



joint comments supplement comments that Policy Integrity filed in response to the 2018 NOI with a similar coalition.<sup>5</sup>

These supplemental comments begin by briefly summarizing Policy Integrity’s 2018 comments. They then address several additional issues related to the Commission’s evaluation of a proposed project’s environmental impacts pursuant to the National Environmental Policy Act (NEPA) and its methodology for determining whether there is need for a proposed project under the Natural Gas Act (NGA).

The Commission should:

- Quantify direct, upstream, and downstream greenhouse gas emissions in all NEPA and NGA analyses.
- Not use a complete substitution assumption in assessing emissions, as affirmed by recent case law.
- Not assume zero indirect emissions for a replacement pipeline project, because by extending the lifespan of an existing pipeline, the replacement project causes both upstream and downstream emissions relative to the no-action baseline.
- Consider requiring applicants to purchase carbon offsets to mitigate *unavoidable* greenhouse gas emissions of natural gas infrastructure as a condition of granting a certificate.
- Consider need on a regional basis—drawing on its decision to identify and consider regional solutions in the electric transmission context—to ensure more efficient and cost-effective natural gas infrastructure is developed, to avoid overbuilding, and to prevent unjust and unreasonable natural gas transportation service rates.
- Consider transition risk, including the combination of a shift to a decarbonized resource mix and building electrification, at the time of certification as part of assessing whether a pipeline is needed under the NGA.
- Refine its analysis to better capture and assess impacts on environmental justice communities by using more granular census block data; using a broad comparison population in determining whether project’s impacts

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<sup>5</sup> See Joint Comments of Env’t Def. Fund, Inst. for Pol’y Integrity at N.Y.U., Nat. Res. Def. Council, Sierra Club, and Union of Concerned Scientists, *Certification of New Interstate Pipeline Facilitates*, Docket No. PL18-1-000 (July 25, 2018).

disproportionately affect identified communities; and considering all pollution impacts even when they do not exceed legal thresholds.

Each of these recommendations is discussed in greater detail below.

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## I. Summary of Policy Integrity's 2018 Comments

In response to the Commission's 2018 NOI, Policy Integrity submitted comments centered around FERC's obligations under NEPA and the NGA to analyze direct and indirect emissions. Those comments provided recommendations for how to quantify, monetize, and compare those pollution costs through a systematic and transparent cost-benefit analysis. To avoid redundancy, Policy Integrity incorporates its previous comments herein and briefly recounts them below, instead of restating its detailed arguments in full.

To begin, Policy Integrity recommended the Commission more meaningfully incorporate environmental effects assessed as part of the NEPA process—including direct, upstream, and downstream emissions—into its public convenience and necessity test under the NGA.<sup>6</sup> Policy Integrity likewise recommended that FERC use the alternatives analysis under NEPA to better inform its evaluation under the NGA.<sup>7</sup> The Commission should use its authority to attach conditions to certificate approval to require mitigation of environmental damage, including foreseeable emissions.<sup>8</sup>

Next, Policy Integrity recommended that the Commission adopt a policy to quantify and monetize upstream and downstream emissions in its NEPA and NGA analyses.<sup>9</sup> Quantification and monetization of emissions can allow FERC to incorporate climate damages into its Section 7 analysis by using a common metric that fits easily into the Commission's economic test under the NGA.<sup>10</sup> This policy will allow the Commission to distinguish between projects that have

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<sup>6</sup> Policy Integrity 2018 Comments, *supra* note 4, at 9-10.

<sup>7</sup> *Id.* at 15.

<sup>8</sup> *Id.* at 16.

<sup>9</sup> *Id.* at 17-24.

<sup>10</sup> *Id.* at 21-22.

substantial climate consequences but limited public benefits, as compared to those that have substantial public benefits with limited or positive climate consequences.<sup>11</sup>

Policy Integrity also recommended ways the Commission can best calculate emissions and improve its NEPA and NGA analysis. First, the Commission should ask applicants to provide as much information as possible about foreseeable environmental effects of a proposed project, including information on expected source, end use, and amount of natural gas to be transported.<sup>12</sup> Second, the Commission should use reasonable default estimates and available tools to calculate upstream and downstream emissions.<sup>13</sup> Reasonably accurate, useful estimates of upstream and downstream emissions can be made even without project-specific information on precise end uses or supply sources.<sup>14</sup> Policy Integrity demonstrated that FERC can use a “full burn” assumption as an upper-bound estimate of emissions (similar to other agencies) and use capacity subscriptions to determine the lower-bound assumption.<sup>15</sup> The Commission also should compare the relative emissions of energy substitutes using models, rather than assuming perfect substitution.<sup>16</sup>

Finally, Policy Integrity recommended the Commission adopt a holistic cost-benefit analysis framework for evaluating projects.<sup>17</sup> By systematically and transparently quantifying and comparing the costs and benefits of pipeline infrastructure projects, FERC can evaluate

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<sup>11</sup> *Id.* at 23.

<sup>12</sup> *Id.* at 24.

<sup>13</sup> *Id.* at 27.

<sup>14</sup> *Id.*

<sup>15</sup> *Id.* at 30-33.

<sup>16</sup> *Id.* at 38-43 (providing several models used by other agencies). This issue is more fully discussed below, *infra* Section II.B.

<sup>17</sup> *Id.* at 43.

proposed projects and alternatives through an economically rational, politically accountable, and more predictable process.<sup>18</sup>

Policy Integrity continues to believe these recommendations should be incorporated into the Commission's pipeline certification policy. The next two section expands upon and further support these recommendations.

## **II. The Commission Should Quantify Direct, Upstream, and Downstream Greenhouse Gas Emissions in All NEPA and NGA Analyses**

NEPA and the NGA require the Commission to reasonably assess the climate impacts of proposed projects. The Commission must evaluate the project's upstream and downstream greenhouse gas emissions (in addition to direct emissions) using available tools and reasonable assumptions. Once FERC has fully inventoried a proposal's emissions, it should then monetize those emissions using the Social Cost of Greenhouse Gases.

This section supplements Policy Integrity's prior comments, described above and incorporated herein, by highlighting recent legal developments in regard to assessing indirect greenhouse gas emissions. As detailed below, recent developments only further counsel that the Commission assess the full scope of climate damages, including upstream and downstream emissions, and provide additional guidance on how the Commission can rationally do so.

### **A. Two Recent Cases Emphasize the Need To Assess Indirect Emissions**

Back in 2018, existing precedent was clear that NEPA requires analysis of reasonably foreseeable upstream and downstream emissions.<sup>19</sup> In the last three years, legal developments have further emphasized that the Commission must reasonably analyze upstream and

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<sup>18</sup> *Id.* at 48.

<sup>19</sup> *See id.* at 4-17.

downstream emissions even without perfect information about the expected source, end use, or amount of natural gas to be transported through a proposed pipeline.<sup>20</sup>

Perhaps most significantly, in *Birckhead v. FERC*, the U.S. Court of Appeals for the District of Columbia Circuit recognized that downstream and upstream emissions are “reasonably foreseeable and sufficiently causally connected to a pipeline project to qualify as an indirect effect” that must be assessed.<sup>21</sup> The court explained that it was “troubled” by the Commission’s “less-than-dogged” information-gathering efforts on these fronts, and was “dubious of the Commission’s assertion that asking [the applicant] to provide additional information about the origin of the gas would be futile.”<sup>22</sup> Additionally, the court recognized that even without perfect information, FERC could inform its analysis through “educated assumptions” about indirect greenhouse gas emissions.<sup>23</sup> Although lack of jurisdiction and argument preservation prevented the court from ruling for the plaintiffs, the court made clear that it found the Commission’s efforts wanting and suggested that it may deem FERC’s failure to consider indirect greenhouse gas emissions unlawful in a future decision.

At a recent oral argument in *Food & Water Watch v. FERC*,<sup>24</sup> the D.C. Circuit strongly indicated that this future decision may come soon. Facing similar claims to those presented in *Birckhead*, the court expressed severe skepticism of the Commission’s argument that detailed

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<sup>20</sup> For discussion of why the Commission should request that certificate applicants provide as much information as possible on the expected source, end use, and amount of natural gas to be transported through a proposed pipeline, see *id.* at 24–27. For discussion of why, even without such precise information from project applicants, the Commission should use reasonable default estimates and available tools to calculate upstream and downstream greenhouse gas emissions, see *id.* at 27–43.

<sup>21</sup> *Birckhead v. Fed. Energy Reg. Comm’n*, 925 F.3d 510, 517 (D.C. Cir. 2019).

<sup>22</sup> *Id.* at 518–20.

<sup>23</sup> *Id.* at 520 (quoting *Delaware Riverkeeper Network v. Fed. Energy Reg. Comm’n*, 753 F.3d 1304, 1310 (D.C. Cir. 2014)).

<sup>24</sup> No. 20-1132 (D.C. Cir. argued Feb. 12, 2021).

source and end-use data is required to reasonably forecast upstream and downstream emissions, highlighting various tools available and used by other agencies to quantify these indirect emissions without perfect information.<sup>25</sup> For instance, the court emphasized on several occasions that approximately 98 percent of all natural gas is combusted—which the Commission did not dispute—and suggested that FERC simply incorporate this assumption into its assessment of downstream emissions in the absence of more specific information about the particular application. Although a decision in this case is pending, the court once again indicated its strong dissatisfaction with the Commission’s assessment of greenhouse gas impacts.

As these two cases emphasize, the Commission must assess upstream and downstream greenhouse gas impacts and cannot disregard these impacts merely because it does not possess perfect information. For one, the Commission should seek any relevant information that it can from the applicant regarding the source and end use of the transported energy. But even without additional efforts, basic information about the pipeline’s transport and capacity provides ample information for FERC to make reasonable estimates of gross indirect emissions. Policy Integrity’s 2018 comments, and a subsequent Policy Integrity report,<sup>26</sup> detailed the tools and methodologies that the Commission could apply to inform such estimates. Reasonable forecasting of upstream and downstream emissions is required under both NEPA and the NGA.

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<sup>25</sup> See Oral Argument, *Food & Water Watch v. Fed. Energy Reg. Comm’n*, No. 20-1132 (D.C. Cir. argued Feb. 12, 2021), [https://www.cadc.uscourts.gov/recordings/recordings2020.nsf/71A3F39788C9707A8525867A0058106E/\\$file/20-1132.mp3](https://www.cadc.uscourts.gov/recordings/recordings2020.nsf/71A3F39788C9707A8525867A0058106E/$file/20-1132.mp3).

<sup>26</sup> JAYNI HEIN ET AL., INST. FOR POL’Y INTEGRITY, PIPELINE APPROVALS AND GREENHOUSE GAS EMISSIONS 12-31 (2019), <https://perma.cc/UD26-5MHE>.

## **B. Recent Precedent Offers Further Disapproval of Complete Substitution and Counsels Best Practices for Energy Substitution Analysis**

As Policy Integrity explained in its 2018 comments, the notion of “perfect substitution”—that increasing energy supply has no aggregate greenhouse gas impacts because it entirely offsets substitute production—violates basic supply-and-demand economics and has been widely rebuked in court.<sup>27</sup> Accordingly, Policy Integrity recommended that the Commission compare the relative emissions of energy substitutes, using a sophisticated, transparent model. Policy Integrity further explained that if the Commission assesses greenhouse gas emissions on a net basis, it should do the same for project benefits such as taxes and economic development.<sup>28</sup> As a default, upper-bound estimate, moreover, Policy Integrity recommended that FERC assume that a pipeline will continuously transport 100 percent of its capacity, that all transported gas will be combusted, and that all combusted gas is additional and displaces no other fuels (known as a “full burn” assumption).<sup>29</sup>

Recent case law further refutes the notion of perfect substitution, emphasizing the need for the Commission to analytically assess substitution effects without defaulting to this irrational claim. Most notably, in a decision issued several months ago in *Center for Biological Diversity v. Bernhardt*, the U.S. Court of Appeals for the Ninth Circuit cited approvingly to case law finding that the Commission must reasonably “quantify the indirect greenhouse gas emissions that would

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<sup>27</sup> Policy Integrity 2018 Comments, *supra* note 4, at 38-43. Cases highlighted therein that refuted the assumption of perfect substitution include *Sierra Club v. Fed. Energy Reg. Comm’n*, 867 F.3d 1357, 1372 (D.C. Cir. 2017) (“Sabal Trail”); *WildEarth Guardians v. Bureau of Land Mgmt.*, 870 F.3d 1222, 1237-38 (10th Cir. 2017); *Mid States Coal. for Progress v. Surface Transp. Bd.*, 345 F.3d 520, 549-50 (8th Cir. 2003); *Mont. Env’t Info. Ctr. v. U.S. Off. of Surface Mining*, 274 F. Supp. 3d 1074, 1090-91 (D. Mont. 2017); *San Juan Citizens Alliance v. Bureau of Land Mgmt.*, 326 F.Supp.3d 1227, 1242-44 (D.N.M. 2018); *W. Org. of Res. Councils v. Bureau of Land Mgmt.*, 2018 WL 1475470, at \*13 (D. Mont. Mar. 26, 2018).

<sup>28</sup> Policy Integrity 2018 Comments, *supra* note 4, at 43 (“[W]hen FERC reports the regional tax revenue from a project or other long-term benefits to the local and regional economy, the agency does not discuss how those taxes or other benefits would come at the expense of other taxes from other development opportunities in the region.” (internal quotation marks and citation omitted)).

<sup>29</sup> *See id.* at 30-34.

result” from pipeline construction and explained that “basic economic principles” demonstrate that facilitating fossil-fuel production causes total production and consumption to increase and does not merely displace substitutes.<sup>30</sup> Combined with prior decisions from other circuits,<sup>31</sup> this case clearly demonstrates that increasing fossil-fuel supply necessarily affects the market and has substantial greenhouse gas implications—thus requiring the Commission to assess those impacts through proper energy substitution analysis or make other reasonable default assumptions.

The *Center for Biological Diversity* decision is also instructive on how agencies should perform such a substitution analysis. There, the Bureau of Ocean Energy Management (BOEM) relied on a model known as MarketSim. But because MarketSim irrationally “assumes that foreign oil consumption will remain static” despite increases in domestic production—an assumption that violates basic supply-and-demand principles and the global nature of the energy market—the court concluded that the no-leasing alternative would result in *more* emissions than the selected leasing plan.<sup>32</sup> As the court explained, BOEM offered no rational explanation for its failure to model foreign consumption despite plentiful available data,<sup>33</sup> and its “counterintuitive result” belied common sense.<sup>34</sup>

This case suggests a set of best practices that FERC should follow if it performs energy substitution analysis. First, the Commission should ensure that the assumptions underlying any model are reasonable and based on up-to-date data. Second, in selecting or developing an energy

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<sup>30</sup> 982 F.3d 723, 736-37 (9th Cir. 2020) (citing *Sabal Trail*, 867 F.3d at 1374).

