



September 1, 2017

Kimberly D. Bose, Secretary
Federal Energy Regulatory Commission
888 First Street, NE, Room 1A
Washington, DC 20426

Mr. Martin Brand
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Mr. Mark Klotz
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Re: Millennium Pipeline Company, L.L.C. Docket No. CP16-486-000 (Eastern System Upgrade Project)

Dear Secretary Bose, Mr. Martin Brand, and Mr. Mark Klotz,

As the Delaware Riverkeeper Network has demonstrated to the Federal Energy Regulatory Commission (“FERC”) and the New York State Department of Environmental Conservation (“NYSDEC”) in previous comments, and as supported by expert analysis outlined again here, the Millennium Pipeline Company, L.L.C.’s (“Millennium”) proposed Eastern System Upgrade Project (“ESU” or “Project”) is an improperly segmented portion of a larger project that includes the Valley Lateral Pipeline and the CPV Valley Energy Center. The CPV powerplant is clearly an intended delivery point of the ESU project. Based on the recent decision by the United States Court of Appeals for the District of Columbia Circuit (D.C. Circuit) in *Sierra Club, et al. v FERC*, --F.3d--, 2017 WL 3597014 (D.C. Cir., Aug. 22, 2017), which found that FERC is required to consider and quantify the downstream greenhouse gas (“GHG”) emissions from the combustion of the natural gas transported by a project as part of their National Environmental Policy Act (“NEPA”) review, FERC’s environmental review of the ESU project is inadequate

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and deficient as it fails to consider or quantify the indirect effects of downstream GHG that will result from burning the natural gas that the ESU project will transport to the CPV Valley Energy Center and/or other natural gas powerplant facilities. In addition to examining end use emissions, both agencies need to account for the emissions and other impacts from the source of the gas as well. This analysis should examine both existing feeder facilities and expected induced development. Neither the downstream GHG impacts nor the upstream GHG impacts have been accounted for.

To fulfill NEPA's mandate, FERC must prepare a full environmental impact statement (EIS) for the Project, to account for the cumulatively significant climate impacts of the greenhouse gas emissions from this Project and other gas projects in the region, including the CPV Valley Energy Center and other deliver point natural gas powerplants. In light of the recent D.C. Circuit's decision in the *Sierra Club* case, this EIS must:

- quantify the project's emissions combined with past, present, and reasonably foreseeable future gas projects in the region;
- and adopt appropriate mitigation measures in recognition of the past, present reasonably foreseeable future gas projects in the region to reduce the severity of cumulative impacts from the project.

FERC should also employ the social cost of carbon as a methodology for assessing the significance of the project's impacts.

NYSDEC relies on FERC's environmental review of the ESU project, conducted pursuant to NEPA, for their review of permitting applications for the Project and the information in FERC's review was inadequate. Based on the recent *Sierra Club* decision, in addition to the many other reasons we have provided New York already, NYSDEC should find FERC's environmental review of the Project inadequate and deficient and should deny all permits before them for the ESU project.

The Millennium ESU, Valley Lateral Project and CPV Valley Energy Center are part of an integrated whole.

Despite the fact that each of these projects has been advanced before FERC and NYSDEC as independent projects, Millennium's ESU is clearly inter-connected with the Millennium Valley Lateral Project and the associated CPV powerplant.

Expert analysis, conducted by Accufacts Inc.¹ of the Project's recently released Critical Energy Infrastructure filings, confirms that Millennium has improperly split the ESU from the overall planned expansion of its natural gas pipeline system in an attempt to avoid a more rigorous comprehensive environmental review of the project's construction, operation and maintenance.

