



Pinelands Preservation Alliance

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Protecting the Pinelands
since 1989

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January 24, 2017

Mr. Sean Earlen, Chair
Ms. Nancy Wittenberg, Executive Director
Pinelands Commission
PO Box 359
15 Springfield Road
New Lisbon, New Jersey 08064

Re: Pinelands Commission Application No. 2012-0058.001

Dear Mr. Earlen and Ms. Wittenberg,

The Pinelands Preservation Alliance (PPA) wishes to submit the following comments on the application of South Jersey Gas (SJG) for approvals to build a natural gas transmission pipeline through the Pinelands Forest Area in Cumberland, Atlantic and Cape May Counties. We have previously objected to the procedure that the Pinelands Commission is following after the Appellate Division remand of the matter, and we will not repeat those issues here. Please provide the following comments and attached expert reports to the Commissioners and include them in the record of decision in this matter.

As you previously found over the course of more than a year of reviews in 2013, the proposed pipeline violates the Comprehensive Management Plan (CMP) rules for development in the Forest Area, because it is not designed to “primarily serve only the needs of the Pinelands.” *The proposed pipeline is exactly the kind of infrastructure development which the CMP bars from the Forest Area* because, once approved, such developments (1) create pressure for more development along their length (whatever the project’s proponents may hope or claim today), (2) strike at the integrity of the CMP, (3) create precedents for future violations of the CMP, and (4) risk damage to natural resources in a Pinelands conservation zone. If this project is approved, it will render the long-standing, fundamental rule of the CMP governing infrastructure in the Forest Area meaningless. It is irrelevant whether SJG can make an argument that, all things considered, the route it proposes is “preferred.”

Executive Summary

The Commission cannot find the pipeline will primarily serve only the needs of the Pinelands and meets CMP resource protection rules for the following reasons (details on each point follow this summary):

a. The pipeline is designed to carry four times as much gas as the BL England plant could use, and more than twice the capacity that SJG has contracted to provide to the BL England power plant.

- The proposed new 447 MW combined cycle generating facility would use up to 67,224 MCF of gas per day when operating at full capacity, or about half the 125,000 MCF per day of capacity that SJG has contracted to provide BL England under the Standard Gas Service Agreement. This actual usage would amount to about 22,600,000 MCF per year. While SJG previously failed to disclose this fact, this result is confirmed by the Standard Gas Service Agreement, which obligates BL England to pay for only 20,797,397 MCF per year. *See* Skipping Stone Report, Ex. A, at pp. 7-8.
- Even operating at the lower 435 psig Maximum Allowable Operating Pressure (MAOP) it claims, the pipeline would have a capacity of approximately 309,000 MCF to the interconnection station in Tuckahoe, where it would meet the existing north-south transmission line. This means that, in addition to the unused capacity available to BLE, SJG would have an additional 184,000 MCF of capacity, or a total of 242,000 MCF of capacity for its other customers at that point on a typical day. *See* Skipping Stone Report, Ex. A, at pp. 8-9. Any lowering of this capacity on the coldest days of the year is irrelevant, since SJG is under no contractual obligation to provide BL England with service on the 15 coldest days of the year.
- The pipeline is actually designed to operate with far higher capacity still. The pipeline is designed to operate at an MAOP of 700 psig, and will be able to do so with minor upstream improvements that SJG says it has planned. A typical 700 psig MAOP transmission line would have a capacity of about 333,800 MCF/day when operating at 570 psig, or 380,000 MCF/day when operating at the full MAOP of 700 psig. This is several times the amount of transmission capacity that BL England could possibly use to run the proposed new power plant, and three times the maximum capacity SJG has contracted to BL England. *See* Skipping Stone Report, Ex. A, at pp. 11-12. Again, a pipeline designed to carry more than twice the capacity contracted to the power plant, and at least four times the

capacity the proposed new plant could actually use, cannot be said to “primarily” serve that one customer.

- b. The mere fact that BL England is inside the Pinelands boundary does not mean gas to the plant primarily serves the “needs of the Pinelands”** (even if the pipeline did primarily serve the power plant). The terms and intent of the “primarily serves” rule for the Forest Area is to focus on the region’s needs, not an individual specific user that happens to be located inside the boundary. Because the vast majority of those receiving BL England electricity are outside the Pinelands, it is impossible to say bringing gas to the plant *primarily serves only a need of the Pinelands*.
- c. SJG has consistently said the pipeline is being built for – and most of the cost paid by – its ratepayers, the vast majority of whom are outside the Pinelands.** SJG cannot make ratepayers bear 60% of the pipeline cost, but claim the entire capacity of the pipeline will go to BL England.
- d. Ratepayers have first claim on all gas transported by the new pipeline, and SJG’s agreement for BL England is not even a firm contract.** Under its agreement, SJG doesn’t have to provide any gas at all on the 15 coldest days of the year, or at any other time it needs that capacity for its ratepayers. The contract SJG entered with RC Cape May Holdings makes clear it is not a firm commitment, and the BL England plant is under no obligation or expectation to use anywhere near the *maximum* capacity it is allowed.
- e. The great majority of South Jersey Gas customers are outside the Pinelands.** At most, only 30% of the customers who could receive the redundancy or reliability service of the new pipeline are inside the Pinelands. The new pipeline could not provide redundancy or reliability service to Atlantic County customers, either within or outside the Pinelands, because the existing north-south pipeline from Atlantic County can only send gas south towards the new pipeline, due to its design pressure. In any case, the great majority of the company’s customers in both counties are outside the Pinelands.
- f. The vast majority of electricity customers and demand to be served by BL England are outside the Pinelands.** As BPU itself has confirmed, BL England’s power does not go specifically to Pinelands customers, but feeds into a grid that serves a region in which only a very small percentage of customers and demand are in the Pinelands.
- g. Repowering the BL England plant is not necessary, either to Pinelands customers or anyone else, according to updated PJM Interconnection findings, so the pipeline would not “primarily serve only the needs of the Pinelands” even if it only went to the power plant.** PJM Interconnection’s analyses show that neither Pinelands residents nor

anyone else needs BL England to be repowered to ensure reliable electrical service. PJM has specifically found that, in light of new power plants and system upgrades already completed or in process, the closure of the Oyster Creek NGR and of the BL England plant do not create any reliability problems for the region's electricity supply.

