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EST.2016

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Analysis of PennEast Pipeline DEIS Public Need and Alternatives

September 12th, 2016

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1. EXECUTIVE SUMMARY

The Draft Environmental Impact Statement (DEIS) issued by FERC for the PennEast pipeline project, docket CP15-558, was issued on July 22nd, 2016. This report was commissioned by several Citizens Against the Pipeline groups in New Jersey along with HALT PennEast to study the project's proposed "purpose and need" and alternatives analysis within the DEIS.

We conclude that the DEIS is flawed, incomplete, and does not consider several viable options or properly consider the "no action" alternative.

The DEIS predominantly cites the existence of long term precedent agreements on the project as adequately proving its fulfilling a public need, but does not note that the majority of these transactions are between affiliates and as such are not arms-length transactions. Affiliate transactions do not indicate true market demand or need, and should be regarded by FERC as insufficient on their face to demonstrate true need.

The DEIS fails to note that claims within the PennEast application are contradicted by the shipper's own SEC filings. Numerous counter-examples exist to the shipper's claims for needing more diversity in their gas supply and resilience and avoidance of single-points-of-failure in their systems.

The DEIS does not capture the true financial motivation for the PennEast owners, which is to capture a new approximately $220 million/year revenue stream for those companies.

Terms such as "costly" and "inexpensive" are used within the document without references and without a solid basis to compare them with one another.

The majority of the justification used by PennEast for the project was contained in a study PennEast commissioned by Concentric Energy Advisors (Concentric). That study looked at the "polar vortex" winter of 2013/2014, and the potential impacts PennEast could have had if it had existed at that time. FERC did *not* include this study in the DEIS, which we view as the correct action since the study was theoretical, and addressed historical situations that have already been solved in other manners. However, by leaving this study out of the DEIS, FERC has stripped out the only study put forth by PennEast in support for their project. With the Concentric study removed, PennEast has only its affiliate transactions and a handful of others to justify its environmental costs.

As a result of these issues, the “no action” alternative is incomplete and unconvincing. It uses a self-referential circular argument for the proposed project which is controverted by the shipper’s own financial filings with government.

Other alternatives are failed to be considered at all, including dual-fuel power generation and storage options.

Finally, the project is not fully subscribed, with 100,000 dekatherms/day of capacity still available after 2 years time. When combined with the fact that the majority of the capacity were not contracted as arms-length transactions, this would seem to indicate that demand in the region and New Jersey in particular is far lower than PennEast would indicate. The recent failures of both the Diamond East and North East Direct proposals due to lack of demand in the region underscores this fact and points to PennEast being a case of aggressive over-building of pipeline infrastructure for little public benefit.

2. PURPOSE AND NEED FOR PROJECT

Section 1.1 of the DEIS define the project's Purpose and Need. In it, it states that "PennEast's stated objectives" include:

- *"provide low cost natural gas produced from the Marcellus Shale region in northern Pennsylvania to homes and businesses in New Jersey, Pennsylvania, and surrounding states;*
- *serve markets in the region with firm, reliable access to Marcellus Shale natural gas supplies versus traditional, more costly Gulf Coast regional supplies and pipeline pathways;*
- *provide enhanced competition among natural gas suppliers and pipeline transportation providers; and*
- *satisfy the needs of shippers seeking: additional supply flexibility, diversity, and reliability; liquid points for trading in locally produced natural gas; direct access to premium markets in the northeast and mid-Atlantic regions; ability to capture pricing differentials between the various interconnected pipelines; enhanced natural gas transportation system reliability; and direct access to affordable long-lived dry gas reserves.*

We examine will examine each of these claims in turn. But first, it should be noted what is not included in the DEIS.

2.1. POLAR VORTEX WINTER ANALYSIS NOT INCLUDED

It has been noted that the DEIS does not mention the Polar Vortex winter, or price spikes, or the Concentric Study that was commissioned by PennEast. We commend FERC for recognizing that the study was flawed and also made irrelevant by events in the market since that time occurred.

However, it should be noted that, by not including the Concentric Study in the DEIS, that there are very few facts that support the public need for the pipeline.

By way of comparison, the FEIS for the Constitution Pipeline[1] noted a definitive rationale for the pipeline, and mentions several new demand points driving the purpose and need of the project (which are backed up in the applicants' application). PennEast's DEIS and application have no

[1] Constitution Pipeline FEIS Section 1, Page 1-2 https://www.ferc.gov/industries/gas/enviro/eis/2014/02-12-14-eis.asp

citations or references for increased demand requirements at all, beyond the statement of who the shippers are that have agreed for firm capacity agreements of 15% or more.

2.2. PROJECT NOT FULLY SUBSCRIBED

To date, PennEast has only been able to contract for 90% of the total design volumes of the pipeline (990,000 dekatherms/day out of 1.1 million dekatherms/day). This includes 735,000 dekatherms/day contracted by PennEast's owning companies (see figure 1).

This means PennEast has only been able to generate 255,000 dekatherms/day of outside interest in the pipeline, and still has an outstanding 100,000 dekatherms/day of supply they cannot find any firm to contract for.

This demonstrates that, outside of the PennEast's owner's own interest to transfer pipeline fees from other pipeline companies to themselves, there is in fact very weak demand for this pipeline in the NJ and Eastern PA region.

2.3. "LOW COST" NATURAL GAS FROM MARCELLUS REGION

The DEIS accepts PennEast's assertion that the natural gas it will provide is "low cost". No where in the DEIS is "low cost" defined, nor are any projections or comparisons showing before-and-after expected costs to shippers shown.

In contrast to the DEIS and PennEast's assertions, all indications are that additional pipeline infrastructure out of the Marcellus shale region will in fact equalize prices across the country - meaning that in fact Marcellus rates will *increase* dramatically.

