

**STATE OF IOWA
BEFORE THE IOWA UTILITIES BOARD**

IN RE:)
) **DOCKET NO. INU-2021-0001**
INVESTIGATION INTO A)
COMPREHENSIVE PLAN FOR)
IOWA’S TRANSMISSION GRID)
OF THE FUTURE)

COMMENTS

Environmental Law & Policy Center (“ELPC”) and Iowa Environmental Council (“IEC”) provide these comments in response to the “Order Initiating Investigation, Requesting Comments and Setting Date for Workshop” (“Order”) issued by the Iowa Utilities Board (“Board”) on July 2, 2021, in docket number INU-2021-0001.

The U.S. is in the midst of a profound transformation in our energy sector driven by the imperative to reduce greenhouse gas emissions to address climate change. Relatedly, the economics of generation have shifted significantly away from fossil fuels and toward clean energy over the last decade. Policies across the Midwest and the whole of the U.S. have accelerated this shift, but even on a non-subsidized basis, renewables are often less expensive than just the operating costs of coal facilities and compete well on a levelized basis with gas. Federal policy will continue to push for an even more rapid transition as the Biden Administration has laid out a goal of reaching carbon-free electricity by 2035.

Although ELPC and IEC see value in planning for the major transition in electric generation over the coming years, the Board’s direct jurisdiction is limited to siting of transmission lines and not regional transmission planning. However, the Board should engage in existing

regional and interregional transmission planning efforts through stakeholder processes and does have oversight of the investments of Iowa’s investor-owned utilities. The scope of action should reflect these limitations and jurisdiction. We believe this docket would be most effective if it focused on how the Board can most effectively participate as a stakeholder at MISO and FERC and how to maximize the efficiency of existing transmission facilities located in Iowa to best facilitate the integration of more renewable generation and storage.

I. Background

Iowa Code gives the Board authority to grant a transmission line franchise if it “represents a reasonable relationship to an overall plan of transmitting electricity in the public interest.”¹ Under this framework, the Board evaluates transmission line proposals individually when transmission owners propose them. The Board initiated this docket in response to a series of transmission franchise requests.² The Board expressed concern that the proposed lines were single-purpose lines that did not fit into an overall plan and that the “piecemeal” approach was unsustainable.³ The Board is seeking to determine whether it is feasible to develop a statewide plan.⁴

By law the Board must consider benefits to the public, including consumers located outside of Iowa, in determining whether lines are in the public interest.⁵ Iowa law also encourages the development of additional generation in Iowa, and the export of wind energy from Iowa.⁶

¹ Iowa Code § 478.4.

² Order at 2.

³ *Id.* at 2, 4.

⁴ *Id.* at 4.

⁵ Iowa Code § 478.3(3); *see* Order at 3.

⁶ Iowa Code §§ 476.53, 476.53A.

The Board's Order suggests there are limited benefits to Iowans from the expansion of new generation that the recently approved lines support.⁷ Specifically, the Order suggests that the additional generation has not lowered energy costs, has led to loss of prime farmland, and infringes on landowner interests.⁸

The Order's request for comments seeks "information regarding Iowa's transmission grid, the plans for expansion of the transmission grid, the plans for expansion of generation in Iowa, and how the plans reasonably relate to an overall plan for transmitting electricity in the public interest."⁹ The Board also seeks to ensure the interests of landowners, tenants, and local governments.¹⁰

II. The Energy Industry is Rapidly Transitioning to Renewable Generation.

The sources of electric generation to serve customers is undergoing a rapid shift across the country. Hundreds of coal plants have retired and most of the remaining coal plants have set retirement dates.¹¹ Less expensive renewable energy is replacing uneconomic coal plants all across the country.¹²

Federal climate and energy policy encourage continued and rapid deployment of renewable generation and will likely continue to do so in the face of more severe impacts of climate change.

⁷ *Id.* at 2.

⁸ *Id.* at 3.

⁹ Order at 4.

¹⁰ Order at 5.

¹¹ Jared Anderson, "US coal-fired power output decline continues with last PSEG coal plant retirement," S&P Global (June 1, 2021), available at <https://www.spglobal.com/platts/en/market-insights/latest-news/electric-power/060121-us-coal-fired-power-output-decline-continues-with-last-pseg-coal-plant-retirement>.