<sup>31</sup> See *supra* note 27.

<sup>32</sup> *Ctr. for Biological Diversity*, 982 F.3d at 736.

<sup>33</sup> *Id.* at 738 (“The record belies BOEM’s contention that it could not have summarized or estimated foreign emissions with accurate or credible scientific evidence.”).

<sup>34</sup> *Id.* at 736, 740 (“BOEM’s conclusion that *not* drilling will result in more carbon emissions than drilling is counterintuitive. An agency acts arbitrarily and capriciously when it reaches a decision that is so implausible that it could not be ascribed to a difference in view or the product of agency expertise.” (internal quotation marks omitted)).

substitution model, the Commission should include all “key variable[s]” that impact demand and greenhouse gas emissions, and not omit any important variables that are uncertain. For instance, a model should account for the fact that domestic fossil-fuel demand is likely to decline over the long term due to recent laws calling for large reductions in greenhouse gas emissions<sup>35</sup>—and should not assume a “worst case scenario outcome” where fossil-fuel demand continues unabated for decades.<sup>36</sup> And third, the Commission should conduct sensitivity analyses to test important analytical assumptions, rather than blindly accepting the model’s results.

Our previous comments highlighted various available models that the Commission should consider applying to assess substitution effects.<sup>37</sup> As an alternative, if the Commission determines that no model is suitable for its purposes, it could assess a range of default substitution estimates. In a recent Environmental Impact Statement for the Keystone XL pipeline, for instance, the State Department modeled alternative scenarios of 80% and 40% displacement, considering the greenhouse gas impacts of each.<sup>38</sup>

If the Commission assumes energy displacement, however, it must also apply those same substitution assumptions when assessing the pipeline’s economic benefits. That is, if a project’s

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<sup>35</sup> See, e.g., Brad Plummer, *Blue States Roll Out Aggressive Climate Strategies. Red States Keep to the Sidelines.*, N.Y. TIMES (June 21, 2019), <https://perma.cc/Y3GW-ML6V> (“Over the past year. . . California, Colorado, Maine, Nevada, New Mexico, New York and Washington have all passed bills aimed at getting 100 percent of their state’s electricity from carbon-free sources like wind, solar or nuclear power by midcentury.”).

<sup>36</sup> BUREAU OF LAND MGMT., COASTAL PLAIN OIL AND GAS LEASING PROGRAM: FINAL ENVIRONMENTAL IMPACT STATEMENT S-40 (2019); accord DEP’T OF THE INTERIOR & BUREAU OF LAND MGMT., DRAFT EASTERN COLORADO RESOURCE MANAGEMENT PLAN & ENVIRONMENTAL IMPACT STATEMENT B-65 (2019) (explaining that it is “unlikely” that “emission trajectories follow a historical growth curve . . . over the course of the remainder of the century”).

<sup>37</sup> Policy Integrity 2018 Comments, *supra* note 4, at 40-41. Although our 2018 comments highlighted MarketSim as one available option, recent case law discussed above counsels that the Commission should not apply this model in its current form.

<sup>38</sup> DEP’T OF STATE, DOS-2019-0033, DRAFT SUPPLEMENTAL ENVIRONMENTAL IMPACT STATEMENT FOR THE PROPOSED KEYSSTONE XL PIPELINE 4-83 (Oct. 4, 2019). The State Department also considered a full displacement scenario, but as detailed above, assuming complete substitution flagrantly violates basic supply-and-demand economics.

greenhouse gas emissions are partially displacing emissions that would occur under a no-action alternative, then its revenues are also partially displacing revenues that would occur absent the project.<sup>39</sup> The Commission can apply an energy substitution model to make educated projections about the net tax and revenue benefits from a project proposal, which can then inform its determination of public convenience and necessity. The approach that the Commission has relied upon in the past—attributing none of the pipeline’s indirect climate impacts to the project, but all of its indirect economic effects—is inconsistent and irrational.<sup>40</sup>

### **C. A Proper Long-Term Analysis Rebutts the Suggestion That Replacement Projects Have No Indirect Greenhouse Gas Impacts**

Even for replacement projects that do not increase short-term capacity, the additional upstream and downstream emissions can be considerable insofar as the project increases the pipeline’s lifespan and thereby produces long-term emissions compared to the no-action baseline. Rather than assume zero indirect emissions, as the Commission did for a recent replacement project,<sup>41</sup> FERC should assess these indirect emissions using reasonable assumptions about how the replacement project affects the lifespan of existing pipeline.

By definition, replacement projects reinforce decaying pipeline infrastructure and thereby

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<sup>39</sup> See, e.g., HEIN ET AL., *supra* note 26, at 55 (explaining that FERC can use “the same approach it [should] use[] when quantifying greenhouse gases” to measure such benefits as the “economic value of the additional natural gas that a project brings to market”); Jayni Hein & Natalie Jacewicz, *Implementing NEPA in the Age of Climate Change*, 10 MICH. J. ENV’T & ADMIN. L 1, 41-42 (2021) (explaining that “inconsistent treatment of expected revenue and expected emissions places a thumb on the scale in favor of [fossil-fuel] development”).

<sup>40</sup> For case law requiring agencies to consistently treat beneficial and adverse impacts, see, e.g., *Ctr. for Biological Diversity v. Nat’l Highway Traffic Safety Admin.*, 538 F.3d 1172, 1998 (9th Cir. 2008) (finding it arbitrary to arbitrary to “put a thumb on the scale by undervaluing the benefits and overvaluing the costs” of a regulation); *Bus. Roundtable v. Securities & Exchange Comm’n*, 647 F.3d 1144, 1148-49 (D.C. Cir. 2011) (criticizing agency for “inconsistently and opportunistically fram[ing] the costs and benefits” of a rule); *Johnston v. Davis*, 698 F.2d 1088, 1094-95 (10th Cir. 1983) (remanding an environmental impact statement because “unrealistic” assumptions “misleading[ly]” skewed comparison of the project’s positive and negative effects).

<sup>41</sup> Northern Natural Gas Co., 174 FERC ¶ 61,189, P 29 n.43 (2021).

extend the pipeline’s lifespan.<sup>42</sup> Yet in the recent *Northern Natural* decision approving a pipeline replacement project—the Commission’s first order in which it sought to assess the significance of greenhouse gas impacts under Section 7 of the NGA—FERC stated, without supporting authority or analysis, that “[t]here is no new capacity associated with this pipeline replacement, thus no downstream greenhouse gas [] emissions to consider.”<sup>43</sup> But the fact that there are no immediate additional downstream or upstream emissions associated with the replacement project does not mean that the project causes no indirect emissions long term. By extending the lifespan of the existing pipeline, the replacement project in fact causes both upstream and downstream emissions relative to the no-action baseline.

Accordingly, the Commission should apply reasonable assumptions to estimate the downstream and upstream emissions from a pipeline replacement project. First, the Commission should assess the pipeline’s existing lifespan and predict how that lifespan will be extended as a result of the replacement proposal. Then, using the pipeline’s transport capacity and any available information about the pipeline’s actual transport during its time in operation, the Commission should assess the pipeline’s upstream and downstream emissions during the extension period, just as it should to assess the indirect emissions from a proposed new pipeline.

Insofar as FERC relies on energy substitution models to assess displacement effects, the Commission should ensure that it selects a model with a sufficient time horizon to account for these long-term impacts. Most existing energy substitution models capture impacts decades into

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<sup>42</sup> See, e.g., FED. ENERGY REG. COMM’N, ENVIRONMENTAL ASSESSMENT, SOUTH SIOUX CITY TO SIOUX FALLS A-LINE REPLACEMENT PROJECT 12 (2021) (explaining that the replacement project assessed therein would permit developer to “continu[e] to operate these pipeline segments and to safely provide the natural gas transportation capacity to meet residential, commercial, and industrial growth demands”).

<sup>43</sup> *Northern Natural Gas Co.*, 174 FERC ¶ 61,189, P 29 n.43 (2021).

the future. The NEMS model, for instance, forecasts energy market impacts through 2050.<sup>44</sup> Accordingly, if the Commission chooses to use an energy substitution model for new pipelines, it should apply that same model to assess the long-term indirect impacts of replacement projects, rather than assume perfect substitution. If the Commission does not identify or develop an energy substitution model that meets its needs, then it could assess a range of default substitution estimates, as discussed above, or assume no substitution of long-term indirect impacts and attribute the full upstream and downstream emissions during the extension period to the proposed replacement project.

### **III. The Commission Should Impose Mitigation Requirements on Greenhouse Gas Emissions, Including Offsets for Unavoidable Emissions**

After quantifying and monetizing all greenhouse gas emissions and other significant costs and benefits, the Commission should use a comparison of costs and benefits to inform its decision on whether approving a project is preferable to the no-action alternative under NEPA, and is required for public convenience and necessity under the NGA.<sup>45</sup> If FERC so determines, then it should consider using its authority to set terms and conditions to address any unavoidable greenhouse gas emissions.

The Commission has authority to require, as a condition of certification, that pipeline infrastructure developers offset direct carbon dioxide and other greenhouse gas emissions that cannot be reasonably mitigated or avoided.<sup>46</sup> This practice is commonly known as “carbon

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<sup>44</sup> U.S. ENERGY INFO. ADMIN., THE NATIONAL ENERGY MODELING SYSTEM: AN OVERVIEW 2018 at 8 (2019), <https://perma.cc/A4HF-7J6A>.

<sup>45</sup> See Policy Integrity 2018 Comments, *supra* note 4, at 43-48; see also Avi Zevin, *Regulating the Energy Transition: FERC and Cost-Benefit Analysis*, 45 COLUM. J. ENV'T L. 419, 492-504 (2020) (outlining FERC's authority to apply cost-benefit analysis as part of natural gas pipeline certification).

<sup>46</sup> See *infra* Section III.B.i.

offsets.”<sup>47</sup> Requiring such offsets for residual direct emissions would fulfill the goals of NEPA and the NGA by minimizing environmental degradation.<sup>48</sup> The Commission should also examine the possibility and appropriateness of requiring offsets for indirect emissions, including how to properly do so without under- or double-counting those emissions. Whether the Commission applies offsets to both direct and indirect emissions or to only direct emissions, those offsets should only be applied as a last resort after the Commission has imposed other mitigation measures such as minimizing leakage and mandating energy efficiency at natural gas facilities (for direct emissions) and attaching conditions that limit the quantity of gas transported through a pipeline or the time period over which the pipeline operates (for indirect emissions).

This section begins by offering policy recommendations for the Commission regarding carbon offsets, and then highlights law and precedent supporting an offset requirement.

**A. The Commission Should Consider Imposing Offsets Requirements To Mitigate Any Greenhouse Gas Emissions that Cannot Be Avoided or Otherwise Mitigated**

Carbon offsets enable applicants to compensate for the impact of greenhouse gas emissions associated with a project by reducing emissions elsewhere. Examples of carbon offsets permitted in other governmental programs include mine and landfill methane capture, rice

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<sup>47</sup> “Carbon offsets” is a slight misnomer because it refers to all greenhouse gases, not just carbon dioxide. Consistent with its common usage, this document uses the term to refer to offsets of all greenhouse gas emissions. The Commission can require offsets of all greenhouse gas emissions under a single program by using global warming potentials to calculate emissions in carbon dioxide equivalent units, as the Commission already does to calculate direct emissions.

<sup>48</sup> The volume of direct emissions from pipeline infrastructure, though often lower than indirect emissions, can itself be quite substantial. For instance, the Rio Grande liquefied natural gas terminal and Rio Bravo natural gas pipeline, which the Commission approved in 2019, is predicted to release more than nine million metric tons per year in direct emissions of carbon dioxide equivalent. Rio Grande LNG, LLC, 169 FERC ¶ 61,131, P 108 (2019). Using the social cost of carbon estimate of \$51 per metric ton for year 2020 emissions, this equates to over \$450 million in annual climate damages from direct emissions alone.

cultivation, destruction of ozone-depleting substances, livestock projects and agricultural methane avoidance, forestation, and end-use efficiency projects.<sup>49</sup>

There are numerous advantages to requiring well-designed carbon offsets of unavoidable project emissions. For one, the purchase of verifiable offsets that satisfy rigorous standards for additionality could substantially curtail the climate harms from approving pipeline infrastructure. Secondary advantages of carbon offsets include facilitating the development of technology and institutional capacity for reducing emissions in a range of sectors.<sup>50</sup> And by internalizing some costs of greenhouse gas emissions, carbon offsets better align the incentives of fossil-fuel transportation with the public interest.

If the Commission requires offsets of unavoidable carbon emissions, it should develop practices and protocols to ensure that offsets reliably mitigate a project's climate harms. The Commission should set standards ensuring that offsets are additional, verifiable, real, and permanent.<sup>51</sup> To these ends, the Administrative Conference of the United States recommends that agencies “verify[] that credits represent real offsets”;<sup>52</sup> the associated consultant's report elaborates that verification of “real” offset credits entails designing procedures to avoid double-

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<sup>49</sup> *Compliance Offset Protocols*, CAL. AIR RES. BD., <https://ww2.arb.ca.gov/our-work/programs/compliance-offset-program/compliance-offset-protocols> (last visited May 19, 2021); *Offsets*, REGIONAL GREENHOUSE GAS INITIATIVE, <https://www.rggi.org/allowance-tracking/offsets> (last visited May 19, 2021); see also U.S. GOV'T ACCOUNTABILITY OFF., GAO-11-345, CLIMATE CHANGE ISSUES: OPTIONS FOR ADDRESSING CHALLENGES TO CARBON OFFSET QUALITY 1-2 (2011), <https://perma.cc/QHN5-DYJ5> (discussing various types of offset projects including forestation, carbon capture, and installation of energy-efficient equipment).

<sup>50</sup> ANJA KOLLMUS ET AL., HANDBOOK OF CARBON OFFSET PROGRAMS: TRADING SYSTEMS, FUNDS, PROTOCOLS, AND STANDARDS 1 (2010).

