

**U.S. Senate Committee on Energy and Natural Resources**  
**May 4, 2023 Hearing: Oversight of the Federal Energy Regulatory Commission**  
**Questions for the Record Submitted to The Honorable James P. Danly**

**Questions from Ranking Member John Barrasso**

**Question 1:** During the “*Full Committee Hearing to Conduct Oversight of FERC*” on May 4, in response to my first question, you commented about the need for spinning mass and for frequency and voltage regulation on large regional interconnected electric grids. In response, Senator Heinrich said, “Chairman, I want to start just by saying as an engineering matter that we are no longer dependent on spinning mass to regulate frequency or voltage; you can accomplish that with state-of-the-art inverters. That’s actually articulated in IEEE 1541 and we’ve been doing that in Hawaii for years.

- a. Commissioner Danly, please respond to Senator Heinrich’s assertion that “we are no longer dependent on spinning mass to regulate frequency or voltage.”

**RESPONSE:**

Resources equipped with advanced power electronics controls are capable of regulating frequency and voltage. To operate the bulk electric system with an increasing proportion of non-synchronous resources requires what are known as “grid-forming” inverters. Most inverter-based resources on the bulk electric system are of the “grid-following” type, which rely on the voltage waveform of the bulk electric system to function. Additionally, it has yet to be demonstrated whether grid-forming inverters are capable of providing an entire interconnection’s frequency and voltage regulation services independently of synchronous resources.<sup>1</sup> Such a transition would likely be expensive and complex.

To date, spinning mass has been the only way to ensure that the large interconnections in the continental United States have the resilience and ride-through capability needed to ensure the reliable operation of the bulk power system.<sup>2</sup> This is true in Hawaii, too, where fossil-fueled generation runs 24 hours a day. In fact, the most recent “Integrated Grid Plan” from Hawaiian Electric

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<sup>1</sup> See, e.g., National Renewable Energy Laboratory, *Research Roadmap on Grid-Forming Inverters*, at iv (Nov. 2020), <https://www.nrel.gov/docs/fy21osti/73476.pdf> (“Transitioning to a grid with more inverter-based resources poses major challenges because the operation of future power systems must be based on a combination of the physical properties and control responses of traditional, large synchronous generators as well as those of numerous and diverse inverter-based resources . . . . These challenges stem from the recognition that there is no established body of experience for operating hybrid power systems with significant amounts of inverter-based resources at the scale of today’s North American interconnections.”).

<sup>2</sup> See *id.* (“Managing the stability of today’s electric power systems is based on decades of experience with the physical properties and control responses of large synchronous generators, usually with the size of hundreds to even thousands of megawatts.”); see also *id.* at 1.

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explicitly acknowledges the need for these units.<sup>3</sup> Accordingly, Hawaii may not be the best example since it is currently powered primarily by oil,<sup>4</sup> diesel and natural gas turbines—all of which are traditional spinning mass resources.<sup>5</sup>

- b. Can “state-of-the-art inverters alone provide frequency and voltage regulation to large interconnected regional electric grids such as those administered by ISO New England or PJM?”

**RESPONSE:**

All resources require a source of energy to create power and provide frequency regulation and voltage support services. State-of-the-art inverters, when combined with a sufficient and reliable power source, can provide frequency and voltage support, assuming appropriate engineering design and integration. While such state-of-the-art inverters have been successfully deployed and implemented in Hawaii on a small scale, it has yet to be demonstrated on much larger, interconnected regional electric systems like ISO New England or PJM.

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<sup>3</sup> See, e.g., Hawaiian Electric, *Integrated Grid Plan Report*, at 260 (May 2023), [https://hawaiipowered.com/igpreport/IGP-Report\\_Final.pdf](https://hawaiipowered.com/igpreport/IGP-Report_Final.pdf) (“By necessity, we operate the existing fossil fuel-based generation fleet at lower minimum loads and cycling units more than they were designed to do. As more renewable projects are integrated over the next few years, generating units, especially steam generation units, will be under increasingly variable operations. Operating the 50- to 75-year-old O’ahu fleet, for example, with increased load ramping, low-load operation and offline cycling accelerates the aging process, which has led to and will continue to cause increasing rates of forced outages and/or derations of firm capacity on a daily basis . . . These reliability risks must be urgently addressed—this is foundational to achieving the State’s decarbonization and renewable energy goals.”).

<sup>4</sup> See, e.g., Hawaiian Electric, *Billing & Payment, Rates & Regulations: Average Price of Electricity* (“Electricity prices in Hawaii are generally much higher than on the U.S. mainland due to the cost of imported oil used to power many of the islands’ generators. . . . Our isolated geographic location also contributes to the higher cost of electricity because we don’t have nearby utility companies from which to draw power in the event of a problem. So for system reliability, we must have reserve generating capacity and multiple distribution routes.”), <https://www.hawaiianelectric.com/billing-and-payment/rates-and-regulations/average-price-of-electricity>.

<sup>5</sup> See, e.g., Hawaii Energy Facts and Figures, at 2 (Nov. 2020) (“According to data from the United States Energy Information Administration, in 2018 (the most recent year for which complete data is available), Hawaii’s energy needs were met by 31.109 trillion British thermal units (Btu) equivalent of renewable energy; 14.367 trillion Btu of coal; 0.192 trillion Btu of natural gas; and 247.227 trillion Btu of petroleum products (this includes jet fuel, gasoline, diesel, fuel oil, naphtha, and other distillates.”) (citation omitted), [https://energy.hawaii.gov/wp-content/uploads/2022/06/HSEO\\_FactsAndFigures-2020.pdf](https://energy.hawaii.gov/wp-content/uploads/2022/06/HSEO_FactsAndFigures-2020.pdf). According to the Energy Information Administration, “[f]ossil fuels, mostly petroleum products, generate the majority of Hawaii’s electricity, but renewable energy accounts for a growing share.” Energy Information Administration, *Hawaii: State Profile and Energy Estimates* (last updated Mar. 16, 2023), <https://www.eia.gov/state/print.php?sid=HI>; see also *id.* (“In 2022, about three-tenths of Hawaii’s total electricity (utility-scale and small-scale) was generated by renewable sources of energy.”).

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**Question 2:** Please review the Commission Staff’s answers to the data related questions that I submitted to Chairman Phillips and comment if necessary.

**RESPONSE:**

Thank you for the opportunity to share my observations with you on Commission staff’s data provided in response to your questions submitted to Chairman Phillips.

As predicted, the data shows that the directive to Commission staff to change its NEPA procedures, primarily the directive to prepare Environmental Impact Statements instead of Environmental Assessments, prolonged the Commission’s review of natural gas infrastructure applications, increasing review timelines for Natural Gas Act (NGA) section 7 applications by five months from 2021 to 2022.<sup>6</sup> According to the Energy Information Administration, “[t]he least U.S. interstate natural gas pipeline capacity on record was added in 2022” with the Commission certificating only “five projects [that] increased capacity to transport natural gas” the majority of which were minor expansions “focused primarily on upgrading compressor stations” and “only one project adding a relatively small amount of new pipe.”<sup>7</sup> In the Chairman’s response, Commission staff states that the 2022 project processing timelines were in part affected by “increased stakeholder participation and complex public comments requiring further analysis,”<sup>8</sup> those comments primarily related to downstream emissions over which the Commission has no control.<sup>9</sup>

Furthermore, it is worth highlighting that Commission staff states that the changes in processing timelines is in part caused by “the scope of environmental issues and public interest considerations.”<sup>10</sup> Expanding the scope of environmental issues

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<sup>6</sup> Chairman Phillips, Responses to U.S. Senate Committee on Energy and Natural Resources Questions for the Record, at 3 (June 2, 2023) (Chairman Phillips Response) (stating that for NGA section 7 applications certificated in 2022, the Commission processed applications in 15.4 months whereas in 2021, the Commission process applications in 10.5 months).

<sup>7</sup> Energy Information Administration, *The least U.S. interstate natural gas pipeline capacity on record was added in 2022*, <https://www.eia.gov/todayinenergy/detail.php?id=55699>.

<sup>8</sup> Chairman Phillips Response at 3.

<sup>9</sup> See, e.g., *Iroquois Gas Transmission Sys., L.P.*, 178 FERC ¶ 61,200 (2022) (analyzing a study quantifying the project’s lifecycle GHG emissions).

<sup>10</sup> Chairman Phillips Response at 3.

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beyond that which can legally be considered under the NGA, as the recent interim greenhouse gas emissions (GHG) guidance from the Council on Environmental Quality would have us do,<sup>11</sup> would likely have the effect of, again, further extending the Commission’s review timelines.

**Question 3:** Under the Interstate Commerce Act, the Commission has the authority to investigate pipeline rates and practices when a shipper protests those rates. These challenges can take years to process and can be costly. For example, the Commission still has not issued a final decision on a challenge to Colonial Pipeline’s rates filed in November of 2017.

- a. Is a 5-year delay consistent with the Commission’s obligations under the Interstate Commerce Act? Does the Commission have the authority to process these challenges more efficiently? If so, what are ways the Commission can achieve this goal?

**RESPONSE:**

Any litigation that takes over five years certainly appears troubling. However, a general procedural overview of the processing of the complaints against Colonial Pipeline Company (Colonial) may be helpful to understand why the litigation has taken so long. Colonial is the largest product pipeline in the United States and has never fully litigated its cost-of-service rate since the pipeline commenced service in 1962.<sup>12</sup> Colonial has grandfathered rates that have been adjusted periodically under the Commission’s indexing methodology, and market-based rates.<sup>13</sup>

While the first complaint was filed against Colonial Pipeline Company in November 2017, eleven more complaints were filed between then and March 2020, just over three years ago.<sup>14</sup> Those complaints challenged “the lawfulness of all of the tariff rates [both indexed and market-based rates] charged by Colonial for transportation of petroleum products for all origins and destinations on Colonial’s system, as well as Colonial’s practices

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<sup>11</sup> 88 Fed. Reg. 1196-01 (Jan. 9, 2023).

<sup>12</sup> *Epsilon Trading, LLC v. Colonial Pipeline Co.*, 177 FERC ¶ 63,017, at P 3 n.5 (2021) (2021 Partial Initial Decision) (Accession No. 20211201-3095).

<sup>13</sup> *Epsilon Trading, LLC v. Colonial Pipeline Co.*, 164 FERC ¶ 61,202, at P 3 (2018) (*Epsilon Trading, LLC*) (Accession No. 20180920-3056).

<sup>14</sup> 2021 Partial Initial Decision, 177 FERC ¶ 63,017 at P 1 n.1.

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and charges related to transmix and product volume losses.”<sup>15</sup> The Commission consolidated those twelve complaints and set them for hearing before an Administrative Law Judge (ALJ), establishing what the Commission has termed the “Colonial Global Complaint proceeding.”<sup>16</sup>

From September 15 through December 18, 2020, more than 25 participants participated in a 58-day virtual hearing that featured 25 witnesses and produced over a thousand exhibits and thousands of pages of testimony. Parties had until January 29, 2021, to file Initial Post-Hearing Briefs, and Post-Hearing Reply Briefs by March 1, 2021.

On December 1, 2021, the Presiding ALJ issued a partial initial decision analyzing the law and material evidence underpinning the challenges to, and the Commission’s investigation of, Colonial’s market-based rate authority and transmix and product loss practices.<sup>17</sup> On April 27, 2022, the Presiding ALJ issued a partial decision analyzing the law and material evidence underpinning the challenges to, and the Commission’s investigation of, Colonial’s cost-based rates.<sup>18</sup> In total, the initial decisions spanned nearly 750 pages. Following the issuance of each partial initial decision, parties had the opportunity to file Briefs on Exceptions and Briefs Opposing Exceptions, the last of which were due on August 1, 2022.<sup>19</sup> The Commission is now considering the entire record in order to issue Orders on Initial Decisions and now that the entire record and the ALJ’s decisions are before us, there is no reason for further delay. The Commission should speedily resolve the matter and end the uncertainty that attends this kind of protracted, complex litigation.

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<sup>15</sup> *Epsilon Trading, LLC*, 164 FERC ¶ 61,202 at P 1. “Transmix” means “mixtures of fuels, which no longer meet the specifications for a fuel that can be used or sold as a fuel without further processing.” 40 C.F.R. § 1090.80.

<sup>16</sup> *E.g., Gunvor USA LLC v. Colonial Pipeline Co.*, 168 FERC ¶ 61,080, at P 1 (2019) (Accession No. 20190808-3035).

<sup>17</sup> 2021 Partial Initial Decision, 177 FERC ¶ 63,017.

<sup>18</sup> *Epsilon Trading, LLC v. Colonial Pipeline Co.*, 179 FERC ¶ 63,008 (2022) (Accession No. 20220427-3066).

<sup>19</sup> *See* FERC Staff, Notice Granting Extension of Time, Docket Nos. OR18-7-000, et al., at 2 (May 10, 2022) (Accession No. 20220510-3030).

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Given the unusual complexity of the Colonial Global Complaint proceeding, the pace of this litigation does not appear to me to be indicative of a broader trend in the Commission’s processing of Interstate Commerce Act (ICA) complaints that would require amendment of the ICA to process rate challenges more efficiently. It is worth noting that the length of the litigation was in part driven by requests by both the Complainants and the Presiding ALJ to obtain extensions of the procedural schedule.<sup>20</sup>

It also does not appear to me that the Commission’s processing of these complaints is inconsistent with our obligations under the ICA. The ICA requires that the Commission ensure that an oil pipeline’s rates are just and reasonable and not unduly discriminatory or preferential,<sup>21</sup> and the Commission’s searching examination of Colonial’s rates has been undertaken to ensure that the rates comply with the statute. While a shipper is unable to recover the cost of litigating rate challenges at the Commission, if a complainant prevails by showing that a challenged rate is unjust and unreasonable, that complainant is entitled to reparations, beginning two years prior to the date upon which the complaint was filed.<sup>22</sup>

It is also worth bearing in mind that, in passing the Energy Policy Act of 1992 (EPAAct 1992), Congress streamlined ratemaking for oil pipelines. EPAAct 1992 directed the Commission to “establish[] a simplified and generally applicable ratemaking methodology for oil pipelines” and “streamline procedures of the Commission relating to oil pipeline rates in order to avoid unnecessary regulatory costs and delays.”<sup>23</sup> The Commission fulfilled its mandate by establishing its indexing rate methodology.<sup>24</sup> In the

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<sup>20</sup> See, e.g., Chief ALJ, Order Granting and Modifying Revised Procedural Schedule, Dockets No. OR18-7-000, et al. (June 23, 2020) (Accession No. 20200623-3047); Chief ALJ, Order of Chief Judge Extending Initial Decision Deadline, Docket Nos. OR18-7-000, et al. (July 22, 2021) (Accession No. 20210722-3072).

<sup>21</sup> 49 U.S.C. app. § 1 *et seq.* (1988).

<sup>22</sup> *Id.* § 16(1).

<sup>23</sup> Pub. L. No. 102-486, Title XVIII—Oil Pipeline Regulatory Reform, §§ 1801(a)-1802(a), 106 Stat. 2776, 3010 (1992) (codified at 42 U.S.C. § 7172 note).

<sup>24</sup> *Revisions to Oil Pipeline Regulations Pursuant to Energy Policy Act of 1992*, Order No. 561, FERC Stats. & Regs. ¶ 30,985, at 30,941 (1993) (cross-referenced at 65 FERC ¶ 61,109), *order on reh’g*, Order No. 561-A, FERC Stats. & Regs. ¶ 31,000 (1994) (cross-referenced at 68 FERC ¶ 61,138), *aff’d sub nom. Ass’n of Oil Pipe Lines v. FERC*, 83 F.3d 1424 (D.C. Cir. 1996).

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last decade, only three cost-of-service rate cases against oil pipelines have been fully litigated at the Commission.

- b. Does the ability for pipelines to recover the cost of litigation incentivize the unnecessary extension of litigation on the part of the pipeline owners?

**RESPONSE:**

Consistent with the D.C. Circuit case, *Iroquois Gas Transmission Sys. v. FERC*,<sup>25</sup> Commission precedent allows pipelines to recover reasonably incurred regulatory litigation costs from shippers.<sup>26</sup> In some instances, the Commission has allowed pipelines to recover these expenses through a surcharge, a practice which has been upheld on appeal.<sup>27</sup>

The Commission has disagreed with arguments that “the Commission should not permit pipelines to recover litigation expenses because pipelines will have no incentive to limit litigation costs,”<sup>28</sup> explaining that any surcharge that the Commission authorizes must be just and reasonable and that pipelines “do[] not control the degree to which shippers have litigated the issues raised.”<sup>29</sup>

**Question 4:** Not-for-profit electric cooperatives and the generation and transmission associations (G&T) that supply them serve nearly 42 million Americans and cover more than 50 percent of the country’s landmass. Many supply power to communities in states such as Wyoming. Members of G&T cooperatives share ownership, including the costs, risks, and benefits. If one member does not fulfill its obligation, all other G&T members are burdened with the cost.

- a. How many G&T cooperatives are subject to regulation by the Commission?

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<sup>25</sup> *Iroquois Gas Transmission Sys., L.P. v. FERC*, 145 F.3d 398 (D.C. Cir. 1998).

<sup>26</sup> See *SFPP, L.P.*, Opinion No. 435-A, 91 FERC ¶ 61,135, at 61,512 (2000) (“Litigation related to the pipeline’s cost of service and the structure of its tariff are part of its normal, ongoing operations, and such costs are recoverable as part of the pipeline’s cost of service.”) (footnote omitted).

