In the Matter of the General Investigation to Determine Reasonable Rates and Charges for Monongahela Power Company and The Potomac Edison Company on and after January 1, 2012	)))))	Case No. 11-1274-E-P

DIRECT TESTIMONY
of
CATHERINE M. KUNKEL

ON BEHALF OF
THE WEST VIRGINIA CITIZEN ACTION GROUP
1500 Dixie Street
Charleston, West Virginia 25311

November 14, 2011

Q1. PLEASE STATE YOUR NAME AND BUSINESS ADDRESS.

A1. My name is Catherine M. Kunkel and my business address is PO Box 651, Whitesville, WV 25209.

Q2. BY WHOM ARE YOU EMPLOYED AND IN WHAT CAPACITY?

A2. I am employed by the non-profit Coal River Mountain Watch as Sustainable Energy Program Coordinator. Coal River Mountain Watch is a member of the Energy Efficient West Virginia coalition, founded by West Virginia Citizen Action Group (WVCAG). As the Sustainable Energy Program Coordinator, my job responsibilities include researching and preparing written materials to support the advocacy work of the Energy Efficient West Virginia coalition, public education around energy efficiency, and working with local government leaders on developing municipal energy efficiency programs.

Q3. WHAT ARE YOUR DUTIES, RESPONSIBILITIES, AND EDUCATIONAL AND PROFESSIONAL QUALIFICATIONS?

A3. I graduated from Princeton University with a B.A. in physics and from Cambridge University with a Certificate of Advanced Study from the Department of Applied Mathematics and Theoretical Physics. I studied for two years in the Ph.D. program in the Energy and Resources Group at the University of California, Berkeley. I have also worked as a Senior Research Associate in the Electricity Markets and Policy group at Lawrence Berkeley National Laboratory (LBNL). Both my graduate research and my work at LBNL included research on residential energy efficiency programs and policies, which resulted in co-authoring two publications. My current duties and responsibilities include serving on the steering committee of Energy Efficient West Virginia, coordinating public outreach and education around energy efficiency, and providing research support and strategic input for the coalition's regulatory and legislative efforts.

Q4. HAVE YOU PREVIOUSLY TESTIFIED BEFORE THE WEST VIRGINIA PUBLIC SERVICE COMMISSION?

A4. Yes. My direct testimony have been filed in the currently pending Mon Power and Potomac Edison energy efficiency case, 11-0452-E-PT, in redacted and confidential versions.

Q5. WHAT IS THE PURPOSE OF YOUR TESTIMONY?

A5. The purpose of my testimony is to urge the Commission to open a general investigation into

integrated resource planning for investor-owned electric utilities in West Virginia.

Q6. HAVE RESIDENTIAL RATES INCREASED IN THE COMPANIES' SERVICE TERRITORY IN RECENT YEARS?

A6. Electric rates both in the Companies' service territory and in the AEP Companies' West Virginia service territory have increased significantly over the past several years. As electric bills are placing an increasing burden on West Virginia residents, businesses and local governments, including the customers of the Companies, it is more and more important for the Commission to ensure that the Companies are procuring the lowest cost energy resources for their customers.

In 2009, the average Mon Power and Potomac Edison residential customer consumed 11,900 kWh per year.[1] Such a customer has seen their annual electric bill increase from $864 under rates implemented in January 2008 to $1,141 in 2011, a 32% increase within 3 years.[2] In the current case, the Companies propose a 4.5% increase that would result in an additional $51 per year for this same customer.[3]

Q7. HOW DID THE COMPANIES ARRIVE AT THEIR RATE REQUEST IN THE CURRENT CASE?

A7. In the current ENEC proceeding, the Companies proposed their 2012 ENEC rates based on their under-recovery of ENEC costs in the review period (July 1, 2009 through June 30, 2011), and their forecast ENEC costs in 2012. ENEC costs include mainly variable costs such as fuel costs, purchased power costs, and other consumables. (In this case, the 2012 forecast also includes a reduction in rates due to savings from the Allegheny Energy and FirstEnergy merger).[4] In other words, as is typical for an ENEC rate case, the planning horizon considered in setting the ENEC rates does not extend beyond one year into the future.

Q8. DOES THIS RATE-SETTING METHODOLOGY RESULT IN THE LEAST COST OF SERVICE TO CUSTOMERS?

A8. Due to the lack of a formal integrated resource planning process, this process for setting rates

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1 Energy Information Administration, ""Electric Sales, Revenue, and Average Price: Table T6 – Class of Ownership, Number of Consumers, Sales, Revenue, and Average Retail Price by State and Utility: Residential Sector", http://www.eia.gov/electricity/sales_revenue_price/index.cfm, released Nov 1, 2010.

