

**THE POWER STRUGGLE:
EXAMINING THE RELIABILITY
AND SECURITY OF AMERICA'S
ELECTRICAL GRID**

HEARING

BEFORE THE
SUBCOMMITTEE ON ECONOMIC GROWTH, ENERGY
POLICY, AND REGULATORY AFFAIRS
OF THE

COMMITTEE ON OVERSIGHT AND
ACCOUNTABILITY

U.S. HOUSE OF REPRESENTATIVES

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Tuesday, March 12, 2024

U.S. HOUSE OF REPRESENTATIVES
COMMITTEE ON OVERSIGHT AND ACCOUNTABILITY
SUBCOMMITTEE ON ECONOMIC GROWTH, ENERGY
POLICY, AND REGULATORY AFFAIRS

Washington, D.C.

The Subcommittee met, pursuant to notice, at 10:04 a.m., in room 2154, Rayburn House Office Building, Hon. Pat Fallon [Chairman of the Subcommittee] presiding.

Present: Representatives Fallon, Donalds, Bush, Brown, Stansbury, and Norton.

Also present: Representative Casar.

Mr. FALLON. This hearing of the Subcommittee of Economic Growth, Energy Policy, and Regulatory Affairs will come to order. I want to welcome everyone for coming today and thank you for your time. Without objection, the Chair may declare a recess at any time. I recognize myself for the purpose of making an opening statement.

Today's hearing focuses on an issue that is critical, of course, to all Americans, and that is the reliability and security of our Nation's power grid. When we flip on the switch, plug in your phone charger, or put groceries in the fridge, you expect electricity will be flowing. In fact, we take it for granted.

When I was in the military, I remember horror stories of fellow servicemembers that were stationed overseas, in other countries, and that was not always the case. In fact, it was sometimes regular that they could expect a power outage for up to 3, 4 hours daily. And as Americans, we know when it happens for an hour once or twice a year we get absolutely furious, and our heads want to explode.

An elaborate network of power plans, transmission lines, and distribution nodes work every day to delivery electricity where and when it is needed. However, as demand grows so do the risks for that reliability to fail. In 2023, the North American Electric Reliability Corporation, or NERC, which serves as the watchdog for grid reliability, released its long-term reliability assessment, and

that assessment warned regulators and utilities that more reliable capacity was needed to mitigate the challenges presented by growing electricity demand. That is why it is urgently needed, and it is urgently important for Congress to engage in serious discussions to identify the risks to this reliability and safeguard our grid against threats.

Many of these threats do not come from within the network. So, where do they come from? Weather, of course, poses a significant risk to the grid. We have also seen foreign adversaries, or entities sponsored by them, use cyberattacks to cripple the grid, and that is something they can do from afar, half a world away.

But many of these risks are caused by the Federal Government. New regulations proposed under this Administration will strain the system and the grid, and the grid is really just not prepared to handle it. Regulations including attempts to force car companies to only—and that is the key word here—only manufacture electric vehicle create a significant new demand on the grid, one that many experts say is completely unsustainable. Regulations attempting to rid all fossil fuel power plants, despite the necessity in providing consistent power generation; regulations forcing more electric appliances onto the market despite the fact that, under the new standards, many of them will not work; not to mention this Administration's radical push for renewables while ignoring the need for power generation around the clock, not just when the sun is shining and, of course, the wind is blowing.

What is the cumulative impact of all these regulations? Well, and you have to ask this question too—is our existing grid system even remotely prepared to deliver the volume of electricity these rush-to-green policies require? What do we need to do to ensure the American people have the reliable and affordable power that they need, and quite frankly, that they have become accustomed to? That is what we are here to find out.

The Federal Energy Regulatory Commission, or FERC, oversees our Nation's bulk power system, including generation transmission and distribution of power needed to maintain grid reliability. We offered FERC the opportunity to appear at today's hearing. Unfortunately, FERC declined to participate. Luckily, we have the next best thing, which is former Commissioner James Danly, who can speak to the inner workings of FERC and how they should respond to these challenges. We also are going to hear today from Mr. Travis Fisher, and expert with significant experience at FERC and in the private sector.

I hope our conversations here today will be insightful and help us better look into how we can prepare for the challenges ahead and what Congress should consider when debating issues impacting the security of our power grid.

I want to thank all the witnesses for coming today, and I yield to Ranking Member Bush for her opening statement.

Ms. BUSH. Thank you, Mr. Chairman. St. Louis and I are here today to address the safety, security, and sustainability of the Nation's electrical grid. Decades of pollution and overuse and overreliance on fossil fuels have disproportionately harmed Black and Brown communities in St. Louis and throughout the world.

Black children in St. Louis are ten times more likely to visit the emergency room for asthma than White children. Air pollution billowing from coal plants makes it harder to breathe, especially for Black communities already burdened with decades of systemic and structural racism and environmental inequities. Too many children in my community suffer from asthma. Too many parents, siblings, and friends die from preventable cancers.

The time for change is now. This is quite literally a matter of life and death. Soot pollution from coal-burning power plants is responsible for 3,800 premature deaths in this country every year, according to a new Sierra Club report. Just 17 coal plants are responsible for over half of those deaths, and Missouri is home to 2 of those 17. According to the report, 94 Missourians die prematurely every year due to burning coal. A separate report last year ranked St. Louis one of the ten worst places in the U.S. for air pollution.

Throughout my time in Congress, I have proudly worked toward climate-friendly policies. I continue to fight for a Green New Deal, including my own Green New Deal for Cities bill which would provide funding directly to city, state, local, tribal, and territorial governments to respond to the climate crisis and create hundreds of thousands of green jobs in the process.

One other fundamental step to mitigating the climate crisis is building a clean and renewable power grid. In the last Congress, Democrats made significant progress toward environmental justice and a sustainable power grid, including passing the Inflation Reduction Act. The IRA is the largest investment in green energy in American history, yet, we still have much more work to do. Congress must support Federal regulators who step up and do their part, expand clean, affordable, and safe energy transmission, including FERC. The people of St. Louis sent me here to make sure they had clean and affordable energy that was not making them sick. I want to work with regulators to make that a reality.

Republicans might sit here and tell you that renewable energy is a threat to our power grid, that it jeopardizes its security. This assertion is simply untrue. You know what threatens the grid depending on fossil fuel? Climate change exacerbated extreme weather events. In December 2022, Winter Storm Elliot struck St. Louis, bringing bitter cold and snow that strained the power grid. While St. Louis' fossil fuel-based infrastructure froze over and failed, its wind power facilities made up the shortfall. Far too many of my constituents suffered in the bitter cold. Coal and natural gas let them down. But wind power exceeded expectations.

We also cannot ignore the actions of domestic extremists, including white nationalists and white supremacists who have violently attacked electrical grids to stoke chaos and fear.

In 2022 alone, DOE reported 163 electrical emergency incidents and disturbances, including physical attacks, a 71 percent increase from 2021. In December 2022, a hate group attacked the power grid in North Carolina, leaving 45,000 people without electricity, shutting down a school for 5 days, and leading to one person's death.