As discussed in the attached Accufacts report:

The 24-inch Neversink segment has become an increasing bottleneck as gas rates have increased in recent years on the Millennium system. The serious impact of much higher

¹ Kuprewicz, Richard B. Accufacts Inc. Observations Concerning the Millennium Pipeline Eastern System Upgrade Project Proposal, FERC Docket No. CP-16-486. March 26, 2017.

gas rates and actual gas velocities, can be easily demonstrated by reviewing the steep slope (more vertical nature) of the pressure plots on Exhibit 1 and 3 for the existing Neversink segment. These steep slopes, higher pressure loss per mile, suggest that the Neversink 24-inch pipeline is destined for a different service, such as to serve as a much lower gas flow delivery supply gas line to the proposed CPV power plant. Once the Neversink is looped with a 30-inch 1,200 psig MAOP pipeline, the smaller diameter weaker MAOP Neversink pipeline segment is of little value to the mainline Millennium Pipeline system except to serve as a delivery supply line to customers on that segment, essentially the proposed CPV power plant.

In addition to the Accufacts Report, the US Environmental Protection Agency (EPA) is on record stating their concerns over the interdependency of the Valley Lateral Project and the ESU in comments on the FERC dockets for both projects. In a June 10, 2016 letter to FERC, EPA Region 2 states:

EPA is also concerned that the proposed Eastern System Upgrade is connecting into the Valley Lateral Project (CP16-17) now under review by FERC. The EA must discuss this interconnect and its purpose in detail, and whether the Eastern System Upgrade would be constructed and meet the purpose and need with or without the Valley Lateral being completed.²

Similarly, in a June 8, 2016 letter to FERC regarding the Valley Lateral Project, EPA Region 2 states:

EPA also requests that the document more fully discuss the proposed interconnect to the Valley Lateral by the proposed Eastern Systems Upgrade project. It should be stated clearly whether this interconnect would be providing more natural gas to the Valley Lateral, and whether the Eastern Systems Upgrade requires this interconnect to function.

Even assuming the CPV plant was not a planned delivery point for the gas, it is an incontrovertible truth that it will go to a different powerplant, which would still require a similar GHG analysis.

FERC failed to include the necessary greenhouse gas analysis required by NEPA in its environmental assessment of Millennium's ESU.

In the August 22, 2017 *Sierra Club, et al. v. FERC* decision, the D.C. Circuit found that FERC failed to assess the serious climate impacts of the Southeast Market Pipelines project and downstream gas-burning power plants. Several holdings from the decision apply to the Eastern System Upgrade Project's environmental review, and indicate that FERC impermissibly neglected to consider all of the project's climate impacts.

The environmental assessment (EA) prepared by FERC for the ESU fails to reach an informed decision about the climate ramifications of the project. Instead of assessing soon to be implemented or constructed regional gas infrastructure projects and their cumulative climate

² Letter from Grace Musumeci, Chief, Environmental Review Section, EPA Region 2, to FERC Re Millennium Eastern System Upgrade Project, FERC Docket no. PF16-13 on June 10, 2016.

impacts, the EA only generally discusses the types of climate change impacts that will burden the project's geographic area. The EA states that GHG emissions from the project would be cumulatively insignificant without offering any rationale. Based on the D.C. Circuit instructions to FERC in the *Sierra Club* case, this must be corrected:

The EIS accordingly needed to include a discussion of the “significance” of this indirect effect, *see* 40 C.F.R. § 1502.16(b), as well as “the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions,” *see* WildEarth Guardians, 738 F.3d at 309 (quoting 40 C.F.R. § 1508.7).

...

Quantification would permit the agency to compare the emissions from this project to emissions from other projects, to total emissions from the state or the region, or to regional or national emissions-control goals. Without such comparisons, it is difficult to see how FERC could engage in “informed decision making” with respect to the greenhouse-gas effects of this project, or how “informed public comment” could be possible.

As a result, FERC must prepare an EIS that quantifies the project's emissions and past, present, and reasonably foreseeable future gas infrastructure projects in the region. To decide otherwise would violate NEPA's mandate for an informed public process.

Additionally, the EIS must employ the social cost of carbon methodology or, at the very least, a discussion of why the Agency elected not to use such methodology, in accordance with the D.C. Circuit's ruling in *Sierra Club*:

[I]n its rehearing request, Sierra Club asked FERC to convert emissions estimates to concrete harms by way of the Social Cost of Carbon. . . . But FERC has argued in a previous EIS that the Social Cost of Carbon is not useful for NEPA purposes, because several of its components are contested and because not every harm it accounts for is necessarily “significant” within the meaning of NEPA. *See* EarthReports, 828 F.3d at 956. We do not decide whether those arguments are applicable in this case as well, because FERC did not include them in the EIS that is now before us. On remand, FERC should explain in the EIS, as an aid to the relevant decisionmakers, whether the position on the Social Cost of Carbon that the agency took in EarthReports still holds, and why.”