2 WV PSC Case 07-0930-E-T (Revised Tariff Sheets filed December 28, 2007) and WV PSC Case 09-1352-E-42T (Revised Tariff Sheets filed June 29, 2010).

3 Direct testimony of Kevin G. Wise, Exhibit KGW-26

4 Direct testimony of Kevin G. Wise, p. 2, lines 8-14.

cannot be identified as resulting in the least cost of service because it does not ensure that the Companies are procuring the lowest cost energy resources for their customers. Determining the least-cost resource mix should be an important consideration in ensuring that rates are just and reasonable. Had an integrated resource planning process been implemented several years ago, it is possible that some of the recent rate increases could have been averted.

Q9. WHAT IS INTEGRATED RESOURCE PLANNING?

A9. Integrated Resource Planning is a process through which a utility evaluates a full range of scenarios for meeting long-range forecast electricity demand, treating supply- and demand-side resources on a consistent basis, in order to determine the portfolio of supply- and demand-side resources that will meet projected load at the lowest cost while ensuring reliability of the power system. An integrated resource plan (IRP) should be subject to public review and comment in front of a public service commission.

Q10. WHY ARE YOU CONCERNED ABOUT THE LACK OF A FORMAL INTEGRATED RESOURCE PLANNING PROCESS IN WEST VIRGINIA?

A10. There is no formal IRP process in West Virginia. Rate cases do not provide a forum for interested stakeholders, and ultimately the Commission, to analyze long-term scenarios for meeting future generation and capacity needs; instead they only allow an opportunity to examine whether a utility's recent and short-term forecast expenditures are prudently incurred. Without a formal planning procedure that evaluates potential future scenarios to determine the appropriate mix of supply-side and demand-side resources to achieve the lowest energy system cost, customers can not be reasonably assured of just and reasonable rates. More than half of the states in the country have an IRP process, often implemented through PSC ruling rather than legislative action.[5]

Q11. PLEASE EXPLAIN.

A11. In the absence of an IRP process, I am concerned that the Companies have proposed to under-invest in energy efficiency in Case 11-0452 and that they will continue to under-invest in energy efficiency and other demand-side resources, which are often found to be the least cost option.[6] As discussed in WVCAG's testimony in case 11-0452-E-PT, the Companies have failed to evaluate the

5 R. Wilson and P. Peterson, "A Brief Survey of State Integrated Resource Planning Rules and Requirements," Synapse Energy Economics, April 28, 2011.

6 See Lazard, "Levelized Cost of Energy Analysis", June 2008 at http://www.narucmeetings.org/presentations.cfm?cat=Summer at p. 2.

potential for cost-effective energy efficiency in their service territory or even to evaluate the cost-effectiveness of additional energy efficiency programs beyond the two specifically referenced in the joint stipulation in Case 09-1352-E-42T. It is highly likely that there is significant potential for additional cost-effective savings, which would generate savings at a lower levelized cost per kWh saved than the Companies' avoided costs. ENEC and base rate cases provide little opportunity to address this concern.

Q12. HAVE THE COMPANIES PROVIDED AN INTEGRATED RESOURCE PLAN IN THE CURRENT CASE?

A12. Yes. The Companies have provided an IRP in response to CAD discovery request A-4. This IRP is deficient in many ways. The IRP fails to provide estimates of energy demand, owned power generation or purchased power generation (MWh). The Companies have provided no explanation or alternative scenarios for their assumptions about growth in summer and winter peak demand, nor have they provided any scenarios regarding commodity prices and price volatility. The IRP also fails to consider energy efficiency and demand response resources to determine whether investment in EE/DR is more cost-effective than purchasing power and capacity from PJM or investing in new generation. It fails to consider the possibility of carbon regulations, in addition to failing to evaluate the plausible impact of forthcoming EPA Clean Air Act and Clean Water Act regulations. This IRP is attached to my testimony as Exhibit CMK-1 for your convenience.

Q13. IS THE DEVELOPMENT OF A FORMAL IRP PROCESS URGENT?

A13. Yes. As described in the direct testimony of Company witness Michael Delmar in the current case, and discussed in more detail in my direct testimony in case 11-0452-E-PT (Q34 through Q36), there are likely to be large changes in PJM's generation mix and in the Companies' own generation fleet over the next several years, driven by the age of the Companies' coal-fired generating units and more strict environmental standards. These potential changes to generation and capacity, when coupled with the trend of increasing coal prices,[7] will likely increase the cost-effectiveness of demand-side resources such as energy efficiency and demand response. Investments in demand-side resources should be considered in decisions on whether to retrofit old, inefficient and unscrubbed coal-fired power plants in response to the forthcoming EPA HAP/MACT regulations and other EPA regulations.