In addition, PennEast's owners are authorized by FERC to recapture their construction costs within the pipeline flow fees. This cost recapturing will be done at the expense of the rate payers of the LDCs who also own the pipeline (see below on affiliate transactions).

2.4. "COSTLY" GULF COAST SUPPLIES

The DEIS says that PennEast proposed:

> *"[to] serve markets in the region with firm, reliable access to Marcellus Shale natural gas supplies versus traditional, more costly Gulf Coast regional supplies and pipeline pathways"*

There are several issues with this statement. PennEast seems to believe they are the only pipeline carrying gas from the Marcellus shale region into PA and NJ. They are not. The Transco Leidy Line and others already transport gas from the Marcellus shale areas into NJ (indeed, PennEast largely parallels the Leidy line). There is no rationale given as to why another one is needed. In addition, PennEast spokesperson Patricia Kornick recently supplied this information to a local call in radio show in Lambertville[2]:

> *"Rather than relying on natural gas being transported from Pennsylvania, down to the Gulf Coast and then returning to serve area energy consumers, the PennEast Pipeline will be the first system to bring natural gas directly into New Jersey from a local, abundant natural gas supply".*

As with the DEIS statement, this is frankly false and shows PennEast's attempts to deceive FERC, other permitting agencies and the public.

Further, there is no justification that Gulf Coast supplies are "more costly". PennEast supplies no rational for this other than a bald assertion in their application, and noting pricing differentials between Marcellus hubs and those in the Transco Zone 6 Non-NY hub. As noted previously, differentials between hubs are largely becoming equalized, and the Marcellus prices are expected to rise.

What PennEast is attempting to do here, with FERC aiding and abetting them, is to define the need of PennEast in terms of the past, instead of defining its impact in the future. Indeed, PennEast was interviewed for an article in July 2015[3], and as part of the interview was asked the following question[4]:

> *"What are PennEast's projections for electrical and natural gas prices in NJ out to 2040? They claim New Jersyans will see a cost savings, let's see an actual number. I ask this because a joint DOE/EIA.GOV study projects natural gas and electrical prices will rise in all of the scenarios they've studied due to the expansion of the LNG Industry. The numbers go over 10% in some scenarios".*

PennEast's response was this:

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[2] PANJ.com Interview Jeff Tittel and Mike Spille, July 18, 2016

"[3] New Jersey Communities Unanimously Say 'No' to the Penn East Pipeline http://www.huffingtonpost.com/wild-river-review/beleaguered-new-jersey-co_b_7984424.html

[4] "PennEast Q&A Behind the HuffingtonPost Article" https://thecostofthepipeline.com/2015/08/20/penneast-qa-behind-the-huffington-post-article/

"PennEast does not make such projections; however, it evaluates the behavior of the market, researches credible predictions about what could happen and plans accordingly."

Figure 1 - PennEast Shippers

Shipper	Volume	% of Total	Owner
Cabot Oil & Gas Corporation	50,000	4.5%	N
Consolidated Edison Company of New York, Inc.	100,000	9.1%	N
Enerplus Resources (USA) Corporation	30,000	2.7%	N
New Jersey Natural Gas Company	180,000	16.4%	Y
NRG Rema LLC	10,000	0.9%	N
Pivotal Utility Holdings, Inc. (D/B/A Elizabethtown Gas)	100,000	9.1%	Y
PSEG Power LLC	125,000	11.4%	Y
South Jersey Gas Company	105,000	9.5%	Y
Texas Eastern Transmission, LP	125,000	11.4%	Y
UGI Energy Services, LLC	100,000	9.1%	Y
Warren Resources, Inc.	15,000	1.4%	N
Talen Energy Marketing, LLC	50,000	4.5%	N
Total	990,000	90.0%	
Capacity	1,100,000	100.0%	
Summary	**Volume**	**%**	
Shippers who are pipeline owners	735,000	66.8%	

So in fact when PennEast talks about "costly" or "low cost" gas in various regions, it is not doing so based on any sort of real projections or analysis. It is a baseless assertion not backed up by any studies (and, indeed, FERC's own studies refute it).

2.5. SHIPPERS ARE PREDOMINANTLY AFFILIATES

The list of shippers on PennEast shown in figure 1. Of the 1.1 million dekatherms of total capacity on the pipeline, over 68% of the capacity is contracted by affiliates of the owners.

Of that 68%, 610,000 dekatherms of the capacity is to the LDCs in NJ and PA who have indicated they are accommodating this volume by shifting their existing contracts from other pipelines to the PennEast pipeline. Thus, this is not a market based demand for *new capacity*. Instead, this is a demand to shift pipeline fee revenue from existing pipelines to the owners of PennEast.

Figure 2 shows an example of an existing relationship, using South Jersey Industries and South Jersey Gas as an example.

