UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION

In the Matter of	**)**	**Docket No. CP14-553-000**
Texas Gas Transmission, LLC	**)**	**Docket No. CP15-14-000**

COMMENTS OF ALLEGHENY DEFENSE PROJECT, FRESHWATER ACCOUNTABILITY PROJECT, HEARTWOOD, AND OHIO VALLEY ENVIRONMENTAL COALITION

The following comments are submitted on behalf of the Allegheny Defense Project, FreshWater Accountability Project, Heartwood, and Ohio Valley Environmental Coalition regarding the Federal Energy Regulatory Commission's ("FERC") notices of intent to prepare environmental assessments ("EA") for Texas Gas Transmission's ("TGT") proposed Ohio-Louisiana Access Project and Southern Indiana Market Lateral Project (collectively, "Projects"). In the Ohio-Louisiana Access Project, TGT proposes to (i) construct a new compressor station in Ouachita Parish, Louisiana; (ii) modify an existing receipt meter station to allow bi-directional flow; and (iii) make certain yard and station piping modifications at the existing compressor stations in Louisiana and Indiana to allow each of the compressor stations to flow gas bi-directionally. In the Southern Indiana Market Lateral Project, TGT proposes to construct, operate, and maintain (i) a new 29.9-mile 20-inch diameter natural gas pipeline lateral; (ii) a 0.9-mile, 10-inch diameter pipeline lateral, (iii) two meter and regulator stations; and (iv) other appurtenant auxiliary facilities, extending from TGT's existing Robards Junction facilities in Henderson County, Kentucky to interconnections with two industrial facilities in Posey County, Indiana.

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I. FERC must take a hard look at the direct effects of the Projects.

FERC must take a hard look at the environmental consequences of the Projects. *Robertson v. Methow Valley Citizens Council*, 490 U.S. 332, 350 (1989). Direct effects are "caused by the action and occur at the same time and place." 40 C.F.R. § 1508.8(a). Here, there are significant potential direct effects, most notably the proposed crossing of the Ohio River in the Southern Indiana Market Lateral Project.

TGT proposes a horizontal directional drill ("HDD") under the Ohio River as part of the construction of the lateral pipeline from Henderson County, Kentucky to Posey County, Indiana. Southern Indiana Market Lateral, Resource Report 2, App. 2A at 6. The length of the Ohio River at this point is 1,854 feet. *Id*. TGT claims that because it is crossing the Ohio River via HDD, there will be "no impacts to this waterbody." Resource Report 2 at 2-7. TGT is overly confident and FERC must consider the potential for impacts to the Ohio River from the HDD process and the potential for future pipeline ruptures. FERC must also take a hard look at the direct impacts of the projects on other waterbodies and wetlands, wildlife habitat, air quality, and land use.

II. FERC must take a hard look at the indirect effects of the Projects, including shale gas development in the Marcellus and Utica shale formations.

FERC must take a hard look at the indirect effects of the Projects, including shale gas development in the Marcellus and Utica shale formations. Indirect effects are:

> [C]aused by the action and are later in time or farther removed in distance, but are still reasonably foreseeable. Indirect effects may include growth inducing effects and other effects related to induced changes in the pattern of land use, population density or growth rate, and related effects on air and water and other natural systems, including ecosystems.

40 C.F.R. § 1508.8(b). The indirect effects of shale gas development in the Marcellus and Utica shale formations are causally related to the Projects and reasonably foreseeable. Therefore, FERC has an obligation to take a hard look at the environmental effects of Marcellus and Utica shale extraction as an indirect effect of the Projects.

A. There is a clear causal connection between the Projects and shale gas development in the Marcellus and Utica shale formations.

In previous proceedings, FERC has cited an unpublished Second Circuit decision for the proposition that it need not consider the impacts of Marcellus and Utica shale gas development when reviewing jurisdictional infrastructure projects. In that case, which is not binding precedent, the Second Circuit stated that there was an insufficient causal relationship between a proposed pipeline and gas drilling in the Marcellus shale formation. *Coalition for Responsible Growth v. FERC*, 485 Fed. Appx. 472, 2012 WL 1596341 (2d Cir. 2012). In reaching this conclusion, the Second Circuit simply accepted all of FERC's arguments at face value without addressing *any* of the case law that FERC relied on in the underlying proceedings. *Id*. *See also Central New York Oil and Gas Co., LLC*, 137 FERC § 61,121, at PP 81-101 (2011), *order on*

reh'g, 138 FERC ¶ 61,104, at PP 33-49 (2012). An examination of the case law reveals why FERC's interpretation of its NEPA obligations is without merit.

For example, the Ninth Circuit has said that an agency must consider something as an indirect effect if the agency action and the effect are "two links of a single chain." *Sylvester v. U.S. Army Corps of Engineers*, 884 F.2d 394, 400 (9th Cir. 1989). Here, Marcellus and Utica Shale gas extraction activities and the Project are obviously "two links of a single chain." Another case cited by the *Sylvester* court, *Colorado River Indian Tribes v. Marsh*, 605 F.Supp. 1425 (C.D. Cal. 1985), strongly supports this causal connection. In that case, the U.S. Army Corps of Engineers ("Corps") issued a permit allowing a developer to stabilize a riverbank without considering the indirect and cumulative effects of the stabilization – namely, future residential and commercial development. The court held that the Corps "assess[ed] the project with tunnel vision" that "was tantamount to limiting its assessment to primary impacts." *Colorado River Indian Tribes*, 605 F.Supp. at 1433. The court further noted that:

> The Corps should have analyzed the indirect effects of the bank stabilization on both "on site" and "off site" locations, i.e., the growth-inducing effects related to the changes in the pattern of land use and population growth. It would appear that the Corps failed to consider the cumulative impact associated with the bank stabilization project when it may have been reasonably foreseeable that the placement of ripraps was just a stepping stone to major development in the area.

Id. FERC must not repeat the mistakes of the Corps in *Colorado River Indian Tribes* by assessing the impacts of the Projects with "tunnel vision." Just as the bank stabilization was a "stepping stone" to residential and commercial development, so too are the Projects in the context of induced shale gas development in the Marcellus and Utica shale formations. Therefore, FERC must look at the indirect effects of authorizing the Projects on both "on site" and "off site" locations, including the growth-inducing effects related to the changes in the pattern of land use and related effects on air and water and other natural systems, including ecosystems. *Id*. *See also* 40 C.F.R. § 1508.8(b).

Multiple industry and government sources, including the underlying applications, demonstrate that there is a clear causal connection between gas drilling in the Marcellus and Utica shale formations and projects such as the ones under review in these proceedings. In 2011, the National Petroleum Council ("NPC"), a federal advisory committee that reports to the Secretary of Energy, published a report noting that:

> The 2007 NPC *Hard Truths* study described infrastructure as a *key link in the chain, connecting supply to markets*, and found that knowledge of existing infrastructure and planning for new infrastructure could fall short of meeting market needs. Sufficient natural gas midstream infrastructure, including gathering systems, processing plants, *transmission pipelines*, storage fields, and LNG terminals, is *crucial* for efficient delivery and functioning markets….*New infrastructure will be required to move natural gas from regions where production is expected to grow to areas where demand is expected to increase*.

NPC, Prudent Development: Realizing the Potential of North America's Abundant Natural Gas and Oil Resources, pp. 51-52, 2011 (emphasis added) (Attachment 1). In other words, without "sufficient natural gas midstream infrastructure, including….transmission pipelines," gas extracted "from regions where production is expected to grow," such as the Marcellus and Utica shale formations, will not have a way to reach "areas where demand is expected to increase." Thus, the NPC clearly considers upstream shale gas extraction and transmission pipelines as "two links of a single chain" that transports natural gas to downstream market areas.[1]

Moreover, TGT's own application materials acknowledge the close causal relationship between the Projects and gas drilling in the Marcellus and Utica shale formations. According to TGT's application for the Ohio-Louisiana Access Project:

> The Project *is **designed** to meet the demand to transport natural gas **produced in the Marcellus/Utica Shale Region*** to mid-western and southern markets on the Texas Gas system….R.E. Gas Development, LLC ("R.E. Gas"), Jay-Bee Production Co. by its agent DMRB Services, LLC ("Jay-Bee"), Louisville Gas and Electric Company ("LG&E"), Gulfport Energy Corporation ("Gulfport"), Sabine Pass Liquefaction, LLC ("Sabine"), DTE Energy Trading, Inc. ("DTE"), and Public Energy Authority of Kentucky ("PEAK") are the customers supporting this Project[.]

Ohio-Louisiana Access Project Application at 2 (emphasis added). TGT further explains that:

> Significant amounts of natural gas are being produced in the Marcellus/Utica Shale production areas and there has been an increased demand for pipeline infrastructure to transport these natural gas supplies to markets. The proposed Ohio-Louisiana Access Project will meet this market demand by creating additional interstate transportation capacity from Lebanon, Ohio to Midwestern and Southern markets on the Texas Gas system.
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> …By modifying Texas Gas' existing pipeline system, the Project will allow Texas Gas to flow gas bi-directionally and provide access to markets located in the Midwestern and Southern regions of the United States. The Project also will enhance gas supply flexibility for existing and future customers of Texas Gas by making additional gas supplies available to the Texas Gas system and those consuming markets.

Id. at 4-5. TGT further explains that:

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[1] It is worth noting that Commissioner Philip D. Moeller served on the Coordinating Subcommittee that participated in preparing *Prudent Development*. NPC, Prudent Development, App. B, p. B-6 (2011), *available at* http://www.npc.org/reports/rd.html (Attachment 2). In addition, two other senior FERC officials served on two relevant subgroups that participated in the preparation of *Prudent Development*. Jeff C. Wright, the Director of FERC's Office of Energy Projects, served on the Gas Infrastructure Subgroup of the Resource & Supply Task Group, *Id*. at B-20, and FERC's Senior Technical Advisor, C. Webster Gray, served on the Offshore Operations Subgroup of the Operations & Environment Task Group. *Id*. at B-23.

> As conventional natural gas production declines, gas produced from shale plays now comprises a substantially larger, and increasingly important, component of the nation's domestic gas supply portfolio, and is essential to ensuring continued availability of adequate natural resource supplies to customers at reasonable prices. The Energy Information Administration ("EIA") forecasts that U.S. shale plays will increase by 11 billion cubic feet per day ("Bcf/d") by 2020, with total natural gas production at 73 Bcf/d.
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> *Gas produced in the Marcellus and Utica Shale production areas is projected to increase significantly over the next several years*. In 2013, the Marcellus/Utica shale region produced approximately 10 Bcf/d and is forecasted to produce approximately 26 Bcf/d in 2020, an increase of 156 percent.
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> In addition, demand for domestic gas supplies is projected to remain strong. Wood Mackenzie forecasts that U.S. natural gas demand will grow from approximately 71 Bcf/d in 2013 to 78 Bcf/d in 2020, an increase of 11 percent, *with the majority of this demand, or 4 Bcf/d, occurring in the Southern region of the country*.
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> Almost all of this demand growth is expected to be from the power generation and industrial sectors. Wood Mackenzie forecasts that U.S. industrials will grow approximately 4 Bcf/d and the power generation sector will grow approximately 2 Bcf/d between 2013 and 2020.
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> *Texas Gas has designed a project that will meet the demand to transport gas supplies from the Marcellus/Utica shale basins to markets in the South and Midwest*.

Id. at 14-17 (internal citations omitted) (emphasis added).

In a recent presentation by TGT's parent company, Boardwalk Pipeline Partners ("Boardwalk"), Boardwalk noted that it intends to "leverage and strengthen existing natural gas pipeline transportation and storage assets by attaching to new end-use markets and accessing abundant supply sources." Boardwalk, 2014 Wells Fargo Energy Symposium, p. 8 (Dec. 2014) (Attachment 3). Boardwalk identified the "Marcellus/Utica shale plays" as the supply sources that will have the "greatest production growth" through 2020. *Id*. at 10. Indeed, Boardwalk estimated that by 2020, gas production in the Marcellus/Utica formations is estimated reach 26.2 Bcf/d, which is more than all of the other shale gas formations identified in its presentation combined. *Id*. The presentation specifically identified the Projects at issue here with arrows indicating natural gas flowing from "Marcellus & Utica Supplies" south on TGT's system. *Id*. at 17. In addition, Boardwalk identified other reasonably foreseeable jurisdictional projects, including the Northern Supply Access Project and Western Kentucky Market Lateral Project. *Id*. at 18-19. Again, the presentation highlights that the gas supply for these projects will be the Marcellus and Utica shale formations. *Id*.

