BEFORE THE NORTH CAROLINA UTILITIES COMMISSION DOCKET NO. M-100, SUB 164

In the Matter of:)
Consideration of the Federal Funding)
Available Under the Infrastructure)
Investment and Jobs Act)
)

INITIAL COMMENTS OF CCEBA

The Carolinas Clean Energy Business Association ("CCEBA") intervenor in this docket, submits these initial comments in response to the North Carolina Utilities Commission's ("Commission") *Order Allowing Comments Regarding Federal Funding for Utility Service in North Carolina* ("Order") in this docket. In filing these comments, CCEBA reserves the right to file reply comments addressing other issues of relevance to the Commission's inquiry.

CCEBA believes the provisions of the Infrastructure Investment and Jobs Act of 2021, H.R. 3684, 117th Cong. (2021) ("IIJA") offer significant opportunities for North Carolina in the achievement of the goals laid out in House Bill 951 (HB 951 or "Session Law 2021-165"). CCEBA agrees with the Commission's preliminary conclusion that "it is in the public interest for the public utilities of this State to fully and carefully consider taking advantage of these available federal grants and loans, in order to promote adequate, reliable, and economical utility service to the citizens and residents of the State." (Order at 2.)

While there are many provisions of the IIJA that may provide resources for North Carolina, some of which the Commission cited in its Order, CCEBA wishes to address these initial comments to the provisions which may assist the Commission and North

Carolina's incumbent utilities to overcome one of the most significant roadblocks to the success of HB 951: transmission congestion.

The fact of transmission congestion in certain areas of North Carolina is well-established. Throughout the stakeholder process led by Duke Energy Progress, LLC ("DEP") and Duke Energy Carolinas, LLC ("DEC") (together, "Duke Energy"), presenters have made clear that transmission capacity poses a restriction on the addition of substantial amounts of renewable resources to the Duke Energy portfolio.

Recent proceedings before the Commission have also underlined the impact congestion has on the ability of potentially-beneficial projects to interconnect and contribute to the supply of renewable energy on the Duke grid. In *State of North Carolina ex. rel. Utilities Commission v. Friesian Holdings, LLC, et al.*, ____ N.C. App. ____ (No. COA20-867, 18 January 2022), the North Carolina Court of Appeals upheld this Commission's decision to deny a Certificate of Public Convenience and Necessity for a 70 MWAC merchant plant in part based upon its conclusion that the extensive network upgrade costs required, including the "reconstruction of roughly 73 miles of the existing grid at a cost of \$223.5 million plus \$25 million in interest . . . were unreasonably high." *Id.* at \$\mathbb{P}16.

Just last week, in Commission Docket No. EMP-116, Sub 0 (the "Juno Docket"), Duke Energy submitted a late-filed exhibit in response to Commission questions concerning its intervention in the proceeding. Noting that "Duke Energy has a significant interest in an efficient queue reform transition and generator interconnection process, as well as the manner in which transmission upgrades in the Companies' balancing authority areas are identified and approved," Duke Energy acknowledged that transmission

congestion, particularly in the area that would need to be upgraded in order to interconnect the project at issue in that docket, poses a challenge for accomplishing the goals of HB 951. (*See Exhibit A*, "Late Filed Exhibit 1 of Duke Energy Carolina, LLC and Duke Energy Progress, LLC March 9, 2022," at 1 of 4.)

In the Juno Docket, the Commission asked Duke Energy to respond to the following question: "Are the transmission upgrades identified in the DEP Transitional Cluster Study ("TCS") Phase 1 report and assigned, in part, to Juno Solar likely to be required to achieve the CO2 emissions reductions required under HB951?" Duke responded as follows:

Yes. Duke Energy believes that construction of upgraded transmission infrastructure identified in the DEP TCS Phase 1 Report in the southeastern North Carolina and northeastern South Carolina region of DEP (known as the "Red Zone") will be needed. Such upgrades will enable integration of the significant clean energy resources that will likely be required to achieve HB 951's emissions reduction goals in a least cost manner while ensuring the adequacy and reliability of the existing grid is maintained for DEP's customers.

(Id.)

Duke Energy continued, noting that despite the congestion, the specific area known as the "Red Zone" continued to be selected for potential projects due to its "superior development qualities":

The challenges identified by Juno Solar witness Steven Levitas and other Interconnection Customers regarding development of new solar generation in the Red Zone (due to significant Network Upgrade costs required to interconnect new generation in this region) are well-documented and generally uncontroverted. Duke Energy has identified the Red Zone constraints in grid locational guidance published in Competitive Procurement of Renewable Energy Program RFPs since early 2018 as well as in numerous publicly-available generator interconnection studies. However, development of new solar energy projects in this area continues to be robust due to superior development qualities in the region (flat and relatively cheap land, less population density, higher irradiance) which suggests that market participants believe development opportunities in this area can ultimately overcome the cost of the Red Zone upgrades.

(*Id.* at 2 of 4.) Duke went on to note that "The TCS Phase 1 Report and numerous generator interconnection studies demonstrate that solving the Red Zone upgrades will be needed to interconnect and deliver new clean energy resources to our customers from this region." (*Id.*)

CCEBA agrees with Duke Energy that addressing the transmission congestion issue, particularly in the "Red Zone" is vital to achieving the goals of HB 951. We also agree with Duke Energy's comment that "[w]ell-planned new 'backbone' transmission infrastructure that can facilitate interconnection of new clean energy resources could present a superior solution to the reactive generator interconnection process that exists today." (*Id.* at 3 of 4.)

Because of the significant impediment such transmission congestion poses to the accomplishment of HB 951's goal of achieving a 70% reduction in CO2 by 2030 and net zero by 2050 in the least cost manner, any resource available for solving such congestion with funds made available by the IIJA should certainly be pursued. Transmission and interconnection upgrade costs can significantly increase the costs of one or even multiple potential renewable energy projects in a given cluster. By the same token, the elimination of those costs through alternative funding could result in a lower cost of such energy under any plan developed to achieve the goals of HB 951.