- h. When the Pinelands Commission staff found the pipeline violates the CMP, it had all the information then as it has now – so there is no valid justification for doing an about-face.** Each piece of information it now says only came to light when SJG delivered a copy of the Standard Gas Service Agreement was actually discussed openly in public meetings and SJG documents *prior* to the Executive Director's January 2014 finding that the pipeline violates the CMP. This kind of unjustified about-face makes the Commission look unprincipled.
- i. The pipeline will bring impacts and risks to water and other resources that neither SJG nor the Pinelands Commission has addressed or resolved.** Just because the pipeline is to be built beside the path of or under roads does not mean it will not harm or risk natural resources. SJG has simply ignored research and experience on the vulnerability of submerged pipelines to leaks and failure, the impacts that escaping liquids and gas would have, and the risks that drilling and trenching will alter the hydrology of streams or wetlands through which the pipeline is to pass. The record as it stands is drastically insufficient to demonstrate compliance with CMP resource protection standards.

The pipeline Would Not Primarily Serve Only the Needs of the Pinelands

A. The pipeline is designed to carry several times as much gas as the BL England plant could use, and more than twice the capacity SJG has contracted to provide to the BL England power plant.

a. The new 447 MW combined cycle generating facility would use up to 67,224 MCF of gas per day when operating at full capacity, or about half the 125,000 MCF per day of capacity that SJG has contracted to provide BLE under the Standard Gas Service Agreement. This actual usage would amount to about 22,600,000 MCF per year. While SJG previously failed to disclose this fact in its Compliance Statement, this result is confirmed by the Standard Gas Service Agreement, which obligates BL England to pay for only 20,797,397 MCF per year. See Skipping Stone Report, Ex. A, at p.7-8. Under the contract arrangement, BL England would buy gas from the interstate supplier for delivery to the SJG system and transport to the power plant. But BL England is under no obligation or even expectation to use all of the 125,000 MCF/day capacity; in fact, it is obligated to pay for only the annual total of 20,797,397 MCF per year, or about half of the annualized capacity provided in the Standard Gas Service Agreement on which SJG tries to rely in its argument. SJG and the Commission, therefore, cannot rely on the Standard Gas

Service Agreement to find that the pipeline would *primarily* serve only the needs of the Pinelands.

b. Even operating at the lower 435 psig Maximum Allowable Operating Pressure (MAOP), the pipeline would have a capacity of approximately 309,000 MCF to the interconnection station in Tuckahoe, where it would meet the existing north-south transmission line. This means that, *in addition to the unused capacity available to BLE*, SJG would have an additional 184,000 MCF of capacity with the pipeline, or a total of 242,000 MCF of capacity for its other customers or uses at that point on a typical day (and even more on the 15 coldest days of the year when it has no contractual commitment to supply BL England). See Skipping Stone Report, Ex. A, at pp. 8-9. To be clear, this additional capacity is beyond the maximum contracted capacity in the Standard Gas Service Agreement. This is also more than SJG would need to serve all its customers in Cape May, or Cape May and Atlantic Counties, within and beyond the Pinelands. See Skipping Stone Report, Ex. A, at pp. 9-10. For this reason alone, SJG and the Commission cannot rely on SJG's contract with BL England's owners to find that the pipeline would *primarily* serve the needs of the Pinelands.

c. The pipeline is actually designed to operate with far high capacity still. The pipeline is designed to operate at an MAOP of 700 psig, and will be able to do so with minor upstream improvements that SJG says it has planned. A typical 700 psig MAOP transmission line would have a capacity of about 333,800 MCF/day when operating at 570 psig, or 380,000 MCF/day when operating at the full MAOP of 700 psig. This is several times the amount of transmission capacity the BL England could possibly use to run the proposed new power plant, and three times the maximum capacity SJG has contracted to BL England. See Skipping Stone Report, Ex. A, at p. 12.

There can be no question that SJG intends to operate the pipeline with the MAOP of 700 psig, either when the pipeline is first made operational or subsequently. First, it is spending the additional money to build the pipeline at this greater size and capacity, and has stated it intends to get ratepayers to bear that additional cost. Second, it told BPU the pipeline would have an MAOP of 700 psig and obtained BPU approvals on that basis. And third, SJG and its consultants have stated that the modest upstream upgrade needed to operate the new pipeline at the higher pressure are feasible and planned to take place. See, e.g., BPU Order in Docket No. G013030202 dated July 23, 2015; South Jersey Gas Responses to BPU Discovery Requests RCR-E-004 and RCR-E-005. The Black & Veatch Report specifically justifies the construction of a 24", higher-pressure pipeline, despite the extra cost, on the basis of serving the ratepayers, not BL England. See Black & Veatch Report, especially pp. 6 & 28; Cooper Report, Ex. B, at pp. 8-12.

Unless SJG proves it would waste its ratepayers' and investors' money on an extra-big pipeline and never use that capacity, the Commission must treat the pipeline as being intended to operate as it is designed. Again, a pipeline designed to carry more than twice the capacity contracted to the power plant, and at least four times the capacity the proposed new plant could actually use, cannot be said to "primarily" serve that one customer. This is true whether or not SJG chooses to operate the pipeline at its maximum permitted pressure of 700 psig or at the lower pressure of 435 psig that it claims.

B. The mere fact that BLE England is inside the Pinelands boundary does not mean gas to the plant primarily serves only the "needs of the Pinelands" (even if the pipeline did primarily serve the power plant).