Finally, TGT explains that a portion of the unsubscribed capacity for the Ohio-Louisiana Access Project has been subsequently subscribed by TGT's customers for the Southern Indiana Market Lateral. *Id*. at 17, n. 8. According to a local news report:

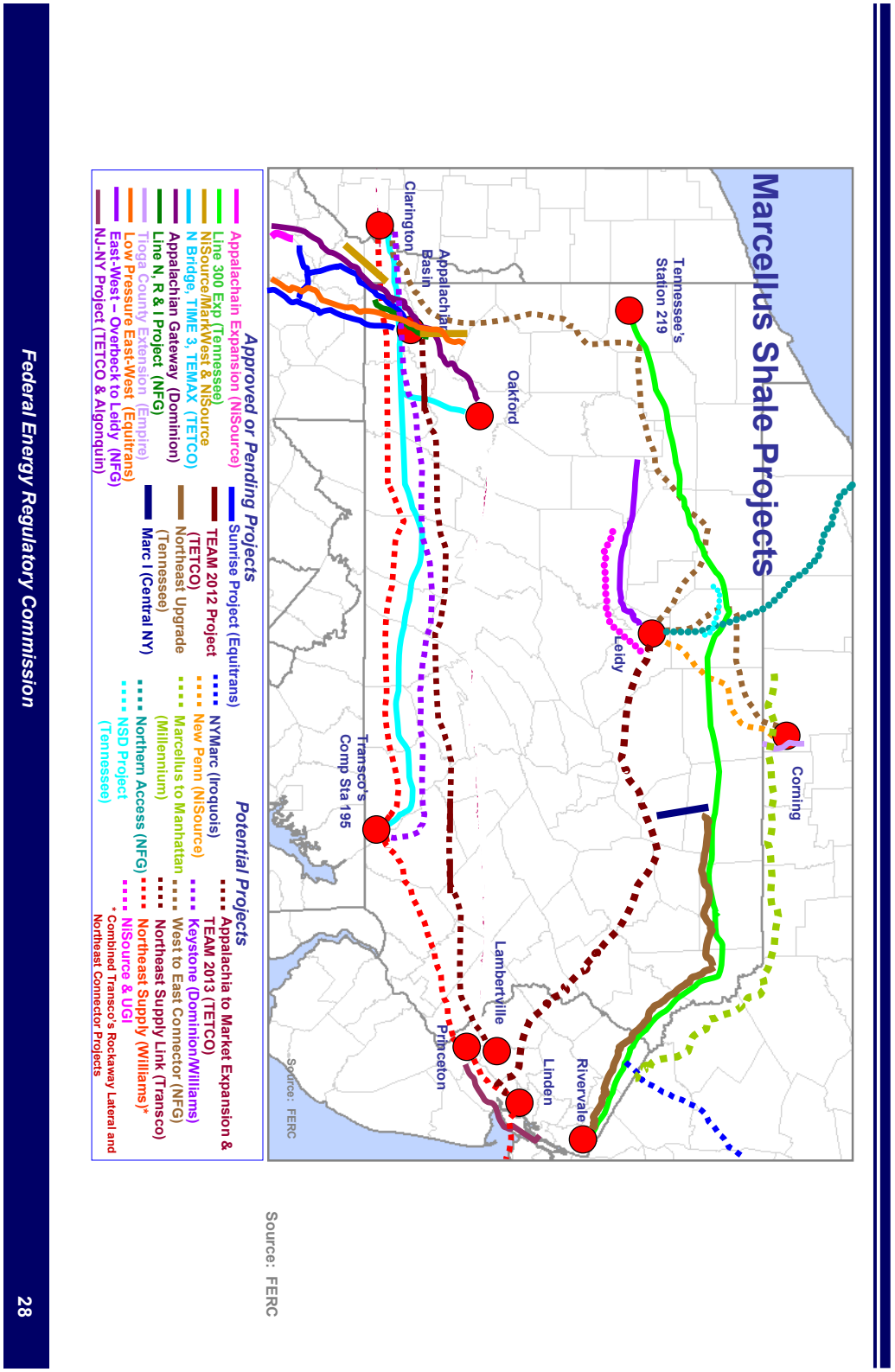
> Texas Gas is working on projects to transport gas from pipelines at Lebanon, Ohio, which carry gas from the Marcellus and Utica shale fields. If completed, the Southern Indiana Market Lateral will transport 166,000 MMBtu, or roughly 166 million cubic feet, per day of natural gas piped from Lebanon.

Allison Crawford, Proposed Gas Pipeline to Route Through Henderson, WKMS, July 1, 2014 (Attachment 4). The customers for the Southern Indiana Market Lateral include Midwest Fertilizer Company ("MFC") and SABIC Innovative Plastics ("SABIC"). Southern Indiana Market Lateral Application at 1. According to a recent article in Site Selection, a publication that focuses on corporate real estate, MFC's decision to construct a new fertilizer plant in Indiana is related to "the positive natural gas situation, due largely to the shale gas activity in the Marcellus and other formations." Adam Bruns, Cropping Up: Natural gas fires up projects up and down the banks of the Ohio, including one whopper of a fertilizer plant. Site Selection. Nov. 2013 (Attachment 5).

All of this information supports the fact that the proposed Projects, should they be authorized by FERC, would be "key links in the chain" connecting gas supplies from the Marcellus/Utica shale basins to markets in the South and Midwest. Therefore, there is a clear causal connection between the Projects and gas drilling in the Marcellus and Utica shale basins. In addition to the industry statements provided above, it is important to note that FERC itself considers shale gas extraction and infrastructure (including transmission pipelines) as "two links of a single chain."

For example, FERC's Strategic Plan for FY2014-2018 states that the "development of interstate natural gas infrastructure – *pipelines*, storage, and LNG facilities – is a *critical link in ensuring that natural gas supply can reach market areas*." FERC, Strategic Plan FY2014-2018, p. 17 (Mar. 2014) (emphasis added), *available at* http://www.ferc.gov/about/strat-docs/FY-2014-FY-2018-strat-plan.pdf. It is arbitrary for FERC to acknowledge the "critical link" between "natural gas supply" and "market areas" for purposes of its own strategic planning and then claim there is an insufficient causal connection between pipelines and gas supplies whenever it reviews the environmental impacts of a proposed pipeline. This is particularly true since there are so many projects such as the ones at issue here that are targeting the same gas supply region – the Marcellus and Utica formations in Pennsylvania, West Virginia, and Ohio.

According to a 2010 presentation in Berlin, Germany, FERC identified numerous jurisdictional "Marcellus Shale Projects" in Pennsylvania and surrounding states. FERC, Natural Gas in the U.S.: Supply and Infrastructure = Security, p. 28 (Oct. 26-27, 2010) (Attachment 6). FERC's map of "Marcellus Shale Projects" is provided below:



Source: FERC

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On the next page of the presentation, FERC identifies numerous jurisdictional "Natural Gas Facilities Impacting the Marcellus Shale Basin." *Id*. at 29. The projects are broken down by

company and identify the capacity, miles of pipe, and compression of each project "impacting the Marcellus Shale Basin." *Id*. FERC also discussed the impacts of drilling and hydraulic fracturing for shale gas. *See id*. at 30-33 (discussing the process of hydraulic fracturing, volumetric composition of fracture fluids, and estimated water needs per shale well in the Marcellus, Barnett, Fayetteville and Haynesville Shale Basins).

In a 2011 presentation in Buffalo, NY, FERC noted that "existing pipelines are eyeing backhauls in response to Marcellus Growth." FERC, Shale Development: Its impact on Infrastructure and LNG Exports, p. 21 (Oct. 18, 2011) (Attachment 7). FERC also noted that several pipelines "have sought to construct new facilities to transport Marcellus shale gas." *Id*. at 23. FERC also identified pipelines that "have expressed interest in constructing new facilities to transport natural gas liquids out of the Marcellus shale." *Id*. at 29-31. FERC cannot claim with a straight face that jurisdictional infrastructure projects such as the ones proposed here are not causally connected to Marcellus shale gas drilling when FERC itself refers to similar projects as "Marcellus Shale Projects."

According to the Energy Information Administration ("EIA"):

> Spurred by growing natural gas production in Pennsylvania, West Virginia, and Ohio, the natural gas pipeline industry is planning to modify its systems to allow bidirectional flow to move up to 8.3 billion cubic feet per day (Bcf/d) out of the Northeast.

EIA, 32% of natural gas pipeline capacity into the Northeast could be bidirectional by 2017, Dec. 2, 2014 (Attachment 8). TGT's Ohio-Louisiana Access Project is one such system modification "to allow bidirectional flow." According to Fellon-McCord, an energy consulting firm:

> Since 2010, the landscape of natural gas production in the United States has shifted, *with developments in the Marcellus and Utica shale plays* ***driving overall supply growth***. Because of the proximity of those basins to major gas-consuming markets in the Northeast and Midwest U.S., supplies from other areas in the country are looking for new destinations. As a result, pipelines from producing regions in the Rockies, Texas, and the Gulf Coast are taking steps to divert the flow of natural gas to alternative destinations, while others are looking to tap into the growing resource in the Ohio/Pennsylvania market.
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> One of the mainline pipeline rebalancing projects centers on Rockies Express Pipeline (REX), a 1,698-mile pipeline ranging from the Rocky Mountains in Colorado to eastern Ohio. REX was originally built for the purpose of bringing Rockies gas to the Midwest market and then redistributing supplies to the Northeast. However, with demand in and around Ohio being met by increased shale production in the area, consideration is being given to reversing the flow on the most eastern Zone 3 portion of REX, *potentially sending up to 1.8 Bcf per day westward from the Marcellus and Utica basins*. Additionally, Natural Gas Pipeline Company of America (NGPL) recently held an open season to reverse more than 0.5 Bcf per day of incremental volume from the REX interconnection in Illinois, directing it south to the Gulf Coast.

> Growing LNG export capacity and increased demand from the petrochemical industry surrounding the U.S. Gulf Coast is making the region an increasingly desirable destination for natural gas supplies. In addition to diverted gas from REX, ANR Pipeline (ANR), which delivers gas from Texas, the Oklahoma panhandle region, and Louisiana to the Midwest and Great Lakes regions, *recently reversed gas at the Lebanon Lateral in Ohio to flow west to Indiana so that gas can be routed to the south*. ANR offered an open season to reverse capacity to carry gas from Indiana to South Louisiana, *which could combine with other proposed ANR flow changes to pull more than 1.6 Bcf per day from the Marcellus and Utica shale plays*.
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> *Other pipelines that connect at the Lebanon receipt point are also exploring options to divert supplies from the Marcellus and Utica, including Texas Gas Transmission (TGT), which is looking to build the Southern Indiana Market Lateral to bring supplies to the Midwest. The company recently held an open season for capacity at Lebanon relating to the Northern Supply Access Project, which will provide firm access to gas supplies through the new lateral*. TGT is targeting an in-service date of July 2016 for the project. Columbia Gas Transmission (TCO), Dominion Transmission (DTI), and Texas Eastern Transmission (TETCo) are among other pipeline companies evaluating the best ways to position operations in a changing U.S. supply landscape.

Evan Mason, Natural Gas Pipelines Respond to Changes in U.S. Production Landscape, Fellon-McCord, (May 6, 2014) (emphasis added) (Attachment 9). According to a recent article in Natural Gas Intelligence:

> Boardwalk Pipeline Partners' Texas Gas Transmission LLC is proposing to move more Marcellus/Utica shale gas to market via the Ohio-Louisiana Access Project, which would create capacity from Lebanon, OH, to Midwestern and southern markets on the pipeline's system through the addition of north-to-south capability….Like other traditionally northbound pipelines, Texas Gas is working to provide southbound capacity for the abundance of Appalachian gas that is looking for a market.

Joe Fisher, Texas Gas Planning Two-Way Street: Ohio to/from Louisiana; DTI Proposes Upstream Marcellus Link. Natural Gas Intelligence. Oct. 10, 2014 (Attachment 10). Simply put, TGT would not be reconfiguring its pipeline as proposed in the Ohio-Louisiana Access Project to allow gas to flow north to south were it not for the recent *and* reasonably foreseeable future production of natural gas in the Marcellus and Utica shale formations. FERC cannot simply ignore the indirect effects of Marcellus and Utica shale gas extraction by claiming there is an "insufficient causal link" when multiple government, industry, and media sources indicate otherwise.

FERC's stubborn refusal to consider the effects of upstream gas drilling in the Marcellus and Utica shale formations is reminiscent of similar arguments made by the Surface Transportation Board that were rejected by the Eighth Circuit. In that case, the Surface Transportation Board argued that because many utilities were likely to switch to the kind of low-sulfur variety of coal that a planned railroad would make available, "this shift will occur regardless of whether [the railroad company's] new line is constructed." *Mid States Coalition*

for Progress v. Surface Transportation Board, 345 F.3d 520, 549 (8th Cir. 2003). The Eighth Circuit rejected this argument outright:

> ….the proposition that the demand for coal will be unaffected by an increase in availability and a decrease in price, which is the stated goal of the project, is illogical at best. The increased availability of inexpensive coal will at the very least make coal a more attractive option to future entrants into the utilities market when compared with other potential fuel sources, such as nuclear power, solar power, or natural gas. Even if this project will not affect the short-term demand for coal….it will most assuredly affect the nation's long-term demand for coal[.]

Mid States, 345 F.3d at 549. It would be similarly illogical for FERC to ignore the impacts of gas drilling in the Marcellus and Utica shale formations because once the Projects are in service and the target market areas are connected to gas production in the Marcellus and Utica shale formations, it makes drilling in Pennsylvania, Ohio, and West Virginia much more likely. Again, this is supported by TGT's own application materials. *See* Ohio-Louisiana Access Project Application at 2.

It is also important to point out the steep decline curve in the average Marcellus shale gas well. For example, "the average first year decline rates across Pennsylvania appear to range from approximately 60% to 80%." Penn State Extension, Appalachian Basin Decline Curve and Royalty Estimation, July 27, 2014, *available at* http://extension.psu.edu/natural-resources/natural-gas/news/2014/07/appalachian-basin-decline-curve-and-royalty-estimation-part-1 (Attachment 11). This is relevant since "the initial decline, or decrease in production, over the first year of operation of a shale well is an important variable in estimating the potential for future production." *Id*. *See also* Penn State Marcellus Center for Outreach and Research, PA Estimated Cumulative Production & Decline Curves (Attachment 12). With average first year decline rates between 60% to 80%, it is likely that more drilling and fracking will occur as the industry attempts to keep production up, thereby causing even more environmental impacts.

B. Gas drilling in the Marcellus and Utica shale formations is reasonably foreseeable.

Gas drilling in the Marcellus and Utica shale formations is reasonably foreseeable. An indirect impact is "reasonably foreseeable" if it is "sufficiently likely to occur that a person of ordinary prudence would take it into account in reaching a decision." *Sierra Club v. Marsh*, 976 F.2d 763, 767 (1st Cir. 1992). "[W]hen the *nature* of the effect is reasonably foreseeable but its *extent* is not, [an] agency may not simply ignore the effect." *Mid States*, 345 F.3d at 549 (emphasis in original). *See also Habitat Education Center v. U.S. Forest Service*, 609 F.3d 897, 902 (7th Cir. 2010). Here, it is sufficiently likely to occur that a person of ordinary prudence would take Marcellus and Utica shale gas drilling into account before reaching a decision about whether the Projects are in the public interest. As explained above, TGT's own application materials, in addition to multiple other sources, support this conclusion.

Moreover, TGT claims in its environmental reports that the purpose and need for Ohio-Louisiana Access Project is "to provide firm transportation service for new gas supplies

produced in the Marcellus/Utica Shale region." Ohio-Louisiana Access Project, Resource Report 1 at 1-2. TGT further claims that under the No-Action alternative, alleged beneficial impacts would not occur, "including the additional transportation capacity for gas produced in the Marcellus/Utica Shale." Thus, it is clear that TGT itself has taken into account Marcellus and Utica shale gas drilling in designing the Projects. It would be arbitrary and capricious for FERC to ignore the impacts of shale gas drilling in the Marcellus/Utica formations when the applicant does not.