In February 2023, the Federal Bureau of Investigation filed charges against two domestic extremists who conspired to destroy power stations around Baltimore. Then, again, in 2023, in April,

Federal courts sentenced two more white supremacists for their scheme to destroy critical infrastructure to spark civil unrest.

These incidents can no longer be considered isolated, you know, outliers. Last year, Ranking Member Garcia, Ranking Member Raskin, and I sent a letter to the Federal Energy Regulatory Commission and the Department of Homeland Security on extremism and energy terrorism. I am pleased that FERC is taking these threats seriously. Our government must ensure these attacks do not happen again.

The people of St. Louis should be able to trust that the Federal Government takes every action to secure the power infrastructures that connect their homes, their schools, their offices, and their hospitals. Access to these basic utilities is a human right.

That is why I have introduced the Recognizing Access to Utilities as a Human Right resolution. My bill would recognize access to water, sanitation, electricity, heating, cooling, public transit, and broadband communications as basic human rights, and public services that must be accessible, safe, acceptable, sufficient, affordable, justly resourced and sustainable, climate-resilient, and reliable for every single person.

People should not have to risk their health, safety, and well-being in order to keep the lights on. My constituents need to know that when they flip a switch the lights and the heat will go on, and it will not cost them a fortune. We need to get renewable energy onto the grid to reduce emissions. We need a power grid that can endure the extremes of the climate crisis. Thank you.

Mr. FALLON. I ask unanimous consent for Representative Casar from Texas to be waited onto the Subcommittee for today's hearing for the purposes of asking questions. Without objection, so ordered.

I am pleased to welcome our witnesses for today's hearing, Mr. James Danly, Mr. Travis Fisher, and Mr. Jonathan Monken.

James Danly is currently a Partner for Energy Regulation at Skadden, Arps, Slate, Meagher & Flom LLP and Affiliates. Previously he served as the General Counsel Commissioner and Chairman at FERC. Travis Fisher is the Director of Energy and Environmental Policy Studies at the Cato Institute, and Jonathan Monken is Principal at Converge Strategies. We look forward to hearing your testimony and hearing from you all on today's important topic.

Pursuant to Committee Rule 9(g), the witnesses will please stand and raise their right hands.

Do you solemnly swear or affirm that the testimony you are about to give will be the truth, the whole truth, and nothing but the truth, so help you God?

[Chorus of ayes.]

Mr. FALLON. Thank you. Let the record show that the witnesses answered in the affirmative. Please take your seats.

We appreciate you all being here, as I just mentioned, for your testimony. Let me remind the witnesses that we have read your written statements, and they will appear in full in the hearing record. Please limit your oral statements to 5 minutes. As a reminder, please press the button in front of you, the little red one, so we can hear you. When you begin to speak there will be a light. It will be green for 4 minutes and then 1 minute yellow, and then

when it is red, if you are in the middle of a statement, if you could just kind of wrap it up, that would be great. The runway is real short at that point.

I now recognize Mr. Danly for his opening statement. Thank you, sir.

**STATEMENT OF JAMES P. DANLY
PARTNER, ENERGY REGULATION
SKADDEN, ARPS, SLATE
MEAGHER & FLOM LLP AND AFFILIATES**

Mr. DANLY. Chairman Fallon, Ranking Member Bush, and Members of the Subcommittee, it is an honor to be here today to talk about an important topic that really is of immediate interest to every American, and I appreciate the chance to share some of experiences from having been General Counsel and Chairman at FERC.

It is impossible, as has already been stated, to exaggerate or overstate the importance of a stable bulk power system. Virtually every aspect of American life depends upon having affordable and continuous electricity. And this need that the United States has for its welfare, dependent upon continuous and stable electricity at reasonable prices, is at a time when load requirements are growing. The demand is going up, and it is going up in accelerating pace.

So, the problem is that we are also, at the same time, experiencing a greater number of threats to the bulk power system. Among them are the physical and cybersecurity threats. There is also another threat to it, which is that of resource adequacy. And so, I just want to spend 2 seconds before we get to questions, as I did in my written testimony, drawing a bit of a distinction between two different concepts: resource adequacy and reliability.

Reliability is that aspect of the bulk electric system that allows it to function and recover from predictable interruptions and problems quickly and without interruption of service. This is primarily driven by the NERC reliability standards, the standards that FERC oversees the promulgation of by NERC, and they are technical requirements. They are things like vegetation management protocols and proper operation of balancing authorities.

There are also, for cyber purposes, the CIP standards that require certain types of minimal activities to be taken to ensure that critical assets are protected from cyber threats.

Resource adequacy is something quite different. That is something that basically sounds in economics and regulation. Resource adequacy is the ability of the bulk power system to ensure that it can meet demand at all times, and you can have a perfectly reliable system—that is that if there were power to get to a place that needs it, it could get there, but if you do not have a sufficient quantity of power then you may have a reliable system, but you do not have a resource-adequate system.

Resource adequacy comes down to a matter of either planning for the future properly and having accurate expectations for what the demand is going to be down the road, and administratively determining it and then building it. This usually happens in vertically integrated utilities or states that have vertically integrated utilities through the Integrated Resource Plan, or in the case of the FERC

jurisdictional markets, the ISOs and RTOs, by having market rules that properly incentivize the development of needed new generation.

One of the problems that the markets have had over the last, I do not know, let us say 10, 15 years, is that they have not always properly valued the new capacity that is required. And every market is different. The tariffs are different region to region. But there have been problems in properly incentivizing the arrival of new generation to meet load growth.

This problem becomes all the more difficult when the markets have to operate and create those price signals upon which we rely to ensure resource adequacy when they are operating in the context of widespread and lucrative subsidies, which have the inevitable effect of warping price signals, and that means that you either over- or under-value the various types of resources that will ultimately come to the marketplace. And when resources are undervalued, you do not have enough of them, or you do not have enough of the right type of them.

So, I just want to make that distinction so that it can inform the discussion going forward. The word “reliability” does not apply to both resource adequacy and the technical requirements that come from NERC standards. Reliability has a narrow meaning, and resource adequacy has a different meaning, but the two of them are obviously interrelated concepts, and both are worthy of discussion today.

With that I look forward to your questions, and thank you again for having me up here.

Mr. FALLON. Thank you, sir. I now recognize Mr. Fisher for his opening statement.

**STATEMENT OF MR. FISHER
DIRECTOR OF ENERGY AND ENVIRONMENTAL STUDIES
CATO INSTITUTE**

Mr. FISHER. Good morning, Chairman Fallon, Ranking Member Bush, and Members of the Subcommittee. I am Travis Fisher. As the Chair said, I am the Director of Energy and Environmental Policy Studies at the Cato Institute, a nonpartisan public policy research organization in Washington, DC. It is an honor to be invited to speak with you today about the reliability and security of America’s power grid.

At the turn of the millennium, the National Academies of Engineering ranked the electric grid the greatest engineering achievement of the 20th century. The power grid should be an asset to American prosperity, but policymakers, through a multitude of subsidies, regulations, and mandates, have wounded it, to the point that it is now becoming a dangerous liability.

