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5 SCALING FOR GROWTH: MEETING THE DEMAND

6 FOR RELIABLE, AFFORDABLE ELECTRICITY

7 WEDNESDAY, MARCH 5, 2025

8 House of Representatives,

9 Subcommittee on Energy,

10 Committee on Energy and Commerce,

11 Washington, D.C.

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16 The subcommittee met, pursuant to call, at 10:01 p.m., in Room 2123, Rayburn
17 House Office Building, Hon. Robert E. Latta [chairman of the subcommittee] presiding.

18 Present: Representatives Latta, Weber, Palmer, Allen, Balderson, Pfluger,
19 Harshbarger, Miller-Meeks, James, Bentz, Fry, Lee, Langworthy, Rulli, Evans, Goldman,
20 Fedorchak, Guthrie (ex officio), Castor, Peters, Menendez, McClellan, Matsui, Tonko,
21 Veasey, Schrier, Auchincloss, and Pallone (ex officio).

22 Also Present: Representatives Carter, and Joyce.

23 Staff Present: Ansley Boylan, Director of Operations; Jessica Donlon, General
24 Counsel; Andrew Furman, Professional Staff Member, Energy; Sydney Greene, Director,
25 Finance and Logistics; Emily Hale, Staff Assistant; Calvin Huggins, Staff Assistant; Megan

26 Jackson, Staff Director; Sophie Khanahmadi, Deputy Staff Director; Mary Martin, Chief
27 Counsel, Energy; Joel Miller, Chief Counsel; Ben Mullaney, Press Secretary; Jackson
28 Rudden, Staff Assistant; Chris Sarley, Member Services/Stakeholder Director; Peter
29 Spencer, Senior Professional Staff Member, Energy; Kaley Stidham, Press Assistant;
30 Waverly Gordon, Minority Deputy Staff Director and General Counsel; Tiffany Guarascio,
31 Minority Staff Director; Kristopher Pittard, Minority Professional Staff Member; Emma
32 Roehrig, Minority Staff Assistant; Kylea Rogers, Minority Policy Analyst; and Tuley Wright,
33 Minority Staff Director, Energy.

34

35 Mr. Latta. Good morning. The Subcommittee on Energy will now come to
36 order. And the chair recognizes himself for an opening statement.

37 Welcome to today's hearing, "Scaling For Growth: Meeting the Demand on
38 Reliable, Affordable Electricity." Today, we will discuss the state of our Nation's power
39 system and the opportunity that lie ahead in the next generation economy.

40 Our economy's electric grid built over the course of well over 100-plus years has
41 been referred to as the most complex, sophisticated machine known to be mankind.
42 When operating correctly, the U.S. grid efficiently delivers low-cost, reliable energy to
43 communities of all sizes. Through extensive planning, coordination, and collaboration
44 from a host of government and industry partners, this complex process seamlessly
45 responds in real time to maintain reliability in both normal and extreme weather
46 conditions.

47 Yet today, historic increases in electricity demand primarily from energy intensive
48 AI models and domestic manufacturing are exposing key impediments to the ability of
49 utilities, grid operators, and generators to keep the lights on. When the lights go out,
50 people's lives are at stake.

51 The entities charged with overseeing our electric grid have been warning of
52 potential shortfalls under normal weather conditions. Extreme weather or unforeseen
53 circumstances could turn catastrophic. In 2025, the Energy Information Administration
54 projects the 12.3 gigawatts of co-capacities are set to retire. By the end of the decade,
55 the North American Electric Reliability Corporation projects as high as 52 gigawatts of
56 thermal generation will retire. The stakes cannot be higher.

57 Across the world, our adversaries are seeking to undermine U.S. leadership on the
58 world stage to write the rules on the next-generation economy. Nations like communist

59 China, who do not share our democratic values, are seeking to develop world-leading AI
60 models through authoritarian military lens to export their command-and-control style of
61 governments across the world.

62 Yet within this emerging crisis, there is an opportunity of our nation to correct the
63 course and grow jobs creating industries right here at home. But to get there, we need
64 more energy, and we need it fast.

65 The Department of Energy's Berkeley lab estimates that U.S. status center growth
66 alone is projected to double or triple by 2028. I know in my district it is home to over
67 86,000 manufacturing jobs. I am keenly aware of this problem. And I always say that
68 we are not just operating with needing electricity and power in my district, we need
69 affordable power to make sure.

70 The Clean Power Plan 2.0 is driving accelerated premature retirements of our base
71 load power. Permitting barriers for new natural gas pipeline infrastructure are
72 handicapping regions of the country such as the Northeast that are desperate for energy.

73 Meanwhile, subsidized intermittent energy resources and public policy decisions
74 are favorable renewable energy are flooding interconnection queues and making
75 baseload power from coal, natural gas, and nuclear near uneconomic. Generations
76 developers continue experiencing ongoing supply chains constraints for distribution,
77 transformers, and generation turbines.

78 As we will hear today, House Republicans are not alone in raising the alarm.
79 Today's discussion will help illuminate the ways in which grid operators, utilities, and
80 co-ops are all addressing these challenging dynamics to address reliability and
81 affordability while providing the opportunity to grow jobs and creating industries.

82 The witnesses before us today will provide a holistic approach of the Nation's
83 electricity system, the unique characteristics of each respective region of the country, and

84 the challenges facing grid-governing regime.

85 PJM, the Nation's largest regional transmission organization, which spans 13
86 States and Washington, D.C., organizes competitive wholesale markets to buy, sell
87 electricity, and monitors reliability standards across the multistate footprint.

88 In the West basin electric co-op, members serve 3 million consumers across nine
89 States, spanning both vertically integrated States in organized markets. Southern
90 Company, a traditionally vertically integrated utility reliably serves customers across the
91 Southeast with a diverse portfolio of generating resources.

92 So I look forward to discussion that we are going to have today with each of the
93 respective entities and regions and how they are confronting this new frontier and the
94 demand expansion. And this subcommittee will play an integral role in laying the
95 groundwork to unlock the necessary capital investment for job creating industries while
96 ensuring affordable and reliable energy for American households and small businesses.
97 And with that, I yield back the balance of my time with 3 seconds.

98 At this time, I recognize the ranking member of the subcommittee, the gentlelady
99 from Florida, for 5 minutes for your opening statement.

100 Ms. Castor. Well, thank you, Mr. Chairman. And welcome to our witnesses.

101 Mr. Chairman, we have just received some very sad news, the passing of one of
102 our colleagues, Congressman Sylvester Turner from Houston. And if Representative
103 Fletcher were here, she would say Houston is the energy innovation capital of the world.
104 Also, Sylvester Turner was the long-time mayor of Houston. He was just elected. He
105 was with us yesterday and brought his guest to the Capital. So would you indulge us
106 with a moment of silence for his memory.

107 Mr. Latta. Absolutely. The subcommittee will pause for a moment of silence.

108 [Moment of silence.]

109 Mr. Latta. Will the gentlelady yield?

110 Ms. Castor. I yield to the gentleman.

111 Mr. Weber. Thank you. I thank the gentlelady. I served with Sylvester Turner
112 4 years in the Texas House. I hated him, because when he went to the back mic and
113 talked against my bill, he made me look like a fool. Which is not hard to do. Y'all all
114 know that, right? Great champion for Texas, great champion for Houston. Such a
115 gentleman. Such a scholar. I saw him last night --

116 Ms. Castor. Yeah.

117 Mr. Weber. -- coming off the floor in his wheelchair. I was shocked this
118 morning. So he will be missed. And, Mr. Chairman, I yield back.

119 Ms. Castor. Thank you, Mr. Weber.

120 Mr. Goldman. Thank you. I, too, served with Sylvester, and I am a little shook.
121 He was a legend. And he is one of the most decent men you ever met. And Randy's
122 correct. If you are at the front mic, and he was at the back mic, you are dead. He was
123 one of the smartest men you have ever met. One of the nicest. My father has a wall
124 of fame at the house. He has got a photo with him and Ronald Reagan, him and Lady
125 Thatcher, and then George H.W. Bush, George W. Bush, and Sylvester Turner. That is
126 how much he meant to people. It wasn't about party, it was about the person, and it
127 was about Texas. And that is who Sylvester Turner was, and he will be greatly missed.
128 Thank you, Mr. Chairman. I yield.

129 Mr. Latta. Thank you. The gentlelady is recognized.

130 Ms. Castor. Well, thank you. I want to thank our colleagues for sharing their
131 sentiments about Congressman Turner.

132 Meanwhile, back here in the Energy Subcommittee, it is difficult to dive into this
133 very important topic. Mr. Chairman, I really appreciate you focusing in on that. But at

134 the same time, it is rather absurd that we are tackling strengthening our electrical system
135 while Elon Musk and the Trump administration are taking a sledgehammer to the
136 Department of Energy. And especially the initiatives that strengthen and modernize the
137 grid.

138 The new administration has spent weeks illegally shutting down DOE grants and
139 loans and partnerships that make energy safe, reliable, and affordable, and that includes
140 the illegal firings of the Department of Energy Inspector General who is tasked with
141 rooting out waste, fraud, and abuse, and firing the scientists who protect our nuclear
142 enterprise.

143 Meanwhile, the administration and House Republicans have offered nothing to help
144 hardworking Americans tackle the cost of living, including their electric bills. In fact,
145 consumers are losing confidence as Republicans focus on tax breaks for the wealthy and
146 the well-connected and handouts to big oil and gas.

147 And beware, Canada and Mexico are major manufacturers of electrical grid
148 components like transformers and circuit breakers and switch gears, which are needed to
149 update our growing grid. And Trump's tariffs will make these upgrades more expensive,
150 and they will take even longer, not to mention the direct cost increases that tariffs have
151 on electricity, especially on the northern States.

152 As part of the Bipartisan Infrastructure Law, the Department of Energy was
153 administering a large grid resilience and innovation partnership initiative. The intent
154 there was to enhance grid flexibility and improve the resilience of the power system
155 against extreme events, like hurricanes in my neck of the woods.

156 One grid project was a battery installation add in Iron Mountain Data Center in
157 Virginia that was meant to test the potential to store clean backup power in grid support
158 uses. On his first day in office, though, the President illegally throws that project, as well

159 as \$103 million in grid funding that should be helping my neighbors back home in Florida.

160 Growing America's leadership and artificial intelligence requires access to more
161 energy. We will see a doubling in data center electricity capacity by 2030 from projects
162 already under construction. A 1-gigawatt data center would be the single largest energy
163 load in the United States today, and we are building dozens of them. And to support
164 data centers and broader electricity growth, the U.S. Energy Information Association
165 forecasts that the U.S. will build 63 gigawatts of new utility scale capacity this year;
166 94 percent of that is zero carbon. And gas will not magically solve this challenge, even
167 for those who decide they want to build a new gas plant. If they make that decision
168 today, the plant won't come online before 2030.

169 Next-generation technologies like advanced geothermal and nuclear, while
170 incredibly promising, are at least several years away. And here is a fact check of the
171 speech last night. The President misleadingly said the Biden administration had closed
172 more than 100 power plants. That is not true. According to the Department of Energy,
173 the total number of electric power plants increased by 2,187 from 2020 to 2023. That is
174 the number of utility scale electric power plants in the Nation actually increased during
175 the Biden administration. There were about 11,000 in 2020 compared with about
176 13,250 in 2023.

177 Solar wind and batteries are the least expensive, cleanest, and fastest way to add
178 energy to the grid right now. They are driving down energy costs now. And if we want
179 to lower the cost of energy, and we want more reliable energy, then we should be making
180 it easier to build solar, wind, and batteries whenever it makes sense to do so. That is
181 why it is raising huge red flags that the Trump administration is unceremoniously halting
182 these grid and power projects. And if Republicans were willing to stand up for the
183 innovative work to modernize the grid that is happening right now, then there are real

184 policies that we could work on together.

185 The real barriers to getting new power online for data centers, for large-scale
186 manufacturing of just everyday American families is the limited capacity and
187 disjointedness of our power grid.

188 We need to build more transmissions to enable more generations and get more
189 out our existing grid infrastructure. The U.S. has two options: We can choose to
190 double-down on outdated fossil fuel strategies that are more expensive, slower to
191 interconnect and are big polluters. Or we can choose the other option: Advancing real
192 policies that deliver cheaper, cleaner, faster power that could benefit everyone. I yield
193 back.

194 Mr. Latta. The gentlelady's time has expired and yields back. The chair now
195 recognizes the gentleman from Kentucky, the chairman of the full committee, 5 minutes
196 for an opening statement.

197 The Chair. Thank you, Mr. Chairman, for the time, and thank you to all the
198 witnesses for being here. Gosh, I just met Mr. Turner, Representative Turner, I think
199 yesterday. It is yesterday or the day before sitting in the center aisle. I just chatted
200 with him and introduced myself. And for what I have heard from people spoken today, I
201 really missed a lot of only knowing him for less than a day. And my thoughts and
202 prayers are with his family. And all of us here in Congress when we lose a colleague, it is
203 tough. So God bless his family.

204 But turning to today's hearing, it is going to continue our important work in this
205 committee to identify what is necessary to unleash American energy for the benefit of
206 the public, the economy, and our national security. Without question, energy, and
207 especially the affordable, reliable, delivery of electric power is essential for America to
208 make and do the things needed for secure and strong economy. Affordable, reliable

209 power is essential for growing manufacturing for advancing the great promises of AI, and
210 for producing the goods and services our constituents rely upon. It is essential for
211 health and safety.

212 To ensure we have the right Federal policies, we must examine how the key
213 players in our power sector, utilities, grid operators, State and Federal regulators are
214 preparing for a future of extraordinary electricity growth.

215 The witnesses today who have worked to provide power that will help us in this
216 examination. Apparent tough challenges make our task particularly urgent. The first
217 challenge concerns the factors behind the emerging reliability crisis. In recent years, we
218 have witnessed the failure to ensure that there is power when our communities need it
219 the most. This crisis has been caused by the loss of huge amounts of reliable, baseload
220 and dispatchable generation across many regions of our Nation following the misguided
221 regulations, and without adequate replacement for their resources.

222 The resulting threats of blackouts and brownouts, even in normal peak demand
223 conditions have been extending across the most populous regions of the Nation as
224 authorities like the North American Electric Reliability Corporations show.

225 Federal and State policies have driven growth of intermittent or
226 weather-dependent wind and solar generation at the expense of generation we will need
227 for reliable system. It is all important. This has increased the risk for tens of millions of
228 Americans.

229 Many of our constituents have already experienced costly and deadly power
230 outages. This started in California when we witnessed it in Texas 3 years ago during
231 Winter Storm Uri. Just 2 years ago, southeast and east coast communities, including
232 Kentucky, lost power. We had rolling blackouts in Kentucky, a TVA area, due to the lack
233 of supply power during the winter event. The root cause of this situation is a lack of

234 reliable generation capacity constraints on natural gas supplies.

235 The second challenge involves the new energy demand of AI in cutting-edge
236 technologies. The need for power to expand in advance AI in America is coming with a
237 blinding fast urgency that represents a generational challenge and the need for more
238 reliable electricity. This presents its own unique challenges layered upon the existing
239 problems and threats.

240 This hearing will help us understand what is being done by the power sector
241 utilities and operators to meet these challenges and respond to the urgency of exploding
242 demand.

243 I thank you, Chair Latta, for hosting, having this hearing. I welcome the
244 witnesses. And I will yield to the gentlelady from North Dakota, Mrs. Fedorchak, for the
245 remainder of my time.