According to Rice Energy, a gas production company operating in the Marcellus and Utica shales, one of the reasons to invest in it is because of "firm transportation contracts" that "de-risk production growth, ensure takeaway and limit Appalachian basis exposure." Rice Energy, Barclays CEO Energy-Power Conference, p. 31 (Sept. 2, 2014) (Attachment 13). In other words, the same firm transportation contracts that FERC considers as "significant evidence of demand for the project" are relied on by gas producers such as Rice to "de-risk" its production growth. *See Certification of New Interstate Natural Gas Pipelines*, 88 FERC ¶ 61,227, p. 25 (1999), *clarified*, 90 FERC ¶ 61,128, *further clarified*, 92 FERC ¶ 61,094 (2000) ("Certificate Policy Statement"). According to a report by the research investment firm Morningstar, "some of the most prominent, lowest-cost, and fastest-growing Marcellus players, including Cabot Oil & Gas, Range Resources, Chesapeake Energy, EQT Corporation, and Antero Resources" have "identified *between 10 and 30 years of* ***drilling locations*** across the Marcellus, which should fuel *several more years of production growth* at relatively low cost." Morningstar Energy Observer, *Shale Shock: How the Marcellus Shale Transformed the Domestic Natural Gas Landscape and What It Means for Supply in the Years Ahead*, p. 17 (Feb. 2014) (emphasis added) (Attachment 14). These statements further support the fact that gas drilling in the Marcellus and Utica basins is both causally connected to the Project *and* reasonably foreseeable.

The production customers for the Ohio-Louisiana Access Project include R.E. Gas Development (a subsidiary of Rex Energy), Gulfport Energy Corporation ("Gulfport"), and Jay-Bee Production Company ("Jay-Bee"). Ohio-Louisiana Access Project Application at 2. According to Rex Energy, its gas drilling operations are "principally focused on the Marcellus, Utica and Upper Devonian shales in the Appalachian Basin." Rex Energy, Prospectus Supplement, p. S-2 (Aug. 13, 2014) (Attachment 15). According to Rex Energy, as of December 31, 2013, it had interests in about 183,400 gross (113,600 net) acres in the Appalachian Basin. *Id*. Rex Energy drilled 24 gross (18.4 net) wells, fracture stimulated 35 gross (26.2 net) wells and placed into service 23 gross (15.1 net) wells in the first six months of 2014. *Id*. Another 11 gross (8 net) wells were drilled and waiting on completion as of June 30, 2014. *Id*.

Rex Energy has "identified a multi-year inventory of potential drilling locations that [it] believe[s] provides attractive growth and return opportunities." *Id*. at S-4. Specifically, Rex Energy says that it has "identified approximately 357 gross potential drilling locations in the liquids-rich Butler Marcellus Shale, approximately 431 gross potential drilling locations in the Butler Upper Devonian and approximately 143 gross potential drilling locations in the combined Warrior North and Warrior South prospects." *Id*. In 2014, Rex Energy planned to drill "approximately 52 to 57 wells, which represents approximately 6% of our identified inventory." *Id*.

According to Gulfport, the Utica shale is the "hottest play in North America." Gulfport, Utica Overview (Attachment 16). Gulfport's "principal properties are located in the Utica Shale in Eastern Ohio and along the Louisiana Gulf Coast[.]" Securities and Exchange Commission, Form 10-K, Gulfport Energy Corporation, p. 2 (Attachment 17). According to Gulfport:

> As of February 27, 2014….we [] have owned leasehold interests in approximately 167,700 gross (165,400 net) acres in the Utica Shale in Eastern Ohio. We spud our first well, the Wagner 1-28H, on our Utica Shale acreage in February 2012 and, as of December 31, 2013, had spud 66 wells, 38 of which were completed and are producing. In 2013, we spud 52 gross (39 net) wells, of which 24 were completed as producing wells, 11 were waiting on completion, one was non-productive, nine were waiting on horizontal rigs and seven were still being drilled as of December 31, 2013. As of February 14, 2014, we had spud six gross (five net) wells all of which were still drilling. In addition, 61 gross (3.5 net) wells were drilled by other operators on our Utica Shale acreage during 2012 and 2013.
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> We have seven rigs under contract on our Utica Shale acreage. We currently intend to drill 85 to 95 gross (64 to 71 net) wells on our Utica Shale acreage in 2014 for an estimated aggregate cost of $594.0 million to $634.0 million.

Id. Gulfport further notes that, according to the Ohio Department of Natural Resources, as of February 9, 2013, "there were 65 producing horizontal wells, 236 horizontal wells that had been drilled but were not yet completed or connected to a pipeline, 15 horizontal wells that were being drilled and an additional 272 horizontal wells that had been permitted" in the Utica shale. *Id*. at 5. Regarding takeaway capacity, Gulfport states that:

> In Ohio, as of December 31, 2013, we had entered into firm transportation contracts for 2014, 2015, and 2016 for an aggregate of approximately 427,000 MMBtu per day, 677,000 MMBtu per day and 650,000 MMBtu per day, respectively. We are currently seeking to secure additional firm transportation contracts for incremental volumes from our Utica Shale acreage and expect to finalize additional contracts in the first half of 2014. Our primary long-haul transportation commitments including the following:
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> - 194,000 MMBtu per day of firm transportation capacity on ANR Pipeline Company facilities that will allow us to reach the Michigan, Chicago and Wisconsin natural gas markets in 2014.
> - 200,000 MMBtu per day of firm transportation capacity on Tennessee Gas Pipeline facilities beginning in mid-2014 and, by the end of 2014, we expect to be able to reach Gulf Coast delivery points with the full contracted volumes; and
> - *50,000 MMBtu per day of firm capacity to the Gulf Coast through Texas Gas Transmission facilities beginning in 2016*.
>
> *Under firm transportation contracts, we are obligated to deliver minimum daily volumes or pay fees for any deficiencies in deliveries. We continue to actively identify and evaluate additional takeaway capacity to facilitate production growth in our Utica Basin position*.

Id. at 12-13 (emphasis added). In other words, once pipeline companies such as TGT enter into firm transportation contracts with companies such as Gulfport, the latter has an economic incentive to continue drilling operations – otherwise, they face having to "pay fees for any deficiencies in deliveries." Thus, FERC cannot claim that gas drilling in the Marcellus and Utica shale formations is not reasonably foreseeable. Gulfport further explains how its drilling activities are both reasonably foreseeable and causally related to TGT's Projects:

> With respect to our Utica Shale acreage where we are focusing a significant portion of our exploration and development activity,[2] historically there has been no or only limited infrastructure in this area and the commencement of production from our initial and subsequent wells on our Utica Shale acreage has been delayed due to challenges in obtaining rights-of-way and acquiring necessary state and federal permitting and the completion of facilities by our midstream service provider. If we are unable, for any sustained period, to implement acceptable delivery or transportation arrangements, or encounter compression or other production related difficulties, we will be required to shut in or curtail production from the impacted field(s). Any such shut in or curtailment, or an inability to obtain favorable terms for delivery of the oil and natural gas produced from our fields, would adversely affect our financial condition and results of operations.

Id. at 27. In other words, Gulfport expressly states that its exploration and production activity is dependent upon sufficient midstream infrastructure, such as TGT's proposed Projects.

It should also be noted that Gulfport recently entered into a compliance agreement with the Ohio Division of Oil and Gas Resources Management ("Division") for brine contamination at seven drilling sites in Ohio. *Id*. at 29. According to Gulfport, an investigation by the Division "determined that certain contaminants were escaping from underneath the containment liners at these locations." *Id*. Gulfport agreed to implement a remediation plan and to pay $250,000. According to Gulfport:

> If the Chief of the Division determines that we have failed to comply with the conditions set forth in the compliance agreement, the Chief may suspend all or part of our drilling and production operations in the State of Ohio for a period determined by the Chief, and we would incur additional penalties and costs.

Id. This reveals a couple things.

First, it demonstrates that one of TGT's production customers backing the Ohio-Louisiana Access Project has already caused damage to Ohio's environment. This is precisely why FERC needs to consider the indirect effects of gas drilling when it reviews pipeline projects. When FERC uses "tunnel vision" to arbitrarily narrow its environmental analysis, it conveniently ignores these types of impacts.

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[2] According to Gulfport, approximately 87% of its "proved undeveloped reserves" were located in the company's Utica shale holdings. *Id*. at 45.

Second, it raises concerns regarding TGT's assertions regarding the public convenience and necessity. For example, TGT acknowledges that one of the factors that FERC considers in balancing public benefits against potential adverse consequences is "the applicant's responsibility for unsubscribed capacity." Ohio-Louisiana Access Project Application at 19. Nowhere in TGT's application does it disclose that Gulfport, one of the project shippers for the Ohio-Louisiana Access Project, is subject to a consent order that could significantly impact Gulfport's ability to provide the capacity agreed to under that precedent agreement. FERC must factor that into its public interest determination.[3]

Jay-Bee, the third production customer for the Ohio-Louisiana Access Project, is currently operating in Wetzel, Tyler, Doddridge, Ritchie, and Gilmer Counties, West Virginia. Jay Bee Companies, Area of Operations (Attachment 18). Jay-Bee claims that it plans to expand into Marshall, Wood, Wirt, Calhoun, Braxton, Lewis, Harrison, and Marion Counties, West Virginia as well. *Id*. Based upon the information above, there is no reason why FERC cannot engage in reasonable forecasting of future shale development in the Marcellus and Utica shales, especially as it relates to the three production customers for the Ohio-Louisiana Access Project – R.E. Gas Development (i.e., Rex Energy), Gulfport, and Jay-Bee.

Moreover, the nature of the effects of shale gas development is well established and readily available. For example, according to a recent U.S. Geological Survey report:

> A recent analysis of Marcellus well permit locations in Pennsylvania found that well pads and associated infrastructure (roads, water impoundments, and pipelines) required nearly 3.6 hectares (ha) per well pad with an additional 8.5 ha of indirect edge effects (Johnson, 2010). This type of extensive and long-term habitat conversion has a greater impact on natural ecosystems than activities such as logging or agriculture, given the greater dissimilarity between gas-well pad infrastructure and adjacent natural areas and the low probability that the disturbed land will revert back to a natural state in the near future (high persistence).

USGS, Landscape Consequences of Natural Gas Extraction in Cameron, Clarion, Elk, Forest, Jefferson, McKean, Potter, and Warrant Counties, Pennsylvania, 2004-2010, p. 10 (Attachment 19). From this, it is known that an average Marcellus well directly impacts 3.6 ha (~ 9 acres) and indirectly impacts another 8.5 ha (~ 21 acres). These impacts are "extensive" and "long-term."

In a 2012 presentation provided through the Penn State Cooperative Extension, The Nature Conservancy ("TNC") estimated that 60,000 shale gas wells could eventually be drilled in Pennsylvania. TNC, Marcellus Gas Well & Pipeline Projections. p. 13 (Attachment 20). In a

[3] Gulfport is also under investigation by the Environmental Protection Agency ("EPA") for "alleged discharge of produced water in March 2012" regarding its operations in West Cote Blanche Bay along the Gulf Coast. SEC, Form 10-K, Gulfport Energy Corporation, p. 29 (Attachment 17). As of the filing of its Form 10-K with the SEC, Gulfport remains under investigation and has "been informed that the government may pursue claims against [it] and certain of [its] field personnel." *Id*.

2014 report, the investment research firm Morningstar stated that there is "somewhere between 30 and 75 years of Marcellus resource potential at current production rates" and that "approximately 1,000 wells will need to be brought on line each year to hold gas production flat." Morningstar Energy Observer at 15; 17. In other words, at 1,000 new wells per year, there is the potential for 30,000 to 75,000 Marcellus shale gas wells. TNC's estimation of 60,000 falls squarely within Morningstar's estimations.

TNC further reviewed how these projected wells would be distributed on the landscape under various well pad development scenarios. *Id*. It also analyzed where Marcellus Shale drilling was likely to occur (*Id*. at 15-17) and how many miles of new pipelines and the direct and indirect effects of those pipelines on forests by 2030 (*Id*. at 21). For example, by 2030, TNC estimated that there could be 10,000 – 25,000 miles of new gathering pipelines causing an estimated 60,000 to 150,000 acres of direct forest clearing and 300,000 to 900,000 acres of forest edge effects. *Id*. at 21.

According to TNC, pipeline mileage in Pennsylvania will at least double if not quadruple by 2030. *Id*. at 22. The footprint from pipelines alone is projected to be larger than the "cumulative area impacted by all other Marcellus gas infrastructure combined." *Id*. Thus, when shale gas wells, roads, and other associated infrastructure (besides pipelines) are included, these figures will be much higher. These are enormous impacts to our landscapes, watersheds, wildlife habitat, and recreation opportunities that FERC must consider and disclose to the public before it decides whether the Projects are in the public interest.

Even if FERC does not know the precise location and timing of future gas drilling, "when the *nature* of the effect is reasonably foreseeable but its *extent* is not, [an] agency may not simply ignore the effect." *Mid States*, 345 F.3d at 549 (emphasis in original). *See also Habitat Education Center v. U.S. Forest Service*, 609 F.3d 897, 902 (7th Cir. 2010). Furthermore:

> *[P]rojects need not be finalized before they are reasonably foreseeable*. "NEPA *requires* that an EIS engage in reasonable forecasting. *Because speculation is ... implicit in NEPA*, [] we must reject any attempt by agencies to shirt their responsibilities under NEPA by labeling any and all discussion of future environmental effects are crystal ball inquiry." As the [EPA] also has noted, "reasonably foreseeable future actions need to be considered even if they are not specific proposals."

Northern Plains Resource Council v. Surface Transportation Board, 668 F.3d 1067, 1078-79 (9th Cir. 2011) (citations omitted) (emphasis added). FERC must not shirk its responsibilities under NEPA by labeling any attempt to analyze the environmental impacts of shale gas extraction in the Marcellus and Utica shale formations as "crystal ball inquiry." No crystal ball is required for FERC to engage in reasonable forecasting of shale gas extraction in the Marcellus and Utica shale formations. As explained above, FERC's 2010 presentation in Berlin makes clear that the agency is well aware of the nature shale gas drilling, including the process of hydraulic fracturing in shale, the volumetric composition of fracture fluids, and estimated water needs for fracking in shale formations. *See* Attachment 6 at 30-33.