The stakes are high. A weakened power grid puts lives at risk. Reminders of this fact include the tragic loss of lives during Winter Storm Uri and the growing frequency of grid reliability events across the country. During extreme weather, Americans need reliable electricity to survive. Day-to-day we need reliable and affordable electricity to thrive and grow the economy.

As I see it, there are two distinct paths forward regarding electricity policy. The first, which I support, is to embrace American

values and foster an electric industry that harnesses free market competition to best serve the interests of consumers. This path recognizes the fact that most Americans are simply unwilling to sacrifice their well-being on behalf of a forced energy transition.

The second path, which I fear is what we are on presently, is to force a transition to politically favored technologies that consumers do not want. Taking the second path is unwise. I want to highlight three major Federal policies that lie along this path and the harmful impacts they will have on the reliability and affordability of electricity in the United States.

First is the Inflation Reduction Act, or IRA. The production tax credits in the IRA alone could cost American taxpayers \$3 trillion by the year 2050. These tax credits reward electricity production from unreliable sources and distort the market signals that keep reliable power plants running. The result will be a weaker grid over time, not to mention a deepening fiscal crisis in the country.

Second is the tailpipe emissions rule from the Environmental Protection Agency, or EPA. This proposal seeks to ensure that by 2032, two-thirds of new vehicles sold will be electric. Beyond taking away basic freedoms like the freedom to choose what kind of car to buy, this rule will place immense stress on the power grid by adding substantially to the overall electricity demand, which is already growing because we find new ways to use electricity all the time.

Third is the power plant rule from the EPA. The proposed rule mandates two technologies that are not adequately demonstrated—carbon capture and green hydrogen. The EPA heard from White House reviewers that the technologies are not ready for prime time, but the EPA seems to be establishing a new standard for its mandates. It claims carbon capture and green hydrogen are adequately demonstrated because they are adequately subsidized by the IRA.

Take these two rules together and it means significantly more demand on the grid and less supply. The result is increased prices and, unfortunately, a growing number of energy shortfalls. What that means for electricity customers is higher power bills and increased risk of blackouts. California has become the poster child in the United States for an aggressive energy transition. It is also the only state that mandates electric vehicles while asking people not to plug them in at certain times of day because the grid cannot handle it. This is not the American way. We should be able to buy the vehicles we want, fuel them when we want, and not be stuck with a \$3 trillion tab for an unreliable grid.

Economist Frederic Bastiat was correct when he wrote, and I am quoting, “Treat all economic questions from the viewpoint of the consumer, for the interests of the consumer are the interests of the human race,” end quote. The American people want reliable electricity at low costs, and policymakers should listen.

In living rooms across the country, having low-cost electricity can make the difference between light and darkness. During emergencies, having reliable electricity can make the difference between life and death.

It is not too late to stop the coming energy crisis because it is a crisis caused by unwise policies, and we can reform them. The power grid can be an asset to the American economy if we let it.

I urge you to choose the path that will lead to a bright future for America. Thank you.

Mr. FALLON. Thank you, sir. I now recognize Mr. Monken for his opening statement.

**STATEMENT OF JONATHON MONKEN
PRINCIPAL
COVERAGE STRATEGIES**

Mr. MONKEN. Good morning, Chairman Fallon, Ranking Member Bush, and distinguished Members of the Committee. Thank you for the opportunity to speak with you today on the vital subject of our Nation's electricity grid.

My name is Jonathon Monken, and I am a Principal at Converge Strategies, where I advise clients at the Federal and state government level as well as the private sector, on the development and implementation of strategies designed to improve the energy resilience of critical infrastructure systems, with an emphasis on the U.S. Department of Defense.

Often referred to as the world's largest machine, the North American grid is a vast network of assets designed to deliver electricity to all of its customers in a safe, efficient, and reliable manner. Today's hearing is timely for two reasons: the grid is undergoing an unprecedented transition related to the ways we generate and use electricity, and the reliable delivery of service to customers is under threat by natural and manmade risks that demand our collective attention.

The issue of grid resilience must be understood as an issue of national security. Just as we would not leave the defense of our country to chance, the energy system that underpins our collective economic and reliability needs must be supported through targeted planning, investment, and policy. In my testimony I will provide context to both issues and highlight the importance of grid planning and oversight to address the risks that they represent.

The grid transition is driven by two primary factors including unprecedented increases in customer demand, known as "load growth," and the transition to Carbon Free Energy sources of electricity generation. The Federal Government plays an essential role in developing policy, supporting technical standards, and collaborating with the private sector to ensure the grid is prepared to meet the energy needs of all citizens.

Over the past year, grid planners nearly doubled their 5-year load growth forecasts, with the nationwide demand for electricity expected to rise sharply from 2.6 percent to 4.7 percent over the next 5 years, as outlined in 2023 FERC filings. This increased consumption is a reflection of more than \$630 billion in private sector investment in new manufacturing, industrial, and data center facilities.

Meeting this demand is essential to domestic economic growth, and requires deliberate action to deploy and sustain energy resources. Across all grid regions of the U.S., 2 terawatts of new generation, more than 94 percent of which are renewables and battery storage, are queued up to meet this demand. Large-scale wind and solar power plants are competitive with existing conventional generation, and offer cheaper power than fossil fuel facilities. A recent

analysis found that 99 percent of U.S. coal plants are now more expensive to run than new solar, wind, and battery storage assets.

The rapid deployment of new resources must be matched with a corresponding investment in electric transmission infrastructure to ensure these generation assets are connected to the growing demand in all regions of the country. The U.S. Department of Energy estimates that the transmission system will need to expand by up to 60 percent by 2030, to maintain reliable electric service, and that transmission investment may need to triple by 2050.

This transition is occurring at a time when the grid is under threat from climate-driven changes in severe weather patterns, as well as targeted attacks on grid infrastructure from homegrown violent extremists conducting physical attacks and foreign adversaries utilizing cyber capabilities. There were 1,665 physical and cybersecurity incidents involving the U.S. and Canadian power grids in 2022 alone, including 60 incidents that led to outages, representing a 71 percent increase over 2021.

FBI Director Christopher Wray recently testified to Congress that, "China's hackers are positioning on American infrastructure in preparation to wreak havoc and cause real-world harm to American citizens and communities if and when China decides the time is right to strike." Exacerbating these security risks is the trend of increasingly frequent and severe weather events impacting the grid across the country.

These risks highlight the importance of actively managing and assessing the balance and diversity of resources supplying the grid to avoid worst-case outcomes during adverse operating conditions. Recent Winter Storms Uri and Elliott highlighted the risks associated with the heavy dependence of a grid service territory on generators of a single fuel type within a limited geography. While all generators of all types experienced outages due to the cold weather and operating conditions, the outages were far more pronounced with natural gas generators. In the case of Winter Storm Uri, "From February 8 through February 20, 2021, of the 1,293 unplanned generating unit outages, derates, and failures to start that were due to fuel issues, 1,121, or 87 percent, were due to natural gas supply issues." This resulted in more than 4.5 million people losing power for as long as 4 days.

