April 4, 2014

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

Jodi M. McDonald, Chief
Regulatory Branch, US Army Corps of Engineers
New York District CENAN-OP-R
Upstate Regulatory Field Office
Buffington Street, Bldg. 10, 3rd Floor
Watervliet, New York, 12189

RE: Constitution Pipeline: FERC Docket Nos. CP 13-499-000 and CP 13-502-000; USACE Docket No. NAN-2012-00449-UBR

Dear Secretary Bose and Ms. McDonald:

Please accept the following comments from Otsego 2000, Inc. on the Draft Environmental Impact Statement (DEIS) for the proposed Constitution Pipeline, particularly as it affects the counties of Otsego, Delaware, and Schoharie in New York State. Otsego 2000, Inc. is an intervener in these proceedings and on October 10, 2012, filed comments on the scope of the required environmental review (PF12-9) in connection with the proposed Constitution Pipeline. We regret that the DEIS failed to consider or adequately respond to our scoping comments. We urge FERC to withdraw the DEIS and take no further action on the application until all of the matters set forth in our scoping comments, as discussed more fully here, are addressed.

Otsego 2000, located in the village of Cooperstown, New York, is a nonprofit organization formed over thirty years ago to protect and enhance the rural, historic, agricultural, and environmental resources of the region surrounding Otsego Lake, which is also the headwaters of the Susquehanna River. In addition, we are a founding member of Citizens Against Unsafe Drilling, a coalition comprised of more than thirty grassroots organizations throughout Otsego County and the surrounding area. These organizations represent thousands of residents opposed to shale gas extraction and its related infrastructure, including the proposed pipeline projects.

Our region is blessed to have retained a scenic rural landscape reflective of its rich agricultural history and culture. Significant private and public investments have contributed to preserving this environment, and to building an economy consistent with its historical roots—one that supports agriculture, academic institutions, museums, tourism, and a strong second-home market. Among the many cultural and economic assets of our region are the National Baseball

Hall of Fame, Glimmerglass Festival, Fenimore Art Museum, the Farmers' Museum, Hartwick College, SUNY Oneonta, Brewery Ommegang, and Bassett Healthcare among many others. The region also has well over 36,000 acres listed on the State and National Registers of Historic Places, including the Glimmerglass Historic District, the first cultural landscape designated as a National Historic District.

The Upper Susquehanna River Watershed, which the Constitution Pipeline would traverse, covers Otsego County, northern Delaware County and part of Schoharie County, and provides drinking water to more than 600,000 visitors and residents annually. Federally recognized in 1972 as an "American Heritage River," the Susquehanna River supplies nearly half of the fresh water that flows into Chesapeake Bay and serves millions of consumers along its route. It is noteworthy that in 2011 the national conservation organization, American Rivers, named it "America's Most Endangered River" due to the looming threat of shale gas development.

The Upper Susquehanna River Watershed is noted for its landscape of forests, hills, fields, streams, and wetlands, providing critical habitats that sustain a remarkable diversity of flora and fauna, including species designated as endangered, threatened, and of concern. Moreover, the watershed is ecologically connected to the northern Catskill region, collectively forming a contiguous landscape of diverse habitat, which would be divided and substantially harmed by the proposed pipeline project. Protection of the Upper Susquehanna River Watershed and northern Catskill region is crucial to protection of the existing economic base. The economy of this important region is directly connected to its undisturbed lands, clean air and water, agriculture, organic farms, breweries, historic preservation and heritage tourism, outdoor recreation, including hiking, hunting, and fishing, and a second-home market. The proposed projects threaten all of these significant regional assets.

I. NEW, CONTRADICTORY, AND INCOMPLETE DOCUMENTATION REQUIRES WITHDRAWAL OF THE DEIS.

A. New Developments Have Changed the Scope of the Project.

The Applicants recently submitted new documents at the end of the public comment period seeking to expand the scope of the project to include at least 11 communications towers greater than 100 feet in height. This new information was submitted on March 27, 2014, just 12 days before the public comment period is set to close. Interveners and the general public must be given an extension of time to respond with respect to this newly disclosed information.

Further, the Applicants have only recently disclosed that they have entered into binding agreements to supply natural gas from the project to certain municipalities along the proposed route. In a motion to intervene dated June 12, 2013, Leatherstocking Gas Company LLC indicated that it "may" enter into a Memorandum of Understanding with Constitution for gas delivery at several points along the proposed route. See also DEIS Introduction, p.1-2: "...Constitution has identified that the proposed pipeline **could** provide natural gas service to nearby municipalities." However, in a response to scoping questions dated September 7, 2012, the Applicant expressly **denied** that such matters are being considered, stating:

> ...the Constitution pipeline is designed to meet its customers' contractual commitments and is not designed to provide natural gas to any specific end user or market other than those currently identified... [B]ased on the executed long-term, binding agreements with two shippers, consistent with Commission policy, Constitution will comply with the need outlined in our binding precedent agreements to the shippers **and considers any comment outside of these agreements as speculative.** (Emphasis added.)

In the summary of existing or potential projects evaluated for cumulative impacts, FERC reported that the status of the Leatherstocking project was "unknown" (DEIS, Table 4.13-1, p.4-209.). As a result, the EIS did not address the cumulative impacts of such development. Now, on March 18, 2014, near the close of the public comment period, the Applicants have confirmed that four delivery taps will in fact be installed along the proposed route to provide local gas service. However, the direct, indirect and cumulative impacts of these delivery taps have not been addressed in the DEIS.

It must be emphasized that the NYSDEC specifically requested that these matters be addressed in the EIS, stating:

> ...the draft EIS must evaluate whether the pipeline would be reasonably available for supply and distribution for communities along the pipeline route...The draft EIS discussion should include the applicable procedures and requirements for the potential aforementioned activities...the draft EIS should describe and evaluate…if the pipeline supply is available to additional customers along the route, describe what additional facilities or upgrades would be needed…and **their associated environmental impacts.** (NYSDEC, Comments on Scope of the EIS, dated November 7, 2012; emphasis added.)