7 Direct testimony of Michael B. Delmar, p. 11, lines 10-20.

An integrated resource planning process would require the Companies to inform its customers and the Commission on the various scenarios being considered for meeting future demand, allowing an opportunity to provide public and Commission comment and timely input to the plan.

Q14. PLEASE SUMMARIZE YOUR RECOMMENDATIONS.

A14. WVCAG recommends that the Commission open a general investigation into establishing an IRP process for West Virginia investor-owned electric utilities. Such a process would allow the Commission and other stakeholders to analyze and provide comment on IRPs from the Companies.

Q15. DOES THIS CONCLUDE YOUR DIRECT TESTIMONY?

A15. Yes, it does.

Allegheny Power - West Virginia
2010 Integrated Resource Plan

Based Upon 2009/2010 PJM RTO AP Peak Forecast
Mean-Value Forecast for Seasonal Peak Periods

Bundled Service (Regulated)									
Summer	2010	2011	2012	2013	2014	2015	2016	2017	2018
Demand-Side (MW)									
Monongahela Power	1,944	2,087	2,144	2,174	2,202	2,228	2,251	2,276	2,298
Potomac Edison	636	683	702	712	721	729	737	745	752
West Virginia Power	100	103	106	108	109	110	110	111	112
Total [a] [b]	2,680	2,873	2,952	2,993	3,032	3,067	3,098	3,132	3,162
Supply-Side (MW)									
Owned Capacity [c]	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469	2,469
PURPA Capacity [d]	139	139	139	139	139	139	139	139	139
Purchased (Excess) Capacity [e]	72	265	343	384	424	459	490	524	554
Total	2,680	2,873	2,952	2,993	3,032	3,068	3,098	3,132	3,163
Winter	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Demand-Side (MW)									
Monongahela Power	1,944	2,087	2,144	2,174	2,202	2,228	2,251	2,276	2,298
Potomac Edison	636	683	702	712	721	729	737	745	752
West Virginia Power	100	103	106	108	109	110	110	111	112
Total [a] [b]	2,680	2,873	2,952	2,993	3,032	3,068	3,098	3,132	3,162
Supply-Side (MW)									
Owned Capacity [c]	2,498	2,498	2,498	2,498	2,498	2,498	2,498	2,498	2,498
PURPA Capacity [d]	149	149	149	149	149	149	149	149	149
Purchased (Excess) Capacity [e]	33	226	305	347	385	420	451	485	515
Total	2,680	2,873	2,952	2,993	3,032	3,068	3,098	3,132	3,162
Load Management	2010	2011	2012	2013	2014	2015	2016	2017	2018
PJM Interruptible Load Response (ILR) [f]	4	4	4	4	4	5	5	5	5
Emergency Load Response Program (ELRP) [g]	5	5	5	5	5	5	5	5	5

a. Demands are based on AP's share of the 2009/20010 PJM RTO peak (summer) forecast and latest available AP state PLC data and multiplying the PLC by forecasted and actual zonal and FPRs from ERPM.
Actual peak hour demands have an equal probability of being over or under the forecast values due to weather variations.

Bundled Service load consists of WV electric customers who do not have retail choice.

b. Total loads include the PJM Forecast Pool Requirement (FPR) and Base Residual Auction (BRA) Scaling Factor. These load values, in conjunction with PJM UCAP values for capacity, comprise the PJM Installed Reserve Margin (IRM) requirement of 15%.

c. Owned Capacity is generation owned by Allegheny Power and used to serve WV bundled service load. The summer capacity is based on the latest available and official PJM RPM UCAP (Unforced Capacity) values. The winter capacity is based on the latest available winter PJM UCAP values and is only shown as reference.

d. PURPA Capacity is generation purchased from small power production and cogeneration qualifying facilities pursuant to the Public Utility Regulatory Policies Act of 1978 (PURPA). PURPA generation is currently used by MP to serve bundled service load. Summer capacity is based on official PJM RPM UCAP values and winter capacity is based on the latest available winter PJM UCAP values and is only shown as reference.

e. Purchased capacity is capacity purchases made by AP for bundled service load requirements, including the PJM Installed Reserve Margin (IRM) requirement of 15%.

f. Interruptible Load Response (ILR) program is a PJM reliability program that AP started participating in February 2008. The program pays customers to be ready to reduce load if called by PJM during system emergencies. The customer must be available for up to 10 reductions per year and have the ability to reduce a minimum of 100 kW per hour. Due to this program being voluntary, these values are shown as reference only and are not used in calculating PJM IRM requirements. This program expires effective May 31, 2012 and is replace by the Demand Response Program.