<sup>27</sup> *SFPP, L.P.*, Opinion No. 435-B, 96 FERC ¶ 61,281, at 62,074-75 (2001), *order on reh’g, SFPP, L.P.*, 100 FERC ¶ 61,353, at PP 9-14 (2002), *aff’d in relevant part, BP W. Coast Prods., LLC v. FERC*, 374 F.3d 1263, 1294 (D.C. Cir. 2004).

<sup>28</sup> *SFPP, L.P.*, Opinion No. 511-D, 166 FERC ¶ 61,142, at P 117 (2019) (citation omitted).

<sup>29</sup> *Id.* (citation omitted).

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**RESPONSE:**

Commission staff estimate that there are 18 G&T cooperatives that are fully subject to the Commission's rate regulation under sections 205 and 206 of the Federal Power Act. Section 201(f) of the FPA exempts many cooperatives from the Commission's rate regulation authority.

- b. What is your personal experience with cooperatives and the regulation of cooperatives?

**RESPONSE:**

As the customer of a retail cooperative myself, I have direct experience of the value that cooperatives provide to their members. As a Commissioner, I have also met with numerous cooperatives and the trade associations to which they belong. Given their unique ownership structure—they are owned by the customers they serve—cooperatives have a different set of incentives from investor-owned utilities. This gives cooperatives a different view on FERC matters that I have made a practice of actively seeking out, especially when the Commission is contemplating rulemakings. The Commission's decisions are always improved when we take the comments and protests of cooperatives into account when formulating policy.

- c. What challenges do you foresee that Cooperatives face, especially given that cooperatives are funded by debt and do not have equity investors on which to rely?

**RESPONSE:**

Because cooperatives are fully funded by the members they serve, any increase in the costs to deliver electric service are born by those members. The limited number of customers and the resources upon which the members can draw make it difficult for many cooperatives to undertake the large capital expenditures that may be needed for maintenance or to adapt to changing regulatory burdens.

- d. Do FERC regulations sufficiently consider the distinct risks and challenges faced by cooperatives?

**RESPONSE:**

I have always found that cooperatives have a willing ear at the Commission and that their comments in our generic proceedings



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are responded to fully and in accordance with the Commission's obligations under the Administrative Procedure Act. Many cooperatives are exempted from FERC's ratemaking jurisdiction by FPA section 201(f) and thus many of our regulations are simply inapplicable to them. Although I have not conducted a searching inquiry as to the particular burdens placed on cooperatives under FERC's regulatory regime, I would enthusiastically hear any complaints from cooperatives about how FERC exercises its jurisdiction and would encourage them to file petitions for rulemaking to the extent to which they are aggrieved.

- e. Many cooperatives serve economically distressed and rural areas. Does the Commission conduct outreach to these communities to ensure their opinions are heard?

**RESPONSE:**

Given the constrained resources of cooperatives, cooperatives may have limited ability to effectively participate in Commission proceedings so as to vigorously advance their interests. As you correctly point out, many cooperatives serve economically distressed and rural areas. Given cooperatives' resource constraints, I think it could be valuable for the Office of Public Participation to engage in deliberate outreach to cooperatives to assist them in participating in Commission proceedings. Indeed, I made such a suggestion when I spoke to the inaugural director of the Office of Public Participation when she first assumed her duties. As I explained in my response to question (b) above, I think cooperatives have important contributions make, and I welcome their submissions in any of our dockets.

**Question 5:** As discussed during the May 4 Hearing, disadvantaged communities should have access to affordable, reliable, and domestic energy. These communities are especially sensitive to high prices. If needed infrastructure is not built, disadvantage communities are the first to feel the pain of price spikes.

- a. In your view, can energy infrastructure, including natural gas infrastructure, can help alleviate the burden of high prices on disadvantaged communities?

**RESPONSE:**

Yes, energy infrastructure can help alleviate the burden of high prices. High prices are caused by high demand and limited

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supply.<sup>30</sup> The development of energy infrastructure increases access to supply which in turn leads to lower energy prices.

- b. How will the Commission apply its “directed outreach program” to these communities? Will part of this outreach include outlining both the cost and the benefits of a project for a community?

**RESPONSE:**

I am unaware of any initiative at the Commission known as the “directed outreach program,” though I would be interested to learn about it, if it exists. To the extent to which such an undertaking is being pursued, it would be conducted by Commission staff who work at the direction of the Chairman. Since I am neither responsible for, nor have the authority to direct, such activities, I am unable to state how Commission staff will engage with any particular community in its outreach efforts. Assuming that such outreach would be conducted by the Office of Public Participation (OPP), a “directed outreach program” will be irrelevant to the substance of the Commission’s decisions, except insofar as it encourages or discourages potential litigants filing in our dockets. OPP has a narrow remit: to “coordinate and provide assistance to members of the public to facilitate participation in Commission proceedings.”<sup>31</sup> Their job is to make it easier for the public to participate in FERC proceedings, not to advocate that the public take particular positions before the Commission. Additionally, OPP has been instructed not to take positions on the substance of FERC matters and it is composed primarily of non-decisional staff, which is to say, its staff are walled-off from the Commissioners and the staff responsible for reviewing litigants’ filings and assisting the Commission in developing its orders. The only way OPP’s outreach should affect the Commission’s proceedings is that OPP may increase the number of litigants in our dockets.

Your broader concern, that the Commission, as an institution, often focuses more on the costs and adverse effects of infrastructure development while paying scant attention to the benefits, is well-

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<sup>30</sup> See, e.g., U.S. Energy Information Administration, *Natural gas explained: Factors affecting natural gas prices* (last updated Oct. 27, 2022), <https://www.eia.gov/energyexplained/natural-gas/factors-affecting-natural-gas-prices.php> (“Increases in natural gas supply generally result in lower natural gas prices, and decreases in supply tend to lead to higher prices. Increases in demand generally lead to higher prices, and decreases in demand tend to lead to lower prices.”).

<sup>31</sup> FERC, *Glick Announces Appointment of Elin Katz as Director of FERC’s New Office of Public Participation* (Oct. 12, 2021), <https://www.ferc.gov/Elin-Katz-Director-Of-OPP>.

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founded. This is unfortunate, not only because the institutional bias leads the Commission to tell only part of the story, but also because this bias appears to run directly contrary to the purpose of the statutes we administer, which is to “encourage the orderly development of plentiful supplies of electricity and natural gas at reasonable prices.”<sup>32</sup> Over the last couple of years, I have been concerned that the Commission has failed to take a balanced approach to such discussions, especially discussions regarding infrastructure permitting. For example, none of the three panels convened during the Commission’s Roundtable on Environmental Justice and Equity in Infrastructure Permitting focused on the benefits that attend access to plentiful supplies of reasonably priced energy, something largely dependent upon the development of adequate energy infrastructure.<sup>33</sup> Absent a discussion of the benefits of abundant, affordable energy, any discussion on infrastructure permitting is necessarily incomplete.

**Question 6:** In response to Senator Cantwell, you testified, and I agree, that the power markets FERC regulates must be free of manipulation. Do you also believe that the targets of FERC’s enforcement program have and should have due process rights (including prompt responses for information and discovery) that the Commission must respect?

- a. Please tell me whether and if so how FERC respects the rights of the targets of its civil enforcement program, especially those targets who are individuals or small companies?
- b. Large institutions have considerable resources and many competing interests. It appears that, as a practical matter, they are often in a different situation when considering or pursuing settlement of matters than are small companies or individuals. In your judgment, has FERC’s civil enforcement program sufficiently respected the rights of individuals or small entities in proceedings against such individuals or entities?
- c. If so, please support your answer with specific examples and data. If not, what are your suggestions for improvement?

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<sup>32</sup> *NAACP v. FPC*, 425 U.S. 662, 669-70 (1976) (citations omitted) (*NAACP*); accord *Myersville Citizens for a Rural Cmty.*, 783 F.3d 1301, 1307 (D.C. Cir. 2015) (quoting *NAACP*, 425 U.S. at 669-70). I note that the Supreme Court has also recognized the Commission has authority to consider “other subsidiary purposes,” such as “conservation, environmental, and antitrust questions.” *NAACP*, 425 U.S. at 670 & n.6 (citations omitted). But all subsidiary purposes are, necessarily, subordinate to the statute’s primary purpose.

<sup>33</sup> FERC Staff, Second Supplemental Notice of Roundtable on Environmental Justice & Equity in Infrastructure Permitting, Docket No. AD23-5-000 (Mar. 14, 2023) (Accession No. 20230314-3058).

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- d. Has, and, if so, how has FERC assured respondents in its civil enforcement proceedings access to a prompt and fair fact finding before a neutral factfinder? Please support your answer with data.
- e. Has FERC enforcement conducted civil litigation in a manner that enables a prompt resolution by the courts?
- f. In your judgment, is greater oversight of FERC's enforcement program by the Commission or Congress warranted to ensure that the rights of individuals and smaller entities that are the subject of civil enforcement have a reasonable ability to defend themselves?

**RESPONSE:**

The role of the Office of Enforcement in ensuring that our markets remain free of manipulative practices is critical. Markets can only function, which is to say they can only produce the just and reasonable rates required by the Federal Power Act, if they are free of manipulation. Nevertheless, as important as it is to police our markets, all parties under investigation by the Commission's Office of Enforcement must be afforded their full Constitutional due process rights. I have long expressed concerns that the enforcement process—where the Commission itself both investigates and adjudicates whether market manipulation or other violations have occurred—is fraught with due process concerns. In a word, our enforcement system is unjust. While the Commissioners ultimately decide whether violations have occurred, there is, in my view, an obvious, inherent institutional bias in favor of the conclusions and accusations made by our own Office of Enforcement. I encourage the Commission to investigate potential reforms to remediate that bias.

- (a) In my view, the Office of Enforcement often abuses the threat of litigation to force the targets of their investigations into settlements, especially in smaller stakes cases. Who wants to spend millions of dollars to defend a relatively trivial case when you can settle it for a small sum? I further believe that the Office of Enforcement particularly bullies private citizens and smaller companies with threats of litigation. It can take years of burdensome, invasive data requests and discovery just to reach the point at which the Office of Enforcement is ready to formally recommend action to the Commission, even in relatively minor cases. The expense and encumbrances that attend such litigation are often too great, especially for smaller entities, to bear. In my opinion, the Office of Enforcement has come, institutionally, to

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rely upon an investigative system in which the process itself is part of the penalty.

- (b) No. In my view, the Office of Enforcement has come to target individuals by making them jointly and severally liable for the penalty faced by the entity for which they worked in order to apply additional leverage for settlements. This is particularly troubling given the Commission's longstanding laxity in applying scienter requirements in its enforcement cases.
- (c) In my view, particular individuals generally should not be targeted by the Office of Enforcement unless they acted in their personal capacity to manipulate the markets in clear contravention of company directives. For example, if a rogue trader violates explicit direction from his leadership and takes a manipulative action for personal gain (e.g., with the sole intent of increasing his end-of-year bonus), that individual may be appropriately subject to liability in a personal capacity. On the other hand, if an individual trader acts under the direction of his leadership to take a manipulative action that incidentally benefits the individual, that individual should not be targeted.
- (d) The enforcement process is far from expeditious although, in fairness, that is only partially the fault of the Office of Enforcement. In part, the length of enforcement actions has been driven by the Commission's unnecessary (and extratextual) show cause proceedings which violate the statute's requirement that the process be "prompt." But I encourage both Congress and the Commission to investigate ways to speed up the process. As an example, the Commission could direct the Office of Enforcement to abandon its longstanding practice of pressuring targets into accepting tolling agreements early in the enforcement process. Once a tolling agreement is in place, the Office of Enforcement no longer has an incentive to seek quick resolution of a case which, in the absence of a tolling agreement, would be driven by the default 5-year statute of limitations. I am also not convinced that the Office of Enforcement acts as a neutral factfinder. In my experience, it acts much more like a group of prosecutors trying to build a case with a single objective in mind: securing an indictment. One reform I have contemplated would be to direct the appointment of a FERC attorney (not from within the Office of Enforcement) in every investigation and assign them the sole responsibility of advocating for the accused—not to represent them, but to ensure that the accused is able to fully establish and explain their side of the case—an enforcement ombudsman. As I

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have alluded to above, I also have grave doubts as to whether the Commission, as a body, can truly discharge its duties as a neutral fact finder, given what I believe to be a deeply ingrained bias in favor of the conclusions of our own staff. This may be inherent in the structure of the agency, as the commissioners are ultimately responsible for setting policy around market manipulation, overseeing the staff conducting enforcement actions, and adjudicating whether violations have occurred. Although case law has supported enforcement regimes in which the same agency serves as investigator, prosecutor and judge, having seen enforcement up close, I do not believe that it affords defendants a truly fair hearing before a truly neutral decision maker. I encourage both Congress and the Commission to explore any potential reforms to ensure neutral fact-finding and neutral decision making.

(e) No; see above.

(f) Yes; see above.

**Question 7:** FERC opened a Notice of Inquiry docket (AD22-7) in February 2022 to investigate the supply of jet fuel to airports but has taken no further action.

a. What is the status of that docket? This proceeding should be timely resolved.

**RESPONSE:**

The Commission's Notice of Inquiry on Oil Pipeline Capacity Allocation Issues and Anomalous Conditions in Docket No. AD22-7-000 remains pending before the Commission. The Notice of Inquiry established April 25, 2022, as the deadline for initial comments and May 25, 2022, as the deadline for reply comments. The Commission received 25 comments (initial and reply).

I issued a separate statement in the proceeding to express three concerns.<sup>34</sup> *First*, there was not a problem that, in fact, needed to be resolved or that even *could* be resolved by Commission action. *Second*, we were singling out a particular shipper category as the basis for exploring across-the-board changes to our policies and tariffs. *Third*, even if the Commission were to decide to take action, it would be difficult to make a properly informed decision because carriers may not willingly provide the information that the

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<sup>34</sup> *Oil Pipeline Capacity Allocation Issues & Anomalous Conditions*, 178 FERC ¶ 61,105 (2022) (Danly, Comm'r, concurring).

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Commission requested, given the disclosure constraints imposed  
by the Interstate Commerce Act.

- b. Should Congress provide FERC with greater authority to require pipeline carriers to provide additional information regarding the allocation status of pipelines and the relative volumes of products being transported on those pipelines to help the Commission and affected parties identify airports where supply constraints could inhibit operations and growth?

**RESPONSE:**

If the goal is to reduce the supply constraints that raise prices and inhibit operations and growth at airports, that purpose is unlikely to be achieved by requiring carriers to provide additional information. In general, the ICA does not provide the Commission with authority to order carriers to expand service, discontinue service, or connect with another carrier.

Furthermore, carriers have identified several obstacles to alleviating supply constraints for airports. Colonial Pipeline filed comments stating that “it might be impossible for pipelines to physically construct an expansion or new project capable of servicing these airports,” that “there is no way for the Commission to guarantee that any expanded space be reserved for jet fuel, nor is it assured that the airlines would provide the financial backstop for such an expansion through an open season commitment for firm space,” and that “[a carrier] may not reserve . . . capacity only for jet fuel shippers without violating the ICA,” “common carrier pipelines are supposed to be shipper-neutral, and new expansions would not guarantee additional capacity for jet fuel, absent discrimination.”<sup>35</sup> Similarly, SFPP, Inc. filed comments stating, “[t]o the extent expansions have not occurred in certain markets, it is not because [its parent company, Kinder Morgan, Inc.,] is not interested in expansion; rather, it is because of some combination of high project costs (whether due to permitting, right of way acquisition, or geography/location) and lack of shipper willingness to backstop the necessary capital investment.”<sup>36</sup>

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<sup>35</sup> Colonial Pipeline Co., April 25, 2022 Comments, Docket No. AD22-7, at 26-27 (Accession No. 20220425-5230).

<sup>36</sup> SFPP, L.P., May 25, 2022 Reply Comments, Docket No. AD22-7-000, at 7 (Accession No. 20220525-5202).

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**Question 8:** Recently, the Committee has heard testimony that FERC has and should exercise jurisdiction over the pipeline transportation of hydrogen under the Interstate Commerce Act and/or Natural Gas Act.

- a. Has the Commission evaluated whether it has jurisdiction over hydrogen pipeline transportation under the Interstate Commerce Act or Natural Gas Act pursuant to the terms of those two statutes?

**RESPONSE:**

The Commission has not evaluated whether it has jurisdiction over hydrogen pipeline transportation under the Interstate Commerce Act (ICA) or Natural Gas Act (NGA).

To make such a determination under the ICA, the Commission would have to determine whether the hydrogen pipeline “engaged in . . . [t]he transportation of oil or other commodity, except water and except natural or artificial gas, by pipe line, or partly by pipe line and partly by railroad or by water.”<sup>37</sup> The Commission makes this finding by evaluating “(1) whether the commodity is a fuel source in that it has heating value and is used for energy-related purposes; (2) whether the cost of transportation will have an impact on energy markets; and (3) whether the commodity will compete with oil or other refined products for capacity in the pipeline.”<sup>38</sup>

The Department of Energy states that hydrogen is currently transported by pipeline in its gaseous state in regions with substantial demand and by truck in either its liquid or gaseous state in regions where demand is smaller or emerging.<sup>39</sup> The most recent jurisdictional determination came from the former Interstate Commerce Commission (ICC) which held that “Congress intended to exclude from [its] jurisdiction [under the ICA] all gas types

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<sup>37</sup> 49 U.S.C. § 1(1). Congress subsequently passed the Department of Energy Organization Act (DOE Act) in 1977, which transferred to FERC “such functions set forth in the [ICA] and vested by law in the Interstate Commerce Commission or the Chairman and members thereof as relate to transportation of oil by pipeline.” Pub. L. No. 95-91, § 306, 91 Stat. 565, 581 (1977); *see also* 49 U.S.C. § 60502; *see also* *CF Indus., Inc. v. FERC*, 925 F.2d 476 (D.C. Cir. 1991) (discussing FERC’s authority under the DOE Act).