246 Mrs. Fedorchak. Thank you, Mr. Chairman. I appreciate this opportunity. I
247 would have been honored to introduce three out of the four panelists because I worked
248 closely with all of them, but I am going to take a minute to introduce a fellow North
249 Dakotan.

250 I am honored to introduce Mr. Todd Brickhouse who embodies the values of hard
251 work, innovation, and community service. As the CEO and general manager of Basin
252 Electric Power Cooperative, Todd leads one of our State's largest and most prominent
253 businesses. It is an organization that delivers reliable, affordable power to millions of
254 people throughout the Great Plains.

255 With over 25 years of experience, Todd has dedicated his career to ensuring that
256 rural America, and America as a whole, has the energy it needs to grow and thrive. Like
257 most in this industry, Todd's work isn't about politics, it is about problem solving. That is
258 what I appreciate most about working with folks in this industry. It is about powering

259 everything from farms and small businesses to emerging leaders -- like emerging
260 industries like carbon capture and data centers. Todd leadership is doing, just that as
261 are others on this panel.

262 Today, Todd brings Dakota commonsense since to D.C., and I am proud to
263 welcome him and his amazing tea who are behind him before our committee today.
264 Thank you very, Mr. Chairman. I yield back.

265 Mr. Latta. The gentlelady yields back. And the Chairman yields back the
266 balance of his time. The chair now recognizes the gentleman from New Jersey, the
267 ranking member of the full committee, for 5 minutes of questions -- or pardon me, for 5
268 minutes for an opening statement.

269 Mr. Pallone. Thank you, Chairman Latta. This hearing is an important and
270 timely topic. Unfortunately, it is happening in the midst of chaos and confusion for the
271 energy industry because of the actions of President Trump and congressional
272 Republicans.

273 Grid operators around the country are begging Congress to take the challenges
274 they are facing seriously, and instead Republicans just passed a budget that would gut
275 programs and incentives vital to electric reliability, while simultaneously cutting Medicaid
276 to fund tax breaks for billionaires.

277 President Trump's Department of Energy continues to freeze and slow-walk
278 billions of dollars in investments in the clean energy sector, which could result in higher
279 energy costs on American families. It is all unacceptable, in my opinion. And it is
280 frustrating because this subcommittee has important policy decisions to consider.

281 After a 20-year pause, demand for power in the United States is growing again.
282 And as I have repeatedly said, this is an opportunity. It means that companies are
283 investing in America, the cutting-edge technologies are being developed here, and the

284 families are making investments in decarbonizing their homes and vehicles. These are
285 good things if power sector could meet the challenge.

286 We need to act to make sure that our grid remains reliable and affordable over
287 the next decade. That means removing unnecessary barriers to clean energy and
288 making sure that we are adequately planning for a 21st century grid.

289 Claims that this challenge could only be met with an endless fleet of natural gas
290 power plants are completely misguided. For one, the gas turbine supply chain simply
291 won't allow it. Gas turbine manufacturers are backed up and cannot fulfill new orders
292 until 2029. But more importantly, we need a solution that won't saddle homeowners
293 and businesses with higher energy bills to pay for assets that may not be used for
294 20 years. And we need to find a way to ensure that new large loads, like data centers
295 powering AI are paying for their fair share of grid infrastructure, regardless of whether
296 they are co-located with generation sources or pulling electricity directly from the grid
297 itself.

298 And these aren't speculative issues to the future. They are happening now.
299 Families in my home State of New Jersey are going to experience a nearly 25 percent
300 increase in their power costs this June in part because PJM seems incapable of getting its
301 act together to quickly add renewable resources to its grid.

302 The Texas grid operator, which serves less power demand than PJM, managed to
303 add 11 gigawatts of generation in storage capacity last year. And PJM only managed to
304 add less than half of that, despite having a whopping 143 gigawatts in its queue.

305 We should be working together to develop solutions to address this problem.
306 But unfortunately the Trump administration and Republicans have other ideas.
307 Bonneville Power Administration, which is absolutely vital for electric reliability in the
308 Pacific Northwest, was forced to fire 20 percent of its workforce as part of Elon Musk's

309 dismantling of the Federal workforce, despite the fact that it doesn't cost taxpayers a
310 dime.

311 Republicans are also taking aim at independent regulators, vital for reliability and
312 affordability, like FERC and the NRC. And because the Trump administration cut corners
313 in its definition of energy in its executive orders, there is a lot of confusion about whether
314 the tariff on electricity imports from Canada is zero, 10, or 25 percent. It is a complete
315 disaster, and it is going to likely lead to higher energy costs for American consumers,
316 particularly, in the Northeast.

317 Now Trump and Republicans are trying to gut and repeal the Inflation Reduction
318 Act, the Bipartisan Infrastructure Law, and these laws are critical to ensuring that new
319 energy sources get built and that existing ones, especially nuclear plants, stay online.

320 Two new studies -- and I would like to ask unanimous consent, Mr. Chairman, to
321 insert them into the record. I will hand them over to you.

322 Mr. Latta. Without objection, so ordered.

323 [The information follows:]

324

325 ***** COMMITTEE INSERT *****

326

327 Mr. Pallone. Thank you. They show that repealing the Inflation Reduction Act's
328 technology neutral tax credit would increase prices on families and decrease the amount
329 of power brought onto the grid. The reality is that clean energy is the only source of
330 new generation capable of meeting growing power demand at scale. Clean energy
331 sources and battery storage are 95 percent of the interconnection queue, and they are
332 not going away. In fact, they are the only thing that can come to the rescue and power
333 our manufacturing and AI renaissance. And gutting the Inflation Reduction Act and
334 illegally freezing funds will only ensure that our grid won't be able to keep up with
335 demand all while radically increasing energy prices for our constituents.

336 So I can say, Mr. Chairman, Democrats are going to fight against Republicans'
337 radical agenda that makes our electricity less reliable, more expensive, and dirtier. So
338 thank you, and I yield back the balance of my time, Mr. Chairman.

339 Mr. Latta. Well, thank you very much.

340 The gentleman yields back the balance of his time. And that now concludes our
341 member opening statements. The chair would like to remind members that pursuant to
342 committee rules, all members' opening statements will be made part of the record. At
343 this time, we want to also thank our witnesses again for being here with us today and
344 taking the time to testify before the subcommittee. Each witness will have an
345 opportunity to give an opening statement, followed by a round of questions from the
346 members.

347 Our witnesses today are Mr. Todd Brickhouse, the Chief Executive Officer and
348 General Manager of Basin Electric Power Cooperative; Mr. Asim Haque, Senior Vice
349 President for Governmental and Member Services at PJM; Mr. Tyler Norris, the James B.
350 Duke Fellow at Duke University; and Mr. Noel Black, Senior Vice President of Regulatory

351 Affairs at the Southern Company.

352 Before we get started, just a quick housekeeping, if you -- you want to make you
353 pull the mic up close to you when you speak. And there is the set of red lights there that
354 will signal. If you have a green light, 4 minutes. It will go yellow with one minute
355 remaining. And at red, that means stop. We appreciate you following that.

356 And with that, Mr. Brickhouse, you are now recognized for 5 minutes for an
357 opening statement.

358

359 **STATEMENTS OF TODD BRICKHOUSE, CHIEF EXECUTIVE OFFICER AND GENERAL**
360 **MANAGER, BASIN ELECTRIC POWER COOPERATIVE; NOEL W. BLACK, SENIOR VICE**
361 **PRESIDENT OF REGULATORY AFFAIRS, SOUTHERN COMPANY; ASIM HAQUE, SENIOR**
362 **VICE PRESIDENT FOR GOVERNMENTAL AND MEMBER SERVICES, PJM**
363 **INTERCONNECTION, LLC; AND TYLER H. NORRIS, JAMES B. DUKE FELLOW, DUKE**
364 **UNIVERSITY**

365

366 **STATEMENT OF TODD BRICKHOUSE**

367

368 Mr. Brickhouse. Thank you, Mr. Chairman. As you indicated, my name is Todd
369 Brickhouse, and I am the CEO of Basin Electric Power Cooperative. Basin is a
370 not-for-profit generation and transmission cooperative, and we are owned by
371 139-member cooperatives across nine States, and we serve three million consumers. As
372 measured by our geographic retail service territory, Basin is the largest electric utility in
373 the country. We serve roughly half million square miles, which is 12 percent of the
374 United States. So we like to say that Basin's assets are the engines of commerce for a
375 service territory that feeds and fuels our Nation.

376 Basin is one of nearly 900 not-for-profit electric cooperatives across the country
377 that are independently owned and governed by the people that we serve. Electric
378 cooperatives provide electric service to 42 million Americans in 48 States.

379 There are a number of trends and policies impacting our country and electric
380 utilities, and I would like to touch on a few of those this morning. Reshoring our
381 manufacturing base, guaranteeing our energy security, and supporting the development
382 of artificial intelligence all significantly increased demand for electric power. After all,
383 the electrons that many of us on this panel provide are the raw materials of a modern
384 economy.

385 To satisfy this growing demand, Basin is currently increasing its generation
386 portfolio by more than 40 percent. And we are increasing our transmission mileage by
387 more than 20 percent. Over the next decade, we will spend \$12 billion on these
388 endeavors. That compares to currently eight and a half billion dollars of assets on our
389 balance sheet today.

390 Federal regulations should be streamlined to support our efforts. For example,
391 our recent Roundup-to-Kummer-Ridge transmission project required two separate
392 environmental assessments, one from the Bureau of Land Management and another from
393 the Bureau of Indian Affairs, even though both these agencies are under the Department
394 of the Interior. This resulted in added time, expense, and of course, red tape.

395 Secondly, Basin is currently adding 1,500 megawatts of nondispatchable,
396 renewable resources to our generation fleet. This has required years of planning and
397 development work. And these business decisions were made based on the availability
398 of production tax credits. We understand and we support the need to put our country
399 on a sustainable, physical path. But the immediate removal of PTCs will not allow
400 utilities to plan for and avoid increased costs, and this will also immediately harm rate
401 payers.

402 Another policy matter that needs to be on your mind is tariffs, which the President
403 spoke about last night. We strive to source our capital expenditure program
404 domestically. But the utility industry relies on global supply chain. Our \$12 billion
405 capital expenditure program will be adversely impacted by tariffs. And I would just like
406 to explain to you that these are not one-time costs. These are costs that will be felt over
407 30 years as we depreciate these assets, and we repay the debt used to fund them.

408 Finally, and most importantly, in order to capitalize on the opportunities of
409 reshoring our manufacturing base, guaranteeing our energy security, and fully developing
410 artificial intelligence, we need consistent and rational energy policies from you all.

411 Every sector of our economy depends on reliable and affordable electricity,
412 whether it be households, manufacturers, or the technology industry.

413 As Daniel Yergin and Peter Orszag wrote in an article last week, we are not, and I
414 quote, "We are not so much in an energy transition, we are in an energy addition."

415 Periodic efforts to severely curtail major sources of the dispatchable electric generation
416 are counterproductive, and they do not further our national interest.

417 Microsoft and Amazon recognize the importance of dispatchable resources as
418 evidenced by the recent partnership with the nuclear industry. Similarly, Meta or
419 Facebook has recently partnered with Entergy for the development of 2,300 megawatts
420 of dispatchable natural gas resources in Louisiana.

421 Basin is in discussions with more than 7,000 megawatts of similar loads. The
422 Great Plains where Basin serves offers abundant wind and carbon-based natural
423 resources, helping Basin satisfy growing demand in a balanced manner.

424 Basin stands ready to support efforts by Congress, the administration, and Federal
425 agencies to enhance affordability and reliability for the American consumer. Thank you.

426 [The prepared statement of Mr. Brickhouse follows:]

427

428 ***** COMMITTEE INSERT *****

429

430 Mr. Latta. Thank you very much. Mr. Haque, you are recognized for 5 minutes
431 for your opening statement.

432

433 **STATEMENT OF ASIM HAQUE**

434

435 Mr. Haque. Chairman Latta, Ranking Member Castor, Chairman Guthrie, Ranking
436 Member Pallone, and members of the subcommittee, thank you for the invitation to
437 participate in this hearing to provide PJM's perspective as it relates electric grid reliability
438 and cost during this period of heavy forecasted demand growth. My name is Asim
439 Haque, and I am the senior vice president of governmental and member services at PJM
440 Interconnection.

441 PJM is considered the largest grid operator in North America, as we ensure the
442 reliable flow of power to 67 million consumers in all or parts of 13 States and the District
443 of Columbia. PJM is an entity without profit motive, as we effectively function as a
444 not-for-profit that is fully regulated by the Federal Energy Regulatory Commission, an
445 independent Federal agency that plays a critical role in the oversight of the energy
446 industry.

447 We are a mission-driven organization whose primary focus is to keep the lights on
448 for the 67 million consumers that we serve.

449 This past January, during a cold spell, we experienced our all-time winter peak of
450 approximately 145,000 megawatts. And if you were here in the district or otherwise in
451 our footprint during MLK weekend, you probably didn't think for a second about the cold
452 weather and its impact on the grid. And that is how we like it. And that is the
453 expectation that we create for ourselves at PJM, which is in tandem with our asset

454 owners to keep the lights on 24/7 without you having to think about it.

455 While our industry can be quite complicated, what we are seeing projecting out
456 into the future actually is not incredibly complicated. After years of what has been
457 relatively flat demand for power in PJM, we are now seeing a major uptick in forecasted
458 growth due primarily to the proliferation of data centers, but also due to electrification in
459 the on-shoring of U.S. manufacturing.

460 According to our most recent forecast, PJM expects its summer peak to climb to
461 220,000 megawatts over the next 15 years. To compare, our all-time summer peak,
462 which occurred in 2006, is 165,563 megawatts. For winter, the forecast is estimated at
463 210,000 megawatts, again, 15 years out. PJM's record-high winter peak, again, occurred
464 just this past January at 145,000 megawatts.

465 So we are experiencing in real time as well as forecasting out the substantial
466 increase in demand. So let's talk about supply.

467 After years of having a healthy reserve margin in PJM, we are seeing that reserve
468 margin get eaten up. PJM conducted a study in 2023 where we estimated retirements
469 in the amount of 40,000 megawatts by 2030, driven primarily by state and Federal
470 policies and some economics. Now we do have a number of mostly renewable
471 resources that want to connect to the system that are currently in our generation
472 interconnection queue. That queue has undergone quite a bit of reform per our own
473 efforts, and an order from the FERC in 2022, and we are nearing the end of that
474 FERC-approved reform.

475 We hope that all of these projects interconnect. But we certainly have quite a
476 few projects that are through the queue right now that aren't constructing at the pace
477 needed to keep up with supply retirements and certainly not the projected increase in
478 demand.

479 Last year, we interconnected just 4,800 megawatts into an otherwise
480 180,000-megawatt system. So supply is coming off of the system, and new supply
481 additions are not keeping pace again.

482 Currently, about 50,000 megawatts through the queue, nothing left to do with
483 PJM, and not interconnecting or not constructing. And we can talk about that a little
484 more.

485 We should also note that the resources leaving the system are larger, dispatchable
486 coal and gas resources. And the resources they are adding from our queue are primarily
487 intermittent renewable resources. We resource agnostic. And when you flip the
488 switch, you don't know whether that is a nuclear, coal, gas, renewable watt that you have
489 just consumed. But when you trace those watts all the way back to their source, all of
490 these resource types have different capability and availability. So we need to be
491 conscious of that. It is not a one-for-one swap in terms of availability and capability of
492 the resources that we are retiring, and then the resources that we are adding to the
493 system.