SJG argues that the Proposed Pipeline will "primarily serve only the needs of the Pinelands" by primarily servicing a business located in the Pinelands. South Jersey Gas CMP Compliance Statement, May 21, 2015, at 5. However, the mere fact that BL England is physically located inside the Pinelands does not mean that gas service to the plant will primarily serve only the needs of the Pinelands, as required by the CMP, for four basic reasons:

- (a) the power plant is not itself a "*need* of the Pinelands," as the Pinelands does not *need* to have a power plant within its boundaries, and the people of the Pinelands are already served with electricity from power plants outside the Pinelands;
- (b) the combined cycle power plant which the pipeline would feed does not even exist yet, but is only planned or proposed for the future (and indeed may never be built), so it cannot possibly qualify as a need of the Pinelands;
- (c) the power plant will serve a population and demand that is almost all located outside the Pinelands, as power plants do not send electricity only to specific buildings and homes but feed a regional network of customers. See CMP Policy & Implementation Committee Meeting Minutes, Jul. 26, 2013 at 4 (acknowledging that once energy enters the grid, "one cannot say where the energy will go");and
- (d) the pipeline is designed to carry vastly more gas than the proposed 447 KW combined cycle facility could possibly use, and far more than BL England's owners have committed themselves to buy and transport through the pipeline.

SJG's argument is contrary to the conservation and planning principles at the heart of the Pinelands Protection Act and the CMP, which strictly limit development in Pinelands conservation zones like the Forest Area. While all development in the Forest Area is heavily regulated, public utilities, such as natural gas pipelines and power plants, are held to a particularly high standard. They must be "intended to primarily serve only the needs of the

Pinelands.” N.J.A.C. 7:50-5.23(b)(12). In determining compliance with this standard, the Commission examines customers served by the utility. See Former Pinelands Commission Executive Director Terrence Moore’s Letter to the New Jersey Pinelands Commission (19 Jan. 2017) (collecting cases). The Commission has not considered the location of the utility to be relevant to this analysis.

Thus, if the construction of BL England were proposed today, it would need to meet the CMP’s rigorous “primarily serves only the needs of the Pinelands” standard. In that circumstance, the Commission would consider whether the customers of the plant were primarily located in the Pinelands. The plant’s location within the Pinelands would be irrelevant. The same must be true of the proposed pipeline.

In fact, SJG’s characterization of BL England as an existing customer within the Pinelands is misleading: the conversion of BL England from coal-powered to natural gas-powered will require the construction of a *new* dual-fuel 447 MW combined cycle generation facility. See Skipping Stone Report, Ex. A, p. 7. So the facility the pipeline would serve does not even exist – and indeed may never be built. Since the facility does not exist, the pipeline cannot possibly be justified on the grounds that it serves a need of the Pinelands just because the facility is to be placed inside the Pinelands boundary.

In this regard, we also strongly support the comments submitted by former Pineland’s Commission Executive Directors Terrence Moore and John Stokes, and former Commission member Robert McIntosh.

C. SJG has consistently said the pipeline is being built for – and most of the cost is to be paid by – current and future ratepayers, the vast majority of whom are outside the Pinelands.

Even if the location of the power plant were sufficient to determine whom the proposed pipeline would serve, the pipeline would still not primarily serve the Pinelands because the pipeline is designed primarily for purposes other than the power plant (as the Pinelands Commission has already found).

SJG clearly states in its “Compliance Statement” that the proposed pipeline “has two purposes. First, it is intended to provide natural gas service to BL England Second, it is intended to reinforce SJG’s existing infrastructure in the Pinelands, greatly reducing the potential for a loss of service to 28,500 Pinelands customers and 142,000 customers overall in Cape May and Atlantic Counties.” (p. 1) This claim is repeated throughout the Amended Application and SJG reports and documents submitted to the Commission. The Board of Public Utilities repeated and relied upon this claim in its orders approving the project. See, e.g., Order re Docket No. G013030202 dated June 21, 2013; Order re Docket No. G013030202, dated July 23, 2015; Petition and Exhibits (filed by SJG), BPU Docket No. G013111049, dated October 31,

2013 pp. 3-4, 6-8, 12 (stating that “the Reliability Line is needed whether or not the Dedicated Line [to BL England] is built” and “The Reliability Line ... will supply both the existing 250 psig transmission and 60 psig distribution systems of the Company.”) The purpose of the pipeline has been a feature of this project from the start and has not changed in any way since the Executive Director’s finding of non-compliance in 2014.

The fact that the primary “beneficiaries” of the pipeline would be SJG customers other than the BL England plant is conclusively demonstrated by the fact that SJG petitioned for and obtained an order by BPU that BL England’s owners must only pay for 40% of the cost of building the pipeline, while *the ratepayers must bear 60% of the cost*. SJG commissioned and relied on a detailed report by Black & Veatch to support its applications to the BPU and the Commission. The Black & Veatch report specifically argues that the division of cost for the pipeline must be based on the principle of “causation,” and that the needs of the company’s ratepayers represented 60% of the cause for building the pipeline. *See* Black & Veatch, Cost Allocation Study for a Proposed High Pressure Natural Gas Transmission Pipeline, Prepared for South Jersey Gas, October 2012. The BPU accepted this argument and ruled for SJG that its ratepayers must bear the primary cost of the pipeline. *See* BPU Order in Docket No. 13010052, dated April 29, 2013. In fact, the agreement between SJG and BL England is expressly premised on the stipulation that the ratepayers will bear 60% of the cost of the project. *See* Stipulation, BPU Docket No. 13010052, especially paragraphs 24-25. All these facts were in the record and known to the Pinelands Commission since before the Executive Director’s January 2014 Report.

SJG has testified to the BPU that:

[I]t is very important to be clear about the fact that RCCM [RC Cape May Holdings] is paying for its share of this line, and is in no way being subsidized. As outlined in the Black and Veatch report dated October, 2012, the reliability portion of the new line is justified entirely based upon the needs of South Jersey Gas's system, and is a system addition that SJG will be pursuing independent of whether or not the BL England repowering proceeds. ... In order for RCCM to participate in the PJM capacity market as a competitive generator, the company cannot enjoy any sort of subsidy. As such, we wish to be very clear on the point that RCCM is fully paying for the portion of the line that supports the plant.

See Direct Examination of Richard Bethke (Associated Engineer for SJG), Exhibit P-4 to SJG Petition In the Matter of the Petition of South Jersey Gas Company for a Determination Pursuant to the Provisions of N.J.S.A. 40:55D-19, p. 10 (emphasis added). Again, this material was known to the Pinelands Commission when the Executive Director determined the pipeline violates the CMP.