<sup>38</sup> *Palmetto Prods. Pipe Line LLC*, 151 FERC ¶ 61,090, at P 30 (2015) (discussing *Gulf Cent. Pipeline Co.*, 50 FERC ¶ 61,381 (1990), *aff’d*, *CF Indus., Inc. v. FERC*, 925 F.2d 476).

<sup>39</sup> Department of Energy, Office of Energy Efficiency & Renewable Energy, Hydrogen and Fuel Cell Technologies Office, Hydrogen Delivery, <https://www.energy.gov/eere/fuelcells/hydrogen-delivery>.



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regardless of origin or source.”<sup>40</sup> Hydrogen, if transported by pipeline, would be virtually certain to be transported as a gas—to do so as a liquid would require it (assuming standard pressures) to be cooled to and kept below -423°F (20° K).<sup>41</sup> Under the ICC’s holding, therefore, hydrogen transportation by pipeline would be non-jurisdictional.

Nevertheless, if the transportation of hydrogen by pipeline is found to fall within the jurisdiction conferred by the ICA, hydrogen pipelines would become common carriers, meaning that hydrogen pipelines would have to offer to transport hydrogen at the same rates and terms to all interested shippers. Hydrogen pipelines could not agree to negotiated rates for specific shippers. In addition, the Commission would only have authority to regulate the rates and services of hydrogen pipelines; the Commission has no power to site hydrogen pipelines or grant a pipeline eminent domain authority.

To determine whether hydrogen pipelines are jurisdictional under the NGA, the Commission would have to determine whether the pipeline engaged in the “transportation of natural gas in interstate commerce.”<sup>42</sup> The NGA defines “natural gas” as meaning “natural gas unmixed, or any mixture of natural and artificial gas.”<sup>43</sup> The Commission does not have jurisdiction over pipelines transporting purely artificial gas, that is, when “the product gas is artificially created by the agency of man.”<sup>44</sup> Hydrogen is an artificial gas.<sup>45</sup>

Further, the Commission only assumes jurisdiction over pipelines when doing so would advance a goal or purpose of the NGA<sup>46</sup>—

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<sup>40</sup> *Cortez Pipeline Co.*, 45 Fed. Reg. 85,177, 85,178 (Dec. 24, 1980).

<sup>41</sup> Department of Energy, Office of Energy Efficiency & Renewable Energy, Hydrogen and Fuel Cell Technologies Office, Liquid Hydrogen Delivery, <https://www.energy.gov/eere/fuelcells/liquid-hydrogen-delivery>.

<sup>42</sup> 15 U.S.C. § 717(b).

<sup>43</sup> *Id.* § 717a(5).

<sup>44</sup> *Nat. Gas Pipeline Co. of Am.*, 53 FPC 802, 804 (1975).

<sup>45</sup> Department of Energy, Office of Energy Efficiency & Renewable Energy, Hydrogen and Fuel Cell Technologies Office, Hydrogen Production, <https://www.energy.gov/eere/fuelcells/hydrogen-production> (stating that hydrogen “doesn’t typically exist by itself in nature and must be produced from compounds that contain it.”).

<sup>46</sup> *See Cortez Pipeline Co.*, 7 FERC ¶ 61,024, at 61,041 (1979) (stating that the issue of how to define “natural gas” “should be determined primarily by reference to the goals and purposes of the NGA”) (citations omitted). The Supreme Court counsels that “[i]n determining the meaning of the statute, [one] look[s] not only to

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that is, when it would be consistent with the NGA’s objective of “encourag[ing] the orderly development of plentiful supplies of . . . natural gas at reasonable prices.”<sup>47</sup> Based on this analysis, FERC has found that a pipeline transporting predominantly carbon dioxide in interstate commerce which produced a small amount of methane that was never separated or sold was not within its jurisdiction.<sup>48</sup> A similar analysis would likely apply to hydrogen pipelines and the Commission would, therefore, likely lack jurisdiction under the NGA.

If, however, the Commission is found to have jurisdiction over hydrogen pipelines under the NGA, the transportation and sale of hydrogen will be considered as “affected with a public interest.”<sup>49</sup> In addition, the Commission will have authority to conduct hearings concerning the lawfulness of rates,<sup>50</sup> investigate market manipulation in connection with the purchase or sale of natural gas or transportation services,<sup>51</sup> fix rates and charges,<sup>52</sup> regulate the construction of natural gas pipeline facilities and abandonment of transportation and service,<sup>53</sup> facilitate price transparency in those markets,<sup>54</sup> and subject pipelines to penalties of up to \$1,000,000 per day per violation of “any rule, regulation, restriction, condition, or order made or imposed by the Commission.”<sup>55</sup> Hydrogen pipelines, once certificated, would also be accorded the right to acquire land by the exercise of eminent domain—a formidable power.<sup>56</sup>

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the particular statutory language, but to the design of the statute as a whole and to its object and policy.” *Crandon v. United States*, 494 U.S. 152, 158 (1990) (citations omitted).

<sup>47</sup> *NAACP*, 425 U.S. at 669-70 (citations omitted).

<sup>48</sup> *Cortez Pipeline Co.*, 7 FERC ¶ 61,024.

<sup>49</sup> 15 U.S.C. § 717(a).

<sup>50</sup> *Id.* § 717c.

<sup>51</sup> *Id.* § 717c-1.

<sup>52</sup> *Id.* § 717d.

<sup>53</sup> *Id.* § 717f(b), (c).

<sup>54</sup> *Id.* § 717t-2.

<sup>55</sup> *Id.* § 717t-1.

<sup>56</sup> *Id.* § 717f(h).

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It is also worth noting that many have stated that the transportation of hydrogen in interstate gas pipelines is not without its challenges. The Congressional Research Service (CRS) has described how hydrogen, due to its molecular size, is more prone to leaking from pipelines than methane and can also cause “embrittlement” of the materials from which natural gas pipelines are commonly constructed.<sup>57</sup> This embrittlement “can lead to acute pipeline failure or may generally reduce the service life of a pipeline.”<sup>58</sup> While there may be ways to develop new pipelines that are suited to a hybrid role, the CRS concludes that “[w]hen hydrogen is introduced into pipelines originally designed to transport natural gas . . . [it] can create greater safety risks than those in dedicated hydrogen pipelines.”<sup>59</sup>

As a final matter, it is worth noting that hydrogen has a number of physical characteristics that may make it impractical as a replacement for natural gas or other hydrocarbons in the economy, at least on a significant scale. “Hydrogen has the highest energy content of any common fuel by weight (about three times more than gasoline), but it has the lowest energy content by volume (about four times less than gasoline).”<sup>60</sup> This has serious implications for the practicality of transporting large volumes of hydrogen over substantial distances. Pipeline capacity is scarce and therefore valuable. The opportunity costs of transporting a low energy density fuel, necessarily displacing higher energy density fuel in the process, would likely raise the overall cost of energy significantly.

Also, “it takes more energy to produce hydrogen (by separating it from other elements in molecules) than hydrogen provides when it is converted to useful energy.”<sup>61</sup> This raises serious questions about the practicality of producing the quantities of hydrogen that would be needed for a “hydrogen economy.” Vast amounts of

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<sup>57</sup> Congressional Research Service, *Pipeline Transportation of Hydrogen: Regulation, Research, and Policy*, at 3 (Mar. 2, 2021), <https://crsreports.congress.gov/product/pdf/R/R46700>.

<sup>58</sup> *Id.*

<sup>59</sup> *Id.* at 4.

<sup>60</sup> U.S. Energy Information Administration, *Hydrogen explained*, <https://www.eia.gov/energyexplained/hydrogen/>.

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

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surplus energy would be needed to supply enough hydrogen to replace natural gas.<sup>62</sup>

Since it appears, at best, questionable that hydrogen pipelines would be jurisdictional to the Commission under either the NGA or the ICA, if Congress wants hydrogen pipelines to be subject to federal regulation, it should consider legislation to establish that jurisdiction unambiguously.

- b. Isn't it true that FERC regulates the pipeline transportation of all commodities with energy uses under either the Interstate Commerce Act or Natural Gas Act?

**RESPONSE:**

Probably not. The Interstate Commerce Act (ICA) and the Natural Gas Act (NGA) regulate specific commodities. The ICA regulates the transportation of oil by pipeline. As I explain in Question 8a, the Commission determines whether a commodity falls under the definition of "oil" by evaluating three factors.<sup>63</sup> The NGA regulates the transportation of natural gas, which includes "natural gas unmixed, or any mixture of natural and artificial gas."<sup>64</sup> Pipelines that transport purely artificial gas (which hydrogen likely is under the law) are not within the Commission's jurisdiction under the ICA or NGA.

**Question 9:** Commissioner Christie mentioned the situation in PJM over the Christmas holiday in 2022. The events of that weekend have spurred a bankruptcy and significant litigation. Reports are that payments/collections of as much as \$2 billion may be at stake. How and over what time period will the Commission resolve factual and legal disputes over these events? What conclusion should the Members of the Committee draw from the existence of this dispute? What, if anything, can done to reduce the incidence of disputes such as these when reliability is at risk?

**RESPONSE:**

The Commission is currently considering numerous complaints that address this issue. Those cases are currently pending before

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<sup>62</sup> For more on the practical limitations of hydrogen see Michael Liebreich, *The Unbearable Lightness of Hydrogen*, BloombergNEF (Dec. 12, 2022), <https://about.bnef.com/blog/liebreich-the-unbearable-lightness-of-hydrogen/>.

<sup>63</sup> *Supra* note 38 (citing *Palmetto Prods. Pipe Line LLC*, 151 FERC ¶ 61,090 at P 30 (discussing *Gulf Cent. Pipeline Co.*, 50 FERC ¶ 61,381, *aff'd*, *CF Indus. Inc. v. FERC*, 925 F.2d 476).

<sup>64</sup> 15 U.S.C. § 717a(5).

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the Commission. However, as a general matter, I have long been concerned about PJM's performance as the entity that administers the markets in this region, particularly with regard to resource adequacy and ensuring accurate price formation so that the markets can work properly.

For example, PJM, which relies upon capacity auctions, has *only one* mechanism to ensure resource adequacy—the price signals sent by those markets. The lack of effective buyer-side market power mitigation allows new state-sponsored, renewable resources to manipulate the markets by offering their capacity below cost thereby suppressing the prices paid to existing resources.

Since there is no regulatory authority charged with overseeing PJM's system planning to ensure that, on a region-wide basis, there is sufficient generation to meet load, and because the states and the utilities appear to now rely upon PJM for resource adequacy, the sole mechanism that exists to create incentives for the retention of needed, existing generation or the entry of new generation to serve growing load requirements, are the capacity market's price signals. Because responsibility for system stability is diffused among the states, PJM, power producers, and FERC, there is no clear accountability for resource adequacy failures.

Because price signals are the only method of ensuring that sufficient generation is built or retained, if the price signals are distorted by external, price-suppressing subsidies, the capacity markets will be unable to send the accurate price signals needed to create incentives for a large enough quantity of new capacity to meet system demands. When, even worse, the external subsidies are designed to favor a particular category of resources (such as wind and solar) which do not have the reliability attributes necessary to ensure long-term system stability, the inevitable consequence is that the subsidized renewables will drive the unsubsidized, dispatchable generation into insolvency. Over time, this creates capacity shortfalls and deprives the electric system of the attributes needed to keep the lights on.

Although FERC has historically ensured that such out-of-market subsidies would be unable to skew price signals through various market protection mechanisms like the Minimum Offer Price Rule, in the last two years we have abandoned this commitment.<sup>65</sup> The

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<sup>65</sup> See Statement of Commissioner James P. Danly, Docket No. ER21-2582-000 (Oct. 27, 2021) (Accession No. 20211027-4003) (opposing the evisceration of the Minimum Offer Price Rule).

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market skewing effects are already being seen. In the last several months, PJM has begun to raise the alarm about impending resource adequacy shortfalls and yet, at a time of impending scarcity, the prices at the last capacity auction went *down*.<sup>66</sup> This is an indisputable sign of market failure and it is just the beginning. Although we have yet to see the full effects of FERC’s policy decisions, they will inevitably have real-world consequences as the markets experience ever greater scarcity and are unable to attract the investment in the generation assets required to ensure that the electric system remains stable. Reliability failures will ultimately result, which is why FERC must act now to ensure the integrity of our markets by protecting them from the effects of subsidies.

**Questions from Senator Maria Cantwell**

**Question 1: PJM Capacity Market and Reliability**

Commissioner Danly, you asserted during the hearing that low prices in PJM's capacity market are jeopardizing PJM's current and future reliability because they are driving early retirement of fossil fuel resources deemed necessary to ensure reliability. You also appeared to use reliability issues during Winter Storm Uri as an example of this problem. I believe your analysis may be at odds with other energy market experts so I am hoping to better understand your conclusions.

- Doesn’t the basic design of PJM’s capacity market, with its downward sloping demand curve, ensure that capacity prices will increase as supply becomes scarcer, even before there’s any shortage?
- Do you agree that PJM sets the demand curve such that if supply needed to meet expected demand in three years is threatened, then the capacity market price will keep increasing until enough supply is secured, and can go as high as the net cost of entry for a new combined cycle gas facility that could be built in time to meet that need?  
<https://www.pjm.com/-/media/committees-groups/committees/mrc/2023/20230328-special/resource-retirements-replacements-and-risks-faq.ashx>

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<sup>66</sup> PJM, *Energy Transition in PJM: Resource Retirements, Replacements & Risks*, at 17 (Feb. 24, 2023), <https://www.pjm.com/-/media/library/reports-notice/special-reports/2023/energy-transition-in-pjm-resource-retirements-replacements-and-risks.ashx> (“For the first time in recent history, PJM could face decreasing reserve margins . . . should these trends – high load growth, increasing rates of generator retirements, and slower entry of new resources – continue.”); Rich Heidorn Jr., *PJM Chief: Retirements Need to Slow Down*, RTO INSIDER, Mar. 27, 2023, <https://www.rtoinsider.com/articles/31899-pjm-chief-retirements-need-to-slow-down#:~:text=Rich%20Heidorn%20Jr.,Power%20Supply%20Association%20last%20week> (quoting CEO PJM CEO Manu Asthana as stating that “PJM needs to slow down the pace of generation retirements to avoid reliability problems by the end of the decade.”); See PJM Interconnection, L.L.C., *PJM Capacity Auction Procures Adequate Resources*, at 1 (Feb. 27, 2023), <https://www.pjm.com/-/media/about-pjm/newsroom/2023-releases/20230227-pjm-capacity-auction-procures-adequate-resources.ashx> (“The auction produced a price of \$28.92 MW-day for much of the PJM footprint, compared to \$34.13/MW-day for the 2023/2024 auction in May 2022 . . .”).

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- With regard to Winter Storm Uri, do you disagree with PJM’s analysis that the challenges it faced during this period was not due to a lack of capacity, but rather the failure of generators who were paid hundreds of millions of dollars in capacity market payments to meet their obligations to do so?
- Given that PJM’s analysis determined that of the outages that occurred—63% were natural gas, 28% coal, 4% oil, 2% nuclear, 1% hydro, and 1% other, and that “wind and solar resources performed as the near-term forecasts projected”—are you concerned about the high outage rate of natural gas fired plants during this emergency?
- Do you agree with PJM’s findings that a lack of weatherization was the fundamental cause of gas plant failures during the 2014 Polar Vortex outages, and do you support PJM’s recent calls to FERC and NERC to adopt stricter weatherization standards for generators?

**RESPONSE:**

The basic design of PJM Interconnection, L.L.C.’s (PJM) capacity market, including its downward-sloping demand curve, was originally based on sound economic theory. The problem is that PJM (with the Commission’s complicity) has stacked the deck against accurate price formation, thereby allowing the PJM market to easily be gamed and prices to be suppressed. The primary culprit is elimination of rules that protect the market against market manipulation by subsidized renewable resources. These resources use the subsidies to dump their “supply” into the market at artificially low prices (at an offer price of zero, in fact), thereby manipulating the downward-sloping curve to produce lower prices for all other supply in the market. This is only one example of the steps taken that undermine PJM’s markets, and I have long predicted that resource adequacy failures and their attendant reliability crises will be the consequence. To show just how poorly administrated PJM’s market is, despite the fact that PJM has begun warning of the impending scarcity of generation, the prices in its most recent procurement auction went *down*.<sup>67</sup> This reduction in auction prices at a time of impending scarcity is a self-evident market failure and it demonstrates the price warping effects of government subsidies. Prices should increase as supply decreases under the downward-sloping demand curve, and they would be if

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<sup>67</sup> See PJM Interconnection, L.L.C., *PJM Capacity Auction Procures Adequate Resources*, at 1 (Feb. 27, 2023), <https://www.pjm.com/-/media/about-pjm/newsroom/2023-releases/20230227-pjm-capacity-auction-procures-adequate-resources.ashx> (“The auction produced a price of \$28.92 MW-day for much of the PJM footprint, compared to \$34.13/MW-day for the 2023/2024 auction in May 2022 . . .”).