FERC's refusal to address these impacts in the DEIS is an error that must be corrected.

We understand that the United States Environmental Protection Agency (EPA), United States Department of the Interior (DOI), and New York State Department of Environmental Conservation (NYSDEC) have each, respectively, asked for an extension of time to comment on the DEIS. Otsego 2000 concurs that additional time is warranted and strongly urges FERC to immediately grant an extension of at least 60 days to allow interveners and the public to address the recent changes to the project scope. Our ability to comment on the DEIS is gravely compromised by the inclusion of late changes and the failure of FERC to consider issues in the DEIS previously questioned by the parties.

B. Pipeline Capacity is Misstated and Contradictory.

The DEIS states unequivocally that: "Constitution and Iroquois have not identified or proposed any plans for future expansion of their system." (DEIS, p. 2-32.) However, later in the document, FERC contradicts this statement, asserting:

> …the Constitution pipeline's maximum capacity would be 850,000 Dth/d, which is 200,000 Dth/d (31 percent) greater than the currently proposed level [650,000 Dth/d]. This relatively modest allowance for increased capacity would likely **preclude the use of**

> **the Constitution line as a major conduit for newly emerging gas supplies,** should they occur. (DEIS, p. 4-203; emphasis added.)

This inconsistency must be corrected and explained. First, a "31 percent" increase in capacity cannot conceivably be described as "modest." Furthermore, the assertion that the stated capacity "precludes" the Constitution Pipeline from becoming a major conduit for newly emerging gas supplies completely ignores the potential for future parallel pipelines that could be installed within the proposed easement. An increase of capacity by 31% would most likely entail the need for an additional compressor station, which must be considered as direct, indirect, and cumulative impacts of the project.

Equally troubling is an assertion contained in the draft New York Energy Plan, released on January 7, 2014, reporting that in the future, capacity of the Constitution Pipeline will be significantly increased above the capacity projected in the DEIS. Specifically, the Energy Plan states that the new pipeline will initially be designed to transport at least 500,000 dekatherms (Dth) per day, **but will be expandable to meet growing demand for takeaway capacity in northeast Pennsylvania.** (New York Energy Plan [Draft 2014] Volume 2, Sources, Table 5A, Planned Northeast Pipeline Projects; emphasis added.) Thus, the New York State Energy Plan clearly contemplates that significant "expansion" will occur. Such an increase in capacity would clearly lead to aggravated environmental impacts, which the EIS has entirely ignored. It is also foreseeable that such additional capacity would facilitate an expanded footprint of gas extraction impacting Pennsylvania and New York State, which the DEIS has improperly and summarily dismissed from consideration. (See discussion at Part II. A, below.)

The public has a right to know with certainty what plans for expansion exist, how expanded capacity will be added to the pipeline, and what the environmental impacts of the expansion will be. This is particularly true where the right of eminent domain is granted based on a defined capacity. The full potential for pipeline expansion and related direct, indirect, and cumulative effects must be comprehensively addressed in a revised DEIS.

C. Referenced Analyses Are Grossly Incomplete and Premature.

Virtually no aspect of the draft EIS is complete. The deficiencies are pervasive and substantial. Taken together they deprive the public of a meaningful opportunity to comment on the proposed plans and fail to impose enforceable mitigation measures prior to permitting. Significant omissions that FERC admits are not addressed in the DEIS include, but are not limited to, the following:

- Geotechnical feasibility studies for trenchless crossings at 9 out of 12 locations have not been completed (DEIS, p. 5-1);
- Water wells and springs within 150 feet of the project are not identified (DEIS, p. 5-3);
- Field studies of wetlands and water body impacts are not completed (DEIS, p. 5-3);
- Sufficient detail for proposed permanent access road crossings of water bodies and wetlands are not provided (DEIS, p. 5-4);

- Impacts on water bodies that will not be crossed are not provided (DEIS, p. 5-4);
- Impact assessments and/or descriptions of 54 permanent access roads and access roads leading to metering stations are not provided (DEIS, p. 5-5);
- While admitting that the greatest impacts will be on vegetation and on forested lands with 36 miles of forested lands to be crossed, no Upland Forest Mitigation Plan has been prepared (DEIS, p. 5-6);
- The invasive species survey is not complete and wash stations have not been identified (DEIS, p. 5-6);
- Mitigation plans for migratory bird habitat have not been prepared (DEIS, p. 5-7);
- No in-stream blasting plan has been submitted for public review (DEIS, p. 5-7);
- Approvals have not been secured for water withdrawals, and plans to cross streams during spawning windows have not been approved (DEIS, p. 5-8);
- Necessary surveys for "special status species" including bald eagles, sensitive bat species, dwarf wedge mussels, northern monkshood, and other listed species of concern have not been completed (DEIS, p. 5-9);
- A bald eagle mitigation plan for blasting and other construction activity in proximity to bald eagle nests has not been developed (DEIS, p. 5-9);
- Anticipated specific residential development impacts and specialty farm impacts are not finalized (DEIS, p. 5-9);
- Plans for mitigation of impacts on property insurance are missing (DEIS, p. 5-10);
- Required surveys of historic and cultural resources are not completed (DEIS, p. 5-12);
- Mitigation measures for exceeding air emission standards are not completed (DEIS, p. 5-13);
- Mitigation measures for exceeding noise standards have not been prepared (DEIS, p. 5-13);
- Plans for inspection of the pipeline for hazards and repairs are not set forth (DEIS, p. 5-14); and
- Plans for emergency training, equipment procurement and emergency response are not provided (DEIS, p. 5-14).

The above omissions go to the very heart of the question of whether this project can or should be constructed. By providing a wholly incomplete DEIS for public comment, FERC has put the public and the communities, which this project would impact, in an untenable position. Clearly the permitting of this project should not be considered until all of the documents and information

identified on the face of the DEIS are completed and made available to the public for comment. The DEIS is premature and must be withdrawn until this occurs.