<sup>51</sup> U.S. GOV'T ACCOUNTABILITY OFF., GAO-08-1048, CARBON OFFSETS: THE U.S. VOLUNTARY MARKET IS GROWING, BUT QUALITY ASSURANCE POSES CHALLENGES FOR MARKET PARTICIPANTS 2-3 (2008), <https://perma.cc/936C-KAN9>. Offset programs have been subject to criticism for sometimes failing to create emission reductions that meet these key criteria. See, e.g., Anja Kollmuss et al., *Has Joint Implementation Reduced GHG Emissions?* (Stockholm Env't Inst., Working Paper No. 2015-07, 2015), <https://perma.cc/7M6Y-VVXF> (concluding that roughly three-quarters of offsets permitted under Kyoto Protocol likely did not represent additional emissions reductions).

<sup>52</sup> Adoption of Recommendations, 82 Fed. Reg. 61,728, 61,733 (Dec. 29, 2017).

counting, selecting clear and realistic baselines, establishing policies on “credit stacking” (i.e., allowing a single project to generate credits for multiple permit markets), and ensuring that credits do not result in leakage.<sup>53</sup> The Commission can also look for guidance to other government agencies that administer carbon offset programs, including the California Air Resources Board and the Regional Greenhouse Gas Initiative.<sup>54</sup>

The Commission should also develop policies to ensure that carbon offsets are used as a last resort, not a first resort, and that the availability of carbon offsets as a mitigation measure does not lead the agency to approve a project that is not net beneficial (i.e., a project benefits do not exceed its costs). This is critical because carbon offsets may not perfectly mitigate climate effects due to the concerns flagged above about additionality, permanence, and verifiability, and because they do not mitigate other environmental and public health harms from pipelines that could have particularly significant impacts on environmental justice communities (including indirect greenhouse gas emissions if offsets are applied to direct emissions only). In other words, the Commission should not use offsets as a substitute for traditional avoidance and minimization measures.<sup>55</sup> Instead, the Commission should apply the three-step sequential hierarchy of “avoidance, minimization, and compensation” that other agencies often use, requiring carbon

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<sup>53</sup> JASON A. SCHWARTZ, CONSULTANT REPORT TO THE ADMIN. CONF. OF THE U.S., MARKETABLE PERMITS: RECOMMENDATIONS ON APPLICATIONS AND MANAGEMENT vi, 55-58 (2017), <https://perma.cc/E624-MPEH>. This report contains detailed recommendations on ensuring additionality and permanence, minimizing leakage, and avoiding double-counting. *Id.* at 55-61.

<sup>54</sup> *See supra* note 49.

<sup>55</sup> Government programs typically use offsets in conjunction with traditional avoidance and mitigation measures, permitting carbon offsets only to partially achieve compliance. For instance, the California Air Resources Board permits covered entities to meet between 4-8% of their compliance obligations (depending on the year) through offsets. *Compliance Offset Program*, CAL. AIR RES. BD., <https://perma.cc/77DW-XVSX>.

offsets (a form of “compensation”) only as a last resort for unavoidable emissions from net-beneficial projects after avoidance and minimization measures have been exhausted.<sup>56</sup>

That process should look as follows. First, in deciding whether to approve a project, the Commission should weigh the project’s costs against its benefits and assess whether the project is net beneficial.<sup>57</sup> As laid out in Policy Integrity’s previous comment, monetized impacts to consider under this framework include climate costs, construction and operation costs, eminent domain costs, health costs from localized air pollution, and market effects such as the economic value of reduced gas prices and supplied natural gas.<sup>58</sup> Costs that are difficult to quantify and monetize—including water pollution, distributional and environmental justice effects,<sup>59</sup> and harms to wildlife including endangered species—also merit careful attention and consideration.<sup>60</sup> Then, for any natural gas projects that are found to be net beneficial and so are approved, the Commission should require minimization of greenhouse gas emissions such as strengthening requirements to minimize leakage or mandating energy efficiency at natural gas facilities, like compressors. The Commission should then proceed to require offsets of remaining greenhouse gas emissions.

Even if indirect greenhouse gas emissions are not covered under the Commission’s offset policy, Policy Integrity’s 2018 comments emphasized the central role that indirect emissions should play in the public convenience and necessity determination and identified various

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<sup>56</sup> Presidential Memorandum on Mitigating Impacts on Natural Resources from Development and Encouraging Related Private Investment § 2(f), 80 Fed. Reg. 68,743 (Nov. 3, 2015) [hereinafter Presidential Memorandum]; *see also* 10 C.F.R. § 900.3 (describing “mitigation hierarchy” that involves “first seeking to avoid, then minimize impacts, then, when necessary, compensate for residual impacts”).

<sup>57</sup> *See* Policy Integrity 2018 Comments, *supra* note 4, at 43-48.

<sup>58</sup> *Id.* at 46-48; *see also* Zevin, *supra* note 45, at 504-07 (detailing how FERC could monetize these benefits).

<sup>59</sup> *See infra* Section VI.C.

<sup>60</sup> Policy Integrity 2018 Comments, *supra* note 4, at 48.

conditions that the Commission could attach to reduce these emissions. As discussed in that letter, the Commission should quantify and monetize all indirect greenhouse gas emissions using available tools, and factor those monetized values into its assessment of whether the project's benefits outweigh its costs and thereby merits certification.<sup>61</sup> For net-beneficial projects, the Commission should consider minimizing indirect emissions by attaching conditions that limit the quantity of gas transported through a pipeline or the time period over which the pipeline operates.<sup>62</sup> As with minimizing direct greenhouse gas emissions, the Commission should rely on avoidance (not approving the pipeline) and minimization measures (onsite measures to reduce emissions) before considering offsets of remaining indirect emissions.

Notably, the purchase of carbon offsets will likely not address any of the project's other environmental impacts, including local pollution. It is thus essential for the Commission to carefully consider all environmental and public health harms in its certification assessment, and not approve the pipeline unless it makes a reasoned determination that the benefits outweigh the costs when all costs and benefits, including externalities, are taken into account. If other unavoidable environmental impacts (such as local air pollution or water pollution) can be reliably offset through other reasonable means, the Commission should then consider such additional offset requirements as a condition of certification. However, carbon offsets are a particularly attractive option given the global nature of greenhouse gas pollution, which mix into the global atmosphere and have the same effect regardless of origin. Therefore, developers can more easily offset the impacts of a project's greenhouse gas emissions by paying to facilitate an equivalent reduction in greenhouse gases by other means. Carbon offsets are also more readily

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<sup>61</sup> *Id.*

<sup>62</sup> *Id.* at 16.

available than offsets for most other environmental harms, making it more feasible for a developer to comply with a condition to offset emissions.<sup>63</sup>

If the Commission imposes an offset requirement, it may wish to begin by applying that requirement to direct emissions only, as direct emissions are relatively straightforward to quantify, fall squarely within the Commission’s jurisdiction (whereas regulation of upstream and downstream emissions overlaps with the jurisdiction of other agencies), and are typically of a magnitude<sup>64</sup> that the Commission could require carbon offsets of these emissions while maintaining a more manageable offset program.<sup>65</sup>

If this carbon offset program is successful, the Commission may wish over time to consider the possibility and appropriateness of extending it to indirect emissions. After all, the Commission has authority to mitigate indirect emissions,<sup>66</sup> and has the responsibility to quantify and consider those emissions as part of its NEPA review and its public convenience and necessity determinations.<sup>67</sup> The Commission may wish to coordinate with agencies that exercise authority over upstream and downstream emissions, such as the Department of the Interior and

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<sup>63</sup> As an example of the availability of reasonably priced, verified carbon offsets, regulated entities hold more than 220 million allowances from carbon credit offsets under the California Air Resources Board’s cap-and-trade program, owing to the widespread use of carbon credits under that program. *See* CAL. AIR RES. BD., Q1 2021 COMPLIANCE INSTRUMENT REPORT (2021), <https://perma.cc/TG9M-PZKC>. Markets for other kinds of offsets, such as water quality trading programs and habitat mitigation banks, may exist for some kinds of environmental effects in some regions, but such credits are not as generally available as carbon offsets.

<sup>64</sup> *See* JAMES BRADBURY ET AL., DEP’T OF ENERGY, GREENHOUSE GAS EMISSIONS AND FUEL USE WITHIN THE NATURAL GAS SUPPLY CHAIN 4 (2015), <https://perma.cc/WWU5-BWHM> (attributing roughly 80 percent of all greenhouse emissions generated by natural-gas supply chain to combustion).

<sup>65</sup> The Council on Environmental Quality advises that agencies “not commit to mitigation measures . . . [if] it is not reasonable to foresee the availability of sufficient resources[] to perform or ensure the performance of the mitigation.” Council on Env’t Quality, Memorandum for Heads of Federal Departments and Agencies: Appropriate Use of Mitigation and Monitoring and Clarifying the Appropriate Use of Mitigate Findings of No Significant Impact 76 Fed. Reg. 3843, 3848 (Jan. 21, 2011).

<sup>66</sup> *Sierra Club v. Fed. Energy Reg. Comm’n*, 867 F.3d 1357, 1374 (D.C. Cir. 2017) (“Sabal Trail”) (concluding that the Commission should provide a “quantitative estimate of the downstream greenhouse emissions” resulting from a pipeline project, since “greenhouse-gas emissions are an indirect effect of authorizing this project, which FERC could reasonably foresee, and which the agency has legal authority to mitigate”).

<sup>67</sup> *See* Policy Integrity 2018 Comments, *supra* note 4, at 4-17.

Environmental Protection Agency, to ensure consistency across government policy without either under- or double-counting the indirect greenhouse gas emissions. As discussed above, regardless of whether the Commission extends offsets to indirect emissions, it must quantify those emissions, meaningfully consider them as part of the public convenience and necessity determination, and consider measures to mitigate those emissions.

**B. The Commission Has Authority To Require Carbon Offsets as a Condition of Certification for Natural Gas Transportation Infrastructure**

The Commission has authority both to mitigate greenhouse gas impacts and to set broad terms and conditions on certification, and offsets are consistent with compensatory mitigation that agencies impose to remediate environmental harm. Thus, as detailed below, FERC has authority to require purchase of carbon offsets as a condition of granting a certificate of public convenience and necessity.

**i. Under the NGA, the Commission Has Authority To Mitigate Greenhouse Gas Impacts Through Its Broad Authority To Impose Terms and Conditions of Certification**

When FERC grants a certificate of public convenience and necessity, it has “the power to attach to the issuance of the certificate . . . such reasonable terms and conditions as the public convenience and necessity may require.”<sup>68</sup> The Commission’s power to impose conditions is “extremely broad.”<sup>69</sup>

So long as the Commission exercises its authority “subject to the objectives of the Commission’s regulatory power,”<sup>70</sup> courts have accorded FERC great deference in fashioning terms and conditions. Because the Commission has broad authority to consider “adverse

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<sup>68</sup> 15 U.S.C. § 717f(e).

<sup>69</sup> *Transcon. Gas Pipeline Corp. v. Fed. Energy Reg. Comm’n*, 589 F.2d 186, 190 (5th Cir. 1979).

<sup>70</sup> *Pure Oil Co. v. Fed. Power Comm’n*, 292 F.2d 350, 353 (7th Cir. 1961).

environmental effects” in assessing public convenience and necessity,<sup>71</sup> it also has wide latitude to impose conditions mitigating those environmental impacts. The Commission imposes a series of standard environmental conditions on all projects,<sup>72</sup> with pipelines often subject to dozens of additional targeted mitigation measures addressing such issues as air quality, noise, and impacts on vegetation.<sup>73</sup> Courts have explained that requiring mitigation of “acceptable environmental costs” constitutes “responsible agency decision making,”<sup>74</sup> and have upheld numerous environmental mitigation measures imposed by the Commission as reasonable.<sup>75</sup>

Greenhouse gas emissions fall squarely within the types of environmental impacts that the Commission may mitigate through conditions to a certificate of public convenience and necessity. The D.C. Circuit has explicitly held as much. In *Sabal Trail*, the court explained that the Commission “has legal authority to mitigate” greenhouse gas emissions, citing FERC’s statutory authority to grant certificates of public convenience and necessity and to attach conditions thereto.<sup>76</sup> The court recognized that the Commission could “deny a pipeline certificate on the ground that” the resulting greenhouse gas emissions would be “too harmful,” thereby requiring the Commission to consider and potentially mitigate these effects.<sup>77</sup> This holding echoes similar statements from Chairman Glick, who has repeatedly emphasized the

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<sup>71</sup> *Sabal Trail*, 867 F.3d at 1373 (“Because FERC could deny a pipeline certificate on the ground that the pipeline would be too harmful to the environment, the agency is a ‘legally relevant cause’ of the direct and indirect environmental effects of pipelines it approves.”).

<sup>72</sup> See 18 C.F.R. § 157.206(b).

<sup>73</sup> See, e.g., *Atlantic Coast Pipeline, LLC*, 161 FERC ¶ 61,042, app. A (2017) (setting out 73 environmental conditions on pipeline approval).

<sup>74</sup> *Midcoast Interstate Transmission, Inc. v. Fed. Energy Reg. Comm’n*, 198 F.3d 960, 968 (D.C. Cir. 2000).

<sup>75</sup> See, e.g., *S. Coast Air Quality Mgmt. Dist. v. Fed. Energy Reg. Comm’n*, 621 F.3d 1085, 1099 (9th Cir. 2010) (“FERC adequately considered the environmental effects of end-use consumption of North Baja gas when it conditioned its certificate on the pipeline only delivering gas that meets the strictest applicable gas quality standards imposed by state regulatory agencies on downstream local distribution companies and pipelines.” (internal quotation marks and alterations omitted)).

<sup>76</sup> 867 F.3d at 1374.

<sup>77</sup> *Id.* at 1373.

Commission’s authority to require mitigation of greenhouse gas emissions from natural gas infrastructure projects.<sup>78</sup>

In light of this precedent, it is clear the Commission has broad authority to condition certificates of public convenience and necessity on mitigation measures for greenhouse gas emissions. As detailed above, the Commission should consider a range of measures to mitigate greenhouse gas emissions, including offsets for unavoidable direct emissions (and possibly indirect emissions) from net-beneficial projects.

