

Energy Roadmap Workshop on Energy Infrastructure Report

Written by Patrick Mann, WVU College of Business and Economics

Objectives and Format

The primary objective of the energy infrastructure workshop was to assess the energy infrastructure in West Virginia as to its needs and analyze the potential for energy infrastructure development. Other objectives included an assessment of the present status of the energy infrastructure in West Virginia, identification of specific energy infrastructure impediments, identification of incentives for energy infrastructure development, and the examination of the process of expanding energy infrastructure.

The approximate attendance at the workshop was 70 persons. The attendees included academics, state government agency personnel, federal government agency personnel, electric utility representatives, natural gas industry representatives, economic development representatives, and interested member of the public.

The workshop format consisted of individual presentations by electricity and natural gas representatives in the morning. This was followed in the afternoon by a regulatory presentation and a panel on energy infrastructure security. The workshop concluded with three breakout sessions focusing on electricity infrastructure, natural gas infrastructure, and energy infrastructure security.

Workshop Presentations

Patrick Mann, Professor of Economics, West Virginia University, opened the workshop by noting the two general questions to be addressed by the three breakout groups: (1) What are the impediments to the development in electricity infrastructure, natural gas infrastructure, and infrastructure security?, and (2) What can state government do address these impediments? This was followed by Jeff Herholdt, Manager, Energy Efficiency Program, West Virginia Development Office, who described the importance of energy to the West Virginia economy. The final introductory presentation was made by Pat Esposito, Chairman, Governor=s Energy Task Force, in which he described the connection between the Energy Roadmap and the energy infrastructure workshop as well as the contents of the Energy Roadmap.

The first morning presentation was made by George Blankenship, Senior Consultant, Allegheny Power (AP). He discussed AP=s infrastructure in West Virginia, the reliability of the AP system, and the causes of outages within the AP system. In conclusion, he listed the important electricity transmission issues as the impending Energy Policy Act and regional transmission expansion planning.

The second morning presentation was made by Richard Verret, Senior Vice-President, American Electric Power (AEP). He provided information on AEP=s infrastructure in West Virginia, planned AEP capital investment in transmission in the state, and the planned AEP 765 KV transmission line from Wyoming County into Virginia. In conclusion, he listed the important

transmission impediments as environmental issues, mandated multi-state approvals, and mandated federal approval.

The third morning presentation was made by Karl Pfirman, President, PJM West. He discussed PJM and its importance to West Virginia, the advantages of being a PJM member, and the public benefits of PJM. He concluded by discussing the present PJM structure and its possible expansion into Virginia and Kentucky.

The fourth morning presentation was made by Jim Crews, Manager of Gas Control, NiSource. He described the Columbia Natural Gas Transmission network, the Homestead expansion project, and the elaborate process of getting natural gas to the retail market. He concluded by noting the increasing importance of LNG in the natural gas retail market and its negative implications for West Virginia natural gas producers.

The final morning presentation was made by Dan Kortum, Business Development, Dominion Transmission. He discussed the problems of expanding the transmission network, transmission financing, the process of obtaining transmission project approval, and the shelved status of the Greenbrier Pipeline project. In conclusion, he noted that limited pipeline capacity is the single most important impediment to natural gas development in the state.

The first afternoon presentation was a combined effort of David Ellis, Director, Utilities Division, West Virginia Public Service Commission (PSC), and Earl Melton, Director Engineering Division, West Virginia Public Service Commission (PSC). The two presenters provided a regulatory perspective on energy transmission and related issues. Ellis discussed the impending Energy Policy Act and its energy infrastructure implications. Melton discussed two current proceedings at the PSC: (1) siting rules for exempt wholesale electricity generators, and (2) net metering standards.

The final afternoon presentation consisted of a panel on security issues regarding energy infrastructure. Steve Viglianco, Special Agent, Federal Bureau of Investigation, discussed the role of the FBI in protecting energy infrastructure. Staff Sergeant Greg Young and Sergeant Tim Carden of the Joint West Virginia Intelligence Fusion Center, discussed the role of the West Virginia Army National Guard in protecting energy infrastructure as well as their security assessment model. Joe Paladino, National Energy Technology Laboratory (NETL), discussed the new Energy Infrastructure Training and Analysis Center at NETL including its objectives and potential products.