494 But either way, we want those watts. We want those renewable resources to
495 find their way under the system as soon as possible. We want as much supply as we can
496 get in order to meet this growing demand that means delaying retirements, new supply,
497 that is supply in our queue, and even additional supply on top of that.

498 So again, supply is decreasing, demand is increasing, but for your constituents, the
499 supply demand in balance has the potential to bleed into fundamental pillars of power
500 delivery for the average American to really reliability and cost. We all need to consider
501 reliability degradation and consumer cost increases as a natural byproduct of policies that
502 exacerbate the supply, demand, and balance.

503 I want to end my opening statement with some optimism. The fact that we are

504 here talking about supply and demand is great progress. We have been talking about
505 this PJM for some years now. And the fact that this committee is focused on the supply,
506 demand challenge is a really good thing. The fact that demand is growing means that
507 our Nation's economy is growing, and that is a really good thing as well. We have lots of
508 resources that want to interconnect in the PJM system. That is a really good thing as
509 well.

510 PJM, in particular, has markets that it can utilize to incentivize our next major
511 technological breakthrough as well as any new resources that we can possibly find on to
512 the system.

513 Mr. Latta. Pardon me. If you could just finish up, please. Thank you.

514 Mr. Haque. Yep. So, again, this is a moment here at PJM, it is a moment for
515 the industry, and in conjunction with our stakeholders and all of you we expect to meet
516 that moment. Thank you.

517 [The prepared statement of Mr. Haque follows:]

518

519 ***** COMMITTEE INSERT *****

520

521 Mr. Latta. Mr. Norris, you are recognized for 5 minutes for your opening
522 statement.

523

524 **STATEMENT OF TYLER H. NORRIS**

525

526 Mr. Norris. Good morning, Chairman Latta, Ranking Member Castor, Chairman
527 Guthrie, and Ranking Member Pallone, and members of the subcommittee. Thank you
528 for the opportunity to testify. I am informed that another Tyler testified a month ago.
529 I assure you this is not coordinated.

530 My name is Tyler Norris. I am a James B. Duke Fellow at Duke University. My
531 Ph.D research focuses on electric power systems. My research is informed by 15 years
532 of experience in the energy sector, spanning utility-skilled power plant development,
533 electricity market forecasting, and technology commercialization at the Department of
534 Energy. I am here today in my personal capacity.

535 My testimony draws, in part, from my research as lead author of a new study
536 called, "Rethinking Load Growth" released last month by Duke University's Nicholas
537 Institute.

538 While demand presents challenges, our research suggests that with strategic
539 planning, the U.S. power system is well-positioned to integrate these loads in a reliable
540 and cost-effective manner.

541 My testimony focuses on three areas: First, how the existing power system can
542 integrate new large loads while preserving reliability. Second, how interconnection
543 reforms can accelerate new generation. Third, how these near-term solutions can buy
544 time and capital for long-lead resources, like bulk transmission and nuclear power.

545 First, our analysis finds that with modest flexibility from new large loads, the grid
546 can accommodate significant demand growth without major new infrastructure. The
547 U.S. power system is already designed to handle extreme peaks and demand, meaning
548 that in most hours the substantial portion of the power system is unutilized. And, in
549 fact, we found that the average utilization rate of the U.S. power system is 53 percent,
550 meaning the nearly half of our power infrastructure sits unused at any given time.

551 If new large loads such as AI data centers can adjust their power consumption
552 during a small fraction of high-stress hours on the order of 0.5 percent of their maximum
553 up time, the grid could absorb the equivalent of four or five Project Stargates, the \$500
554 billion data center initiative announced by President Trump. This highlights a key
555 opportunity, leveraging existing capacity through flexible load strategies can provide a
556 bridge while long-lead resources, such as new transmission and a clean firm generation
557 are developed.

558 Second, while load flexibility can help, interconnection delays remain a major
559 obstacle to deploying new generation. And the volume of projects stuck in interconnect
560 queues has quadrupled the 2,600 gigawatts.

561 However, there is one market, the Electric Reliability Council of Texas. They have
562 taken a different approach, and it is achieving significantly greater interconnection and
563 performance in other U.S. markets.

564 Between 2021 to 2023, ERCOT interconnected at least 70 percent more
565 generation capacity than any other organized market, despite serving the load that is half
566 the size of PJMs.

567 Unlike other regions which require extensive studies and costly network upgrades
568 before allowing new generators to connect, ERCOT permits interconnection first and
569 manages grid impacts in real time, while planning transmission upgrades separately.

570 While not all markets replicate your cut's approach without structural reforms,
571 there are meaningful steps that FERC and other policymakers can take to improve
572 interconnection efficiency. These include adopting a less restrictive approach to energy
573 resource and our connection service, enabling generators to use grid capacity reserved
574 for existing power plants and developing interconnection entry fees to provide greater
575 upfront certainty.

576 Finally, long-term reliability will require investment and new transmission and
577 clean firm generation. These resources can take a decade to develop and their high
578 capital cost makes them highly sensitive to policy uncertainty.

579 So the stable Federal policies, including maintaining tax incentives, loan
580 guarantees, and clear transmission-planning processes will be critical to ensuring that
581 these projects are built.

582 At the same time, a hasty overbuild of new gas infrastructure endures, in response
583 to load growth, could undermine private investment and clean firm technologies, such as
584 advanced nuclear and geothermal.

585 In investors perceive that policymakers are tilting the playing field towards gas or
586 creating excess capacity that substantially depresses capacity prices, they may be
587 reluctant to commit to these higher-risk long-term investments.

588 In conclusion, by leveraging flexible load, streamlining interconnection, and
589 investing in long-lead resources, the U.S. can maintain reliability while enabling economic
590 growth and making progress on decarbonization.

591 Thank you for the opportunity to testify, and I look forward your questions.

592 [The prepared statement of Mr. Norris follows:]

593

594 ***** COMMITTEE INSERT *****

595

596 Mr. Latta. Well, thank you very much for your opening statement.

597 Mr. Black, you are recognized for 5 minutes for your opening statement.

598

599 **STATEMENT OF NOEL W. BLACK**

600

601 Mr. Black. Thank you up, Chairman Latta, Chairman Guthrie, Ranking Member
602 Castor, and members of the committee for the opportunity to discuss what we see as an
603 exciting but pressing policy issues around electricity.

604 Electricity is the lifeblood of our modern society. Its essential service woven into
605 every aspect of our lives, it powers our homes and hospitals, drives our economic growth,
606 and ensures the well-being and safety of our customers.

607 We believe this interconnected grid that we have built over the last 100 years is
608 irreplaceable in delivering electric service and provides scale and value that other
609 solutions can't match.

610 Electricity is a necessity. An access to reliable electricity is a fundamental
611 expectation. When electricity is unstable or unaffordable, the real-world impacts are
612 immediate and can be severe. Our responsibility is to ensure the grid delivers
613 dependable, cost-effective energy, no matter the circumstances and over the long term.

614 At Southern Company, our 28,000 employees take this very seriously. Every day
615 we work to serve 9 million customers who rely on us. Our diverse 44,000 megawatt
616 interconnected fleets spanning nuclear and hydro, natural gas, coal, and renewables
617 demonstrates how an intentionally engineered approach provides a foundation for
618 energy security.

619 Our system, this interconnected grid, is a modern engineering marvel, as we have

620 heard earlier. Utilities like ours are an essential piece of the energy equation. It is not
621 only the interconnected grid with its -- it is only -- I beg your pardon -- the interconnected
622 grid with its scope and scale that can meet all customers' needs.

623 Southern Company's commitment to innovation resilience is evident. With the
624 recent addition of new nuclear units at Vogtle, we now operate the largest nuclear
625 generation station in the country. In this moment of rapid energy growth, it has
626 become obvious how electricity and energy, though, are highly regional in nature. The
627 weather, resources, State and local politics, geography, the region's load profile and
628 market structure greatly impact the physics and finance of delivering electricity.

629 We have all heard the one-size-fits-all approach are often not appropriate for
630 energy policy. That is because of this intense regionalism that drives energy outcomes.
631 At Southern Company, our customers are the beneficiaries of a state-regulated, vertically
632 integrated market structure that holds us, Southern Company, directly accountable.

633 Straightforward regulatory models like ours where the accountability for the grid
634 is clearly understood are producing results enabling this innovation economy.

635 In short, the Southeast remains open for business. Regions with unusually
636 complex regulatory processes are experiencing slower infrastructure build-out. I think
637 this may be why the concept of co-location has become so popular in certain parts of the
638 country.

639 Time-challenged customers see co-location as a tool to cut through some of the
640 complexities. As those regions consider co-location arrangements, however, it will be
641 critical to ensure that existing everyday customers are protected.

642 Co-location arrangements we don't see are not necessary in our region because
643 we are timely serving this demand. At Southern Company, we have a robust,
644 well-planned energy system that seeks to protect all customers from price volatility.

645 Under the watchful eyes of our regulators, we strive to make the right
646 investments today to keep prices stable and support economic expansion which helps
647 mitigate any inflationary pressures tomorrow.

648 However -- and I am about to wrap up and this is important -- to sustain this
649 momentum, we must continue to invest in infrastructure. The reality is clear,
650 infrastructure, particularly natural gas infrastructure, is required now to meet the rising
651 demand. Pipelines, transmission systems, and generation capacity must keep pace with
652 the economy.

653 Thank you for the opportunity to speak. I look forward to discussing how we can
654 work together to ensure America continues to benefit from abundant, reliable, and
655 affordable energy.

656 [The prepared statement of Mr. Black follows:]

657

658 ***** COMMITTEE INSERT *****

659

660 Mr. Latta. Well, thank you very much for your opening statement. And that
661 will conclude our opening statements from our witnesses. We will now begin the
662 questions for our members. And I will begin the questions. I recognize myself for 5
663 minutes.

664 One of the questions I ask everybody that came before us in the subcommittee in
665 the last Congress is very simple. I usually get a yes or no. Do we need more energy
666 production in this country or less? Mr. Brickhouse?

667 Mr. Brickhouse. Yes.

668 Mr. Latta. Mr. Haque.

669 Mr. Haque. Yes.

670 Mr. Latta. Mr. Norris?

671 Mr. Norris. Yes,

672 Mr. Latta. Mr. Black?

673 Mr. Black. Absolutely.

674 Mr. Latta. Thank you. That is exactly the same response I got from everybody
675 in the last Congress. Boy, lots of questions and so little time that we get. But if I can
676 start -- Mr. Haque, if I can ask you some quick questions. We had the polar vortex, it
677 went across the Midwest in 2014. And I know in talking with PJM, I think every year I
678 ask the same questions. If we could sustain what we were able to do, not having
679 blackouts, brownouts at that time.

680 But when looking at PJM's statements and also what was told in my office, that we
681 also now are looking at 2026. What could happen in 2026 if we had another massive
682 polar vortex?

683 Mr. Haque. So, Chairman, you know, where we are headed is this continued

684 supply demand crunch. So, again, supply is coming off the system, we are not seeing a
685 lot of the new supply added to the system, and then we are seeing these major upticks in
686 demand --

687 Mr. Latta. Let me interrupt. I am sorry to interrupt. Let me just ask you what
688 you just said. Because, also, in your testimony you brought this up. You know, we are
689 taking off generation at the same time the demand is going up. Should we be looking at
690 not taking off that generation? And why is that generation being taken offline?

691 Mr. Hague. The drivers behind generation leaving the system are primarily State
692 and Federal decarbonization policies in tandem with some economics. We put out a
693 study in 2023. It was an energy transition study that we put together that expressed
694 the statistics around the drivers for supply leaving the system.

695 Mr. Latta. Well, you know, that is concerning because, you know, if we are
696 taking it off at the same time, we are having more need. It is going to be a real problem
697 for us.

698 Mr. Black, if I could ask, in your statement, and also towards your closing in your
699 statement you are talking about we need to be investing in that infrastructure that
700 supports rapid growth.

701 You know, was the whole idea and the whole notion of all these data centers
702 coming online ever projected maybe 10 years ago from what we are looking at in our
703 generation that we had to have?

704 Mr. Black. Definitely not projected, but definitely manageable, right? So I think
705 we would go through processes called IRPs, or Integrated Resources Planning Processes,
706 every few years. And we expedited one in Georgia recently so that we can -- it gets back
707 to that notion of intentionally designing and engineering our system fleet to meet this
708 moment. I would say, we think about it and manage it really through this notion of

709 energy abundance as well, right?

710 Supply and demand, obviously, is an issue in everything and everything and, you
711 know, we deal with in our lives. But I think we seek to make sure we are available.
712 And that availability and abundance puts downward pressure on rates for us, right? And
713 I think that is a really, really important issue. And obviously, in this moment of meeting
714 this demand, we can do both.

715 Mr. Latta. Well, thank you. Mr. Brickhouse, I have probably more electric
716 co-ops in my district than any other districts in the State of Ohio. And I know the
717 importance of what you all do out there. But, you know, a couple other questions I
718 think it is very important that you brought up was about addressing permitting. And on
719 the permitting side, if we don't do something, what is going to happen out there if we
720 don't address permitting, especially for not just you, but for anybody that is out there,
721 either generator or on the power?

722 Mr. Brickhouse. Well, what my colleague from PJM referenced was a large
723 uptick in -- or mismatch between supply and demand. And I think this mismatch is
724 critical for policymakers to understand. It takes us 7 years from initial concept to
725 bringing on and actually generating electrons for a power plant. You can bring on a data
726 center in 3 years. So what we are faced with now is having to tell data centers and
727 other large loads that they need to wait up to 7 years in order to build their facilities. So
728 permitting is a key part of it, and we need more sensible, you know permitting action
729 coming out of Congress and, frankly, in some of the States we serve as well.

730 Mr. Latta. Well, again, I appreciate everyone being here today, because all of the
731 things that we have heard from our witnesses, you know, this is what we have to be
732 addressing to make sure we meet our power needs into the future.

733 And my time has expired, and I now recognize the gentlelady from Florida, the

734 ranking member of the subcommittee, for 5 minutes for questions.

735 Ms. Castor. Thank you, Mr. Chairman.

736 Mr. Norris, your new study caught my attention because you say that we can
737 accommodate some of the additional capacity we need through flexible load strategies.
738 What are you talking about here?

739 Mr. Norris. Thank you, Ranking Member. What flexible load strategies refer to
740 is we are a very, very small summer -- number of hours a year where the system is
741 experiencing its highest stress. That these large electricity consumers could reduce their
742 assumption from the grid from a variety of possible avenues. One would be if they have
743 their own onsite power for batteries to work if they could tap. Again, we are talking on
744 an average basis of 2 hours per event. That is one option.

745 A lot of the new AI centers -- data centers have the ability to defer their
746 workloads. These are the training workloads that train the foundational models. And
747 so those are deferrable.

748 Other advanced data center companies have now found the ability to shift those
749 workloads to other data centers and other regions during extreme weather events. And
750 then, finally, there is the option to simply temporarily reduce operations. And this is the
751 case for other computational loads like Bitcoin mining. And those are actually some of
752 the most flexible loads on the system that we see right now. And they are able to
753 dispatch down almost instantaneously in signal from the grid.