Winter Storm Elliott saw a similar outcome, where 63 percent of all generation outages, by megawatt, were from natural gas-fired plants. More comprehensive evaluations of fuel security are needed to identify the optimal mixture of generation types to reduce the risk of disruptions caused by fuel availability. This should include transmission planning to prioritize connecting regions with a greater diversity of resources to those regions with a high dependency on single fuels that could suffer from these common-mode failures. Expanded interregional transmission would help alleviate reliability issues associated with, for example, the forced outage rates of generation that far exceeded grid operator planning criteria during these recent cold weather events.

Thank you again for the opportunity to discuss this important matter with the Subcommittee, I look forward to your questions.

Mr. FALLON. Thank you, gentlemen. I appreciate it. I now recognize myself for 5 minutes of questions.

Mr. Danly, you spent numerous years at FERC, including as General Counsel, Commissioner, and as Chairman. Last year, the EPA proposed a rule commonly referred to as the Clean Power Act 2.0, which targets emissions from fossil fuel-fired power plants. On August 8th of last year, you sent a letter to the EPA Administrator Regan stating, and I quote, “While the proposed rule could, by itself, significantly impair reliability, the Commission must also consider the proposed rule amidst the numerous other public policies that increasingly jeopardize the reliable operation of the bulk electric system.”

Just how severely could the Clean Power Act 2.0 rule, in your opinion, impair grid reliability simply on its own?

Mr. DANLY. As the process was going forward my concern was that the EPA had not taken into consideration what the reliability consequences of the rule were going to be, and on top of that, and more specifically, there was no inquiry done at the time, and this was educed on the record during a hearing in front of the Commission during our Reliability Tech Conference. No specific inquiry was made into the effect on the markets.

One of the biggest problems with these sorts of external effects on the power generation system is that the market mechanisms in which generators have to offer in, and it is on the basis of those offers that are then accepted through this bid stack that clears that the generators ultimately are going to be called upon to deliver power.

When you have a very expensive regulatory system that is imposed that changes all of the pricing that the generators are going to be subject to or going to require in order to remain solvent. And if you do not have a clear view of what is going to happen in the markets, it is going to be very difficult to be certain that you are not going to suffer catastrophic consequence for resource adequacy down the road.

So, by itself, I think that the Clean Power Plan could potentially create extraordinarily expensive prices in the markets, and what I am really concerned about is not that, because that is a public policy decision. What I am concerned about is that it seems to be undertaken without full knowledge of the consequence.

Mr. FALLON. How much more could the other public policies to which you referred to, like the EPA’s EV mandate and large government-funded subsidies for renewables, how could that impact the cost and reliability?

Mr. DANLY. So, there are a couple of ways. One is the more demand you have, the higher the price goes. That is Econ 101. There is another problem, which is that in order to get hold of the power that would come from the large deployment of renewables that a lot of public policymakers want and expect to have happen, there needs to be a huge buildout of transmission. I am skeptical that that buildout of transmission is even feasible given the cost. It is an extremely capital-intensive proposition to build out that amount of transmission.

And given the regulatory risk that attends any large infrastructure project in the United States, it is very hard to site and construct long linear infrastructure projects. The likelihood of being

defeated on appeal from NEPA if this were ever a matter of siting and permitting by FERC would be very high.

And there is a reason why many of the transmission projects that have been proposed and talked about before have failed. It is either because they are unpopular and the citizens of the jurisdictions in which they are proposed simply do not want them, or we have problems with cost allocation in which they may be meritorious from an engineering standpoint, but they do not actually reduce the cost to the consumers.

So, the more of these policies that are implemented, the more expensive the transmissions system is going to be, and that is going to result ultimately in a higher all-in build to end rate payers.

Mr. FALLON. Let me ask you this, too. Your August letter stated that the EPA's assertions, that the EPA did not, in fact, consult the Federal Energy Regulatory Commission in its analysis of the proposed rules', quote/unquote, "potential reliability effects."

Mr. DANLY. I am sorry. I did not understand the question. I did write that in the letter, yes.

Mr. FALLON. So, can you clear this up? What are the potential implications of the EPA's failure to properly solicit the Commission's counsel, especially on a rule which targets 60 percent of our Nation's power generation?

Mr. DANLY. Well, I would have thought that it was fairly clear. If you engage in a large rulemaking that has profound effect on an entire segment of the economy without a clear understanding of what the reliability consequences are, not only do you fail to undertake the duties that are assigned to you, but you could potentially be engaging in policy that has unforeseen consequences that could be quite deleterious.

These are the sorts of things where you probably ought to satisfy yourself that the consequences are known before you embark upon them fully.

Mr. FALLON. OK. Thank you. And without objection I would like to request unanimous consent to enter into the record Mr. Danly's letters from August 8, 2023, November 8, 2023, and December 20, 2023, which outlines his concerns with this issue. Without objection, so ordered.

I now yield to Ranking Member Bush for her 5 minutes of questions.

Ms. BUSH. Thank you, Mr. Chairman. St. Louis and I are here today for this convening on threats to our Nation's power grid and to elaborate on the real, actual attacks it faces by white nationalists across our country. For years, law enforcement and researchers have been monitoring violent white supremacist groups and their targeting of our country's power grid. Many in these groups call themselves accelerationists. They have put out how-to manuals to make it easier to attack critical infrastructure, like the electric grid, and are convinced that the best way to achieve their goal of a white supremacist future is to cause a societal collapse by plunging it into darkness.

Mr. Monken, I briefly spoke during my opening remarks, but are domestic terrorist groups a current threat to the United States energy infrastructure?

Mr. MONKEN. Yes, they absolutely are.

Ms. BUSH. Thank you. Unfortunately, those with hate in their hearts do not want to see all communities of people succeed, especially our Black and Brown communities. Over the last 2 years, the FBI arrested three different groups of white supremacists for attacking, or plotting to attack, our power grid.

Mr. Monken, what steps have the Federal Government and Federal energy regulators taken to address the risk of physical attacks on the electric grid?

Mr. MONKEN. Currently, I believe they are insufficient, frankly. There are some existing standards known as CIPs, or Critical Infrastructure Protections, specifically designated CIP 14 for physical security of critical installations or critical substations within the bulk electric system. But right now, it is still insufficient for what we need.

Ms. BUSH. Thank you. And then, Mr. Monken, what can Congress do better to ensure that the national electric grid system is safe from physical attack? What can we do?

Mr. MONKEN. Having a clear understanding of what the most effective mitigation strategies really are, from a physical security standpoint, I think is hugely important. And then placing a significant priority on how those projects are ultimately introduced, reviewed for their just and reasonable costs, and then ultimately approved to make sure that those facilities are secure enough that we have confidence that they will deliver that reliable power that the people need.

Ms. BUSH. OK. Thank you. The people of St. Louis currently face high utility bills, extreme weather, and air that is unhealthy to breathe, and on top of all of that, white supremacists want to sabotage the power grid and foment chaos and fear in our communities. We must invest in and foster the growth of green energy and the infrastructure needed to deliver power to the people of St. Louis. I look forward to working with FERC to make this happen as quickly as possible. My constituents do not have time to wait.