Natural Gas Breakout Session

The attendees at the natural gas infrastructure session dealt with two questions: (1) What are the impediments to the expansion of the natural gas infrastructure in West Virginia?, and (2) What actions can the state take to address these impediments? The session facilitator was Pat Esposito, Chairman, Governor's Energy Task Force.

The natural gas group agreed on two major impediments to expansion of the natural gas infrastructure. These impediments were the financing and capitalization of natural gas infrastructure and the obtaining of right-of- ways in a timely and cost effective manner.

The primary recommendation of the natural gas group was that the governor should convene a forum of federal regulators, state regulators, and industry representatives to address the issue of capital investment incentives for the development of energy infrastructure. Several examples of capital formation incentives were provided that could be discussed at the governor's forum. One, the PSC should insure that authorized rates of return for regulated utilities are sufficient to encourage infrastructure investment. Two, the PSC, in order to facilitate long-term supply contracts, should designate local distribution companies (LDC's) as suppliers of last resort. Three, the legislature should provide a severance tax credit for the proposed fees to be paid by producers to transmission or pipeline firms to finance the natural gas infrastructure. Finally, the state should establish infrastructure corridors.

Electricity Breakout Session

The attendees at the electricity infrastructure session dealt with two questions: (1) What are the impediments to the expansion of the electricity infrastructure in West Virginia?, and (2) What actions can the state take to address these impediments? The session facilitator was Tom Witt, Professor of Economics, West Virginia University.

The electricity group agreed on four major impediments to the expansion of the electricity infrastructure. One was the lack of public education as to the economic importance of energy infrastructure. A second was the lack of site analyses causing uncertainty regarding the number of feasible plant sites in the state. A third was the uncertainty regarding rate of return on transmission investment, cost recovery, and site permitting. The fourth was environmental issues and litigation (the NIMBY problem).

The electricity group recommended several state actions to address the impediments to electricity infrastructure. One, the state in collaboration with NETL, should engage in educational activities regarding the economic importance of energy infrastructure, the economic importance of electricity generation, and the essential linkage between electricity generation and the coal industry. Two, the state should engage in proactive siting of energy infrastructure and electricity generation projects. Three, the state should improve and streamline the project approval and infrastructure permitting process. Four, the state should facilitate inter-agency cooperation and collaboration in the project approval process. Finally, the state should collect meteorological data which would facilitate the project development process.

Energy Security Breakout Session

The attendees at the infrastructure security session dealt with two questions: (1) What deficiencies exist regarding infrastructure security in West Virginia?, and (2) What actions can the state take to address these deficiencies? The session facilitator was Mark Burton, Associate Professor of Economics, Marshall University.

The infrastructure security group agreed on four major deficiencies regarding energy infrastructure security. One deficiency was technology in that infrastructure security requires applications new technology. A second deficiency was the human factor since infrastructure security mandates public awareness and security checks. A third deficiency was assessment and knowledge since infrastructure security requires knowledge of risk as well as knowledge of how to combat security

threats. The fourth deficiency was strategic coordination since effective infrastructure security mandates communication and cooperation among the various units dealing with security issues.

The infrastructure security group recommended several state actions to address the deficiencies in energy infrastructure security. One, the state should conduct tabletop security exercises. Two, the state should support security modeling and assessment. Three, the state should apply (or provide application incentives) new security technologies as they become available. Finally, the state should support research and development for energy security programs.

Conclusions

One conclusion is that there are important impediments to the expansion of the electricity and natural gas infrastructure in West Virginia. A second conclusion is that there are deficiencies in the area of infrastructure security in West Virginia. The third conclusion is that the state can be a major player in addressing these impediments and deficiencies and that the state role will not require substantial state expenditures.