754 Ms. Castor. Will this help us address the growing concern with additional costs
755 to consumers, to other rate payers as AI data centers demand more energy?

756 Mr. Norris. Yes. So there is an opportunity here because, you know, we
757 already have a relatively low utilization rate for the existing power system. So if new
758 load utilize the existing more, that can result in actual reduction in rates to the existing

759 rate payers. So that is a great opportunity.

760 The challenge becomes when the new loads end up triggering the need for
761 substantial new grid infrastructure and new power plants that are only needed to serve a
762 limited number of hours in the air for peaking capacity.

763 And so, I think it is important to consider guardrails when you are talking about
764 potential, significant increase in rates in response to that capacity expansion.

765 Ms. Castor. So is that a job for Congress? Is that a job for FERC? Is that a job
766 for public utility commissions, or all of the above?

767 Mr. Norris. I think it is probably all of the above. I mean one of the challenges
768 that we face right now is that in large-load interconnection, there are no standardized
769 processes. So this is State jurisdictional as, you know, retail rates usually are. But, you
770 know, it is very different from generator interconnection where we have very
771 standardized processes. It is work regulated.

772 So it is really the wild of us right now. And each State is kind of doing it
773 differently. And so I am not a lawyer. I am not going to opine into the jurisdictional
774 issues between FERC and States, but I think other previous former FERC commissioners
775 are seeing right now as we speak that it would be helpful to have some degree of
776 synergization,

777 Ms. Castor. So, Mr. Haque, what do you think of this? And have you looked
778 study?

779 Mr. Haque. I have looked at the study. I think there is a lot there with respect
780 to demand flexibility. And we have actually been in conversations with data centers
781 who are trying to locate it in the footprint about their ability to be flexible. It is not clear
782 whether or not these data centers can actually express the kind of flexibility that is
783 described in Mr. Norris' paper.

784 And so, you know, I agree with Mr. Norris that if we are able to get some flexibility
785 from data center load, that, you know, we may not have to plan necessarily for.

786 Because we planned our systems based on peak, because we want to serve 24/7, 365.

787 Ms. Castor. And I hear you loud and clear about the interconnection queue
788 problem. And that clearly is an area where Congress could help get these large power
789 sources onto the grid. Do you agree.

790 Mr. Haque. Representative, our generation interconnection queue has been
791 reformed. So we got an order from the FERC in 2022, and we are at the tail end of
792 implementing that reform. It has taken some time to get the queue from a position
793 where it was evaluating these large centralized generating stations, now evaluating many
794 hundreds, if not more of smaller, renewable projects. So we realize queue are a
795 challenge.

796 Ms. Castor. You are ahead of the game compared to others?

797 Mr. Haque. I have not benchmarked us necessarily against others, and I don't
798 want to speak against. But we are, again, at the tail end of that queue reform effort.

799 Ms. Castor. Okay. Mr. Norris, you also highlight this problem with the
800 interconnection queues in your testimony. What do you recommend that Congress
801 needs to do about it?

802 Mr. Norris. Thank you for that. I know we are limited on time, so I will try to
803 be brief. I think while I mentioned that it is hard for other markets to fully replicate
804 what ERCOT is doing. I think there are a lot of lessons there and things we can do
805 enable generators that are willing to accept some risk of curtailment; to be added to the
806 grid much more quickly. And we have adopted this very sort of conservative, restrictive
807 approach that actually imposes these very high barriers of entry to getting new
808 generators on the system.

809 And so I think there are opportunities to streamline and interconnection service
810 and actually make it more consistent with the original ten of energy resource center
811 connection service that FERC set out in 2003.

812 Ms. Castor. Thank you. I yield back my time.

813 Mr. Latta. The gentlelady's time has expired and yields back. The chair now
814 recognized the gentleman from Kentucky, the chairman of the full committee, for 5
815 minutes for questions.

816 The Chair. Thank you. I appreciate it very much. And a lot of my thinking in
817 this area came -- a lot of us were at the Library of Congress last fall. And Eric Schmidt,
818 the Google Eric Schmidt, not Senator Ed Schmitt was presenting to us, and he talked a lot
819 about the demands for AI, the demands for AI, the demands for power. And in his book,
820 "Genesis," he wrote with the last book written by Henry Kissinger just really lays out the
821 need to win the battle of AI against China.

822 And who is going to control the platform for AI? And he didn't say this, but I
823 took away from it. It is like the dollar. Are we going to be the world currency or not?
824 And so, in the biggest driver for AI is the innovators are going to figure it out. What they
825 need is access to power so they can generate these. And there is trainable AI data
826 centers that can be flexible. But China is not building -- they are building others as well
827 as that we have to compete with. And we are going to have to be flexible and efficient
828 as much as we possibly can. But to believe that we can stay down the path that we are
829 on in electricity and to defeat China that I think it is just -- it is like European thinking.
830 Let's run the world. Let's plan for the world like we want it to be, not like it is. And
831 you deal things in the ivory tower. It has just been devastating to Europe right now.
832 Go there and see.

833 And so we have to be responsible and we have to have -- but I think it is

834 imperative that we win the fight for AI. If we don't, then we are going to lose the battle
835 for AI to China. And China building two co-plants a week -- or a co-plant every 2 weeks
836 to support their AI. We are also going to lose the other battle for climate change as well
837 unless China has a different client than we do, and I don't think that is accurate.

838 So, Mr. Black, in your testimony you talk about energy policies are highly regional
839 in nature, and how it affects the physics of finance and making and moving electricity.
840 For policymakers, what should we take away from that point?

841

842 RPTR KERR

843 EDTR ZAMORA

844 [10:59 a.m.]

845 Mr. Black. So we just had a question sort of talking about whose job it is to deal
846 with some of these issues. You know, I will say we are always thinking through how do
847 we regulate as close to the customer as possible from the State perspective.

848 So a lot of the programs that Mr. Norris has studied in presenting we have had for
849 a number of years. I am going to age myself. At 25 years ago, I helped develop a tariff
850 called the customer-owned dispatchable energy tariff, which is a standby generator tariff
851 that does exactly what Mr. Norris is talking about. But that is all through the State level,
852 right.

853 So when we get into these responsibilities of who can manage the grid and help us
854 improve utilization rates, we would say much of that is at the State level. And we do
855 that through IRPs and, again, the careful, careful management and oversight of our State
856 regulators.

857 The Chair. So thank you.

858 And we are going to have more hearings and hopefully have people that build
859 these data centers that will just talk about what the risk is if we go down the path that
860 Europe has gone where they are not building them in Europe. They are not building
861 them. They can't afford to build them in Europe, and that is a -- it set Europe back.
862 Absolutely, their energy policy has set them back.

863 So, Mr. Brick house and Mr. Haque, you are in different regions of the country,
864 under different regulatory setups. Would you each briefly explain how you plan to meet
865 new growth and power demand and ensure reliability and affordability?

866 Mr. Brick house first and then Mr. Haque.

867 Mr. Brickhouse. Thank you.

868 So our process and actually how Basin was formed more than 65 years ago, it
869 starts with a load forecast. And from that annual load forecast, we will plan out what
870 our generation assets are going to look like in the future. So you get something similar
871 to what Mr. Black was referencing on an integrated resource plan.

872 And Basin's recent history has been rapid growth. Since 2010, we have averaged
873 a increase in megawatt hour sales to our members of about 5 percent a year. And you
874 are not going to find hardly any other utilities that have grown that rapidly. And over
875 that --

876 The Chair. I have a limited amount of time. So, Mr. Haque, if you could. I am
877 running out of time, so --

878 Mr. Haque. Sure. PJM is, again, a 14-jurisdiction regional transmission
879 organization, and we have both regulatory paradigms. We have the vertically integrated
880 jurisdictions, about half, and we have restructure jurisdictions, about half. Restructured
881 jurisdictions, they rely on markets to incentivize new resources. Vertically integrated
882 jurisdictions, the same as Mr. Brickhouse and I think as Mr. Black were describing,
883 through integrated resource planning.

884 The Chair. So thank you.

885 And wind and solar is important to this mix. As a matter of fact, you can produce
886 it quicker, is what my colleague from Florida talked about. But the problem is, if you
887 incentivize it to the point where people don't build other dispatchable power because
888 you can't be competitive, then we lose in the long term.

889 So in the short term, wind and solar is going to be -- because of the supply chains
890 and others, we are going to need it, but we also need to make sure we don't

891 disincentivize building power to win this battle.

892 So my time has expired, and I yield back.

893 Mr. Latta. Thank you much. The chairman yields back.

894 The chair now recognizes the gentleman from New Jersey, the ranking member of
895 the full committee, for 5 minutes of questions.

896 Mr. Pallone. Thank you, Mr. Chairman.

897 Mr. Norris, I want to ask you some questions. I want to focus on something you
898 mentioned in your written testimony, which was that if large energy loads can be a little
899 flexible, it will buy us a lot more time to increase the grid's generation and transmission
900 capacity. And, frankly, we are going to need that time because many grid operators
901 have been abysmally slow at getting sources of clean energy hooked up to the grid.

902 So let me you ask you this, Mr. Norris. Can you talk about what policy changes to
903 interconnection queues or anything else we need to make to get energy on the grid as
904 quickly as possible, and how important it is to make those changes sooner rather than
905 later?

906 I have three questions, so --

907 Mr. Norris. Thank you, Congressman.

908 This has been a significant area of research for us, and what is actually interesting
909 about it is how similar the solutions are on the large load side for the large generator side
910 to get them onto the grid faster. And the way it works, sir, is they look at the maximum
911 output or draw that the generator or the load puts on the system, and they study it.
912 And what happens is it often triggers a lot of upgrades on the system.

913 But if the load or the generator is willing to be flexible such that it might be
914 curtailed in a small number of hours a year, it can connect to the grid much more quickly.
915 That is what ERCOT does, and that is why their speed to interconnection is twice as fast as

916 every other market.

917 And so with modifications to energy resource interconnection service and making
918 these large load services available, they may be able to connect with the grid much more
919 quickly so that we can win the AI race, as the other member just said.

920 Mr. Pallone. All right. I guess I am going to have to go quicker, because I
921 actually realized I have four questions.

922 With all this increased demand on the grid, how can we best protect residential
923 ratepayers from skyrocketing costs, and how much of this is the Federal Government's
924 responsibility versus State regulator's responsibility?

925 Mr. Norris. Yeah, I think for a lot of these large loads that are coming on the
926 system, they are coming into a paradigm where we had no load growth. And where the
927 traditional paradigm was, we need any new loads of any cost. And the problem is that,
928 under this kind of paradigm, with this amount of load this quickly, the rate impacts could
929 be substantial.

930 And so I think you are seeing a number of jurisdictions realize that there need to
931 be guardrails put in place. And ideally, any incremental cost of service to serve the new
932 load for these large loads should be covered by that large load.

933 And I think there are other guardrails that can be put in place like upfront security
934 they could post while they are trying to interconnect, and then exit fees as well.

935 Mr. Pallone. Okay. And then I wanted to go back to the studies I entered into
936 the record earlier, and they show that repealing the IRA's technology, neutral tax credits
937 could increase the price families pay for power in some States by up to 20 percent.

938 So, Mr. Norris, just because -- you know, of course, I question a lot my Republican
939 colleagues, what they describe as facts. But wouldn't that be bad for affordability?
940 Am I correct?

941 Mr. Norris. Yes. And there are a few studies out there that are demonstrating
942 this right now. I mean, it is sort of obvious, right. If you pull back incentives for a given
943 activity, you are going to see less of that activity. In this case, that means there is going
944 to be less generation out of the system, and that is going to impose higher cost.

945 And there was a study just released last week by NERA Economic Consulting that
946 found that there would be higher rates of 7 percent for residential customers in 2026
947 alone, and I think it was 10 percent for commercial customers.

948 Mr. Pallone. Okay. My last question is of Mr. Haque. FERC recently approved
949 PJM's Reliability Research Initiative, or RRI, which allows the one-time assertion of up to
950 50 projects in the PJM's queue ahead of other resources.

951 I am very aware of PJM's challenges of getting enough power line, but just
952 ask -- you know, if you ask any of my constituents, they will certainly talk about that.

953 But, Mr. Haque, can you confirm that the RRI framework is a one-time solution for
954 PJM and that the grid operator is dedicated to working diligently to comply with FERC
955 Order 2023 and create an interconnection process that doesn't need these manual
956 interventions to allow energy to access the grid?

957 Mr. Haque. I can confirm all of that, Representative. Thank you.

958 The RRI initiative is actually one of three different initiatives that we advanced to
959 try and expedite supply trying to come onto the system, and we are grateful for FERC's
960 assistance in approving our proposals.

961 If you think about it, you know, we are going to be in a position next year where
962 we are in our new queue reformed process. Any project that comes through the queue
963 will have a 1 to 2-year turnaround timeframe. It has taken us a few years to sort of
964 unclog the queue and get to that position, but while we are doing that, we have actually
965 created, through the FERC's approval, some additional expedited lanes to try and get

966 resources onto the system to meet this growing demand.

967 Mr. Pallone. And, you know, obviously, I am concerned about this approach of
968 deciding which projects can get onto the grid is going to disincentivize clean energy
969 developers from, you know, ever building generators that serve PJMs again.

970 I know my time has run out, but I do want to say, Chairman Latta, I was happy to
971 see -- he is not here, I don't think -- that Chairman Guthrie talked about the importance of
972 solar and wind power. Because every time I hear Trump, he says he wants to get rid of
973 it completely. So it is good that you guys at least, or I hope, do not agree with Trump in
974 that regard, but we will see.

975 Thank you.

976 Mr. Latta. The gentleman's time has expired. He yields back.

977 The chair now recognizes the gentleman from Texas, the vice chairman of the
978 subcommittee, for 5 minutes for questions.

979 Mr. Weber. I thank the chairman.

980 Mr. Norris, I am going to come to you. You made some interesting statements in
981 your testimony about ERCOT has certain advantages. Would you go back through there
982 and state those again for us?

983 Mr. Norris. Yes. So ERCOT makes it much easier for new generators to connect
984 to the grid, and there are different reasons for this, but, basically, it is come one, come all.
985 They study them. They give them the result of the study, but they don't charge them for
986 the cost of big grid upgrades.

987 So a project can connect at its own risk, and the result is that their speed to
988 market, speed to interconnect is twice as fast as other markets. And they have been
989 adding more capacity, as I mentioned earlier, than any other market by far.

990 Mr. Weber. When you say speed to connect is twice as fast, what does that

991 mean? They are able to get up and running in half a day, 1 day, 2 weeks? What does
992 that mean?

993 Mr. Norris. Well, these are big assets. So it is a little longer than that, but you
994 are generally talking about on the order of 2 years. The speed we are talking about is
995 from interconnection request to getting online. And so we are talking about, you know,
996 3 years, approximately. And in other markets, it can take 5 or 6.

997 Mr. Weber. Okay. Mr. Brick house, I am going to come to you. With that in
998 mind -- and I know, of course, ERCOT, do I recall correctly -- I will ask all of you. There
999 are nine grids in the country. Is that right? Nine various grids. Is that right?

1000 Mr. Haque. There are nine grid operators in the country.

1001 Mr. Weber. Nine grid operators. Okay.

1002 So with that in mind, trying to make things easier to connect to, Mr. Brick house,
1003 how do you all follow along those lines? Are you like ERCOT, less like ERCOT? Where
1004 do you all fall in that scenario Mr. Norris just painted?