In sum, SJG cannot make ratepayers bear 60% of the pipeline cost, but claim the entire capacity of the pipeline will go to BL England. See Cooper Report, Ex. B, at Executive Summary and pp. 2-3, 7-8.

D. Ratepayers have first claim on all gas transported by the new pipeline, and SJG's agreement for BL England is not even a firm contract.

Under its agreement, SJG doesn't have to provide any gas at all on the 15 coldest days of the year or at any other time it needs that capacity for its ratepayers. See Skipping Stone Report, Ex. A, at pp. 5-6 and 15; Cooper Report, Ex. B, at pp. 5-6.

Consistent with these facts, SJG told the BPU that the pipeline will serve both existing customers and the power plant, with existing customers taking precedence:

When the pipeline is not needed for reliability to South Jersey Gas customers, it may be used to serve supply to BL England...with or without the BL England project, B&V recommended that this line be installed to protect the South Jersey Gas customers. The fact that this line also serves BL England is no different than the fact that the stations at Swedesboro and Repaupo also serve the needs of BL England when BL England is allowed to be in service. BL England is allowed to be supplied only when it does not put the South Jersey Gas customers at risk of outage.

Response to Discovery Request, BPU Docket No. GO13010052, RCR-P-035 (emphasis added).

In fact, SJG's argument intentionally confuses the way the pipeline would function. SJG has *not* contracted to supply gas to the BL England power plant, but only to make its new pipeline available to BL England for *up to* 125000 MCF per day of the pipeline's total *capacity*, on at least 350 days per year, *if and to the extent* BL England obtains gas from the interstate supplier and has it delivered to the upstream end of SJG's system. Under the Standard Gas Service Agreement, RC Cape May Holdings is responsible for buying its own gas from the interstate supplier; SJG just provides the conduit. The new pipeline would serve SJG's existing and new customers, as well serving BL England, every day of the year because it can transport far more than the contracted capacity for BL England.

The Standard Gas Service Agreement is *not a Firm Supply* contract. SJG's consultants state that "125000 MCF is the maximum volume of natural gas that can reliably flow through SJG's system *on the coldest winter days*" (Letter from Steven R. Ewing, Woodard & Curran, to Charles Horner, Pinelands Commission, dated July 16, 2015, p. 2), but the contract between SJG and RC Cape May Holdings *does not require SJG to supply the power plant on those days at all*. Moreover, SJG is clear that "BL England is allowed to be supplied only when it does not put the

South Jersey Gas Customers at risk of outage.” See South Jersey Gas Response to BPU Discovery RCR-P-035. See Skipping Stone Report, Ex. A, at pp. 5-6; Cooper Report, Ex. B, at pp. 5-6.

The pipeline is also designed, according to SJG, to ensure that “125000 MCF is the maximum volume of natural gas that can reliably flow through SJG’s system on the coldest winter days without impacting the Company’s ability to serve the natural gas needs of our existing customers” (Ewing Letter dated July 16, 2015 Letter, p. 2.), thus conceding that the pipeline is designed so that even in the most difficult conditions it can and will serve the company’s existing customers (the vast majority of whom are outside the Pinelands).

E. The great majority of South Jersey Gas customers are outside the Pinelands.

At most, only 30% of the customers who could receive the redundancy or reliability service of the new pipeline are inside the Pinelands. The great majority of the company’s customers in both counties are outside the Pinelands. The vast majority of SJG customers are located outside the Pinelands. See Skipping Stone Report, Ex. A, pp. 13-15; see also Cooper Report, Ex. B, pp. 30-32. This fact is also shown, for example, in the quote above from SJG and in the presentation SJG gave to the Policy & Implementation Committee on September 27, 2013 (see especially slides 8 and 9). This conclusion is not surprising, since, according to the 2010 Census Block data, 77% of the population of Cape May County and 61% of the population of Atlantic County live outside the Pinelands (defined as the Pinelands Area plus Pinelands National Reserve).

In addition, the pipeline could not provide redundancy or reliability service to Atlantic County customers, either within or outside the Pinelands, further limiting the number of Pinelands customers which could receive gas through the new pipeline. This is so because the existing north-south pipeline from Atlantic County can only send gas south towards the new pipeline, due to its design pressure. See Skipping Stone Report, Ex. A., at pp. 10-11.

F. The vast majority of electricity customers and demand to be served by BL England are outside the Pinelands.

As BPU itself has confirmed, BL England’s power does not go specifically to Pinelands customers, but feeds into a grid that serves a region in which only a very small percentage of customers and demand are in the Pinelands. That’s just how electricity and power grids work. This engineering and scientific fact is explained in detail in the Cooper Report, Ex. B, at pp. 24-28.

SJG claims that the majority of the power to be generated over the lifetime of a refitted BL England plant would be by demand inside the Pinelands, relying on a report by PowerGEM.

This claim is simply absurd. It rests upon the patently false premise that it is possible to trace electrical power from its source to particular users within the PJM Interconnection system.

The fatal flaw in the SJG argument was specifically refuted by none other than the BPU itself in response to questions posed by Commissioners to its representative, Jerry May, director of the BPU's division of energy: "In response to Commissioner Rohan Green's question regarding what customers would be served by BLE if Oyster Creek did not shut down, Mr. Mays explained the regional transmission agency, PJM. ... He said ... one cannot say where that energy will go as it will be included with electricity transmitted through the PJM system." See Minutes of CMP Policy & Implementation Committee Meeting, July 26, 2013, p. 4 (emphasis added).

The Cooper Report explains the operation of the electrical system and the many ways in which the applicant's PowerGEM report is defective and in error. Not only does the report completely fail to show that most demand would be from inside the Pinelands, it is also based on a fundamental misrepresentation of the working of the electrical transmission system. In fact, as BPU pointed out to the Commission, the electrical power system into which BL England would sell electricity is far larger than the Pinelands or New Jersey, and each power source within the system benefits all users within its geographic area. It is impossible, therefore, to conclude that the BL England plant would primarily serve demand inside the Pinelands. See Cooper Report, pp. 26-28.

It is important to note, moreover, that 81% of the population of the seven counties with land in the Pinelands National Reserve live outside the Pinelands National Reserve boundary, as of the 2010 U.S. Census. It follows that those inside the Pinelands represent a very small percentage of the population served by the PJM system and the BL England power plant.