(Participant Evaluation of Meeting on Remaining Pages)

PARTICIPANT EVALUATION RESULTS
West Virginia Energy Infrastructure Workshop
Dec. 11, 2003
Stonewall Resort, Roanoke, WV

Total number of evaluations submitted:	18					
Presentation Session Evaluation	Strongly Disagree				Strongly Agree	
	1	2	3	4	5	No Answer
Overall I think the presentations were very helpful in laying the groundwork for generating a better understanding of the issues leading to new ideas.	0.00%	0.00%	5.56%	61.11%	33.33%	0.00%
The amount of time given to the presenters was just right.	0.00%	0.00%	16.67%	50.00%	33.33%	0.00%
The amount of time spent on Q&A with the presenters was just right.	0.00%	0.00%	5.56%	55.56%	38.89%	0.00%
Facilitated Session Evaluation	Strongly Disagree				Strongly Agree	
	1	2	3	4	5	No Answer
The breakouts were effective in generating discussion, ideas, and/or recommendations.	0.00%	0.00%	5.56%	38.89%	38.89%	16.67%
The facilitated session was accurately reported in the plenary session.	0.00%	0.00%	0.00%	44.44%	38.89%	16.67%
I felt welcome to express my ideas and opinions in the facilitated session.	0.00%	0.00%	0.00%	22.22%	66.67%	11.11%
I personally agreed with the ideas, opinions, or suggestions that were presented from the facilitated session.	0.00%	0.00%	5.56%	50.00%	27.78%	16.67%
Logistics Evaluation	Strongly Disagree				Strongly Agree	
The meeting space was conducive to a successful event.	0.00%	0.00%	0.00%	27.78%	72.22%	0.00%
The event staff was very helpful.	0.00%	0.00%	0.00%	27.78%	72.22%	0.00%
The hotel staff was very helpful.	0.00%	0.00%	0.00%	22.22%	72.22%	5.56%
There was plenty of good food and beverages available.	0.00%	0.00%	0.00%	22.22%	77.78%	0.00%
The website provided timely, valuable information.	0.00%	0.00%	11.11%	27.78%	50.00%	11.11%
The online registration worked well for me.	0.00%	0.00%	0.00%	27.78%	61.11%	11.11%
Overall this was a high quality event.	0.00%	0.00%	0.00%	33.33%	55.56%	5.56%
Heard about event by:						

Website	1				
Postcard	0				
Brochure	3				

The most helpful presentation for me was:
APS/AEP, better understanding of their system.
Dan Kortman.
Dave Ellis / Earl Melton and AEP.
Deregulation and the Electricity Infrastructure.
Electric / Natural Gas / PJM.
Energy Policy Act " <i>illegible</i> ".
Natural Gas Infrastructure - Details specifics of what is needed to build capacity.
PJM.
PJM.
PJM.
PJM, understanding planning issues.
Security.
Several.
The AEP presentation because there was also discussion about technology to aid this issue...discuss this more.
This is difficult, but both " <i>illegible</i> ".

General comments about the presentations:
5
Everything was done efficiently.
Excellent.
Informative and covered various points of view.
Keeping to the time limits was appreciated.
Overall very informative.
Relevant, informative, and well done.
Very good.

In my opinion, the most important ideas generated in the breakout sessions were:
<i>"illegible"</i>
Education.
Education and permitting(environmental and PSC) streamlining.
Natural Gas: A session facilitated by the state to bring interested parties to a discussion of solutions.
Need for regional planning, better education, and better government communication " <i>illegible</i> "
PSC, reevaluating regulated rates of return.
Risk assessment aspects and hearing from the army personnel.
To some degree.
What the state would do?

In my opinion, the following topics also need to be considered to move West Virginia forward in this area:

"illegible"

Education of the issues related to "not in my back yard".

The technology/ communication (internet) infrastructure.

What is the capability of the state? What is the state doing today?

What question(s) should have been asked that weren't asked?

What about water and telecommunications infrastructure as it relates.

General comments about the breakout sessions:

Great series!

Seemed to hit correct points.

Strong.

The session was good.

Too short!

General comments about logistics:

Good.

Hard to get to from out of state.

Having sign on the lunch tables was very helpful. The food was great.

Need better, higher profile links to website from sponsoring agencies.

Nicely done. Great setting.

The starting time should not have been moved up 30 minutes without prior notification.