¹² "Renewables account for most new U.S. electricity generating capacity in 2021," U.S. Energy Information Administration (Jan. 11, 2021), available at <https://www.eia.gov/todayinenergy/detail.php?id=46416>.

Federal policy currently calls for a carbon-free electricity sector by 2035.¹³ The United States has also recommitted to reduce emissions under the Paris Climate Agreement.¹⁴ Numerous studies have consistently shown the need for Iowa to generate enough renewable energy to export it to other states in order to decarbonize the power sector.¹⁵

Iowa's embrace of renewable energy has meant that Iowa has been at the forefront of this transition. In 2019, for the first time, wind energy generation exceeded coal in Iowa.¹⁶ Nearly sixty percent of total electric generation in Iowa was wind in 2020 - the most of any state in the country.¹⁷ Meanwhile, the Board has approved generating certificates for more than one gigawatt of solar generation, with nearly one gigawatt still pending approval.¹⁸

This leadership is the direct result of policy choices that have supported the development of renewable energy. Iowa's policy is "to encourage the development of renewable electric power generation and to encourage the use of renewable power to meet local electric needs and the development of transmission capacity to export wind power generated in Iowa."¹⁹ This is supported by similar state policy "to attract the development of electric power generating and

¹³ *Executive Order, "Tackling the Climate Crisis at Home and Abroad," (Jan. 27, 2021) §205(b), available at <https://www.whitehouse.gov/briefing-room/presidential-actions/2021/01/27/executive-order-on-tackling-the-climate-crisis-at-home-and-abroad/>.*

¹⁴ H.J. Mai, "U.S. Officially Rejoins Paris Climate Agreement on Climate Change," NPR (Feb. 19, 2021), available at <https://www.npr.org/2021/02/19/969387323/u-s-officially-rejoins-paris-agreement-on-climate-change>.

¹⁵ See "Iowa's Road to 100% Renewable," Iowa Environmental Council (Apr. 2020), available at https://www.iaenvironment.org/webres/File/IEC20002_PathwayTo100Renewable_F_Web.pdf (comparing estimates from six studies).

¹⁶ "Condition of the State," Iowa Environmental Council (Oct. 2020) at 14, available at [https://www.iaenvironment.org/webres/File/IEC%20Condition%20of%20the%20State%20\(Energy\)%20Oct_%2020%20E.pdf](https://www.iaenvironment.org/webres/File/IEC%20Condition%20of%20the%20State%20(Energy)%20Oct_%2020%20E.pdf).

¹⁷ Energy Information Administration, available at <https://www.eia.gov/electricity/data/browser/#/topic/0?agg=2,0,1&fuel=vtvv&geo=00000g&sec=008&freq=A&star=t=2001&end=2020&ctype=linechart<ype=pin&rtype=s&maptype=0&rse=0>.

¹⁸ See Docket Nos. GCU-2019-0001, GCU-2019-0002, GCU-2019-0003, GCU-2019-0004, GCU-2020-0001, GCU-2021-0001, GCU-2021-0002, GCU-2021-0003, GCU-2021-0004.

¹⁹ Iowa Code § 476.53A.

transmission facilities within the state.”²⁰ These policies must guide the Board’s actions to facilitate the rapid transition in electric generation to renewable sources.

Iowa should continue to lead the renewable energy transition.

III. Renewable Electricity Generation Benefits Iowans.

Iowans recognize the benefits of renewable energy. Nearly all Iowans (90 percent) support solar energy and nearly as many (86 percent) support wind energy.²¹ The vast majority (74 percent) also support development of renewable energy within their own county.²² Iowans support renewable energy because of the myriad benefits.

The Board Order initiating this docket questioned the benefits of renewable generation for Iowans. While the statement was conclusory in nature and dicta, we found it concerning. Contrary to the suggestions in the Order, building more renewable energy generation in Iowa is not only the least-cost way to reliably meet future energy needs, it will also provide significant economic and environmental benefits to Iowans. Evidence also suggests that the transition to renewable energy will benefit agriculture in the state.

A. Iowans Benefit From Additional Renewable Generation

Renewable generation provides direct benefits to Iowans because it provides low-cost generation within the state, avoids costs for fossil-fueled generation, and has fewer environmental concerns.