Now on the issue of our clean energy transition, according to the National Oceanic and Atmospheric Administration's chief scientist, quote, "Not only was 2023 the warmest year in NOAA's 173-year climate record, it was the warmest by far," end quote. That is scary, and it is unacceptable. It is unacceptable for our children and for our grandchildren who will inherit this mess if we do not address the horrors of climate change.

So, Mr. Monken, very briefly, how does climate change affect the communities' need and demand for energy?

Mr. MONKEN. Well, in a very significant way, recognizing the fact that not only are these climate-driven events a significant exacerbator of existing challenges that we have for grid reliability, meaning they are more likely to cause the types of outages at both the scale and the duration that are going to have those very human consequences, they also disproportionately affect communities of low economic status, recognizing they disproportionately affect these minority communities that do not have the financial wherewithal or the ability to avert the worst case impacts of those particular disasters.

So, it is something that we really need to address through a delivered action toward energy equity, recognizing that the ability to

pay is not the prerequisite for the ability to receive the reliable power that you need.

Ms. BUSH. That is a quote. In my opening statement, I spoke of my constituents in marginalized communities who bear the brunt of the high cost of burning fossil fuels for power generation. These costs can be both physical and monetary. Mr. Monken, can you briefly explain how investing in clean power grid enables economic growth?

Mr. MONKEN. Absolutely. The aggregated economic impacts of the clean energy transition are dramatic and significant, and when we look at where jobs can be really built and sustained in support of the green energy transition, it is a much more equitable distribution of where those jobs can really be built, and then again, sustained as we get through the transition itself.

So, recognizing that this is a necessary driver, we should not be in the back seat for the clean energy transition and let even global adversaries take a pole position on how this transition occurs. We really need to enforce our right to be able to be the first movers in this space and harness the full economic value of it.

Ms. BUSH. Thank you, and I yield back.

Mr. FALLON. The Chair now recognizes Mr. Donalds from Florida for his 5 minutes of questions.

Mr. DONALDS. Thank you, Chairman. Let us talk blackouts for a moment. Every minute, every blackout, money is lost to the American national economy. National security is also put at risk. According to the Uptime Institute, in 2022, their outage analysis, more than 60 percent of significant power outages result in at least \$10,000 worth of economic loss.

Mr. Fisher, do you agree with this statistic?

Mr. FISHER. I do agree with it, and, in fact, I am concerned that that is going to keep going.

Mr. DONALDS. OK. Thank you. A couple of examples. You have the East Coast blackout in 2003. The power outage blacked out eight states, 50 million people were blacked out for 2 days, approximately \$10 billion were lost in economic output, \$1 billion worth of losses in New York City alone. I remember that one because my mom told me she had to walk back across the Brooklyn Bridge from Manhattan because everything was shut down.

Example No. 2, Winter Storm Uri in Texas in 2021. Extremely low temperatures caused blackouts resulting in deaths of 200-plus people, cost tens of billions of dollars in economic damage.

Mr. Danly, on a day-to-day basis, what is the No. 1 cause of power outages in the United States?

Mr. DANLY. I am not sure what the No. 1 cause is. They range from unexpected outages of transmission lines to maintenance issues with the generators.

The thing is when you talk about outages there are two different types. There is the outage for the bulk power system, which is the wholesale power system that FERC regulates, and then there are the much, much, much more common outages, which are at the distribution level. That can be caused by somebody running a car into a pole.

Ninety-nine percent, I would guess, of the outages that people experience are distribution-level outages and do not ever implicate

the fundamental stability of the bulk electric system. Those are inconvenient, and they do cause real economic harm, but they can be repaired with relatively minor fixes. I mean, we are speaking in relative terms here.

It is when the bulk electric system itself has a blackout that you have real problems because bringing the system back online or bring up generation to meet demand can be very challenging. So, there has to be a distinction made between distribution-level events, 99 percent of the problems we have, and the more profound and serious cases for the bulk electric system.

Mr. DONALDS. All right. So, let us dig into bulk electric system outages. Currently, roughly 60 to 75 percent of the grid is what we would call fossil fuels and/or energies like nuclear that are consistent in output. Roughly 20, 21 percent is now solar panels and wind turbines. What is the issue with solar panels and wind turbines in terms of being a part of the overall bulk power portion of the electric grid?

Mr. DANLY. So, I do not actually know if the statistics you quoted there are for name plate capacity capacity or actually delivered energy. I am not sure which of the two it is. So, I think it is a little high if you are talking about actual delivered energy.

But the dispatchable resources you are talking about—thermal resources like coal and gas, hydro power, and nuclear—are capable of being, unless there is some unexpected maintenance problem or the like, are capable of being scheduled, and you can be certain that they are going to be there when required. You choose them based upon what the least cost unit is to dispatch, but the one thing you know is that if prices rise you will still have those to rely upon.

Wind and solar, intermittent resources, unless they have some kind of a battery backup do not have the ability to deliver power at any time. It is only when the resource is available—the sun is shining, or the wind is blowing—they are intermittent.

They also have another problem which is that they are not as easily able to offer the ancillary services to the transmission system that the transmission system relies upon. I am talking about things like voltage support. These are ancillary services that are absolutely required by the transmission system, and inverter-based resources historically have not done that. They are working on what they call grid-forming inverters, but they are not widespread.

Mr. DONALDS. I want to just cleanup.

Mr. DANLY. Sure.

Mr. DONALDS. So, in other words, when you are dealing with natural gas, nuclear, hydro power, thermal, et cetera, those are consistent deliveries to the overall grid. There is never really any downtime in those. But wind and solar have downtimes, like if the wind is not blowing or the sun is not shining. Correct?

Mr. DANLY. For the most part you are able to predict the downtime of the thermal and dispatchable resources, yes.

Mr. DONALDS. OK. Secondary question, and actually, Mr. Chairman, for the record, I want to submit an article, “The U.S. has billions of wind and solar projects, good luck plugging them in,” written by the *New York Times*, February 23, 2023.

Mr. FALLON. Without objection, so moved.

Mr. DONALDS. All right. So, Mr. Danly, a quick followup on all of this. With all of these solar and wind projects that are trying to come online, if they are not consistent flows like, say, nuclear, is battery technology sufficient to capture the generation of these energies so that they can be applied to the grid?

Mr. DANLY. Not in any way that would be affordable or widespread, no. Not right now, and probably not for the foreseeable future.

Mr. DONALDS. Thank you. I yield.

Mr. FALLON. The Chair now recognizes Ms. Brown from Ohio.

Ms. BROWN. Thank you, Mr. Chairman. This is one topic where we can all agree, our power grids are critical to the Nation. Unfortunately, the grid is under threat from multiple directions. Climate change is straining our aging grid and stressing the system during increasing heat, cold, and other extreme weather systems. In the worst-case scenario, grid failures can mean no air conditioning during a heat wave, no lights during a late-night thunderstorm, or a skyrocketing heat bill in the winter.

As a Member of the Select Committee on Strategic Competition with the Chinese Communist Party, I have also heard firsthand about the CCP's hacks of our electric grids and the danger it poses on our national security. And echoing Ranking Member Bush, the power grid has become a new target for domestic extremists attempting to destabilize our country and foster fear and chaos, particularly in the Black community. This is absolutely unacceptable, and I applaud the Department of Justice for holding these bad actors accountable.