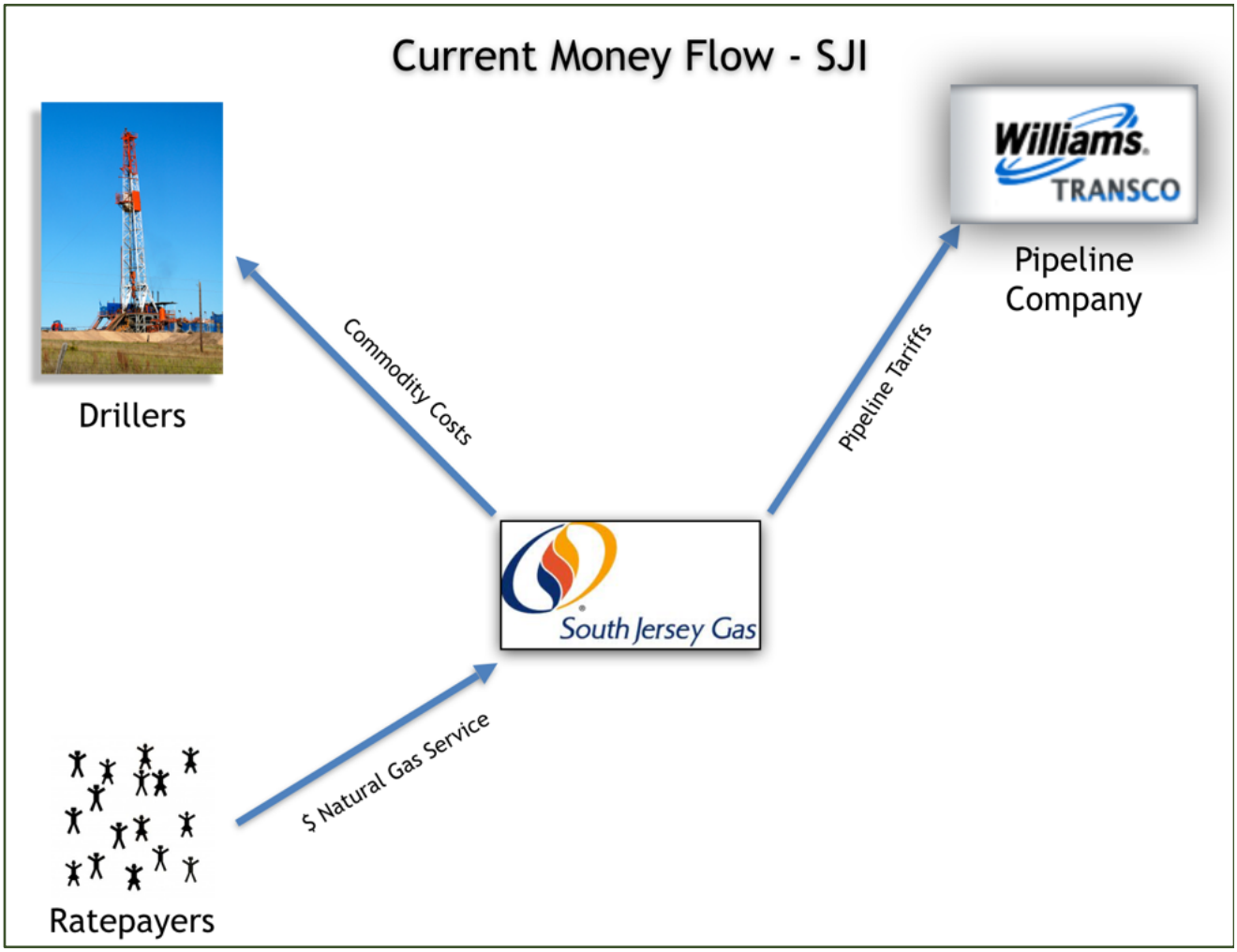

Figure 2 - Existing SJI Relationships

It shows how ratepayer dollars are split up when paying for natural gas. Some portion of the fee represents service fees the utility is allowed to keep as a regulated business. The commodity costs for the natural gas itself is passed through the utility (and they are not allowed to profit from price fluctuations in those commodity costs). And there is also a tariff paid to the pipeline companies, in this example we are showing Williams Transco as one of SJG's pipeline providers. The tariff is a fee paid for transporting natural gas over the pipe, and is regulated by FERC.

Figure 3 shows a new relationship that will form if PennEast comes to fruition.