Wind generation has become one of the lowest-cost options for generating energy. The Energy Information Administration’s levelized cost estimates of new generation resources found

²⁰ Iowa Code § 476.53.

²¹ “Polling Results,” Iowa Business for Clean Energy, available at <https://www.iowacleanenergy.org/polling-results>.

²² *Id.*

standalone solar has the cheapest levelized cost of any new resource, closely followed by wind.²³ Lazard's latest levelized cost of energy analysis found wind and solar were cheaper than conventional technologies and were even competitive with fully depreciated fossil fuel generation.²⁴

Iowans have benefitted from investments in this low-cost resource because it has avoided capital costs for new fossil-fueled generation as well as variable operating and fuel costs at existing plants. MidAmerican and Interstate Power & Light Company (IPL) have not built new fossil generating capacity in over a decade. Increased production of low-cost wind means that existing fossil plants are running less, adding up to fewer variable costs passed on to customers as well.

In addition, recent analyses have found the costs simply for operating and maintaining existing fossil generation units in Iowa are higher than building new renewable alternatives.²⁵ IPL went through a resource planning process that resulted in plans to retire Lansing Generating Station by the end of 2022 and convert its Burlington plant to natural gas by next year. The plan replaced that power with the construction of 400MW of utility-scale solar by 2023 and 100MW of distributed generation, or smaller-scale solar and battery storage, by 2026. IPL predicted the retirements and investments would avoid over \$300 million in costs over the coming decades.²⁶ This cost differential emphasizes the customer benefit of the transition to renewables and, because Iowa is part of the MISO market, even renewable energy that is built in Iowa for utilities in surrounding states benefits customers here by reducing overall market prices.

²³ "Levelized Costs of New Generation Resources in the Annual Energy Outlook 2021," Energy Information Administration (Feb. 2021) at 7, available at https://www.eia.gov/outlooks/aeo/pdf/electricity_generation.pdf.

²⁴ "Levelized Cost of Energy and Levelized Cost of Storage – 2020," Lazard (Oct. 19, 2020), available at <https://www.lazard.com/perspective/levelized-cost-of-energy-and-levelized-cost-of-storage-2020/>;

²⁵ See, e.g., Docket No. RPU-2019-0001, Direct Testimony of Uday Varadarajan (filed Aug. 1, 2019); Docket No. RPU-2019-0001, Direct Testimony of Paul Chernick (corrected) (filed Sep. 26, 2019); Docket No. EPB-2020-0156, Direct Testimony of David Posner (filed Dec. 17, 2020).

²⁶ Docket No. RPU-2019-0001, "Cover Letter and Iowa Clean Energy Blueprint," (filed Nov. 20, 2020), at 1.

Transitioning from fossil generation to renewable energy also provides climate and environmental benefits. Iowa's coal fleet continues to emit a range of air pollutants that contribute to climate change and health impacts.²⁷ Iowa's coal plants emit NO_x, SO₂, mercury, CO₂, and particulate matter.²⁸ For example, in 2020 George Neal South emitted more than 628 tons of NO_x, 1,200 tons of SO₂, and 748,000 tons of CO₂; George Neal North emitted more than 1,040 tons of NO_x, 1,660 tons of SO₂, and 1,019,000 tons of CO₂.²⁹ Carbon dioxide contributes to climate change.³⁰ The growing impacts of climate change are anticipated to create significant harm within Iowa and across the world, with disproportionate effects on the people least equipped to adapt.³¹ Nitrogen oxides contribute to smog, ground-level ozone, and acid rain.³² Sulfur dioxide contributes to acid rain.³³ Particulate pollution contributes to "premature death in people with heart or lung disease, nonfatal heart attacks, irregular heartbeat, aggravated asthma, decreased lung function, increased respiratory symptoms, such as irritation of the airways, [and] coughing or difficulty breathing."³⁴ In contrast, wind and solar have no emissions from operation.

Coal units produce far more solid waste than wind in Iowa. Coal ash waste is typically stored in large ponds, often near water sources. In Iowa, several of these ponds are within hundred-

²⁷ See Docket No. EPB-2020-0156, "MidAmerican Energy Company Electric Power Generation Facility Budget Update," (filed April 1, 2020) at 9-11; Docket No. EPB-2020-0150, "Interstate Power and Light Company Update to Emissions Plan and Budget For Planning Years 2021 & 2022" (filed Jan. 15, 2021) at 13, 14.