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the market was not being manipulated to artificially reduce prices.<sup>68</sup>

There is no question that PJM is driving dispatchable fossil fuel resources into premature retirement. As a result, risk of reliability failures will continue to increase in frequency and severity, as we saw during Winter Storm Uri. Aside from subsidized renewables being allowed to drive them out of business, the other problem is that natural gas fired resources would be unlikely to recover the cost of firm natural gas contracts if they included these costs in their capacity offers, and thus would be forced into retirement.

The claim that “wind and solar resources performed as the near-term forecasts projected” during the storm appears to ignore the issue of how they performed as compared to fully dispatchable fossil resources. With respect to intermittent resources, performing “as projected” could mean that they were not performing at all. It is generally “projected” that the sun sets at night, that some days are cloudy, that the wind may be weak. Keep in mind that under those very same weather patterns, load may reach historic highs from a cold snap or a heat wave. The Germans have even coined a word for the winter version of this phenomenon, often spoken about when discussing resource adequacy—*dunkelflaute*—which “refer[s] to a period that is cloudy, cold, and windless.”<sup>69</sup>

As to my prediction that the premature retirement of fossil fuel resources caused by market failures resulting from skewed price signals will ultimately lead to reliability failures—you do not have to take my word for it. Just last week, ENR held a hearing on reliability. During this hearing, Jim Robb, the head of the North American Electric Reliability Corporation (NERC), when asked if

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<sup>68</sup> See, e.g., FERC Staff, September 29, 2021 Notice of Filing Taking Effect by Operation of Law, Docket No. ER21-2582-000 (Accession No. 20210929-3009); see also Statement of Commissioner James P. Danly, Docket No. ER21-2582-000 (Oct. 27, 2021) (Accession No. 20211027-4003) (opposing the evisceration of the Minimum Offer Price Rule); *PJM Interconnection, L.L.C.*, 178 FERC ¶ 61,020 (2022) (Danly, Comm’r, dissenting) (opposing elimination of 10 % adder in modeling energy market offers); Statement of Commissioner James P. Danly, Docket Nos. EL19-58-006, et al. (Jan. 20, 2022) (Accession No. 20220120-3114) (dissenting to order *PJM Interconnection, L.L.C.*, 177 FERC ¶ 61,209 (2021), reversing recently approved reserve market reforms); *Indep. Mkt. Monitor for PJM v. PJM Interconnection, L.L.C.*, 176 FERC ¶ 61,137 (2021) (Danly, Comm’r, dissenting), *reh’g denied*, 178 FERC ¶ 61,121 (2022) (Danly, Comm’r, dissenting) (opposing unit-specific mitigation review of all seller capacity offers).

<sup>69</sup> Tim McDonnell, *Can Europe survive the dreaded dunkelflaute?*, QUARTZ, Dec. 13, 2022, <https://qz.com/can-europe-survive-the-dreaded-dunkelflaute-1849886529>.



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he agreed that the “United States is headed for a reliability crisis”<sup>70</sup> he replied, “I do.”<sup>71</sup> PJM CEO Manu Asthana, in the same hearing, when asked whether he agrees that the “United States is heading for a reliability crisis,”<sup>72</sup> stated that “I do think there is an increasing risk of that.”<sup>73</sup> The head of NERC, the entity responsible for promulgating the nation’s mandatory reliability standards, and the CEO of FERC’s largest wholesale electric market, both agree with me that the current pace of the shift towards intermittent resources and the retirement of dispatchable generation are threatening resource adequacy and system stability.

That said, I share your concern that any natural gas resources were unable to perform during an emergency event. Failure of natural gas resources to perform is often driven by inadequate fuel supply and there are two primary problems that natural gas generators face in obtaining sufficient fuel: (1) the cost of firm fuel contracts likely exceeds any price the market would bear, and (2) even if the markets could bear the cost of firm fuel, in some regions there is insufficient natural gas pipeline infrastructure to meet demand on peak days. Finally, I generally support greater weatherization of all resources, including wind resources, as well as opportunities to recover such costs in the market, preferably by means of market clearing prices that have not been manipulated by subsidized generators.

**Question 2: Hydro Relicensing.**

As the Commissioners know, FERC leads the licensing and relicensing process for non-federal hydropower facilities which makes up around half of our nation’s hydropower capacity. And currently licenses for 459 hydropower facilities, including pumped storage, representing 17 gigawatts will expire by 2035. In my state alone, there are 18 facilities whose licenses expire by 2035, representing over 1.3 gigawatts of capacity. I understand that right now on average,

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<sup>70</sup> *Hearing to Examine the Reliability & Resiliency of Elec. Servs. in the U.S. in Light of Recent Reliability Assessments & Alerts Before the S. Comm. On Energy & Nat’l Res.*, 118th Cong. (2023), <https://www.energy.senate.gov/hearings/2023/6/full-committee-hearing-to-examine-the-reliability-and-resiliency-of-electric-services-in-the-u-s-in-light-of-recent-reliability-assessments-and-alerts> (statement of Senator Hoeven citing FERC Commissioners Mark Christie and Danly).

<sup>71</sup> *Id.* (statement of NERC President & CEO Jim Robb).

<sup>72</sup> *Id.* (statement of Senator Hoeven citing FERC Commissioners Mark Christie and Danly).

<sup>73</sup> *Id.* (statement of PJM President & CEO Manu Asthana).

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relicensing a hydropower facility takes seven years and the paperwork costs \$3.5 million. Which does not include important costs of new turbines, fish passage, or dam safety investments.

- Do you believe the current hydropower licensing process needs reform, and if so are there specific changes you believe Congress should consider making to the process more effective and efficient?

**RESPONSE:**

Whether the current hydropower licensing process needs reform depends upon whether one believes that the process is functioning as Congress intended, and upon whether the policy goals originally advanced by Congress have now changed.

The length of the current relicensing process is in large measure a function of the multitude of issues Congress has directed FERC to consider under the Federal Power Act (FPA). Under the FPA, when acting on a license application FERC must “give equal consideration to the purposes of energy conservation, the protection, mitigation of damage to, and enhancement of, fish and wildlife . . . , the protection of recreational opportunities, and the preservation of other aspects of environmental quality.”<sup>74</sup> FERC must also determine whether a proposed project “will be best adapted to a comprehensive plan for improving or developing a waterway or waterways for the use or benefit of interstate or foreign commerce, for the improvement and utilization of water-power development, for the adequate protection, mitigation, and enhancement of fish and wildlife (including related spawning grounds and habitat), and for other beneficial public uses, including irrigation, flood control, water supply, and recreational and other purposes.”<sup>75</sup> These statutory directives mean that, the larger the number of resources a project affects, the lengthier the review the FPA requires. If the goal is to shorten hydropower licensing timelines, Congress could consider paring down the issues that FERC is statutorily required to consider in its licensing decisions.

In addition, other federal statutes, such as the Endangered Species Act (ESA), often lengthen licensing timelines. While relicensing projects was not specifically studied, FERC staff’s *Report on the Pilot Two-Year Hydroelectric Licensing Process for Non-Powered*

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<sup>74</sup> 16 U.S.C. § 797(e).

<sup>75</sup> *Id.* § 803(a)(1).

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*Dams and Closed-Loop Pumped Storage Projects and Recommendations Pursuant to Section 6 of the Hydropower Regulatory Efficiency Act of 2013*, which was submitted to Congress, discusses the effects that obtaining other federal authorizations have on the licensing process.<sup>76</sup> FERC staff stated that, “[t]he formal consultation process [required by ESA] can be lengthy and can hinder the Commission’s ability to issue a license in a timely manner.”<sup>77</sup> In addition, FERC staff noted that “FWS commented that if ‘not likely to adversely affect’ determinations could not be reached, it may not have the resources to handle multiple formal consultations in an expedited manner.”<sup>78</sup>

When discussing permitting reform, policymakers often turn to statutory deadlines as a means to discipline agencies. However, in the case of hydropower licensing, several of the statutes already set forth timelines for agency actions. Those deadlines are regularly not met either because statutory language allows extensions<sup>79</sup> or the deadlines are circumvented.<sup>80</sup> If the goal is to shorten hydropower licensing timelines, Congress could consider firm deadlines or, perhaps better, placing agencies that issue other federal authorizations in a consultative role.

- Is FERC working to streamline duplicate security regulations for hydroelectric projects that are subject to both NERC and Division of Dam Safety and Inspection security requirements and audits?

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<sup>76</sup> FERC Staff, *Report on the Pilot Two-Year Hydroelectric Licensing Process for Non-Powered Dams and Closed-Loop Pumped Storage Projects and Recommendations Pursuant to Section 6 of the Hydropower Regulatory Efficiency Act of 2013*, Docket No. AD13-9-000, at 41-45 (May 2017), <https://www.ferc.gov/sites/default/files/2020-04/ReportonthePilotTwo-YearHydroelectricLicensingProcess.pdf>.

<sup>77</sup> *Id.* at 43.

<sup>78</sup> *Id.*

<sup>79</sup> *See, e.g.*, 16 U.S.C. § 1536(b)(1)(B) (section 7 of the ESA provides that “[i]n the case of an agency action involving a permit or license applicant, the Secretary and the Federal agency may not mutually agree to conclude consultation within a period exceeding 90 days unless . . . if the consultation period proposed to be agreed to will end before the 150th day after the date on which consultation was initiated, submits to the applicant a written statement setting forth—(I) the reasons why a longer period is required, (II) the information that is required to complete the consultation, and (III) the estimated date on which consultation will be completed; or . . . if the consultation period proposed to be agreed to will end 150 or more days after the date on which consultation was initiated, obtains the consent of the applicant to such period.”).

<sup>80</sup> *See, e.g., Turlock Irrigation Dist.*, 175 FERC ¶ 61,144 (2021) (California State Water Board avoiding the one-year deadline in the Clean Water Act by denying applications without prejudice).

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**RESPONSE:**

Hydropower projects subject to NERC jurisdiction can use their compliance with NERC standards to meet overlapping requirements imposed by the Division of Dam Safety and Inspections. However, it should be recognized that there is often a significant gap between the NERC standards and FERC regulations. The NERC standards were created to address electric supply and the stable functioning of the Bulk Electric System (BES), while the FERC regulations focus on public health, safety, the environment, and the protection of property. Projects with low impact on the BES, for example, can pose significant safety risks. Thus, the risk-based criteria of the two programs can vary drastically for the same project. Our Dam Safety Security audits highlight the situations where NERC standards are less stringent and encourage, but do not mandate, the owner/operator to comply with the FERC requirements in order to better secure their critical assets. Additionally, some assets at hydropower facilities do not fall under NERC's purview at all, even if the power generation portion of the facility does. These assets then must be assessed independently for their function and criticality and may be subject to FERC security requirements.

**Question 3: Hydrogen Pipelines.**

I'd like to get the Commissioners' views on transporting hydrogen in pipelines, an emerging issue that needs attention today. Most members of the Senate Energy Committee have expressed support for hydrogen and see it as a promising fuel source with many diverse applications and benefits. As you know, transporting hydrogen from where it's produced to where it is needed is a key part of the hydrogen puzzle. And pipelines will surely play a key role in any hydrogen-based energy system. But it was also clear from an Energy Committee hearing last Congress that there is uncertainty in the regulatory regime surrounding hydrogen pipelines.

- What is FERC's current role and authority when it comes to siting a hydrogen pipeline?

**RESPONSE:**

The Commission has not evaluated whether it has jurisdiction over hydrogen pipeline transportation under the Interstate Commerce Act (ICA) or Natural Gas Act (NGA).

To make such a determination under the ICA, the Commission would have to determine whether the hydrogen pipeline "engaged in . . . [t]he transportation of oil or other commodity, except water and except natural or artificial gas, by pipe line, or partly by pipe

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line and partly by railroad or by water.”<sup>81</sup> The Commission makes this finding by evaluating “(1) whether the commodity is a fuel source in that it has heating value and is used for energy-related purposes; (2) whether the cost of transportation will have an impact on energy markets; and (3) whether the commodity will compete with oil or other refined products for capacity in the pipeline.”<sup>82</sup>

The Department of Energy states that hydrogen is currently transported by pipeline in its gaseous state in regions with substantial demand and by truck in either its liquid or gaseous state in regions where demand is smaller or emerging.<sup>83</sup> The most recent jurisdictional determination came from the former Interstate Commerce Commission (ICC) which held that “Congress intended to exclude from [its] jurisdiction [under the ICA] all gas types regardless of origin or source.”<sup>84</sup> Hydrogen, if transported by pipeline, would be virtually certain to be transported as a gas—to do so as a liquid would require it (assuming standard pressures) to be cooled to and kept below -423°F (20° K).<sup>85</sup> Under the ICC’s holding, therefore, hydrogen transportation by pipeline would be non-jurisdictional.

Nevertheless, if the transportation of hydrogen by pipeline is found to fall within the jurisdiction conferred by the ICA, hydrogen pipelines would become common carriers, meaning that hydrogen pipelines would have to offer to transport hydrogen at the same rates and terms to all interested shippers. Hydrogen pipelines could not agree to negotiated rates for specific shippers. In addition, the Commission would only have authority to regulate the rates and services of hydrogen pipelines; the Commission has

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<sup>81</sup> 49 U.S.C. § 1(1). Congress subsequently passed the Department of Energy Organization Act (DOE Act) in 1977, which transferred to FERC “such functions set forth in the [ICA] and vested by law in the Interstate Commerce Commission or the Chairman and members thereof as relate to transportation of oil by pipeline.” Pub. L. No. 95-91, § 306, 91 Stat. 565, 581 (1977); *see also* 49 U.S.C. § 60502; *see also* *CF Indus., Inc. v. FERC*, 925 F.2d 476 (D.C. Cir. 1991) (discussing FERC’s authority under the DOE Act).

<sup>82</sup> *Palmetto Prods. Pipe Line LLC*, 151 FERC ¶ 61,090, at P 30 (2015) (discussing *Gulf Cent. Pipeline Co.*, 50 FERC ¶ 61,381 (1990), *aff’d*, *CF Indus., Inc. v. FERC*, 925 F.2d 476).

<sup>83</sup> Department of Energy, Office of Energy Efficiency & Renewable Energy, Hydrogen and Fuel Cell Technologies Office, Hydrogen Delivery, <https://www.energy.gov/eere/fuelcells/hydrogen-delivery>.

<sup>84</sup> *Cortez Pipeline Co.*, 45 Fed. Reg. 85,177, 85,178 (Dec. 24, 1980).

<sup>85</sup> Department of Energy, Office of Energy Efficiency & Renewable Energy, Hydrogen and Fuel Cell Technologies Office, Liquid Hydrogen Delivery, <https://www.energy.gov/eere/fuelcells/liquid-hydrogen-delivery>.

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no power to site hydrogen pipelines or grant a pipeline eminent domain authority.

To determine whether hydrogen pipelines are jurisdictional under the NGA, the Commission would have to determine whether the pipeline engaged in the “transportation of natural gas in interstate commerce.”<sup>86</sup> The NGA defines “natural gas” as meaning “natural gas unmixed, or any mixture of natural and artificial gas.”<sup>87</sup> The Commission does not have jurisdiction over pipelines transporting purely artificial gas, that is, when “the product gas is artificially created by the agency of man.”<sup>88</sup> Hydrogen is an artificial gas.<sup>89</sup>

Further, the Commission only assumes jurisdiction over pipelines when doing so would advance a goal or purpose of the NGA<sup>90</sup>— that is, when it would be consistent with the NGA’s objective of “encourag[ing] the orderly development of plentiful supplies of . . . natural gas at reasonable prices.”<sup>91</sup> Based on this analysis, FERC has found that a pipeline transporting predominantly carbon dioxide in interstate commerce which produced a small amount of methane that was never separated or sold was not within its jurisdiction.<sup>92</sup> A similar analysis would likely apply to hydrogen pipelines and the Commission would, therefore, likely lack jurisdiction under the NGA.

If, however, the Commission is found to have jurisdiction over hydrogen pipelines under the NGA, the transportation and sale of

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<sup>86</sup> 15 U.S.C. § 717(b).

<sup>87</sup> *Id.* § 717a(5).

<sup>88</sup> *Nat. Gas Pipeline Co. of Am.*, 53 FPC 802, 804 (1975).

<sup>89</sup> Department of Energy, Office of Energy Efficiency & Renewable Energy, Hydrogen and Fuel Cell Technologies Office, Hydrogen Production, <https://www.energy.gov/eere/fuelcells/hydrogen-production> (stating that hydrogen “doesn’t typically exist by itself in nature and must be produced from compounds that contain it.”).

<sup>90</sup> See *Cortez Pipeline Co.*, 7 FERC ¶ 61,024, at 61,041 (1979) (stating that the issue of how to define “natural gas” “should be determined primarily by reference to the goals and purposes of the NGA”) (citations omitted). The Supreme Court counsels that “[i]n determining the meaning of the statute, [one] look[s] not only to the particular statutory language, but to the design of the statute as a whole and to its object and policy.” *Crandon v. United States*, 494 U.S. 152, 158 (1990) (citations omitted).

<sup>91</sup> *NAACP v. FPC*, 425 U.S. 662, 669-70 (1976) (citations omitted).

<sup>92</sup> *Cortez Pipeline Co.*, 7 FERC ¶ 61,024.