Attached hereto as Exhibit B is the January 12, 2022 Notice of Intent issued by the Department of Energy (Fed. Reg., Vol. 87, No. 12, pp. 2769-2773). In that Notice of Intent, the DOE notes the commencement of the "Building a Better Grid Initiative." In a paragraph that reads as if it were written about the "Red Zone" in the DEC/DEP territories,

the DOE notes "clean energy generation is increasingly the least-cost option in many parts of the country, and investment in transmission will play a critical role in unlocking the deployment of greater renewable energy generation" and "as the number of generation and storage projects proposed for interconnection to the bulk-power system is growing, interconnection queue wait times are increasing and the percentage of projects reaching completion appears to be declining, particularly for wind and solar resources." (Exhibit B at 2769-70.) The DOE then states that the IIJA was in fact adopted to meet this challenge. (*Id.*)

In other words, the transmission upgrades needed to ameliorate the Red Zone congestion and other similar restricted areas in the DEC/DEP balancing authority areas are textbook cases for use of the funding provided by the IIJA. Three particular funding opportunities, still in development, will be important for this Commission and Duke Energy to follow and participate in.

First, the Transmission Facilitiation Program, newly authorized by the IIJA under IIJA § 40106, will provide a \$2.5 Billion revolving fund to facilitate the construction of high capacity new, replacement, or upgraded transmission lines" either through the DOE's involvement as a customer for additional capacity, as a lender, or as a participant in public-private partnerships. DOE states that it "intends to establish procedures for the administration of this program and for solicitation and selection of project applications." (*Id.* at 2771-72.) CCEBA strongly urges the Commission to monitor the DOE's progress in issuing these procedures and ultimately to apply for funding for the Red Zone transmission upgrades identified in the DEP Phase 1 Report.

In addition, the DOE states that under the Enhancing Grid Resilience provisions of the IIJA, the Department "intends to issue solicitations for applications by states, American Indian Tribes, local communities, and industry" for "formula grants, competitive grants, and competitive awards across a number of provisions of IIJA that allow for upgrading transmission infrastructure." (*Id* at 2772.) Further guidance and solicitations will be "forthcoming." CCEBA again urges the Commission to ensure that North Carolina participates in any such solicitations. The Red Zone and other congested areas can be relieved by such funding, lower the costs to ratepayers of any needed upgrades, and open the grid to the interconnection of innovative renewable generation and storage projects in chronically-underserved areas of North Carolina.

Finally, CCEBA recommends that the Commission consider participating in the Designation of Route-Specific Transmission Corridors program and apply to designate congested transmission areas vital to the accomplishment of the goals of HB 951 as a National Corridor. The IIJA made changes to the qualifications for such a designation, clarifying that a National Corridor "can be any area experiencing or expected to experience electricity transmission capacity constraints or congestion that adversely affects customers." (*Id.* at 2773.) The DOE intends to "provide a process for the designation of National Corridors on a route-specific, applicant-driven basis." (*Id.*) CCEBA urges the Commission to monitor the progress of the development of this program and to propose specific corridors in the DEC/DEP balancing authority areas as National Corridors, in order to benefit from the lowered regulatory burdens such designation allows.

CCEBA stresses that transmission congestion is an issue that cuts across all generation technologies, and poses a significant threat to North Carolina's ability to

achieve the goals of HB 951. Any funding or assistance available from the federal government which can result in lowered costs for interconnecting projects is worth the attention of the Commission and utilities. CCEBA appreciates the opportunity to comment in this docket and reserves the right to reply to comments of other intervenors on funding possibilities that extend beyond transmission.

Respectfully submitted this the 15th day of March 2022.

/s/ John D. Burns
John D. Burns
General Counsel

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CERTIFICATE OF SERVICE

I hereby certify that all persons on the docket service list have been served true and accurate copies of the foregoing document by hand delivery, first class mail deposited in the U.S. mail, postage pre-paid, or by email transmission with the party's consent.

This the 15th day of March 2022.

/s/ John D. Burns
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CCEBA COMMENTS ON M-100, Sub 164

Exhibit A

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March 9, 2022

VIA Electronic Filing

Ms. A. Shonta Dunston, Chief Clerk North Carolina Utilities Commission **Dobbs Building** 430 North Salisbury Street Raleigh, North Carolina 27603

> Late Filed Exhibit 1 of Duke Energy Carolinas, LLC and Duke Energy Re:

Progress, LLC

Docket No. EMP-116, Sub 0

Dear Ms. Dunston:

Enclosed for filing in the above-referenced proceeding on behalf of Duke Energy Carolinas, LLC and Duke Energy Progress, LLC is their Late Filed Exhibit 1.

Please do not hesitate to contact me should you have any questions. Thank you for your assistance with this matter.

Very truly yours,

/s/E. Brett Breitschwerdt

EBB:kjg

Enclosure

Docket No. EMP-116, Sub 0

Late Filed Exhibit 1 of Duke Energy Carolinas, LLC and Duke Energy Progress, LLC

March 9, 2022

Duke Energy Carolinas, LLC ("DEC") and Duke Energy Progress, LLC ("DEP" and together with DEC, "Duke Energy" or "the Companies") submit this late filed exhibit in the above-captioned proceeding to address questions posed by the Commission during the March 2, 2022 evidentiary hearing.

<u>Commission Question 1</u>: Please explain why the Companies elected to intervene in this proceeding.

Duke Energy Response: The reasons for the Companies' intervention are straightforward: Duke Energy has a significant interest in an efficient queue reform transition and generator interconnection process, as well as the manner in which transmission upgrades in the Companies' balancing authority areas are identified and approved (either directly or indirectly). As part of Duke Energy's ongoing energy transition and integrated resource planning process, thoughtful and deliberate transmission development for the benefit of all customers is a critically important issue, as a robust transmission system provides significant reliability benefits for both retail and wholesale customers. The Companies recognized the potentially significant transmission upgrades anticipated to be needed to reliably interconnect Juno Solar, LLC's ("Juno Solar" or "Applicant") project and, therefore, determined that intervention was appropriate in order to monitor the proceeding and preserve the ability to provide input where needed or called upon, as has now occurred.