g. Emergency Load Response Program (ELRP) is a PJM voluntary peak load reduction program that AP started participating in April 2008. The program offers financial rewards to customers who can reduce their power consumption during periods of high demand or prices. In return for reducing load, the customer is paid a percentage of the wholesale market price for their reductions. Due to this program being voluntary, these values are shown as reference only and are not used in calculating PJM IRM requirements.

h. This plan represents one of many possible futures based on current legal requirements. While the plan is shown for an extended period of time because of filing requirements, any projection beyond the near term has a very low probability of occurrence due to uncertainties in the load forecast and in the regulatory environment.

i. Some values may not sum exactly due to rounding.

j. Fort Martin scrubbers will reduce the ICAP for each unit by 20 MWs and are anticipated to be online by December 1, 2009.

k. All EFORd values are as of 11/30/2009. There is no degradation planned in the above generation capacity data. It is assumed outage rates will not change.

Allegheny Power - West Virginia
2010 Integrated Resource Plan

Existing Generation Capacity

AP Existing Generation Capacity - January (2009) and August (2009) PJM UCAP - MW

Station	Jan	Aug	Unit	Jan	Aug	Unit	Jan	Aug	Unit	Jan	Aug
Albright	280.0	271.2	Unit 1	75.9	72.9	Unit 2	75.1	72.2	Unit 3	128.9	126.1
Fort Martin	1020.0	1033.2	Unit 1	510.0	505.7	Unit 2	510.0	527.5			
Harrison	363.1	357.7	Unit 1	120.9	119.1	Unit 2	117.4	115.7	Unit 3	124.8	122.9
Pleasants	92.3	90.7	Unit 1	48.8	48.0	Unit 2	43.5	42.8			
Rivesville	108.3	101.6	Unit 5	29.6	28.0	Unit 6	78.7	73.6			
Willow Island	174.8	169.2	Unit 1	50.7	49.8	Unit 2	124.1	119.4			
Bath County PS	483.8	483.8	AP's share of Allegheny Energy Inc.'s 40% Share of Bath County Capacity								
Total	**2,522.3**	**2,507.5**									

Note: AP generation is based on PJM's RPM (Reliability Pricing Model) construct and UCAP (Unforced Capacity) values, which is calculated by multiplying the unit's summer installed capacity ratings times one minus its effective Equivalent Demand Force Outage Demand (EFORd) value. EFORd is defined as the effective availability rate of a unit that is planned to be in service during a delivery year.

PURPA Existing Generation Capacity - January (2009) and August (2009) PJM UCAP - MW

Bundled Service			Default Service			Wholesale Market		
Station	Jan	Aug	Station	Jan	Aug	Station	Jan	Aug
Grant Town	72.4	72.4						
Hannibal	28.9	18.9						
West Virginia U.	48.2	48.2	None	0.0	0.0	None	0.0	0.0
Total	**149.4**	**139.5**	**Total**	**0.0**	**0.0**	**Total**	**0.0**	**0.0**

Note: PURPA generation is based on PJM's RPM (Reliability Pricing Model) construct and UCAP (Unforced Capacity) values, which is calculated by multiplying the unit's summer installed capacity ratings times one minus its effective Equivalent Demand Force Outage Demand (EFORd) value. EFORd is defined as the effective availability rate of a unit that is planned to be in service during a delivery year.

Change in Owned Generation Capacity (From Previous Year)

Year	Unit/Project	Description	Jan - MW	Aug - MW
2004	Total	PJM IRM / Unit Capacity & Outage Rates	(2)	(3)
2005	Total	PJM IRM / Unit Capacity & Outage Rates	91	88
2006	Total	PJM IRM / Unit Capacity & Outage Rates	30	29
2007	Total	WV Settlement Asset Transfer & PJM IRM / Unit Capacity & Outage Rates	555	583
2008	Total	WV OVEC Asset Transfer & PJM IRM / Unit Capacity & Outage Rates	(63)	(90)
2009	Total	PJM IRM / Unit Capacity & Outage Rates	(12)	(12)

PUBLIC SERVICE COMMISSION
OF WEST VIRGINIA
CHARLESTON

In the Matter of the General Investigation to Determine Reasonable Rates and Charges for Monongahela Power Company, on and after January 1, 2012	))))	Case No. 11-1274-E-P

CERTIFICATE OF SERVICE

I hereby certify that a true copy of the foregoing *Direct Testimony of Catherine M. Kunkel, on Behalf of Intervenor West Virginia Citizen Action Group* has been served on all parties of record, this 14th day of November, 2011.

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