**ii. Carbon Offsets Are Consistent with Compensatory Mitigation Requirements that Other Agencies Frequently Employ**

Carbon offsets are a form of compensatory mitigation, which refers to “[c]ompensating” for an adverse environmental impact “by replacing or providing substitute resources or environments.”<sup>79</sup> Compensatory mitigation is frequently employed by other state and federal agencies as a last-resort mitigation measure after avoidance and minimization. Although this survey of compensatory mitigation requirements from other agencies does not relate specifically to the NGA, it exemplifies the widespread acceptance and use of compensatory mitigation and

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<sup>78</sup> See, e.g., Rio Grande LNG, LLC, 169 FERC ¶ 61,131, P 15 (2019) (Glick, Comm’r, dissenting) (“[I]f the Commission were to determine that the Project’s [greenhouse gas] emissions are significant, that is not the end of the analysis. Instead, . . . the Commission could blunt those impacts through mitigation—as the Commission often does with regard to other environmental impacts.”); Jordan Cove Energy Project L.P., 170 FERC ¶ 61,202, P 20 (2020) (Glick, Comm’r, dissenting) (same), *order on rehearing*, 171 FERC ¶ 61,136, P 28 (2020) (Glick, Comm’r, dissenting) (same); Texas LNG Brownsville LLC, 170 FERC ¶ 61,139, P 25 (2020) (Glick, Comm’r, dissenting) (same). Commissioner Clements recently also joined with Chairman Glick in two dissenting opinions, arguing that where a project has significant impacts due to emissions, but those impacts are outweighed by its benefits, “the Commission could require a pipeline to adopt measures that would mitigate the GHG emission of the project, or the project developer could propose voluntary measures that would be incorporated as certificate conditions to mitigate those adverse impacts, further increasing the likelihood that a project’s benefits outweigh its adverse impacts”). Northern Natural Gas Co., 175 FERC ¶ 61,146, P5 (2021) (Clements and Glick, Comm’rs, dissenting); Tuscarora Gas Transmission Co., 175 FERC ¶ 61,147, P5 (2021), (Clements and Glick, Comm’rs, dissenting).

<sup>79</sup> 40 C.F.R. § 1508.1(s)(5).

thus provides further support for the Commission’s authority to require carbon offsets under its broad power to impose terms and conditions.

The Council on Environmental Quality’s (CEQ) regulations implementing NEPA evince the widespread acceptance of compensatory mitigation, as those regulations have long supported the use of compensatory mitigation as one of several types of environmental mitigation that agencies should consider and pursue.<sup>80</sup> Under NEPA, agencies are instructed to assess “[m]eans to mitigate adverse environmental impacts,”<sup>81</sup> including “mitigating measures . . . not [included] in the proposed action” itself.<sup>82</sup> The regulations specifically require agencies to consider “measures that avoid, minimize, or *compensate* for effects caused by a proposed action” as part of these mitigation efforts.<sup>83</sup> As CEQ has explained, “many agencies develop and consider committing to mitigation measures to avoid, minimize, rectify, reduce, or *compensate* for potentially significant adverse environmental impacts.”<sup>84</sup>

The Bureau of Land Management (BLM) has made use of various compensatory mitigation measures in project-level review for more than thirty years.<sup>85</sup> This includes requiring applicants to purchase carbon offsets to mitigate greenhouse gas emissions from individual projects. In 2008, BLM required a company seeking to expand its gypsum processing facility to

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<sup>80</sup> *Id.* When the federal government revised the CEQ regulations in 2020, it did not amend this provision. Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act, 85 Fed. Reg. 43,304 (July 16, 2020).

<sup>81</sup> 40 C.F.R. § 1502.16(a)(9).

<sup>82</sup> *Id.* § 1501.9(e)(2); *accord id.* § 1502.14(e).

<sup>83</sup> *Id.* § 1508.1(s) (emphasis added). This definition was added in the 2020 revisions. Update to the Regulations Implementing the Procedural Provisions of the National Environmental Policy Act, 85 Fed. Reg. at 43,375.

<sup>84</sup> Appropriate Use of Mitigation and Monitoring and Clarifying Appropriate Use of Mitigated Findings of No Significant Impact, 76 Fed. Reg. 3843, 3848 (Jan. 21, 2011) (emphasis added).

<sup>85</sup> Jamie Gibbs Pleune et al., *The BLM’s Duty to Incorporate Climate Science into Permitting Practices and a Proposal for Implementing a Net Zero Requirement into Oil and Gas Permitting*, 32 COLO. NAT. RES., ENERGY & ENV’T L. REV. (forthcoming 2021) (manuscript at 73).

“acquire recognized carbon credits to offset the Project’s increased GHG emissions.”<sup>86</sup> And again in 2009, BLM approved an electric company’s application to construct a transmission project subject to the applicant’s commitment to either create greenhouse gas emission reductions or purchase carbon credits to fully offset emissions from project operation, maintenance, and inspection.<sup>87</sup> More recently, BLM published a report embracing compensatory mitigation to offset greenhouse gas emissions resulting from the federal coal-leasing program.<sup>88</sup> The Commission can look to these examples to similarly require natural gas infrastructure applicants to purchase carbon offsets to mitigate residual greenhouse gas emissions from proposed projects.

Other agencies have applied compensatory mitigation and offset requirements in a range of different contexts, furthering supporting the Commission’s authority. In 2015, for instance, a presidential memorandum directed federal agencies to “adopt a clear and consistent approach for avoidance and minimization of, and compensatory mitigation for, the impacts of their activities and the projects they approve,” calling on agencies to “offset foreseeable harmful impacts to natural resources” that could not be otherwise avoided.<sup>89</sup> In response, several agencies amended their policies to emphasize compensatory mitigation and offsets. For instance, the Fish and Wildlife Service issued a new mitigation policy to minimize adverse impacts of land and water developments on fish, wildlife, plants, and their habitats, which emphasized the important role of

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<sup>86</sup> Amy L. Stein, *Climate Change Under NEPA: Avoiding cursory consideration of Greenhouse Gases*, 81 U. COLO. L. REV. 473, 479, 516-17 (2010) (citing BUREAU OF LAND MGMT., UNITED STATES GYPSUM COMPANY EXPANSION/ MODERNIZATION PROJECT: FINAL ENVIRONMENTAL IMPACT STATEMENT 4.0-78 to -81 (2008)).

<sup>87</sup> BUREAU OF LAND MGMT. & DEP’T OF THE INTERIOR, RECORD OF DECISION FOR THE SUNRISE POWERLINK TRANSMISSION PROJECT AND ASSOCIATE AMENDMENT TO THE EASTERN SAN DIEGO COUNTY RESOURCE MANAGEMENT PLAN, D.11-52 to -53 (2009), <https://perma.cc/E9RP-EAG3>.

<sup>88</sup> BUREAU OF LAND MGMT., FEDERAL COAL PROGRAM: PROGRAMMATIC ENVIRONMENTAL IMPACT STATEMENT SCOPING REPORT 6-16 to -17 (2017), <https://perma.cc/78WH-WQ32>.

<sup>89</sup> Presidential Memorandum, *supra* note 56, at 68, 743-44.

“compensatory mitigation to offset the adverse impacts of actions to threatened and endangered species.”<sup>90</sup> And for decades, the Environmental Protection Agency has permitted mitigation banks as a form of offsets for wetlands impacts under Section 404 of the Clean Water Act.<sup>91</sup>

State land-use agencies also routinely require compensatory mitigation for project applicants—a practice that the Supreme Court has broadly endorsed. As the Supreme Court explained, compensatory mitigation requires project applicants to “internalize the negative externalities of their conduct” as “a hallmark of responsible land-use policy.”<sup>92</sup> Accordingly, the Court held that an agency may require a project applicant that “would destroy wetlands on his property” to “compensate for this loss” by “demand[ing] that he enhance wetlands elsewhere,” so long as there is an “essential nexus and rough proportionality” between the damage caused and the mitigation sought.<sup>93</sup> Although this case and other Supreme Court precedent on compensatory mitigation requirements from local land-use authorities<sup>94</sup> concern the standards for an unconstitutional taking and do not address the Commission’s statutory authority, they further evince the widespread acceptance of regulatory offset requirements in land management. Like landowners who destroy wetlands, pipeline developers who release greenhouse gases into the atmosphere cause environmental degradation that harms the public and should be required to offset that impact as a condition of approval.

Accordingly, there is considerable precedent for the Commission to impose a requirement that applicants offset unavoidable emissions from net-beneficial projects. As discussed above,

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<sup>90</sup> U.S. Fish and Wildlife Service Mitigation Policy, 81 Fed. Reg. 83,440, 83,450 (Nov. 21, 2016), *withdrawn* 83 Fed. Reg. 36,472 (July 30, 2018).

<sup>91</sup> See *Mitigation Banks Under CWA Section 404*, ENV’T PROT. AGENCY, <https://www.epa.gov/cwa-404/mitigation-banks-under-cwa-section-404> (Apr. 16, 2019).

<sup>92</sup> *Koontz v. St. Johns River Water Mgmt. Dist.*, 570 U.S. 595, 607 (2013).

<sup>93</sup> *Id.* at 606.

<sup>94</sup> See *Nollan v. California Coastal Comm’n*, 483 U.S. 825 (1987); *Dolan v. City of Tigard*, 512 U.S. 374 (1994).

the Commission should require offsets for unavoidable direct emissions, while also examining the possibility of requiring offsets (and imposing other mitigation) for indirect emissions.

#### **IV. The Commission Should Take a Regional Approach to Assessing Need**

The NGA requires the Commission to determine whether a natural gas infrastructure project is or will be required by the public convenience and necessity, which includes, among other inquiries, an assessment of whether there is need for a project.<sup>95</sup> Although the 1999 Policy Statement listed a variety of factors FERC could consider in assessing need, including demand projections, consumer savings, and comparisons of projected demand to current capacity,<sup>96</sup> the Commission has almost exclusively relied on a single, narrow indicator of need: precedent agreements. The Commission contends that these agreements show a market need, which it has then used as a proxy for need as a whole, and in turn for public convenience and necessity. FERC has disclaimed any desire to look more broadly at need, finding that if there are shippers willing to purchase capacity in a pipeline, then there is need for the project.<sup>97</sup>

But, as explained in Policy Integrity previous comments, FERC should take a holistic approach to assessing whether a project is needed. A transparent and systematic cost-benefit analysis would help determine whether a project has net benefits and therefore is needed.<sup>98</sup> And the NGA provides the Commission discretion to do this type of assessment.<sup>99</sup>

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<sup>95</sup> 1999 Policy Statement, *supra* note 3, at P 7.

<sup>96</sup> *Id.* at P 8.

<sup>97</sup> *See, e.g.*, Atlantic Coast Pipeline, LLC, 161 FERC ¶ 61,042, P 56 (2017); Mountain Valley Pipeline, LLC, 161 FERC 61,043, P 42 (2017); Adelpia Gateway, LLC, 169 FERC ¶ 61,220, P 37 (2019); Spire STL Pipeline LLC, 164 FERC ¶ 61,085 (2018) (LaFleur, Comm'r, dissenting) (protesting the Commission's failure to consider the regional market in which pipeline will operate).

<sup>98</sup> Policy Integrity 2018 Comments, *supra* note 4, at 43-48.

<sup>99</sup> Zevin, *supra* note 45, at 492-504.

In addition, FERC should take a more regional approach to decisionmaking.<sup>100</sup> Currently FERC uses an ad hoc, project-by-project approach to need—rather than considering the needs of the region—and relies heavily on precedent agreements and other private contracts. But this approach can identify only the private benefits of a project rather than public ones. Furthermore, whenever there are externalities associated with projects, this approach would ignore social costs and benefits. Therefore, instead of looking narrowly at whether a project is needed by a set of private actors, the Commission should look at how the project would benefit the region more generally.

This regional approach could include considering precedent agreements—such contracts can be relevant to determining need.<sup>101</sup> But projects do not occur in a vacuum; they are part of broader regional market that should not be ignored. Therefore, when determining need, FERC should also consider current and future shifts in supply and demand; whether existing infrastructure could support demand; whether non-gas solutions may be more cost-effective; whether there are congestion constraints that could be alleviated with new capacity; whether there are regulatory changes that will alter demand; and any other aspect of the regional market that may be relevant.

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<sup>100</sup> Intervenors have increasingly raised similar arguments that even where precedent agreements exist, the broader regional market suggests a project is not needed. *E.g.*, Atlantic Coast Pipeline, LLC, 161 FERC ¶ 61,042 (2017) (commenters arguing project was not justified based on future production or demand and that FERC should evaluate need on a region-wide basis); Tennessee Gas Pipeline Co., L.L.C., 163 FERC ¶ 61,190 (2018) (intervenors arguing there is “ample infrastructure in place to accommodate even anticipated increases in shale gas production” and that the project will result in overbuild).

<sup>101</sup> However, Commenters and intervenors have also more specifically criticized the Commission’s practice of heavily (or exclusively) relying on *affiliate* agreements, particularly where a utility holding company sells capacity in a new pipeline to its affiliated regulated utility. *See, e.g.*, Initial Opening Brief of Petitioner Environmental Defense Fund, *Env’t Def. Fund v. Fed. Energy Reg. Comm’n*, Nos. 20-1016 & 20-1017 (D.C. Cir. filed June 26, 2020) (challenging FERC’s reliance on a precedent agreement between a utility with captive end-use customers and an affiliate, and the Commission’s refusal to “look behind” the agreement to determine whether it represented legitimate need).

The Commission has already recognized in the electricity transmission context that taking a regional approach to infrastructure decisionmaking can lead the Commission to approve more “efficient and cost-effective” projects.<sup>102</sup> The benefits of regional consideration are likewise applicable in the context of natural gas infrastructure certification and justify FERC broadening how it determines whether a project is needed under the NGA. As discussed below, a regional approach would serve the purposes of the NGA to ensure orderly development and protect consumers, and it would protect against unjust and unreasonable rates for natural gas transportation services.<sup>103</sup> The Commission should apply its rationale for requiring regional consideration of electricity transmission infrastructure to the analogous natural gas transportation infrastructure. FERC has similar authority over these two systems and a corresponding responsibility to ensure infrastructure projects are efficient, cost-effective, and in the public interest.

**A. The Commission Recognized the Benefits of Regional Assessment and Decisionmaking in the Context of Electric Transmission Infrastructure**

In Order Nos. 890 and 1000, FERC recognized the broad benefits of regional coordination and planning for electric transmission infrastructure decisionmaking. The Commission promulgated Order No. 890 to “promote efficient utilization of transmission by

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<sup>102</sup> *Transmission Planning and Cost Allocation by Transmission Owning and Operating Public Utilities*, Order No. 1000, 136 FERC ¶ 61,051, P 6 (2011) [hereinafter Order No. 1000].