<u>Commission Question 2</u>: Are the transmission upgrades identified in the DEP Transitional Cluster Study ("TCS") Phase 1 Report and assigned, in part, to Juno Solar likely to be required to achieve the CO2 emissions reductions required under HB 951?

<u>Duke Energy Response</u>: Yes. Duke Energy believes that construction of upgraded transmission infrastructure identified in the DEP TCS Phase 1 Report in the southeastern North Carolina and northeastern South Carolina region of DEP (known as the "Red Zone") will be needed. Such upgrades will enable integration of the significant clean energy resources that will likely be required to achieve HB 951's emissions reduction goals in a least cost manner while ensuring the adequacy and reliability of the existing grid is maintained for DEP's customers.

As identified by Mr. Sammy Roberts, Duke Energy's General Manager of Transmission Planning and Operations Strategy, during the October 1, 2021 Technical Conference on Duke Energy's

Duke Energy Carolinas, LLC Duke Energy Progress, LLC Docket No. EMP-116, Sub 0

Late Filed Exhibit 1
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2020 Integrated Resource Plans held in Docket No. E-100 Sub 165, Duke Energy's transmission planning strategy is rapidly evolving to meet the increasingly complex needs of the State's energy future (Slide 9). This includes the Companies' recent queue reform transition to annual cluster studies to study generator interconnection requests and to facilitate sharing of the significant Network Upgrade costs required to interconnect new solar and other generating facilities to the Duke Energy transmission systems. Mr. Roberts also identified the potential need for more proactive "queue informed" coordinated planning of transmission infrastructure to achieve the State's energy policy goals (Slide 15) which must also conform with the Federal Energy Regulatory Commission's ("FERC") transmission planning processes.

The TCS is an important component of the queue reform transition and was designed by the Companies and stakeholders to provide existing non-speculative Interconnection Customers in the Duke Energy interconnection queues an efficient and orderly transitional study process to interconnect in advance of the upcoming 2022 DISIS Cluster. A second key objective of TCS is to establish a clear study baseline for the 2022 DISIS Cluster. To accomplish these objectives, the TCS was designed to promote project readiness after Phase 1 by imposing significant withdrawal penalty risk on Interconnection Customers committing to enter Phase 2, thereby incenting speculative projects without a clear readiness pathway to exit TCS prior to Phase 2 and to consider re-entering DISIS. The 2022 DISIS Cluster is open for enrollment now and, Duke Energy expects that the proposed 2022 solar procurement, if approved by the Commission, will be synced with the 2022 DISIS Cluster, as further discussed below. Duke Energy takes no position on whether Juno Solar or other Interconnection Customers should continue in TCS or withdraw in advance of TCS Phase 2 and consider re-entering DISIS.

The challenges identified by Juno Solar witness Steven Levitas and other Interconnection Customers regarding development of new solar generation in the Red Zone (due to significant Network Upgrade costs required to interconnect new generation in this region) are well-documented and generally uncontroverted. Duke Energy has identified the Red Zone constraints in grid locational guidance published in Competitive Procurement of Renewable Energy Program RFPs since early 2018 as well as in numerous publicly-available generator interconnection studies. However, development of new solar energy projects in this area continues to be robust due to superior development qualities in the region (flat and relatively cheap land, less population density, higher irradiance) which suggests that market participants believe development opportunities in this area can ultimately overcome the cost of the Red Zone upgrades.

If the Red Zone upgrades are not funded and constructed through the current TCS process, there are two additional pathways through which the Red Zone upgrade could be funded and constructed in the near future.

First, as discussed above, Duke Energy is planning to seek Commission authorization for a 2022 solar procurement that will be aligned with the upcoming 2022 DISIS Cluster. DISIS projects in

Duke Energy Carolinas, LLC Duke Energy Progress, LLC Docket No. EMP-116, Sub 0 Late Filed Exhibit 1
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the Red Zone, including those projects competitively selected through the 2022 solar procurement could provide another generator interconnection-driven path to constructing the Red Zone upgrades.

Second, in addition to reactively studying the need for Network Upgrades as part of the generator interconnection process, Duke Energy also believes that achieving the State's resource planning objectives and emission reduction goals requires purposeful and proactive alignment between resource planning and transmission planning. The TCS Phase 1 Report and numerous generator interconnection studies demonstrate that solving the Red Zone upgrades will be needed to interconnect and deliver new clean energy resources to our customers from this region. Well-planned new "backbone" transmission infrastructure that can facilitate interconnection of new clean energy resources could present a superior solution to the reactive generator interconnection process that exists today.

In parallel with administering the TCS and planning for the 2022 DISIS Cluster, the Companies are also planning to evaluate through the FERC Order No. 890-compliant North Carolina Transmission Planning Collaborative ("NCTPC") whether public policy-driven, queue-informed transmission upgrades are needed to both achieve improved reliability and operational flexibility while, at the same time, enabling interconnection of needed clean energy generation resources to the Duke Energy transmission system. As identified by Mr. Roberts in the October 2021 Technical Conference, the Red Zone upgrades in DEP-East could be considered by the NCTPC through this FERC-approved local transmission planning process. More information will be provided as part of the Companies' upcoming Carbon Plan filing on potential transmission needs and upgrades identified by the TCS Phase 1 Report and numerous other generator interconnection system impact studies that are likely needed to achieve the State's resource planning goals.

<u>Commission Question 3</u>: Is an Interconnection Customer permitted to voluntarily waive application of FERC's generator interconnection Crediting Policy (pursuant to which an Interconnection Customer would ordinarily receive a refund equal to the total cost of the Upgrades assigned under a FERC LGIA)?