1005 Mr. Brickhouse. Well, with respect to connections, as I mentioned earlier, you
1006 can get a data center online a lot quicker than you can build a power plant. So our focus
1007 is -- lately, has been getting power plants online as quick as possible. And so we will
1008 go -- primarily, most of our load is in the Southwest Power Pool. So we will go through
1009 an interconnection process with them.

1010 And with Pioneer IV, which is 580 megawatts of dispatchable natural gas
1011 generation we are finishing up, we have actually elected to connect to the grid prior to
1012 the final cost estimate of what grid upgrades will need to take place.

1013 Mr. Weber. Is that a 2- or 3-year process?

1014 Mr. Brickhouse. Yes.

1015 Mr. Weber. How about you, Mr. Haque, 2- or 3-year process?

1016 Mr. Haque. Our process is different than ERCOT's process. If you are load that
1017 wants to connect to the system, you know, we feel like there is an obligation to serve that
1018 load, but our processes are different than the others.

1019 Mr. Weber. So what timeframe does it take?

1020 Mr. Haque. I am sorry. Can you repeat the question?

1021 Mr. Weber. What timeframe does it take? If you are going to hook up -- you
1022 identified a load. What is it going to take, a year, 2, 3?

1023 Mr. Haque. That is dependent. Okay. The load that wants to interconnect to
1024 the system, it will be dependent on a series of different factors. And it will be
1025 dependent on, first of all, the transmission system, whether the transmission system can
1026 actually accommodate the load.

1027 Mr. Weber. Bear the load.

1028 Mr. Haque. And so we will study it and see if the transmission system can
1029 actually accommodate the load. And then there are some, we will just characterize
1030 them as adventurous arrangements that some of these data centers are trying to enter
1031 into, which then adds to the potential complexity with the possibility of this concept of
1032 colocation generally.

1033 Mr. Weber. So you are studying right now about AI, aren't you?

1034 Mr. Haque. Yes, we are.

1035 Mr. Weber. Okay. How about you, Mr. Brick house, studying right now about
1036 AI?

1037 Mr. Brickhouse. Yes, we are expected to connect AI.

1038 Mr. Weber. Did either one of you all -- and I will start back with you, Mr.
1039 Brickhouse -- have to knock offline a coal plant?

1040 Mr. Brickhouse. Have we knocked offline a coal plant?

1041 Mr. Weber. Have you all had to take a coal plant offline?

1042 Mr. Brickhouse. No.

1043 Mr. Weber. How about you all, Mr. Haque?

1044 Mr. Haque. For the purposes of AI?

1045 Mr. Weber. No, just in general.

1046 Mr. Haque. Yes, we have had quite a bit of coal retire on our system.

1047 Mr. Weber. So let me go back to Mr. Brickhouse. Not just for AI, but have you

1048 had to take a coal plant off just in general?

1049 Mr. Brickhouse. We do have periodic outages. And then with the wind

1050 resources across the great planes, periodically --

1051 Mr. Weber. But you have not decommissioned a coal plant?

1052 Mr. Brickhouse. We have not decommissioned a coal plant. One of our original

1053 coal assets was actually decommissioned in the eighties, which I don't think you are

1054 referring to. But that was for different reasons.

1055 Mr. Weber. What, I don't look that old? Is that what you are trying to say? I

1056 like this guy.

1057 So I guess I will come to you, Mr. Black. How do you feel about

1058 commissioning -- or decommissioning some of the coal plants? You have got

1059 13 seconds.

1060 Mr. Black. Sure. We have retired some coal plants, but we have some coal

1061 plants, obviously, still in our fleet. They are incredibly useful for us, and we have

1062 extended the life of those recently in our IRPs to meet demand.

1063 Mr. Weber. Okay. I appreciate that.

1064 Mr. Chairman, I yield back.

1065 Mr. Latta. Thank you. The gentleman's time has expired, and he yields back.

1066 The chair now recognizes the gentleman from California's 50th District for 5
1067 minutes of questions.

1068 Mr. Peters. Thank you very much, Mr. Chair.

1069 And thanks for holding the hearing on this issue. This is something I have been
1070 looking forward to for a while, where we can have a discussion about kind of what the
1071 challenge is and what we might do to come up and meet it as a country.

1072 It will be a challenge to keep the lights on and keep costs low given what we have,
1073 this unprecedented increase in energy demand from data centers manufacturing
1074 electrification, population growth. I think we have all acknowledged that.

1075 I don't believe we are prepared to handle this demand as-is. We can't just
1076 address the problem by building more of any one particular kind of energy, and anyone
1077 who thinks otherwise I think is probably maybe being a little bit ideological, which I don't
1078 want to be.

1079 New cleaner generation has to play a role in meeting the energy demand. We
1080 also need to make significant investments in our electric grid and pipeline infrastructure
1081 so that power can be moved more efficiently from where it is abundant to where it is
1082 needed. And we need to use all the tools in the toolbox to meet the challenge.

1083 But we do fail if we don't get shovels in the ground and start building what we
1084 need at the pace we need to build it, at a pace that meets the urgency of the challenge.
1085 And every day we waste will increase costs, give our competitors an edge, make us more
1086 open to unreliability, and make us less safe.

1087 In the 1970s, when many of the first environmental rules were passed, our priority
1088 was to stop dirty, destructive projects. We were on defense. Today, if we want to
1089 continue to reduce our emissions and build the infrastructure of the future while reducing
1090 cost for taxpayers, we need to go on the offense and reform our laws to meet the

1091 challenges of today. As we have spoken before, that means permanent reform in many
1092 different contexts.

1093 I look forward to working with my colleagues on real solutions that will strengthen
1094 the electric grid, drive down costs, and build a more resilient future for our constituents.

1095 Mr. Norris, I have put forward several bills to incentivize grid planning to harden
1096 utility infrastructure, more efficiently site and permit national interest transmission lines.
1097 And one of those bills is my bipartisan Speed and Reliability Act, which streamlines
1098 permitting for large transmission lines that relieve grid congestion and improve reliability.

1099 Can you talk about the cost and reliability benefits to identifying the highest
1100 valued projects and streamlining permits for those projects?

1101 Mr. Norris. Absolutely. And thanks for your leadership, Congressman.

1102 I think a good case study on this, actually, is in our region in the Carolinas where
1103 the industry worked with Duke Energy on a proactive transmission upgrade. It was to
1104 the eastern Carolinas. And the reason is because the least cost resource available to the
1105 system are located there. Its large scale solar power plants.

1106 But that area of the grid is relatively weak, and so they went through a proactive
1107 public policy driven process. They got approval from the utilities commission, \$560
1108 million, but it unlocked gigawatts of projects. And not only was that expected to reduce
1109 rates overall but actually could improve reliability because, you know, on the hottest
1110 summer days where you get a really nice solar profile, that could actually help support
1111 the summer peaks. So, you know, that is a good example.

1112 And I think your bill there is a no-brainer, right. When you have to go through
1113 two separate permitting processes, both from FERC and the Department of Energy, it
1114 makes a lot sense to consolidate into one because, again, if we are going to meet this
1115 load growth in a fast manner, we have to get into the transmission build as quickly as

1116 possible.

1117 Mr. Peters. Thanks. I appreciate you being here. Also, we have a Duke
1118 connection, which I also -- so I am listening to you extra hard. I appreciate that very
1119 much.

1120 Mr. Haque, I wonder if you could talk about interregional transmission and the
1121 importance of investing in the electric grid. How is that complimentary to building new
1122 generation sources, and how do you think about that, both regional and interregional
1123 transmission?

1124 Mr. Haque. So, certainly, the build-out of transmission will be essential to
1125 getting our resources, especially our renewable resources that are in the queue
1126 connected to the power grid. The more transmission that you build out -- we build out
1127 for reliability, we build out for market efficiency. We are advancing down this path of
1128 long-term planning. That was approved by the FERC. But the more transmission you
1129 build out, theoretically, the less that renewable developers need to pay in upgrades.
1130 And so that will be helpful there.

1131 Interregional, we currently -- we export quite a bit of power to our neighbors.
1132 February, we were exporting -- in fact, we exported 14,000 megawatts during a cold
1133 weather snap to our neighbor, the Midcontinent ISO. And so there is actually quite a bit
1134 of interregional capability that exists today, and so we will continue to study this to see if
1135 there is any additional --

1136 Mr. Peters. PJM has determined that it is not just about building transmission in
1137 your region for reliability, for consumer service; you have decided that as part of your
1138 business it is important for you to plan and to execute on interregional transmission,
1139 right?

1140 Mr. Haque. We have, again, quite a bit of interregional transfer capability, and

1141 we will continue to analyze that. We are actually doing a joint study with the
1142 Midcontinent ISO right now. And, of course, FERC Order 1920 actually mandates that
1143 we look at interregional planning in tandem with our long-term planning framework.

1144 Mr. Peters. Well, thank you. Thanks for your leadership. And thanks to all
1145 the witnesses.

1146 I yield back.

1147 Mr. Latta. Thank you. The gentleman's time has expired, and he yields back.

1148 The chair now recognizes the gentleman from Alabama's Sixth District for 5
1149 minutes of questions.

1150 Mr. Palmer. I appreciate the witnesses being here. And I want to raise some
1151 questions about the reliability of the grid, particularly as it regards transformers.

1152 A couple years ago, there was an attack on two -- on transformers in North
1153 Carolina that shut down power for about 4 or 5 days. And one of the things that I found
1154 out was that they had to salvage or scavenge transformers from around the country.
1155 They didn't have transformers in reserve to get those back up.

1156 Mr. Black -- I should say, Mr. Brick house, you flagged these concerns in your
1157 testimony. And I am concerned that we have a major supply chain problem in our
1158 ability to manufacture transformers here to meet our needs if we were to have a
1159 catastrophic event, a coronal mass ejection, a geomagnetic issue that could shut down
1160 huge numbers of -- huge portions of our power grid.

1161 So I would just like for you to comment on that and particularly something that
1162 President Trump mentioned in his speech last night about the need to declare I think
1163 critical minerals, rare earth elements, as critical to our national security.

1164 Mr. Brickhouse. So on the transformer issue, I think it extends a little bit further
1165 to breakers as well. And part of the issue that you are having is with these large loads

1166 that I think everyone has talked about today. A data center needs similar equipment as
1167 a power plant. We need breakers and transformers when we build a power plant to get
1168 that energy on the grid, and to receive that energy, a data center needs breakers and
1169 transformers.

1170 So with the advent of these large loads in the form of data centers, you have
1171 almost double demand for the similar equipment that are needed by the two facilities.

1172 Mr. Palmer. If we had a catastrophic event -- are you gentlemen familiar with an
1173 event that occurred in 1859 called the Carrington event? It was the worst coronal mass
1174 ejection ever recorded.

1175 If we had an event like that, Lloyd's of London has done an assessment that it
1176 would -- there would be about 30 million people in North America that would be without
1177 power for anywhere from 2 weeks to 2 years. If we were to have something along that
1178 scale, how long would it take us to replace the transformers, the breakers, to get our grid
1179 back up and operational?

1180 Mr. Brickhouse. It would be a considerable period of time, depending on how
1181 wide the impacts were. We did have -- it causes the northern lights in North Dakota,
1182 actually, and there was significant activities within the past 12 months on those. And
1183 the grid operators, especially in the Western area, the power administration watched that
1184 closely.

1185 Mr. Palmer. The point I am trying to make, sir, is that we don't have the
1186 manufacturing capacity in this country. We don't have the skilled labor. We don't
1187 have access to the critical minerals that we need to build our own transformers. We
1188 don't have an adequate supply of transformers. Most of the transformers we get either
1189 come from Mexico or China.

1190 We would be in a very, very serious situation that would -- Lloyd's of London I

1191 think would -- report would indicate a potential massive loss of life, depending on when it
1192 occurred, and that is a huge concern to me.

1193 And what happened in North Carolina, Mr. Black, the guy goes in and shoots up
1194 the oil tanks, which cooled the transformers, and we lose that whole station.

1195 Does Southern Company have a plan if we were to have even not a catastrophic
1196 event but a major event?

1197 Mr. Black. Certainly, GMDs, who have been on our radar for quite some time,
1198 and, you know, physical security like you mentioned in the Carolinas there are something
1199 we plan for and test and prepare for all the time.

1200 I think your sensitivity around, in the midst of all this growth, the supply and
1201 demand challenges, you know, we have seen it ebb some, the challenges, since COVID,
1202 but there is a lot going on, right. And the international stress on the supply chain is
1203 there for sure. So we are preparing for it.

1204 Mr. Palmer. My concern too is we are in an arm's race for artificial intelligence.
1205 And I am looking at the NERC report on the high-risk areas and the medium-risk areas,
1206 and it is clear we don't have the power capacity to build the data systems that we need in
1207 order to win that arm's race with China.

1208 With that, Mr. Chairman, I yield back.

1209 Mr. Latta. Thank you very much. The gentleman yields back.

1210 And the chair now recognizes the gentleman from New Jersey's Eighth District for
1211 5 minutes of questions.

1212 Mr. Menendez. Thank you, Chairman.

1213 Clean energy is the only source of new generation capable of meeting electricity
1214 demand. A report by the Clean Grid Initiative suggests that we need to rapidly deploy
1215 clean energy generation and transmission faster than we currently are.

1216 And 94 percent of proposed power generation waiting to be interconnected is
1217 zero carbon. But, instead, the President's energy policy focused primarily on oil and gas
1218 while ignoring clean energy sources, such as solar and wind. In New Jersey, we have
1219 already seen the consequences of the President's prioritization of oil and gas, as the
1220 future of renewables, like wind, have been put at risk.

1221 We should all be committed to accelerating our clean energy production and
1222 connecting it to the grid as quickly as possible. Instead, Republicans and Trump are
1223 focused on repealing critical programs that invest in renewable energy generation,
1224 putting the future of clean energy at risk.

1225 The Inflation Reduction Act provides certainty for the energy industry, allowing us
1226 to plan for future energy demands. Investing in clean energy generation is critical for
1227 ensuring the future reliability of our grid. Not only does repealing the IRA jeopardize the
1228 future of renewables, it will also increase energy cost for consumers and our constituents.
1229 The IRA is on track to save Americans up to \$38 billion on their electricity bills.

1230 Mr. Brick house, during your opening remarks, you made a reference to consistent
1231 reliable policies. And I believe it is safe to say that you would agree that the energy
1232 industry needs certainty. Is that correct?

1233 Mr. Brickhouse. Consistent policy is helpful, correct.

1234 Mr. Menendez. And having some predictability is helpful in terms of these
1235 long-term investments?

1236 Mr. Brickhouse. Having predictability? Is that what --

1237 Mr. Menendez. Predictability in terms of future policies is helpful in making
1238 these long-term investments. Is that correct?

1239 Mr. Brickhouse. Yes.

1240 Mr. Menendez. So wouldn't repealing the IRA make it harder for the industry

1241 and States to make the investments needed for projected demands for reliable,
1242 affordable electricity? Yes or no?

1243 Mr. Brickhouse. I think that depends.

1244 Mr. Menendez. I think the answer is yes, but I will move on.

1245 Mr. Norris, would repealing the IRA, as our colleagues across the aisle seek to do,
1246 make life more or less affordable for Americans?

1247 Mr. Norris. According to economists, based on studies they have conducted in
1248 the past couple of months, it will lead to an increase in electricity rates. And the NERA
1249 study says 7 percent for residential customers in 2026; 10 percent for commercial
1250 customers in 2026.