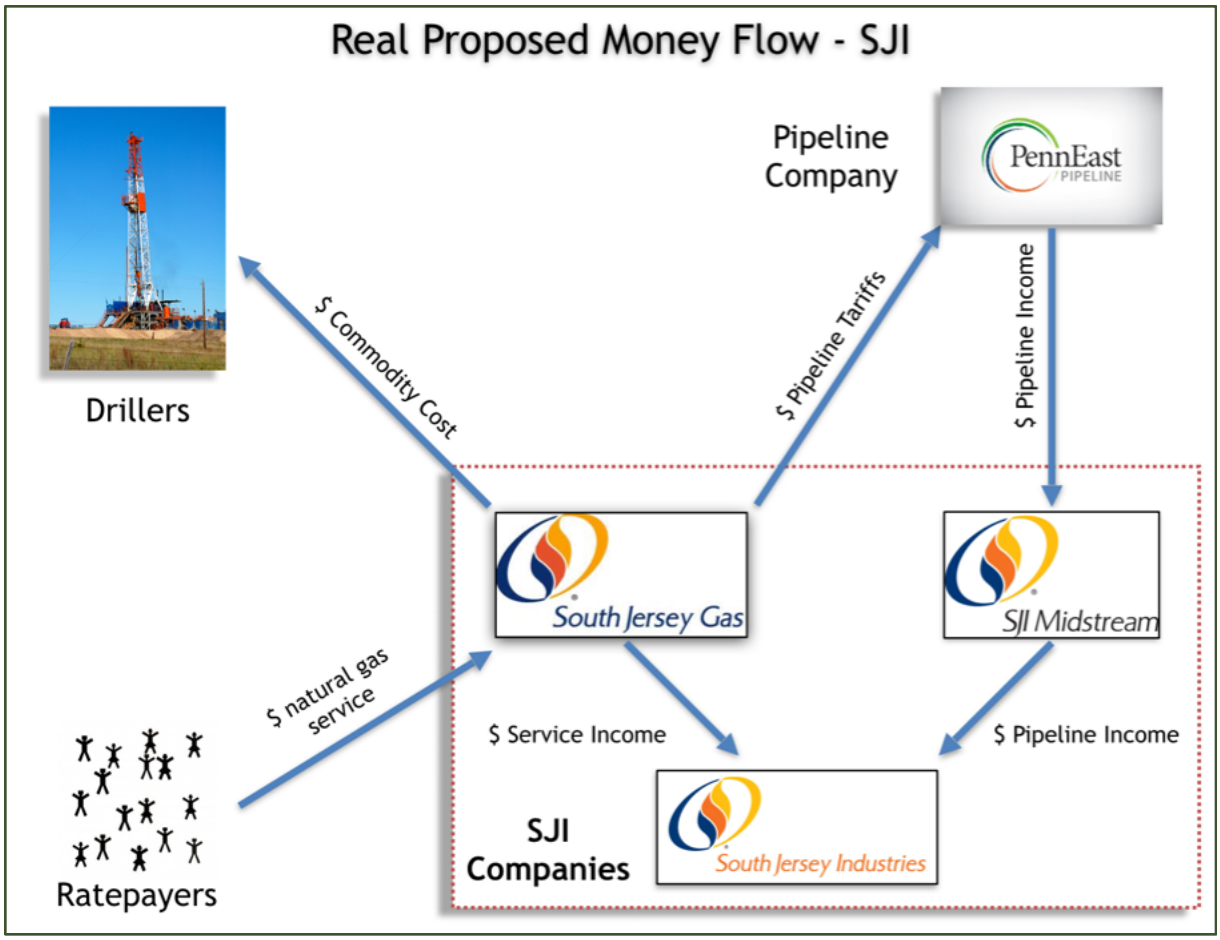

Figure 3 - New SJI Relationship to PennEast

In this case pipeline fees will now be paid to PennEast pipeline company instead of existing pipelines. That pipeline is 20% owned by SJI Midstream.

SJG' parent, South Jersey Industries, will just reap a new financial benefit on the pipeline tariffs that it currently cannot capture.

Essentially the exact same situation applies for New Jersey Resources, UGI, and Elizabethtown Gas. For PSE&G it is somewhat analogous, but it is not their LDC which entered shipping agreements, but instead is their wholesale gas entity PSE&G Power, which may in turn sell it to other PSEG subsidiaries or outside of the firm. See Figure 4 for all the corporate relationships[5].

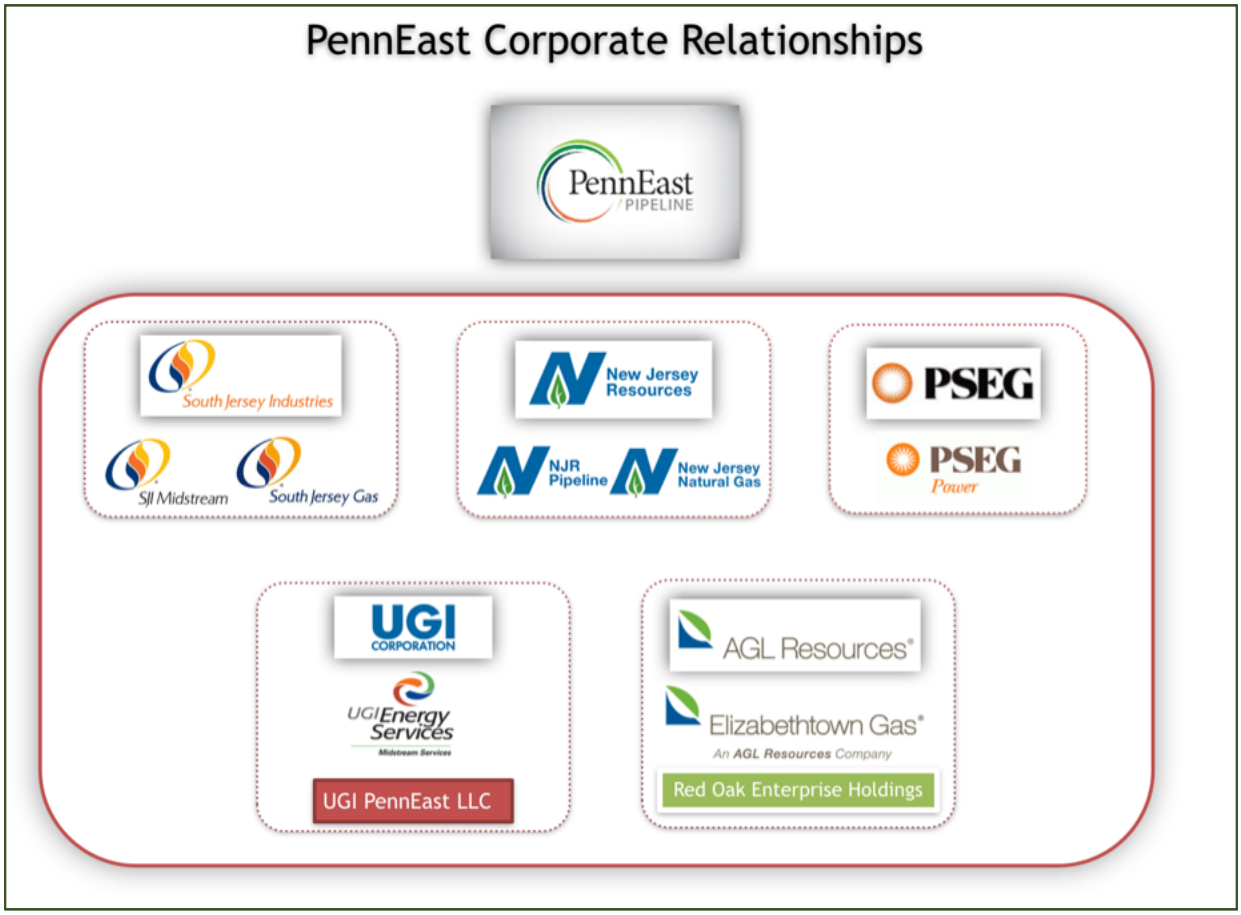

Figure 4 - PennEast Corporate Relationships

Affiliate transactions are a concern because they do not represent classic market need in terms of arms-length transactions. Affiliate transactions may and often do have motivations beyond pure market forces, in particular the motivations of the parent companies and executive compensation.