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hydrogen will be considered as “affected with a public interest.”<sup>93</sup> In addition, the Commission will have authority to conduct hearings concerning the lawfulness of rates,<sup>94</sup> investigate market manipulation in connection with the purchase or sale of natural gas or transportation services,<sup>95</sup> fix rates and charges,<sup>96</sup> regulate the construction of natural gas pipeline facilities and abandonment of transportation and service,<sup>97</sup> facilitate price transparency in those markets,<sup>98</sup> and subject pipelines to penalties of up to \$1,000,000 per day per violation of “any rule, regulation, restriction, condition, or order made or imposed by the Commission.”<sup>99</sup> Hydrogen pipelines, once certificated, would also be accorded the right to acquire land by the exercise of eminent domain—a formidable power.<sup>100</sup>

It is also worth noting that many have stated that the transportation of hydrogen in interstate gas pipelines is not without its challenges. The Congressional Research Service (CRS) has described how hydrogen, due to its molecular size, is more prone to leaking from pipelines than methane and can also cause “embrittlement” of the materials from which natural gas pipelines are commonly constructed.<sup>101</sup> This embrittlement “can lead to acute pipeline failure or may generally reduce the service life of a pipeline.”<sup>102</sup> While there may be ways to develop new pipelines that are suited to a hybrid role, the CRS concludes that “[w]hen hydrogen is introduced into pipelines originally designed to transport natural

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<sup>93</sup> 15 U.S.C. § 717(a).

<sup>94</sup> *Id.* § 717c.

<sup>95</sup> *Id.* § 717c-1.

<sup>96</sup> *Id.* § 717d.

<sup>97</sup> *Id.* § 717f(b), (c).

<sup>98</sup> *Id.* § 717t-2.

<sup>99</sup> *Id.* § 717t-1.

<sup>100</sup> *Id.* § 717f(h).

<sup>101</sup> Congressional Research Service, *Pipeline Transportation of Hydrogen: Regulation, Research, and Policy*, at 3 (Mar. 2, 2021), <https://crsreports.congress.gov/product/pdf/R/R46700>.

<sup>102</sup> *Id.*

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gas . . . [it] can create greater safety risks than those in dedicated hydrogen pipelines.”<sup>103</sup>

As a final matter, it is worth noting that hydrogen has a number of physical characteristics that may make it impractical as a replacement for natural gas or other hydrocarbons in the economy, at least on a significant scale. “Hydrogen has the highest energy content of any common fuel by weight (about three times more than gasoline), but it has the lowest energy content by volume (about four times less than gasoline).”<sup>104</sup> This has serious implications for the practicality of transporting large volumes of hydrogen over substantial distances. Pipeline capacity is scarce and therefore valuable. The opportunity costs of transporting a low energy density fuel, necessarily displacing higher energy density fuels in the process, would likely raise the overall cost of energy significantly. Also, “it takes more energy to produce hydrogen (by separating it from other elements in molecules) than hydrogen provides when it is converted to useful energy.”<sup>105</sup> This raises serious questions about the practicality of producing the quantities of hydrogen that would be needed for a “hydrogen economy.” Vast amounts of surplus energy would be needed to supply enough hydrogen to replace natural gas.<sup>106</sup>

Since it appears, at best, questionable that hydrogen pipelines would be jurisdictional to the Commission under either the NGA or the ICA, if Congress wants hydrogen pipelines to be subject to federal regulation, it should consider legislation to establish that jurisdiction unambiguously.

- As we move to integrating hydrogen into the economy and likely upgrading and converting natural gas pipelines to hydrogen pipelines, do you think clarification of regulatory authority over hydrogen pipelines is going to be necessary?

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<sup>103</sup> *Id.* at 4.

<sup>104</sup> U.S. Energy Information Administration, Hydrogen explained, <https://www.eia.gov/energyexplained/hydrogen/>.

<sup>105</sup> *Id.*

<sup>106</sup> For more on the practical limitations of hydrogen see Michael Liebreich, *The Unbearable Lightness of Hydrogen*, BloombergNEF (Dec. 12, 2022), <https://about.bnef.com/blog/liebreich-the-unbearable-lightness-of-hydrogen/>.



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**RESPONSE:**

Under the current statutory and regulatory regime, FERC would be presented with several thorny issues if asked to act on an application converting a natural gas pipeline to a hydrogen pipeline, especially if FERC is asked to retain jurisdiction over that pipeline.

FERC would have to determine if the proposed hydrogen pipeline will transport “any mixture of natural and artificial gas”<sup>107</sup> and whether the transportation of that gas would advance the purpose of the Natural Gas Act (NGA). If either of those answers are “no,” FERC would be unable to retain jurisdiction over the pipeline once converted.

FERC would also have to determine if the conversion of the pipeline meant that the natural gas pipeline company was abandoning its natural gas facilities, or any service rendered by its facilities. The NGA prohibits natural gas companies from abandoning facilities and service without FERC approval, and FERC can only grant approval after “finding . . . that the available supply of natural gas is depleted to the extent that the continuance of service is unwarranted, or that the present or future public convenience or necessity permit such abandonment.”<sup>108</sup>

While these issues certainly could be addressed by Congress, I strongly caution against using the NGA to regulate hydrogen pipelines. Subjecting hydrogen pipelines to the NGA would impose significant economic regulations and enforcement penalties on a nascent industry. In addition, if the goal is to establish a comprehensive or central regulatory scheme over hydrogen pipelines, such a scheme will not be achieved by simply giving FERC authority under the NGA. While FERC has exclusive authority over the transportation of natural gas in interstate commerce, the natural gas pipeline industry is also subject to a myriad of other regulatory requirements. Pipeline companies must often obtain authorizations from the Environmental Protection Agency, the Pipelines and Hazardous Materials Safety Administration, the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service, the National Marine Fisheries Service, and state agencies administering the Clean Air Act, Clean Water Act,

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<sup>107</sup> 15 U.S.C. § 717a(5).

<sup>108</sup> *Id.* § 717f(b).

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and National Historic Preservation Act. On top of federal authorizations, pipelines also have to obtain state and local permits, so long as those requirements are consistent with FERC's certificate.<sup>109</sup> Making FERC the "lead agency" has not mitigated investor uncertainty regarding these other regulatory schemes or reduced permitting timelines at other agencies.

It is also worth noting that many have stated that the transportation of hydrogen in interstate gas pipelines is not without its challenges. The Congressional Research Service (CRS) has described how hydrogen, due to its molecular size, is more prone to leaking from pipelines than methane and can also cause "embrittlement" of the materials from which natural gas pipelines are commonly constructed.<sup>110</sup> This embrittlement "can lead to acute pipeline failure or may generally reduce the service life of a pipeline."<sup>111</sup> While there may be ways to develop new pipelines that are suited to a hybrid role, the CRS concludes that "[w]hen hydrogen is introduced into pipelines originally designed to transport natural gas . . . [it] can create greater safety risks than those in dedicated hydrogen pipelines."<sup>112</sup>

As a final matter, it is worth noting that hydrogen has a number of physical characteristics that may make it impractical as a replacement for natural gas or other hydrocarbons in the economy, at least on a significant scale. "Hydrogen has the highest energy content of any common fuel by weight (about three times more than gasoline), but it has the lowest energy content by volume (about four times less than gasoline)."<sup>113</sup> This has serious implications for the practicality of transporting hydrogen over substantial distances. Pipeline capacity is scarce and therefore valuable. The opportunity costs of transporting a low energy

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<sup>109</sup> See, e.g., *El Paso Nat. Gas Co., L.L.C.*, 169 FERC ¶ 61,133, at P 61 (2019) ("Any state or local permits issued with respect to the jurisdictional facilities authorized herein must be consistent with the conditions of this certificate. The Commission encourages cooperation between interstate pipelines and local authorities. However, this does not mean that state and local agencies, through application of state or local laws, may prohibit or unreasonably delay the construction or operation of facilities approved by this Commission.") (footnote omitted).

<sup>110</sup> Congressional Research Service, *Pipeline Transportation of Hydrogen: Regulation, Research, and Policy*, at 3 (Mar. 2, 2021), <https://crsreports.congress.gov/product/pdf/R/R46700>.

<sup>111</sup> *Id.*

<sup>112</sup> *Id.* at 4.

<sup>113</sup> U.S. Energy Information Administration, Hydrogen explained, <https://www.eia.gov/energyexplained/hydrogen/>.

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density fuels, necessarily displacing higher energy density fuel in the process, would likely raise the overall cost of energy significantly.

Also, “it takes more energy to produce hydrogen (by separating it from other elements in molecules) than hydrogen provides when it is converted to useful energy.”<sup>114</sup> This raises serious questions about the practicality of producing the quantities of hydrogen that would be needed for a “hydrogen economy.” Vast amounts of surplus energy would be needed to supply enough hydrogen to replace natural gas.<sup>115</sup>

**Question 4: Pipeline Reliability and Cybersecurity Standards.**

I am very concerned about the alarming vulnerability of our nation’s pipelines to cyberattack by foreign agents. But as I understand it, there are no comparable mandatory and comprehensive standards for the nearly three million miles of natural gas, oil, and hazardous liquid pipelines that cross the United States.

- Do you each believe that the mandatory cybersecurity standards that FERC has been setting for the bulk power sector have increased the grid’s resilience to cyberattack?

I am unaware of definitive evidence that the mandatory cybersecurity standards developed by the North American Electric Reliability Corporation (NERC) have increased the Bulk Electric System’s resilience to cyberattack. Academic studies on the subject, taken together, have been equivocal, some finding that NERC’s standards have improved resilience, while others have determined that they have worsened cybersecurity risks.<sup>116</sup> I have long been skeptical that either NERC, which is a (necessarily) slow-moving standards-setting body, or FERC, which is a

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<sup>114</sup> *Id.*

<sup>115</sup> For more on the practical limitations of hydrogen see Michael Liebreich, *The Unbearable Lightness of Hydrogen*, BloombergNEF (Dec. 12, 2022), <https://about.bnef.com/blog/liebreich-the-unbearable-lightness-of-hydrogen/>.

<sup>116</sup> See, e.g., Aaron Clark-Ginsberg & Rebecca Slayton, *Regulating risks within complex sociotechnical systems: Evidence from critical infrastructure cybersecurity standards*, 46 SCIENCE & PUB. POLICY 339 (2018), <https://academic.oup.com/spp/article-abstract/46/3/339/5184558> (abstract stating that “[o]ur assessment shows that the regulations reduced many but not all cybersecurity risks, and at times may have worsened them”); Tom Alrich, *How can we effectively regulate grid security?*, 2 CYBER SECURITY: A PEER-REVIEWED J. 228 (2018), <https://hstalks.com/article/3406/how-can-we-effectively-regulate-grid-security/> (abstract stating “[w]hile these standards have undoubtedly contributed to making the BES much more secure, they also suffer from some serious — and escalating — problems that are pushing them toward the point that in a few years the North American Electric Reliability Corporation — Critical Infrastructure Protection (NERC CIP) standards may be seen as causing more harm than good.”).

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procedure-driven economic regulator, are the correct instrumentalities to oversee either electric or pipeline cybersecurity standards, especially given the vulnerabilities at stake and the rapid development of emergent threats. As I explain below, the NERC standards-setting process and FERC's oversight of the establishment of those standards is a slow, deliberate, and iterative process.

- Do you each believe that the reliability of the bulk power system is interconnected with the reliability of the natural gas pipeline system?

Yes.

- Do you each believe that cybersecurity threats to the natural gas pipeline system represent a serious and urgent threat and should be a top priority for this committee?

I believe that threats to the cybersecurity of the nation's energy infrastructure are numerous, profound, and growing. Prioritizing cybersecurity threats to the natural gas pipeline system would be well within the committee's prerogative.

However, as I alluded to above, I caution against empowering FERC to take lead over a subject that requires nimbleness and immediate reaction. Consider FERC's November 2022 directive that NERC identify and register inverter-based resources connected to the Bulk-Power System, but which are not currently required to register with NERC, and that have an aggregate, material impact on the reliable operation of the Bulk-Power System.<sup>117</sup> This issue is not new. NERC had "identified many systemic performance issues with the inverter-based fleet *over the past six years.*"<sup>118</sup> Nor will the issue be addressed any time soon. It could be at least four years before certain of the IBR entities are registered and another five years before the full suite of contemplated requirements are mandatory and enforceable. Put differently, it will be about ten or eleven years *after* the significant reliability risk was definitively identified that we will have the registration requirements and mandatory standards in place.

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<sup>117</sup> *Registration of Inverter-based Res.*, 181 FERC ¶ 61,124 (2022) (Danly, Comm'r, concurring).

<sup>118</sup> NERC, *Inverter-Based Resource Strategy: Ensuring Reliability of the Bulk Power System with Increased Levels of BPS-Connected IBRs*, at 3 (June 2022), [https://www.nerc.com/comm/Documents/NERC\\_IBR\\_Strategy.pdf](https://www.nerc.com/comm/Documents/NERC_IBR_Strategy.pdf) (emphasis added).

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Inverters are common devices with well-known physical limitations and engineering challenges. In contrast, cybersecurity is probably the most rapidly developing and uncertain threat vector faced by the American energy system. If it takes a decade for FERC and NERC to deal with the familiar challenges posed by inverters, I think it *highly unlikely* that the system for promulgating mandatory reliability standards, as it exists today, is up to the challenge of developing and imposing rational, effective, or timely cybersecurity requirements.

While I have no informed opinion on whether jurisdiction over pipeline cybersecurity should remain with the Transportation Security Administration (TSA), I do note that Congress has already empowered the Secretary of Homeland Security to issue “regulations”<sup>119</sup> and “a regulation or security directive . . . immediately in order to protect transportation security.”<sup>120</sup> Moreover, as you are aware, TSA has begun its formal rulemaking process. On November 30, 2022, TSA issued an advanced notice of proposed rulemaking “seeking input regarding ways to strengthen cybersecurity and resiliency in the pipeline . . . sector[.]”<sup>121</sup> The deadline for comments was February 1, 2023.<sup>122</sup>

**Question 5: Incentivizing Grid Fiber**

One particular opportunity I’d like to get your views on is on the benefits of installing fiber optic communications capacity on top of transmission towers. Fiber not only provides a way to affordably transmit massive amounts of data, it can do so in so in a physically secure manner. Fiber networks can also provide utilities with private, closed-loop, cyber secure communications networks. More bandwidth that allows generators and grid operators to access more real-time data and visibility needed to integrate more distributed resources and intermittent renewable power sources. And more fiber, or lighting up dark fiber, along our nation’s grid could help provide the backhaul, middle-mile capacity needed to bring affordable broadband to essentially every household or business in the United States.

- Do you agree that expanding communications capacity along the grid’s existing rights-of-way could provide significant co-benefits for cybersecurity, grid modernization, and

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<sup>119</sup> 6 U.S.C. § 1207(d).

<sup>120</sup> 49 U.S.C. § 114(l)(2)(A).

<sup>121</sup> *Enhancing Surface Cyber Risk Mgmt.*, 87 Fed. Reg. 73,527 (Nov. 30, 2022).

<sup>122</sup> *Enhancing Surface Cyber Risk Mgmt.*, 87 Fed. Reg. 78,911 (Dec. 23, 2022) (extending comment deadline from January 17, 2023, to February 1, 2023).

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provide high-speed internet to the tens of millions of Americans that can't currently afford or connect to broadband?

**RESPONSE:**

When siting new infrastructure, it is prudent for project sponsors to consider every feasible way in which they can minimize cost and impact by using existing rights-of-way or colocation with existing infrastructure.

- How do you think a federal cost-shared grant or loan programs could spur a private sector fiber buildout that would provide broadband to underserved or unserved Americans?

**RESPONSE:**

This is not an issue within the Commission's jurisdiction; I have no considered view on the matter.

- Does FERC have the flexibility to incentivize or require the build out of communications capacity or does it need further Congressional direction?

**RESPONSE:**

I am unaware of any statutory authority that would authorize the Commission to provide incentives for the development of communications infrastructure.

**Question 6: Meetings With Stakeholders**

A Committee member expressed concerns over whether Commissioners are able to perform their jobs impartially if they meet or interact with FERC-regulated companies, their representatives, or other stakeholders with an interest in FERC's activities.

- Do you share this concern over your impartiality?

**RESPONSE:**

No. Since I first joined the Commission as general counsel, I have found that it can be valuable to meet with FERC regulated entities and other stakeholders and have a frank exchange of views on subject matters within the Commission's jurisdiction. Such entities (or persons) include investor-owned utilities, cooperatives, trade or professional associations, independent power producers, environmental or other non-profits, state and local officials, tribal leaders, and anyone interested in the Commission's proceedings. These meetings are subject to the limitations of the Commission's

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*ex parte* rules, which prohibit discussion of the merits of contested, on the record proceedings with people outside the Commission.

Far from avoiding discussions with stakeholders and potential litigants, I actively *encourage* parties to reach out to discuss issues with me before making filings with the Commission. This gives the parties the benefit of a commissioner’s feedback on the issues they may seek to raise with the Commission before the limitations of the *ex parte* rules apply.

On one significant issue of market design, the minimum offer price rule, I published a series of white papers laying out my legal analysis of the issue and invited stakeholders to meet with me to discuss their criticisms of my position. This allowed me to meet with individuals and stakeholders across the ideological spectrum and from various backgrounds (e.g., ISOs and RTOs, independent market monitors, investor-owned utilities, ratepayers, and state regulators). Inviting this debate helped inform my thinking on the matter and, I hope, assisted the stakeholder community as they considered the positions they would adopt in support of or in opposition to the tariff filings that were eventually submitted to the Commission.