Finally, FERC's limited discussion of mitigation in the EA focuses on methane leak prevention and repair, which are necessary measures, but because of its flawed analysis, the Agency failed to analyze mitigation for the inevitable combustion emissions associated with the project and similar projects in the region. Instead, FERC relies on an unsupported conclusion that gas is cleaner than coal and so overall impacts are not significant. Such cursory analysis runs contrary to NEPA. As the D.C. Circuit held:

The effects an EIS is required to cover “include those resulting from actions which may have both beneficial and detrimental effects, even if on balance the agency believes that the effect will be beneficial.” 40 C.F.R. § 1508.8. In other words, when an agency thinks the good consequences of a project will outweigh the bad, the agency still needs to discuss both the good and the bad. . . .

The *Sierra Club* decision found that FERC's NEPA analysis was flawed as it failed to consider and quantify the downstream GHG emissions from the combustion of natural gas transported by the project. In FERC's review of the ESU, the Agency has again failed to consider or quantify the indirect effects of downstream GHG emissions that will result from the burning of natural gas that the Project will transport to the CPV Valley Energy Center, which has been demonstrated by expert analysis to be a delivery point for the ESU project.

We request that FERC prepare a full EIS for the Project, to account for the cumulatively significant climate impacts of the greenhouse gas emissions from this Project and other gas projects in the region, including the CPV Valley Energy Center, as outlined above. This EIS should quantify the project's emissions combined with past, present, and reasonably foreseeable future gas projects in the region and employ the social cost of carbon as a methodology for assessing the significance of the project's impacts. Failure to do so would be a violation of NEPA's mandate. Finally, we ask that FERC adopt mitigation measures to reduce the severity of cumulative impacts from the project

And we request that NYSDEC deny all permits before them for ESU project, based on the inadequate and deficient EA provided by FERC, in addition the many reasons that the Delaware Riverkeeper Network has outlined for the agency in previous comments.

Respectfully,

A handwritten signature in blue ink that reads "Maya K. van Rossum".

Maya K. van Rossum
the Delaware Riverkeeper

cc:

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March 26, 2017

**To: Maya van Rossum
Aaron Stemplewicz
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Re: Observations Concerning the Millennium Pipeline Eastern System Upgrade Project Proposal, FERC Docket No. CP-16-486

Accufacts Inc. (“Accufacts”) was asked to review the above Millennium Pipeline filing and proposal to FERC identified as the Eastern System Upgrade Project Proposal (“Project”). The Project description indicates the proposal will:

1. loop the existing 24-inch Neversink 920 psig Maximum Allowable Operating Pressure, or MAOP, pipeline with approximately 7.8 miles of pipeline (approximately 0.1 miles of 30-inch and approximately 7.7 miles of 36-inch pipeline identified as the “Huguenot Loop,” which will be designed for an MAOP of 1,350 psig,¹
2. provide 38,300 additional horsepower at the existing 15,900 horsepower Hancock compressor station,
3. construct and operate a new 22,400 horsepower compressor station (Highland) installed between the Hancock and Minisink compressor stations,
4. modify the existing Wagoner Interconnect,
5. supply additional pipeline facilities at the Huguenot Meter and Westtown Metering stations including installation of various pig launchers and receivers, and
6. make modifications at the existing Ramapo Metering and Regulator Station.²

The stated purpose of the Project “is to permit Millennium to transport an incremental volume of 223,000 dekatherms per day of natural gas from Millennium’s Corning Compressor Station to an existing interconnect with Algonquin Gas Transmission, L.L.C (Algonquin) located in Ramapo, New York.”³ The application further states that “The Project facilities have been specifically designed to provide for an additional 223,000

¹ MAOP is a term defined in federal pipeline safety regulations for gas transmission pipelines that has a specific meaning and obligation to FERC. The Millennium application/filing references the term maximum operating pressure, but this term is not defined in federal pipeline safety regulations. The bulk of the Millennium gas transmission system is designed for an MAOP of 1200 psig.