For example, boards between regulated utilities and their parents are often comprised of the same individual. For example, Thomas Bracken sits on both the South Jersey Industries Board of Directors and the South Jersey Gas Board of Directors as well. In this position, along with

[5] Spectra Energy is not shown as they have a more traditional pipeline owner/operator role in this pipeline

his position as President and CEO of the New Jersey Chamber of Commerce, Mr. Bracken is in an excellent position to guide South Jersey Gas in a direction beneficial to its parent South Jersey Industries.

In the case of New Jersey Resources, the President and CEO Laurence M. Downes earned $5.6 million in compensation in 2015, more than double his 2013 compensation of $2.5 million. In an article about controversies over request BPU rate increases[6], a New jersey Natural Gas spokesman is cited on this issue:

> *Kinney said executive compensation and returns on investments derive from the entirety of New Jersey Resources, the parent company of NJNG, which has several subsidiaries that reach customers outside the Garden State.*

Given the financial and personal interests crossing over between subsidiaries (despite being regulated in some cases), affiliate transactions cannot be given the same weight by FERC as they do to non-affiliate, arms-length transactions.

2.6. ADDRESSING SHIPPER'S NEEDS

The DEIS states one of the needs for PennEast is to:

"satisfy the needs of shippers seeking: additional supply flexibility, diversity, and reliability".

In a traditional arms-length transaction between unaffiliated companies, it would be sufficient to take this statement at face value. However, given that nearly 70% of the contracted volumes on the pipeline come from owners or their direct affiliates, it behooves FERC to look more closely at the actual motivations behind the companies and also determine their existing commitments and system reliability. The best way to do this is to look at the shipper's own statements to the federal government on their system supply and reliability. See Section 2.7 for details on this.

2.7. FINANCIAL STATEMENTS TO SEC ON RELIABILITY

South Jersey Industries releases extensive South Jersey Gas' distribution system, reliability, resiliency, and supplier mix. From their 2015 Annual Report, they report[7]:

> *Transportation and Storage Agreements*

[6] "Amid increases in executive pay, N.J. utility company proposes steep rate hike", http://www.nj.com/monmouth/index.ssf/2016/04/njng_rate_increase.html

[7] 2015 South Jersey Industries Annual Report to Shareholders and form 10K to the Securities and Exchange Commission page 24

South Jersey Industries, Inc. Part I

SJG has direct connections to the interstate pipeline systems of both Transcontinental Gas Pipe Line Company, LLC (Transco) and Columbia Gas Transmission, LLC (Columbia). During 2015, SJG purchased and had delivered approximately 44.8 million decatherms (MMdts) of natural gas for distribution to both on-system and off-system customers and for injections into storage. Of this total, 28.1 MMdts were transported on the Transco pipeline system while 16.7 MMdts were transported on the Columbia pipeline system. Moreover, during 2015 third-party suppliers delivered 30.4 MMdts to SJG's system on behalf of end use customers behind SJG's city gate stations. SJG also secures other long-term services from Dominion Transmission, Inc. (Dominion), a pipeline upstream of the Transco and Columbia systems. Services provided by Dominion are utilized to deliver gas into either the Transco or Columbia systems for ultimate delivery to SJG. Services provided by all of the above-mentioned pipelines are subject to the jurisdiction of the Federal Energy Regulatory Commission (FERC). Unless otherwise indicated, our intentions are to renew or extend these service agreements before they expire.

Transcontinental Gas Pipeline (Transco):

Transco is SJG's largest supplier of long-term gas transmission services which includes both year-round and seasonal firm transportation (FT) service arrangements. When combined, these FT services enable SJG to purchase gas from third parties and have delivered to its city gate stations by Transco a total of 297,958 dts per day (dts/d). Of this total, 133,917 dts/d is long- haul FT (where gas can be transported from the production areas of the Southwest to the market areas of the Northeast) while 164,041 dts/d is market area FT. The terms of SJG's year-round agreements extend for various periods through 2025. SJG's seasonal agreements are currently operating under their respective evergreen provisions.

Of the 297,958 dts/d of Transco services mentioned above, SJG has released a total of 49,041 dts/d of its market area FT service. These releases were made in association with SJG's Conservation Incentive Program (CIP) discussed further under Item 7, "Management's Discussion and Analysis of Financial Condition and Results of Operations". In addition, SJG released a total of 50,000 dts/d of its long-haul FT as part of Asset Management Agreements (AMA). The AMA-related releases are discussed below under "Gas Supplies". In addition, SJG released a total of 30,000 dts/d of its long-haul FT as an Off-System Sale capacity release.

SJG currently has six long-term gas storage service agreements with Transco that, when combined, are capable of storing approximately 5.0 MMdts. Through these agreements, SJG can inject gas into market and production area storages during periods of low demand and extract gas at a Maximum Daily Withdrawal Quantity (MDWQ) of up to 107,407 dts during periods of high demand. The longest term of these storage service agreements extends through March 31, 2023.

Dominion:

SJG subscribes to a firm storage service from Dominion, under its Rate Schedule GSS. This storage has an MDWQ of 10,000 dts during the period between November 16 and March 31 of each winter season, with an associated total storage capacity of 423,000 dts. Gas withdrawn from Dominion GSS storage is delivered through both the Dominion and Transco (Leidy Line) pipeline systems for delivery to SJG service territory. The primary term of this agreement extends through March 31, 2019.

Columbia:
SJG subscribes to four firm transportation agreements with Columbia which provide for an aggregate of 104,022 dts/d with the term of 9,000 dts/d of this capacity extending through October 31, 2017 while the term of 45,022 dts/d of this deliverability extends through October 31, 2019. The remaining 50,000 dts/d continues through October 31, 2030. SJG released 8,671 dts/d of this amount to SJRG in conjunction with its Conservation Incentive Program (CIP) thereby reducing the combined availability of firm transportation on the Columbia system to 95,351 dts/d. In addition, SJG released a total of 20,000 dts/d of this capacity to a gas marketer as part of an AMA leaving a net of 75,351 dts/d available to SJG. This AMA-related release is further discussed below under "Gas Supplies."