The Biden-Harris Administration and Democrats in the 117th Congress made unprecedented and historic investments in our Nation's power grid by passing laws like the Bipartisan Infrastructure Law and the Inflation Reduction Act. These laws provided billions of dollars for hardening the grid against severe weather, preventing electricity outages, and promoting green energy infrastructure.

So, turning to you, Mr. Monken, how would you characterize the impact of the Bipartisan Infrastructure Law's nearly \$15 billion electric grid reliability, resilience, and cybersecurity investment?

Mr. MONKEN. Frankly, it is transformative. So, essentially, it provided a level of funding that had not been seen previously when it comes to making targeted investments that directly support the types of grid reliability and critical infrastructure availability that we are discussing in the panel here today. So, being able to make that type of investment is foundational to making sure that not only are we successfully making the clean energy transition, but we are also trying to put the infrastructure and security measures in place to really avoid the types of worst-case outcomes that we are describing here. So, it is an essential contributor to what we need to do.

Ms. BROWN. Thank you. And Mr. Monken, how do you see these Biden-Harris investments in our energy grid lowering costs for all of us in the long term and promoting a cleaner environment?

Mr. MONKEN. Yes, the low-cost component of this, I think, is essential to the discussion because it really needs to be emphasized that when we are talking about what is the most competitive and

what is the lowest-cost form of electricity generation, it is really stabilizing investments in those particular areas. So, it really is going to have a stabilizing effect overall across the country on making sure that we have affordable and clean power.

It also really sets the conditions for success of being able to make the scale of investment in infrastructure like high voltage transmission that can continue to lower overall costs for consumers across the country.

Ms. BROWN. Thank you. And lastly, Mr. Monken, how do problems with our energy grid disproportionately harm low-income and Black and Brown communities, and how does Biden's Justice40 Initiative to ensure 40 percent of benefits from Federal investment reach marginalized communities come into play?

Mr. MONKEN. It is really central to what needs to be done when we look for long-term reliability of the grid, recognizing when we look at areas with really either low economic activity or disproportionately affected communities that are harmed by these severe weather events that we see. Those are populations that do not have the independent financial means to be able to just address these on their own.

So, while people that have the economic means can either move out of the area or go somewhere else or they can buy an expensive generator or a set of solar panels to put on their house or a battery to put on their house that is not readily available in the open market, these are communities that cannot go and do those types of things. So, trying to understand what needs to be done proactively to address that in advance of an event, that has that type of disproportionate effect, is essential to making sure that we do not have to deal with it after the fact, after the people that lost that reliable power suffer as a result.

Ms. BROWN. Thank you so much. The Biden-Harris Administration is making the largest ever investment in our Nation's power grid, thanks to the funding from the Bipartisan Infrastructure Law and the Inflation Reduction Act. These investments all across the country are protecting the grid from climate change and advancing equity for Black and Brown communities. And with that I yield back.

Mr. FALLON. Thank you. The Chair now recognizes Ms. Norton from Washington, DC.

Ms. NORTON. Thank you, Mr. Chairman. Mr. Monken, in July 2023, the Federal Energy Regulatory Commission issued a final rule to more quickly integrate facilities generating renewable energy into the U.S. electric grid system. This effort to expedite power sources into the grid includes wind and solar power sources. This rule is a long time coming and aims to help mitigate a nationwide backlog of clean energy suppliers seeking interconnection to the national power grid in ways that create cleaner energy at lower cost with greater reliability.

So, Mr. Monken, why is it crucial for renewable energy to be a lasting, sustainable part of the national power grid?

Mr. MONKEN. As I mentioned in my opening comments, it is so important to have both geographic and fuel type diversity within the bulk electric system. This is especially relevant for D.C., because there are no bulk electric system generations within the

boundaries of the District of Columbia. So, being able to make these types of targeted investments and setting policy that makes it easier for those types of resources to come online has a tremendous impact on the populations that they ultimately serve.

So, in this particular instance, being able to clear some of these roadblocks that allow more of these resources to enter into the system really opens up these additional opportunities to make sure that there is adequate energy to meet everybody's needs.

Ms. NORTON. Well, Mr. Monken, how does adding more renewable energy to our national power grid help make it more secure from both cyber and physical threats?

Mr. MONKEN. So, the nature of renewable energy itself, it does not require the same level of control systems that are necessary for both spending reserves of fossil-burning plants, just in general, and just understanding that if you can co-locate a lot of these renewable energy resources, because the difference between living close to a coal plant, as was raised the Ranking Member, and the difference between living next to a clean-burning renewable energy resource really makes a significant difference in how far that electricity has to travel in order to serve the loads that are nearer to it.

So, I think you have a couple of different opportunities here, from a security standpoint, to really deploy renewables in a much more secure manner. These are really modern resources that we have the ability right now to build security in as we deploy them, recognizing that they are more distributed in nature, they are more closely located to the loads that they serve, and they give us better opportunities to ensure that they are protected when they go in.

Ms. NORTON. Mr. Monken, right now renewable energy sources, like onshore wind, have lower energy generation costs than new coal and natural gas plants. These renewable energy sources offer less expensive power options for renewable energy sources, offer less options for consumers than existing fossil fuel facilities provide, according to a recent International Energy Agency report. These energy sources are more affordable today than they have ever been in the past, greasing the economic wheels of a clean power grid.

Moreover, failing to upgrade the U.S. electrical grid system limits the potential transformative possibilities of the Inflation Reduction Act landmark legislation Democrats passed, and the Biden-Harris Administration is breaking ground on Inflation Reduction Act projects in communities across the Nation.

So, Mr. Monken, how does the Federal Energy Regulatory Commission's new rule dovetail with the Inflation Reduction Act to transform communities?

Mr. MONKEN. I think this is FERC taking the opportunity to recognize that this is a volume game, and I think we have agreed in the way that we have communicated how we need to try and address reliability issues is with large-scale deployment of energy resources. So, going back to a question around, or a comment around resource adequacy, this is the opportunity to make sure that we can deploy the scale of power generation—in this case, clean power generation—to try and meet the growing demand that we have on the system.

So for FERC, I think it really comes down to making sure that there is a clear understanding of the ways in which we can facilitate things like investment in transmission to supplement the investment in clean energy that we are making right now, and I think that is central to the issue that needs to be addressed, is making sure that the grid is able to receive all of that power that needs to come onto the system and deliver it to the people who need it.

Ms. NORTON. Thank you, Mr. Monken.

Mr. Donalds [presiding]. The Chair recognizes Ms. Stansbury of New Mexico.

Ms. STANSBURY. All right. Well, good morning, everyone. I am excited to talk about grid modernization and transition here today because I happen to be one of those grid nerds, like some of the others who are here in this hearing today.

And, you know, I think it is actually great to use this Committee and other committees to talk about this important and revolutionary transition that is happening both to our economy as well as our infrastructure because much of our grid was built over the last 100 years, is coming to the end of its design life, we are bringing on all these new, different sources of energy, and our planet is undergoing this massive transformation.