1251 Mr. Menendez. So the answer would be, yes, it would make life more -- it would
1252 be less affordable for Americans?

1253 Mr. Norris. Correct.

1254 Mr. Menendez. And how disruptive would the repeal of the IRA be to the
1255 long-term investments currently underway across the country to increase our access to,
1256 again, reliable, affordable electricity?

1257 Mr. Norris. I want to highlight one resource in particular, which is nuclear
1258 power. And I think it is unequivocal that -- I mean, it is a resource that is still above cost.
1259 Georgia did a great service in some sense by paying above market for those two reactors
1260 at Vogtle, but there still has to be some cost premium paid to get those resources online.
1261 And they are heavily reliant on Federal subsidies and incentives.

1262 And so if there is a repeal of the IRA tech-neutral tax credit for nuclear or any
1263 impact on the loan program's office, there will not be a nuclear renaissance in the United
1264 States. And similar principles apply to enhanced geothermal and other possible firm
1265 baseload or clean baseload sources in the future.

1266 Mr. Menendez. And to achieve energy dominance in this country, shouldn't we
1267 want an all-of-the-above approach, and shouldn't we continue these investments that are
1268 already underway and funded by the IRA?

1269 Mr. Norris. One of the I think could have been bipartisan opportunities in the
1270 IRA was to shift from resource-specific tax incentives to a technology neutral structure.
1271 And so the whole idea there was to make it an all-of-the-above approach, and so I think
1272 that was a key design. And, again, for these advanced resources, it is going to be critical
1273 to keep those in place if we want to see them move forward.

1274 Mr. Menendez. Thank you.

1275 Mr. Haque, I understand that wind, solar, and storage make up the vast majority
1276 of resources in PJM's queue, and PJM is currently undergoing queue reform efforts. So
1277 let me ask you this: If the IRA's tax credits were to be repealed, wouldn't the vast
1278 majority of resources in PJM's interconnection queue see a substantial amount of their
1279 financial incentives erased?

1280 Mr. Haque. Representative, we haven't studied what potential repeal of the IRA
1281 would do to the queue. I have read studies independently that say that repeal of the
1282 IRA would create financial challenges for those resources to come to eventual fruition.

1283 And right now, you know, we have got a challenge because we have actually
1284 cleared, through our queue, about 50,000 megawatts, 50 gigawatts of primarily
1285 renewable resources that are having challenges related to financing, that are having
1286 challenges related to supply chain, that are having challenges related to State and Federal
1287 citing.

1288 And so I think that, you know, pursuant to your point, that, you know, this would
1289 probably create additional financial strain on those resources should the IRA be repealed,
1290 but, again, nothing that I have specifically seen.

1291 Mr. Menendez. That is why we should work to make sure we continue the IRA
1292 and see its full implementation, not repeal it.

1293 Thank you all so much.

1294 Mr. Latta. Thank you. The gentleman's time has expired, and he yields back.

1295 The chair now recognizes the gentleman from Georgia's 12th District for 5 minutes
1296 of questions.

1297 Mr. Allen. Thank you, Mr. Chairman.

1298 And I would like to thank the witnesses for being here today and sharing your
1299 expertise on this important challenge that we have.

1300 The United States has an abundant energy supply, and the question is not do we
1301 have enough energy resources but can we produce energy at the levels needed to meet
1302 the Nation's future demand.

1303 My State of Georgia is the top State to do business in 12 years in a row, and with
1304 that, new manufacturing and data centers are coming to the State. This is leading to
1305 high demand for the grid, and we must continue to ensure we can provide reliable,
1306 affordable energy as we power our Nation's needs.

1307 In my district, the 12th District of Georgia, we have Plant Vogtle, the largest
1308 nuclear energy clean power station in the country. Nuclear energy will play a critical
1309 role in meeting our growing needs to ensure U.S. leadership in the next generation
1310 economy.

1311 The ADVANCE Act was signed into law last year and included my legislation, the
1312 Nuclear Licensing Efficiency Act, which will drive more efficient, timely, and predictable
1313 reviews of reactor licenses.

1314 Mr. Black, thank you for being here today. Can you discuss the consideration
1315 Southern Company takes into account when seeking to invest in nuclear facilities and how

1316 you see the role of nuclear energy in our future energy mix?

1317 Mr. Black. Well, we are certainly proud of Vogtle and glad we have it online,
1318 particularly in this moment of radical expansion of our grid. It is operationally a
1319 fantastic resource and provides a lot of sort of electrical benefits to our system that
1320 enables us to take even more customers to our system.

1321 I think the AP1000 is a solution that we understand. Its risks are understood,
1322 and I think it is a solution that we in our Nation should think through in expanding its
1323 development.

1324 Mr. Allen. Right. We know how to build them. I mean, it was 30 years --

1325 Mr. Black. Yes.

1326 Mr. Allen. -- before we built.

1327 And this is somewhat of a modular project. I mean, it is made off -- a lot of it is
1328 made offsite and then brought in and erected. And we can continue probably to
1329 improve on that. But at least we now have the workforce. We have the capability.
1330 We know we can do it, and we know that things are going to be running there are for a
1331 long, long time.

1332 Mr. Brick house, in my State, the Oglethorpe Power is a wholesale provider of
1333 energy for electric co-ops, and they tell me that it is critical for reliability of the grid.
1334 They have the ability to run their dispatchable baseload assets like nuclear but also their
1335 coal plants and natural gas generation. During the Biden administration, the EPA's Clean
1336 Power Plan 2.0 would only make it harder and more expensive for cooperatives to
1337 maintain reliability of the grid.

1338 Can you walk us through how the EPA regulations on power plants are factored
1339 into Basin Electric members' planning and investment decisions and how that may impact
1340 the ratepayer and reliability in your areas?

1341 Mr. Brickhouse. Certainly. Thank you. And our chief financial officer, who is
1342 with me today, used to work at Oglethorpe, so we have some things in common there.

1343 I think the most illustrative example for the committee would be that a baseload
1344 coal plant, you want it to be available and online, or available, at least, 90 percent of the
1345 time. If you have to go and do carbon sequestration on that, you are going to have a
1346 parasitic load of about 25 percent of the output of that unit, and you are combining
1347 another industrial process to that unit. And the combined -- you are not going to have
1348 100 percent reliability for your carbon capture, which is going to bring down the entire
1349 availability of that power plant.

1350 Mr. Allen. In other words, put you pretty much out of business there.

1351 Mr. Brickhouse. Or makes your rates a lot more expensive.

1352 Mr. Allen. Yeah. I would like to circle back on the role of nuclear energy.

1353 Mr. Haque, as an organized market, PJM operates very differently than vertically
1354 integrated structure of the State of Georgia. When operating efficiently, the market
1355 should send price signals that invite potential nuclear developers to enter the region.
1356 Given growing energy demands in the market, there should be an opportunity for more
1357 nuclear energy to help meet future energy needs of the region.

1358 What are the barriers you are seeing in PJM's region to expand the use of nuclear
1359 energy?

1360 Mr. Haque. Thank you, Representative. I think we are actually seeing some
1361 good movement on nuclear in the PJM region right now, and so we are seeing particularly
1362 nuclear uprights to existing facilities. There was a recent announcement of the
1363 reopening on what was formerly Three Mile Island, now called the Crane Clean Energy
1364 Center, in the State of Pennsylvania. So we are seeing some good movement in the
1365 nuclear space.

1366 When you have these supply demand challenges, it means the prices go up. And
1367 so when prices go up, it sends a price signal to those who would want to invest in our
1368 market and specifically invest not on the backs of consumers but private dollars into the
1369 marketplace to build a new unit.

1370 That is the sort of crux of what the markets are, and we are actually, you know,
1371 seeing some of that activity already in our footprint after sending just, frankly, one high
1372 clearing price.

1373 Mr. Allen. Well, thank you very much.

1374 And I yield back, Mr. Chairman.

1375 Mr. Latta. Thank you. The gentleman's time has expired, and he yields back.

1376 The chair now recognizes the gentlelady from Virginia's Fourth District for 5
1377 minutes for questions.

1378 Ms. McClellan. Thank you, Chairman Latta and Ranking Member Castor, for
1379 holding this hearing on how we can meet our growing demand for reliable and affordable
1380 electricity.

1381 I am glad to hear Chairman Guthrie in his questions earlier say that that should
1382 include clean energy sources like wind and solar. I agree.

1383 So I am a member of Gen X, and I grew up on Schoolhouse Rock. And I think
1384 everybody here knows and is very familiar with "I'm Just a Bill." But my favorite episode
1385 actually was "The Energy Blues."

1386 And I can't help, as we have been listening to your testimony and the questions, I
1387 have had Energy Blues rolling through my mind. Maybe one day I will ask for unanimous
1388 consent to put the lyrics in the record. I am not going to sing it, but I do want to
1389 highlight a couple of them.

1390 "Energy. Sometimes I think I'm runnin' out of energy. Seems like we use an

1391 awful lot for heatin' and lightin' and drivin', readin' and writin' and jivin'. Energy.
1392 You'd think we'd be savin' it up."

1393 It goes through a history of the energy sources and the increase in demand in
1394 American history. It says, "Energy. We're looking to try and find some new kinds.
1395 Energy. Exploring to try and make a new find. Nuclear and thermal and solar. If we
1396 miss we'll get colder and colder. Energy. We've gotta stop usin' you up."

1397 Then it introduced my little kid self to the concept of energy efficiency. "So don't
1398 get cross when mama says turn that extra light out. Just turn it off till we find us a fuel
1399 that never runs out. If everyone tries a bit harder, our fuel will go farther and farther.
1400 Energy. We're gonna be stretchin' you out."

1401 So just want to remind you that our childhood shows, our childhood jingles are
1402 actually very educational and still very relevant.

1403 So, Mr. Brickhouse, I think I misheard you in one of your answers, and I want to
1404 make sure I set the record straight. In your written testimony, you urged Congress to
1405 keep the investment tax credit and production tax credit. Is that correct?

1406 Mr. Brickhouse. Correct. And in my oral testimony, I referenced that as well.

1407 Ms. McClellan. Okay. I thought I -- I might have misheard you. I thought I
1408 heard something that contradicted that. So I just wanted to make sure that your
1409 position on that was clear.

1410 In Virginia, we have the Coastal Virginia Offshore Wind project, which is an
1411 incredible example of how offshore wind can be a powerful economic engine for the
1412 entire region. And it is something that has bipartisan support that grew out of
1413 bipartisan -- the Virginia Clean Economy Act and related wind legislation that we passed.
1414 And nationally, offshore wind has brought \$25 billion in new investments to ports,
1415 factories, manufacturing facilities, the electrical grid, and jobs.

1416 You all have discussed the demand for electricity in the region is expected to grow
1417 significantly in the coming years for a wide variety of reasons. And there are currently
1418 offshore wind projects like the one in Virginia and elsewhere that could contribute to
1419 PJM's grid.

1420 Mr. Norris, could you explain how, despite Chairman Guthrie's view that wind and
1421 solar are necessary and we should continue down that path, can you talk about how
1422 President Trump's executive order halting new Federal leases and permits for wind
1423 energy and the massive uncertainty it creates for businesses will impact PJM's ability to
1424 meet the growing demand for energy in the coming years?

1425 Mr. Norris. Yeah. Well, one of the great things about offshore wind is it
1426 actually has a pretty high-capacity factor and a capacity value, because it actually
1427 produces on winter mornings when we need power. So it has a nice profile.

1428 What is happening is that some States have said we are willing to pay above
1429 market to get the offshore wind industry kick-started. Kind of like Georgia said we are
1430 willing to pay above market to get these two new reactors online. And that is a great
1431 service to the country that they are performing because offshore wind is an immense
1432 resource. It could offer a lot of energy in the future. It does require some upfront
1433 investment to get it down the cost curve. But if you are going to get rid of the leases,
1434 then it has no possibility of growing as an industry, and you are basically preventing those
1435 States from saying we want to develop this resource.

1436 Ms. McClellan. Thank you.

1437 And I will just note in my final seconds that one of the quickest ways that we can
1438 help to address the growing demand is to also help mitigate that demand through things
1439 like energy efficiency programs that are the fastest and cheapest way to help address
1440 demand and slow its growth.

1441 So you all touched on that in your testimony, and I just wanted to reiterate that
1442 point given that we are taking some opposite actions here in Congress last week and this
1443 week on the House floor.

1444 Thank you, and I yield back.

1445 Mr. Latta. The gentlelady's time has expired and yields back.

1446 The chair now recognizes the gentleman from Ohio's 12th District for 5 minutes
1447 for questions.

1448 Mr. Balderson. Thank you, Mr. Chairman.

1449 And I will start my questions this morning -- thank you all for being here -- with my
1450 good friend and always my chairman from the great State of Ohio, Mr. Haque.

1451 Mr. Haque, I would like to discuss some concerning trends we are seeing with
1452 operators' interconnection queues. It has been talked a little bit about here this
1453 morning.

1454 PJM's existing installed capacity mix is overwhelmingly made up of dispatchable
1455 power generation, such as natural gas, nuclear, and coal. However, 97 percent of PJM's
1456 queue capacity comes from renewable generation.

1457 Mr. Haque, in your testimony, you note that, unlike traditional thermal
1458 generation, renewable resources do not provide certain essential reliability services that
1459 are necessary to balance and maintain the power grid. Do you have any concerns with
1460 the lack of dispatchable power generation entering PJM's interconnection queue, and are
1461 there enough of these projects to offset premature retirements and meet rising growth
1462 demand?

1463 Mr. Haque. Thank you, Representative. Great to see you.

1464 We certainly have concern with not having dispatchable resources in the
1465 generation or connection queue, and the grid is a machine and it is a machine governed

1466 by the laws of physics. And this is not us. This is a North American Electrical Liability
1467 Corporation who has published papers, published analyses that say that we need central
1468 reliability services, which are things like -- control things like ramp and voltage and things
1469 that, as a lawyer, I don't quite understand but that are necessary.

1470 And so we do need our spending mass resources. We do need our thermal
1471 resources -- nuclear, coal, gas -- to continue to run a power grid the size of PJM
1472 interconnection.

1473 Having, you know, said all that, you know, again, we need these dispatchable
1474 resources to find the wind system. We can integrate more renewables onto our system.
1475 There are grid operators. There are grids that run on, you know, more renewable
1476 resources than we currently run on. Now, what that sort of balance is and what that
1477 threshold is, you know, we are not quite there yet, but we do need dispatchable
1478 resources to run our system.

1479 Mr. Balderson. All right. Thank you.

1480 Mr. Haque, again, I recently introduced the Grid Power Act with Senator Hoeven
1481 of North Dakota and Senator Todd Young of Indiana. Our bill provides a process that
1482 would give grid operators the authority to identify and expedite the consideration of
1483 essential projects that will protect our grids reliability and provide the power needed to
1484 meet America's growing demand.

1485 As you know, the key backlog isn't unique to PJM. Depending upon the region,
1486 projects may sit and wait in interconnecting queues for over 5 years before they can even
1487 begin their feasibility and impact studies. I appreciate that PJM is ahead of the curve
1488 here. And as you said, you are making good progress getting through the queue
1489 backlog. But I also understand that last year, PJM cleared 50 gigawatts of resources
1490 through their queue, and developers are not getting those projects built.