SJG also subscribes to a firm storage service with Columbia under its Rate Schedule FSS along with an associated firm transportation service under Rate Schedule SST, each of which extends through October 31, 2019. SJG has a total FSS MDWQ of 52,891 dts and a related 3,473,022 dts of storage capacity. SJG released to SJRG 19,029 dts/d of its FSS MDWQ along with 1,249,485 dts of its FSS storage capacity. Additionally, SJG released to SJRG 19,029 dts/d of its Columbia SST transportation service. Both releases made by SJG were in connection with its CIP and extend through September 30, 2016.

They go onto document their Gas suppliers and Supplemental Gas supplies showing more than adequate supplies and redundancy in their systems. They then document their peak day supply[8]:

[8] ibid page 26

Peak-Day Supply

SJG plans for a winter season peak-day demand on the basis of an average daily temperature of 2 degrees Fahrenheit (F). Gas demand on such a design day for the 2015-2016 winter season is estimated to be 503,873 dts (excluding industrial customers). SJG projects that it has adequate supplies and interstate pipeline entitlements to meet its design requirements. SJG experienced its highest peak-day demand for calendar year 2015 of 507,219 dts (including industrial customers) on February 15, while experiencing an average temperature of 10.1 degrees F that day.

Pipeline	Maximum daily deliverability (dths) (1)	Expiration
Texas Eastern Transmission, L.P.	270,738	Various dates between 2017 and 2023
Columbia Gas Transmission Corp.	50,000	Various dates between 2024 and 2030
Tennessee Gas Pipeline Co.	25,166	Various dates between 2018 and 2019
Transcontinental Gas Pipe Line Corp.	22,531	Various dates between 2016 and 2017
Algonquin Gas Transmission	12,000	June 30, 2017
Total	**380,435**	

(1) Numbers are shown net of any capacity release contracted amounts.

Figure 5 - NJR Firm precedent agreements

SJI has made similar statements in their 2014 and 2013 10K forms and annual reports as well. Even during the so-called "polar vortex" winter, SJI was adequately covered due to having long term precedent agreements in place along with numerous hedges in their unregulated subsidiaries to guard against commodity price risks. In fact, it should be noted that all of the PennEast LDC subsidiary parents had very strong financial windfalls during the polar vortex periods because of the makeup of their natural gas contracts.

New Jersey Resources also documents their natural gas system and the ability of their regulated affiliate, New Jersey Natural Gas, to absorb issues with their system and suppliers in communications to the SEC and investors[9]:

Firm Natural Gas Supplies

In fiscal 2015, NJNG purchased natural gas from approximately 86 suppliers under contracts ranging from one day to one year and purchased over 10 percent of its natural gas from two suppliers. NJNG believes the loss of these suppliers would not have a material adverse impact on its results of operations, financial position or cash flows as an adequate

[9] 2015 Annual Report and 10K filing, New Jersey Resources, page 46

number of alternative suppliers exist. NJNG believes that its supply strategy should adequately meet its expected firm load over the next several years.

Pipeline	Maximum daily deliverability (dths)	Expiration
Texas Eastern Transmission, L.P.	94,557	April 30, 2017
Transcontinental Gas Pipe Line Corp.	8,384	March 31, 2017
Total	**102,941**	

Figure 6 - NJR Storage Contracts

They also document their existing precedent agreements, see figure 5[10], their storage contracts in figure 6[11], and finally their upstream storage contracts in figure 7[12]:

Company	Maximum daily deliverability (dths)	Expiration
Dominion Transmission Corporation	128,714	Various dates between 2017 and 2020
Steckman Ridge, L.P.	38,000	March 31, 2020
Central New York Oil & Gas	25,337	March 31, 2018
Total	**192,051**	

Figure 7 - NJR Upstream Storage Contracts

In these tables and accompanying text, NJR demonstrates in great detail that they have a great deal of resiliency built into their system, numerous suppliers, and are able to deal with peak loads through storage and other means. Indeed, NJR states baldly: "*NJNG believes the loss of these suppliers would not have a material adverse impact on its results of operations, financial position or cash flows as an adequate number of alternative suppliers exist*".

UGI also makes similar disclosures in their filings[13]. They state:

Gas Utility is permitted to recover prudently incurred costs of natural gas it sells to its customers. See "Management's Discussion and Analysis of Financial Condition and Results of Operations - Market Risk Disclosures" and Note 9 to Consolidated Financial Statements. Gas Utility meets its service requirements by utilizing a diverse mix of natural gas purchase contracts with marketers and producers, along with storage and transportation service contracts. These arrangements enable Gas Utility to purchase gas from Gulf Coast, Mid-

[10] ibid

[11] ibid

[12] ibid

[13] UGI Corporation 2015 Annual report and Securities and Exchange Commission form 10K, page 25

Continent, Appalachian and Marcellus sources. For the transportation and storage function, Gas Utility has long-term agreements with a number of pipeline companies, including Texas Eastern Transmission, LP, Columbia Gas Transmission, LLC, Transcontinental Gas Pipeline Company, LLC, Dominion Transmission, Inc., ANR Pipeline Company, and Tennessee Gas Pipeline Company, L.L.C.

Gas Supply Contracts

During Fiscal 2015, Gas Utility purchased approximately 82.8 bcf of natural gas for sale to retail core-market customers (principally comprised of firm- residential, commercial and industrial customers that purchase their gas from Gas Utility ("retail core-market")) and off-system sales customers. Approximately 83% of the volumes purchased were supplied under agreements with 10 suppliers. The remaining 17% of gas purchased by Gas Utility was supplied by approximately 24 producers and marketers. Gas supply contracts for Gas Utility are generally no longer than 12 months. Gas Utility also has long-term contracts with suppliers for natural gas peaking supply during the months of November through March.