²⁸ *Id.*

²⁹ Publicly available data from EPA Air Markets Program, <https://ampd.epa.gov/ampd/>.

³⁰ "Sources of Greenhouse Gas Emissions," U.S. EPA, available at <https://www.epa.gov/ghgemissions/sources-greenhouse-gas-emissions> (last visited July 22, 2021).

³¹ See Intergovernmental Panel on Climate Change, "Climate Report" (2018), ch. 3, available at https://www.ipcc.ch/site/assets/uploads/sites/2/2019/06/SR15_Chapter3_Low_Res.pdf.

³² "Nitrogen Oxides (NO_x), Why and How They Are Controlled," U.S. EPA (1999), at 1, available at <https://www3.epa.gov/ttn/catc/dir1/fnoxdoc.pdf>.

³³ "What is Acid Rain?," U.S. EPA (last updated July 8, 2021), available at <https://www.epa.gov/acidrain/what-acid-rain>.

³⁴ "Health and Environmental Effects of Particulate Matter (PM)," U.S. EPA (last updated May 26, 2021), available at <https://www.epa.gov/pm-pollution/health-and-environmental-effects-particulate-matter-pm>.

year floodplains.³⁵ The waste contains heavy metals and other materials that can contaminate groundwater.³⁶ There is evidence of leaking from these types of containment systems nationally and within Iowa.³⁷ Even with repowering becoming common across the state, wind development in Iowa results in a far smaller quantity of waste. In fact, at the 2020 rate of operation, Iowa coal plants produce 30 tons of coal ash for every 1 ton of wind blade waste over a 20-year period.³⁸ As renewable energy costs continue to come down, Iowans will benefit by adding low-cost renewable generation to replace uneconomic and dirty fossil fuel generation. This will result in direct benefits to Iowans in lower utility bills, cleaner air, and cleaner water.

B. Renewable Generation Supports Economic Development.

Iowa's early leadership in wind energy was launched with the nation's first renewable portfolio standard signed into law by Governor Branstad in 1983 and took off with the addition of renewable-friendly state policies throughout the 1990s and early 2000s. This supportive state policy and regulatory environment helped attract \$22 billion in capital investment and build an industry that supports 5,000 jobs in the state, generates \$68.9 million per year in lease payments to local landowners, and \$127.9 million per year in tax revenues to local governments.³⁹ Wind revenues have allowed Iowa communities to invest in roads and bridges, schools and community colleges, senior meal sites, and other critical services while holding down taxes. Local officials

³⁵ Zack Colman, "The toxic waste threat that climate change is making worse," Politico (Aug. 26, 2019), available at <https://www.politico.com/story/2019/08/26/toxic-waste-climate-change-worse-1672998>.

³⁶ *Id.*

³⁷ *Id.*; see "Annual Groundwater Monitoring and Corrective Action Report for the Neal South CCR Monofill," MidAmerican Energy Company (Jan. 31, 2020), available at https://www.brkenegy.com/ccr/assets/pdf/mec/NS/Landfill/GW_monitoring_and_corrective_action/Annual%20groundwater%20monitoring%20and%20corrective%20action%20report/2019/NSAGMCAR.pdf.

³⁸ "Perspectives on Waste: Wind Turbines," Iowa Environmental Council, July 2021, [https://www.iaenvironment.org/webres/File/Iowa%20Wind%20Blade%20Waste%20Fact%20Sheet%20-%202021%20\(1\).pdf](https://www.iaenvironment.org/webres/File/Iowa%20Wind%20Blade%20Waste%20Fact%20Sheet%20-%202021%20(1).pdf).

³⁹ American Clean Power Association Iowa Fact Sheet, https://cleanpower.org/wp-content/uploads/2021/05/Iowa_clean_energy_factsheet_Q2-2021.pdf.

continue to process and permit applications for wind energy developments, with local elected leaders engaging in robust discussions to balance interests between residents; there is clearly continued interest from Iowans in continued expansion of renewable energy in Iowa and the economic benefits that accompany such development.⁴⁰

Iowa's renewable energy has also attracted significant investment in the state by companies seeking access to clean energy and this draw is likely to grow. The number of Fortune 500 companies committing to 100% clean energy has doubled since 2017 and six times more companies have set science-based emissions reduction targets.⁴¹ This presents a significant opportunity for Iowa to attract and grow jobs.

