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Professional Opinion on the Proposed PennEast Pipeline Project

The PennEast Pipeline project proposal fails to adequately address need and volume requirements and, therefore, should not be approved unless these issues are adequately addressed. Based on current natural gas supply and demand, there is no apparent need for the gas that would be transported by the pipeline. If future demand is anticipated, this must be stated and explained clearly in the proposal. Assuming that need is shown, the proposal is vague about what portion of the approximately 1 billion cubic feet per day (Bcf/d) would be delivered to consumers in southeastern Pennsylvania versus New Jersey. It is also unclear whether there may be an intention not stated in the proposal to supply gas to markets beyond Pennsylvania and New Jersey.

Existing interstate pipelines provide all of New Jersey's natural gas demand and Pennsylvania is a net exporter of natural gas to other states so has no unfilled demand. Based on these facts about present supply and demand, it is not clear that a need exists for the PennEast Pipeline project.

Natural gas consumption for New Jersey has been relatively flat for the past four years at average rate of 1.8 billion cubic feet of gas per day (Bcf/d), somewhat below the higher levels of the late 1990s (Figure 1). Although consumption increased slightly in 2013 compared to the three previous years, New Jersey cannot be called a growth market as the proposal states. New Jersey gas supply is shown in Table 1. The small difference between supply and consumption is accounted for by processing and transportation loss, and compression needs.

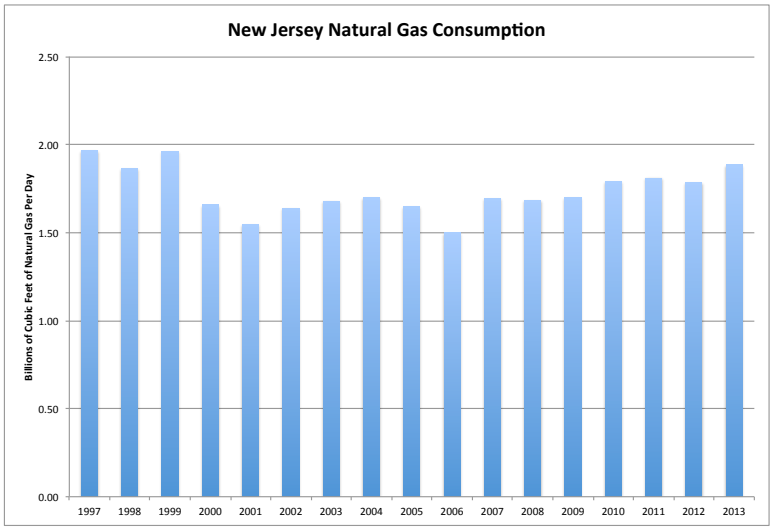


Figure 1. New Jersey annual natural gas consumption. Source: EIA.

Net Natural Gas Pipeline Deliveries

Bcf/d	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005	2004	2003	2002	2001	2000	1999	1998	1997
New Jersey	1.8	1.8	1.7	1.7	1.3	1.3	1.2	1.4	1.2	1.1	1.1	1.1	1.1	1.1	1.0	1.0	1.1	1.1
Pennsylvania	-2.8	-2.5	-1.6	-1.2	-0.2	0.0	0.0	-0.7	-0.3	0.0	0.0	0.0	0.0	-0.4	0.3	0.3	0.4	0.6

Table 1. New Jersey and Pennsylvania net natural gas deliveries by interstate pipeline. Source: EIA.

Pennsylvania natural gas demand has grown since the recent boom in Marcellus Shale production (Figure 2). At the same time, Pennsylvania has been a net exporter of natural gas since 2003 (Table 1). Pennsylvania exported 2.5 Bcf/d in 2013 and 2.8 Bcf/d in 2014. It must, therefore, be assumed that most if not all of the gas for the proposed PennEast Pipeline would go to New Jersey.