II. THE DEIS FAILS TO ADDRESS DIRECT, INDIRECT AND CUMULATIVE IMPACTS AS REQUIRED BY LAW.

A. The DEIS Improperly Dismisses Foreseeable Shale Gas Development in New York State.

There can be no serious dispute that the negative impacts of the proposed Constitution Pipeline fall most heavily on New York State. Nearly 100 miles of the 120-mile project are located in New York. Yet the DEIS fails to consider indirect or cumulative impacts which will result from shale gas development in New York. FERC has categorically ignored detailed plans proposed by NYSDEC in the revised draft "*Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program"* (SGEIS). These plans would launch a broad program for high volume hydraulic fracking in the Marcellus and Utica Shale formations of New York State. Consideration of the plans set forth in the SGEIS must not be ignored. Nor may FERC argue that consideration of shale gas extraction in New York State is speculative because the SGEIS is currently under review by NYSDEC. Simply because a plan is subject to regulatory review does not render it speculative. Quite the contrary, such review renders it reasonably foreseeable.

Significantly, the DEIS acknowledges the breadth of potential impacts resulting from the proposed project which require evaluation pursuant to the National Environmental Policy Act, 48 CFR, Sec. 1508 et. seq. (NEPA), which states:

> Three types of projects (past, present and reasonably foreseeable projects) could potentially contribute to cumulative impacts when considered with the proposed projects. These projects include **Marcellus Shale development (wells and gathering systems); natural gas facilities that are not under the Commission's jurisdiction; other FERC jurisdictional natural gas pipelines; and unrelated actions such as residential and industrial developments**... (DEIS, p. ES-10.)

However, in text that immediately follows, FERC purports to excuse consideration of the impact of shale gas development in New York based on the incorrect and misleading assertion that "hydraulic fracturing is currently prohibited in New York" (DEIS, p. ES-10). See also the discussion at p. 5-15 stating: "Development of the Marcellus Shale is expected to continue in proximity to, and during construction and operation of, portions of the pipeline project in Pennsylvania (hydraulic fracturing of the Marcellus Shale is currently prohibited in New York)."

Hydraulic fracturing is not in fact prohibited in New York. Applicants can and have obtained permits for shale gas extraction involving low-volume hydraulic fracturing through the state's existing generic regulatory program issued in 1992. Indeed, recently drilled shale gas wells identified in the DEIS in Otsego County were fracked in this manner. Furthermore, as discussed above, NYSDEC is presently preparing an SGEIS that would permit high-volume hydraulic fracturing. Thus, the current allowances for gas development in New York State and the pending completion of a "generic" environmental impact statement for high volume hydraulic fracturing

by NYSDEC clearly indicate that it is reasonably foreseeable that gas well development in the Marcellus and Utica Shale will occur in New York. To ignore the potential impacts of these future activities violates federal requirements for environmental review.

B. Foreseeable Induced Shale Gas Development Must Be Considered.

The DEIS addresses only "existing" gas projects or projects that are currently proposed rather than foreseeable future Marcellus and Utica Shale development. For example, Table 4.13.1 (DEIS, p. 4-204) limits consideration of cumulative impacts to a short list of "existing and proposed" activities. Similarly, Sections 4.13.1.2 and 4.13.1.3 only address existing or currently proposed wells and gathering line systems, ignoring any consideration of gas wells or related infrastructure that could be permitted or induced by the pipeline in the future. (See DEIS pp. 4-202 to 4- 232; passim.) Attempting to explain these omissions, FERC asserts:

> A more specific analysis of Marcellus Shale upstream facilities is outside the scope of this analysis **because the exact location, scale, and timing of future facilities are unknown**. (DEIS, page 4-214; emphasis added.)

On its face, this conflicts with NEPA policy and federal regulations, which require an analysis of the full range of a project's impacts "whether direct, indirect, or cumulative." (Id., 40 C.F.R. § 1508.8.) Under NEPA, indirect impacts are defined as those that occur "later in time or farther removed in distance" and may include

> **...**growth inducing effects and other effects related to **induced changes in the pattern of land use**…and related effects on air and water and other natural systems, including ecosystems. (40 C.F.R. § 1508.8; emphasis added.)

Despite this definition, the DEIS systematically fails to address the indirect impacts of induced gas development, specifically the extent to which the presence of the proposed pipeline will encourage and facilitate the development of new gas wells, compressor stations, and related infrastructure which could attach to the pipeline as an open-access facility. The DEIS also fails to consider how environmental impacts of the pipeline may be "cumulated" with the impacts of gas development generally in the Marcellus and Utica Shale regions. FERC incorrectly limits its analysis to short- and long-term impacts resulting from construction of the proposed pipeline, ignoring the potential for future and induced development of gas wells and related infrastructure in New York and Pennsylvania. (See e.g. Sections 4.13 and 5.1.) This is legally and factually insufficient.

The assertion by FERC that meaningful analysis of future impacts is unnecessary because the "location, scale, and timing" of those impacts is not precisely known is inconsistent with the very definition of an indirect impact under NEPA, which specifically contemplates effects that occur "later in time and farther removed in distance" and effects related to "induced changes in the pattern of land use." (Citations, above.) The analysis of such induced effects occurring in the future and at a distance clearly must involve estimates of future effects and general development patterns, inasmuch as the exact spatial and temporal characteristics of such future effects can almost never be precisely known. Indeed, if the general analysis of potential growth patterns

were to be precluded from consideration, indirect and cumulative impacts would be essentially impossible to analyze for virtually any activity.

Clearly, FERC is not absolved from considering impacts for which the exact "location, scale, and timing" are unknown where those impacts are foreseeable. With respect to the potential for induced shale gas development, it is reasonable and necessary that the DEIS set forth numeric estimates of well pads and other related infrastructure that can be reasonably anticipated in the vicinity of the proposed pipeline, and from this generate estimates of environmental impact to lands and natural systems. The failure of FERC to make any effort whatsoever to conduct such an analysis in the DEIS constitutes a blanket failure by FERC to meet its obligations under NEPA in violation of federal law.