UGI then goes on to talk about their supply outlook for the coming year[14]:

Outlook for Gas Service and Supply

Gas Utility anticipates having adequate pipeline capacity, peaking services and other sources of supply available to it to meet the full requirements of all firm customers on its system through fiscal year 2016. Supply mix is diversified, market priced, and delivered pursuant to a number of long-term and short-term primary firm transportation and storage arrangements, including transportation contracts held by some of Gas Utility's larger customers.

All three speak of future growth prospects, but those prospects are in the 1%-3% range and would not factor into any PennEast decision making process.

From these filings, we see these utilities seem to already have resilient, redundant natural gas systems and supplies. There is no indication in their SEC filings that their systems are at risk and need additional redundancy. To the contrary, they paint a very positive outlook. And it should be noted that this outlook does not include the PennEast pipeline.

From this we conclude that the primary motivation for PennEast is a profit motive for the owners of the LDC shippers.

[14] ibid

2.8. NEW JERSEY NATURAL GAS SINGLE POINT OF FAILURE

New Jersey Natural Gas has stated publicly that they need PennEast because, according to Kathleen Ellis, COO of New Jersey Natural Gas, "[NJNG] is served primarily by one interstate pipeline, which provides between 85 percent and 90 percent of our total supply. You don't need to be an energy expert to know that two feeds from two different sources are considerably more reliable than one".[15] In fact, their long term precedent agreements show that only 71% of their volumes come from a single source (Texas Eastern). The other 29% come from other pipelines.

If you factor in storage the numbers come closer. However, there is a major issue with NJR's claims. Specifically, if PennEast were to directly connect to NJR's system today, or via the proposed Southern Reliability Link (SRL), then some credence could be given to Ms. Ellis' contentions.

However, PennEast does not connect into the NJR system. Instead, PennEast terminates in Pennington, NJ. Gas from PennEast will need to flow through the Texas Eastern system from Pennington, NJ south to Bordentown, NJ (which will involve the Garden State Expansion project). So even with PennEast, they are still reliant on the Texas Eastern pipeline.

If PennEast is so vital to New Jersey Resources, and if they are in fact deeply concerned about single points of failure in their system, it is not clear at all why they choose to terminate PennEast short of their own system and will have to rely on another pipeline for final-leg delivery into their area.

3. LOW PRICES, LACK OF DEMAND IN NJ

There is no demonstrated demand in the state of NJ for additional natural gas supplies. Figure 7 shows a graph of natural gas prices in NJ trending in a race towards the bottom.

The figure shows New Jersey's prices have been dropping dramatically since 2008, and the downward trend is much steeper than that of the national average. Also, New Jersey's graph shows much less price variation than the national average, indicating that we suffer significantly less seasonal price variance than the rest of the nation.

eia.gov confirms that future demand projections for NJ indicate that demand will be flat out to 2040.

The DEIS makes vague claims about PennEast possibly "reducing" emissions by changing the fuel source mix, but this is not a valid claim in NJ. In NJ there is only 1 coal plant remaining, the so-called "BLEngland" site in southern NJ. This plant has been on the verge of retirement for

[15] Kathleen T. Ellis , COO NJNG, http://www.nj.com/opinion/index.ssf/2016/09/nj_natural_gas_says_errors_skew_penneast_pipeline.html