G. Repowering the BL England plant is not necessary, either to Pinelands customers or anyone else, according to updated PJM Interconnection findings, so the pipeline would not "primarily serve only the needs of the Pinelands" even if it only went to the power plant.

PJM Interconnection's analyses show that neither Pinelands residents nor anyone else needs BL England to be repowered to ensure reliable electrical service. PJM has specifically found that, in light of new power plants and system upgrades already completed or in process, the closure of the Oyster Creek nuclear facility and of the BL England plant do not create any reliability problems for the region's electricity supply.

For several years, the BL England plant has operated only on a very limited basis. See Cooper Report, Ex. B, pp. 12-14. Over that period, *PJM has not identified a single reliability violation attributed to BL England's limited operation.* Pinelands customers have enjoyed

reliable electric service despite the substantial drop in BLE's output. These facts disprove SJG's assertion that the full capacity of the plant "*is strategically vital for energy reliability in the southern New Jersey region.*" SJG Compliance Statement, p. 6.

This result is not surprising. The updated PJM reliability assessments show that BL England's retirement would create no long-term reliability concerns, with or without the retirement of the Oyster Creek nuclear facility. These assessments take into account the creation of a great deal of new generating facilities and transmission system upgrades that have taken place in recent years. So events on the ground have outrun SJG's claims of necessity. SJG, however, relies on clearly misleading and outdated claims by its consultant, PowerGEM, regarding the electric reliability impacts of repowering BL England. The updated PJM analyses are discussed in detail in the Cooper Report, Ex. B., pp. 14-24.

In summary, key points here include:

- In November, 2014, PJM analyzed long-term system reliability by modeling its transmission grid using an updated 2022 base case that incorporates changes to the grid. PJM assumed that BLE was retired as planned, and the analysis found no "single contingency" reliability violations in the Atlantic City Electric (ACE) transmission zone, and only two Generator Deliverability violations which have since been resolved by other upgrades. PJM identified no long-term reliability concerns for the ACE transmission zone where BL England is located, assuming the plant retires completely.
- In December, 2014, PJM analyzed system reliability under a scenario that assumed that the study areas were subject to a polar vortex under winter peak loads. In this analysis, PJM assumed that BLE's turbines were not repowered and anticipated the deactivation of the remaining 137 MW of the plant's existing generation. The analysis found no loss of load expectation in either of the transmission zones (ACE and Jersey Central Power & Light) that serve customers in the Pinelands.
- In January, 2016, PJM again updated its reliability analysis on the assumption that all of BL England's remaining generation (including 8 MW supplied by its diesel units), as well as all generation from the Oyster Creek nuclear plant, would be deactivated as of 2021. This updated analysis revealed that Oyster Creek's retirement would create no reliability impacts, and BL England's complete deactivation would create only Generator Deliverability violations, which is a measure of economic efficiency, not actual reliability of electricity service. (SJG mischaracterizes generator deliverability violations as reliability violations, which they are not. Cooper Report, Ex. B., p. 21-22.)

- In September 2015, ACE filed a petition with the BPU to upgrade the Orchard – Lewis 138 kV transmission line in order to address five of the circuit overloads PJM initially identified by as resulting from BL England’s retirement, but which ACE intended to carry out whether or not BL England is retired. ACE’s petition sought permits for the upgrades even in the event that BL England is repowered, explicitly noting that *“should the Facility repower using natural gas, the transmission system upgrades would likely be needed to maintain reliability during that process when the Facility is offline.”*
- Additionally, ACE’s petition stated that it had already planned to upgrade forty-one (41) miles of 138 kV transmission lines to 230 kV by 2020, *“because of deteriorated hardware issues and issues with ground line deterioration of the lattice tower legs.”* The company also noted that portions of the Upper Pittsgrove – Landis line would have to be replaced because a comprehensive 2014 inspection of the infrastructure revealed *“corrosion and abrasion issues . . . in more than half of the structures.”*
- In its Compliance Statement, SJG characterizes the “overloaded” circuits identified in PowerGEM’s report as contributing to electric transmission outages caused by New Jersey’s lack of sufficient in-state generation. This claim is incorrect. SJG ignores the new generating capacity in proximity to the Pinelands that has entered the market since PowerGEM last analyzed the system in 2014, such as the Middlesex 560MW natural gas generator expected to come into service in May 2018, the injection of additional 96.5MW capacity at Bus 228203, and the Melrose 70MW natural gas unit in Middlesex County, among others. PJM’s updated analyses, in contrast, take account of these changes.
- In 2014 (after PowerGEM’s analysis), *PJM acknowledged that the closing of both B.L. England and Oyster Creek “won’t be an issue” because the market had already responded to the planned retirement of Oyster Creek by driving the construction of new natural gas plants in the service territory:*

[Oyster Creek’s retirement] is an opportunity for new projects that are developing to actually get value and know they have a market to sell to,” PJM spokeswoman Paula Dupont-Kidd noted. “It’s provided incentive for a lot of new generation to come into the area.”

Specifically, Dupont-Kidd referred to more than 2,000 MW of new generation from the 700 MW natural-gas fired facilities being built in West Deptford and Woodbridge, as well as the Newark Energy Center’s 655 MW combined-cycle gas and heat recovery plant, which began operating in May, 2015.

- Because Oyster Creek’s retirement had been anticipated so early, PJM had already planned, financed, and constructed transmission upgrades designed to avoid any reliability issues associated with loss of the nuclear facility. Indeed, PowerGEM’s analysis concedes that PJM had by 2013 recommended \$100 million in new transmission upgrades designed to solve any potential for overloaded circuits. Partially because of these upgrades, PJM’s 2016 RTEP model identified “*no impacts*” from the planned retirement of Oyster Creek.

In sum, SJG’s claim that building and supplying a new generating facility at the BL England site is necessary to meet the electricity needs of the Pinelands is demonstrably false.

H. When the Pinelands Commission staff found the pipeline violates the CMP, it had all the information then as it has now – so there is no valid justification for doing an about-face.