² Millennium Pipeline Company L.L.C application to FERC, “Eastern System Upgrade Resource Report 1 General Project Description,” July 2016, pp. 1-1 & 1-10.

³ *Ibid.*, p. 1-2.

dekatherms per day of firm transportation, as well as to maintain adequate operating pressures at intermediate delivery points following the construction of the Project, to continue to meet customer demand on Millennium's system during the summer months, and to ensure continued deliveries to interconnecting pipelines.”⁴

In order to obtain Project pipeline/flow/pressure data Accufacts was required to sign a Protective Agreement with Millennium, and a CEII nondisclosure agreement with FERC that prohibits public disclosure of certain information concerning this proposal. Based on a review of the CEII protected Exhibit G submissions for this project, Accufacts cannot justify the pipeline Project, especially the 1,350 psig MAOP design nor the 36-inch diameter for the new Huguenot Loop. In Accufacts' opinion this unusual proposal suggests further expansions are in Millennium's plans and such “segmented” expansion(s) should be included with this Project's proposal.

Confidential Attachments (CEII protected) Exhibits No. 1, 2, 3, and 4 developed by Accufacts.

The attached four Exhibits plot pressure and flow versus milepost between Corning compressor station, or “CS,” (set as milepost zero) and the Ramapo Metering station connection to Algonquin (milepost ~ 189) for the existing and the proposed peak day expansion cases submitted to FERC for summer and winter, respectively.

The mainline pipeline length downstream of Minisink to Ramapo provided by Millennium as Exhibit Gs for the mainline transmission pipe are not modified by the proposed Project but vary by over 5 miles in length (or over 16% of the segment). Millennium needs to reconcile this error in updated filings to FERC given the importance of the Minisink CS to Ramapo mainline segment length to the validity of the Project's application. Suspecting a typographical error in the Exhibit G submissions, for purposes of the attached Confidential CEII Exhibits, I have normalized this length to the same value across all four Exhibits using the shortest mainline length given in the Exhibit Gs for the Minisink to Ramapo pipeline segment. There is another apparent error in the existing winter case pressures for the segment between the Minisink CS and the Ramapo M&E delivery point (see Exhibit 3 pressure line). The pressure slopes appear inconsistent for the flows, and pressure downstream along a pipeline does not increase with flow unless compression is added.

Based on the provided CEII information, Accufacts has the following additional detailed comments supplemented from a review of attached Exhibits:

1) The proposed MAOP of 1,350 psig for the new pipe looping (i.e., Huguenot Loop) cannot be supported nor justified by this Project.

With the exception of the existing Neversink 24-inch segment restricted to an MAOP of 920 psig, the Millennium Pipeline gas transmission mainline was installed and designed to operate as a 30-inch pipeline with a MAOP of 1,200 psig (see purple dashed MAOP

⁴ *Ibid.*

lines on all Exhibits).⁵ Installing the 36-inch segment at an MAOP of 1,350 overbuilds the Project for its stated purpose. Millennium has not adequately explained nor justified their request to install additional large diameter 36-inch pipeline at the MAOP of 1,350 psig. Installing much larger diameter pipe rated for much higher MAOP than the current major system's design signals further expansions are being anticipated or planned as a result of this Project. Both the large diameter 36-inch pipeline and the higher pressure 1,350 psig MAOP for the looped pipe proposal are inconsistent with the remainder of Millennium's main gas transmission system of 30-inch pipe and 1,200 psig MAOP upstream and downstream of the proposed loop. There is no way, for example, that the 1,350 psig of the proposed loop can be utilized without incorporating additional compressor stations and/or mainline pipeline changes beyond the cases filed for this Project's proposal.

2) The 36-inch diameter pipe is larger than that needed for the Project.