1491 Mr. Haque, can you briefly discuss why PJM's Reliability Resource Initiative is so
1492 critical to improving grid reliability and maintaining resource adequacy, first question?
1493 And how can grid operators, FERC, and Congress build all this initiative to get more
1494 reliable generation?

1495 Mr. Haque. Yeah, absolutely. I think grid operators across the country are
1496 facing what we are facing, which is the supply demand challenge and clogged queues.

1497 Again, you know, I would like to think that we are ahead of the curve. Again, I
1498 have not benchmarked us against other grid operators, but, you know, again, next year
1499 we will be through our queue reform effort, 1- to 2-year turnaround timeframe.

1500 But in the meantime, we needed to create an opportunity for resources that are
1501 more shovel ready that can best contribute to reliability to find their way into the queue
1502 because, otherwise, you would have to get back -- you would have to get in the back of a
1503 line starting in 2026, and we need those resources now.

1504 Now, there has been a misnomer out there that, you know, these are going to be
1505 effectively fossil resources, and that is actually not true. In fact, what we know right
1506 now is that nuclear uprights and this Crane Clean Energy Center, this TMI reopening are
1507 going to find their way into the RRI, the Reliability Resource Initiative. And we are
1508 hearing anecdotally that we will have some storage projects as well find their way
1509 through to the RRI.

1510 So to us -- again, we are agnostic in terms of the resource type. Every resource
1511 type has its capability, and we have to be sort of honest about the physics of the grid and
1512 how it operates. And so that is our RRI, which I think is very akin to the legislation that
1513 you introduced.

1514 Mr. Balderson. Yes. Thank you.

1515 Mr. Chairman, I yield back.

1516 Mr. Latta. Thank you. The gentleman yields back.

1517 And the chair now recognizes the gentlelady from California's Seventh District for
1518 5 minutes for questions.

1519 Ms. Matsui. Thank you, Mr. Chairman. And I would like to thank you and
1520 Ranking Member Castor for having this hearing today. And I want to thank the
1521 witnesses for joining us today.

1522 I am particularly concerned by President Trump's unprecedented power grab to
1523 exert control over independent agencies, including FERC. Congress created the Federal
1524 Energy Regulatory Commission as an independent agency to insulate its decisions from
1525 political influence.

1526 Mr. Norris, can you very briefly explain FERC's role in regulating electricity, how
1527 that impacts Americans' electricity bills, and why FERC's impartiality is so important?

1528 Mr. Norris. Yes. Thank you, Congresswoman.

1529 I like to think of FERC as sort of the referee that makes sure that markets are
1530 functioning properly and calls fouls where they take place. But the whole point is to
1531 have efficient markets, right, that are competitive to ensure that the least cost electricity
1532 that is reliable is available to the customers. And so that is the role.

1533 I think it is concerning. Look, I have been part of a number of FERC proceedings,
1534 a lot of State PUC proceedings. I have never -- I can't remember ever hearing a
1535 participant in one of those proceedings say we wish this was more politicized and had less
1536 quality review, right.

1537 So I think when you are talking about a business context with decisions that are
1538 this critical, you need substantial expertise, and that is exactly why we have FERC,
1539 because they brings that to bear.

1540 Ms. Matsui. Right. Now, you worked as a solar developer, adding new energy

1541 capacity to the grid to help meeting rise in demand. So I guess from an energy project
1542 developer's perspective, what would be your top concern if the President had ultimate
1543 authority over FERC rulemaking?

1544 Mr. Norris. I could think of a variety of concerns. I mean, I think even just from
1545 a speed of business standpoint -- I mean, it already takes a long time to get these
1546 proceedings done. But if you add another layer of review and approval, that could make
1547 the process even less efficient.

1548 I think knowing that the regulators are impartial and technology neutral is critical
1549 to ensure that there is business confidence and that you attract investment from a variety
1550 of different sectors. So those two issues, I think, speed of business and a lack of
1551 impartiality, would be the two biggest concerns.

1552 Ms. Matsui. So every member of this committee should be gravely concerned
1553 about protecting FERC's independence, correct?

1554 Mr. Norris. I believe so.

1555 Ms. Matsui. Otherwise, FERC's policies could shift dramatically from each new
1556 administration.

1557 Fundamentally, I don't disagree with my Republican colleagues about the
1558 challenges we are facing. The chair has called this hearing to highlight the need to meet
1559 rising energy demand, while also lowering energy costs for consumers. That is a goal we
1560 all share. But if your objective is to add more affordable generation to the grid, it
1561 doesn't take an energy expert to tell you that repealing Federal incentives that lower the
1562 cost of building and operating new energy projects is counterproductive.

1563 It was just reported that Republicans will start drafting a bill next week that will
1564 repeal Federal incentives for new energy projects, which are supporting the bill of
1565 affordable energy across the country, including in many of my Republican colleagues'

1566 district.

1567 Mr. Norris, what effect would this repeal have on the electric grid in, let's say,
1568 Southeastern U.S.?

1569 Mr. Norris. I think there are a variety of potential impacts. I will note that a
1570 key component of Duke Energy's resource plan going out 10 to 15 years now is nuclear
1571 power expansion, building on what has happened to Vogtle. And if those incentives are
1572 repealed, I think it is quite unlikely that there will be any nuclear expansion that takes
1573 place in the Southeast.

1574 Offshore wind is another impact. They are planning for that. It is part of their
1575 Carbon Plan Integrated Resource Plan. That would probably be taken off the table, and,
1576 of course, it would make solar and wind more expensive as well. So it is likely to
1577 increase rates, and it may have impacts on reliability.

1578 Ms. Matsui. Okay. I want to switch gears, Mr. Norris, to talk about load
1579 flexibility. I am a strong proponent of virtual power plants because I believe they have
1580 the potential to meet rising demand faster and cheaper than many other options.

1581 Our utility in Sacramento, SMUD, is a leader on virtual power plants, but many
1582 utilities are skeptical that virtual power plants can reliably meet demand.

1583 Mr. Norris, what would you say to a utility that is skeptical of virtual power plants?

1584 Mr. Norris. Well, you know, the largest form of a virtual power plant is what we
1585 call demand response, and it plays a very substantial role in some markets. So in the
1586 Midwest Independent System Operator, demand response contributes to about 10
1587 percent of their overall system peak. That is quite substantial. And then in many other
1588 markets, it is about 5 percent.

1589 In Duke Energy, where I am based, you know, they have a PowerPair program
1590 where most of the subscribers actually allow the utility to have direct control over the

1591 battery storage onsite. So in this case, you can actually have the utility knowing that it is
1592 able to operate because they can send a direct control signal to that device.

1593 Ms. Matsui. Okay. Well, thank you very much.

1594 And I have run out of time. Thank you. I yield back.

1595 Mr. Latta. Thank you. The gentlelady's time has expired and yields back.

1596 The chair now recognizes the gentleman from Texas' 11th District for 5 minutes
1597 for questions.

1598 Mr. Pfluger. Thank you, Mr. Chairman.

1599 It is amazing to me that we still have a math problem between the two sides of
1600 the aisle here, but we do. And, you know, I want to try to address this math problem.

1601 Last year, when I asked the Secretary of Energy, Ms. Granholm, how much energy
1602 does the United States consume, she couldn't answer the question. And, you know,
1603 when you go back a couple years ago, you see that the consumption has actually risen by
1604 about .5 percent annually. But Department of Energy, the same one that Ms. Granholm
1605 ran, actually has predicted that it is going to be between 5 to 6 percent increase in
1606 consumption in the next 10 years. And yet, we are still talking about unreliable sources
1607 here, which is just unbelievable to me.

1608 And the billions of dollars that are being pushed out because of the IRA -- we will
1609 get to those questions -- but the answer to that question was 4,292 terawatt hours in
1610 2022, with a .5 percent increase annually. But that is changing.

1611 So, Mr. Brickhouse, what I want to talk to you about first off is, in your testimony,
1612 you talk about tripling of increase for natural gas demand. And I want to hear, what is
1613 holding us back from using that as a provider?

1614 Mr. Brickhouse. Well, based on Electric's perspective, nothing is preventing us
1615 from using it. Since 2010 -- again, we have grown 5 percent annually each year, on

1616 average. Since then, we have added roughly 1,000 megawatts of natural gas generation
1617 to our portfolio. At the same time, thankfully for the wind resources in our service
1618 territory, we have added a similar amount of wind generation.

1619 As we look out through the balance of this year, we will add 600 megawatts of
1620 dispatchable natural gas generation, and then we will spend \$4 billion between now and
1621 2030 to add another 1,500 megawatts of natural gas generation.

1622 Mr. Pfluger. What is the most important quality to you? Is it affordability? Is
1623 it reliability? Is it this notion that somehow one form or another is cleaner? I mean,
1624 what is the most important? As a deliverer of electricity, what is the most important
1625 characteristic?

1626 Mr. Brickhouse. Well, I think anybody that joins the electric utility industry -- we
1627 are a public service industry, which I think is a noble calling, and our objective is to
1628 produce safe and reliable and affordable power in an environmentally responsible
1629 manner. I think everyone at this table that is employed by a utility, that is our tagline.

1630 Mr. Pfluger. And natural gas can do that and is that --

1631 Mr. Brickhouse. Most definitely.

1632 Mr. Pfluger. -- with 40 percent of the production of --

1633 Mr. Black, permitting reform. What I was trying to get at, what is holding us back
1634 from using that. Tell us about the detrimental effects of not having permitting reform to
1635 deliver affordable, reliable, clean energy.

1636 Mr. Black. Sure. Yeah. There are three fairly specific things that we could do
1637 to amend, you know, this process, the Clean Water Act and NEPA and judicial reform to
1638 prevent litigation and uncertainty around infrastructure projects.

1639 And I think the important point of all this is -- and you asked a great question of
1640 sort of what is the constraint right now. And I checked gas prices this morning. They

1641 were a little less than \$3 for MMBtu, and pipelines are the constraint, right.

1642 There is a finite amount of space in a pipe, and if we don't have enough pipes, you
1643 get to a point where you have things like basis blowout, which is the cost of
1644 transportation blows out, you know, 10 times more than the cost of gas.

1645 So our need is to build the infrastructure so that we don't create our own
1646 constraint, and then we can get access to that today sub \$4 gas.

1647 Mr. Pfluger. I was just trying to Google gas prices in Europe, and I am sure we
1648 can do that relatively quick. But it is not \$3 at NCF; it is much higher than that.

1649 Mr. Haque, in the last 45 seconds, any expanded thoughts on permitting and how
1650 we can deliver for the needs that we know -- we are in energy expansion. That is where
1651 we are.

1652 Mr. Haque. We support permitting reform. Anything we can do to get energy
1653 infrastructure built more expeditiously, whether that is generation or transmission, will
1654 be extremely helpful.

1655 You know, one additional factor that we didn't discuss with respect to -- I
1656 appreciated Mr. Brickhouse and Mr. Black's responses. You know, I think policy also
1657 has -- and specifically decarbonization policies, specifically in the gas industry right now, it
1658 can be the cheapest resource possible to build out and would also, you know, help with
1659 great reliability in tandem with the renewable resources that we are going to naturally
1660 see find their way onto the system.

1661 You know, but if sort of there is a policy overhang that creates a risk premium that
1662 is really too high for investors to invest in, that is sort of another factor on top of what has
1663 already been referenced that creates challenges for natural gas generation to get built
1664 out on the system.

1665 Mr. Pfluger. Thank you very much.

1666 Time has expired. I yield back.

1667 Mr. Latta. Thank you. The gentleman's time has expired and yields back.

1668 The chair now recognizes the gentleman from New York's 20th District for 5
1669 minutes for questions.

1670 Mr. Tonko. Thank you, Mr. Chair.

1671 I am glad that there is a bipartisan recognition of the impending challenges facing
1672 our electricity system to meet growing demand, but we are doing ourselves a disservice if
1673 we continue to ignore demand size solutions.

1674 Mr. Norris, I appreciated your testimony because I believe we need to incentivize
1675 energy efficiency, demand response, and smarter grid management. Reducing peak
1676 demand allows our existing generation resources to be stretched further.

1677 So, Mr. Norris, can you make the case for reducing peak demand as one of the
1678 fastest and most cost-effective strategies we can implement to match near-term growth
1679 projections?

1680

1681 RPTR SINKFIELD

1682 EDTR ROSEN

1683 [11:59 a.m.]

1684 Mr. Norris. That is correct. And I can expand on that. So there --

1685 Mr. Tonko. If you could, please.

1686 Mr. Norris. You know, the cheapest form of a megawatt is a megawatt, right.

1687 So not having the need to deliver the megawatt. And so there are a growing number of
1688 loads on the system that could be flexible, right. So they could be deferred, or they
1689 could be fun-loaded by a couple of hours. Because these system peaks that we are
1690 talking about, they are on average events that are approximately 2 hours. The most
1691 trickiest is when they occur during winter mornings, and that is from 6:00 to 8:00 a.m., or
1692 6:00 to 9:00 a.m. is the period that is well-defined for a lot of the jurisdictions in the
1693 eastern interconnect.

1694 And so for flexibility of 2 to 3 hours, for example, running your hot water heater,
1695 you know, before you wake up, so that your water is already warm and ready to go so
1696 you don't have to run it, right, like when that peak is occurring, we can get more
1697 headroom out of this system out of that.

1698 And I think the biggest opportunity may be from these large centralized new loads
1699 that are coming in. Because especially if they already have their own onsite power, and
1700 they are able to run that for a few hours a year, then we would add a lot more of that
1701 load a lot more quickly.

1702 Mr. Tonko. Thank you. I appreciate that. And unfortunately, demand-side
1703 policies are not the only tools being ignored by the Trump administration. We really are
1704 going to need every available electron to meet our needs. It is hard to believe that the

1705 administration is so brazenly dismissing the importance of wind and solar and of storage.

1706 Excluding wind and solar from energy dominance and its council's launch, and
1707 making it harder to permit wind projects on both Federal and private lands is completely
1708 antithetical to any claim that we need to rapidly expand our electricity system.

1709 Certainly, renewables have supply chain and permitting challenges, but so do gas
1710 plants with turbines currently being ordered for delivery in 2029.

1711 So Mr. Norris, since wind and solar and storage resources make up the bulk of the
1712 interconnection queue and are able to be deployed most quickly amongst new resources,
1713 do you think there is a disconnect in the administration's position of disadvantaging these
1714 resources while also seeking to encourage near-term load growth?

1715 Mr. Norris. Yes, I think it is worth noting. So, you know in Texas, for example,
1716 they have seen record summer peaks in the past 2 years. At the same time, they have
1717 added record amounts of new capacity. And most of those additions were solar and
1718 batteries. And so, I think, most analysts have concluded that if ERCOT had not added
1719 that solar and storage as fast as they did, there would have been rolling blackouts in the
1720 summer periods during those summer peaks.

1721 Solar and storage can contribute to reliability, and it is doing so in a number of
1722 markets. And wind as well. It actually balances out the solar profile oftentimes
1723 because you can still get decent wind resource in those winter mornings. I think what
1724 you said is generally accurate.

1725 Mr. Tonko. We also know policy stability is needed to properly plan for and
1726 make energy investments. There have been several independent studies finding that
1727 repeal of clean energy tax incentives will result in major cost increases for our American
1728 families and businesses. And creating uncertainty about the future availability of these
1729 credits is already having a chilling effect on private sector investments.