Each piece of information it now says only came to light when SJG delivered a copy of the Standard Gas Service Agreement was actually discussed openly in public meetings and SJG documents prior to the January 2014 finding that the pipeline violates the CMP. This kind of unjustified about-face makes the Commission look unprincipled. See Part H below for more details and citations to the record.

In her January 2014 findings regarding the proposed pipeline, the Executive Director stated that “the proposed pipeline is not fully consistent with the permitted use standards for a Forest Area.” See Report on a Proposed Memorandum of Agreement (MOA) Between the New Jersey Pinelands Commission and the New Jersey Board of Public Utilities Regarding Construction of a Proposed Approximately 15 Miles of a 22-Mile, 24-Inch Natural Gas Pipeline in the State Designated Pinelands Area (hereafter “January 2014 Report”), pp. 2, 3 and 12 (emphasis added). The draft MOA which both the Commission’s Executive Director and SJG urged the Commission to adopt stated, “Given that the proposed pipeline is intended to serve customers located both inside and outside of the Pinelands, it is evident that the project does not primarily serve only the needs of the Pinelands.” MOA between the New Jersey Pinelands Commission and the New Jersey Board of Public Utilities, p. 2 (emphasis added).

Pinelands Commission staff reiterated this finding in numerous statements and presentations to the public and the Commission. SJG provided detailed edits to the Executive Director’s report, but did not attempt to contest the finding of inconsistency with the CMP, during the drafting process. This finding of inconsistency with the CMP was the essential basis for the entire process in which SJG and the Pineland Commission Executive Director together created and sought the BPU’s and Pinelands Commission’s approval for the MOA.

The current “amended” application is for the same project in all respects material to the finding of inconsistency. The pipeline follows the same route through the Forest Area and connects to the same existing transmission line in Tuckahoe. The only design change is the placement of a connection station, which is immaterial to the Forest Area non-compliance. SJG gives the same stated purposes for the pipeline, including both providing natural gas to a new BL England power plant and service to the company’s existing customers in Cape May County, as it did prior to the January 2014 finding of non-compliance. *Compare, e.g.,* South Jersey Gas “Compliance Statement” p. 1 (the proposed pipeline “has two purposes. ...) with Black & Veatch Cost Allocation Study for a Proposed High Pressure Natural Gas Transmission Pipeline, Prepared for South Jersey Gas, October 2012 p. 1 and throughout, with BPU Order in Docket No. GO13130202 dated June 21, 2013, and with Executive Director’s January 2014 Report especially pp. 2, 12.

The Executive Director and the Commission were well aware of the key terms of the agreement between SJG and Cape May Holdings *prior to* making the finding that the pipeline route violates the CMP. The Policy & Implementation Committee discussed the agreement on at least two occasions, and Commission files included numerous documents describing the agreement. Specifically, the Commission and its staff knew when it made the finding of inconsistency with the CMP that:

- (1) SJG had agreed to supply BL England 125,000 MCF of gas transport capacity per day, at least 250 days of the year. *See, e.g.,* CMP P&I Committee Meeting Minutes for July 26, 2013 (“Mr. May said that all the gas will go to BLE unless there were a reliability issues, in which case it would be immediately diverted to the Cape May County customers.”); Black & Veatch Cost Allocation Study, October 2012, at 17-18 (explaining that the agreement requires SJG to provide the pipeline capacity all but the 15 coldest days of the year); SJG Discovery Response RCR-P-008, including attached email correspondence.
- (2) SJG claimed this commitment represented the entire capacity of the new pipeline, and therefore the pipeline would not serve other customers in the ordinary course. *See, e.g.,* CMP P&I Committee Meeting Minutes for July 26, 2013 (“Mr. May said that all the gas will go to BLE unless there were a reliability issues, in which case it would be immediately diverted to the Cape May County customers.”); Black & Veatch Cost Allocation Report Supplement, February 10, 2013, at 3 (stating reliability service to existing customers was premised on “zero flow to the BLE facility.”); Email from P. Fontaine to N. Wittenberg, October 14, 2013. And,
- (3) The contract terms were contained in a “Standard Gas Service Agreement (FES)” which BPU had approved in an Order dated April 29, 2013, and a Stipulation

between the parties, both of which the Commission received during its deliberations in 2013. BPU Order in Dk GO13010052, April 29, 2013.

It would put a stake through the credibility of the Pinelands Commission were it to carry out a 180-degree reversal of this key finding just because the Commission did not give the vote it was expected to give on the MOA.

I. The pipeline will bring risks to water and other resources that neither SJG nor the Pinelands Commission has addressed or resolved.

SJG has dismissed the possible and expected environmental impacts that construction and operation of the proposed pipeline will have on natural resources, claiming that because portions of the pipeline will be beneath a road surface, other portions in a “disturbed road shoulder” and others underground, the pipeline poses no environmental threat. This conclusion is not reasonable and remains entirely unproven. We outline here the potential and expected adverse impacts with citations to additional details.

A. Water Impacts

The pipeline will be immersed in the Kirkwood-Cohansey Aquifer along much, if not most, of its length. This fact contradicts unsupported assumptions the Commission staff seems to have made in evaluating the environmental risks of the pipeline. In addition, the route crosses several non-degradation streams designated as “PL” or “FW1” streams under the state surface water quality standards and Clean Water Act. No activity is permitted that may affect the water quality of these streams except towards improved water quality.

SJG has not provided the depth to seasonal high water table along the proposed route, but its engineering plans show that (a) the HDD segments will be more than 5 miles in length and will reach as deep as 56 to 62 feet below the surface, so at least 5 miles of pipe will definitely be within the aquifer, and (b) for the rest of the pipeline, the minimum depth below the surface at the top of the pipe will be 4 feet, and the evidence available indicates most or all of the route has a depth to seasonal high water of less than six feet (4 feet plus the 2-foot diameter of the pipe). The company’s stormwater report states that the depth to the water table at the Tuckahoe interconnection station is only 52” below grade, indicating that the water table may be high enough throughout the pipeline’s length to ensure the pipe is wholly or partially immersed in the aquifer. In addition, the US Geological Survey’s online monitoring of the water table show that the water table below nearby upland areas is typically 3 to less than 5 feet deep during most of the year – shallower than the depth of the proposed pipe in that area. (This data is available via the USGS web site at <http://nj.usgs.gov/infodata/groundwater.html>.)