Holding meetings with Commission stakeholders does not affect my ability to serve as an impartial adjudicator and, if anything, assists me in understanding the problems and concerns of those affected by the Commission’s issuances.

- In your time as a Commissioner, have you met with any FERC-regulated companies or associations of FERC-regulated companies who have a financial interest in the energy industry? If you have had any such meetings, please provide a list of all entities and individuals with whom you have met. Were any of these meetings not open to the public?

**RESPONSE:**

As discussed in my answer to the previous question, I meet regularly with organizations and individuals who may have a financial stake of one kind or another in the energy sector. Whether it’s an investor-owned utility, public power, or a non-profit advancing an ideological objective, I assume that everyone I meet with has a stake in the energy sector of one kind or another, or they would not make the effort to seek a meeting. While I have something akin to an open-door policy—subject to scheduling limitations—I am not in the habit of making these meeting public.

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My schedule is regularly disclosed pursuant to FOIA requests, and I am happy to provide you with a copy.

- In your time as a Commissioner, have you met with or attended an event sponsored by any tax exempt 501c3 entity that receives donations from individuals, corporations, or foundations? If you have had any such meetings, please provide a list of all entities and individuals with whom you have met. Were any of these meetings not open to the public?

**RESPONSE:**

I do not routinely inquire into the tax-exempt status of the organizations with which I meet. It is likely that many of the stakeholder groups with which I have met are tax-exempt non-profits under 501(c)(3) or other provisions of the Internal Revenue Code. I would also assume that these tax-exempt organizations have donors of various kinds including “individuals, corporations, or foundations.”

- In your time as a Commissioner, have you met with any former employers, clients, or other individuals, including but not limited to those former employers who may be representing parties in matters appearing before FERC or in the courts regarding matters in which FERC is a party? If you have had any such meetings, please provide a list of all entities and individuals with whom you have met. Were any of these meetings not open to the public?

**RESPONSE:**

Before joining the Commission as FERC’s general counsel in 2017, I worked at the law firm of Skadden, Arps. Since that time, I have followed the applicable ethical rules with respect to matters in which I was involved while employed by the firm and with respect to matters in which Skadden, Arps represents clients before the Commission. Since leaving Skadden, Arps nearly six years ago, I have periodically interacted socially and professionally with former colleagues. In all instances, these interactions have been consistent with applicable professional and ethical standards.

- In your time as a Commissioner, have you met with any organizations that had not been cleared by FERC’s ethics advisors?

**RESPONSE:**

Commissioners do not routinely seek clearance for every meeting they hold with stakeholders. Instead, we conduct our meetings in



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accordance with the advice provided by the Commission’s Designated Agency Ethics Official. During my time as a commissioner, I have conducted my meetings in accordance with the advice of the Commission’s Designated Agency Ethics Official.

**Questions from Senator James E. Risch**

**Question 1:** We are seeing repeated failures of the RTO markets—from high prices, to threatened or complete failures in reliability, to massive interconnection queue delays, to the inability to build transmission. Simply put, we are seeing cost and reliability under significant pressure in these markets. At what point are these failures and pressures significant enough that FERC decides to issue a 206 order into the market failures, especially for NE-ISO, PJM and CAISO? Why has FERC not already done this?

**RESPONSE:**

That point has long since passed. The Commission should have instituted section 206 investigations into the RTO markets years ago, particularly with respect to the markets you mention. This has not happened because such an action has not enjoyed broad enough support among my colleagues. In fact, as chairman, I placed such an opportunity squarely in front of the Commission—an opportunity to vote on an order to initiate a *sua sponte* FPA section 206 order against the California Independent System Operator. My colleagues voted it down.<sup>123</sup> If the recent reliability challenges, price distortions, and rising costs that we have witnessed in our jurisdictional markets to date have been insufficient to induce the Commission to issue an order under FPA section 206, I would be hard pressed to imagine what it will take to spur us to action.

**Questions from Senator Mike Lee**

**Question 1:** Utility companies and project developers need to be absolutely sure that federal regulators are not going to move the goalposts on them after they have made a decision to spend millions or billions of dollars on an infrastructure project.

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<sup>123</sup> See, e.g., *Transcript of the 1073rd Meeting*, FERC, at 47 (Dec. 17, 2020), <https://www.ferc.gov/media/transcript-dec-meeting>; *Staff Presentation on California Independent System Operator (EL21-19-000)*, FERC (Dec. 17, 2020), <https://www.ferc.gov/news-events/news/staff-presentation-california-independent-system-operator-el21-19-000>.

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- Please describe the importance of precedent agreements in providing certainty for project investments.
- What role do precedent agreements play in allowing the market to determine public interest?

**RESPONSE:**

Pipeline companies have described precedent agreements as providing “a means to secure financing for construction,”<sup>124</sup> and “credit support, which sustains the viability of projects and allows pipeline companies to move forward with development of infrastructure.”<sup>125</sup> In the absence of precedent agreements, little natural gas infrastructure would be developed because they are critical to obtaining the financing for these major, capital-intensive projects.

Precedent agreements are also strong evidence of need, and the Commission need not look further in most circumstances to determine whether a project is or will be needed.<sup>126</sup> Courts have upheld, on numerous occasions, the Commission’s application of its 1999 Certificate Policy Statement<sup>127</sup> and the Commission’s reliance on precedent agreements to support multiple findings of market need.<sup>128</sup> As the U.S. Court of Appeals for the Third Circuit

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<sup>124</sup> Spectra Energy Partners, LP, July 25, 2018 Initial Comments, Docket No. PL18-1-000, at 3 (Accession No. 20180725-5163).

<sup>125</sup> Enbridge Gas Pipelines, April 25, 2022 Comments, Docket Nos. PL18-1-000, et al, at 47 (Accession No. 20220425-5451); *see also* Enbridge Gas Pipelines, Mar. 18, 2022 Request for Rehearing in Part, and Clarification, in Part, Docket Nos. PL18-1-000, et al., at 81 (Accession No. 20220318-5209) (“Binding precedent agreements serve as an excellent indicator of project need because they reflect shippers’ commitments to a project and provide pipelines with the revenue support necessary to make investment and financing decisions for the project.”).

<sup>126</sup> *See Certification of New Interstate Nat. Gas Facilities*, 178 FERC ¶ 61,107 (2022) (Danly, Comm’r, dissenting at P 14) (Updated Certificate Policy Statement).

<sup>127</sup> *Certification of New Interstate Nat. Gas Pipeline Facilities*, 88 FERC ¶ 61,227 (1999), *corrected*, 89 FERC ¶ 61,040 (1999), *clarified*, 90 FERC ¶ 61,128 (2000), *further clarified*, 92 FERC ¶ 61,094 (2000) (1999 Certificate Policy Statement).

<sup>128</sup> *See, e.g., City of Oberlin v. FERC*, 937 F.3d 599, 606 (D.C. Cir. 2019) (“[T]his Court has also recognized that ‘it is Commission policy to not look behind precedent or service agreements to make judgments about the needs of individual shippers.’”) (citation omitted); *Township of Bordentown v. FERC*, 903 F.3d 234, 262-63 (3d Cir. 2018) (“In this case, FERC reasonably relied on [the] binding contract to utilize all of the Project’s capacity . . . as evidence of the market need and proof that the Project will be self-supporting.”); *Minisink Residents for Env’t Pres. & Safety v. FERC*, 762 F.3d 97, 111 n.10 (“Petitioners identify nothing in the policy statement or in

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stated, “[a] contract for a pipeline’s capacity is a useful indicator of need because it reflects a ‘business decision’ that such a need exists. If there were no objective market demand for the additional gas, no rational company would spend money to secure the excess capacity.”<sup>129</sup> The Commission has stated similarly.<sup>130</sup>

**Question 2:** In recent years, I fear that the Commission has strayed from its clearly defined and narrowly tailored mission “to encourage the orderly development of plentiful supplies of electricity and natural gas at just and reasonable rates.” While I am pleased to see some progress over the last few months toward reversing this trend, I remain concerned about the lingering regulatory uncertainty contributed to by FERC decisions over the last two and a half years. This uncertainty stifles investment in natural gas pipelines and electricity transmission projects, infrastructure that is necessary for reliable, affordable, and plentiful energy.

- What should FERC be doing, or not be doing, to provide more certainty to project investors making risk assessments?

**RESPONSE:**

As an initial matter, I quite agree that, over the last several decades, FERC has strayed ever further from its core mission of ensuring the orderly development of plentiful supplies of electricity and natural gas at just and reasonable rates. Fairness demands that I acknowledge that some of the expansion of FERC’s role has been at the direction of Congress. Enactments like the Energy Policy Act of 2005,<sup>131</sup> which established FERC’s role overseeing mandatory standards promulgated by NERC, and the Infrastructure Investment and Jobs Act,<sup>132</sup> which reinvigorated

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any precedent construing it to suggest that it requires, rather than permits, the Commission to assess a project’s benefits by looking beyond the market need reflected by the applicant’s existing contracts with shippers. To the contrary, the policy statement specifically recognizes that such agreements ‘always will be important evidence of demand for a project.’”) (quoting 1999 Certificate Policy Statement, 88 FERC ¶ 61,227 at 61,748); *see also Myersville Citizens for a Rural Cmty., Inc. v. FERC*, 783 F.3d 1301, 1311 (D.C. Cir. 2015) (*Myersville*) (explaining that “[f]or a variety of reasons related to the nature of the market, ‘it is Commission policy to not look behind precedent or service agreements to make judgments about the needs of individual shippers.’ In keeping with its policy, the Commission concluded that the evidence that the Project was fully subscribed was adequate to support the finding of market need.”) (citations omitted).

<sup>129</sup> *Township of Bordentown*, 903 F.3d at 262 (citations omitted).

<sup>130</sup> *See, e.g., Adelpia Gateway, LLC*, 169 FERC ¶ 61,220, at P 35 (2019) (“Given the substantial financial commitment required under these agreements by project shippers, we find that these agreements are the best evidence that the service to be provided by the project is needed in the markets to be served.”) (citation omitted).

<sup>131</sup> Pub. L. 109-58, § 1211, 119 Stat. 594, 941-946 (2005).

<sup>132</sup> Pub. L. 117-58, § 40105, 135 Stat. 429, 933-934 (2021).

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FERC’s transmission backstop siting authority, have transformed FERC from its original role under the FPA from a ratemaking agency into something more expansive.

That said, FERC has taken on many industry-shaping initiatives on its own. From the establishment of open access for transmission service in Order No. 888,<sup>133</sup> to the establishment of the wholesale markets in Order No. 2000,<sup>134</sup> and to the direction of the process by which transmission systems are planned under Order No. 1000,<sup>135</sup> FERC has arrogated to itself the power to: compel the use of private assets by third parties, re-order the mechanisms by which we compensate the electric utilities that serve the majority of Americans, and plan America’s electric system, respectively. These changes have caused industry-wide unsettling of expectations in the first instance and, to compound matters, have been the source of endless tinkering and litigation, frustrating commercial actors’ ability to assess risk premiums on an ongoing basis, and leaving all FERC orders and utility tariffs affected by these regimes under a perpetual cloud of uncertainty due to continuous litigation risk. These undertakings, of breathtaking scope and profound effect, completely reshaped the electric industry, yet had only the thinnest basis in the text of the Federal Power Act.<sup>136</sup> One wonders whether they would have survived

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<sup>133</sup> *Promoting Wholesale Competition Through Open Access Non-Discriminatory Transmission Servs. by Pub. Utils.; Recovery of Stranded Costs by Pub. Utils. & Transmitting Utils.*, Order No. 888, FERC Stats. & Regs. ¶ 31,036 (1996) (cross-referenced at 75 FERC ¶ 61,080), *order on reh’g*, Order No. 888-A, FERC Stats. & Regs. ¶ 31,048 (cross-referenced at 78 FERC ¶ 61,220), *order on reh’g*, Order No. 888-B, 81 FERC ¶ 61,248 (1997), *order on reh’g*, Order No. 888-C, 82 FERC ¶ 61,046 (1998), *aff’d in relevant part sub nom. Transmission Access Pol’y Study Grp. v. FERC*, 225 F.3d 667 (D.C. Cir. 2000), *aff’d sub nom. New York v. FERC*, 535 U.S. 1 (2002).

<sup>134</sup> *Regional Transmission Orgs.*, Order No. 2000, FERC Stats. & Regs. ¶ 31,089 (1999) (cross-referenced at 89 FERC ¶ 61,285), *order on reh’g*, Order No. 2000-A, FERC Stats. & Regs. ¶ 31,092 (2000) (cross-referenced at 90 FERC ¶ 61,201), *aff’d sub nom. Pub. Util. Dist. No. 1 of Snohomish Cnty. v. FERC*, 272 F.3d 607 (D.C. Cir. 2001).

<sup>135</sup> *Transmission Plan. & Cost Allocation by Transmission Owning & Operating Pub. Utils.*, Order No. 1000, 136 FERC ¶ 61,051 (2011), *order on reh’g*, Order No. 1000-A, 139 FERC ¶ 61,132, *order on reh’g & clarification*, Order No. 1000-B, 141 FERC ¶ 61,044 (2012), *aff’d sub nom. S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41 (D.C. Cir. 2014).

<sup>136</sup> *See* Order No. 888, 75 FERC ¶ 61,080 (citing FPA sections 205 and 206 as providing “ample legal authority” and a responsibility under FPA section 206 “to order the filing of non-discriminatory open access transmission tariffs” upon finding such order necessary to remedy undue discrimination), *order on reh’g*, Order No. 888-A, 78 FERC ¶ 61,220, *order on reh’g*, Order No. 888-B, 81 FERC ¶ 61,248, *order on reh’g*, Order No. 888-C, 82 FERC ¶ 61,046, *aff’d in relevant part sub nom., Transmission Access Policy Study Group v. FERC*, 225 F.3d 667, *aff’d sub nom., New York v FERC*, 535 U.S. 1; *Preventing Undue Discrimination & Preference in Transmission Serv.*, Order No. 890, 118 FERC ¶ 61,119, at P 1 (explaining the final rule addresses and remedies

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judicial review had these orders been promulgated following the Supreme Court’s reinvigoration of the major questions doctrine in *West Virginia v. EPA*.<sup>137</sup>

FERC’s most recent foray into expansive, atextual policymaking came in the form of last year’s natural gas pipeline certificate policy statements.<sup>138</sup> Had those policy statements, particularly the GHG Policy Statement, remained in force, FERC would have added the further titles of environmental regulator and climate change tsar to its list of duties.

We rely upon private investment in the United States to develop the critical infrastructure that serves the public interest. We do not have a centrally planned economy. Private actors need a degree of certainty in order to deploy capital rationally. They also need certainty in order to obtain financing on commercially viable terms. Every time FERC asserts a newly discovered power to regulate greater swaths of the American economy, private actors are unable to assess an accurate risk premium for their investments. The results are inevitable: investment chills, new projects are not initiated, the development of critical infrastructure slows, and the economy at large suffers because demand is left unmet. We have seen this bear out over the last couple of years since FERC initiated its ill-fated certificate policy statements—

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undue discrimination under the pro forma Open Access Transmission Tariff adopted in 1996 by Order No. 888), *order on reh’g & clarification*, Order No. 890-A, 121 FERC ¶ 61,297 (2007), *order on reh’g & clarification*, Order No. 890-B, 123 FERC ¶ 61,299 (2008), *order on reh’g & clarification*, Order No. 890-C, 126 FERC ¶ 61,228, *order on clarification*, Order No. 890-D, 129 FERC ¶ 61,126 (2009); Order No. 1000, 136 FERC ¶ 61,051, at P 1 (citing FPA section 206 to adopt reforms to electric transmission planning and cost allocation requirements for public utility transmission providers, building on Order No. 890), *order on reh’g & clarification*, Order No. 1000-A, 139 FERC ¶ 61,132, *order on reh’g & clarification*, Order No. 1000-B, 141 FERC ¶ 61,044, *aff’d sub nom. S.C. Pub. Serv. Auth. v. FERC*, 762 F.3d 41; Order No. 2000, 89 FERC ¶ 61,285 (encouraging the creation of regional transmission organizations to address operational and reliability issues and eliminate any residual discrimination in transmission services when operation of the transmission system remains under the control of a vertically integrated utility), *on reh’g*, Order No. 2000-A, 90 FERC ¶ 61,201, *aff’d sub nom., Pub. Util. Dist. No. 1 of Snohomish County v. FERC*, 272 F.3d 607.

<sup>137</sup> 142 S. Ct. 2587 (2022); *accord* Testimony of Mark C. Christie, Before the U.S. Senate Committee on Energy and Natural Resources, March 3, 2022 Hearing: *Hearing to Review FERC’s Guidance on Natural Gas Pipelines*. Justice Scalia made a point of noting in the opinion in *Morgan Stanley Cap. Grp. Inc. v. Pub. Util. Dist. No. 1 of Snohomish Cnty.*, 554 U.S. 527, 538 (2008), that the Supreme Court had not “hitherto approved” and in that decision “express[ed] no opinion” regarding “the lawfulness of the market-based-tariff system.”

<sup>138</sup> *Consideration of Greenhouse Gas Emissions in Nat. Gas Infrastructure Project Revs.*, 178 FERC ¶ 61,108 (2022) (Interim GHG Policy Statement); Updated Certificate Policy Statement, 178 FERC ¶ 61,107. The Commission converted the two policy statements to “draft” policy statements. *Certification of New Interstate Nat. Gas Facilities*, 178 FERC ¶ 61,197, at P 2 (2022).