And I am particularly excited to talk about the huge, huge investments that the Biden Administration has made in this transition. In fact, the Biden Administration, as has been said here in this hearing this morning, has made once-in-a-generation investments in our grid, in technology, in reshoring manufacturing through the bills that we have been talking about and that we passed here in this body, the Congress before this.

So, that includes the Inflation Reduction Act, as we have been talking about, the Infrastructure Investment Act, as well as the CHIPS and Science Act. And this represents, in total, the largest single investment in the clean energy revolution, not only that the United States has ever made, in America, and our economy, but that any country ever in the history of the planet has made, in any country.

So, it is really, I think, an exciting moment but also a perilous and frightening moment, in part because we know climate change is real, it is happening. We already are seeing the warmest winter ever in history on record this winter and the largest increase in temperature this last year across the country. And we know that this transition has to happen quickly, and that if we do not use public policy to incentivize that transition we are going to end up in a really bad situation.

So, you know, in particular, I represent the state of New Mexico, and New Mexico is really at the forefront of this energy transition. We have two national laboratories which are at the forefront of research. We actually passed some of the most forward-leaning renewable portfolio standards in 2019. And when I was in the State House, I collaborated with our Governor to literally write and pass bipartisan grid modernization legislation to address many of the issues that have been raised here today.

But what we are seeing is that in states that have good policy, like New Mexico, they are really poised to take advantage of the

massive investment that we are making through President Biden and Democratic investments in the clean energy revolution.

Just this last year in New Mexico, we cut ribbon, about 8 months ago, on literally the largest wind farm in North America, which is in my district. And it will be providing electricity all across the West. We just cut ribbon on the largest wind turbine manufacturer, for the actual turbines themselves, in my district just a few months ago, made possible by the Inflation Reduction Act. We just cut ribbon in my district, just a few months ago, on the very first re-shoring of solar arrays back to the United States from overseas since the passage of the Inflation Reduction Act. And Intel Corporation is putting in its largest chip manufacturing expansion in the United States in my district.

Now, if anyone has any question about whether or not these bills are helping to accelerate and turbocharge the clean energy revolution and address the issues that we are talking about here today, I can tell you, unequivocally, they are creating thousands of jobs in my district, they are helping modernize our grid, they are creating opportunity in communities that have long struggled with economic challenges, and it is transforming our energy economy across the West. And New Mexico is poised to do that because we had forward-thinking politicians who sat in seats like we are sitting right now, to help pass laws to help this transition happen.

So, Mr. Monken, I do want to ask, you know, we have heard a lot of sort of fear mongering and scary stuff about the grid, but what can we do at the Federal level to really accelerate the grid modernization and clean energy transition? What are the three main things that Congress can do?

Mr. MONKEN. Thanks for the question, and I think first and foremost being able to recognize the fact that this needs to be a holistic strategy that includes access to all of the technologies that are potentially available. I think a continued investment in the onshoring of production capabilities for essential components that we need as part of this transition is hugely important to the process, to make sure that everything that we need to build this system is available to us. So, that is certainly helpful.

Economic stability and predictability are essential. We have seen an incredible amount of investment in response to the amount of money that has been made available by the Federal Government so that people have more predictability about the potential success of their investments. That is reflected in the \$680 billion that has been invested in clean manufacturing, industrial capacity, and data centers in the United States since the passage of both of the pieces of legislation you described.

And I think the last and possibly the most important component right now is to include transmission in the next round of legislation, that is actively targeting how we really incentivize infrastructure investment in the country, to make sure that all of those pieces fit together. We have addressed it from the technology standpoint and the consumer standpoint. Now we need to make sure we can make those two pieces meet.

Ms. STANSBURY. Great. Thank you.

Mr. DONALDS. The gentlelady's time has expired. The Chair recognizes Mr. Casar from Texas.

Mr. CASAR. Thank you, Chair. Today, I want to talk about Texas, and I want to submit into the record an article from today's *Houston Chronicle* that states "Texas had the most power outages in the country in the last 5 years, new report finds."

Mr. DONALDS. Without objection.

Mr. CASAR. Thank you, Chair. Texas has had severe power outages. We have been talking about them today in Committee, especially how Winter Storm Uri took hundreds of lives and left millions and millions of people without power.

And my first question is actually for you, Mr. Fisher. It is not news that the Cato Institute, where you are at, is on the right end of the political spectrum. It would not shock anybody to find out I am a progressive's progressive. But there have been areas of important agreement that we have discovered in some of these Committee hearings. For example, having a more free and fair and legalized system of migration is a place where many progressive, and your organization, have actually found some common ground. And I have questions for you on this issue first.

So, my first question for you is actually not about the electric power grid but about, for example, Texas exports oil, famously exports LNG. And I would assume that your organization would frown upon Texas not being allowed to export or import, say, liquid natural gas or oil and gas.

Mr. FISHER. Yes, I see that as a free market, a free trade issue.

Mr. CASAR. Exactly. We have an issue for 90 percent of Texas, where we actually are not able to export electricity when we generate more electricity than it is that we are going to buy. And we also cannot import it when we can find lower prices from other states or other generations or when there is scarcity, like we had in Winter Storm Uri. And so, would your organization see it as important for regulators to not prevent the export or import of electricity if Texas is, in fact, generating quite a bit of that?

Mr. FISHER. So, my take on this is actually that there is no explicit limit to trade. There are DC ties, so there are direct current ties that go from ERCOT to outside of ERCOT.

However, the thing that I would note, as free market as we are, one of the issues that—I will speak for Cato and for myself—federalism matters, especially in this area where the grid is so complicated, that if we do not have a patchwork of experiments that the states offer we lose out on crucial data on what works and what does not.

Mr. CASAR. Understood. And I would assume that whether the Federal Government mandates connections or not or subsidizes them or not might be areas of disagreement. But I actually am genuinely looking for areas of agreement here.

And so, if the private industry were interested in interconnecting ERCOT to be able to sell power back and forth, and wanted to do that of their own accord, but regulators were to say, "No, we do not want to do that," would that be an area where you and I would agree, potentially, that private actors should be allowed to interconnect between Texas and other areas to reduce prices for Texans, increase competitiveness, and increase reliability? Again, the method of getting there we might disagree, just like in other areas. But I am just trying to figure out, because frankly, in other Committee

hearings I have been surprised to find that there are areas where we are trying to get to a similar policy goal.

Mr. FISHER. As I view this issue, in fact, it is a state policy issue, so it is not up to me. It is up to the state of Texas. I have never lived in Texas, but I know that you do not mess with Texas, and that is kind of the approach that I take to this. It is a state policy issue, and I do not believe it is the Federal Government's job to come in and tell Texas what to do.

Mr. CASAR. I understand, and again, I am not asking you that question. I am asking would you support regulators saying, "No, you cannot sell power in and out of Texas"? And it is OK. You can think about it and maybe next time less of a—

Mr. FISHER. No, it is entirely up to Texas. The folks of Texas who want to make that policy, it is entirely up to them.