III. FERC must take a hard look at the cumulative impacts of gas drilling in the Marcellus and Utica shale formations.

In addition to being indirect effects of the Projects, Marcellus and Utica shale gas drilling is also a cumulative impact. Thus, even if FERC refuses to consider gas drilling in the Marcellus and Utica shales as an indirect effect, it still must consider such drilling as a cumulative impact. A cumulative impact is the:

> [I]mpact on the environment which results from 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*. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time.

40 C.F.R. § 1508.7 (emphasis added). In previous proceedings, FERC has used arbitrarily narrow cumulative impacts analysis areas, or "regions of influence," to ignore many of the cumulative impacts associated with past, present, and reasonably foreseeable future gas development in the Marcellus and Utica shale formations. This is inconsistent with CEQ guidance regarding the consideration of cumulative impacts.

For example, CEQ states that:

> For a project-specific analysis, it is often sufficient to analyze effects within the immediate area of the proposed action. When analyzing the contribution of this proposed action to cumulative effects, however, the geographic boundaries of the analysis *almost always should be expanded*. These expanded boundaries can be thought of as differences in hierarchy or scale. Project-specific analyses are usually conducted on the scale of counties, forest management units, or installation boundaries, *whereas cumulative effects analysis should be conducted on the scale of human communities, landscapes, watersheds, or airsheds*.

CEQ, Considering Cumulative Effects under the National Environmental Policy Act, p. 12 (1997) (emphasis added) (Attachment 21). CEQ further says that it may be necessary to look at cumulative effects at the "ecosystem" level for vegetative resources and resident wildlife, the "total range of affected population units" for migratory wildlife, an entire "state" or "region" for land use, and the "global atmosphere" for air quality. *Id*. at 15. In other words, CEQ says agencies should be considering cumulative impacts at a much broader scale than what FERC did in the EA. When FERC limits the scope of a cumulative impacts analysis area to include only those projects that are within a narrow region of influence, it arbitrarily ignores substantial and long-term effects on various resources including wildlife, vegetation, water quality, air quality and recreation caused by shale gas development.

It should also be noted that the Environmental Protection Agency ("EPA") recently criticized FERC's cumulative impact analysis in another proceeding regarding the proposed Algonquin Incremental Market ("AIM") Project (FERC Docket No. CP14-96-000). In that case, FERC prepared a DEIS for the AIM Project but refused to consider the cumulative impacts of

Marcellus Shale gas extraction because such extraction was "greater than 10 miles from the project construction areas, air quality control regions and sub-watersheds crossed by the project." EPA, Comments on the AIM Project, p. 10 (Sept. 29, 2014) (Docket No. CP14-96-000; Accession No. 20140929-5268). EPA recommended that FERC "reconsider this rationale" because "geographic proximity is not in and of itself the standard" for including other actions in a cumulative impact analysis. *Id*.

FERC, however, routinely *insists* that geographic proximity is essential for reviewing the cumulative impacts of jurisdictional projects. For example, in the Zone 3 East-to-West Project proposed by Rockies Express Pipeline, a project similar to the Ohio-Louisiana Access Project because it would modify an existing pipeline to allow bi-directional flow, FERC "limited [its cumulative impact] review to projects *directly in the vicinity* of the [Zone 3 East-to-West] Project." Zone 3 East-to-West EA at 29 (emphasis added) (Docket No. CP14-498-000; Accession No. 20141124-4007). In other words, FERC used geographic proximity as a means to substantially narrow the cumulative impact analysis area and exclude consideration of impacts such as Marcellus and Utica shale gas drilling even though those impacts are directly related to that project just as they are to the Projects here. Other FERC proceedings reveal similarly narrow cumulative impact analysis areas:

- In the EA for National Fuel's proposed Tuscarora Lateral, FERC used "a 0.5 mile radius as the project area/region of influence." Tuscarora Lateral EA at 57 (Docket No. CP14-112-000; Accession No. 20141031-4002). Such a small "region of influence" ignored the cumulative impacts of shale gas drilling even though National Fuel's application for the Tuscarora Lateral explicitly states that the project is intended to "provid[e] [New York State Electric & Gas Corporation] with [] firm access to Marcellus Shale and other supplies from Millennium [Pipeline]." Tuscarora Lateral Application at 22 (Accession No. 20140318-5167).
- In the EA for Columbia Gas Transmission's East Side Expansion, FERC used "a 0.5-mile radius as the project area/region of influence for most resources impacted (not including air quality)." East Side Expansion EA at 2-112 (Docket No. CP14-17-000; Accession No. 20140827-4001). Such a small "region of influence" ignored the cumulative impacts of shale gas drilling even though Columbia's application for the East Side Expansion states that the purpose of that project is "to construct facilities to increase its system capacity making it possible for new sources of gas supply to meet emerging market growth needs." East Side Expansion Application at 12 (Accession No. 20131101-5125).
- In the EA for National Fuel's proposed West Side Expansion, FERC used "a 0.5-mile radius as the region of influence for most resources affected (not including air quality)." West Side Expansion EA at 45 (Docket No. CP14-70-000; Accession No. 20141208-4006). Such a small "region of influence" ignored the cumulative impacts of shale gas drilling even though National Fuel's application for the West Side Expansion explicitly states that the project "will create additional capacity on the Line N system that is required for the transportation of additional Marcellus Shale gas production." West Side Expansion Application at 4 (Accession No. 20140206-5021).
- In the EA for TETCO's Uniontown to Gas City ("U2GC") Project, FERC "limited [its] review to projects directly in the vicinity of [the U2GC Project]." U2GC EA at 26 (Docket No. CP14-104-000; Accession No. 20140821-4005). By limiting its review to

projects "directly in the vicinity" of the U2GC Project, FERC ignored the cumulative impacts of shale gas drilling even though TETCO's environmental reports for the U2GC Project explicitly stated that the project "responds to significant interests from customers regarding transportation capacity to accommodate increased production of natural gas from the emerging Marcellus Shale and Utica Shale plays in the supply rich area west of Uniontown, Pennsylvania." U2GC Resource Report 1 at 1-1 (Accession No. 20140311-5175).

- In the EA for Columbia Gas Transmission's Smithfield III Expansion, FERC only considered "projects directly in the vicinity of the [Smithfield III Expansion] Project." Smithfield III Expansion EA at 2-37 (Docket No. CP13-477-000; Accession No. 20131029-4012). By limiting its review to projects "directly in the vicinity" of the Smithfield III Expansion, FERC ignored the cumulative impacts of shale gas drilling even though Columbia's application for the Smithfield III Expansion explicitly stated that the purpose of that project was "to construct facilities necessary to transport gas from the Appalachian basin[.]" Smithfield III Expansion Application at 3 (Accession No. 20130510-5082).
- In the EA for Dominion's Clarington Project, FERC only considered other projects "within an area of influence of 5 miles of the proposed [Clarington] Project." Clarington Project EA at 39 (Docket No. CP14-496-000; Accession No. 20150115-4001). By limiting the "area of influence" to within 5 miles of the Clarington Project, FERC ignored the cumulative impacts of shale gas drilling even though Dominion's application stated that the purpose of the project is "to transport Appalachian production" from the "Marcellus and Utica shales." Clarington Project Application at 4 (Accession No. 20140602-5213).
- In the EA for Dominion's Appalachian Gateway Project, FERC only considered "other projects in the general Project area." Appalachian Gateway EA at 2-134 (Docket No. CP10-448-000; Accession No. 20110331-4001). By limiting its review to project "in the general [Appalachian Gateway] Project area," FERC ignored the cumulative impacts of shale gas drilling even though Dominion's application expressly referenced increasing gas production "in the Appalachian region of West Virginia and Pennsylvania," including conventional and unconventional (coal bed methane and Marcellus shale) production, and stated that its project would "provide Appalachian producers a secure a reliable route to transport their growing gas supplies to high demand markets in the Mid-Atlantic and Northeastern regions." Appalachian Gateway Application at 4 (Accession No. 20100601-5221).
- In the EA for Columbia's Appalachian Expansion Project, FERC only considered other projects "within the area affected by the proposed Project." Appalachian Expansion EA at 26 (Docket No. CP08-85-000; Accession No. 20080818-4003). By limiting its review to only those projects that occurred "within the area affected by the proposed Project," FERC ignored the cumulative impacts of shale gas drilling even though Columbia's application said its project was "driven by the need to move additional Appalachian production gas that is currently trapped in the production fields." Appalachian Expansion Project Application at 5 (Accession No. 20080229-4007).

In all of these projects, FERC only prepared an EA and substantially limited the scope of the cumulative impact analysis area. In *Kern v. BLM*, the Ninth Circuit explained that "the

importance of analyzing cumulative impacts in EAs is apparent when we consider that….so many more EAs are prepared than EISs[.]" 284 F.3d 1062, 1076 (9th Cir. 2002) (internal quote and citation omitted). By using such restrictive geographic parameters in one project after another, however, FERC necessarily ignores the vast majority of cumulative impacts of Marcellus and Utica shale gas drilling that occur outside of these arbitrary "regions of influence." Moreover, since FERC refuses to consider Marcellus and Utica shale gas drilling as an indirect effect under NEPA, it is clear that these impacts will never be addressed by FERC in any meaningful way even though these impacts are directly related to the construction and expansion of facilities under FERC's jurisdiction.

In *LaFlamme v. FERC*, 852 F.2d 389 (9th Cir. 1988), the Ninth Circuit reviewed FERC's authorization of the Sayles Flat Project, a hydroelectric power project on the American River in California. FERC prepared an EA for the Sayles Flat Project and ultimately issued a finding of no significant impact. In its decision, the court said that FERC violated NEPA by failing to consider the cumulative impacts of other projects on the American River Basin. Instead, FERC relied on a previous EIS for another project (the Upper Mountain Project) that was "limited to assessing the impact of *that* project's diversion dams and other proposed facilities in *that* project's area." *LaFlamme v. FERC*, 852 F.2d 389, 401 (9th Cir. 1988) (emphasis added). The court continued:

> At no point did the [Upper Mountain Project] EIS analyze the effects of *other projects*, pending or otherwise, might have on *this* section of the American River Basin. Such a narrow analysis of one project's impact on this area cannot possibly provide the necessary broad consideration of all "past, present, and reasonably foreseeable future actions" required in a cumulative impact analysis. *Considering that the Upper Mountain Project represents only the initial development of the remaining water resources in the South Fork of the American River basin, the foreseeability of future development underscores the importance of performing a comprehensive cumulative impact analysis of the project's effects on the environment* ***before any more development proceeds***. The Upper Mountain Project's EIS does not provide the necessary comprehensive analysis of the cumulative impact of all projects in this area, especially the Sayles Flat Project.
>
> Additionally, FERC's analysis of the Sayles Flat project in their order denying rehearing does not support their conclusion that this project does not have a potential for significant adverse cumulative impacts on the resources in this area. FERC and the FERC staff make the same analytical error with Sayles Flat as they did in their study of the Upper Mountain Project: *they examined the Sayles Flat project in isolation, without considering the "net" impact that all projects in the area may have on the environment*. National Wildlife Federation v. FERC, 801 F.2d at 1507. Therefore, because FERC has not considered the impact that all past, present, and reasonably foreseeable future projects may have on the basin's resources, the record simply cannot support FERC's conclusion that the Sayles Flat project does not have a potential for adverse cumulative impacts on the environment. Accordingly, FERC's decision not to prepare an EIS on the project's cumulative impacts was unreasonable.

Id. at 401-02 (emphasis added). Just as it was unreasonable for FERC to consider the Sayles Flat Project "in isolation," so too is it unreasonable to consider the Projects here in isolation. For example, both Projects involve activities impacting the Ohio River basin in Indiana. In the Southern Indiana Market Lateral Project, TGT proposes to cross the Ohio River from Henderson County, Kentucky to Posey County, Indiana. Southern Indiana Market Lateral Application at 6. This will allow TGT to provide natural gas to two industrial facilities, Midwest Fertilizer Company's proposed fertilizer plant and SABIC Innovative Plastics' existing plant and proposed co-generation facility. *Id*. at 1. In the Ohio-Louisiana Access Project, TGT proposes to install auxiliary facilities at the Dillsboro Compressor Station in Dearborn County, Indiana, which would allow the compressor station to "flow the proposed quantities [of natural gas] north to south[.]" Ohio-Louisiana Access Project Application at 8. Natural gas made available via the proposed Ohio-Louisiana Access Project will supply the customers of the Southern Indiana Market Lateral Project. Thus, the cumulative impacts of these two Projects should be considered together.

Moreover, upon modification of the TGT system to allow bi-directional flow, it is highly likely that there will be future projects similar to the Southern Indiana Market Lateral Project. Indeed, according to the Site Selection article referenced above:

> A review of the *300 projects* tracked by Site Selection from July 2012 through August 2013 shows an *abundance of corporate facility projects related in some way to the energy exploration activity throughout the region*.

See Attachment 5. The article then references in a table the "Top Ohio River Corridor Counties by Corporate Facility Projects." *Id*. Therefore, upon completion of the bi-directional modifications that are proposed for TGT's system, it is reasonably foreseeable that many more projects such as the Southern Indiana Market Lateral Project will be proposed up and down the Ohio River. Unless FERC changes course, it will fail to consider the net impact of other past, present and reasonably foreseeable projects, including related Marcellus and Utica shale gas drilling, in violation of NEPA.

FERC has previously relied on the Second Circuit's decision in *Natural Resources Defense Council v. Callaway*, 524 F.2d 79 (2d Cir. 1975), to claim that it is only required to include "such information as appears to be reasonably necessary under the circumstances for evaluation of the project rather than to be so all-encompassing in scope that the task of preparing it would become either fruitless or well nigh impossible." See *Dominion Cove Point LNG*, 148 FERC ¶ 61,244 at P 239 (Sept. 29, 2014) (citing *NRDC v. Callaway*, 524 F.2d 79, 88 (2d Cir. 1975)). The Second Circuit went on to state, however, that "an agency may not go to the opposite extreme" by treating a project in isolation when there is persuasive evidence concerning other projects with similar environmental consequences. *Callaway*, 524 F.2d at 88. Indeed, the court noted that such a reading was inconsistent with Congress's purpose in passing NEPA:

> As was recognized by Congress at the time of passage of NEPA, a good deal of our present air and water pollution has resulted from the accumulation of small amounts of pollutants added to the air and water by a great number of individual, unrelated sources.