Duke Energy Response: FERC's interconnection Crediting Policy for generator interconnection-assigned Network Upgrade costs is memorialized in Section 11.4 of Duke's *pro forma* LGIA. Duke has identified no FERC precedent that would prohibit an Interconnection Customer from voluntarily waiving application of FERC's Crediting Policy with respect to all or a portion of the costs of any Network Upgrades required to be constructed. However, such voluntary waiver would need to be memorialized in the LGIA executed between the Transmission Provider and Interconnection Customer, which would make the IA a non-conforming LGIA. All non-conforming IAs must be filed with FERC for approval. It is not possible to predict whether FERC would approve such a non-conforming IA (even where executed by the Interconnection Customer)

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or whether other interested parties might intervene to oppose such a voluntary departure from the Crediting Policy. See Duke Energy Progress, LLC, 177 FERC ¶ 61,001 at P 32 (2021) (finding that DEP had burden to demonstrate that terms of an affected system operating agreement, which did not incorporate FERC's Crediting Policy, were just and reasonable and rejecting DEP arguments that the customer's voluntary waiver of the Crediting Policy evinced by the customer's execution of the agreement prior to filing was sufficient to satisfy the just and reasonable standard) Rehearing denied, 177 F.E.R.C. P 62114 (2021).

The timing of a future FERC determination of whether to accept an Interconnection Customer's voluntary commitment to deviate from the Crediting Policy is also notable. The non-conforming LGIA would likely be submitted to FERC (either executed or unexecuted) in spring 2023 after a Facilities Study has been completed and IAs are executed for all TCS projects, introducing the potential risk of late stage withdrawals and adverse impacts to both the TCS as well as the 2022 DISIS Cluster if FERC does not accept the non-conforming provisions of the IA as just and reasonable at that time.

CERTIFICATE OF SERVICE

I hereby certify that a copy of the foregoing <u>Late Filed Exhibit 1</u>, as filed in Docket No. EMP-116, Sub 0, was served via electronic delivery or mailed, first-class, postage prepaid, upon all parties of record.

This, the 9th day of March, 2022.

/s/E. Brett Breitschwerdt

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Attorney for Duke Energy Carolinas, LLC and Duke Energy Progress, LLC

CCEBA COMMENTS ON M-100, Sub 164

Exhibit B



Any member appointed to fill a vacancy for a term of service not completed will serve for the remainder of the term of service of her/his predecessor. No member may serve for a period in excess of three consecutive terms. Members of the Committee will serve as Special Government Employees (SGEs), as defined in 18 U.S.C. 202(a). As SGEs, members are selected for their individual expertise, integrity, impartiality, and experience.

Nomination Process: Interested persons, stakeholders, or organizations (including individuals seeking reappointment by the Secretary of Education to serve on the NCFMEA) may nominate a qualified medical expert(s). To submit a nomination(s) or self-nominate for appointment to serve on the NCFMEA, please send a cover letter addressed to the Secretary of Education as follows: Honorable Miguel A. Cardona, Ed.D., Secretary of Education, U.S. Department of Education, 400 Maryland Avenue SW, Washington, DC 20202. In the letter, please note your reason(s) for submitting the nomination. Include a copy of the nominee's current resume/ cv and contact information (nominee's name, mailing address, email address, and contact phone number). In addition, the cover letter must include a statement affirming that the nominee (if you are nominating someone other than yourself) has agreed to be nominated and is willing to serve on the NCFMEA if appointed by the Secretary of Education. Please submit your nomination(s) including the requested attachments to the U.S. Department of Education, Office of the Secretary, Committee Management via email to: cmtemgmtoffice@ed.gov. (Please specify in the email subject line "NCFMEA Nomination").

For questions, please contact Karen Akins, U.S. Department of Education, Committee Management Officer, Office of the Secretary, (202) 401–3677, or via email at *Karen.Akins@ed.gov*.

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Miguel A. Cardona,

Secretary of Education.
[FR Doc. 2022–00908 Filed 1–18–22; 8:45 am]
BILLING CODE P

DEPARTMENT OF ENERGY

Building a Better Grid Initiative To Upgrade and Expand the Nation's Electric Transmission Grid To Support Resilience, Reliability, and Decarbonization

AGENCY: Office of Electricity, Department of Energy.
ACTION: Notice of intent.

SUMMARY: In this notice, the Department of Energy (DOE or the Department) unveils its new Building a Better Grid Initiative focused on catalyzing nationwide development of new and upgraded high-capacity transmission lines. Under the Building a Better Grid Initiative, DOE will identify critical national transmission needs and support the buildout of long-distance, high-voltage transmission facilities that meet those needs through collaborative transmission planning, innovative financing mechanisms, coordinated permitting, and continued transmission related research and development. DOE commits to robust engagement on energy justice and collaboration, including with states, American Indian Tribes and Alaska Natives, industry, unions, local communities, and other stakeholders for successful implementation of the program. FOR FURTHER INFORMATION CONTACT: Ms.

FOR FURTHER INFORMATION CONTACT: Ms. Michelle Manary, Acting Deputy Assistant Secretary, Electricity Delivery Division, Office of Electricity, Mailstop OE–20, Room 8H–033, 1000 Independence Avenue SW, Washington, DC 20585; Telephone: (202) 586–1411 or ElectricityDelivery@hq.doe.gov. More information will also be available at https://www.energy.gov/oe/office-electricity.

SUPPLEMENTARY INFORMATION:

I. Background

A robust transmission system is critical to the Nation's economic, energy, and national security. However, the United States faces challenges as its electric grid infrastructure continues to age—studies from the past decade find that 70 percent of the grid's transmission lines and power transformers were over 25 years old. 12 In addition, insufficient transmission capacity—especially transmission that facilitates transfer of power across

regions—presents another critical challenge facing the grid. Upgrading and expanding the current transmission system will enhance grid reliability and resilience and enable the cost-effective integration of clean energy.

Modernizing, hardening, and expanding the grid will enhance the resilience of our entire electric system, and ensure that electricity is available to customers when it is needed most. Aging infrastructure leaves the grid increasingly vulnerable to attacks.3 The increasing frequency of extreme weather events is leading to energy supply disruptions that threaten the economy, put public health and safety at risk, and can devastate affected communities all over the country. Investment in transmission infrastructure can help protect the grid against supply disruptions due to physical and cyberattacks or climate-induced extreme weather, minimize the impact of supply disruptions when they happen, and restore electricity more quickly when outages do occur.

Expanding transmission capacity also improves reliability by creating stronger and more numerous energy delivery pathways, helping to ensure that consumers have a dependable source of electricity to power their homes, schools, and businesses. When one generation source is physically unavailable or uneconomic, transmission enables delivery from other generation sources, making the system better equipped to meet delivery requirements under the broader range of real circumstances and stresses seen in

recent years.