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2022 saw the smallest incremental increase in natural gas pipeline capacity in a single year since 1995.<sup>139</sup> This reduction in infrastructure development comes at a time when the need and demand for natural gas is as high as it has ever been. Perhaps counter-intuitively, the need for additional interstate pipeline capacity is being driven in no small part by the increasing proportion of intermittent wind and solar resources among the generation fleet.

What can and should FERC do? FERC must not lose sight of a limits of our authority under the Natural Gas Act’s (NGA) public convenience and necessity standard, nor should we lose sight of the how narrow the limits of our ratemaking powers are under the Federal Power Act (FPA). As to the NGA, the Supreme Court has explained that the inclusion of the term “public interest” in our statute is not “a broad license to promote the general public welfare”—instead, it “take[s] meaning from the purposes of the regulatory legislation.”<sup>140</sup> The purpose of the NGA, as the Supreme Court has instructed us, is “to encourage the orderly development of plentiful supplies of . . . natural gas at reasonable prices.”<sup>141</sup> It is evident both from the text of the statute and the Supreme Court’s gloss that the NGA does not confer the authority upon FERC to conduct backdoor environmental regulation from wellhead to burner tip. As to the FPA, our power and obligation is to ensure that the rates for wholesale power and electric transmission service are just and reasonable. Efforts to expand our jurisdiction beyond that narrow remit should be abandoned, except where Congress has declared otherwise.

In order to restore regulatory certainty to the natural gas pipeline and electric industries we should immediately close the dockets on several of our open proceedings. We should terminate the now-draft Natural Gas Pipeline and Interim GHG Policy Statements, both of which have been in draft form for over a year. This would reaffirm that precedent agreements are the most probative evidence of need for a natural gas pipeline and that natural gas pipeline

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<sup>139</sup> U.S. Energy Information Administration, The least U.S. interstate natural gas pipeline capacity on record was added in 2022, <https://www.eia.gov/todayinenergy/detail.php?id=55699>.

<sup>140</sup> *NAACP v. FPC*, 425 U.S. 662, 669 (1976) (*NAACP*).

<sup>141</sup> *Id.* at 669-70 (citations omitted); *accord Myersville*, 783 F.3d at 1307 (quoting *NAACP*, 425 U.S. at 669-70). I note that the Supreme Court has also recognized the Commission has authority to consider “other subsidiary purposes,” such as “conservation, environmental, and antitrust questions.” *NAACP*, 425 U.S. at 670 & n.6 (citations omitted). But all subsidiary purposes are, necessarily, subordinate to the statute’s primary purpose.

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companies will not be subject to the unpredictable and incalculable costs of mitigating upstream and downstream emissions. In closing those dockets, we should acknowledge that they never should have issued, thereby reassuring industry that we are not going to re-open similar proceedings. We should also repudiate the misguided “eyeball” test established in *Northern Natural Gas Company*,<sup>142</sup> which sought to establish a standardless threshold for when GHG emissions would be considered significant.

We should also close the Transmission Planning notice of proposed rulemaking and reaffirm our commitment to the principles of *Illinois Commerce Commission v. FERC*, which holds that ratepayers should only pay rates that are roughly commensurate with the benefits they receive from transmission projects.<sup>143</sup>

**Question 3:** As you know, permitting reform is a topic that is finally gaining some traction among my colleagues. It is encouraging that there is a growing consensus that we need to update our regulations so we can produce more energy in America and rely less on foreign countries with lower environmental standards.

Unfortunately, some harmful ideas have been proposed by some that would increase consumer costs without providing any benefits. One of those ideas is to spread the costs of large transmission lines among a wider group of electricity customers. This, according to their side, would make it easier for them to build large long-distance lines to deliver wind and solar power to places like California that suffer frequent power shortages because of their climate policies.

In my opinion, it is simply not fair to force ratepayers in states like Utah and Idaho to shoulder the costs of California and Oregon climate policies.

Should Congress be in the business of socializing the costs of large transmission lines to customers that do not benefit from those lines?

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<sup>142</sup> *N. Nat. Gas Co.*, 174 FERC ¶ 61,189 (2021) (*Northern Natural*). In *Northern Natural*, a majority of my colleagues established what has been referred to (by some) as the “eyeball” test. See Catherine Morehouse, *Glick, Danly spar over gas pipeline reviews as FERC considers project’s climate impacts for first time*, UTIL. DIVE, Mar. 19, 2021, <https://www.utilitydive.com/news/glick-danly-spar-over-gas-pipeline-reviews-as-ferc-considers-projects-cli/597016/> (“We essentially used the eyeball test,” [Chairman Glick] said, adding that based on that analysis, ‘it didn’t seem significant in terms of the impact of those emissions on climate change.’”).

<sup>143</sup> See *Ill. Commerce Comm’n v. FERC*, 576 F.3d 470 (7th Cir. 2009); see also *Ill. Commerce Comm’n v. FERC*, 721 F.3d 764 (7th Cir. 2013).

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**RESPONSE:**

With the massive subsidies for certain kinds of generation contained in the Inflation Reduction Act of 2022<sup>144</sup> the most significant barrier to asset managers seeking to harvest these subsidies is their ability to interconnect their remotely-located facilities to load. As you suggest, there is now a concerted effort to convince policymakers that FERC must be given the authority to compel the construction of vast quantities of new transmission and, in so doing, allocate (i.e., socialize) the costs of that transmission among the widest possible population of ratepayers. Absent legislation, under longstanding case law,<sup>145</sup> such cost allocation could not be deemed just and reasonable. Should such legislation be enacted, the American people will have insult added to injury. Having been taxed to provide the subsidies absent which much of this remotely located renewable generation would not have been built, they will then have the pleasure, as ratepayers, for shouldering the cost to build the infrastructure required to ensure that the project developers have access to their sought-after revenue streams. FERC has already begun an attempt to broaden the population of ratepayers that will bear the costs of transmission development in its Transmission Planning NOPR.<sup>146</sup> Should that rulemaking be finalized in its current form, and upheld on appeal, ratepayers in Utah would be potentially liable for the costs of transmission projects driven by the public policies, not just of other states, but other states' *municipalities*.<sup>147</sup> Should such a scheme ultimately see implementation, there is an obvious asymmetry: FERC will effectively force the subsidization of those jurisdictions with forward-leaning public policies at the expense of those jurisdictions that have *chosen* not

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<sup>144</sup> Pub. L. No. 117-169, 136 Stat. 1818 (2022) (Inflation Reduction Act of 2022).

<sup>145</sup> See *Ill. Commerce Comm'n v. FERC*, 576 F.3d 470; see also *Ill. Commerce Comm'n v. FERC*, 721 F.3d 764.

<sup>146</sup> *Building for the Future Through Elec. Reg'l Transmission Planning & Cost Allocation & Generator Interconnection*, 179 FERC ¶ 61,028 (2022) (Transmission Planning NOPR); see also *Building for the Future Through Elec. Reg'l Transmission Planning & Cost Allocation & Generator Interconnection*, 176 FERC ¶ 61,024 (2021) (Transmission Planning ANOPR).

<sup>147</sup> See Transmission Planning NOPR, 179 FERC ¶ 61,028 (Danly, Comm'r, dissenting at P 4) ("The NOPR proposes to require regions to factor in any state or even 'local' (!) public policy (read, renewable) goals, no matter how far-fetched.") (citation omitted); *id.* (Danly, Comm'r, dissenting at P 11) (noting states such as Utah are among the primary opponents of the reforms in the ANOPR); Utah Public Service Commission Comments, Docket No. RM21-17-000, , at 15 (Aug. 17, 2022) (explaining that these reforms will "result in unjust and unreasonable rates that shift policy choices of certain states to consumers in others . . .").



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to enact such policies. Not only would this violate the basic principle of cost allocation that has been required by governing case law for decades (that rates paid should be roughly commensurate with benefits received), but it would also run afoul of the very purpose for the enactment of the Federal Power Act in the first place—the establishment of a federal regulatory authority with power over interstate rates that would serve as watchdog prohibiting one state’s policies from harming its neighbors.<sup>148</sup>

To the extent to which Congress wishes to eliminate obstacles to the development of transmission that is genuinely needed for reliability or economic reasons, Congress should consider reforms to the environmental review process under NEPA. The regulatory uncertainty that NEPA creates is a substantial barrier to transmission development in parts of the country where it is nearly impossible to build a transmission project of any length without crossing federal land. I am concerned that recent efforts at permitting reform have failed to sufficiently address the main problem that NEPA creates—the back-end litigation risk of a federal court vacating and remanding permits based on the court’s perception that the federal agency insufficiently explained or explored some comparatively trivial issue in a complex infrastructure project. Such flyspecking is virtually inevitable when all NEPA documents are subjected to the Administrative Procedure Act’s default arbitrary-and-capricious standard of review, a low and inconsistently applied threshold that allows for what amounts to a judicial veto on federal agency decisions. Time limits for agency action and page limits for NEPA documents do not and cannot address this central problem, but may risk exacerbating it. Federal agencies respond to the

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<sup>148</sup> See, e.g., *N.Y. v. FERC*, 535 U.S. 1, 20-21 (2002) (explaining that “the enactment of the FPA in 1935 closed the ‘Attleboro gap’ by authorizing federal regulation of interstate, wholesale sales of electricity—the precise subject matter [found to be] beyond the jurisdiction of the States in [*Public Utilities Commission of Rhode Island v. Attleboro Steam & Electric Co.*, 273 U.S. 83 (1927) (*Attleboro*)]”); *N.J. Bd. of Pub. Utils. v. FERC*, 744 F.3d 74, 98 (3d Cir. 2014) (explaining that “what FERC has actually done here is permit states to develop whatever capacity resources they wish, and to use those resources to any extent that they wish, while approving rules that prevent the state’s choices from adversely affecting wholesale capacity rates” and that “[s]uch action falls squarely within FERC’s jurisdiction”); *New Eng. Power Generators Ass’n, Inc. v. FERC*, 757 F.3d 283, 290-91 (D.C. Cir. 2014) (explaining that “states remain free to subsidize the construction of new generators, and load serving entities to build or contract for any self-supply they believe is necessary,” and that the Commission acted within its authority in “regulat[ing] the ‘price constructs that result in offers into the capacity market from these resources that are not reflective of their actual costs’”); *Conn. Dep’t of Pub. Util. Control v. FERC*, 569 F.3d 477, 481, 485 (D.C. Cir. 2009) (denying the petitions for review and explaining that “if consumer-constituents of state commissions prefer to forbid the construction of new power plants, they will appropriately bear the costs of that decision, including paying more for system reliability from older and less efficient units”).

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incentive that this litigation risk creates, so the increasing length of NEPA documents and the longer times that agencies take to conduct environmental reviews are often no more than a sincere, if often misguided, effort to address this risk—to the limited degree this is even possible.

**Questions from Senator John W. Hickenlooper**

**Question 1:** The MISO region recently approved the nation’s largest ever regional transmission portfolio, known as the Long Range Transmission Plan (LRTP). This portfolio of large-scale projects is expected to provide staggering benefits to states all across the Midwest, including enhanced reliability, resilience, and enabling low-cost power to connect to the grid. My understanding is that planning is currently underway for a second group of projects which could be even more impactful. Sadly, however, MISO’s success with respect to regional transmission and cost-allocation is the exception more than the rule, as most regions have not approved comparable buildouts of large-scale transmission over the past decade.

- What has FERC learned by watching what MISO region has been able to achieve?

As a general matter, I have stated that there are obviously problems with the existing transmission regime.<sup>149</sup> And while I welcome long term transmission planning reform, I remain steadfast in my view<sup>150</sup> that Regional Transmission Organizations (RTOs) / Independent System Operators (ISOs) and other interested public utilities should file their own proposals under section 205 of the Federal Power Act (FPA).<sup>151</sup>

As I explained in my dissent to the Commission’s Transmission Planning NOPR,<sup>152</sup> the Commission’s currently contemplated alternative, *i.e.*, to take action under FPA section 206<sup>153</sup> to find that existing transmission planning across the nation—in every region, for every utility and every market—is so unjust and unreasonable

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<sup>149</sup> *Bldg. for the Future Through Elec. Reg’l Transmission Planning & Cost Allocation & Generator Interconnection*, 176 FERC ¶ 61,024 (2021) (Transmission Planning ANOPR) (Danly, Comm’r, concurring at P 3) (“I, for example, have long been troubled by interconnection logjams and have wondered whether we are needlessly propping up fantasy projects while viable projects get lost in the crowd.”) (citing *PacifiCorp*, 171 FERC ¶ 61,112 (2020) (Danly, Comm’r, concurring)).

<sup>150</sup> *See Bldg. for the Future Through Elec. Reg’l Transmission Planning & Cost Allocation & Generator Interconnection*, 179 FERC ¶ 61,028 (2022) (Transmission Planning NOPR) (Danly, Comm’r, dissenting at P 1).

<sup>151</sup> 16 U.S.C. § 824d.

<sup>152</sup> *See* Transmission Planning NOPR, 179 FERC ¶ 61,028 (Danly, Comm’r, dissenting at P 2).

<sup>153</sup> *Id.* § 824e.

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that it must be replaced with mandatory, pervasive, and invasive reforms<sup>154</sup> cannot be said to serve the purposes of the FPA. It would also be nearly impossible to make such a showing given the drastic variance in transmission rates across the country and across utilities within a single region. The RTOs/ISOs are fully capable of proposing rate changes and reforms on their own.<sup>155</sup> The Midcontinent Independent System Operator, Inc. (MISO) has certainly demonstrated as much. And while I am not opposed to another option, such as requiring the RTOs/ISOs to show cause under FPA section 206 why their existing transmission planning processes are just and reasonable,<sup>156</sup> it is still preferable that the RTOs/ISOs and public utilities make their own filings under FPA section 205. They know their transmission systems far better than we do, they understand their utilities and the ratepayers they serve far better than we do, and they have to live with the consequences of their tariffs.

The example set by MISO demonstrates that the Commission should proceed with caution in imposing uniform federal mandates for transmission planning processes and cost allocation. This is because there are regional differences that make a uniform, FERC-imposed course of action potentially disruptive to progress made in individual RTOs/ISOs. MISO has similarly pointed out such considerations in its comments in the Commission’s Transmission Planning NOPR proceeding (FERC Docket No. RM21-17-000). Specifically, MISO stated that “the Commission should be mindful of regional differences that might limit the success of ‘one size fits all’ mandates” and “should take into account the flexibility needed for different regions.”<sup>157</sup> Moreover, MISO submitted that “the Commission should not move forward with overly-prescriptive requirements that create obstacles for a process well underway.”<sup>158</sup>

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<sup>154</sup> See Transmission Planning NOPR, 179 FERC ¶ 61,028; Transmission Planning ANOPR, 176 FERC ¶ 61,024.

<sup>155</sup> See, e.g., New England Power Pool Participants Committee Initial Comments, Docket No. RM21-17-000, at 4-7 (Oct. 12, 2021) (Accession No. 20211012-5561) (detailing past and current transmission planning activities).

<sup>156</sup> Transmission Planning NOPR, 179 FERC ¶ 61,028 (Danly, Comm’r, dissenting at P 29).

<sup>157</sup> Midcontinent Indep. Sys. Operator, Inc. Comments, Docket No. RM21-17-000, at 2 (Oct. 12, 2021) (Accession No. 20211012-5703).

<sup>158</sup> Midcontinent Indep. Sys. Operator, Inc. Reply Comments, Docket No. RM21-17-000, at 2 (Sept. 19, 2022) (Accession No. 20220919-5217).

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The Organization of MISO States, Inc. has also underscored the importance of flexibility and explained in its comments that “the success of these planning processes was in part the result of the flexibility MISO and stakeholders were able to exercise in undertaking such complicated long-range planning activities to accommodate the rapidly changing environment in the MISO North/Central sub-region” and that “[t]his flexibility was needed to gain perhaps the most important ingredient for success – buy-in from the benefiting states.”<sup>159</sup> And RTOs/ISOs have expressed a similar sentiment in regard to the need for flexibility in their individual comments.<sup>160</sup> As has The RTO/ISO Council (IRC),<sup>161</sup> which explained that “[a]ffording regional flexibility is critical to allow IRC members to customize long-term planning procedures that build on (not undermine) prior achievements or continue (not

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<sup>159</sup> The Organization of MISO States, Inc. Initial Comments, Docket No. RM21-17-000, at 4-5 (Aug. 17, 2022) (Accession No. 20220817-5123).