> "Important decisions concerning the use and the shape of man's future environment continue to be made in small but steady increments which perpetuate rather than avoid the recognized mistakes of previous decades." S.Rep.No.91-296, 91 Cong., 1st Sess. 5 (1969). NEPA was, in large measure, an attempt by Congress to instill in the environmental decisionmaking process a more comprehensive approach so that long term and cumulative effects of small and unrelated decisions could be recognized, evaluated and either avoided, mitigated, or accepted as the price to be paid for the major federal action under consideration. The fact that another proposal has not yet been finally approved, adopted, or funded does not foreclose it from consideration, since experience may demonstrate that its adoption and implementation is extremely likely.

Id. Thus, the *Callaway* decision provides no cover for FERC's failure to consider the cumulative effects of past, present, and reasonably foreseeable Marcellus and Utica Shale gas extraction. By preparing numerous EAs for jurisdictional projects that largely ignore the cumulative impacts of gas drilling in the Marcellus and Utica shale formations, FERC "perpetuate[s] rather than avoid[s] the recognized mistakes of previous decades."

In addition, FERC cannot refuse to consider these impacts because it does not know the extent of such ongoing and future drilling. As stated above, even if FERC does not know the extent of such drilling activities, it is certainly aware of its nature and may not simply ignore the effect by constructing an arbitrarily narrow cumulative impact analysis area. *Mid States Coalition for Progress v. Surface Transportation Board*, 345 F.3d 520, 549 (8th Cir. 2003). As the Ninth Circuit has explained:

> [*P]rojects need not be finalized before they are reasonably foreseeable*. "NEPA *requires* that an EIS engage in reasonable forecasting. *Because speculation is ... implicit in NEPA*, [] we must reject any attempt by agencies to shirk their responsibilities under NEPA by labeling any and all discussion of future environmental effects as crystal ball inquiry." As the [EPA] also has noted, "reasonably foreseeable future actions need to be considered even if they are not specific proposals."

Northern Plains, 668 F.3d at 1078-79 (citations omitted) (emphasis added).

Another case supporting the need for FERC to consider the reasonably foreseeable impacts of Marcellus and Utica Shale gas extraction is *Natural Resources Defense Council v. Hodel*, 865 F.2d 288 (D.C. Cir. 1988). In *Hodel*, the D.C. Circuit remanded the case because the Department of Interior failed to adequately consider the "inter-regional" cumulative impacts of its 5-year oil and gas leasing program in the outer continental shelf on migratory species. *Id*. at 299. The court noted that it would "eviscerate NEPA" to approve of the DOI's environmental analysis. *Id*. FERC must not ignore the "inter-regional" impacts of Marcellus and Utica Shale gas extraction.

One of the impacts that FERC routinely ignores by virtue of its arbitrarily narrow "regions of influence" is the impact that shale gas drilling has on wildlife habitat. According to recent research published in Environmental Science & Technology:

> Potential effects [of shale gas drilling] on terrestrial and aquatic ecosystems can result from many activities associated with the extraction process and the rate of development, such as road and pipeline construction, well pad development, well drilling and fracturing, water removal from surface and ground waters, establishment of compressor stations, and by unintended accidents such as spills or well casing failures….The cumulative effect of these potential stressors will depend in large part on the rate of development in a region. Depending on extent of development, oil and gas extraction has the potential to have a large effect on associated wildlife, habitat and aquatic life.

Brittingham, M.C., et al., Ecological Risks of Shale Oil and Gas Development to Wildlife, Aquatic Resources and their Habitats, Environmental Science & Technology, pp. 11035-11037 (Sept. 4, 2014) (citations omitted) (Attachment 22). This research further explains the impacts of shale gas drilling:

- Shale oil and gas development changes the landscape. Land is cleared for pad development and associated infrastructure, including pipelines, new and expanded roads, impoundments, and compressor stations, and much of this exploration and development is occurring in relatively undeveloped landscapes. Seismic testing, roads, and pipelines bisect habitats and create linear corridors that fragment the landscape. *Id*. at 11037 (citations omitted).
- Habitat fragmentation is one of the most pervasive threats to native ecosystems and occurs when large contiguous blocks of habitat are broken up into smaller patches by other land uses or bisected by roads, transmission lines, pipelines or other types of corridors. Habitat fragmentation is a direct result of shale development with roads and pipelines having a larger impact than the pads (Table 1). For example, in Bradford and Washington counties Pennsylvania, forests became more fragmented primarily as a result of the new roads and pipelines associated with shale development, and development resulted in more and smaller forest patches with loss of core forest (forest > 100 m from an edge) at twice the rate of overall forest loss. Pipelines and roads not only resulted in loss of habitat but also created new edges. Similar results have been shown in other studies. *Id*. (citations omitted).
- Fragmentation from linear corridors such as pipelines, seismic lines, and roads can alter movement patterns, species interactions and ultimately abundance depending on whether the corridor is perceived as a barrier or territory boundary or used as an avenue for travel and invasion into habitats previously inaccessible. *Id*. (citations omitted).
- [T]he New York State Department of Environmental Conservation estimates that development of one horizontal well requires over 3300 one-way truck trips. This is a concern because roads of all types have a negative effect on wildlife through direct mortality, changes in animal behavior, and increased human access to areas, and these negative effects are usually correlated with the level of vehicular activity. Even after a well is drilled and completed, new roads and pipelines provide access for more people, which results in increased disturbance. *Id*. at 11038 (citations omitted).
- In Wyoming, Sawyer et al. found that mule deer migratory behavior was influenced by disturbance associated with coal bed gas development and observed an increase in movement rates, increased detouring from established routes, and overall decreased use

of habitat along migration routes with increasing density of well pads and roads. *Id*. (citations omitted).

- Exploration and development of the shale resource is associated with both short-term and long-term increases in noise. In the short term, site clearing and well drilling, [high volume hydraulic fracturing], and construction of roads, pipelines and other infrastructure are a limited time disturbance similar to disturbance and sound associated with clearing land and home construction (Table 1). Depending on number of wells drilled, construction and drilling can take anywhere from a few months to multiple years. Compressor stations, which are located along pipelines and are used to compress gas to facilitate movement through the pipelines, are a long-term source of noise and continuous disturbance (Table 1). Because chronic noise has been shown to have numerous costs to wildlife, compressors have potential to have long-term effects on habitat quality. *Id*. (citation omitted).
- For many species of wildlife, sound is important for communication, and noise from compressors can affect this process through acoustical masking and reduced transmission distances. Studies on effects of noise from compressors on songbirds have found a range of effects including individual avoidance and reduced abundance, reduced pairing success, changes in reproductive behavior and success, altered predator-prey interactions, and altered avian communities, for example, refs 55-59 Greater sage-grouse (*Centrocercus urophasianus*) gather at leks where males display in order to attract females. Lek attendance declined in areas with chronic natural gas-associated noise and, experimentally, sage-grouse were shown to experience higher levels of stress when exposed to noise. *Id*. (citations omitted).
- Because of the large overlap between the Appalachian shale play and core forest habitat in the East, many forest species are vulnerable to development. Area-sensitive forest songbirds are primarily insect-eating Neotropical migrants, are an important component of forest ecosystems, and, as a group, many have declined in numbers in response to forest fragmentation. These birds are area-sensitive because breeding success and abundance are highest in large blocks of contiguous forest, and numerous research studies have documented negative effects of fragmentation on abundance and productivity….The impact that shale development has on this group of species will depend on the scale and extent of development. *By some estimates, less than 10% of potential shale gas development has occurred in the Appalachian basin. If this is the case, there is the potential for a 10-fold increase in the amount of shale gas development which would likely have negative impacts on area-sensitive forest songbirds and other forest specialists*. *Id*. at 11040 (citations omitted) (emphasis added).
- Development of shale resources, which clears land for well pads and roads, is occurring across a large portion of the native range of brook trout, especially in Pennsylvania (Figure 3). If remaining high-quality stream reaches become unsuitable to brook trout, there may be further fragmentation of the larger meta-population. *Id*.
- Freshwater mussels are an additional taxonomic group of interest because of already high numbers of listed species and relative sensitivity to toxicants. The endangered Indiana Bat, (*Myotis sodalis*), is another example of a species where a large portion of its native range is within areas of shale development (Figure 3). Gillen and Kiviat 2012 reviewed 15 species that were rare and whose ranges overlapped with the Marcellus and Utica shale by at least 35%. The list included the West Virginia spring salamander

(*Gyrinophilus subterraneus*), a species that is on the IUCN Red List as endangered and whose range overlaps 100% with the shale layers. It requires high quality water and is sensitive to fragmentation suggesting that this species is at great risk to oil and gas development. The list also included eight Plethodontid salamanders, a group that tends to be vulnerable because of the overlap between their range and shale layers, their dependence on moist environments and sensitivity to disturbance. *Id*. at 11040-11041.

The Brittingham research demonstrates the substantial impact that shale gas drilling is having and will continue to have on wildlife throughout the Marcellus and Utica shale formations, especially if FERC continues facilitating such drilling by authorizing infrastructure projects such as the ones proposed here without analyzing the cumulative impacts on wildlife and disclosing that information to the public. FERC has an obligation under NEPA to take a hard look at these impacts on a much broader scale than it has in previous proceedings.

Indeed, Figure 3 in the Brittingham study reveals precisely why FERC must expand the cumulative effects analysis area for resource areas such as wildlife. *See* Brittingham, et al., at 11042. The map in Figure 3 overlays the spatial position of unconventional vertical and horizontal wells with the distribution of brook trout classification. Between 2000-2013, at least 7,336 unconventional wells were drilled in Pennsylvania. *Id*. When FERC only looks at other projects within a narrow "region of influence," it is clear that the vast amount of cumulative impacts of gas drilling are willfully ignored. This not only includes effects on wildlife but also on water quality, public lands, recreation, air quality, and climate change.

IV. FERC must include other connected, cumulative, and similar actions in the same environmental analysis.

FERC must consider other connected, cumulative and similar actions in the same environmental analysis. Actions are connected if they are "closely related." 40 C.F.R. § 1508.25(a)(1). Connected actions include actions that "automatically trigger other actions," "cannot or will not proceed unless other actions are taken previously or simultaneously," or "are interdependent parts of a larger action and depend on the larger action for their justification." *Id*. Cumulative actions are those actions that, "when viewed with other proposed actions have cumulatively significant impacts" that should be discussed in the same EIS. 40 C.F.R. § 1508.25(a)(2). Significance "cannot be avoided by terming an action temporary or by breaking it down into small component parts." 40 C.F.R. § 1508.27(b)(7). Similar actions are those actions that, "when viewed with other reasonably foreseeable or proposed agency actions, have similarities that provide for evaluating their environmental consequences together, such as common timing or geography" that should be considered in the same analysis when that is the best way to "assess adequately the combined impacts of similar actions or reasonable alternatives to such actions." 40 C.F.R. § 1508.25(a)(3). "An agency impermissibly 'segments' NEPA review when it divides connected, cumulative, or similar federal actions into separate projects and thereby fails to address the true scope and impact of the activities that should be under consideration." *Delaware Riverkeeper v. FERC*, 753 F.3d 1304, 1313 (D.C. Cir. 2014).

There are several projects that should be considered connected, cumulative, and/or similar actions. First and foremost, FERC must consider the two underlying Projects, the Ohio-

Louisiana Access Project and Southern Indiana Market Lateral, in the same environmental analysis document. For some reason, FERC has decided to review the Projects in two separate EAs despite clear evidence that the Southern Indiana Market Lateral is dependent upon implementation of the Ohio-Louisiana Access Project. TGT submitted its application for the Ohio-Louisiana Access Project on September 24, 2014. According to that application, TGT was aware that it was about to submit an application for the Southern Indiana Market Lateral:

> Texas Gas is developing projects for which it expects to file Applications for Certificates of Public Convenience and Necessity by the end of 2014. The Southern Indiana Market Lateral will consist of approximately 29 miles of 20-inch-diameter natural gas pipeline extending from an existing lateral of the Texas Gas system in Henderson County, Kentucky and will terminate in Posey County, Indiana. The Southern Indiana Market Lateral will serve two new industrial users in Indiana that will source a portion of their natural gas supplies from Lebanon, Ohio and will contract for and utilize a portion of the excess mainline capacity associated with the proposed Project after it is in service. *The instant Project is not dependent upon the Southern Indiana Market Lateral, and the Project would go forward even if the Southern Indiana Market Lateral is not constructed*. A recent court case suggests the Commission Staff may elect to process the environmental review of the Project and the Southern Indiana Market Lateral concurrently. Texas Gas would not object to concurrent environmental review provided the Project certificate timeline of June 2015 is preserved.

Ohio-Louisiana Access Project Application at 24. It is important to note that TGT expressly indicated that the Ohio-Louisiana Access Project "is not dependent upon the Southern Indiana Market Lateral." In TGT's subsequent application for the Southern Indiana Market Lateral, TGT stated that:

> On September 25, 2014 in Docket No. CP14-553-000, Texas Gas filed an application to construct, own, operate, and maintain a new compressor station in Ouachita Parish, Louisiana; modify existing interconnects; and make certain yard and station piping modifications at various compressor stations, which have traditionally flowed gas south to north in order to provide incremental firm transportation service north to south ("Ohio-Louisiana Access Project") on the Texas Gas system.

Southern Indiana Market Lateral Application at 18. What is important to note here is not what the Southern Indiana Market Lateral Application says but what it does *not* say. Unlike the Ohio-Louisiana Access Project Application, where TGT specifically stated that that project was not dependent upon the Southern Indiana Market Lateral, nowhere does TGT explain whether the Southern Indiana Market Lateral is dependent upon the Ohio-Louisiana Access Project. The facts indicate that the Southern Indiana Market Lateral *is* dependent upon the Ohio-Louisiana Access Project and, therefore, the Projects should be reviewed as connected actions in the same environmental analysis.

For example, TGT states that the Ohio-Louisiana Access Project will "creat[e] additional interstate transportation capacity from Lebanon, Ohio to Midwestern and Southern markets on the Texas Gas system." Ohio-Louisiana Access Project Application at 4. In order to make

available on TGT's system the additional capacity from Lebanon, Ohio, TGT is proposing to modify the existing Dilsboro Compressor Station to allow gas to flow north to south. *Id*. at 8. In the Southern Indiana Market Lateral Application, TGT further acknowledges that "a portion of [the] mainline capacity [subscribed to in the open season for the Southern Indiana Market Lateral Project] is the unsubscribed capacity provided by the facilities of Texas Gas' Ohio Louisiana Access Project[.]" Southern Indiana Market Lateral Application at 7, n. 5. In other words, a customer of TGT's Southern Indiana Market Lateral Project is depending on capacity being provided through construction of the Ohio-Louisiana Access Project. Therefore, the underlying Projects are obviously "closely related" and should be considered connected actions and reviewed in the same environmental analysis rather than two separate EAs. Even if FERC does not consider the Projects "connected" actions, they are certainly cumulative and similar actions that warrant analysis in the same document. The Projects are "cumulative actions" because, when viewed together, they will have cumulatively significant impacts.