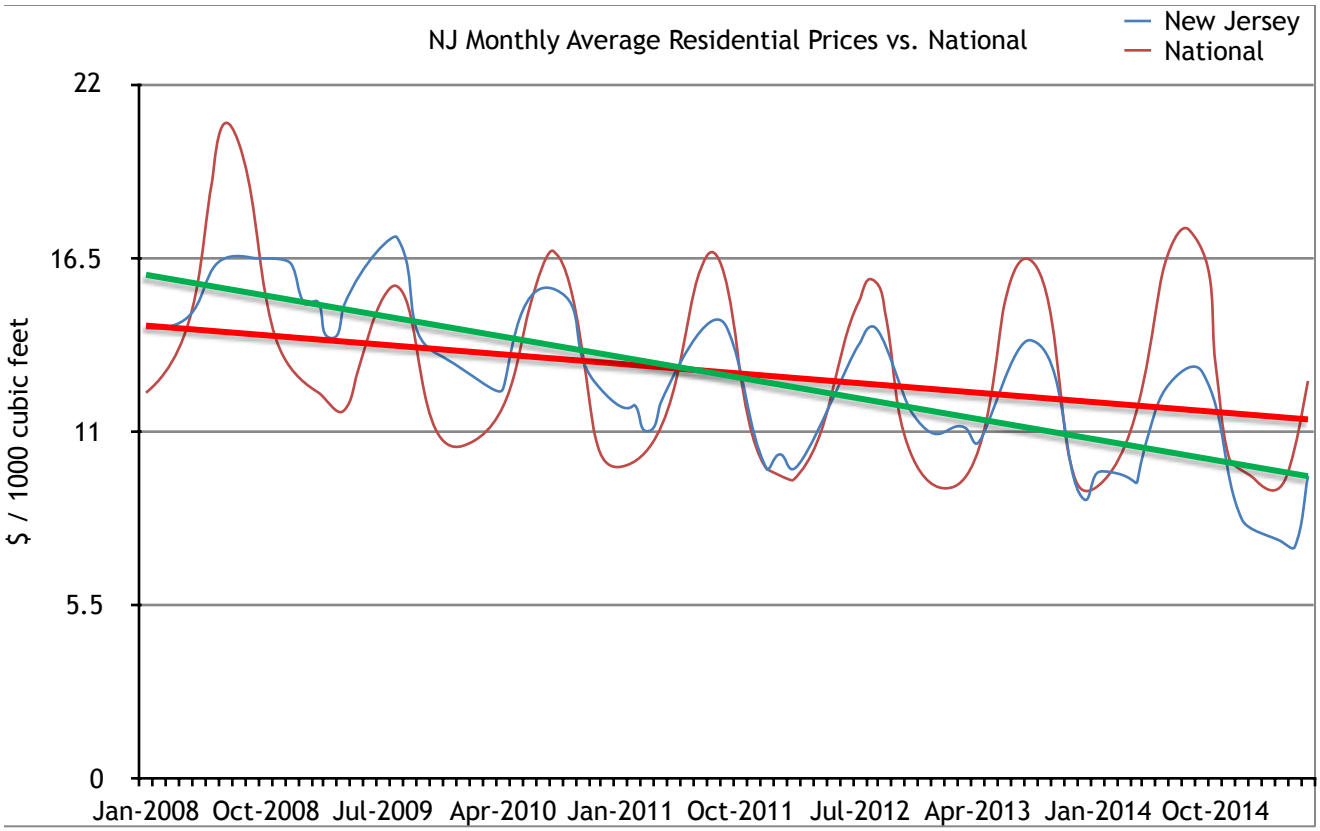

Figure 7 - New Jersey Average Residential Price vs National average

many years now, its owner has been embroiled in controversy over trying to convert it to natural gas instead of simply retiring it[16]:

> *The owner of the plant, which was once viewed as one of the dirtiest in the state, agreed to shut down the coal unit in an administrative consent order several years ago with the state Department of Environmental Protection that would resolve a series of air pollution violations at the facility. The closing has been* ***repeatedly extended by the state****, the most recent occurring in 2014.*
>
> *The $90 million project is awash in controversy and litigation, mostly because the plant will get its fuel from a new 22-mile natural gas pipeline through parts of the Pinelands, a route opposed by four former governors and conservationists.*

The pipeline referenced above would be built by PennEast owner South Jersey Industries, and is one of their main justifications for PennEast. There is no need to keep this plant open, and in

[16]" CLOUD OF CONTROVERSY HANGS OVER AIR PERMIT FOR NEW B.L. ENGLAND POWER PLANT", http://www.njspotlight.com/stories/16/04/13/cloud-of-controversy-hangs-over-air-permit-for-new-b-l-england-power-plant/

fact the PJM has begun modeling the plant's shut down into its system projections (with no natural gas replacement). In fact, by building PennEast, they will be not only keeping this one site open and polluting, but also require the new 22-mile pipeline to be built through the Pinelands region of NJ, in addition to the construction of PennEast. This shows PennEast not being built to meet new demand, but instead it shows PennEast manufacturing demand through its owns and related projects.

4. NO ACTION ALTERNATIVE

According to NEPA, the "No Action Alternative" in an Environmental Impact Statement must take a comprehensive, "hard look" at what would occur if the project were not built. This includes the impacts that would not occur, and any other positive or negative outcomes for the region involved. Ideally, it should also cite supporting material on which to base its conclusions.

But, far from being rigorous, the No Action Alternative in the PennEast DEIS is only four paragraphs in length. It contains only a single data point for citation, a reference to the project shippers. No other references are given, other than indicating that "According to PennEast…", with no other supporting materials.

It further states[17]:

> *"If PennEast's proposed facilities are not constructed, the Project shippers may need to obtain an equivalent supply of natural gas from new or existing pipeline systems. In response, PennEast or another natural gas transmission company would likely develop a new project or projects to provide the volume of natural gas contracted through the Project's binding precedent agreements with the Project shippers."*

In fact, the shippers own statements to the SEC shown in section 2-7 of this document show this statement to be false. If PennEast was not constructed, the utilities would continue to use their existing precedent agreements, and would renew them in the future. They have more than sufficient capacity already, low 1-3% growth, and prices near bottom in the state.

As such, the no action alternative treatment within the DEIS is not accurate or comprehensive. It does not accurately capture the existing markets or natural gas systems the shippers utilize, and cites no facts in support of its conclusions.

5. DUAL FUEL ALTERNATIVES

[17] DEIS section 3-3

The DEIS does not consider dual-fuel fired plants as an alternative for electrical power generation. Given that many of the justifications for the pipeline are based on "peak capacity" scenarios, considerations such as dual-fuel fired electrical generation are appropriate and necessary.

The Eastern Interconnection Planning Cooperative (EIPC) commissioned a very large, multi-year study in to capacity and generations in the Eastern region to study issues such as this one[18]. The report notes that more and more dual-use plants are ramping up, and these have been used increasingly to alleviate pipeline constraints during peak pipeline use times. The argument here is simple: why build a billion dollar pipeline if you could solve the problem by burning oil 4 days a year (and only in the event of an extreme winter event)?

Such an idea has been ridiculed by PennEast representatives in the press, but misses the point that burning oil or other fuels for only a few days a year is a very viable alternative to building a 118 mile long pipeline.

6. LNG STORAGE ALTERNATIVES

The DEIS fails to seriously consider LNG storage alternatives to meet the needs of PennEast shippers during peak capacity times. LNG storage is a viable alternative in many scenarios, particularly when peak periods are relatively infrequent.

As noted here, several of the PennEast shippers already are aggressive users of LNG storage solutions and facilities. Additional use of storage should be included in the DEIS as an option that would have much smaller localized impacts and more efficient use of resources in the state.

[18] "Phase 2 Report: Interregional Transmission Development and Analysis for Three Stakeholder Selected Scenarios And Gas-Electric System Interface Study July 2015" http://nebula.wsimg.com/92151dbddb45d5c0d4981177eb19d52a?AccessKeyId=E28DFA42F06A3AC21303&disposition=0&alloworigin=1