Electric grid investment also spurs economic growth. Investment in the grid will create demand for well-paying jobs in construction and will drive innovation, commercialization, and deployment of energy technologies that can spur new businesses. Moreover, clean energy generation is increasingly the least-cost option in many parts of the country, and investment in transmission will play a critical role in unlocking the deployment of greater renewable energy generation.

Transmission is critical to addressing the climate crisis through the decarbonization of the power sector and electrification of transportation and other sectors. The climate crisis accelerates the need for the United States to modernize its electric grid. To

¹ See U.S. Dep't of Energy, Infographic: Understanding the Grid (Nov. 2014), https:// www.energy.gov/articles/infographicunderstanding-grid.

² See Energy Information Agency, Major utilities continue to increase spending on U.S. electric distribution systems, (July 20, 2018), https://www.eia.gov/todayinenergy/detail.php?id=36675.

³ See ICF International, Electric Grid Security and Resilience: Establishing a Baseline for Adversarial Threats, at 26 (June 2016), https://www.energy.gov/sites/prod/files/2017/01/f34/Electric%20Grid%20 Security%20and%20Resilience—Establishing%20a%20Baseline%20for%20 Adversarial%20Threats.pdf.

address the imminent threat of climate change, and capitalize on the economic opportunity of doing so, President Biden established ambitious goals: A carbon pollution-free power sector by 2035, and a net-zero greenhouse gas emissions economy by 2050.4 Multiple pathways exist for the United States to meet these clean energy goals, but all require upgrading and expanding the Nation's transmission infrastructure.⁵ In particular, they require deploying interstate high-voltage lines connecting areas with significant renewable energy resources to demand centers and linking together independently operated grid regions. The most cost-effective renewable resources are often located in remote geographic areas far from the areas with the biggest demand.6 Therefore, accelerating the shift toward a clean power sector requires investment in critical enabling infrastructure such as transmission to increase access to these renewable energy sources.7 Numerous studies conclude "that a reliable power system that depends on very high levels of renewable energy will be impossible to implement without doubling or tripling the size and scale of the [N]ation's transmission system." 8 A recent study found as the number of generation and storage projects proposed for interconnection to the bulk-power system is growing, interconnection queue wait times are increasing and the percentage of projects reaching completion appears to be declining, particularly for wind and solar resources.9 Needed investments in transmission infrastructure include

increasing the capacity of existing lines, using advanced technologies to minimize transmission losses and maximize the value of existing lines, and building new long-distance, high-voltage transmission lines.

Recognizing these challenges, Congress enacted and the President signed the Infrastructure Investment and Jobs Act (IIJA) on November 15, 2021. IIJA builds on existing Department of Energy authorities to provide substantial new tools and funding to the Department to accelerate the modernization, expansion, and resilience of the Nation's electric grid. DOE intends to coordinate the use of all authorities and funding focused on collaborative planning, innovative financing mechanisms, and coordinated permitting now at the disposal of the Department to resolve challenges and constrains facing the electric grid.

II. Transmission Deployment Program

For the reasons discussed previously, DOE intends to launch a coordinated transmission deployment program to implement both IIJA and previously enacted authorities and funding. Under the Building a Better Grid Initiative, DOE will engage in a collaborative initiative to encourage and enable investment in transmission infrastructure. DOE recognizes the importance of engaging with other federal agencies, state and local governments, American Indian Tribes and Alaska Natives, industry, unions, local communities, environmental justice organizations, and other stakeholders. Working with these partners, DOE aims to increase coordination and transparency; to employ available tools and resources to support the development of nationallysignificant transmission projects; and to improve transmission siting, permitting, and authorization processes.

DOE's implementation of the Building a Better Grid Initiative will fall into five broad categories: Coordination; enhancing transmission planning to identify areas of greatest need; deploying federal financing tools to reduce project development risk; facilitating an efficient transmission permitting process; and performing transmission-related research and development.

A. Coordination

Early and collaborative engagement is an essential element of building a reliable, resilient, and efficient electric grid. DOE will consult and work collaboratively with government entities, including states, American Indian Tribes, and Alaska Natives, and other stakeholders throughout the process of evaluating and deploying the Department's tools and authorities to accelerate transmission deployment.

(1) Regional Convenings. In most of the country, the primary venue in which the future of the transmission grid is being planned is through regional and state-level processes led by transmission planning organizations such as independent system operators (ISOs)/ regional transmission organizations (RTOs), state regulatory commissions, and utilities, with key involvement from transmission developers, independent power producers, consumer advocates, unions, public interest organizations, technology providers, and other stakeholders that contribute to the planning process to identify where and when new transmission lines are needed to ensure that the delivery of electricity remains reliable and affordable. In implementing the specific elements of the Building a Better Grid initiative described underneath, DOE intends to leverage existing regional venues where stakeholders are convened around transmission planning to identify nationally significant transmission lines, validate transmission modeling approaches, and provide technical analysis to states, American Indian Tribes and Alaska Natives, ISOs/RTOs, and utilities.

(2) Offshore Wind Transmission Convening. DOE is partnering with the Department of the Interior's Bureau of Ocean Energy Management (BOEM) to convene key stakeholders, government partners, and ocean users, including American Indian Tribes and Alaska Natives, state and local governments, ISOs/RTOs, utilities, wind energy developers, and non-governmental organizations, to elucidate the central transmission challenges associated with meeting the Biden Administration's goal-30 GW of deployed offshore wind (OSW) capacity by 2030 and to facilitate OSW development well beyond that goal—and identify potential solutions to those challenges. Later this year, DOE and BOEM will lead a series of convening workshops, in consultation with the Federal Energy Regulatory Commission (FERC) and other federal agencies, to develop a set of recommendations and associated action plan for addressing medium- and longterm OSW transmission challenges. These will include recommendations for OSW transmission development, transmission planning and permitting policies, as well as seeking to maximize benefits to the onshore transmission system by considering solutions that will reduce congestion and support system interconnection inclusive of

⁴ See Executive Order 14008 of Jan. 27, 2021, Tackling the Climate Crisis at Home and Abroad, 86 FR 7619 (Feb. 1, 2021), https://www.federalregister.gov/documents/2021/02/01/2021-02177/tackling-the-climate-crisis-at-home-and-abroad; Fact Sheet: President Biden Sets 2030 Greenhouse Gas Pollution Reduction Target Aimed at Creating Good-Paying Union Jobs and Securing U.S. Leadership on Clean Energy Technologies (Apr. 22, 2021), https://www.whitehouse.gov/briefing-room/statements-releases/2021/04/22/fact-sheet-president-biden-sets-2030-greenhouse-gas-pollution-reduction-target-aimed-at-creating-good-paying-union-jobs-and-securing-u-s-leadership-on-clean-energy-technologies/.