It is important to note that in the NJ Natural Gas, Southern Reliability Link matter, the state is requiring the utility is to address these aquifer impact issues in detail. Given the similar geology of the two settings, there is no rational basis to give SJG a pass on the same issues.

- 1) Statements that the pipeline will not go through the Kirkwood-Cohansey aquifer and that “there will be no impact to the aquifer from on-going operations of the pipeline even in the unlikely event of a gas leak” are incorrect and over-simplify the processes involved in a methane gas leak.**

Horizontal directional drilling descriptions in SJG’s engineering reports show that the pipeline will be placed within the surficial Kirkwood-Cohansey aquifer through at least 7.16 miles of HDD segments. Given the shallow water table in the region, it is apparent that even trenched areas will also intrude into the aquifer. There exist many scenarios based on temperature, sediment and ground cover among other variables in which a potential leak of liquid condensates and/or methane gas would harm groundwater and associated natural resources. These risks have been ignored by SJG and, to date, by the Commission in its prior statements. SJG has not conducted any analysis of the specific leak or failure risks posed given the soils, water chemistry and hydrogeology of the landscape through which the pipe would be run. The Commission cannot reasonably conclude that the pipeline would comply with CMP water protection standards without first considering, addressing and removing these risks. See Rubin Report, Ex. C, pp. 6-11.

The expert report of Paul Rubin of HydroQuest, Ex. C, explains that natural gas transmission lines often contain liquid condensates, which constitute water quality contaminants. This report summarizes a wide body of scientific and practical experience on pipeline failures and their consequences.

The most common environmental injury associated with HDD is “frac-out.” In its prior reports, the Commission staff dismissed the possibility that such a frac-out would cause any damage to the Pinelands environment. This assumption was wholly irrational, since the material that is sent to towards the surface in such a failure will contain liquid contaminants and other material that would degrade water quality and harm affected plants and wildlife. See Rubin Report, Ex. C, p. 13-15.

Natural gas leaks into the aquifer may cause significant natural resource damage. We have been copied on a report submitted by Dr. Emery Coppola to the Pinelands Commission, which demonstrates this point in great detail and shows that the Commission’s treatment of this question in the past has been extremely superficial and unscientific. See Dr. Emery A. Coppola, *The Risks To Waters Within the Pinelands From the Proposed South Jersey Gas Natural Gas Pipeline*, submitted by Dr. Coppola to the Commission.

The construction process also risks disturbing the soil and geology patterns that sustain the streams and wetlands the pipeline would cross, yet South Jersey Gas has done nothing to address this likelihood. For example, it has not conducted the kind of analysis that would be required to show that the specific routes of its HDD pipes will not puncture a clay lens that sustains a wetland. See Rubin Report, Ex. C, pp12-15.

2) External pipeline corrosion was not adequately address by SJG.

The pipeline will be susceptible to leakage or failure due to external corrosion or fatigue. See Rubin Report, Ex. C, pp. 3, 6-10. These risks are aggravated by the large diameter and chosen thickness of the proposed pipeline. See Cooper Report, Ex. B, pp. 38-41 and sources cited there. External pipeline corrosion has been cited as the leading cause of natural gas distribution line failure. Reports submitted by South Jersey Gas lack modeled pipeline assessments for the proposed transmission line that determine the probability of pipeline failure and address environmental risk associated with such an event. Special emphasis must be paid to stretches of pipeline installed through horizontal directional drilling as a recent study identified pipes installed under this method as having an increased likelihood of coating damage that may increase susceptibility to corrosion. These reports would be needed to gauge the potential impact of a proposed pipeline project of this scale.

3) Construction dewatering is a risk that SJG has completely ignored

SJG has not addressed the issue of construction dewatering. Pipeline construction as proposed for non-HDD segments calls for the top of the 24-inch diameter pipeline to be covered by a minimum of four feet of fill. As a result, the bottom of the pipeline will be at a minimum depth of six feet below grade. Given that the pipeline route traverses vast areas of lowlands including those associated with streams, wetlands and flood plains, it is certain that the shallow groundwater table is high in many areas along the pipeline route. This is supported by water levels determined from soil boring logs submitted by SJG. As a result, groundwater will be encountered when excavating to a depth of six feet. Dewatering will be required during excavation and installation of piping. To our knowledge no analysis has been conducted to determine the volume of water that will be encountered and removed from a given segment of pipe trench.

A dewatering analysis must be conducted to determine what type of permit will be required from the NJDEP Bureau of Water Allocation and Well Permitting (Bureau). As per N.J.A.C. 7:19-1.6(e)2 a Water Use Registration is required if the combined pumping capacity within a *single municipality* is greater than 70 gallons per minute, and less than 100,000 gallons per day. If anticipated pumping will exceed 100,000 gallons per day, then a Dewatering Water Allocation Permit will be required. Without a dewatering analysis the Pinelands Commission

will not know if construction dewatering is consistent with NJDEP regulations. To date no dewatering applications have been filed with the NJDEP.

4) SJG has not addressed the source and disposal of construction and testing water

As mentioned above trench dewatering will most certainly be required. Water from trench dewatering can be laden with fine particulates from silt and clay rendering discharge water turbid. This discharge water may require filtering before disposal. SJG has not addressed this possibility. The Commission needs to know how this water will be disposed, and if necessary require filtering.

Once a given segment of pipeline is installed, it's integrity is typically tested by filling the pipeline with water under pressure. The amount of water used in testing is not insignificant. For example, testing 1,000 linear feet of 24-inch diameter pipe will require 23,500 gallons of water. What will be the source of this water? Will water be obtained from a stream, groundwater, Pinelands ponds, etc.? The Commission needs to know the source of the water used for testing.

b. Contrary to SJG's assertions, the proposed new gas-powered plant will not be clean or cleaner.