State officials have recognized the benefits of this economic development. As Governor Kim Reynolds recently stated, "Whether it's ethanol, biodiesel, wind, or solar, Iowa is a renewable energy powerhouse. . . . Iowa will continue to harness the power of public-private partnership to further Iowa's reputation as a leader in renewable energy production while also creating a more efficient and resilient electric grid."⁴²

C. Transitioning to Renewable Energy Benefits Agriculture.

The Board raised concerns about agricultural impacts from the growth of renewable energy in Iowa, including the "loss of prime farmland."⁴³ This does not appear to account for important benefits to agriculture from long-term lease payments, soil restoration, and the potential to return the land to agricultural use.

⁴⁰ American Clean Power Association Iowa Fact Sheet, https://cleanpower.org/wp-content/uploads/2021/05/Iowa_clean_energy_factsheet_Q2-2021.pdf.

⁴¹ "Fortune 500 companies are acting on the climate crisis - but is it enough?" World Wildlife Fund, June 2, 2021, <https://www.worldwildlife.org/stories/fortune-500-companies-are-acting-on-the-climate-crisis-but-is-it-enough>.

⁴² Andrew Pearce, "New Alliant battery storage project in Decorah brings renewable energy solution to area," KWWL (July 21, 2021), available at <https://kwwl.com/2021/07/21/new-alliant-battery-storage-project-in-decorah-brings-renewable-energy-solution-to-area/>.

⁴³ Order at 3.

Long-term lease payments provide stability in rapidly-changing agricultural markets. MidAmerican paid \$35.7 million in easement/lease payments in 2020.⁴⁴ Farm owners have stated that the lease payments have allowed them to continue farming. Wind turbines can provide income that outpaces crops in difficult years, with one farmer stating that “For the last four years, the turbines were the most profitable part of my farm.”⁴⁵ Landowners enter into the leases voluntarily precisely because they provide benefits.

A variety of modeling efforts have estimated what it would take to transition Iowa to 100% renewable energy and Iowa’s contribution to a national clean energy transition. These analyses consistently show that it would require an extremely small fraction of Iowa land to provide adequate resources. A recent analysis by Mark Z. Jacobson at Stanford University estimated that Iowa could reliably meet all of its generation needs with wind, solar, storage, and demand response with only a 1% increase in Iowa’s land hosting renewable energy.⁴⁶ For perspective, this would be about one-fifth of all Iowa land voluntarily enrolled in the Conservation Reserve Program today.⁴⁷

Finally, placing solar panels on cropland can provide long-term benefits. If the land underlying solar is seeded with perennial vegetation, the land can benefit from increased biodiversity, decreased erosion, and improved soil quality. Iowa is currently losing topsoil at an

⁴⁴ “Wind Energy,” MidAmerican Energy Company, available at <https://www.midamericanenergy.com/wind-energy> (last visited July 22, 2021).

⁴⁵ Matthew Wilde, “Farm With the Wind,” Progressive Farmer (Apr. 7, 2021), available at <https://www.dtnpf.com/agriculture/web/ag/news/business-inputs/article/2021/04/06/opportunity-opposition-accompany>.

⁴⁶ Jacobson, Mark Z., *Zero Air Pollution and Zero Carbon From All Energy Without Blackouts at Low Cost in Iowa*, April 24, 2020, <http://web.stanford.edu/group/efmh/jacobson/Articles/I/21-USStates-PDFs/21-WWS-Iowa.pdf>.

⁴⁷ Calculation based on Conservation Reserve Program Monthly, Summary, May 2021, USDA Farm Service Agency, <https://www.fsa.usda.gov/Assets/USDA-FSA-Public/usdafiles/Conservation/PDF/MAY2021CRPMonthly.pdf>.

unsustainable rate at a cost of \$1 billion in yield.⁴⁸ Across the Midwest, approximately one-third of the most productive soil has been lost.⁴⁹ Planting perennial vegetation on cropland decreases topsoil losses while improving soil quality. This land could be returned to production in the future and be healthier and more productive when it is.