⁵ See North American Renewable Integration Study, Executive Summary, p. 9.

⁶ See id. at 4-5.

⁷ See Eric Larson, et al., Net-Zero America: Potential Pathways, Infrastructure, and Impacts, at 13–14 (Dec. 15, 2020), https:// netzeroamerica.princeton.edu/img/Princeton_NZA_ Interim_Report_15_Dec_2020_FINAL.pdf.

⁸ ESIG Report at 10 (providing a summary of six studies at Appendix B); also, see *Net Zero America* (previous footnote).

⁹ See Joseph Rand, et al., Queued Up: Characteristics of Power Plants Seeking Transmission Interconnection as of the End of 2020, Briefing at 6 (May 2021), https://etapublications.lbl.gov/sites/default/files/queued_up_ may_2021.pdf.

transmission that will provide broad-

transmission planning processes; and

strategies to accelerate decarbonization

scale benefits to electric customers;

inform regional and interregional

identify interregional and national

potential onshore transmission upgrades.

B. Planning

Building a cost-effective transmission network that offers access to a diversity of energy resources within and across geographic regions, and that supports reliability and resilience through robust inter-regional transfer capability, requires deliberate planning and a different approach than has been used traditionally. Transmission planning processes have not generally been designed to identify long-term (beyond 10-year planning cycles), flexible, and inter-regional solutions that will meet national interests by enhancing electric system resilience across regions. Modernizing transmission planning can provide greater certainty to drive investment to the highest-need transmission projects and enable development of the projects with the largest long-term benefit for consumers. DOE intends to consider the following actions to facilitate transmission

(1) National Transmission Needs Study. DOE intends to identify highpriority national transmission needsspecifically, to identify where new or upgraded transmission facilities could relieve expected future constraints and congestion driven by deployment of clean energy consistent with federal, state, and local policy and consumer preferences; higher electric demand as a result of building and transportation electrification; and insufficient transfer capacity across regions—by conducting a Transmission Needs Study. Consistent with authority provided by the Energy Policy Act of 2005 10 and the IIJA, this study will evaluate current and expected future electric transmission capacity constraints and congestion that could adversely affect consumers. DOE will consult with affected states, American Indian Tribes and Alaska Natives, and appropriate regional entities. The results of this needs assessment can inform the prioritization of the DOE financing authorities described in Section II.C of this document; designation of national interest electric transmission corridors (National Corridors), as described in Section II.D of this document, and regional transmission planning processes.

(2) National Transmission Planning. In addition to the Transmission Needs Study, DOE is leading a national-scale, long-term (a 15- to 30-year) transmission planning analysis to identify

will conduct supportive analyses to identify transmission pathways and develop transmission strategies to integrate offshore wind, consistent with the Administration's goal of 30 GW of OSW by 2030 and to set the stage for a more ambitious 2050 OSW deployment target. In November 2021, DOE launched the Atlantic Offshore Wind Transmission Study, a 2-year study led by NREL and PNNL. Through robust engagement with diversified stakeholder groups, this work evaluates coordinated transmission solutions to enable offshore wind energy deployment along the U.S. Atlantic Coast, addressing gaps

in existing analyses. 11

(4) Transmission Planning Technical Assistance. DOE will continue to develop and leverage modeling tools and capabilities to provide technical analysis to states and regions, and other agencies, where appropriate. This includes the research and capabilities created as part of the National Transmission Planning and the OSW Transmission Analysis above. The technical analysis and assistance aim to aid in long-term energy planning, policy implementation, and regulatory

rulemaking, informed by core transmission planning precepts and in alignment with current federal and state public policy goals. The IIJA requires states to incorporate transmission planning as a mandatory feature of their energy plans and is supported with \$500 million in increased funding for the State Energy Program.

C. Financing

Financial risk poses a significant barrier to pursuing large scale, multiregion transmission projects. Transmission projects require large, upfront investments. For regulated utility projects, returns are ultimately collected over long periods through rates charged to end-use customers, but it is difficult for such utilities to recover costs for transmission projects that cross multiple service territories and planning regions. Merchant transmission developers face challenges securing transmission customers before a project is built, but customer commitments are often needed to reduce investment risk. The IIJA provided critical new authorities and appropriations that the Department can use to help reduce financing challenges project sponsors may face and catalyze private investment in transmission. DOE intends to deploy these authorities while also continuing to make available existing financing tools.

New Programs Authorized in IIJA: (1) Transmission Facilitation Program. The IIIA establishes a new \$2.5B revolving fund to facilitate the construction of high capacity new, replacement, or upgraded transmission lines. 12 This program will prioritize projects that improve resilience and reliability of the grid, facilitate interregional transfer of electricity, lower electric sector greenhouse gas emissions, and use advanced technology. DOE is authorized to do so

through three separate tools.