Similarly, pursuant to 40 C.F.R. § 1508.7, cumulative impacts are defined as "the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." As previously discussed, it is reasonably foreseeable that gas well development in the Marcellus and Utica Shale will occur in proximity to the Constitution Pipeline based on planning for shale gas extraction by regulators in both New York and Pennsylvania, the demonstrated pace of gas extraction underway in Pennsylvania, and regulatory action currently under review by the NYSDEC. Again, to ignore the potential cumulative impacts of these foreseeable developments stands in clear violation of NEPA.

C. Rational Consideration of Adverse Impacts Requires a Build-Out Analysis.

To comply with NEPA, the DEIS must contain a quantitative analysis of reasonably foreseeable impacts, including induced changes, both "upstream" and "downstream" of the proposed project. This should include a full build-out analysis of potential "upstream" gas development and related infrastructure in the region impacted by the pipeline, including an estimate of gas wells, well pads, flow back pits, water impoundments, gathering lines, processing plants, compressor stations, and other features. The EIS should also consider the impact of reasonably foreseeable "downstream" facilities and uses along the pipeline corridor such as local distribution networks, peak shaving plants, facilities for liquefied natural gas (LNG) production, storage, and export. The build-out analysis should include a comprehensive assessment of potential indirect and cumulative adverse impacts, including but not limited to air and water quality, greenhouse gas emissions due to combustion and leakage, wildlife and habitat, ecosystem functions and fragmentation, health and safety, and economic effects.

FERC's failure to comply with NEPA by refusing to conduct a full analysis of foreseeable impacts is compounded by the fact that the NYSDEC has specifically requested that such impacts be considered. In scoping comments dated November 7, 2012, Patricia Desnoyers, Esq. of the New York State DEC, Office of the General Counsel, specially states:

> ...the draft EIS must evaluate whether the pipeline would be reasonably available for supply and distribution for communities along the pipeline route **and whether the pipeline could reasonably serve as a collection line for additional supply from the New York Marcellus and Utica Shale formations.** Since the location of the Proposed Project route has a high potential for development of natural gas extraction from

> Marcellus and Utica Shale formations, as indicated in the *revised NYSDEC draft Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program,* **the draft EIS must evaluate the cumulative environmental impacts associated with these potential activities.** (Emphasis added.)

Otsego 2000 strongly concurs with NYSDEC that the impacts of Marcellus and Utica shale gas extraction development in New York State must be evaluated in the DEIS. The discussion of cumulative impacts contained in section 4.13.1, which lacks any quantitative assessment of gas development potential in New York State, fails to satisfy the legal requirements for such an analysis.

A good faith effort must be made to evaluate the indirect and cumulative impacts of Marcellus and Utica Shale extraction in New York State that could be induced or facilitated by the pipeline. Accordingly, submitted with these comments and incorporated by reference in their entirety are the comments submitted by Otsego 2000 and signatory organizations to the NYSDEC with respect to the *draft Supplemental Generic Environmental Impact Statement on the Oil, Gas and Solution Mining Regulatory Program,* with exhibits, filed by Otsego 2000 and dated January 10, 2013, January 10, 2012, and December 30, 2009, respectively. Review of the proposed projects should not be considered in isolation from the broader analysis of shale gas development currently underway and should therefore await completion of the pending SGEIS by the NYSDEC.

D. Consideration of All Other Impacts Is Entirely Conclusory, Lacking Any Evidentiary Support.

The EIS reflects a disappointing pattern of dismissal of each and every negative environmental impact without adequate analysis or supporting evidence. Repeatedly, the EIS states an environmental risk then concludes that the risk is minor or "less than significant" based on one of three points. The EIS uniformly concludes that any negative impact is short-term, that the risk will be regulated by another permit or regulatory agency, or that the project will comply with "best management practices." These conclusions are offered repeatedly with respect to all impacts without citation of any studies, specified laws, or best management practices that will be applied. The issues purportedly resolved in this summary fashion constitute major impacts, including but not limited to the following:

- FERC concludes that significant geological and paleontological resource impacts could be “adequately minimized” without specifying how this would be done. (DEIS, Sec. 5.1.1.)

- Potential impacts on soils would be “avoided or effectively mitigated” based on unspecified measures that are not disclosed, analyzed or explained in any way. (DEIS, Sec. 5.1.2.)

- FERC concludes that water resource impacts could be “avoided, minimized or mitigated” while conceding that the Applicant has not yet identified water wells and springs within 150 feet of the proposed pipeline and has not completed field studies for the contractor yards that will be needed. (DEIS, Sec. 5.1.3.)

- Regarding the protection of surface waters, FERC simply admonishes that impacts are to be avoided "to the extent possible" without specifying what that might mean. (Id.)

- It is claimed that wetlands impacts can be "effectively minimized or mitigated" despite the fact that significant portions of the proposed corridor, which include wetlands, have not been surveyed and delineated by on-the-ground inspection. (DEIS, Sec. 5.1.4.)

- Ecological consequences of the project include impacts to over 1,000 acres of "upland" forest (more than 57% of the project) and the permanent removal of 471 acres of forest; impacts to 91 acres of wetlands, including 32 acres of forested wetlands and the permanent conversion of 15.8 acres of wetland; fragmentation along the linear corridor and permanent division of interior forest habitat; the construction of 54 permanent access roads, and 277 water crossings. (DEIS, Sec. 5.1 et seq.) The DEIS concludes without any references to scientific literature or meaningful analysis of environmental impacts relating to wildlife, habitat fragmentation, or invasive species that these impacts will be short-term and not significant. Although preparation of an Upland Forest Mitigation Plan is recommended, no required content is provided and no document has been offered for public comment. (DEIS, Sec. 5.1.5.)

- Many adverse impacts on wildlife and aquatic resources will be long-term or permanent; FERC concludes these impacts will be minimized to the extent "feasible" without disclosing what this means, and concludes that none of these impacts would be "adverse" without citation to any plans or reports. (DEIS, Sec. 5.1.6.)