TGT also claims that it is developing other projects "for which it expects to file applications for certificates of public convenience and necessity in early 2015." Southern Indiana Market Lateral Application at 18. These include the Western Kentucky Market Lateral and the Northern Supply Access Project. *Id*. at 18-20. TGT claims that the customer for the Western Kentucky Lateral "will source its gas supplies solely from existing points on the Texas Gas system south of Kentucky and will not use any capacity associated with the proposed Southern Indiana Market Lateral or the Ohio-Louisiana Access Project." *Id*. at 19. TGT, however, provides no evidence to support this assertion. Moreover, once the Ohio-Louisiana Access Project is in service, and increased gas from the Marcellus and Utica shale is made available, there would be nothing to prevent TGT from making that gas available to the customer of the Western Kentucky Market Lateral.

Regarding the Northern Supply Access Project, TGT notes that "it is likely to include upgrades to Texas Gas' system to facilitate necessary additional station reversals" and "would have some overlap with the Ohio-Louisiana Access Project on the mainline capacity[.]" *Id*. at 20. Despite this, TGT claims that because the full scope of the Northern Supply Access Project is "still unknown," would be "incremental to the proposed Ohio-Louisiana Access Project," and be "offset from the proposed Ohio-Louisiana Access Project by more than one year," the projects should be considered separately. *Id*. First, the fact that the Northern Supply Access Project is "incremental to the proposed Ohio-Louisiana Access Project" is a reason for considering the projects jointly, not separately. Second, as will be explained in greater detail below, the fact that the construction impacts of both projects would be offset by more than a year does not support treating the projects separately. Third, there is evidence that TGT does know more about the scope of the Northern Supply Access Project.

For example, in Boardwalk's presentation at the 2014 Wells Fargo Energy Symposium in December 2014, Boardwalk stated that it has already "executed firm precedent agreements for deliveries of approximately 280,000 MMBtu/d with a weighted average contract life of approx.. 16 years." *See* Attachment 3 at 14. TGT further explains that it is "currently marketing an additional 300,000 MMBtu/d of additional North-to-South capacity," expects an in-service date in mid-2017 and a total estimated cost of $250 million. *Id*. The presentation also has a map for the Northern Supply Access Project. *Id*. at 18. This demonstrates that TGT likely knows more

about the scope of this project than stated in the application for the Southern Indiana Market Lateral. Moreover, this presentation demonstrates why FERC should prepare an EIS for, at a minimum, the Ohio-Louisiana Access Project, Southern Indiana Market Lateral, Western Kentucky Market Lateral, Northern Supply Access Project. All of these projects have in-service dates between 2016-2017. *Id*. at 14. Moreover, the maps for these projects indicate the Northern Supply Access and Ohio-Louisiana Access Projects are very similar in terms of reversing the flow of TGT's system and the Southern Indiana Market Lateral and Western Kentucky Market Lateral Projects are very similar in purpose and geography. *Id*. at 17-19. Instead of preparing four separate EAs, FERC must consider these projects in an EIS.

FERC must also consider Rockies Express' Zone 3 East-to-West Project ("REX Pipeline Project") as a connected, cumulative, and/or similar action. Like the Ohio-Louisiana Access Project, the REX Pipeline Project is a proposed reversal of an existing pipeline to allow gas from the Marcellus and Utica shale formations to flow west. *See* REX Pipeline Project Application (Docket No. CP14-498-000; Accession No. 20140610-5159). In the REX Pipeline Project Application, the company acknowledged that TGT's plans to expand capacity at "Texas Gas Lebanon." *Id*. at 13, n. 14. While REX claims that its project is unrelated to TGT's projects, the fact is that if the flow of the REX Pipeline is not reversed, there would not be 1,200,000 Dth/d of gas flowing from the Marcellus and Utica shale formations to Lebanon, Ohio. Thus, TGT's Projects appear to depend, in large part, on construction of the REX Pipeline Project.[4]

Even if FERC does not consider the REX Pipeline Project "connected" to the Projects at issue here, the projects are still cumulative actions that must be considered in the same analysis. By considering each of these projects in isolation, FERC necessarily ignores the broader cumulative effects of the actions if they were considered together. All of these projects are directly related to ongoing and reasonably foreseeable future gas drilling in the Marcellus and Utica shale formations. The cumulative impacts of this drilling and the other direct and indirect effects of each of these jurisdictional infrastructure projects should be considered comprehensively in an EIS, not in isolation in individual EAs.

Additionally, the projects are similar actions that share similar timing. The three projects have in-service dates between June 2015 and July 2016. In *Delaware Riverkeeper v. FERC*, the D.C. Circuit suggested that connected jurisdictional infrastructure projects that have in-service dates within a 10-year timeframe should be considered in the same analysis. 753 F.3d 1304, 1318 (D.C. Cir. 2014). We think the same holds true for cumulative and similar actions, particularly when such actions are occurring in quick succession to facilitate drilling in the same region (i.e., the Marcellus and Utica shale region). A comprehensive consideration of these projects may lead to the development of reasonable alternatives that reduce the number of pipeline miles and/or compressor stations through better coordination between the pipeline companies.[5]

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[4] It should be noted that Gulfport is a production customer for both the REX Pipeline Project and TGT's Ohio-Louisiana Access Project.

[5] We acknowledge that the REX Pipeline Project and Ohio-Louisiana Access Project involve flow reversals on existing pipelines. Nevertheless, once these reversals are made and gas from the Marcellus and Utica shale formations begins flowing west and south, it is almost certain to

Former Pennsylvania Governor Tom Corbett expressed concerns about FERC's piecemeal approach to infrastructure projects in comments on Transcontinental Pipe Line Company's proposed Atlantic Sunrise Project. According Mr. Corbett:

> The significant increase in infrastructure development to transport natural gas to markets raises unique concerns and questions for communities who host these pipelines. I have heard from many citizens of Pennsylvania who live near or along the proposed corridor of the Atlantic Sunrise pipeline and are concerned about the potential environmental impact of this project….While your current review is focused specific to the proposed Atlantic Sunrise pipeline, I also strongly encourage FERC to seek coordination to the greatest extent possible among other proposed pipeline projects that seek to move natural gas to market. A recurring issue raised by local residents is whether we are efficiently deploying infrastructure – and the appropriate level of communication is occurring between potential project developers – in a manner that minimizes and mitigates overall disturbance on both the environment and local communities. Such coordination and efficiency has the advantage of maximizing benefit to consumers as well. *Given the agency's regulatory responsibility, and unique vantage point of being aware of other potential projects, I believe FERC is best suited to consider these factors* as you continue your review of this proposed project.

Gov. Tom Corbett's comments on the Atlantic Sunrise Project, Aug. 18, 2014 (emphasis added) (Docket No. PF14-8-000; Accession No. 20140825-0011). As Mr. Corbett aptly points out, FERC's "unique vantage point of being aware of other potential projects" supports the need for it to seek coordination with pipeline companies and the public in order to reduce environmental impacts from redundant pipeline construction that is obviously targeting to same region. Mr. Corbett's comments are particularly on-point when one considers the map of "Marcellus Shale Project" in Pennsylvania and surrounding states that FERC included in its 2010 presentation. *See* Attachment 6 at 28. The redundant nature of multiple pipeline projects paralleling each other across Pennsylvania reveals the short-sighted nature of current gas infrastructure development impacting this region.

Similar infrastructure expansions are occurring in Ohio, West Virginia, and other states in and surrounding the Marcellus and Utica shale formations in a similar piecemeal approach that avoids addressing the substantial and long-term impacts on the environment and citizens in this region. Therefore, FERC must consider the above-referenced projects and the underlying Projects (at a minimum) in the same EIS in order to provide a more accurate depiction of the actual direct, indirect, and cumulative effects of these projects. As will be explained below, the extent of infrastructure expansion warrants preparation of a programmatic regional EIS as well.

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facilitate further pipeline expansions. As will be explained below, this is precisely why it is critical that FERC prepare a programmatic EIS on natural gas infrastructure projects that are facilitating gas drilling in the Marcellus and Utica shale basins.

V. FERC should prepare an EIS for the Projects.

FERC must prepare an EIS for major federal actions that may significantly impact the environment. 42 U.S.C. § 4332(2)(C); 40 C.F.R. § 1502.4. FERC must consider both the context and intensity of the project. 40 C.F.R. § 1508.27. Regarding intensity, FERC considers the factors in 40 C.F.R. § 1508.27(b) in deciding whether to prepare an EIS. An objective evaluation of these factors indicates the need for an EIS.

For example, authorization of the Ohio-Louisiana Access Project may establish a precedent for future actions with significant effects because once TGT's pipeline is made bi-directional, it will almost certainly lead to future actions. Indeed, in addition to the Southern Indiana Market Lateral, TGT is already planning (and apparently quite close to submitting an application for) the Northern Supply Access Project. It is also reasonable to expect future looping and lateral projects. Therefore, 40 C.F.R. § 1508.27(b)(6) is triggered.

Additionally, as explained above, the Projects are related and will have cumulatively significant impacts, particularly when the cumulative impacts of gas drilling in the Marcellus and Utica shale formations is considered. FERC cannot avoid a finding of significance "by terming an action temporary or by breaking it down into small component parts." 40 C.F.R. § 1508.27(b)(7). By considering the Projects in separate EAs, FERC is allowing TGT to break its projects into smaller component parts to avoid a finding of significance.

It is also clear that there are effects on the environment that are likely to be highly controversial. 40 C.F.R. § 1508.27(b)(4). For example, in recent remarks to the National Press Club, FERC Chairman Cheryl LaFleur said that:

> Pipelines are facing *unprecedented* opposition from local and national groups including environmental activists. These groups are active in every FERC docket, as they should be, as well as in my email inbox seven days a week, in my Twitter feed, at our open meetings demanding to be heard, and literally at our door closing down First Street so FERC won't be able to work.
>
> We have a situation here.

National Press Club Luncheon With FERC Chairman Cheryl LaFleur, Jan. 27, 2015 (emphasis added) (Attachment 23). It is not just "unprecedented opposition" from the public that indicates that projects such as the ones at issue here are highly controversial. As explained above, there is disagreement between FERC and the EPA about the proper scope of FERC's cumulative impact analysis areas. As explained above, EPA has previously told FERC that "geographic proximity is not in and of itself the standard" for including other actions in a cumulative impact analysis. FERC, however, continues to insist upon using geographic scope to narrow the "region of influence" surrounding a project to effectively eliminate considering the vast majority of cumulative impacts caused by Marcellus and Utica shale gas drilling. This represents a significant disagreement between agencies about compliance with NEPA. For this and the reasons above, FERC should prepare an EIS for the Projects.

VI. FERC must consider reasonable alternatives to the proposed actions.

Whether FERC prepares an EA or an EIS for the Project(s), CEQ's regulations require it to consider reasonable alternatives to the proposed action. *See* 40 C.F.R. §§ 1502.14 *and* 1508.9(b). This includes consideration of reasonable alternatives "not within the jurisdiction of the lead agency." 40 C.F.R. § 1502.14(c). This is important because such alternatives "may serve as the basis for modifying [] Congressional approval or funding in light of NEPA's goals and policies." CEQ, Forty Most Asked Questions Concerning CEQ's National Environmental Policy Act Regulations, 46 Fed. Reg. 18,026, Q.2b (Mar. 23, 1981). FERC's supplemental NEPA regulations also require consideration of alternatives. *See* 18 C.F.R. §§ 380.2(d)(3) *and* 380.7(b). FERC's regulations also require that applicants provide alternatives including, at a minimum, the "no action" alternative, "other systems and/or energy conservation" alternatives, and "alternate routes or locations" alternatives. 18 C.F.R. § 380.12(*l*).

As explained above, FERC's piecemeal approach of considering many infrastructure projects individually when there are many other connected, cumulative, and similar actions occurring in the same region and at the same time substantially has resulted in redundant pipelines that needlessly fragment habitat, and increase impacts on watersheds, air quality, recreation opportunities, and landowners. For example, FERC reviewed Dominion's Appalachian Gateway Project (Docket No. CP10-448-000) and Equitrans' Sunrise Project (Docket No. CP11-68-000) in two separate EAs at approximately the same time.[6] Significant portions of the two pipelines parallel each other in northern West Virginia and southwestern Pennsylvania. *See* Attachment 6 at 28 (the solid blue lines indicate the Sunrise Project and the solid purple line indicates the Appalachian Gateway Project). It seems eminently reasonable that FERC, Dominion, and Equitrans could have coordinated more effectively in order to limit the redundancy of pipeline miles. In other words, did both Dominion and Equitrans have to have two separate pipelines running parallel to each other for dozens of miles? The same could be said for the four pipelines running east-to-west for most of the length of southern Pennsylvania. *Id*. FERC must substantially improve its coordination with pipeline companies and the public so that redundant pipelines are limited. Doing so would further the goals of the Certificate Policy Statement to avoid unnecessary disruption of the environment, reduce the threat of overbuilding infrastructure, and avoid unneeded exercise of eminent domain. *See Certificate Policy Statement*, 88 FERC ¶ 61,227, p. 2 (1999), *clarified*, 90 FERC ¶ 61,128, *further clarified*, 92 FERC ¶ 61,094 (2000).

Regarding energy conservation, TGT has not seriously consider such this alternative. For example, TGT states that:

> Energy conservation reduces the need for natural gas and other energy sources. Beginning during the energy crisis of the 1970s, numerous aggressive energy conservation programs were developed in the U.S. It is possible that the development and implementation of additional conservation measures may have some effect on energy

[6] The EA for the Appalachian Gateway Project was released in March 2011 while the EA for the Sunrise Project was released in May 2011.

> demand; however, the magnitude of energy conservation necessary to equal the capacity proposed for this Project will not be attained in the near-term via current proven methods.