<sup>103</sup> Other commenters have previously argued that FERC should take a regional approach to assessing need rather than continuing its policy of determining need on a project-specific basis. *E.g.*, Comments of the Attorneys General of Massachusetts, Illinois, Maryland, New Jersey, Rhode Island, Washington, and the District of Columbia at 5-6, *Certification of New Interstate Natural Gas Facilities*, Docket No. PL18-1-000 (July 25, 2018); Comments of Public Interest Organizations at 35-40, 41, *Certification of New Interstate Natural Gas Facilities*, Docket No. PL18-1-000 (July 25, 2018); Comments of Susan F. Tierney, Ph.D at 36-39, *Certification of New Interstate Natural Gas Facilities*, Docket No. PL18-1-000 (July 25, 2018); *see also* Brief of Dr. Susan Tierney as Amicus Curiae in Support of Petitioners the Environmental Defense Fund in Support of Reversal of the Challenged Orders at 8-10, *Env’t Def. Fund v. Fed. Energy Reg. Comm’n*, Nos. 20-1016 & 20-1017 (D.C. Cir. filed July 2, 2020) (discussing significant overbuild resulting from Commission’s certification policy).

requiring an open, transparent, and coordinated transmission planning process.”<sup>104</sup> The Commission emphasized that regional transmission planning would “increase efficiency through the coordination of transmission upgrades that have region-wide benefits, as opposed to pursuing transmission expansion on a piecemeal basis.”<sup>105</sup> That is, taking a regional perspective on decisionmaking, rather than building transmission through ad hoc local investments, has efficiency benefits for the development of transmission infrastructure. Additionally, the Commission recognized the need for transmission providers to prepare economic planning studies that analyze and report on both congestion and the alternatives for relieving it, to ensure providers consider not just reliability but also “whether transmission upgrades or other investments can reduce the overall cost of serving native load.”<sup>106</sup> FERC also noted that regional studies could be used as part of the regional transmission planning process required by the final rule.<sup>107</sup>

FERC further recognized the benefits of regional decisionmaking when it promulgated Order No. 1000, requiring “transmission providers to participate in a regional transmission planning process that evaluates transmission alternatives at the regional level that may resolve the transmission planning region’s needs more efficiently and cost-effectively than alternatives identified by individual public utility transmission providers in their local transmission planning process.”<sup>108</sup> The Commission went beyond the coordination mandate in Order No. 890 to require transmission providers take “affirmative steps to identify potential solutions at the regional level

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<sup>104</sup> *Preventing Undue Discrimination and Preference in Transmission Service*, Order No. 890, 118 FERC ¶ 61,119, P 3 (2007).

<sup>105</sup> *Id.* at P 524.

<sup>106</sup> *Id.* at P 542.

<sup>107</sup> *Id.* at P 551.

<sup>108</sup> Order No. 1000, *supra* note 102, at P 6.

that could better meet the needs of the region.”<sup>109</sup> The Commission recognized that transmission providers were not “adequately assess[ing] the potential benefits of alternative transmission solutions at the regional level” that would be more efficient and cost-effective.<sup>110</sup>

Notably, while FERC has specific authority over transmission planning under Section 217(b)(4), these Orders and FERC’s authority for a *regional* planning mandate are based in Section 206(a) of the FPA. This section, like Section 5 of the NGA, grants the Commission authority to remedy unjust and unreasonable or unduly discriminatory or preferential rates and practices.<sup>111</sup> The Orders were promulgated to remedy what the Commission saw as a practice leading to unjust and unreasonable rates and undue discrimination: a lack of regional transmission planning processes.<sup>112</sup> In particular, Order No. 1000 explained that the amendments adopted were necessary to ensure that rates for FERC-jurisdictional services were “just and reasonable in light of changing conditions in the industry.”<sup>113</sup> Regional planning would aid transmission providers in producing a plan “that can meet transmission needs more efficiently and cost-effectively.”<sup>114</sup> The Commission found that addressing issues like the “narrow focus of current planning requirements” was necessary to ensure just and reasonable rates because the current process “fail[ed] to promote the more efficient and cost-effective development of new transmission facilities.”<sup>115</sup> The reforms were “intended to correct deficiencies in the transmission

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<sup>109</sup> *Id.* at P 40.

<sup>110</sup> *Id.* at P 81.

<sup>111</sup> 16 U.S.C. § 824e (Federal Power Act); 15 U.S.C. § 717d(a) (Natural Gas Act).

<sup>112</sup> Order No. 1000, *supra* note 102, at P 78. FERC’s conclusion that regional planning was necessary as a remedy under section 206 was upheld by the D.C. Circuit in *S.C. Pub. Serv. Auth. v. Fed. Energy Reg. Comm’n*, 762 F.3d 41 (D.C. Cir. 2014).

<sup>113</sup> Order No. 1000, *supra* note 102, at P 1.

<sup>114</sup> *Id.* at P 4.

<sup>115</sup> *Id.* at P 52.

planning and cost allocation processes so that the transmission grid [could] better support wholesale power markets” and thus ensure just and reasonable rates.<sup>116</sup>

Together, these Orders demonstrate FERC’s recognition that infrastructure decisionmaking at the regional level can be more economically efficient. Those benefits were clear to the Commission in the context of electricity transmission such that it mandated regional planning to ensure identification and consideration of regional solutions for all transmission providers. FERC saw that regional consideration could ensure efficient development and provide cost benefits to consumers. FERC has thus already recognized and explained why regional assessments of need and infrastructure solutions facilitated its discharge of its statutory obligations under the FPA.

#### **B. Regional Assessment Is Beneficial in the Context of Natural Gas Infrastructure**

The regional transmission planning process stands in stark contrast to the ad hoc, project-by-project approach the Commission currently uses for decisionmaking in the natural gas infrastructure context. Whereas, acting under the FPA, the Commission requires a coordinated regional approach to identify and consider “regional solutions to regional needs”<sup>117</sup> and implementation of “more efficient or cost-effective regional transmission alternatives,”<sup>118</sup> the Commission, acting under the NGA, has been steadfast in its refusal to look beyond private contracts as evidence of need or to assess projects from a regional perspective.<sup>119</sup>

Yet, the underlying reasoning from Order Nos. 890 and 1000 are also applicable to natural gas infrastructure. Just as regional assessment can provide efficiency benefits in the context of electricity transmission, a regional approach to natural gas infrastructure could

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<sup>116</sup> *Id.* at P 99.

<sup>117</sup> *S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d at 67 (quoting Order No. 1000, *supra* note 102, at P 320).

<sup>118</sup> *Id.* (citing Order No. 1000, *supra* note 102).

<sup>119</sup> *See supra* note 97.

likewise ensure that more efficient and cost-effective projects are built, and that existing capacity is utilized efficiently.

A regional approach would aid the Commission to approve projects only if they are actually needed in a region and are therefore more efficient and cost-effective than those that may be proposed and approved under FERC's current ad hoc, project-by-project evaluation. Regional assessment would allow the Commission to consider the possibility that natural gas flows will be altered in the future as a result of changes in production and demand.<sup>120</sup> New state and federal policies will alter natural gas demand and change the economic calculus for investment in new natural gas transportation infrastructure. A regional approach would also allow FERC to consider how regional trends in grid decarbonization will affect demand and gas flow, preventing projects that might be left underutilized or stranded.

FERC should also consider whether the region's needs are best served by new infrastructure, or if there are more efficient and cost-effective alternatives. In some regions, like the Northeast, there might be insufficient capacity to meet demand even in a low-demand scenario and thus a need to eliminate congestion.<sup>121</sup> In such regions with a true need for infrastructure, a proper regional assessment of need would show that new infrastructure is indeed the most cost-effective solution. But, when there is no true need, a regional approach would support the conclusion that existing infrastructure is sufficient to meet demand or that other, more cost-effective alternatives should be explored.<sup>122</sup> A regional approach could demonstrate

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<sup>120</sup> Felipe Feijoo et al., *The Future of Natural Gas Infrastructure Development in the United States*, 228 APPLIED ENERGY 149 (2018), <https://perma.cc/CS3U-ZJMQ>; see also National Fuel Gas Supply Corp., 158 FERC ¶ 61,145 (2017) (Bay, Comm'r, separate statement) ("Adding to the uncertainty, there is fluidity in where gas is being produced in the United States. . . . Major new production areas are being discovered that may impact gas flows on existing and proposed pipelines.").

<sup>121</sup> Feijoo et al., *supra* note 120.

<sup>122</sup> See, e.g., Comments of Env't Def. Fund at 14-21, *Certification of New Interstate Pipeline Facilitates*, Docket No. PL18-1-000 (July 25, 2018) (arguing that while the Northeast faces congestion, solving seasonal constraints with a

that existing pipeline capacity is currently underutilized or that utilization rates will drop significantly under a low-demand future scenario, and so it would be more efficient to find ways to better use existing infrastructure.<sup>123</sup> Such an approach might also suggest that investment alternatives beside additional pipeline capacity, including non-gas generation or transmission alternatives, might yield similar benefits at lower costs.<sup>124</sup>

Without assessing need from regional perspective, FERC might not be able to fully understand regional supply and demand changes that affect need and whether the project would contribute to regional overbuild or underutilization. Just like in the transmission context, a regional approach could allow FERC to identify and consider whether there are alternative solutions that have regionwide benefits.<sup>125</sup>

### **C. Regional Assessment Would Serve the Purposes of the NGA and Protect Against Unjust and Unreasonable Rates**

Regional assessment can aid in the orderly development of natural gas supplies and thereby protect consumers—two primary purposes of the NGA.<sup>126</sup> Further, as explained above, encouraging infrastructure decisionmaking to consider regional need and regional solutions will encourage “efficient and cost-effective” development of natural gas infrastructure, thereby protecting against unjust and unreasonable rates.

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pipeline solution, as compared to other alternatives, would result in significant ratepayer costs, and that additional point-to-point throughput capacity may not be the best solution to the problems in the New England market).

<sup>123</sup> Feijoo et al., *supra* note 120, at 154 (concluding that some regions may see pipeline capacity utilization drop to 7% by 2050).

<sup>124</sup> Andrew Kleit et al., *Weather or Not? Welfare Impacts of Natural Gas Pipeline Expansion in the Northeastern U.S.*, 10 ENERGY SYS. 593, 613 (2019) (citing BENT ET AL., JOINT EXPANSION PLANNING FOR NATURAL GAS AND ELECTRIC TRANSMISSION WITH ENDOGENOUS MARKET FEEDBACKS (2018), <https://perma.cc/F6G7-RUQ7>).

<sup>125</sup> *Id.* (“[O]ur work supports a more comprehensive approach for natural gas transmission system planning that considers pipeline expansions with other technology alternatives, similar to what the Federal Energy Regulatory Commission has required for electric power transmission under Order 1000.”).

<sup>126</sup> *Nat’l Assoc. for the Advancement of Colored People v. Fed. Power Comm’n*, 425 U.S. 662 (1976); *Fed. Power Comm’n v. Hope Nat. Gas Co.*, 320 U.S. 591 (1944).

**i. Regional Assessment Serves the Purposes of the NGA**

The Commission's duty to further the public interest must be understood in light of the purposes for which the NGA was enacted.<sup>127</sup> Two primary purposes are consumer protection against excessive prices and (relatedly) the orderly development of natural gas supplies.<sup>128</sup> These overarching goals are reflected in Section 7's requirement that FERC certify only projects that are in the public interest. Regional consideration of need facilitates Commission protection of the public interest by helping fulfill these purposes. Regional consideration can therefore help ensure projects meet Section 7's public interest standard.

The Commission cannot ensure the *orderly* development of natural gas if it continues to assess project need on a project-by-project basis and does not more broadly consider need with a regional perspective. Taking a regional perspective would protect customers from the costs of overbuild that provide little or no benefit in return.<sup>129</sup> The Commission should give serious consideration to the concern that, in at least some regions,<sup>130</sup> its ad hoc certification process and reliance on precedent agreements is encouraging *disorderly* (that is, inefficient) development in the natural gas sector that will unjustly raise consumer costs.

The Commission's consistent refusal to consider data and analysis from regional transmission organizations, independent system operators, federal and state agencies, and expert consultants regarding, for example, future demand projections; comparisons with existing

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<sup>127</sup> *NAACP v. FPC*, 425 U.S. at 669-70.

<sup>128</sup> *Id.* at 670 n.5 (citing consumer protection language in support of the purpose of orderly development); *Hope Nat. Gas*, 320 U.S. 591.

<sup>129</sup> *See, e.g.*, Comments of Public Interest Organizations at 35-40, 41, *Certification of New Interstate Natural Gas Facilities*, Docket No. PL18-1-000 (July 25, 2018).

<sup>130</sup> *See, e.g.*, Allison Good, *Texas Pipeline Overbuild Loom as Companies Rush to Add Permian Infrastructure*, S&P GLOBAL (Mar. 11, 2019), <https://perma.cc/2WXM-3CQK> (discussing overbuild concerns in Texas); *Enterprise Abandons Texas Pipeline Projects as Oil Prices Remain Weak*, REUTERS (Sept. 9, 2020), <https://perma.cc/9NRA-CRCL> (same); Gillian Neimark, *Advocates: Ratepayers will Be on the Hook for Unnecessary Pipelines*, ENERGY NEWS NETWORK (Nov. 14, 2016), <https://perma.cc/JA6E-CH86> (discussing overbuild concerns in the southeast and mid-atlantic).

capacity; or production estimates hinders a holistic analysis of whether new infrastructure is truly needed and in the public interest. Failing to consider these important aspects can lead to duplicative or unnecessary projects in regions where future projections suggest that, due to changes in natural gas flows and demand, assets will (potentially quickly) become stranded. Approving such projects would lead to unnecessary costs and would place the risk on customers for any stranded assets.<sup>131</sup>

Regional consideration, on the other hand, would ensure that where existing infrastructure or non-pipelines solutions can be efficient and cost-effective alternatives, new infrastructure is not approved, again protecting consumers from unnecessary costs. In some instances, regional assessment could even support a finding of need and ensure that infrastructure is built where it provides benefits to customers and society overall, not just private interests. Orderly development should be understood to focus development where natural gas capacity is insufficient to meet current or future demand over the life of the pipeline, and to reject projects where there is no true need.