- Although federally listed or proposed species and 19 other candidate, state-listed, or special concern species will be impacted, FERC concludes that adverse impacts would be "adequately avoided or minimized" without discussion of specific mitigation plans. (DEIS, Sec. 5.1.7.)

- Adverse impacts on critical land use, recreation, special interest and visual resources are also claimed to be "adequately minimized" without specification of how this will be accomplished; FERC simply concludes that it does not "consider these visual impacts to be significant overall" without discussing or elaborating on how significance is defined. (DEIS, Sec. 5.1.8.)

- Negative impacts on property values are simply rejected based on "available studies" however the studies are not cited or discussed. Claims of long-term socioeconomic effects based on tax revenues are mentioned without analysis of impacts on the existing tax base based on the current economy of the region. (DEIS, Sec 5.1.9.)

- Studies of impacts on cultural resources have not been completed, yet FERC concludes that any adverse effects on cultural resources would be "appropriately" mitigated. This is clearly insufficient analysis. (DEIS, Sec.1.10.)

- Adverse air quality and greenhouse gas emissions are summarily rejected by reference to compliance with existing air emissions standards. FERC concludes that in "the unlikely event that these standards are exceeded, the necessary modifications would be implemented to ensure public safety." This conclusion is written in a vacuum, ignoring the numerous reports of significant emissions, including methane leakage from pipeline and compressor stations throughout the life cycle of similar projects. (DEIS, Sec. 5.1.11.)

- Noise impacts are summarily rejected. FERC claims simply that impacts will be "minimized or mitigated" without identifying specifics. (Id.)

- Safety and emergency response are deemed adequate based on reference to future inspections on an "ongoing" basis and identification of fire, police and public officials who will be called upon to respond to an emergency. These provisions lack all specificity and do not provide any guidance as to planned inspections or emergency response. This is particularly troubling as the pipeline would be a permanent installation. The risks of leaks, rupture, explosion and lack of maintenance over time have been ignored. It is insufficient to conclude that this will "protect the public" without specifying how these matters will be handled over future decades. (DEIS, Sec. 5.1.12.)

The conclusion that the projects present no significant cumulative environmental impacts, unsupported by facts, evidence, or analysis, lacks credibility. The DEIS must be withdrawn on the ground that it did not fairly consider either the risks presented or the substance of the proposed mitigations. In short, the DEIS lacks sufficient detail to explain the basis for its conclusions with respect to all adverse environmental impacts.

III. ECOLOGICAL IMPACTS ARE IMPROPERLY DISMISSED.

A. The Selected Route Is Not Supported by Science and Is Inconsistent with Federal Guidelines.

The DEIS acknowledges that construction of the Constitution Pipeline would directly impact more than 1,000 acres of forest or 57% of the project, 91 acres of wetlands, and 277 water bodies. However, despite these significant impacts (which could actually be worse since field surveys have not been performed for much of the route) the actual harm caused by this proposed pipeline far exceeds these numeric estimates because of where the project is located—within an ecologically important "greenfield" corridor.

The proposed pipeline route needlessly passes through a contiguous landscape of hills, valleys, forests and streams, including pristine natural habitats that support rare species and lands that have benefited from regrowth over the past century. At a macroscopic level, these lands constitute a large, undivided, and biologically diverse mosaic important to the Upper Susquehanna River basin with critical connectivity to the northern Catskill region. Bisecting this special area with a 122-mile pipeline would severely damage a natural resource of state and regional significance.

Contrary to federal and state guidelines, the Constitution Pipeline has not been proposed in or near a disturbed corridor, such as existing pipeline easement or adjacent to a transportation facility. Section 18 C.F.R. §380.15(d)(1) states with respect to pipeline projects: "The use, widening, or extension of existing rights-of-way must be considered in locating proposed facilities." Furthermore, in a letter from the NYSDEC dated September 25, 2013, Patricia J. Desnoyers, Esq, of the New York State DEC, Office of the General Counsel, specifically wrote:

> NYSDEC requests that Constitution thoroughly analyze alternative routes that predominantly use existing utility corridors and rights-of-way (including road and railroad ROW) for all or most of the proposed pipeline route in New York.

However the proposed route fails to do this, with only 9% of the project collocated with existing facilities. Consequently, the route selected divides a significant ecological corridor, separating thousands of acres located between the proposed project and Interstate 88 from forests south of the project that are ecologically connected with Catskill Park.

Criteria in 18 C.F.R. §380.15(a) specifically require that the "The siting, construction, and maintenance of facilities shall be undertaken in a way that avoids or minimizes effects on scenic, historic, wildlife, and recreational values." Similarly, provisions in §380.15(d)(2) and (3) call for avoidance of forested areas, steep slopes, wetlands, scenic lands, and areas that support wildlife. Nonetheless the proposed project, which would involve high-impact construction methods including blasting and trenching of waterways, traverses interior forests, steep slopes, high-quality wetlands, and other sensitive habitat. Despite self-serving conclusions in the DEIS, none of these impacts have been minimized.

B. The DEIS Fails to Consider the Adverse Impacts of Ecosystem Fragmentation.

The DEIS fails to consider the full set of ecological impacts associated with construction of a linear pipeline corridor upon wildlife and habitat, rare species, and the integrity of ecosystems. Citing information supplied by the Applicant, the DEIS accepts that the minimum size of an interior forest block capable of supporting interior forest birds is 35 acres. Following this, the document concedes that the pipeline project would result in 55 permanent remnant blocks that are less than 35 acres in size each. (DEIS, Section 4.53, p. 4-70.) However, the DEIS then misleadingly reports that construction activities would impact only 439.7 acres of interior forest habitat and result in the permanent loss of only 217.9 acres of interior forest. (DEIS, p. 4-71.) This appears to ignore the remnant blocks, which no longer provide functional habitat for interior birds. The DEIS does not report the size of the 55 individual forest block remnants, however if a mean size of 17.5 acres is assumed, then a total of nearly 1000 acres of interior forest habitat capable of supporting interior forest birds could be lost, in addition to lands that are directly impacted by construction. Depending on the size of individual forest block remnants, this number could be even higher. By failing to fully account for the loss of functional interior forest land, the DEIS has underestimated environmental harm that would be caused by the project. The DEIS also fails to fully consider the substantial negative impacts that the linear corridor will have upon wildlife, erroneously suggesting that the cleared pipeline easement may even have beneficial impacts as open space. For example in Section 4.6.1.3, FERC states:

> Maintenance of the permanent right-of-way would create smaller contiguous tracts of forest habitat and might reduce available feeding and nesting habitat for certain migratory bird species. The loss of interior forest habitat could result in mobile species permanently populating adjacent habitats, which could increase competition and stress on a long-term basis. **However, the creation of additional edge habitat could benefit certain species by providing travel corridors and additional forage habitat.** (Emphasis added.)