Ohio-Louisiana Access Project, Resource Report 10 at 10-2. This is insufficient. First, TGT refers to "numerous aggressive conservation programs" that were developed in the 1970s but does not identify or discuss any of them. Moreover, TGT states, without any explanation or data, that energy conservation cannot equal the capacity proposed for the Ohio-Louisiana Access Project. At a minimum, TGT should provide some kind of data to put its narrative assertions into context. It is not enough that TGT simply says that conservation measures may have "some effect on energy demand" but not enough to "equal the capacity proposed for this Project."

Regarding renewable energy sources, TGT states:

> The No-Action Alternative would increase the demand for and use of renewable energies such as solar, hydroelectric, or other energy sources (e.g., geothermal, fuel cells, wind). While more of these renewable energy sources are being developed in the U.S., they have much more expensive capital costs and are not currently available for large-scale application or to the point where they would be viable energy alternatives to the proposed Project (Energy Information Administration, 2014). Therefore, renewable energy systems would not be available to meet the short-term energy demands achieved by the Project.

Id. at 10-3. Again, this is insufficient. First, TGT references a 269-page EIA report to support its assertion that renewable energy sources are not viable energy alternatives to the project without citing to a specific page or section. Second, TGT's assertions are self-fulfilling prophecies since the more FERC incentivizes gas infrastructure projects through inadequate EAs that fail to disclose the true cost of such projects (most notably, the failure to consider the indirect and cumulative effects of shale gas drilling), the less likely that the costs of renewable technology will come down to make larger-scale deployment possible. Finally, TGT and FERC should consider the combination of energy conservation *and* renewable energy sources.

VII. FERC must prepare a programmatic EIS for natural gas infrastructure projects related to development of the Marcellus and Utica shales.

FERC must prepare a programmatic EIS for natural gas infrastructure projects related to development of the Marcellus and Utica shale formations. CEQ regulations and guidance support the need for a regional programmatic EIS to better inform the public about the true nature and scope of natural gas infrastructure projects that are pending before FERC or are reasonable foreseeable. Furthermore, FERC is actively engaged with the natural gas industry to rapidly deploy infrastructure in order to coordinate and harmonize the gas industry with electric utilities.

A. CEQ regulations/guidance and case law support preparation of a programmatic EIS.

A programmatic EIS is sometimes required for "broad Federal actions." 40 C.F.R. § 1502.4(b). "Programmatic NEPA reviews address the general environmental issues relating to broad decisions, such as those establishing policies, plans, programs, or suite of projects, and can effectively frame the scope of subsequent site- and project-specific Federal actions." CEQ, *Effective Use of Programmatic NEPA Reviews*, p. 10 (2014) (Attachment 24). "A well-crafted programmatic NEPA review provides the basis for decisions to approve such broad or high-level decisions such as identifying geographically bounded areas within which future proposed activities can be taken or identifying broad mitigation and conservation measures that can be applied to subsequently tiered reviews." *Id*. Additionally:

> Programmatic NEPA reviews may also support policy- and planning-level decisions when there are limitations in available information and uncertainty regarding the timing, location, and environmental impacts of subsequent implementing action(s). For example, in the absence of certainty regarding the environmental consequences of future proposed actions, agencies may be able to make broad program decisions and establish parameters for subsequent analyses based on a programmatic review that adequately examines the reasonably foreseeable consequences of a proposed program, policy, plan, or suite of projects."

Id. at 11. In other words, just because future gas infrastructure projects may be theoretical does not mean that FERC would not be able to "establish parameters for subsequent analyses." In fact, this may assist FERC (and the public) in understanding the broader reasonably foreseeable consequences of jurisdictional projects and non-jurisdictional gas drilling in the Marcellus and Utica shale formations.

The 2014 Guidance recommends preparing a programmatic EIS when "several energy development programs proposed in the same region of the country [have] similar proposed methods of implementation and similar best practice and mitigation measures that can be analyzed in the same document." *Id*. at 21. Additionally, CEQ says that "broad Federal actions may be implemented over large geographic areas and/or a long time frame" and "must include connected and cumulative actions, and the responsible official should consider whether it is helpful to include a series or suite of similar actions." *Id*. at 22.

According to CEQ, the benefit of a programmatic EIS is obvious:

> When the public has a chance to see the big picture early it can provide fresh perspectives and new ideas before determinations are made that will shape the programmatic review and how those determinations affect future tiered proposals and NEPA reviews. Early outreach also provides an opportunity to develop trust and good working relationships that may extend throughout the programmatic and subsequent NEPA reviews and continue during the implementation of the proposed action.

Id. at p. 25 (citations omitted). Furthermore:

> Programmatic NEPA reviews provide an opportunity for agencies to incorporate comprehensive mitigation planning, best management practices, and standard operating

> procedures, as well as monitoring strategies into the Federal policymaking process at a broad or strategic level. These analyses can promote sustainability and allow Federal agencies to advance the nation's environmental policy as articulated in Section 101 of NEPA.
>
> By identifying potential adverse impacts early during the broad programmatic planning, programmatic NEPA reviews provide an opportunity to modify aspects of the proposal and subsequent tiered proposals to avoid or otherwise mitigate those impacts. A thoughtful and broad-based approach to planning for future development can include best management practices, standard operating procedures, adaptive management practices, and comprehensive mitigation measures that address impacts on a broad programmatic scale (e.g., program-, region-, or nation-wide).

Id. at 35. All of this supports the need for FERC to prepare a programmatic EIS for natural gas infrastructure and gas development in the Marcellus and Utica shale formations so that the public has a chance to see the big picture.

According to the Energy Information Administration ("EIA"), there at least 57 natural gas infrastructure projects that have either recently been put into service or are either in the planning stage or under environmental review in the Northeast, Midwest, and Southeast. EIA, Today in Energy, *Some Appalachian natural gas spot prices are well below the Henry Hub national benchmark*, Oct. 15, 2014, *available at* http://www.eia.gov/todayinenergy/detail.cfm?id=18391 (Attachment 25) (Note: scroll to bottom of page and click on the link titled "Several pipeline projects are underway" for a spreadsheet listing the 57 pipeline projects. The spreadsheet is included as a PDF in Attachment 26). Of these 57 pipeline projects, 56 are dedicated to transporting Marcellus and/or Utica shale gas away from states like Pennsylvania. *See* Attachment 26. This is an enormous expansion of the natural gas pipeline system and much of it is due to gas drilling in the Marcellus and Utica shale formations.

For example, in 2013, EIA stated that although natural gas pipeline capacity investment had slowed in 2012:

> Limited capacity additions were concentrated in the northeast United States, mainly focused on removing bottlenecks for *fast-growing Marcellus shale gas production*. *More than half of new pipeline projects that entered commercial service in 2012 were in the Northeast*.

EIA, Today in Energy, *Over half of U.S. natural gas pipeline projects in 2012 were in the Northeast*, Mar. 25, 2013, (emphasis added) *available at* http://www.eia.gov/todayinenergy/detail.cfm?id=10511 (Attachment 27). In December 2014, EIA stated:

> Spurred by growing natural gas production in Pennsylvania, West Virginia, and Ohio, the natural gas pipeline industry is planning to modify its system to allow bidirectional flow to move up to 8.3 billion cubic feet per day (Bcf/d) out of the Northeast….In addition to

> these bidirectional projects in the Northeast, the industry plans to expand existing systems and build new systems to transport natural gas produced in the Northeast to consuming markets outside the region.

EIA, Today in Energy, *32% of natural gas pipeline capacity into the Northeast could be bidirectional by 2017*, Dec. 2, 2014, *available at* http://www.eia.gov/todayinenergy/detail.cfm?id=19011 (Attachment 8). It is clear that there is broad Federal action being implemented over a large geographic area and that natural gas infrastructure projects have similar proposed methods of implementation and similar best practice and mitigation measures. Therefore, FERC must prepare a programmatic EIS.

Finally, case law supports the preparation of a programmatic EIS in appropriate circumstances. In *Kleppe v. Sierra Club*, the Supreme Court recognized that NEPA may mandate a comprehensive EIS "in certain situations where several proposed actions are pending at the same time." 427 U.S. 390, 409 (1976). Further, the Court noted that:

> when several proposals….that will have cumulative or synergistic environmental impact upon a region are pending concurrently before an agency, their environmental impacts must be considered together. Only through comprehensive consideration of pending proposals can the agency evaluate different courses of action.

Id. at 410.

Appellate courts have also defined a two-pronged inquiry to establish whether a programmatic EIS is appropriate: (a) Could the programmatic EIS be sufficiently forward looking to contribute to the decisionmakers' basic planning of the overall program? and, (b) Does the decisionmaker purport to 'segment' the overall program, thereby unreasonably constricting the scope of primordial environmental evaluation?" *Churchill County v. Norton*, 276 F.3d 1060, 1076 (9th Cir. 2001) (citing *Nat'l Wildlife Fed'n v. Appalachian Reg'l Comm'n*, 677 F.2d 883, 889 (D.C. Cir. 1981)). *See also Foundation on Economic Trends v. Heckler*, 756 F.2d 143, 159 (D.C. Cir. 1985). Here, a programmatic EIS would be sufficiently forward looking to contribute to FERC's (and the public's) basic understanding of the true scope of the current and reasonably foreseeable build-out of gas infrastructure to connect the Marcellus and Utica shale formations to market areas. With respect to the second prong, FERC cannot escape the existence of a comprehensive program with cumulative environmental effects by "disingenuously describing it as only an amalgamation of unrelated smaller projects." *Churchill County*, 276 F.3d at 1076 (*citing Nat'l Wildlife Fed'n*, 677 F.2d at 890).

In *City of Tenakee Springs*, the court held that:

> Where there are large scale plans for regional development, NEPA requires both a programmatic and site-specific EIS. See City of Tenakee Springs, 778 F.2d at 1407 (citations omitted). This court has held that where several foreseeable similar projects in a geographical region have a cumulative impact, they should be evaluated in a single EIS. See LaFlamme v. Federal Energy Regulatory Commission, 852 F.2d 389, 401-02 (9th Cir. 1988). There, emphasizing the likelihood of future development, the court remanded

> to [FERC] for further consideration of cumulative impacts because the agency had examined single projects in isolation without considering the net impact that all the projects in the area might have on the environment. See LaFlamme, 852 at 401-03.

915 F.2d at 1312. As will be explained below, there are clearly large-scale plans for regional development of gas infrastructure to facilitate transmission of Marcellus and Utica shale gas to market areas. FERC, therefore, must prepare a programmatic EIS that considers the regional impacts of such development.

B. FERC is engaged in regional development and planning with the gas industry.

FERC has previously claimed that it does not have an "official policy" to "increase the nation's reliance on natural gas" and that it merely "considers individual proposed infrastructure projects on their own merits, pursuant to its statutory obligation under NGA section 7(c)." *Columbia Gas Transmission*, 149 FERC ¶ 61,255 at P 123 (Dec. 18, 2014). This is disingenuous, at best. As stated above, FERC participated in the development of the National Petroleum Council's *Prudent Development* report, which stresses the need to increase natural gas infrastructure. Moreover, FERC's *FY2014-2018 Strategic Plan* identifies the approval of natural gas infrastructure, including pipelines, as a specific "goal" over the next several years.

Additionally, FERC has recently initiated several docket proceedings related to the coordination of the natural gas and electricity markets. See *Coordination Between Natural Gas and Electricity Markets* (Docket No. AD12-12-000); *Coordination of the Scheduling Processes of Natural Gas Pipelines and Public Utilities* (Docket No. RM14-2-000); *Order Initiating Investigation into ISO and RTO Scheduling Practices*, 146 FERC ¶ 61,202 (Docket Nos. EL14-22 et seq.); and *Posting of Offers to Purchase Capacity*, 146 FERC ¶ 61,203 (Docket No. RP14-442). FERC explained that "since natural gas is expected to be relied on much more heavily in electricity generation, the interdependence of these industries merits careful attention." *Coordination Between Natural Gas and Electricity Markets* (Docket No. AD12-12-000, Accession No. 20120215-3066). In ordering further conferences and reports, FERC highlighted the "growing concern regarding natural gas-electric interdependencies and in particular whether the natural gas and electric industries are prepared to work together seamlessly in an environment of increasing reliance on the use of natural gas as a fuel for electric generation." *Coordination Between Natural Gas and Electricity Markets*, 141 FERC ¶ 61,125 at P 1 (Nov. 15, 2012). One of the issues that "spurred significant discussion and concern" was "whether electric market incentives are adequate to ensure gas-fired generator performance or otherwise signal the need for pipeline infrastructure to meet growing needs." *Id*. at P 3, n. 2.

Since FERC's order in Docket No. AD12-12, FERC staff has produced several quarterly reports providing updates on "national and regional Gas-Electric Coordination Activities." *See e.g.*, Gas-Electric Coordination, Quarterly Report to the Commission, p. 1 Sept. 18, 2014 (Docket No. AD12-12-000; Accession No. 20140918-3029). According to this report:

> The Eastern Interconnection Planning Collaborative (EIPC) is now working on the Target 2 study, which will evaluate the adequacy of the natural gas infrastructure in 2018 and

> 2023 to meet the expected core load and non-core gas-fired generation requirements on a Winter Peak Day and a Summer Peak Day. Work is focused on finalizing the second set of natural gas and electricity market assumptions on core and non-core demand levels such as *infrastructure expansions*, load growth, LDC expansion, and oil-to-gas conversion for Target 2 model inputs….
>
> ….The ICF-led study on Long-term Electric and Natural Gas Infrastructure Requirements in the Eastern Interconnection, prepared for NARUC and the Eastern Interconnection States Planning Council (EISPC), examines the potential build-out of natural gas infrastructure required to supply power and gas customers to 2030 under three demand and policy scenarios for the power sector in the Eastern Interconnect region. *The preliminary study results presented in September find that the overwhelming factor driving natural gas infrastructure development is the demand for electricity*.

Id. at pp. 5-6 (emphasis added). FERC staff then highlights "relevant natural gas filings" (pp. 15-17) and "relevant electric filings" (pp. 18-19). Thus, it is clear that the backbone of FERC's "Coordination Between Natural Gas and Electricity Markets" is ensuring there is sufficient gas infrastructure in place to meet future demand for electricity. In other words, FERC is deeply engaged in long-term regional development and planning with the natural gas and electric industries.