IV. The Board Should Both Actively Engage in Existing Regional Transmission Planning Processes and Exercise Its Local Jurisdiction with a Goal of Increasing Efficiency and Effectively Integrating More Renewable Generation.

The Board’s jurisdiction in regional transmission planning is limited by federal law, but it can play an important role by engaging in the existing process and undertaking complementary state-level efforts.

In contrast to electric generation, electric transmission is expressly subject to federal oversight. While the Board has clear authority over the specific siting of transmission lines, transmission is interstate in nature and part of interstate commerce. Specifically, the Federal Power Act gives the Federal Energy Regulatory Commission (FERC) “jurisdiction over all facilities for such transmission or sale of electric energy,” but not for local distribution.⁵⁰ Iowa law acknowledges the interstate nature of generation and transmission by expressly encouraging the export of wind energy, which can require building transmission lines to move the energy.⁵¹ The

⁴⁸ Donnelle Eller, “Erosion estimated to cost Iowa \$1 billion in yield,” Des Moines Register (May 3, 2014), available at <https://www.desmoinesregister.com/story/money/agriculture/2014/05/03/erosion-estimated-cost-iowa-billion-yield/8682651/>.

⁴⁹ Dan Charles, “New Evidence Shows Fertile Soil Gone From Midwestern Farms,” Iowa Public Radio (Feb. 24, 2021), available at <https://www.iowapublicradio.org/news-from-npr/2021-02-24/new-evidence-shows-fertile-soil-gone-from-midwestern-farms>.

⁵⁰ 16 U.S.C. § 824(b)(1).

⁵¹ Iowa Code § 476.53A.

clear grant of authority to FERC restricts the Board's authority to regulate interstate transmission beyond requiring a certificate of public convenience and necessity for the purposes of siting.

The Board can use this docket to help set a vision for how to engage in the federal transmission regulatory framework and exercise its local jurisdiction. In doing so, the Board should be guided by existing Iowa policy that supports and encourages renewable energy development.

A. The Board Should Participate at MISO and FERC to Encourage Transmission Planning that Effectively Facilitates Iowa Renewable Energy and Storage Resources.

Because of the regional, interstate nature of transmission, FERC is authorized to divide the country into regional districts for transmission coordination.⁵² Iowa is in the Midcontinent System Operator (MISO) territory, which has authority to plan regional transmission expansion. MISO fulfills its planning obligations through its transmission expansion planning process, which the Board has relied upon in its approval of transmission franchises.⁵³

Although development of regional transmission plans is a federal action, the Board can play an important role in coordinating input from Iowa stakeholders and engaging at MISO and FERC to ensure that new transmission infrastructure meets the needs of Iowa. The Joint Parties made recommendations about the Board actively participating in the existing regional planning processes and using this docket to collect information and feedback from Iowa stakeholders to enhance the Board's effectiveness in those processes. We agree that the Board's increased participation in existing regional planning processes would be an effective way for the Board to engage in transmission planning. The Board has many opportunities to have its voice heard in regional and interregional transmission planning processes.

⁵² 16 U.S.C. § 824a(a).

⁵³ *See, e.g.*, Docket No. E-22386, "Order Granting Petition for Electric Franchises and Right of Eminent Domain" (filed May 27, 2020), at 24-25.

A key avenue for engagement on this topic is MISO. The Board could advocate for transmission owners to provide information about “age and condition” projects (characterized as “Other” projects in the MISO Transmission Expansion Plan) well before transmission owners undertake the projects. Providing the information in the regional planning process would allow MISO to evaluate potential for consolidation into larger lines, double-circuiting, or alternative actions as described below. “Other” projects have increased in number and cost, creating a gap in the otherwise competitive, benefit-based transmission planning process.⁵⁴ Evaluating these types of projects could yield projects that meet multiple objectives and result in a more efficient grid at lower cost.

FERC has also undertaken efforts on regional transmission planning to promote competition and ensure reasonable access for new generation resources. Most recently, FERC issued an Advance Notice of Proposed Rulemaking (ANOPR) specifically addressing regional transmission planning, cost allocation, and the reforms needed to establish a resilient grid for the future.⁵⁵ This docket may have significant effects on what transmission infrastructure is built in Iowa and how it is paid for and the comment period remains open through October 12, 2021. FERC recently announced a joint federal-state taskforce on electric transmission with the National Association of Regulatory Utility Commissioners. The Board should be active in these processes and ensure that Iowan interests are adequately represented.