 DOE is authorized to serve as an anchor customer on new and upgraded transmission lines in order to facilitate the private financing and construction of the line. Under this authority, DOE would buy up to 50 percent of planned capacity from the developer for a term of up to 40 years. A purchase of capacity will not be considered a "major federal action" that would trigger environmental review pursuant to the National Environmental Policy Act (NEPA). DOE will then market the capacity it has purchased to recover the

while maintaining system reliability. In partnership with the Pacific Northwest National Laboratory (PNNL) and the National Renewable Energy Laboratory (NREL), DOE will work with stakeholders to help identify viable future grid realization pathways to a large-scale transmission system buildout that would accomplish clean energy goals. Robust stakeholder engagement will help define new scenarios for analysis to reach grid decarbonization goals cost effectively and under new high-stress conditions. As part of this process, DOE intends to work with the Department of Transportation, the Department of the Interior, the United States Forest Service, other federal and state agencies, and utilities as appropriate, to integrate existing rightsof-way into the National Transmission Planning Study, including existing rail and highway rights-of-way; the Bureau of Land Management's (BLM) Westwide Energy Corridors; and other existing federal land and utility rightsof-way. (3) OSW Transmission Analysis. To inform the integration of OSW, DOE

¹¹ See Atlantic Offshore Wind Transmission Study, NREL. https://www.nrel.gov/wind/atlanticoffshore-wind-transmission-study.html.

¹² In addition, eligible projects include those that would connect an isolated microgrid to an existing transmission, transportation, or infrastructure corridor located in Alaska, Hawaii, or a U.S.

¹⁰ Federal Power Act (FPA) section 216(a); 16 U.S.C. 824p(a).

a project.

costs it has incurred once the project's long-term financial viability is secured.

• DOE is authorized to make loans for the cost of carrying out eligible transmission projects.

• DOE is authorized to enter into public-private partnerships to codevelop projects that are located in a National Corridor or that are necessary to accommodate an increase in demand for interstate transmission, among other criteria. Such co-development can entail the design, development, construction, operation, maintenance, or ownership of

DOE intends to establish procedures for the administration of this program and for solicitation and selection of project applications. Further guidance will be forthcoming for this program.

(2) Enhancing Grid Resilience. DOE will provide formula grants, competitive grants, and competitive awards across a number of provisions of the IIJA that allow for upgrading transmission infrastructure. DOE intends to issue solicitations for applications by states, American Indian Tribes, local communities, and industry. Further guidance and solicitations will be forthcoming for these programs.

• Preventing Outages and Enhancing the Resilience of the Electric Grid—The IIJA authorizes DOE to make grants for supplemental hardening activities to reduce risks of power lines causing wildfires, and the likelihood and consequence of impacts to the electric grid due to extreme weather, wildfires, and natural disasters. This program is split between \$2.5 billion in matching grants for industry and \$2.5 billion in formula grants for states and American Indian tribes.

• Program Upgrading Our Electric Grid and Ensuring Reliability and Resiliency—The IIJA authorizes DOE to provide \$5 billion in competitive financial assistance to states, local governments, and American Indian tribes. This financial assistance must support electric sector owners and operators with projects that demonstrate innovative approaches to hardening and enhancing the resilience and reliability of transmission, storage, and distribution infrastructure.

• Energy Improvement in Rural and Remote Areas—DOE is authorized to provide competitive grants to small cities, towns, and unincorporated areas to improve resilience, safety, reliability, and availability of energy; and that provide environmental protection from adverse impacts of energy generation.

(3) Deployment of Technologies to Increase Capacity and Enhance Flexibility of the Existing Grid. The IIJA provides DOE with \$3 billion to provide matching grants for the deployment of advanced grid technologies to enhance grid flexibility. Building on the success of the Smart Grid Investment Grant Program, this program now includes advanced transmission technologies such as dynamic line rating, flow control devices, advanced conductors, and network topology optimization, to increase the operational transfer capacity transmission networks. Further guidance and solicitations will be forthcoming for this program.

Existing DOE Programs: (4) Loan Programs. DOE's Loan Programs Office (LPO) administers a number of programs that can provide loan guarantees to help deploy largescale energy infrastructure projects in the United States, some of which have already been utilized to issue over \$300 million in Conditional Commitment for the construction and energization of a new transmission line. Under the Title 17 Innovative Energy Loan Guarantee Program and the Tribal Energy Loan Guarantee Program, the Department is authorized to provide loan guarantees to projects that will expand and improve the transmission grid. Through these programs, LPO can offer borrowers access to debt capital, flexible financing customized for the specific needs of borrowers, and valuable expertise in energy infrastructure project development. LPO can also reduce the risk of investment in long-distance transmission projects by providing financing support for projects that analysis shows are likely to support repayment of the loan, even if those projects have not yet secured preconstruction agreements for transmission service for their full capacity.

(5) Transmission Infrastructure Program (TIP). The Western Area Power Administration (WAPA) administers a unique federal infrastructure development assistance and financing program. TIP manages WAPA's statutory \$3.25 billion borrowing authority to provide debt financing and development assistance for qualifying transmission projects with at least one terminus in WAPA's 15-state service territory and that facilitate delivery of renewable energy. The program leverages WAPA's transmission project development expertise and WAPA's borrowing authority, partnering with private and other non-federal coinvestment to support the development of critical transmission and related infrastructure in the West.

D. Permitting

The siting and permitting of interstate and inter-regional high-voltage

transmission generally requires action by many different authorities governing the federal, state, local, and Tribal lands, as well as private lands, that facilities will pass through. Projects involving multiple agencies are subject to a wide array of processes and procedural requirements for compliance with legal mandates and multiple authorizations. The time required to meet these legal mandates can be reduced through effective planning processes that take advantage of existing rights-of-way, which as outlined previously, DOE intends to incorporate into its planning activities. As an example, DOE is coordinating with BLM as the agency updates its designated West-wide Energy Corridors. But where such rights-of-way are not available, siting and permitting processes can significantly slow development and should be conducted efficiently, with clear expectations and predictable timelines and processes. These aims should occur without sacrificing important analysis, protection of environmental, cultural, and other important values, or robust public engagement. DOE intends to coordinate with states and with federal permitting agencies to help facilitate the siting and permitting process, including through consideration of the following actions:

(1) Federal Permitting Coordination. The Federal Permitting Improvement Steering Council (FPISC), established pursuant to Title 41 of the Fixing America's Surface Transportation Act ("FAST-41"), and made permanent by IIJA, facilitates coordination and oversight procedures for federal environmental review and permitting process related to eligible large-scale infrastructure projects. IIJA provided additional authority to FPISC to include projects on the permitting dashboard. DOE will work with relevant agencies to evaluate and recommend whether to include nationally-significant transmission projects on the dashboard. In addition, DOE works with interagency partners to bolster preapplication planning for transmission projects through its Integrated Interagency Pre-Application Process, which allows transmission project developers a mechanism for early coordination and information sharing with permitting agencies. 13 DOE intends to encourage developers to take advantage of the pre-application process in order to streamline federal permitting action.