Industry comments in Docket No. RM14-2-000 shed further light on FERC's involvement in regional gas infrastructure development and planning. For example, according to the Independent Oil & Gas Association of West Virginia:

> As the Marcellus and Utica Shale formations in West Virginia, Pennsylvania, and Ohio have been developed over the past five years, many of the interstate pipeline expansion projects have been backed by producers who have entered into long-term firm transportation agreements to ensure that their natural gas reaches the marketplace demanding new or geographically more attractive supplies. IOGA encourages power generators or others that may not hold firm capacity to link up with natural gas producers and marketers with supply and capacity to structure capacity release and supply deals that will provide them with the energy services and reliable supply required by the electric transmission grid….In IOGA's view, suppliers and traditional firm purchasers have and will continue to step forward and support new pipeline capacity projects to move gas to market and ensure reliability[.]

Comments of IOGA of West Virginia at 7 (Docket No. RM14-2-000, Accession No. 20141128-5093). According to the Natural Gas Supply Association: ("NGSA")

> *As* ***FERC and industry participants*** *address transitional issues of increased reliance on natural gas by the power sector*, the natural gas industry's achievement in serving the power sector's substantial growth in natural gas demand cannot be overlooked. Because the United States is blessed with an abundant supply of clean-burning natural gas, and new technologies to develop shale gas, growth in natural gas production has been enormous. Over the past decade alone, production has increased by approximately 43

> percent; growing from nearly 50 Bcf/d in 2005 to 71 Bcf/d projected for 2015. In fact, production has increased by 28 percent in just the past five years, allowing gas sellers to accommodate the 25 percent growth in power generation demand in the same timeframe. However, to take full advantage of these abundant new supplies, *additional gas infrastructure* ***must be in place*** *to transport and store natural gas from the wellhead to the point of consumption*.

Comments of NGSA at 3-4 (Docket No. RM14-2-000, Accession No. 20141128-5031) (emphasis added). According to comments submitted on behalf of the Environmental Defense Fund, Conservation Law Foundation, The Sustainable FERC Project, and Clean Energy Group:

> Better price signals coming from shorter duration gas-for-electric generation services *will call forth competitive offerings in* shorter term capacity release, third-party and pipeline no-notice services, and *incremental pipeline expansions (e.g., looping and compression)* which will institutionalize such sub-day services.

Comments of EDF, *et al*. at 19 (Docket No. RM14-2-000, Accession No. 20141128-5097) (emphasis added).

According to PJM Interconnection's 2013 annual report, its transmission system "is clearly undergoing an extraordinary transition as many coal-fired power plants retire and more natural gas-fired plants are built." PJM 2013 Annual Report, p. 8 (Attachment 28). PJM further explained that:

> PJM and other grid operators, *along with the gas industry and regulatory agencies*, are carefully examining the gas/electric interface to identify issues and develop solutions….In a major initiative *with Department of Energy funding*, six grid operators partnered to analyze the *natural gas infrastructure* serving a large portion of the Eastern Interconnection. They are PJM, the Midcontinent ISO, ISO-New England, the New York ISO, the Tennessee Valley Authority and the Ontario Independent Electricity System Operator.
>
> The study is being coordinated by the Eastern Interconnection Planning Collaborative, the umbrella organization for electric grid planning activities in the Eastern Interconnection.

Id. at pp. 22 (emphasis added).

It is beyond dispute that FERC is engaged in long-term regional gas infrastructure planning and development related to the Marcellus and Utica shale formations. The Department of Energy, FERC's parent department (42 U.S.C. § 7171), funded a "major initiative" to "analyze the natural gas infrastructure serving a large portion" of the areas where Marcellus and Utica shale gas are being and will increasingly be delivered as the government and industry work to increase coordination between the gas and electric industries. The network of recently constructed, planned and proposed projects reveals an urgent need for a forward-looking

comprehensive EIS that thoroughly evaluates all environmental impacts together in a single document.

When FERC claims that it only reviews individual proposals, it obfuscates its active participation in this large-scale planning and development. FERC also avoids meaningfully analyzing the direct, indirect and cumulative effects on this region as a whole, including the impacts of Marcellus and Utica shale gas development.[7] FERC also substantially limits the development and consideration of reasonable alternatives to natural gas as a supply for electric generation. Therefore, FERC must prepare a programmatic EIS that addresses recent, present, and reasonably foreseeable gas infrastructure projects related to the Marcellus and Utica shale formations and the coordination between the natural gas and electricity markets.

The benefits of preparing a programmatic EIS may best be demonstrated by way of example. In 2005, the Corps, EPA, Department of Interior's Office of Surface Mining, U.S. Fish & Wildlife Service, and West Virginia Department of Environmental Protection published a "Mountaintop Mining / Valley Fills in Appalachia Final Programmatic Environmental Impact Statement" ("Mountaintop Mining PEIS"). *See* EPA, Mid-Atlantic Mountaintop Mining, *available at* http://www.epa.gov/region3/mtntop/eis2005.htm. The Mountaintop Mining PEIS evaluated options for "improving agency programs" under the Clean Water Act (CWA), Surface Mining Control and Reclamation Act (SMCRA) and the Endangered Species Act (ESA) in order to "reduc[e] the adverse environmental impacts of mountaintop mining operations and excess spoil valley fills [] in Appalachia." Mountaintop Mining PEIS at 1. The Mountaintop Mining PEIS was "designed to inform more environmentally sound decision-making for future permitting" of mountaintop removal coal mining in Appalachia and included "a substantial amount of environmental and economic data" that provided "much valuable information [to] assist [the] respective agencies to better coordinate the review necessary under each agency's mandates." *Id*. According to the preparers, the results of preparing the Mountaintop Mining PEIS would "contribute to more efficient decision-making by coordinating data collection and environmental analyses by the respective agencies, resulting in better permit decisions on a watershed basis." *Id*.

Importantly, the Mountaintop Mining PEIS analyzed "the scope of remaining surface-minable coal in the study area," which included the states of Kentucky, West Virginia, Tennessee, and Virginia. *Id*. at III.o-1 (Attachment 29). This is precisely the kind of analysis that FERC is clearly capable of performing in relation to remaining shale gas that could be extracted from the Marcellus and Utica shale formations and the infrastructure that will be

[7] The fact that gas drilling activities are not regulated by FERC is irrelevant since FERC must consider these cumulative impacts "regardless of what agency (Federal or non-Federal) or person undertakes such other actions." 40 C.F.R. § 1508.7. Indeed, CEQ emphasizes that "all NEPA reviews," regardless of whether it is a site-specific review or a programmatic review, are concerned with reasonably foreseeable cumulative impacts (as well as direct and indirect effects). CEQ, *Effective Use of Programmatic NEPA Reviews*, p. 23 (2014). CEQ further says that one of the benefits of a programmatic review is that "impacts can often be discussed in a broad geographic and temporal context with particular emphasis on cumulative impacts." *Id*. at p. 33.

required to transport that shale gas to market areas. The industry is well aware of the infrastructure it says will be necessary over the next few decades.

For example, in a 2014 report, the Interstate Natural Gas Association of America ("INGAA") stated that it expects over 338,000 miles of natural gas and over 15,000 miles of natural gas liquids pipelines to be built in North America between 2014-2035. INGAA, North American Midstream Infrastructure through 2035: Capitalizing on Our Energy Abundance, Executive Summary, p. 19 (Mar. 18, 2014) (Attachment 30). According to INGAA:

> [M]idstream infrastructure development is *crucial* for efficient delivery of growing supplies to markets. Sufficient infrastructure goes *hand in hand* with well-functioning markets. Insufficient infrastructure can constrain market growth and strand supplies, potentially leading to price volatility and reduced economic activity….
>
> ….The growth of liquids production hinges on the development of transport capability and markets for liquids. Absent such development, NGL production would be stranded in a number of key areas, posing not only challenges for liquids development, but for gas development as well. Natural gas pipelines require that gas transport takes place within certain tolerances for BTU content. Thus, lack of adequate infrastructure for processing and transport of NGL eventually leads to stranded gas supplies because the gas lines will be unable to receive and transport the liquids-laden stream if they are to remain within the required tolerances.

Id. at 1; 8 (emphasis added). In other words, INGAA further demonstrates that jurisdictional infrastructure projects are causally connected to reasonably foreseeable gas drilling in the Marcellus and Utica shale formations. According to INGAA, "[t]he Marcellus shale play is projected to display the greatest growth in natural gas supply, more than doubling its current production level of around 13 Bcfd by 2035." *Id*. at 7. INGAA projects that "increasing production from the Marcellus shale gas displaces gas transport to the northeastern United States and provides incremental gas supplies to Eastern Seaboard, midwestern, and southeastern gas markets" and that "flows through the Tennessee Valley that originate from the Gulf Coast decline over time as a result of Marcellus production increases." *Id*. at 9.

INGAA also projects that "growing production from the Gulf Coast mostly *remains in that area to meet local demand growth*." *Id* (emphasis added). In other words, despite FERC's previous claims that it "would require significant speculation" to determine where the gas will come from for any given project, *see e.g.*, *Dominion Cove Point LNG, LP*, 148 FERC ¶ 61,244, P 231 (2014), the fact is that the industry knows in general where gas is coming from and where it is going to. Gulf Coast production will "remain[] in that area to meet local demand growth," while the Marcellus shale formation will "display the greatest growth in natural gas supply, more than doubling its current production level" and providing increasing gas transmission to the Northeast, Eastern Seaboard, Midwest, and Southeast. In other words, it does not "require significant speculation" for FERC to connect the dots between jurisdictional projects and related upstream production since the dots have already been connected. FERC only has to ask the gas companies that are extracting the gas and, in many cases, are shippers for jurisdictional projects, where they intend to drill. There is an urgent need to do a comprehensive regional analysis now

so that the public can understand the full scope of the proposed infrastructure build-out for increased Marcellus and Utica shale gas extraction. Therefore, should prepare a programmatic EIS before authorizing any further site-specific jurisdictional facilities.

VIII. FERC cannot issue a Certificate without considering other connected, cumulative, and similar actions as well as the indirect and cumulative effects of gas drilling in the Marcellus and Utica shale formations.

When deciding whether to issue a certificate of public convenience and necessity ("Certificate"), FERC examines the interests of the applicant's existing customers, interests of other pipelines and their customers, interests of landowners and communities, environmental impacts, alternatives, technical competence, financing, rates, market demand, eliminating bottlenecks, access to new gas supplies, increasing electric reliability, advancing clean air objectives, long-term feasibility, and other issues concerning a proposed project that are relevant to the public interest. Certification of New Interstate Natural Gas Pipeline Facilities, Statement of Policy, 88 FERC ¶ 61,227, Docket No. PL99-3-00 (Sept. 15, 1999) at 22-23, 27, *clarified*, 90 FERC ¶ 61,128, *further clarified*, 92 FERC ¶ 61,094 (2000) (Certificate Policy Statement); *see generally Permian Basin Area Rate Cases*, 390 U.S. 747, 791 (1967). It is clear that FERC gives significant weight to a few of these factors but downplays or ignores other factors. This bias heavily favors the granting of certificates.

For example, it is clear from all of the information above that FERC has placed significant weight on access to new gas supplies in the Marcellus and Utica shale formations in deciding that projects such as the ones under review here are required by the public convenience and necessity. In its application for the Ohio-Louisiana Access Project, TGT specifically states that one of the benefits of that project will be "to accommodate customers who are seeking access to the Marcellus/Utica shale supplies on the northern end of the Texas Gas system." Ohio-Louisiana Access Project Application at 1. FERC must balance its consideration of this factor, however, with a corresponding assessment of the environmental impacts of accessing these new gas supplies. Indeed, FERC claims that one of the goals of the Certificate Policy Statement is "the avoidance of unnecessary disruption of the environment." Certificate Policy Statement at 2. It would be arbitrary for FERC to give weight to the alleged benefits of access to new gas supplies while simultaneously ignoring the environmental consequences of developing those new gas supplies. Thus, FERC has an obligation, under NEPA *and* its Certificate Policy Statement, to consider the upstream environmental impacts of accessing new gas supplies in the Marcellus and Utica shale formations.

In addition to the avoidance of unnecessary disruption of the environment, two other goals of the Certificate Policy Statement provide further support for the need to prepare a comprehensive programmatic EIS. These goals include avoiding the potential for overbuilding and the unneeded exercise of eminent domain. Certificate Policy Statement at 2. The sheer number of "Marcellus Shale Projects" that FERC has reviewed and approved in recent years, including many redundant pipelines that parallel each other, suggests that FERC is allowing overbuilding to occur, which also means that it may be facilitating the unneeded exercise of eminent domain. *See* Attachment 6 at 28; *see also* FERC, A View From the Beltway at 7-9 (Attachment 31). Indeed, perhaps this is why FERC is now complaining that it is receiving

"unprecedented opposition." National Press Club Luncheon With FERC Chairman Cheryl LaFleur, Jan. 27, 2015 (emphasis added) (Attachment 23). By considering these issues in a programmatic EIS, FERC, the gas industry, and the public could get a better sense of the infrastructure build-out that is already underway so that environmental impacts can be identified, avoided, and mitigated as much as possible. This would advance FERC's goals in the Certificate Policy Statement.

IX. Conclusion

FERC should prepare an EIS for the Projects and take a hard look at the direct, indirect and cumulative impacts of the Projects. FERC must consider Marcellus and Utica shale gas drilling as both an indirect and cumulative effect of the Projects. Such drilling is an indirect effect because it is both causally related to the Projects and is reasonably foreseeable. Such drilling is also a cumulative effect and cannot be ignored because of an arbitrary "region of influence" that serves to substantially restrict the geographic scope of the analysis area so as to eliminate consideration of relevant cumulative impacts.

FERC must consider other connected, cumulative, and similar actions in the same EIS and consider reasonable alternatives. FERC must also prepare a separate programmatic EIS that addresses natural gas infrastructure projects that are targeting the Marcellus and Utica shale formations. No site-specific jurisdictional projects should be authorized until that programmatic EIS is completed. Finally, FERC cannot issue a Certificate until it fully complies with its obligations pursuant to NEPA, the Certificate Policy Statement, and all other applicable laws and regulations. Thank you for the opportunity to comment.

Dated: February 25, 2015

Respectfully submitted,

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CERTIFICATE OF SERVICE

Pursuant to Rule 2010 of FERC's Rules of Practice and Procedure, 18 C.F.R. § 385.2010, I, Ryan Talbott, hereby certify that I have this day served the foregoing document upon each person designated on this official list compiled by the Secretary in this proceeding.

Dated: February 25, 2015

Respectfully submitted,

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