The continued fragmentation of forest areas may benefit certain opportunistic species, particularly predatory or parasitic species such as skunks, raccoons, and brown cowbirds that target interior nesting birds. However this cannot be construed as an environmental benefit. Due to changes in land use and fragmentation that has already occurred, there is no shortage of edge habitat in New York. Yet there is definitely a limited amount of interior forest habitat in the state which continues to diminish—a problem that will only worsen if the proposed 122-mile long Constitution Pipeline project is approved. The U.S.G.S. Breeding Bird Survey has documented major downward trends in interior forest bird populations, including within New York State. Thus, even if the Applicant eventually submits an Upland Forest Mitigation Plan (which to date has not been produced) the fact remains that these are trends that cannot be reversed or mitigated with actions that continue to fragment forest habitat. By avoiding a greenfield route, however, these impacts could be eliminated.

Permanently maintained linear corridors also encourage the spread of invasive plants, an effect exacerbated by soil disturbance and vehicles used during and after construction. Furthermore, once established, invasive plants such as phragmites, purple loosestrife, Japanese knotweed, and stilt-grass are difficult to eliminate and very likely to spread into other areas, including sensitive wetlands. Herbicide treatment is only partially effective and its application can be harmful to wildlife, especially amphibians. Despite the widespread failure of such measures, the DEIS naively asserts that the spread of invasive plants will be controlled and mitigated if the project is approved. Again, a non-greenfield route would significantly reduce these impacts.

With respect to wetland and aquatic systems, the DEIS fails to acknowledge the obvious difference between features that are part of an undisturbed landscape and those which abut developed areas. For example, in comparing the proposed route to alternatives, the DEIS concludes that wetland impacts would be greater along the I-88 corridor, without giving any consideration to the fact that wetlands and aquatic habitat in an undisturbed location in context with surrounding habitat have much greater environmental value than impacted wetlands adjacent to a major road.

A prime example of this type of flawed analysis is in the Applicant's consideration of the Henry S. Kernan Land Trust property, a 930-acre parcel located in Otsego and Delaware counties that has been protected and managed since 1946 and remains in a trust to ensure its continued conservation. The subject of several articles appearing in the NYSDEC's *Conservationist* magazine, the property has been identified by the NYS Natural Heritage Program as one of New York's largest, ecologically pristine sphagnum bogs outside of the Adirondacks. The Kernan Land Trust property is a premier example of unspoiled biodiversity, free of invasive plants, supporting an amazing collection of unique species including carnivorous plants, several native orchids, dwarf mistletoe, and bog rosemary. Yet despite its outstanding natural attributes, the

parcel falls within the proposed Constitution Pipeline corridor. According to the director of the NYS Invasive Species Institute at Cornell University, a pipeline easement through the property would inevitably lead to infestation of this sensitive wetland system with invasive species. There is no justification for this when viable alternative routes exist.

C. Induced and Cumulative Ecological Impacts of Shale Gas Extraction Are Ignored.

While the potential environmental impacts of the Constitution Pipeline are adverse and significant, even more damaging are the ecological impacts of shale gas extraction that may be induced by the project, as well as the cumulative impacts of the project and foreseeable gas extraction in the region. As discussed above, it is entirely unacceptable and in violation of NEPA that FERC has not produced in the DEIS an estimate of the amount of gas wells and related infrastructure that is reasonably foreseeable if the pipeline project is constructed.

High-volume fracking typically follows a grid pattern of well pads and infrastructure that proliferates across the landscape. Current spacing regulations in New York State allow a well pad with multiple wells to be installed every square mile, with infill wells also permitted. The cumulative impacts can be profound. Loss of functional habitat, fragmentation, negative edge effects, invasive species, impacts to wildlife populations due to intense activity, and harm to plant and animal species as a result of air, water, or soil contamination are all impacts that can be expected if fracking takes place around the pipeline. Most vulnerable to the impacts of widespread shale gas extraction are those species with small geographic ranges that overlap the Marcellus and Utica shale regions. See *"Hydraulic Fracturing Threats to Species with Restricted Geographic Ranges in the Eastern United States,"* (J. Gillen, Erik Kiviat, *Environmental Practices*, August, 2012; doi:10.10170S1466046612000361.)

Disturbingly, many of these impacts are most acute in forests. This is of great concern because forests, which comprise much of upstate New York's most intact habitat, are essential for sustaining wildlife populations and maintaining biodiversity. To this point, The Nature Conservancy (TNC) produced a report which analyzed the potential impacts of hydrofracking in Tioga County, New York, titled *"An Assessment of Potential Impacts of High Volume Hydraulic Fracturing on Forest Resources"* (Cara Lee, et al; Dec 19, 2011). A similar analysis of lands in the vicinity of the Constitution Pipeline should be performed for Broome, Chenango, Delaware, Otsego, and Schoharie Counties. Also useful to understanding the large scale landscape consequences of shale gas extraction is the U.S.G.S. report titled "*Landscape Consequences of Natural Gas Extraction in Bradford and Washington Counties, Pennsylvania, 2004-2010*" (E.T. Sionecker, et al; Open-File Report 2012-1154).

In addition to direct impacts of the Constitution Pipeline on natural resources, the threat posed to wildlife, interior forests, and other natural communities around the pipeline due to induced shale gas development and cumulative impacts of such development makes this project and its greenfield route highly objectionable.