Mr. CASAR. Well, the policy decisions of folks in Texas have left 90 percent of people isolated on ERCOT, but some parts of Texas are not, whether you are in Chairman Fallon's district up in north Texas, significant parts of his district not on ERCOT, Ms. Escobar's district in El Paso, in the western part of Texas, or Mr. Weber's out in Beaumont, that are not in ERCOT. Those areas suffered way fewer outages, much fewer outages. They still suffered outages but much less blackouts than those folks that were on ERCOT.

So, Mr. Monken, I have a question for you. You have been talking about how important it is to build out transmission. In your view, is it the best thing for energy competitiveness in the country, for electric reliability across the country, and for preventing these blackouts for us to allow interconnections in and out of Texas?

Mr. MONKEN. Yes. I think the proof is in the data, in recognizing that areas that are not subjected to that level of isolation, from a transmission standpoint, are historically lower cost for the consumer and higher reliability for those consumers, as well.

Mr. CASAR. Thank you, Chair, for the time. I look forward to working across the aisle, if we can, on this issue. I yield back.

Mr. DONALDS. The gentleman yields. Seeing no other Members are here in the hearing today, the Chair recognizes the Ranking Member for her closing statement.

Ms. BUSH. Thank you. The price of energy poses a real problem for the people of St. Louis, but so does smog and greenhouse gases, climate change, exacerbated superstorms. Thankfully, one solution can bring energy prices down and lower greenhouse gas emission—fortify the power grid with renewable energy options. Renewable energy sources like solar and wind provide both cleaner and cheaper power.

Energy issues are complex, but I came to Congress to take on hard challenges. The people of St. Louis know from personal experience that coal, the fuel of the 19th century that clouded their lungs for generations, is not the best way to power 21st century communities. Families and children in my district have suffered enough from the mistakes of the past, and I cannot allow harmful practices to continue.

Democrats in Congress are doing the hard work to catalyze new climate-friendly solutions. Last Congress, we made the largest investment in green energy in history with the Inflation Reduction

Act, and I will keep fighting for the Green New Deal, including my new Green New Deal for Cities.

My colleagues may complain that investment in renewables in the power grid is interfering in private industry, but they always seem to forget that taxpayers pay about \$20 billion every year in subsidies to fossil fuel companies. I thank our witnesses today for your testimony about the future of FERC, but we all know the problem.

Currently, there are two terawatts of power sitting in a bureaucratic queue, more than half of the current power in use in the entire United States, just waiting to join the power grid. Roughly 95 percent of that new power has no emissions. The new FERC rules should tackle that backlog, but we need to incentivize clean energy entrepreneurs to take prudent risks on these new projects. So, we need to let them know that we are ready for their contribution.

I know my colleagues have concerns about the consistency of sun and wind, but new smart grids can help share the load and make up for when the sun shines in one area and freezes over in another. But in Texas, St. Louis, New Mexico, we learned that fossil fuels are not the right energy solution. That is the proof we need more energy options to weave a resilient power grid.

While we are trying to build a reliable power grid, there are also those here and abroad who plot to plunge us into darkness. I appreciate the robust and necessary discussion surrounding the need to secure our power grid from white supremacists, physical attacks, and foreign government cyberattacks. Our energy infrastructure faces foreign and domestic threats each and every day, and Congress must work with Federal agencies and state and local governments to secure our infrastructure from potential attacks.

The people of my community need to know their lights will turn on and the heat will kick in when they need it, and they need to know the methods generating that power are not hurting their lungs. It is clear—renewable energy will lower the cost and increase the reliability of power, as long as we in Congress continue to invest in clean, healthy energy solutions.

Thank you, and I yield back, Mr. Chair.

Mr. DONALDS. The Ranking Member yields back. I yield myself time for a closing statement.

First of all, to the witnesses, thanks so much for being here. I really appreciate your time. One of the things as we go through this conversation and these hearings about the national grid and the energy components of the grid, we must realize that the electric grid has transformed dramatically over the last several decades. Coal, obviously, used to be the dominant portion of our energy grid. That is no longer the case. The massive shift to natural gas in our energy grid has actually led to massive decreases in greenhouse gasses being emitted from electricity generation. That is how we have been able to lower our carbon emissions in the United States over the last 15 years.

Currently, U.S. electricity grid by source is 43.1 percent natural gas, 18.6 percent nuclear, 16.2 percent coal, 10.2 percent wind, 5.7 percent hydropower, 3.9 percent solar, 2.3 percent other. The electric grid is shifting all the time, and where we have to get focused in the United States is making sure that the most efficient and

readily available abilities to power the grid so that consumers can get readily available power at cheap costs is the priority, not climate change.

As we have heard here today, our Nation's power grid is facing a serious reliability crisis. Grid planners anticipate that power demand is expected to rise while power generation is expected to simultaneously decrease at an alarming rate. How are we expected to make up for this disparity when the Biden Administration continues to demonize our most reliable sources? Federal regulations and renewable subsidies are distorting our resource mix in ways that will make our electricity less reliable and less affordable to consumers everywhere, regardless of their politics, regardless of their income levels.

Rules such as the EPA's rule on power plants, which have been wisely scaled back, would still directly impact the amount of additional capacity able to come online in the coming years. Electric vehicle mandates and other initiatives that would radically increase electricity demand would create additional strain on the system while further increasing our dependence on China for critical minerals. Essentially, if we go to more renewable energy we are going to need more batteries. If we use more batteries, the critical minerals for batteries are not mined in the United States. They are mined by the People's Republic of China. And we will be relying on China to expand and maintain our electric grid.

I do not know about you, but that is not very smart.

Simply put, the Biden Administration's never-ending quest for green-at-all-cost policies is making America's electric grid less stable. Even NERC's 2023 ERO Reliability Risk Priorities Report named the changing resource mix as the No. 1 threat to electric reliability.

Congress has a responsibility to oversee the massive Federal initiatives straining the system and impacting the reliability and resiliency of our grid. Americans rightfully expect electricity to be flowing, even when external factors such as severe weather events create strain on these systems.

And while unforeseen risks to the electric grid are certainly a cause for concern, there are steps we can take to mitigate as many of the known liabilities as possible. This includes ensuring policies and procedures do not add unnecessary stress to our existing power capacity. Just as so many sectors depend on bulk electrical systems to function, the grid itself relies on an intricate resource supply chain to operate effectively. Delays in the permitting process of everything from natural gas pipelines to transmission lines add unnecessary uncertainty and costs to utilities, and ultimately costs to the consumers.

As we look to build out the bulk electric system in time to meet growing demand, I urge my colleagues in Congress and the White House to recognize the limitations of a renewables-only agenda and implement policies that will safeguard, not jeopardize, Americans' access to power.

I thank all our witnesses for being here today and for sharing their insights on these issues.

In closing, I want to thank our panelists for today's testimony. With that, and without objection, all Members will have 5 legisla-

tive days within which to submit materials and to submit additional written questions for the witnesses, which will be forwarded to the witnesses for their response.

If there is no further business, and without objection, the Subcommittee stands adjourned.

[Whereupon, at 11:16 a.m., the Subcommittee was adjourned.]