A close review of the Exhibits, especially Exhibit No. 4, will demonstrate that the 36-inch diameter pipeline is larger than needed, even if it were to be installed at a MAOP of 1,200 psig. For example, on Exhibit 4 for the same flow rate, the approximate pressure line between the Hancock CS and Highland CS is less vertical than the pressure line between Highland CS and Huguenot Regulator. The pressure line slope between Highland CS and Huguenot Regulator should be the same or even less vertical because gas flow rate in that segment is the same or less than that for the Hancock CS to Highland CS segment, while the pressures are similar. This deviation in pressure slope or verticalness, because it can significantly affect the analysis, needs to be properly investigated and reconciled. A simple comparison analysis of the Exhibits will further demonstrate that a 30-inch pipeline for the Huguenot Loop would be suitable. Millennium has not adequately justified their proposing a 36-inch diameter pipeline for the Huguenot Loop. Installing a 36-inch pipe segment that is larger than is needed on this primarily 30-inch Millennium Pipeline system, given the current and proposed MAOPs, signals further expansions are anticipated for this Project.

3) Delivery pressures to the Algonquin Pipeline are not justified.

Based on the information provided, the delivery pressure to the Algonquin system at Ramapo can vary considerably. The delivery pressure assumption to Algonquin significantly influences the Millennium Pipeline design and operation. The delivery pressure of 750 psig to Algonquin for the additional gas claimed by the Project needs to be independently justified. Without appropriate justification, it appears as though the current proposal is anticipating additional upgrades.

4) The Neversink 24-inch pipeline segment appears destined for a different service.

It should come as no surprise that the older 24-inch, lower 920 psig MAOP, approximately 7.5 mile long segment of the Neversink portion of the Millennium

⁵ PHMSA CAO

Pipeline is out of character with the design of the rest of the newer Millennium transmission pipeline that is 30-inch, 1,200 psig MAOP. The 24-inch Neversink segment has become an increasing bottleneck as gas rates have increased in recent years on the Millennium system. The serious impact of much higher gas rates and actual gas velocities, can be easily demonstrated by reviewing the steep slope (more vertical nature) of the pressure plots on Exhibit 1 and 3 for the existing Neversink segment. These steep slopes, higher pressure loss per mile, suggest that the Neversink 24-inch pipeline is destined for a different service, such as to serve as a much lower gas flow delivery supply gas line to the proposed CPV power plant. Once the Neversink is looped with a 30-inch 1,200 psig MAOP pipeline, the smaller diameter weaker MAOP Neversink pipeline segment is of little value to the mainline Millennium Pipeline system except to serve as a delivery supply line to customers on that segment, essentially the proposed CPV power plant.

5) The Project proposal signals that Millennium Pipeline is anticipating further pipeline expansions.

The gas rates required on the pipeline segment discharging from the Hancock compressor station (well over 1,200 Dth/d on the 30-inch 1,200 psig MAOP pipeline), results in an increase of almost 30% more gas through the Minisink Compressor station for the Peak Day Winter Expansion Case. As a result, the Project requests major horsepower addition at Hancock CS and a new compressor station addition at Highland (see Exhibit 4) to meet these higher flow rates. This additional compressor horsepower, needs further supporting analysis with appropriate flow/pressure data, given the discrepancies identified in the provided exhibit Gs, and demonstrated in the attached Exhibits. The combination of requested horsepower addition along with the much larger diameter 36-inch higher 1,350 psig MAOP needs additional supporting analysis as these changes suggest additional project expansions are expected well beyond the needs stated in the Project application.

Conclusion

Millennium's request for a larger diameter 36-inch, 1,350 psig MAOP for the Project's new pipeline segment (Huguenot Loop) is inconsistent and unwarranted. Such an unusual MAOP increase proposal over the Millennium Pipeline system's design in combination with the Project's 36-inch diameter pipe proposal, signals to me that further expansion projects are likely or already planned in the future operation of Millennium Pipeline. Such future projects, I believe, are reasonably foreseeable based on basic engineering principles and must be included in the Project's FERC application and Exhibit Gs.

s/ Richard Kuprewicz

Richard B. Kuprewicz,
President,
Accufacts Inc.