**ii. Regional Assessment Protects Against Unjust and Unreasonable Rates**

Just like under the FPA, the Commission is obligated under the NGA to ensure that practices affecting rates are not unjust and unreasonable, or unduly discriminatory or preferential and to remedy any such practice.<sup>132</sup> Natural gas transportation services are FERC-jurisdictional and currently sold through long-term contracts for capacity. While not all capacity is priced using the cost-of-service method, negotiated rates are effectively capped by the recourse rate

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<sup>131</sup> See National Fuel Gas Supply Corp., 158 FERC ¶ 61,145 (2017) (Bay, Comm’r, separate statement) (“Pipelines are capital intensive and long-lived assets. It is inefficient to build pipelines that may not be needed over the long term and that become stranded assets. Overbuilding may subject ratepayers to increased costs of shipping gas on legacy systems.”)

<sup>132</sup> 15 U.S.C. § 717d(a).

(i.e., the cost-of-service based rate).<sup>133</sup> The recourse rate is set using the rate base, which is the amount of capital investment in facilities and equipment (including pipes, land, buildings, and compressors) multiplied by the rate of return.<sup>134</sup> This type of regulation incentivizes pipeline companies to increase their capital investment so that they have a larger source of revenue and potential profits, and therefore already promotes building new infrastructure, rather than utilizing existing pipelines and facilities, to meet demand.<sup>135</sup>

Practices that cause rates to be unjust and unreasonable must be remedied by FERC. A practice that serves to inefficiently increase capital investment, and therefore inefficiently increase rates paid by customers, would be unjust and unreasonable and require Commission action to remedy. In line with the Commission’s determinations in its transmission orders, discussed above, such a practice could include failing to take a regional perspective in assessing need.<sup>136</sup> The Commission explained that, at the time, the process for transmission development was not leading to the most efficient or cost-effective deployment of new facilities; because it was ignoring regional solutions, the process consequently was leading to unjust and unreasonable rates.<sup>137</sup> The same is true of FERC’s ad hoc process for certificating natural gas infrastructure and the failure to consider need on a regional basis.

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<sup>133</sup> KRISTINA MOHLIN, ENV’T DEF. FUND, *THE U.S. GAS PIPELINE TRANSPORTATION MARKET: AN INTRODUCTION GUIDE WITH RESEARCH QUESTIONS FOR THE ENERGY TRANSITION* 7 (2021).

<sup>134</sup> *Id.* at 8.

<sup>135</sup> This is a well-established problem of cost-of-service regulation, known as the “Averch-Johnson effect.” See Harvey Averch & Leland L. Johnson, *Behavior of the Firm Under Regulatory Constraint*, 52 AM. ECON. REV. 1052 (1962). Because a project developer’s profits are directly proportional to incurred capital investment, the project developer has a direct incentive to incur excessive capital costs. When deciding among alternative investments, therefore, the developer has a bias towards capital-based solutions.

<sup>136</sup> Order No. 1000, *supra* note 102, at P 52.

<sup>137</sup> *Id.* (“We conclude that the narrow focus of current planning requirements and shortcomings of current cost allocation practices create an environment that fails to promote the more efficient and cost-effective development of new transmission facilities, and that addressing these issues is necessary to ensure just and reasonable rates.”); see also *S.C. Pub. Serv. Auth. v. Fed. Energy Reg. Comm’n*, 762 F.3d 41, 56 (D.C. Cir. 2014) (explaining that in Order No. 1000, the Commission concluded that failing to participate in a regional process was having a “direct and discernable affect [sic] on rates” and thus was a practice that needed to be remedied).

FERC's current practice of relying on private contracts to demonstrate need removes the incentive for project developers to make infrastructure decisions with an eye toward how a project can meet regional need in the most efficient and cost-effective manner, and fosters overbuild of natural gas infrastructure. In combination with the rate structure described above, this need assessment incentivizes building capital-intensive new infrastructure, even where regional demand projections or other evidence suggest existing capacity would be sufficient and better serve the public interest. Furthermore, because FERC also does not look at concurrent applications in the same region, it might approve projects that are unnecessarily duplicative.

By potentially causing overbuild in a region, the failure to consider regional need inefficiently increases consumer costs because the costs of that overbuild are factored into the recourse rate. The Commission's policy encourages development of new infrastructure regardless of need, rather than potentially more efficient and cost-effective use of existing, underutilized infrastructure. New infrastructure requires a larger capital investment in facilities and equipment, which generates a higher rate base, which in turn allows pipeline companies to charge customers more by increasing the recourse rate.<sup>138</sup> Inefficient and uneconomic increases in capital investment from the failure to take a regional perspective may render the rate charged unjust and unreasonable.

#### **V. The Commission Should Consider Transition Risk in Assessing Need Under the NGA**

As the federal government, states, and localities take action to combat climate change, natural gas infrastructure increasingly faces transition risk that could lead to underutilized or stranded assets.<sup>139</sup> In the 2021 NOI, the Commission asks whether it should consider two issues

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<sup>138</sup> This is true even where contracts are based on negotiated rates, given that the recourse rate sets the price cap.

<sup>139</sup> This is more specifically known as climate-related transition risk, which is the risk associated with actions that society takes in response to climate change, such as policies setting greenhouse gas emissions limits, or the

in assessing need that directly relate to transition risk. FERC asks if, in assessing need, it should examine whether (1) “demand in a new project’s market will materialize”; and (2) “reliance on other energy sources to meet future demand for electricity generation would impact gas projects designed to supply gas-fired generators.”<sup>140</sup> These questions ask whether the Commission should consider regulatory and market risk for natural gas infrastructure projects in determining whether a project is in the public interest.

These questions are particularly salient given the Commission’s reliance on precedent agreements, which address only how assets will be paid for during the first twenty years of an asset’s economic useful life. After these initial agreements expire, if demand has not materialized then ratepayers could become responsible for the costs associated with these assets. The economic useful life of pipelines is currently assumed to be 35 years; however, many applications propose a longer life, between 40 and 60 years.<sup>141</sup> If demand does not materialize and contracts cannot be renewed for the latter part of a project’s useful life, the developer will be unable to recoup its cost.

Decarbonization (and the related shift to renewables) and electrification are two major aspects of the transition risk that faces natural gas infrastructure developers, particularly given the long-lived nature of assets. The risk that these trends pose, especially in combination, and the cost of potentially stranded assets that could result should be considered before a new natural gas infrastructure project is approved and large-scale capital investment has been made.<sup>142</sup>

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development and adoption of new climate-friendly technologies. CONDON ET AL., MANDATING DISCLOSURE OF CLIMATE-RELATED FINANCIAL RISK 6-9 (2021), <https://perma.cc/DM9L-2M2F>.

<sup>140</sup> 2021 NOI, *supra* note 1, at P 9 (question A10).

<sup>141</sup> See Comments of Env’t Def. Fund at 26, *Certification of New Interstate Pipeline Facilitates*, Docket No. PL18-1-000 (July 25, 2018) (cataloguing applicant depreciable life assumptions).

<sup>142</sup> See Emily Hammond & Jim Rossi, *Stranded Costs and Grid Decarbonization*, 82 BROOK. L. REV. 645 (2017).

This issue is already beginning to take shape. Recently, Corning Gas filed tariff revisions seeking to accelerate the depreciation life of its infrastructure “because the [Climate Leadership and Community Protection

Considering transition risk furthers FERC’s mandates under the NGA to ensure orderly supplies of natural gas and to protect consumers.<sup>143</sup>

### **A. Decarbonization and Electrification Pose Transition Risk to Natural Gas Infrastructure**

Climate change poses material risk to natural gas companies and infrastructure developers, particularly as the federal government, states, and localities continue to enact more ambitious climate policies and market forces shift. Two aspects of the transition to a low-carbon economy pose particularly significant risk: decarbonization and electrification. Decarbonization policies that dictate a low-carbon resource mix and technological and market changes will reduce natural gas demand from natural gas-fired power plants, the largest consumers of natural gas. Electrification will reduce demand for heating from residential, commercial, and industrial buildings. Reduced demand for natural gas in turn will reduce demand for natural gas transportation services. RMI estimates that \$32 billion of proposed gas pipelines are at risk of becoming stranded assets based on 2030 natural gas demand.<sup>144</sup>

Climate change mitigation will require reduction or elimination of the use of natural gas-fired plants for electricity. Renewables and advanced technologies, which are becoming more efficient and cost-effective, will replace large portions of natural gas plants as the resource mix shifts in response to climate policy and technological improvements. RMI also projects that

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Act] will shorten the effective life of the Company’s existing and future investment in infrastructure.” N.Y. Pub. Serv. Comm’n, Order Establishing Rates and Rate Plan, *Proceeding on Motion of the Commission as to the Rates, Charges, Rules and Regulations of Corning Natural Gas Corporation for Gas Service*, Case 20-G-0101, at 27 (May 19, 2021). While the New York Public Service Commission rejected the request, Corning sought more than a \$3 million increase in revenue requirement, seeking to have consumers pay more now to ensure that it could recoup the full cost of its investments before they were stranded. *Id.*

<sup>143</sup> Such action would also be in line with President Biden’s mandate in Executive Order No 14,008, directing all federal agencies to “drive assessment, disclosure and mitigation of . . . climate-related risks.” Exec. Order No. 14,008, § 201 (Jan. 27, 2021).

<sup>144</sup> MARK DYSON ET AL., RMI, THE ECONOMICS OF CLEAN ENERGY PORTFOLIOS: HOW RENEWABLE AND DISTRIBUTED ENERGY RESOURCES ARE OUTCOMPETING AND CAN STAND INVESTMENT IN NATURAL GAS-FIRED GENERATION (2018), <https://perma.cc/VR9Y-KK4S>.

nearly 85% of natural gas will be replaceable by clean energy projects by 2035.<sup>145</sup> States have a variety of requirements for their resource mix, like Renewable Portfolio Standards and Zero Emission Credits, which seek to increase investment in renewables and advanced technologies and phase out natural gas-fired power plants.<sup>146</sup> As decarbonization pushes the mix away from natural gas and toward other resources, demand for natural gas transportation infrastructure will decline and flows will be altered, leaving assets underutilized or stranded. While natural gas infrastructure may continue to be needed to supply power plants in the near term, the energy transition may render new (and existing) assets unusable before the end of their assumed economic life, as natural gas-fired power plants are replaced in large part by cleaner alternatives.

Electrification has also become an integral aspect of climate policies.<sup>147</sup> Building electrification will pose a risk for natural gas supply used for heating.<sup>148</sup> In 2019, residential and commercial heating constituted 27% of natural gas consumption.<sup>149</sup> Electrification of these

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<sup>145</sup> MARK DYSON ET AL., RMI, PROSPECTS FOR GAS PIPELINES IN THE ERA OF CLEAN ENERGY: HOW CLEAN ENERGY PORTFOLIOS ARE REDUCING US POWER SECTOR DEMAND FOR NATURAL GAS AND CREATING STRANDED ASSET RISKS FOR GAS PIPELINES (2019). Energy Innovation argues that the natural gas should make up no more than 20% of generation by 2030 to avoid new stranded-asset cost while keeping costs down. MIKE O’BOYLE ET AL., ENERGY INNOVATION, A NATIONAL CLEAN ELECTRICITY STANDARD TO BENEFIT ALL AMERICANS 16 (2021), <https://perma.cc/UG6W-3HFA>.

<sup>146</sup> See, e.g., Climate Leadership and Community Protection Act, N.Y. Statutes, Chapter 106 of the laws of 2019 (July 18, 2019) (New York law requiring electricity demand be served by 100% zero-emission resources); see also Condon et al., *supra* note 139, at 6-7 (“At the state level, twenty-nine states and the District of Columbia have established target dates by which electric utilities must provide a set proportion of electricity from renewable or clean energy sources. The prevalence and aggressiveness of these targets has increased in recent years, and 15 states now aim to achieve 100% clean or renewable energy by 2050 or earlier.” (internal footnotes omitted)). Researchers at the University of California Berkeley found that a 90% clean grid is possible, dependable and affordable, with natural gas representing only 10% of annual generation, “70% lower than their generation in 2019.” AMOL PHADKE ET AL., U. CAL. BERKELEY, 2035: THE REPORT 4 (2020).

<sup>147</sup> See Talor Gruenwald & Mina Lee, *2020: Watt a Year for Building Electrification!*, RMI (Dec. 16, 2020), <https://perma.cc/2FDD-2W5N> (cataloguing cities and states with building electrification codes and other action taken at the subnational level on building electrification).

<sup>148</sup> See SHERRI BILLIMORIA ET AL., RMI, THE ECONOMICS OF ELECTRIFYING BUILDINGS (2018) (finding that building electrification will result in a net decline in natural gas, even where all electricity for heat pumps is generated by gas-fired power plants).

<sup>149</sup> *Natural Gas Explained: Use of Natural Gas*, ENERGY INFO. ADMIN., <https://perma.cc/HNX4-GPO6> (Nov. 30, 2020). The industrial sector represents 33% of natural gas usage, but while some is used for heating, natural gas is also used as a raw material in some processes. *Id.*

sectors would therefore significantly reduce demand for natural gas as a primary energy source. In combination with decarbonization efforts of the power system, electrification will reduce total demand for natural gas.<sup>150</sup> As laws requiring electrification become more common, regulators should consider the risk that demand for new infrastructure will not materialize due to increasing electrification, again rendering transportation assets underutilized or stranded. As noted by a panelist at the Electrification Technical Conference, continuing the natural gas infrastructure build-out without consideration of electrification, and the associated transition risk, will lead to increased consumer costs.<sup>151</sup>

Together decarbonization and electrification will diminish demand for natural gas significantly by reducing or eliminating the two major end-uses of natural gas.<sup>152</sup> These policy and market-driven trends could also change the locations in which demand is heaviest.<sup>153</sup> Reduction and/or redistribution of gas demand could, in turn, leave gas transportation infrastructure stranded. Accordingly, in assessing whether a long-lived gas infrastructure project is required by the public convenience and necessity, the Commission must consider the risk that gas demand will decline or never materialize and that stranded asset costs will be borne by consumers and taxpayers as a result.

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<sup>150</sup> Additionally, research has demonstrated that while electrification might shift consumption and emissions from demand sectors to the power sector, there will still be “energy system-wide reductions in both” because electrified end-use technologies are more energy efficient. CAITLIN MURPHY ET AL., NAT’L RENEWABLE ENERGY LAB’Y, ELECTRIFICATION FUTURES STUDY: SCENARIOS OF POWER SYSTEM EVOLUTION AND INFRASTRUCTURE DEVELOPMENT FOR THE UNITED STATES xii (2021), <https://perma.cc/D9R7-LUF9>.