IV. ANALYSIS OF ALTERNATIVES IS SIGNIFICANTLY FLAWED.

A. Erroneous Comparisons between Transported and Produced Energy Are Presented.

In comparing the impacts of the pipeline to alternative energy sources, FERC makes an erroneous comparison between **produced** and **transported** energy. Specifically, in section 3.1.2.3, FERC attempts to calculate the physical footprint associated with the number of wind turbines or solar farms that would be needed to produce the equivalent amount of energy that could be carried on a daily basis through the Constitution Pipeline (650,000 Dth/d or 190,496.4 MWH). From this, FERC concludes that the land area and physical impact of renewable energy is far more damaging than a gas pipeline. However wind turbines and solar panels actually **produce** energy, whereas a gas pipeline is merely a conduit for the **transport** of energy that is produced elsewhere. Natural gas would have to spontaneously appear within the pipeline for such a comparison to be valid.

A legitimate comparison between the physical footprint of energy provided by the pipeline and renewable alternatives would require calculating the total physical footprint associated with the **production** of natural gas. This would have to include the footprint of gas well pads, flow-back pits, water impoundments, gathering lines, processing equipment, and other infrastructure needed to generate 650,000 Dth/d of energy. Furthermore, the production volumes from fracked wells in the Marcellus typically drop off sharply after the first year of operation, whereas the lifespan of installed wind and solar technology is 25 years or more. Therefore a valid comparison of natural gas to renewables would require estimating the expanding footprint of gas wells and infrastructure needed to produce 650,000 Dth/d over this extended time period. Such a comparison to renewables, which generate electricity directly, would also have to consider the physical impact of gas-fired power plants that are required to convert gas within the Constitution Pipeline to electrical power.

Conversely, if a comparison of transported energy is made, only the impact of electrical power lines should be considered for renewables; and arguably those lines already exist or could be accommodated by collocation with existing lines. In any event, neither those power lines (nor the wind and solar sources of energy generation that supply them) would need to be located in the sensitive corridor selected for the Constitution Pipeline.

Based on this erroneous comparison between produced and transported energy, FERC concludes in section 3.1.2.3 that renewables would result in "greater impacts upon visual, vegetation, and wildlife resources," a determination that is on its face absurd. This erroneous comparison is a fundamental flaw of the DEIS which must be corrected.

B. Analysis of Alternatives Is Not Supported by Facts.

The DEIS analysis of alternatives for bringing gas from Pennsylvania to New England are incomplete and do not consider optimal combinations of pipeline sharing and collocation. For example, Figures 3.2.3-1 and 3.2.3-2 depict alternatives that require “greenfield” components involving additional new corridors. However, it appears that permutations exist that have not been considered, which would eliminate or minimize the need for these types of “greenfield”

impacts. One such alternative would be to transport gas west on (or collocated with) the TGP 300 pipeline and then northeast on (or collocated with) the Dominion Pipeline.

The Millennium-Dominion-TGP alternative described in section 3.3.2 and depicted in Figure 3.3.2-1 would achieve the purpose of minimizing "greenfield" impacts. However the DEIS rejects this route out of hand, claiming that it would have "greater total environmental impacts relative to the proposed pipeline." Providing no environmental analysis to support this claim, FERC has failed to demonstrate that the proposed route for the Constitution Pipeline—which would entail blasting a new 120-mile corridor through heavily forested landscapes and repeated crossings over sensitive streams and wetlands—will in fact have lesser environmental impacts.

Although the Millennium-Dominion-TGP alternative would require more linear feet of pipe, it would be located almost entirely within existing easements and therefore eliminate sensitive "greenfield" impacts. Furthermore, although more landowners would be temporarily affected, those impacts would be within easements that already exist and for which rights to develop have already been secured. Eliminating the need for 120 miles of new corridor easements, taken by or under the threat of eminent domain and affecting hundreds of new landowners, ought to be a priority for FERC.

Finally, the DEIS has summarily dismissed the most obvious alternative for delivering gas from the fracking fields of Pennsylvania to New England, namely the transport of gas east on (or collocated with) the Millennium pipeline or TGP 300 pipeline and then northeast on (or collocated with) the Algonquin pipeline. Since one of the markets identified in the DEIS is downstate New York and New England, expansion of pipeline capacity within the Millennium or TGP 300 corridor is an obvious and the most direct solution.

However, without providing any supporting evidence, the DEIS simply concludes in section 3.2.3.3 that such a route would be "constrained by the high level of development within New York City and the surrounding area," rejecting the alternative with little discussion. It should be noted that the Algonquin mainline does not actually enter New York City. Furthermore, no analysis of easement width or physical constraints has been provided to support the claim that existing development in the region creates a significant barrier precluding this obvious and direct solution. These are fundamental flaws in the DEIS, which must be corrected.

V. THE DEIS FAILS TO ACKNOWLEDGE PLANS FOR EXPORT, WHICH CONSTITUTES ILLEGAL SEGMENTATION.

It is widely known that one of the Applicants for the Constitution project, Iroquois Gas Transmission System (IGT), has issued an "open season" announcement regarding intentions to reverse flow of the Iroquois pipeline for delivery of gas north to Canada. As a result of this proposed IGT "South-to-North" (SoNo) project, much of the gas carried within the Constitution Pipeline will actually be exported outside of the United States. Although delivery to Canada is actually planned for 2016, no mention of this is included in the DEIS. In fact, FERC states in the DEIS:

> **Constitution's application does not include provisions for the exportation of natural gas. Further, there are no existing or proposed natural gas exportation facilities located downstream of Constitution's project**. Should such exportation facilities be proposed in the future downstream of Constitution's project, **which is speculative**, then any such proposal would be subject to a new and separate approval process from the U.S. Department of Energy (DOE), the FERC, and all other applicable permitting agencies. (DEIS, p. 1-10; emphasis added.)