The data produced in connection with Cape May Holding's application for an Air Permit to build the proposed new 447 MW combined cycle generation plant shows that the new plant will produce higher amounts of Volatile Organic Compounds than BL England currently produces. The repeated, blanket claims that the new plant will be "clean" – or even that it will be "cleaner" – are objectively false according to the state's own data. See GET Consulting Report, Ex. D, and the documents cited there. Decommissioning the plant would obviously eliminate all its contaminants, with no required increase in pollutants from any other electricity generating plant. There is no evidence whatsoever that closing the BL England plant would cause any other plant, dirtier or cleaner, to increase its emissions.

In fact, building the new 447 MW combined cycle generating facility would increase emissions in the Pinelands region by displacing demand response (DR) resources that otherwise supply reliable power to Pinelands customers. This point is discussed in detail in the Cooper Report, Ex. B, at pp. 32—37. It is an additional reason, wholly ignored so far by SJG and the Commission, which disproves SJG's claims that the new pipeline would serve electricity *needs* of the Pinelands, as well as its claim that building and operating the new power plant would improve the region's air quality.

c. Threatened and Endangered Species Impacts

- 1) Field surveys for listed plant species were limited to locations of previously documented species occurrences and were not comprehensive in nature.**

By limiting survey efforts to just those species and locations of listed occurrences identified by state agency databases, the survey fails to identify other listed species or occurrences throughout the pipeline route. It is unlikely that agency records reflect all rare plant records and thus comprehensive plant surveys are needed to satisfactorily identify rare species occurrences. A comprehensive survey would focus on all plant species present and will visit individual sites multiple times during a growing season to ensure that all species are identified during flowering or seed set. Plant survey efforts reported on in the Threatened and Endangered Species Habitat Suitability Assessment and Survey Report were species specific and lacked the rigor needed to identify other potential rare species.

- 2) The survey methodology of limiting efforts to only those locations identified in agency databases failed to identify a population of *Carex barrattii* a Pinelands listed plant species.**

A known population of the Pinelands listed plant species *Carex barrattii* occurs along the roadside on the project path and was not discussed in the Threatened and Endangered Species Habitat Suitability Assessment and Survey Report. This further highlights the limitations of the selected species survey methodology and suggests that other listed species may have also been over looked by this report.

- 3) The Threatened and Endangered Species Habitat Suitability Assessment and Survey Report fails to address the presence of *Rubus novocaesarius* in the Natural Heritage database search for listed species in the immediate vicinity of the project site.**

Rubus novocaesarius is an endangered species that is currently known from only one location on earth which according to the New Jersey Natural Heritage Program is in the immediate vicinity of the project site. It is unacceptable that a species as rare as *Rubus novocaesarius* is not addressed in the survey report in terms of initial and secondary risks to the known occurrence as well as nearby suitable habitat.

- 4) The Threatened and Endangered Species Habitat Suitability Assessment and Survey Report proceeded under the false assumption that managed roadsides do not function as suitable habitat for rare plants species.**

As is evident in rare plant species occurrences provided by state agencies, rare plants species are known to persist in viable populations along roadsides. Roadsides function as early successional habitat and this habitat type is becoming increasingly rare in many parts of the state. The maintenance of roadsides does not necessarily preclude rare plants from establishing and the manner and frequency of maintenance is subject to change. Best management practices including no mow zones and guidelines as to mowing width and height exist for the Pinelands that improve roadside conditions for plants. The construction process and maintenance procedures must be expected to destroy or damage plants along the road shoulder, yet SJG has not provided a reliable survey of rare plants along the route. The mowing practices currently in force along the route would make it impossible to conduct such a survey. See Letter from GR Juelg Consulting, Ex. E.

5) *Collophrys irus*, the Frosted Elfin is a state threatened species of butterfly that has breeding and courtship habitat located along the project site.

Like other Lepidoptera, this species requires specific host species for successful larval feeding. A host plant associated with this species *Baptisia tinctoria* was located along the project area in "Area 1". The Threatened and Endangered Species Habitat Suitability Assessment and Survey Report dismisses these occurrences as being "sporadic" and "mainly limited to the forest side of wetland ditches that immediately abut to the woods line where routine mowing is unable to reach". The importance of host species in their requirement for successful breeding cannot be overstated and the habitat suitability report made no effort to adequately describe the plant occurrences in an ecological manner. The presence of this host species in an area where Frosted Elfin is known to exist is an indication of suitable breeding conditions independent of the density or abundance in which these plants are found. To say that this plant occurs mainly beyond the extent of mowing is to suggest that there are some individuals that do exist closer to the disturbance area. Disturbance during construction and subsequent maintenance of cleared space above the pipeline will limit potential areas of establishment for individuals to the *Baptisia tinctoria* populations in the future.

6) The population area for *Eupatorium resinolum* was arbitrarily set as a three meter buffer around five identified individuals.

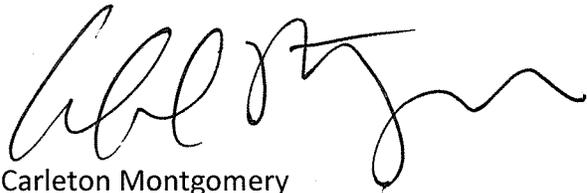
As described in the Threatened and Endangered Species Habitat Suitability Assessment and Survey Report, surveys for *Eupatorium resinolum* were not continued in the adjacent wetland (suitable habitat for this species) and instead used an arbitrary three meter buffer around five plants to identify the extent of the population area. The use of the three meter buffer was not justified in the report and failing to survey suitable habitat at the location of a verified occurrence prevents the report from accurately depicting the population and assessing initial and secondary impacts due to construction and maintenance of the pipeline.

- 7) Since the submission of the Threatened and Endangered Species Habitat Suitability Assessment and Survey Report was submitted, the Northern Long-Eared Bat (*Myotis septentrionalis*) has been listed by the US Fish and Wildlife Service as a federally threatened species.

Myotis septentrionalis has recorded occurrences in both Cumberland and Cape May counties. Its listing as a federally threatened species should trigger an impact assessment for this project on known occurrences and suitable habitat for this species including seasonal restrictions during breeding.

For all these reasons, we urge the Pinelands Commission to find that the pending South Jersey Gas application is not consistent with the requirements of the CMP.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Carleton Montgomery', written in a cursive style.

Carleton Montgomery
Executive Director