<sup>151</sup> Technical Conference to Discuss Electrification and the Grid of the Future, Docket No. AD21-12 (Apr. 29, 2021) (comments of Sara Baldwin, sitting on panel discussing local, state, and federal coordination); *see also* Sam Kalen & Shi-Ling Hsu, *Natural Gas Infrastructure: Locking in Emissions*, 34 NAT RES. & ENV’T 3 (2020).

<sup>152</sup> These uses represent around three quarters of natural gas consumption, making it unlikely that increases in demand in other sectors, like non-heating consumption in the industrial sector or the transportation sector (which is also electrifying) could make up for reductions.

<sup>153</sup> *See, e.g.*, Feijoo et al., *supra* note 120; Clodomiro Unsihuay et al., *Integrated Power Generation and Natural Gas Expansion Planning* 1 (2007) (noting that “the dispatch and expansion of the natural gas power plants affect the natural gas flows in pipelines”).

## **B. The Commission Has Similarly Considered Transition Risk in the Electric Transmission Context**

The Commission has previously recognized the benefits of considering how regulatory priorities can affect infrastructure need in the transmission context. In Order No. 1000, FERC not only recognized the benefits of taking a regional approach to transmission decisionmaking, but also determined that identifying public policy-driven need and potential solutions to meeting that need is necessary to ensure that rates for FERC-jurisdictional services are just and reasonable.<sup>154</sup> FERC explained that “a prudent transmission provider will not only plan to maintain reliability and consider whether transmission upgrades or other investments can reduce overall costs . . . , but also consider how to plan for transmission needs driven by Public Policy Requirements.”<sup>155</sup> The Commission found that public policies could “directly affect the need for interstate transmission facilities” and by mandating consideration of public policy requirements, it was “simply requiring the consideration of facts that are relevant to the transmission planning process.”<sup>156</sup> The Commission also acknowledged that “the effects of Public Policy Requirements on transmission needs are highly variable, based on geography, existing resources, and transmission constraints.”<sup>157</sup>

FERC should similarly require natural gas transportation providers to consider how public policies will directly affect transportation infrastructure needs. For transmission, the Commission recognized that the existing process did not require consideration of transmission needs driven by public policy, and concluded that it needed to remedy that problem to protect against unjust and unreasonable rates and practices.<sup>158</sup>

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<sup>154</sup> Order 1000, *supra* note 102, at P 83.

<sup>155</sup> *Id.*

<sup>156</sup> *Id.* at P 111.

<sup>157</sup> *Id.* at P 208.

<sup>158</sup> *Id.* at P 82, 112.

The Commission should do the same for natural gas infrastructure decisionmaking. Under current practice, FERC does not consider how public policies that require decarbonization of the resource mix and electrification of buildings will affect natural gas transportation needs. FERC should reform the 1999 Policy Statement to require consideration of public policy requirements, which may lead to identification and evaluation of projects that could “facilitate more efficient and cost-effective achievement of these requirements.”<sup>159</sup> Taking public policies into account may also help developers and the Commission understand how climate policies will drive natural gas infrastructure need, either by reducing demand or altering flows, and ensure that the risk to long-term gas infrastructure that those policies pose is identified and evaluated.

**C. Transition Risk Should Be Considered at the Time of Certification as Part of the Assessment of Need**

The risk that these federal and state regulatory changes and market trends pose to natural gas infrastructure developers and investors should be considered by FERC at the time of approval to assure that new infrastructure, which is capital-intensive and long-lived, is in the public interest. As part of its holistic need assessment, the Commission should consider the risk that purported need will not materialize in light of decarbonization of the resource mix and building electrification. Developers should be asked to disclose and price this risk during the approval process. The Commission should not wait to consider how assets will be paid for until after they become stranded.

Traditionally, the energy sector and regulators have considered stranded costs due to economic, technological, or regulatory changes ex post, waiting until after projects have been

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<sup>159</sup> *Id.* at P 83.

approved and large-scale investments have already been made.<sup>160</sup> This history of ex post consideration and compensation for stranded costs has slowed transitions, has prevented retirements of assets, and has led to “systematic overcompensation for regulatory risk because of loss aversion.”<sup>161</sup> In the past, where assets were rendered stranded by policy or market changes, regulators have eventually allowed investors to recoup those costs through their ratepayers.<sup>162</sup>

The Commission, through its Policy Statement, should encourage investors to price transition risk up front and require ex ante consideration of potential stranded costs and how the transition will increase the risk associated with new natural gas transportation infrastructure. Failing to consider significant risk to a project before approval, particularly where the associated costs will likely fall to ratepayers, is inefficient, will not ensure orderly development of natural gas supplies, and fails to protect customers.

## **VI. The Commission Should Refine Its Analysis To Better Capture and Assess Impacts on Environmental Justice Communities**

The Commission requested input regarding its consideration of environmental justice impacts in assessing whether to approve natural gas pipelines and other infrastructure. The identification of disproportionate environmental justice impacts should guide pipeline siting, and may provide a basis for denying a project application altogether if alternatives cannot address those impacts. Like any other analysis, the methodological choices can greatly affect the outcomes of FERC’s assessment.<sup>163</sup> The Commission can improve its environmental justice

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<sup>160</sup> Hammond & Rossi, *supra* note 142 (discussing consideration and compensation of stranded costs by state commissions in the context of nuclear facilities, and by FERC in the context of natural gas take-or-pay contracts and electricity restructuring).

<sup>161</sup> *Id.* at 661.

<sup>162</sup> *See id.* at 652 (“Regulators have shown a considerable appetite for compensating investors post hoc, routinely approving customer charges designed to guarantee an incumbent energy utility one hundred percent compensation for stranded costs during regulatory, economic, and technological transitions in the energy sector.”).

<sup>163</sup> *See, e.g.*, Ronald J. Shadbegian & Ann Wovlerton, *Evaluating Environmental Justice: Analytic Lessons from the Academic Literature and in Practice*, in *FAILED PROMISES: EVALUATING THE FEDERAL GOVERNMENT’S RESPONSE TO ENVIRONMENTAL JUSTICE* 117, 122 (David M. Konisky ed., 2015) (noting that several analytic issues are

analysis to ensure that it appropriately identifies environmental justice populations and properly considers and assess disproportionate impacts. FERC should begin by setting out a systematic and transparent process for conducting its environmental justice analysis. While the Commission may not be bound by Executive Order 12,898, it has regularly assessed at least some environmental justice impacts, and it should provide the public with a clear understanding of how it will conduct its assessments in the future, including, but not limited to, the identification methodology and census data level it will use, and process for evaluating disproportionate impacts.

The Commission can also make several specific changes to its environmental justice analysis to improve the assessment. The Commission should use census block-level data (rather than census tract-level as it often uses<sup>164</sup>) to mitigate the potential that the choice of geographic unit of analysis artificially dilutes or masks the presence of minority and low-income populations. FERC should select a comparison population that is broad and sufficiently representative to reveal disproportionate impacts on environmental justice communities. FERC should also consider all pollutant impacts, rather than treating compliance with the National Ambient Air Quality Standards (NAAQS) as synonymous with a project having no adverse impacts. Criteria pollutants, despite the numerical limits contained in the NAAQS, are non-threshold pollutants with health impacts even where levels are below the permissible legal limit.<sup>165</sup> Minority and low-income communities may be especially vulnerable to these impacts

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particularly important to environmental justice analyses, including “the geographic scope and scale of the analysis, the identification of potentially affected populations, the selection of a comparison group, how to spatially identify effects on population groups, and how exposure or risk is measured in an analysis.”).

<sup>164</sup> See, e.g., *Atlantic Coast Pipeline, LLC*, 164 FERC ¶ 61,100, P 306 (2018); *Florida Southeast Connection, LLC*, 156 FERC ¶ 61,160, P 75 (2016); see also Final Brief of Respondent Federal Energy Regulatory Commission at 67, *Atlantic Coast Pipeline, LLC v. Fed. Energy Reg. Comm’n*, No. 18-1224 (D.C. Cir. filed July 24, 2019) (noting Commission’s use of Census tract-level data in other orders).

<sup>165</sup> Kimberly M. Castle & Richard L. Revesz, *Environmental Standards, Thresholds, and the Next Battleground of Climate Change Regulations*, 103 MINN. L. REV. 1349 (2018).

due to existing health disparities. Each of these analytical choices can help the Commission more effectively consider environmental justice implications in deciding whether, and on what terms and conditions, to grant a certificate of public convenience and necessity.

**A. The Commission Should Use Census Block Data To Identify Environmental Justice Populations**

FERC's identification of affected environmental justice populations sets the stage for its impact analysis. The Commission's choice of methodological approach for identification will affect whether it accurately identifies minority and low-income populations. FERC must therefore be cautious because selecting an unsuitable approach and components, like the geographic unit of analysis, can artificially dilute the presence of minority and low-income populations. That is, analytical choices may alter results such that the Commission fails to identify populations that should be considered in its impact analysis. To improve its identification of environmental justice populations, the Commission should use census block level-data instead of continuing to rely on census tract-level data.

Identification of environmental justice communities may be affected by the components used, particularly the geographic unit of analysis chosen and its accompanying data.<sup>166</sup> The Commission, in selecting the geographic unit, must consider the appropriately sized unit and ensure there is sufficient justification for the choice such that it will not inaccurately portray the size of the affected environmental justice population by "diluting their representation," or miss an environmental justice population entirely.<sup>167</sup> As agencies will often use census data in their analysis, the unit may mirror those used in the census; however, census data can be

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<sup>166</sup> FED. INTERAGENCY WORKING GRP. FOR ENV'T JUSTICE AND NEPA COMM., PROMISING PRACTICES FOR EJ METHODOLOGIES IN NEPA REVIEWS 21 (2016), <https://perma.cc/JPM7-RKGG> [hereinafter PROMISING PRACTICES].

<sup>167</sup> *Id.*

disaggregated to varying levels.<sup>168</sup> Two levels used as the geographic unit in population identification are census tracts and census blocks. Each county in the census database is divided into census tracts, which are subdivided into smaller census blocks.<sup>169</sup> Census blocks are the smallest geographic areas that the census uses.<sup>170</sup> It therefore provides the most granular information about environmental justice communities. The Commission has often used tract-level data even in the face of arguments that this choice has failed to identify minority and low-income communities.<sup>171</sup>

The Commission should use census blocks, rather than using larger census tracts, in whatever approach it chooses for identifying environmental populations, as recommended by the EJ Working Group.<sup>172</sup> Choosing a larger geographic unit of analysis could result in a minority community being outnumbered by a surrounding non-minority population, masking its presence in the analysis. Concern with the potential dilution of environmental justice populations due to the Commission's geographic unit choice has been an ongoing issue raised by environmental and community organizations. For example, in challenging the Commission's certification of the Southeast Market Pipelines Project, intervenors pointed out that FERC's use of census tract data obscured the presence of a 100% Black census block due to its location in a majority-white census tract.<sup>173</sup> In the Atlantic Coast Pipeline proceedings, environmental and neighborhood

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<sup>168</sup> ENV'T PROT. AGENCY, FINAL GUIDANCE FOR INCORPORATING ENVIRONMENTAL JUSTICE CONCERNS IN EPA'S NEPA COMPLIANCE ANALYSES at unnumbered p. 16 (1998), <https://perma.cc/9DW5-XHH6>.

<sup>169</sup> *Id.* at unnumbered p. 60

<sup>170</sup> PROMISING PRACTICES, *supra* note 166, at 23 n.11.

<sup>171</sup> *E.g.*, Final Brief of Respondent Federal Energy Regulatory Commission at 63-66, *Atlantic Coast Pipeline, LLC v. Fed. Energy Reg. Comm'n*, No. 18-1224 (D.C. Cir. filed July 24, 2019); Brief of Respondent Federal Energy Regulatory Commission at 51-52, *Sierra Club v. Fed. Energy Reg. Comm'n*, 867 F.3d 1357 (D.C. Cir. 2017) ("Sabal Trail").

<sup>172</sup> *See* PROMISING PRACTICES, *supra* note 166, at 21. The EJ Working Group also recommends using local demographic data to supplement census data when minority populations are particularly small to ensure that these populations are captured in its analysis. *Id.*

<sup>173</sup> *See Sabal Trail*, 867 F.3d at 1370.

groups raised similar concerns about a census tract analysis that masked the 85% Black and biracial community living downwind from a proposed facility and therefore at highest risk of exposure.<sup>174</sup> An EPA workgroup has also long cautioned against this potential outcome, pointing out that “pockets of minority or low-income communities, including those that may be experiencing disproportionately high and adverse effects, may be missed in a traditional census tract-based analysis.”<sup>175</sup>

The Commission should heed these concerns and use census blocks to identify environmental justice communities and capture disproportionate impacts. Using more local, granular data can help the Commission improve its decisionmaking.<sup>176</sup> Additionally, the Commission should provide written justification for its choice of methods and data to ensure transparency.<sup>177</sup>

#### **B. The Commission Should Use a Broad Comparison Population for Its Impacts Analysis**

Determining whether there are disproportionate impacts entails comparing a project’s effects on environmental justice populations with its effects on a “comparison population,” in order to determine whether the impacts on environmental justice communities are disproportionate.<sup>178</sup> The comparison group selected will thus inevitably affect the determination of disproportionate impact.<sup>179</sup> Choosing an improper comparison population can lead to artificial

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<sup>174</sup> See Request for Rehearing of Shenandoah Valley Network et al. at 131, *Atlantic Coast Pipeline, LLC*, Docket Nos. CP15-554-000 et al. (Nov. 13, 2017).

<sup>175</sup> ENV’T PROT. AGENCY, *supra* note 168, at unnumbered p. 16.

<sup>176</sup> See PROMISING PRACTICES, *supra* note 166, at 21.

<sup>177</sup> See *id.* at 24.

<sup>178</sup> *Id.* at 41-42.

<sup>179</sup> ENV’T PROT. AGENCY, TECHNICAL GUIDANCE FOR ASSESSING ENVIRONMENTAL JUSTICE ON REGULATORY ANALYSIS 55 (2016), <https://perma.cc/HG6E-EFD6>. For example, as the EPA explained, “a comparison group of all minorities in the United States, while informative about the burden of risk among minorities, will not directly provide information about whether this burden is *higher* among minorities relative to non-minorities.” *Id.* at 55 n.55.

distortion of environmental justice impacts, including where the comparison group is too narrow geographically or too similar demographically to the affected population. Agencies are less likely to find a disproportionate impact where the comparison group has an unrepresentatively high proportion of minority or low-income individuals.<sup>180</sup> Restricting the comparison population in a way that ensures the comparison population has a high percentage of minority or low-income individuals will therefore mask disproportionate impacts.