⁵⁴ See Letter from Simon Mahan (Southern Renewable Energy Association, on behalf of the Environmental Sector), to MISO Stakeholder Relations (May 21, 2021).

⁵⁵ “Building for the Future Through Electric Regional Transmission Planning and Cost Allocation and Generator Interconnection,” 86 Fed. Reg. 40266 (July 15, 2021).

B. The Board Should Use Its Limited Jurisdiction to Evaluate Advanced Transmission Technologies to Efficiently, Reliably, and Cost-Effectively Integrate New Renewable Generation.

IEC and ELPC stress that any Iowa-specific planning does not duplicate and is not a replacement for the regional and interregional transmission planning that takes place at MISO and with other regional transmission organizations. To the extent the Board is exercising its limited jurisdiction, it should require Iowa utilities to take actions that will increase the efficiency and reliability of Iowa's existing transmission and distribution infrastructure.

To the extent the Board has authority over public utilities, it should require utilities to identify how they can and will optimize existing infrastructure, including the use of advanced transmission technologies (ATTs) to increase the utilization of existing wires and other transmission infrastructure within the state. Transmission owning utilities in Iowa should develop concrete plans for how to optimize existing grid infrastructure and submit those plans to the Board along with cost estimates, benefits, and timelines. Increasing the efficiency of existing assets can reduce the need for future transmission upgrades and get renewables online faster and cheaper.

By advanced transmission technologies, we refer broadly to technologies that increase the capacity, efficiency, or reliability of transmission facilities. These technologies are sometimes referred to as "alternative transmission solutions", "non-transmission alternatives", or "grid-enhancing technologies" (GETs). We take an expansive definition of these technologies that includes not only the technologies commonly listed as GETs by the Federal Energy Regulatory Commission (FERC) (e.g., power flow control and transmission switching equipment, storage technologies, and advanced line rating management technologies), but also combining renewables and storage, distributed energy resources (DERs), and combinations of all these technologies into a suite of solutions that can better utilize new and existing transmission infrastructure.

These technologies are not speculative, and their benefits are becoming clearer by the day. Alliant Energy just began operation of a 2.5 MW battery storage project in Decorah, Iowa, that will address capacity issues on the local circuit.⁵⁶ In Oakland, PG&E is implementing a solution consisting of storage, distributed generation, and traditional infrastructure upgrades in lieu of constructing new transmission lines through valuable urban centers. Just this year, the Brattle Group completed a study demonstrating that combinations of power flow control, topology optimization, and dynamic line rating could enable Kansas and Oklahoma to double their rates of wind and solar integration over the next four years.

We recognize that ATTs do not eliminate the need for new transmission lines in Iowa, let alone the region. The Board's jurisdiction on transmission planning is limited. However, to the extent the Board has jurisdiction over transmission owning-utilities in Iowa, it should explore requiring Iowa utilities to use ATTs to get the most out of existing grid infrastructure. Requiring Iowa utilities to install and implement cost effective ATTs can help achieve the state's goal of renewables development in a timely, equitable, and least cost way. Additionally, FERC is conducting a conference in September on how to compensate GETs, and the Board could participate to highlight how GETs could cost-effectively facilitate renewable integration.

V. Conclusion

The transition in the electric generation sector has shifted the need for transmission by both decentralizing generation sources and increasing the demand for highly efficient renewable generators located in places like Iowa. This transition to renewable energy has already provided

⁵⁶ Andrew Pearce, "New Alliant battery storage project in Decorah brings renewable energy solution to area," KWWL (July 21, 2021), available at <https://kwwl.com/2021/07/21/new-alliant-battery-storage-project-in-decorah-brings-renewable-energy-solution-to-area/>.

many benefits to Iowans and can continue to provide benefits in the future. Although the Board's authority to regulate transmission is limited, the Board should take advantage of opportunities to engage at MISO and FERC to ensure Iowa interests are represented and should require Iowa utilities to implement ATTs that will increase the efficiency of existing transmission infrastructure.

Respectfully submitted,

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