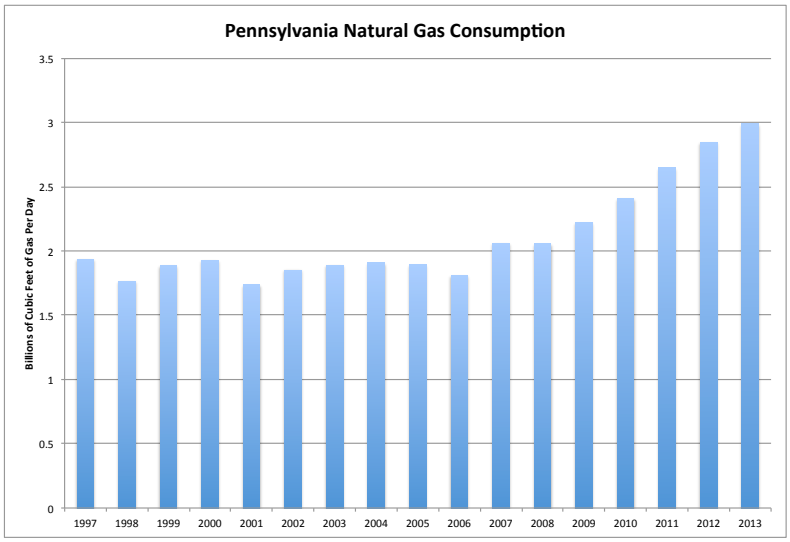


Figure 2. Pennsylvania annual natural gas consumption. Source: EIA.

Although PennEast discusses price competition and diversity of supply as positive potential outcomes for their proposed pipeline, they fail to address need. Additional future need for natural gas may exist as New Jersey moves away from heating oil and coal-fueled sources of electric power but these are not mentioned in the proposal.

The proposed PennEast Pipeline would deliver an additional 1 Bcf/d of natural gas to New Jersey potentially creating a 53% supply surplus above the current level of consumption. Assuming that PennEast can demonstrate some need, it is unclear why 1 Bcf/d of additional supply is warranted or appropriate particularly in light of the considerable property and environmental issues that construction will entail. If PennEast intends to supply additional markets outside of New Jersey, there is no mention of this in the proposal.

Marcellus Shale production today can only be described as an epidemic of over-production. When the play began in earnest in 2005, the northeastern United States relied on pipeline gas deliveries from the Gulf Coast. At that time there was a positive differential relative to Henry Hub pricing. As production has increased, the northeastern gas market is near saturation and spot prices are presently at a negative differential of about -$1/ million cubic feet compared with the Henry Hub.

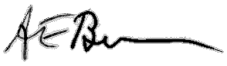
The over-supply from the Marcellus Shale is expected to increase as more wells are drilled. The only relief for producers is to export gas outside of Pennsylvania via new pipelines and by reversing flow in existing pipelines. The plan to export gas to New Jersey benefits producers who have consciously destroyed value in Pennsylvania by providing them with additional markets for their gas. It is unclear if there is any benefit to the public. Although it is certainly the right of mineral owners to over-produce natural gas at a loss if

they choose to and can justify it to shareholders, it is unclear why FERC should grant them the means to remedy the unfavorable price environment that they have deliberately brought upon themselves.

Because of the lack of demand for Marcellus gas in Pennsylvania and adjacent New Jersey, it is possible that PennEast and its committed suppliers have an unstated intent to send gas to other markets not specified in their proposal including the Cove Point LNG export facility in Maryland. Although much has been made of the supposed profitability of LNG export based on the price arbitrage between North America and Europe and East Asia, these claims fail to address the cost of liquefaction and trans-ocean transport.

The best case for LNG export from a brown field export terminal like Cove Point yielded marginally economic outcomes before the recent drop in oil prices. Since most LNG contracts in Europe and Asia are based on crude oil-price linkage, lower oil prices now make LNG export sub-commercial.

In summary, the proposed PennEast Pipeline project should not be approved because need has not been demonstrated. If need can be shown, the proposed 1 Bcf/d volume must be justified.



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