This constitutes a clear misrepresentation of fact by both the Applicants and FERC, since there is no mention of plans to export the gas transmitted in the DEIS and the only proposed markets for the Constitution Pipeline mentioned in the DEIS are New York and New England. Furthermore, the claim that no proposed export facilities are located downstream of the Constitution Pipeline is blatantly false since reversal of the Iroquois pipeline anticipated in 2016 causes it to become an export facility. Clearly the consideration of exportation is not "speculative" in light of this announced project.

Failure to address reversal of the Iroquois line, as part of the Constitution Pipeline DEIS therefore constitutes improper segmentation of a clearly coordinated effort to transport gas outside of the United States. In addition, public comments by J. Hutton, Cabot Oil & Gas (4th Quarter 2012) https://archive.org/details/CabotOilGasCorporation4thQuarter2012ConferenceCall) clearly indicate plans to provide system capacity for delivery of 75,000 Dth/d of gas to the proposed Cove Point LNG facility in Maryland for export. The DEIS must be substantially revised to address all proposed exports of gas that may be facilitated by the Constitution Pipeline.

Finally, although the DEIS acknowledges that the Boston area is one of the intended markets for gas carried by the Constitution Pipeline, FERC fails to discuss or even mention the proposed TGP Northeast Expansion project ("Bullet Line") which would involve construction of a new 150-mile long, 30-inch pipeline from the terminus of the Constitution Pipeline in Wright, New York to Dracut, Massachusetts. This project would effectively serve as an extension of the Constitution Pipeline. Accordingly, it too must be addressed in the DEIS.

VI. STATED ADVANTAGES OF INCREASED RELIANCE ON METHANE GAS ARE NOT SUPPORTED BY EVIDENCE.

The DEIS misleads the public when it concludes that the "the proposed projects would contribute to a cumulative improvement in regional air quality if a portion of the natural gas associated with the proposed projects displaces the use of other more polluting fossil fuels." (DEIS, Sec. 4.13.6.) See also, the claim that "by utilizing cleaner-burning natural gas" in lieu of other fuels greenhouse gas emissions will be reduced. (DEIS, p.1-2.) These statements are not supported by evidence or facts. Indeed, the opposite is true. The primary method by which natural gas extraction occurs today—horizontal high-volume hydraulic fracturing—cannot conceivably be described as "clean" once the numerous environmental and human health problems associated with its production and distribution are considered, including contamination of air and water, habitat fragmentation, fracking waste disposal, earthquakes, methane leaks and explosions, and countless other impacts.

Before FERC can rationally reach a conclusion that the projects taken together may have positive environmental effects, the DEIS must consider the cumulative environmental footprint of the projects. The DEIS would have to be revised to address the full life cycle of impacts associated with natural gas production and infrastructure, including gas well development, gathering lines, pipelines, compressor stations, industrial plants that produce and store liquefied natural gas (LNG) or compressed natural gas (CNG), fueling stations, and import/export facilities over the lifetime of the propose projects. We submit that if the full environmental impacts of gas extraction and methane leakage were taken into account over the decades that the pipeline will be installed, reliance on natural gas would not be characterized as a "cumulative improvement." See e.g. the study commissioned by Senator Markey documenting severe ongoing pipeline methane leaks as infrastructure ages, *America Pays for Gas Leaks*, August 1, 2013.

Significantly, the DEIS also fails to address the findings of the International Energy Agency (IEA) that a large natural gas boom—even with improvements in place to reduce leakage—would eventually lead to greenhouse gas concentrations of 650 parts per million and a global temperature rise of 3.5 degrees Celsius, far exceeding the 2 degree Celsius limit which is critical to avoid the most severe effects of climate change.[1] Furthermore, a recent quantitative study found that current inventories by the EPA and the Emissions Database for Global Atmospheric Research (EDGAR) underestimate methane emissions nationally by a factor of 1.5 and 1.7 respectively.[2]

The same study also determined that regional methane emissions from extraction and processing may actually be five times worse than EDGAR estimates. These data are included in an even more recent study that found that national-scale methane emissions are about 5.4 +/- 1.8% of production.[3] Even the low end of this range supports the results of independent analyses, which show that the climate-driving effects of shale gas development exceed coal when a twenty-year timeframe is appropriately considered.[4] Thus, increased reliance on natural gas could advance rather than retard global warming. The failure of the DEIS to consider this data is another serious omission that must be corrected.

CONCLUSION

For all of the reasons stated above, the DEIS is premature, incomplete, unsupported by evidence and fails to adequately consider the direct, indirect, and cumulative impacts of the projects. The proposed projects are unnecessary and improperly located, with significant negative impacts that

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[1] *Golden Rules for a Golden Age of Natural Gas—World Energy Outlook Special Report on Unconventional Gas*, International Energy Agency, WEO-2012, International Energy Agency, November 2012.

[2] *"Anthropogenic Emissions of Methane in the United States;"* Scot M. Miller, Steven C. Wofsy, Anna M. Michalak, Eric A. Kort, Arlyn E. Andrews, Sebastien C. Biraude, Edward J. Dlugokencky, Janusz Eluszkiewicz, Marc L. Fischer, Greet Janssens-Maenhout, Ben R. Miller, John B. Miller, Stephen A. Montzka, Thomas Nehrkorn, Colm Sweeney; October 2013.

[3] *Methane Leaks from North American Natural Gas Systems,* Brandt et al.**,** Scienc*e,* 14 February 2014: Vol. 343, no. 6172, pp. 733-735, DOI*:* 10.1126/science.1247045

[4] *Methane and the Greenhouse Gas Footprint of Natural Gas from Shale Formations,* Robert W. Howarth, Renee Santoro, Anthony Ingraffea; April 2011;*Venting and Leaking of Methane from Shale Gas Development: Response to Cathles et al.,* Robert W. Howarth, Renee Santoro, Anthony Ingraffea; January 2012.

cannot be mitigated. These defects in the DEIS are fundamental and pervasive. We request that FERC take no further action with respect to permitting these projects on the basis of this profoundly flawed DEIS.

Respectfully submitted,

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Enclosures