However, the Commission has often found that a project will affect *only* minority and low-income communities, creating problems for comparison and evaluation of disproportionate impacts. In recent cases, the Commission has concluded that the affected community as a whole was made up of environmental justice communities and thus determined that the only question to ask was whether the project would disproportionately affect these communities due to factors unique to the population (for example, due to disproportionate health conditions).<sup>181</sup> In other cases, the Commission has compared the affected populations of different alternatives, found that each would have nearly the same impact on environmental justice populations, and thus concluded that the preferred alternatives could not be said to cause disproportionate impacts.<sup>182</sup>

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<sup>180</sup> Bradford Mank, *Proving an Environmental Justice Case: Determining an Appropriate Comparison Population*, 20 VA. ENV'T L.J. 365, 387 (2001). The EJ Working Group has also explained that it may be appropriate for an agency to use multiple comparison groups in certain instances. PROMISING PRACTICES, *supra* note 166, at 41. The EPA has likewise recommended the use of sensitivity analyses with alternative comparison groups where appropriate. ENV'T PROT. AGENCY, *supra* note 179, at 55.

<sup>181</sup> *E.g.*, Brief of Respondent Federal Energy Regulatory Commission at 51, *Vecinos para el Bienestar de la Comunidad Costera v. Fed. Energy Reg. Comm'n*, No. 20-1045 (D.C. Cir. filed Sept. 23, 2020) (“[T]he Commission first examined the racial and ethnic makeup of the affected communities (*i.e.*, those within a 2-mile radius of the Terminal or Pipeline) and found that virtually all were minority or low-income populations, as defined by the relevant EPA Guidance.”); Brief of Respondent Federal Energy Regulatory Commission at 43, *Vecinos para el Bienestar de la Comunidad Costera v. Fed. Energy Reg. Comm'n*, Nos. 20-1093 & 20-1094 (D.C. Cir. filed Nov. 10, 2020) (“The Commission identified the immediate area surrounding the projects as environmental justice communities. . . . But the Commission also found that the entire Cameron County qualified as an environmental justice community.”).

<sup>182</sup> *Sierra Club v. Fed. Energy Reg. Comm'n*, 867 F.3d 1357, 1390-70 (D.C. Cir. 2017).

While guidance does offer that, where appropriate, an agency might compare the impacts of environmental justice communities in the affected environment to a comparison group also within the affected area to assess whether there are disproportionate impacts,<sup>183</sup> that recommendation is inappropriate where a project would affect predominantly (or only) environmental justice populations, such that a comparison population group that is sufficiently distinct cannot be found. If an environmental justice analysis is to mean anything, it should not allow regulators to ignore the fact that a project was sited in an environmental justice community and does not (or primarily does not) affect other groups. Siting a project in this way should demand more, not less, scrutiny.

This problem is illustrated by a recent decision currently being litigated before the D.C. Circuit.<sup>184</sup> In 2019, Sierra Club challenged FERC’s certification of a new liquefied natural gas terminal in Cameron County, Texas, in part on the grounds that the Commission used only the county for its comparison population rather than a broader geographic region such as the state of Texas.<sup>185</sup> As a result, the comparison group was dominated by minority and low-income populations, leading the Commission to improperly conclude that environmental justice population were not overburdened by the project’s impacts because “all project-affected populations are minority or low-income populations, or both.”<sup>186</sup> That is, the Commission concluded that because the county as a whole was predominantly minority and low-income individuals, the question was not whether impacts would be “disproportionately concentrated on”

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<sup>183</sup> See, e.g., PROMISING PRACTICES, *supra* note 166, at 41.

<sup>184</sup> *Vecinos para el Bienestar de la Comunidad Costera v. Fed. Energy Reg. Comm’n*, No. 20-1045 (D.C. Cir. argued Mar 23, 2021).

<sup>185</sup> See *Rio Grande LNG, LLC*, 170 FERC ¶ 61,046, PP 66, 69 (2020).

<sup>186</sup> *Id.* at PP 66-67.

minority and low-income communities in the affected environment.<sup>187</sup> The Commission instead chose to assess whether the impacts would disproportionately affect environmental justice communities because of unique factors to those populations, such as health effects.<sup>188</sup>

While FERC should consider factors unique to populations,<sup>189</sup> it should not ignore the question of whether a project's effects are disproportionately concentrated on environmental justice communities when the effects are concentrated *only* on environmental justice populations. Policy Integrity agrees that such a methodology “signals to project developers that they can avoid a hard look at EJ impacts by simply locating their facilities where the effects will *only* fall on minority or low-income communities.”<sup>190</sup> This undermines the purpose of an environmental justice analysis and ignores the demonstrated history of siting projects in minority and low-income communities that has overburdened these populations at a local, state and national level.<sup>191</sup> In such instances the Commission should use a broad comparison group such that it compares the impacts of a project on environmental justice populations in the affected area to a more general population, that is neither too geographically narrow nor too demographically similar, to avoid masking disproportionate impacts.

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<sup>187</sup> Brief of Respondent Federal Energy Regulatory Commission at 53, *Vecinos para el Bienestar de la Comunidad Costera v. Fed. Energy Reg. Comm'n*, No. 20-1045 (D.C. Cir. filed Sept. 23, 2020).

<sup>188</sup> *Id.* at 53-54. Notably, while the Commission did make such an assessment, it found no disproportionate impacts because the project would not increase criteria pollutants above the NAAQS, a policy refuted in the next section.

<sup>189</sup> See *infra* Section VI.C

<sup>190</sup> Petitioners' Final Joint Opening Brief at 46, *Vecinos Para el Bienestar de la Comunidad Costera v. Fed. Energy Reg. Comm'n*, No. 20-1045 (D.C. Cir. filed Sept. 23, 2020).

<sup>191</sup> See generally CLEAN AIR TASK FORCE, FUMES ACROSS THE FENCE-LINE: THE HEALTH IMPACTS OF AIR POLLUTION FROM OIL & GAS FACILITIES ON AFRICAN AMERICAN COMMUNITIES (2017), <https://perma.cc/5Y2W-VKXU> (describing the greater likelihood that African Americans will live in fence-line communities and explaining that the disparity “is not a coincidence” because “[h]istorically, polluting facilities have often been sited in or near African American communities”); see also Shalanda H. Baker, *Anti-Resilience: A Roadmap for Transformational Justice within the Energy System*, 54 HARV. C.R.-C.L. L. REV. 1, 9-15 (2019) (describing “the current energy system and how the system has historically burdened communities of color and low-income communities”).

The Commission faces a similar problem where it “compare[s] the demographics along the various proposed routes to each other instead of the general population.”<sup>192</sup> In the Southeast Market Pipeline Project, the Commission chose to compare the impact on environmental justice communities of project alternatives. FERC concluded that because each of the alternatives (aside from the no-action alternative) would affect a similar percentage of environmental justice populations, the preferred option could not be said to cause a disproportionate impact.<sup>193</sup> While the D.C. Circuit found the methodology was reasonable because NEPA is intended to help any agency choose between alternatives,<sup>194</sup> this methodology significantly diverges from accepted methodologies and guidance that look at the project’s impacts on environmental justice communities as compared to other populations, not other options.<sup>195</sup> As the Sierra Club argued, “[t]he Commission’s comparison of the approved route and ‘land-based’ alternatives routes to one another begs the question of whether the *Project* has a disparate impact” on environmental justice communities.<sup>196</sup> FERC also has the option to choose the no-action alternative and reject an application where the other alternatives would disproportionately impact environmental justice communities. The Commission should consider whether those affected by the project as it would be approved are disproportionately minority or low-income, and do so by using a broad comparison population that is neither too geographically narrow nor demographically similar.

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<sup>192</sup> See *Sierra Club v. Fed. Energy Reg. Comm’n*, 867 F.3d 1357, 1390-70 (D.C. Cir. 2017) (“Sabal Trail”) (internal quotation marks omitted).

<sup>193</sup> *Id.*

<sup>194</sup> *Id.* at 1370.

<sup>195</sup> See PROMISING PRACTICES, *supra* note 166, at 38-46.

<sup>196</sup> Petitioners’ Opening Brief at 18, *Sabal Trail*, 867 F.3d 1357 (D.C. Cir. 2017).

### **C. The Commission Should Stop Using Compliance with the NAAQS as Synonymous with a Project Having No Adverse Impacts and Consider All Pollution Impacts, Including those Below NAAQS**

The impacts analysis requires that FERC consider whether a project’s environmental and health impacts are disproportionately high and adverse. In analyzing a project’s air quality impacts, FERC has used compliance with the NAAQS as synonymous with a project having no adverse impacts.<sup>197</sup> The Commission thus assumes that where a project would not cause criteria pollutant levels to violate the NAAQS, there is no significant impact on human health or the environment.<sup>198</sup> However, the Commission’s reliance on the NAAQS is unsupported by the guidance documents and inconsistent with the scientific and regulatory treatment of NAAQS.<sup>199</sup> FERC should consider impacts of exposure to criteria pollutants below the NAAQS to environmental justice communities in its assessment.

Carbon monoxide, lead, particulate matter, ozone, nitrogen dioxide, and sulfur dioxide (the six criteria pollutants regulated under the NAAQS) are all non-threshold pollutants, meaning that they have acknowledged health impacts even when found in levels below the legally permissible limits.<sup>200</sup> EPA has identified health benefits from reducing pollutant levels below the legal standard for almost all of its regulated criteria pollutants.<sup>201</sup> That is, EPA has said in multiple rulemakings that there are health risks associated with exposure to criteria pollutants at

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<sup>197</sup> See, e.g., Atlantic Coast Pipeline, LLC, 164 FERC ¶ 61,100, P 314 (2018) (“The Final EIS states that Virginia and North Carolina adopted the federal NAAQS; therefore, these standards are appropriate for consideration of air quality impacts from the projects. The Final EIS concluded that the project would not cause or contribute to a violation of the NAAQS and concluded that a health impact assessment was not required.”).

<sup>198</sup> See, e.g., *id.*; Rio Grande LNG, LLC, 170 FERC ¶ 61,046, PP 59-60 (2020) (finding that the EIS “appropriately relied on NAAQS thresholds to assess health impacts” and that given the projects will meet air quality requirements for NO<sub>2</sub>, “the projects would not have a significant adverse impact on human health”); Annova LNG Common Infrastructure, LLC, 170 FERC ¶ 61,140, P 43 (2020) (affirming Commission staff’s “reasonable reliance on the NAAQS as a proxy for potential health impacts on area populations”).

<sup>199</sup> See generally Castle & Revesz, *supra* note 165.

<sup>200</sup> See *id.* at 1357.

<sup>201</sup> *Id.* at 1392-97 (discussing EPA’s calculations of benefits below NAAQS levels and explicit findings on the lack of evidence of thresholds for ozone, carbon monoxide, and nitrogen dioxide).

levels below the NAAQS.<sup>202</sup> Therefore, as a general matter, it is inappropriate to assume that where a project does not violate the NAAQS, there are no health impacts.

Furthermore, FERC's reliance on the NAAQS is particularly inappropriate for assessing impacts to populations that are sensitive to lower levels of pollution, including those with respiratory and other health issues.<sup>203</sup> For such sensitive populations, exposure to criteria pollutants below the NAAQS may be particularly harmful. Minority individuals are more likely to belong to such sensitive populations because of the health disparities they face. For example, asthma exists in higher rates among minority populations and increases health risks from exposure to ozone, particular matter, and sulfur dioxide.<sup>204</sup> And health risks from such exposure may be more severe as asthma hospitalizations and mortality have also been observed at higher rates in minority communities.<sup>205</sup>

Given these health disparities, minority communities are more likely to experience harm from criteria pollutants exposure below the NAAQS. Ignoring the health effects of a project that does not cause the NAAQS to be violated is disproportionately problematic for minority and other sensitive communities that are more likely to be harmed by exposure at lower levels. By failing to consider impacts of pollutant exposure below the NAAQS, FERC will underestimate the harms a project poses to already sensitive environmental justice communities.

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<sup>202</sup> *Id.* at 1390-91.

<sup>203</sup> *See id.* at 1354, 1374.

<sup>204</sup> *See* Review of the Primary National Ambient Air Quality Standards for Sulfur Oxides, 84 Fed. Reg. 9,866, 9,878-79 (Mar. 18, 2019); ENV'T PROT. AGENCY, EPA 240-R-13-001, AMERICA'S CHILDREN AND THE ENVIRONMENT 21 (3d ed. 2013), <https://perma.cc/K2EV-EKS2>.

<sup>205</sup> *See* Primary National Ambient Air Quality Standard for Sulfur Dioxide, 75 Fed. Reg. 35,520, 35,527 (June 22, 2010); *Health Effects of Ozone in Patients with Asthma and Other Chronic Respiratory Disease*, ENV'T PROT. AGENCY, <https://perma.cc/FQ3P-Y7XD> (June 23, 2020).

Those impacts are compounded by the fact that environmental justice communities are already overburdened by pollution.<sup>206</sup> An environmental justice analysis that declines to consider impacts below the NAAQS will result in sensitive populations already overburdened with pollution being exposed to additional pollution from natural gas pipelines. While the impacts of exposure below the NAAQS might not always be significant, the Commission must determine whether such exposure from the project will have a disproportionate impact on environmental justice communities.

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<sup>206</sup> EPA has identified higher median blood lead levels among black children and those living in poverty, compared to economically well-off and white children. *See* 2008 Lead Standards, 73 Fed. Reg. at 29,195. Higher concentrations of particulate matter, according to EPA, also exist in communities with lower income, lower rates of education, and higher percentages of minority populations, *see* National Ambient Air Quality Standards for Particulate Matter, 78 Fed. Reg. 3,086, 3,125 (Jan. 15, 2013), and have been linked to “disproportionately high and adverse effects on minority and/or low-income populations.” *Id.* at 3,266.

Dated: May 26, 2021

**CERTIFICATE OF SERVICE**

In accordance with Rule 2010 of the Commission's Rules of Practice and Procedure, I hereby certify that I have this day served by electronic mail a copy of the foregoing document upon each person designated on the official service list compiled by the Secretary in this proceeding.

Dated at Washington, D.C. this 26th day of May 2021.

Respectfully Submitted,

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