<sup>160</sup> See, e.g., Cal. Indep. Sys. Operator Corp. Reply Comments, Docket No. RM21-17-000, at 13 (Sept. 19, 2022) (Accession No. 20220919-5195) (“stress[ing] that any Final Rule in this proceeding should grant transmission planners maximum flexibility to implement long-term regional transmission planning into their existing transmission planning frameworks” and that “[t]he CAISO’s Initial Comments noted that several of the NOPR’s proposals were problematic and overly prescriptive in the level of detail they would require for long-term planning”); (citations omitted); New York Indep. Sys. Operator, Inc. Comments, Docket No. RM21-17-000, at 3 (Aug. 17, 2022) (Accession No. 20220817-5198) (“The NYISO requests that the Commission distill its proposed transmission planning reforms into higher-level planning principles in its final rule. The final rule should provide each planning region with the flexibility, in coordination with its applicable state entities and its stakeholders, to modify its existing transmission planning framework in line with such principles and in a manner that respects regional differences.”); ISO New England, Inc. Initial Comments, RM21-17-000, at 4 (Aug. 17, 2022) (Accession No. 20220817-5091) (“ISO-NE respectfully requests that the Commission not set back New England’s longer-term planning accomplishments by adopting uniform or prescriptive compliance requirements in a final rule issued in this proceeding. Instead, the ISO requests that the Commission recognize regional differences and allow the ISO flexibility to develop a compliance approach that builds on the region’s accomplishments in longer-term planning, consistent with the Commission’s long-standing principles.”); Sw. Power Pool, Inc. Comments, Docket No. RM21-17-000, at 3 (Aug. 17, 2022) (Accession No. 20220817-5141) (“SPP believes its current study processes and initiatives are sufficient to meet the Commission’s desired outcomes and the Commission should allow for flexibility in development of the Long-Term Regional Transmission Planning requirements. If the Commission specifies requirements that are expansive in scope and prescriptive in detail, this could become duplicative with SPP’s current processes and initiatives and place unnecessary burden on the future state of SPP planning.”); PJM Interconnection, L.L.C. Reply Comments, Docket No. RM21-17-000, at 10 (Sept. 19, 2022) (Accession No. 20220919-5148) (“urg[ing] the Commission to . . . avoid overly-prescriptive requirements to implement the Long-Term Regional Planning process”).

<sup>161</sup> The following ISOs and RTOs are part of the IRC: Alberta Electric System Operator (AESO); California Independent System Operator (CAISO); Electric Reliability Council of Texas, Inc. (ERCOT); the Independent Electricity System Operator of Ontario, Inc. (IESO); ISO New England Inc. (ISO-NE); MISO; New York Independent System Operator, Inc. (NYISO); PJM Interconnection, L.L.C. (PJM); and Southwest Power Pool, Inc. (SPP). The IRC Initial Comments, Docket No. RM21-17-000, at 1 n.2 (Aug. 17, 2022) (Accession No. 20220817-5150). In the IRC’s initial comments filed on August 17, 2022, the IRC clarifies that because ERCOT, AESO and IESO are not subject to the FERC’s jurisdiction, they do not join the filing. *Id.*

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disrupt) ongoing initiatives.”<sup>162</sup> By way of example, the IRC explained that “MISO has successfully invested in the transmission system of the future through its LRTP Tranche 1 projects” and the IRC observed that “[t]he process used in the LRTP initiative is substantially different than the process used in MISO’s previous MVP portfolio, which demonstrates the need for IRC members to be able to retain flexibility in their own Tariffs.”<sup>163</sup> This is all to say that the efforts undertaken by MISO regarding regional transmission planning and MISO’s progress along those lines reinforce the importance for the Commission to ensure that it does not attempt an inflexible and one-size-fits-all approach that loses sight of regional differences. If nothing else, the RTOs/ISOs pursuit of their own varied tariff regimes will afford the Commission and other utilities with models to observe and, potentially, replicate or improve upon, when it comes time for them to contemplate their own transmission reforms.

**Question 2:** With FERC’s revised statutory backstop siting authority, how do you see FERC and DOE cooperating/coordinating during the NEPA and siting process?

**RESPONSE:**

FERC invites other agencies to participate as cooperating agencies in its NEPA process.<sup>164</sup> In addition, in its *Notice of Intent and Request for Information: Designation of National Interest Electric Transmission Corridors* (Notice of Intent) published on May 15, 2023, the Department of Energy (DOE) stated that, “[w]here projects in [National Interest Electric Transmission Corridors] indicate an intention to seek siting permits from FERC under section 216(b) of the FPA, DOE intends to coordinate with FERC

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<sup>162</sup> *Id.* at 6; *see also id.* at 4 (explaining that “on certain issues, the NOPR is overly prescriptive in the level of detail required to conduct long-term planning,” and that IRC members “[i]n their individual comments . . . identify[] the NOPR proposed requirements that are overly prescriptive and disruptive given the particular circumstances in their region”); *id.* at 5 (submitting that “[i]nstead of prescribing detailed procedures, the IRC believes that the final rule should state high-level, long-term planning principles that transmission planners must consider, and then authorize them to craft their own processes that are tailored to their regional needs” because “[a]lthough there may be some benefits to commonality in approaches across regions, mandating a strictly uniform or overly prescriptive approach may cause unintended consequences, and may not be necessary or appropriate to advance the Commission’s objectives for long-term planning”).

<sup>163</sup> *Id.* at 6.

<sup>164</sup> “Cooperating agency means any Federal agency . . . other than a lead agency that has jurisdiction by law or special expertise with respect to any environmental impact involved in a proposal (or a reasonable alternative) for legislation or other major Federal action that may significantly affect the quality of the human environment.”). 40 C.F.R. § 1508.1(e).

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to the maximum extent practical to avoid redundancy and promote efficiency in environmental reviews.”<sup>165</sup> DOE also specifically sought comment on “[h]ow can DOE and FERC coordinate to avoid redundancy and promote efficiency in environmental reviews regarding the DOE corridor designation and any potential FERC permit applications?”<sup>166</sup>

- What barriers do you see to greater interagency coordination?

**RESPONSE:**

Interagency coordination likely may be improved with a shared understanding of agency roles. In its recent Notice of Intent, U.S. Department of Energy (DOE) stated, “[t]o the extent practicable, DOE anticipates leading the coordination of NEPA reviews with other agencies to support their NEPA documentation and to streamline their responsibilities related to facility permitting as well as coordinating with any other Federal agency required to participate in [National Interest Electric Transmission Corridor] designations.”<sup>167</sup> Although DOE’s statement is consistent with its authority under section 216 of the Federal Power Act to “act as the lead agency for purposes of coordinating all applicable Federal authorizations and related environmental reviews of the facility,”<sup>168</sup> DOE has delegated that authority to FERC.<sup>169</sup>

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<sup>165</sup> *Notice of Intent & Request for Information: Designation of Nat’l Interest Elec. Transmission Corridor*, 88 Fed. Reg. 30,956, at 30,957 (May 15, 2023) (Notice of Intent); *see also id.* at 30,961 (“With respect to NEPA reviews, to promote efficiency and timeliness DOE intends to coordinate to the maximum extent practicable with FERC in cases where an Applicant also intends to seek permits from FERC under section 216(b) of the FPA. As noted in the accompanying RFI, this may include requiring Applicants for designation of a NIETC to provide, to the extent practicable, environmental information at the same scope and level of detail and in the same general form as what FERC would require pursuant to its responsibilities”).

<sup>166</sup> *Id.* at 30,962.

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

<sup>168</sup> 16 U.S.C. § 824p(h)(2).

<sup>169</sup> *See* DOE, *Delegation to the Fed. Energy Regulatory Comm’n*, Delegation Order No. S1-DEL-FERC-2006, at § 1.22 (delegating to the FERC the authority to “[i]mplement section 216(h) of the Federal Power Act, and specifically paragraphs (2), (3), (4)(A)-(B), and (5), to coordinate federal authorizations and related environmental reviews, and to prepare a single environmental review document, for electric transmission facilities in national interest electric transmission corridors designated pursuant to section 216(a) of the Federal Power Act, for which an applicant has submitted an application to the Commission for issuance of a permit for construction or modification under section 216(b) of the Federal Power Act”) (DOE Delegation Order No. S1-DEL-FERC-2006).

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- Could an EIS for a project-specific corridor designation from DOE be sufficient for FERC approval of transmission siting without potentially having to do a separate EIS?

**RESPONSE:**

It is possible that FERC may “tier” off of, or incorporate by reference,<sup>170</sup> an EIS prepared by DOE for a project-specific corridor designation when conducting its analysis of electric transmission facilities under section 216 of the Federal Power Act (FPA). CEQ’s regulations state, “[a]gencies should tier their environmental impact statements and environmental assessments when it would eliminate repetitive discussions of the same issues . . . and exclude from consideration issues already decided.”<sup>171</sup>

However, I think it unlikely that FERC would rely entirely on the findings in an EIS prepared by DOE. First, section 380.6 of the Commission’s regulations implementing NEPA states that the Commission will prepare an EIS for “[m]ajor electric transmission facilities under section 216 of the [FPA] and DOE Delegation Order No. [S1-DEL-FERC-2006] using right-of-way in which there is no existing facility.”<sup>172</sup> For all other “new electric transmission facilities under section 216 of the [FPA] and DOE Delegation Order No. [S1-DEL-FERC-2006],” section 380.5 of the Commission’s regulations states that the Commission will prepare an EA.<sup>173</sup>

Second, FERC’s environmental analysis will consider project-specific impacts that may not be addressed by the EIS prepared by the DOE. For instance, in its Notice of Proposed Rulemaking on *Applications for Permits to Site Interstate Electric Transmission Facilities*, the Commission indicated that it would consider “the reasonably foreseeable emissions from construction, operation, and

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<sup>170</sup> The Council on Environmental Quality’s (CEQ) regulations define “tiering” as meaning “the coverage of general matters in broader environmental impact statements or environmental assessments . . . with subsequent narrower statements or environmental analyses . . . incorporating by reference the general discussions and concentrating solely on the issues specific to the statement subsequently prepared.” 40 C.F.R. § 1508.1(ff).

<sup>171</sup> *Id.* § 1501.11(a).

<sup>172</sup> 18 C.F.R. § 380.6(a)(5); *see also* DOE, *S1-DEL-FERC-2006, Delegation to the Fed. Energy Regulatory Comm’n*, <https://www.directives.doe.gov/delegations-documents/s1-del-ferc-2006> (noting that the delegation was previously cited as “00-004.00A” and that “[t]he Secretarial Delegations of Authority Program has revised the Delegations and Designations numbering system”).

<sup>173</sup> 18 C.F.R. § 380.5(b)(14).

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maintenance of the project facilities.”<sup>174</sup> While I wonder how one could project, let alone consider, the “reasonably foreseeable” emissions from transmission project *maintenance*, my expectation is that, given the granularity of our proposed NEPA review, the EIS prepared by DOE would have to be, at a minimum, supplemented by an EIS prepared by FERC.

**Question 3:** There has been an increased interest in carbon capture technologies in my state of Colorado. Companies such as ION, based in Boulder, are paving the way for existing power plants to capture their emissions while providing reliable and affordable energy. A successful carbon management economy will require a lot of infrastructure. The Trailblazer natural gas pipeline, which partially resides in my state, is seeking to be retrofitted to carry CO<sub>2</sub> to secure storage sites. Clear federal regulations regarding agency jurisdiction over these pipelines will be critical to providing certainty and transparency.

- Does the Commission’s experience regulating oil and natural gas pipelines provide relevant expertise to regulate carbon dioxide pipelines?

**RESPONSE:**

Whether the Commission has relevant expertise to regulate carbon dioxide pipelines depends on what aspects of the industry Congress wants regulated.

The Commission’s experience is primarily that of an economic regulator.<sup>175</sup> The Commission’s experience regulating the prices charged for transportation of oil and natural gas has given the Commission expertise in investigating the lawfulness of rates, fixing rates and charges, investigating market manipulation in connection with the purchase or sale of natural gas or transportation services, and facilitating price transparency in natural gas markets.

The Commission also has experience permitting the construction of natural gas facilities transporting natural gas in interstate commerce that are found to be in the present or future public convenience and necessity, permitting the construction of facilities importing and exporting liquified natural gas that are found to be not inconsistent with the public interest, and permitting the abandonment of natural gas facilities and service. Commission

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<sup>174</sup> *Applications for Permits to Site Interstate Elec. Transmission Facilities*, 181 FERC ¶ 61,205, at P 70 (2022).

<sup>175</sup> See *New York v. FERC*, 783 F.3d 946, 950 (2d Cir. 2015) (“For many years, FERC exercised its statutory jurisdiction essentially as an economic regulator.”) (citations omitted).



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approval of an interstate natural gas pipeline facility comes with power to exercise eminent domain. The Commission has no experience siting oil pipelines or over oil or natural gas pipeline safety. Nor does the Commission have power to set the rates for either of those commodities themselves.

Some have stated that “there is no need for additional Federal involvement in economic regulation” of carbon dioxide pipelines.<sup>176</sup> Several have advocated for Commission having jurisdiction for carbon dioxide pipelines to benefit from the power of eminent domain, which carbon dioxide pipeline projects have had difficulty securing.<sup>177</sup> The Congressional Research Service recently reported that interstate CO<sub>2</sub> pipelines are “fac[ing] opposition among affected landowners and advocacy groups for reasons including risks to public safety. As a consequence, the developers [have] reportedly . . . faced resistance securing voluntary agreements with landowners for pipeline rights-of-way through their properties. . . . Furthermore, there have been regulatory interventions and legislative efforts to limit state eminent domain authority for such projects.”<sup>178</sup> Regardless, any efforts to regulate CO<sub>2</sub> pipelines would have to be undertaken pursuant to statutory enactment because FERC’s authority only extends to various aspects of pipelines that transport natural gas and oil.

- What is needed from Congress to clarify agency jurisdiction?

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<sup>176</sup> See DOE, *Siting and Regulating Carbon Capture, Utilization & Storage Infrastructure*, at 31 (Jan. 2017), <https://www.energy.gov/fecm/articles/siting-and-regulating-carbon-capture-utilization-and-storage-infrastructure-workshop> (DOE Carbon Capture Report).

<sup>177</sup> See Robert R. Nordhaus & Emily Pitlick, *Carbon Dioxide Pipeline Regulation*, 30 ENERGY L. J. 85 (2009) (“Perhaps the most valuable tool in the NGA is the right of eminent domain granted to the holder of a certificate of public convenience and necessity.”) (citation omitted); Jonas Monast, *From Carbon Capture to Storage: Designing an Effective Regulatory Structure for CO<sub>2</sub> Pipelines*, at 15 (2008), <https://nicholasinstitute.duke.edu/sites/default/files/publications/from-carbon-capture-to-storage-designing-an-effective-regulatory-structure-for-co2-pipelines-paper.pdf> (“[T]he FERC natural gas model provides a more effective regulatory model for CO<sub>2</sub> pipelines. This approach would grant to the FERC eminent domain authority, the power to ensure that transportation costs are fair and reasonable, and regulatory control over the opening and decommissioning of CO<sub>2</sub> pipelines.”) (citation omitted). Cf. DOE Carbon Capture Report, at 23 (discussing project that encountered problems securing eminent domain).

<sup>178</sup> Congressional Research Service, *Carbon Dioxide Pipelines: Safety Issues*, at 2 (June 3, 2022), <https://crsreports.congress.gov/product/pdf/IN/IN11944>.

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**RESPONSE:**

If Congress intends for the Commission to regulate the permitting of carbon dioxide pipelines, Congress will need to enact new law. The NGA authorizes the Commission to regulate the transportation of natural gas in interstate commerce. For over four decades, the Commission has interpreted “natural gas” as not including pipelines that transport predominantly carbon dioxide because assuming jurisdiction over the pipeline would not advance the goal or purpose of the NGA.<sup>179</sup> The Supreme Court has declared that purpose to be “to encourage the orderly development of plentiful supplies of . . . natural gas at reasonable prices.”<sup>180</sup>

**Questions from Senator Steve Daines**

**Question 1:** Commissioner Danly, unlike some of your colleagues, you do not support waiving the 50 basis point transmission rate adder for participating in an RTO, citing lack of statutory authority. This year, RTOs have come under increasing criticism and costs of remaining in RTOs are rising. Could you expand on your views regarding the necessity of the RTO adder, particularly as RTO participation costs continue to rise and the RTO model faces increasing scrutiny?

**RESPONSE:**

The transmission rate adder is required by statute. Section 219(c) of the Federal Power Act (FPA) provides that “the Commission shall . . . provide for incentives to each transmitting utility . . . that joins a Transmission Organization.”<sup>181</sup> The Commission has no discretion *not* to include an adder for RTO membership in transmission rates unless Congress itself repeals or amends this statutory provision. When the Commission voted to limit the adder to a period of years, I dissented.<sup>182</sup> The law Congress has passed provides no basis for limiting the adder in this way. Congress presumably enacted FPA section 219(c) in order to encourage transmission owners to join RTOs. If Congress no

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<sup>179</sup> See *Cortez Pipeline Co.*, 7 FERC ¶ 61,024, at 61,042 (1979).

<sup>180</sup> *NAACP v. FPC*, 425 U.S. 662, 669-70 (1976) (citations omitted).

<sup>181</sup> 16 U.S.C. § 824s(c).

<sup>182</sup> See *Elec. Transmission Incentives Policy Under Section 219 of the Fed. Power Act*, 175 FERC ¶ 61,035 (2021) (Danly, Comm’r, dissenting).

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longer wishes to provide that incentive, it should amend the FPA to remove the mandate to include the adder.

What the law currently requires is a matter separate and distinct from whether the concerns with RTOs that you point out are worthy of Congress's attention—they are. RTOs are premised on a sound economic idea—that generation should be dispatched on a least cost basis in a competitive market for generation. The market's resulting price signals are then supposed to incentivize the correct quantity of investment in new or existing resources and facilitate the orderly retirement of inefficient resources. Policy makers, however, have abandoned the premise that the most efficient generation resources should be selected through market forces. Instead, policymakers subsidize favored resources. These subsidies distort the price formation that the RTOs and their market structures are supposed to facilitate, calling into question whether they can continue to be relied upon to ensure resource adequacy.