(2) Public-private partnership projects. The previously-described Transmission Facilitation Program,

¹³ FPA section 216(h); 42 U.S.C. 824p(h).

enacted as part of IIJA, includes authority for the Secretary to enter into public-private partnerships for the design, development, construction, operation, maintenance, and ownership of transmission facilities. In addition, the Secretary, acting through the Administrators of the Southwestern Power Administration (SWPA) or WAPA, has the authority to design, develop, construct, operate, maintain, or own, alone or in partnership with third parties, transmission system upgrades or new transmission lines and related facilities within states in which WAPA and SWPA operate.14 In exercising these authorities, DOE can help facilitate transmission development in areas where state or local permitting requirements would otherwise make a project difficult or impossible to complete. In carrying out either type of project, the Secretary may accept and use contributed funds from another entity, such as a transmission developer, to carry out the Department's work on upgrades or on new projects. DOE may solicit interest in these public-private partnership projects, with a particular focus on projects that would fulfill transmission needs identified by the transmission planning actions outlined

previously.

(3) Designation of Route-Specific Transmission Corridors. The Federal **Energy Regulatory Commission (FERC)** has authority, clarified by the IIJA, to issue permits for the construction or modification of electric transmission facilities in National Corridors designated by the Secretary of Energy. 15 IIJA also clarified that National Corridors can be any area experiencing or expected to experience electricity transmission capacity constraints or congestion that adversely affects consumers. 16 DOE can designate a National Corridor after taking into consideration the Transmission Needs Study discussed previously and other information. In order to facilitate the efficient consideration of projects seeking a FERC-issued permit, DOE intends to provide a process for the designation of National Corridors on a route-specific, applicant-driven basis. DOE intends to give particular consideration to proposed National Corridors that, to the greatest degree possible, overlap with or utilize existing highway, rail, utility, and federal land rights-of-way. Further, in order to enable effective use of both DOE's routespecific National Corridor process and

E. Transmission Research, Development, and Demonstration

DOE continues to conduct RD&D to further develop and reduce the costs of technologies that enable the transmission system to be used more efficiently, including grid enhancing technologies, improved transmission conductors, and grid-related energy storage facilities. The National Laboratories' research programs, in partnership with industry, are investing in the next generation of components and systems. DOE's FY22 budget request prioritizes solicitations to support transmission technology development including transformers, high voltage direct current converter

stations, and storage.

DOE is also developing and improving analytical tools to more effectively support transmission deployment. DOE, in collaboration with several National Laboratories, is developing the North American Energy Resilience Model (NAERM), a nationalscale energy planning and real-time situational awareness tool. DOE is working to enable and expand NAERM's capabilities to facilitate effective transmission planning. Currently deployed transmission planning tools include the Energy Zones Mapping Tool, an online mapping tool that can be used to identify potential energy resource areas and energy corridors, and the Transmission Resilience Maturity Model that enables utilities to measure the maturity of their transmission resilience programs and identify improvements to increase the resilience of their transmission systems.

Moving forward, the Department will keep the public informed of its planned activities and progress related to this Building a Better Grid Initiative to expand and improve the Nation's electric transmission grid. DOE is committed to robust engagement and collaboration with states, American

Indian Tribes and Alaska Natives, industry, unions, local communities, environmental justice organizations, and other stakeholders. For additional information, interested parties may reach out to DOE's Office of Electricity using the contact information provided in this Notice.

Signing Authority

This document of the Department of Energy was signed on January 11, 2022, by Jennifer M. Granholm, Secretary of Energy. That document with the original signature and date is maintained by DOE. For administrative purposes only, and in compliance with requirements of the Office of the Federal Register, the undersigned DOE Federal Register Liaison Officer has been authorized to sign and submit the document in electronic format for publication, as an official document of the Department of Energy. This administrative process in no way alters the legal effect of this document on publication in the Federal Register.

Signed in Washington, DC, on January 12, 2022.

Treena V. Garrett,

Federal Register Liaison Officer, U.S. Department of Energy.

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BILLING CODE 6450-01-P

DEPARTMENT OF ENERGY

Environmental Management Site-Specific Advisory Board, Northern New Mexico

AGENCY: Office of Environmental Management, Department of Energy. **ACTION:** Notice of open virtual meeting.

SUMMARY: This notice announces an online virtual combined meeting of the Consent Order Committee and Risk Evaluation and Management Committee of the Environmental Management Site-Specific Advisory Board (EM SSAB), Northern New Mexico. The Federal Advisory Committee Act requires that public notice of this online virtual meeting be announced in the Federal Register.

DATES: Wednesday, February 16, 2022; 1:00 p.m.-4:00 p.m.

ADDRESSES: This meeting will be held virtually via WebEx. To attend, please contact Menice Santistevan by email, Menice.Santistevan@em.doe.gov, no later than 5:00 p.m. MT on Friday, February 11, 2022.

FOR FURTHER INFORMATION CONTACT: Menice Santistevan, Northern New Mexico Citizens' Advisory Board

16 Section 216(a) of the FPA; 16 U.S.C. 824p(a).

FERC's permitting process, DOE and FERC intend to work together, as appropriate, to establish coordinated procedures that facilitate efficient information gathering related to the scope of activities under review pursuant to these authorities. By harmonizing, to the greatest extent practicable, pre-filing and application processes, DOE and FERC can work with applicants to identify and resolve issues as quickly as possible; share information in a timely fashion; and expedite reviews conducted pursuant to these authorities, the National Environmental Policy Act, and other requirements.

¹⁴ Energy Policy Act of 2005 section 1222; 42 U.S.C. 16421.

¹⁵ FPA section 216(b); 16 U.S.C. 824p(b).