1730 So Mr. Norris, if we need projects to be built as quickly and at the lowest cost
1731 possible, how does tax credit policy and certainty discourage investment and upend
1732 planning?

1733 Mr. Norris. You know, we are already hearing of impacts. You know, there are
1734 active procurements taking place in the Southeast right now for new solar and solar-plus
1735 storage resources. And even the uncertainty of not knowing where the tax incentives
1736 are going to land as a result of then-developers pulling projects out of those RFPs, which
1737 means necessarily the cost of those procurements is going to increase. And so, even the
1738 uncertainty -- before we even, you know, decided if we actually repeal them is already
1739 having an impact.

1740 But, you know, it is just kind of basic economics, right. If you pull back incentives
1741 from a given activity, you are going to see less of that activity. And in that case, this
1742 means that you are going to see less generators added to the system.

1743 Mr. Tonko. Thank you. And, Mr. Black, there is a strong bipartisan support for
1744 nuclear energy on the committee. Can you explain the role the Department of Energy's
1745 loan program's office played in supporting the development plant Vogtle? And if you
1746 could answer that quickly. My time is expiring.

1747 Mr. Black. Yes, it provided hundreds of millions of dollars or benefit in Vogtle.

1748 Mr. Tonko. Okay.

1749 Mr. Black. That is the buy-down of that loan.

1750 Mr. Tonko. I appreciate that. With that, Mr. Chairman, I yield back.

1751 Mr. Latta. Thank you very much. The gentleman yields back. And the chair
1752 now recognizes the gentlelady from Tennessee's First District for 5 minutes for questions.

1753 Mrs. Harshbarger. Thank you, Mr. Chairman. Thank you to the witnesses for
1754 being here today. I will start with Mr. Black. Tech companies make a tremendous

1755 amount of money by running their own super computers at data centers. It seemed to
1756 me that they would want to focus their resources on building these data centers rather
1757 than getting into the power business. So why do you think these tech companies are
1758 going behind the meter because they can buy wholesale power from utilities, or buy
1759 utilities or at regular rates or a negotiated rate?

1760 Mr. Black. I think it is a great question. And I think in parts of the country
1761 where maybe they are finding it difficult to find available power that is affordable, that is
1762 a solution. I think it is likely a near-term solution. Again, I have waxed on about the
1763 benefit of the integrated grid. And I think the one-off co-location solutions may be
1764 short-term. For the long-term, I think the unassailable benefits of the way we provide
1765 power will be recognized.

1766 Mrs. Harshbarger. Yeah, that was my next follow-up. What would the benefits
1767 be to these tech companies, or individual rate payers or the system as a whole when
1768 adding these new loads like the data centers in front of the meter and sitting behind the
1769 meter?

1770 Mr. Black. Yeah, so the benefits of these customers and the growth and the
1771 amount of generation they require done right, charged right with the right tariffs, allow
1772 us to build a system that indeed puts down refresh-on rates. And it is around some of
1773 the conversations that Mr. Norris has had in around that utilization rate. So I need
1774 fewer resources to produce more electricity. Well, that puts downward pressure on
1775 each unit produced of electricity. So it can be a fantastic thing.

1776 Mrs. Harshbarger. Yeah. Okay. Thank you, sir. Mr. Haque, different types
1777 of computing facilities, whether they be crypto currency, mining facilities, AI computing,
1778 or otherwise, they have different demand needs. And as our committee considers these
1779 policies based on growing load demand, would there be any need to define these

1780 facilities differently based on their differing demand needs?

1781 Mr. Haque. It is a great question, Representative. One thing that needs to be
1782 examined is this load, and specifically, you know, the -- we will just characterize it as cost
1783 and other obligations that it creates. And so, you know, we have spent a lot of time
1784 with our stakeholder community and within our stakeholder process talking about this
1785 load in particular, how big it is, how quickly it is coming on to the system.

1786 You talked about, you know, behind the meter opportunities as well as in front of
1787 the meter opportunities for these folks to come on. And look, it is a good story. It is a
1788 good story for the Nation to have these data centers and to have this growth. But
1789 simultaneously, I do think we need to think about whether there needs to be, you know,
1790 additional, we will just call it, you know, for us, you know tariff structures or revisions to
1791 deal with this load coming on, specifically, you know, their cost for the system. And, you
1792 know, for instance, whether they are paying their fair share of transmission upgrades,
1793 whether they are paying their fair share of ancillary services, which is a service within, you
1794 know, our grid framework.

1795 And so I think you are bringing up an important point. I think it is something that
1796 deserves analysis.

1797 Mrs. Harshbarger. Yeah. You know, we talked a little bit a few minutes ago.
1798 You know, PJM covers just a sliver of my district, and then TVA, you know, covers the vast
1799 majority. And you talked about the Winter Storm Elliot where there was a surge in
1800 demand. It affected my district tremendously. And that allowed you to get that
1801 waiver to meet the demand to sell excess power to TVA on the open market.

1802 You know, we don't need all plants to be in use at the same time. You know, it is
1803 kind of like when you lose weight and you have your closet, you don't throw those clothes
1804 away, you take them upstairs, and you put them in the closet. And then you got your

1805 overweight clothes and then you got your skinny clothes. And it is kind of the same way
1806 with this power structure, you know. You don't want to turn all of it off or get rid of it
1807 all at once. Do you agree?

1808 Mr. Haque. I agree with that. I have, historically, been a weight fluctuator, so I
1809 do have my heavy suits and my skinny suits.

1810 Mrs. Harshbarger. Well, we all do. I just go upstairs to shop.

1811 Mr. Haque. But I also agree fundamentally with the premise. And look, the
1812 tighter we get on supply, the less we are going to be able to export to our neighbors.
1813 And we have been, historically, when the weather gets rough, especially these last few
1814 winters, we have been able to export to our neighbors in order for them to keep the
1815 lights on. And so the tighter we get with supply, we have generally been the sort of the
1816 grid in the eastern interconnect that has had the most robust supply. The tighter we
1817 get, the less we are going to be able to help our neighbors. And so, I think,
1818 fundamentally, you know, I do agree with what you are saying.

1819 Mrs. Harshbarger. You keep those overweight clothes. I got you, pal. All
1820 right. My time is up, and I will yield back.

1821 Mr. Latta. The gentlelady's time has expired and yields back. And that is the
1822 first time I have heard that analogy before.

1823 The chair now recognizes the gentleman from Texas' 33rd District for 5 minutes
1824 for questions.

1825 Mr. Veasey. Thank you, Mr. Chairman. And I did want to take a personal
1826 privilege here to talk about my friend, Sylvester Turner, that we lost. When I was in the
1827 State legislature with Sylvester, this was his wheelhouse. He loved talking about ERCOT,
1828 and knew it in and out and the transmission piece. And from someone that he would
1829 always probably say that -- he would never say he was from Houston. He would always

1830 say he was from Acres Homes, which is a neighborhood in Houston. And from Acres
1831 Homes to Harvard, Sylvester got his lesson and literally learned this particular thing that
1832 we are talking about today in and out. And I am devastated. And I thank y'all for being
1833 here today.

1834 One of the problems that we are obviously having is that bringing new resources
1835 onto the grid. It is a challenge for a lot of different reasons, but we know that we are
1836 going to continue to have electricity demand. There was just a great article recently in
1837 one of our local papers in north Texas talking about some nuclear reactors that were
1838 going into the Haskell area of West Texas in order to help with, you know, data centers
1839 and all of the new demand that is going to be online for ERCOT.

1840 One of the things that worries me is I don't know that FERC's ordered 2023 to
1841 modernize interconnection process has made some progress with that. There are still
1842 some barriers that remain. The connect and manage model that is used in my home
1843 state of Texas allows generators to connect faster by managing grid constraints in real
1844 time instead of waiting for upgrades. And that means that sometimes the generators
1845 will have to curtail their production, but that is a market decision that they make. And it
1846 works so well that ERCOT interconnected 2.5 times more capacity than PJM, despite PJM
1847 serving a much larger load.

1848 And so knowing all of that and knowing that America is going to have energy
1849 needs to be met, and that we need a more efficient interconnection system, I wanted to
1850 ask Mr. Norris. A lot of your highlights at ERCOT is far more efficient than other regions
1851 in interconnection, and I wanted to ask you what policies allow ERCOT to interconnect
1852 projects faster than other RTOs and ISOs, and do you think they can be applied
1853 nationally?

1854 Mr. Norris. Thank you, Congressman, for the great comments and the very good

1855 question. I think this is a very, very significant phenomenon that has happened in
1856 ERCOT over the past years. I don't know that we have ever seen such a differential
1857 between one market exceeding every other market so substantially and such a critical
1858 area, and in this case a new capacity addition.

1859 ERCOT has taken a forward-looking approach here. So they allow generators to
1860 connect freely, and they don't charge them for the cost of network upgrades. They plan
1861 their grid separately via separate process that is designed to identify the upgrades that
1862 have the best benefits for the rate payers. And then they manage the impact, as you
1863 said, in real time. So they have sophisticated real-time operational tools that allow
1864 them to manage all these new generators that are coming online.

1865 And the rest of the country, we have actually established very high barriers to
1866 entry for new generation. And the way we study them is highly restrictive, and it is
1867 likely, in many cases, to trigger substantial network upgrades. And that is really, in some
1868 ways, the primary cause of all these interconnection queue backlogs is that we have
1869 taken this highly restrictive approach to getting new generation on the system.

1870 So I do think there are lessons that other jurisdictions can learn from ERCOT.
1871 They can't necessarily adopt it immediately, because that would require larger structural
1872 reform. But there are ways that they can offer services to generators to allow them to
1873 move forward more quickly.

1874 Mr. Veasey. I know that in a lot of your work, you also suggest that better allot
1875 and interconnection transmission planning and resource procurement should take place.
1876 And I was wondering, how should FERC in Congress incentivize more proactive transition
1877 investment?

1878 Mr. Norris. Proactive transmission planning is going to be critical. In part
1879 because we are in a very supply chain constrained environment. My rates are already

1880 rising. And so, there just a threshold for how much we can do very quickly.

1881 So we need proactive planning so that we can identify the highest value upgrade
1882 to the system and focus our limited resources on those. And that is exactly what Order
1883 1920 tried to do, right, is to create this multi-value proactive approach to transmission
1884 planning.

1885 And so, you know, I mentioned one example in the Carolinas that we did with
1886 Duke Energy. And everyone got behind that. It was highly bipartisan. It is going to
1887 unlock a lot of cheap generation. It is going to contribute to reliability. But we have to
1888 make sure that we maintain Order 1920 if we want to reap the benefits of that type of
1889 proactive approach going forward.

1890 Mr. Veasey. Thank you very much. Mr. Chairman, I yield back,

1891 Mr. Latta. Thank you. The gentleman yields back the balance of his time.

1892 The chair now recognizes the gentlelady from Iowa's First District for 5 minutes for
1893 questions.

1894 Mrs. Miller-Meeks. Thank you to Chairman Latta and the Ranking Member
1895 Castor for holding this hearing today. I want to also thank our witnesses for testifying
1896 before the subcommittee.

1897 Mr. Norris, I want to especially thank you for acknowledging that the perverse
1898 incentives of the Biden administration the past 4 years actually dampened the energy
1899 generation from carbon-based fuels, but I digress.

1900 The United States is experiencing unprecedented energy demand growth,
1901 requiring us to rapidly deploy new generation capacity across the country. In Iowa, we
1902 are seeing this firsthand with the recent announcement of QTS' new data center campus
1903 in Cedar Rapids, the largest economic development investment in the city's history at a
1904 minimum of \$750 million.

1905 This facility chose Cedar Rapids in part because of access to reliable, affordable,
1906 renewable energy sources demonstrating how energy infrastructure directly impacts our
1907 ability to attract cutting-edge industries.

1908 As these technology-intensive facilities continue to expand across America, we
1909 face several critical challenges in meeting skyrocketing demand. Meanwhile, EPA's
1910 Power Plant 2.0 rule threatens to undermine grid reliability by forcing plants to
1911 implement carbon capture technology that isn't yet commercially viable at scale.

1912 We need commonsense, pragmatic approaches that facilitate faster development,
1913 such as repurposing existing generation sites, and unused transmission capacity to
1914 streamline permitting and accelerate clean energy integration.

1915 With that context, I would like to ask a few questions about how we can best meet
1916 this growing demand while maintaining reliability and affordability for all consumers and
1917 not ceding national security interests to the Chinese Communist Party.

1918 Mr. Brickhouse, you mentioned that technology-based loads like data centers
1919 become operational in 3 years, while dispatchable generation takes 7 years to build.
1920 How is base and electric leveraging existing sites and transmission corridors, along with
1921 considering wind, solar, and energy storage, which can be placed into service sooner to
1922 meet this interim reliability gap?

1923 Mr. Brickhouse. Well, with respect to renewables, when renewables were used
1924 to hit, or dissatisfy our peak demand, we typically think of it as needing to have backup
1925 dispatchable generation in order to satisfy the times when the wind is not blowing and
1926 the sun is not shining.

1927 For example, on February 20, it was negative 30-something degrees in North
1928 Dakota and across the Great Plains, and probably down into Iowa. And STP had a peak
1929 of 48,000 megawatts. And the wind contribution to generation was about 2,000

1930 megawatts. And that had, I believe, decreased seven-fold in 24 hours.

1931 So we need to have dispatchable generation given the harsh climates in our
1932 service territory.

1933 Mrs. Miller-Meeks. Exactly. And we seen the same thing in Iowa as well as
1934 when I visited MISO. And we know that U.S. needs to significantly accelerate domestic
1935 energy production infrastructure, both to meet growing demand, and as I said, to
1936 compete with the Chinese Communist Party in strategic sectors like AI and clean energy.

1937 Mr. Black, your experience with developing transmission projects across multiple
1938 jurisdictions gives you unique insight into supply chain challenges. How critical are tax
1939 incentives like the tech neutral electricity credits under 45Y and 45E and 45X advanced
1940 manufacturing for on-shoring American manufacturing and energy sector? And what
1941 would the competitive implications be against China if these credits were significantly
1942 reduced.

1943 Mr. Black. Yeah, so there is definitely a significant amount of investment
1944 required. And those investments, or those tools that you just discussed, are incredibly
1945 helpful in ensuring that we can get those projects built and online in a manner that is
1946 affordable for our customers.

1947 Mrs. Miller-Meeks. Thank you. Mr. Haque, Basin Electric is experiencing load
1948 growth significantly higher than natural average, in part, due to data center demand.

1949 Given your experience at PJM, what best practices would you highlight to balance
1950 increased costs to rate payers and economic development?

1951 Mr. Haque. So as supply decreases and demand increases, it will raise prices.
1952 And this is just the reality of the marketplace. Now, one thing that we can do is work
1953 with our retail regulators on how those costs end up getting passed down to consumers.

1954 I was a former retail regulator myself from the State of Ohio. You know, how

1955 those, we call them default service procurement auctions work, how a deregulated state,
1956 how those costs are passed down is something that is worth examining, frankly, in all of
1957 our jurisdictions. Because a price increase in just one of our markets should not actually
1958 result in a direct proportionality of costs that are passed down to consumers.

1959 Mrs. Miller-Meeks. Thank you. We need to significantly accelerate domestic
1960 energy infrastructure to meet growing demand. Tax incentives, like the tech neutral
1961 clean energy credits under 45Y, 45E, and the 45Q carbon sequestration credit, and the
1962 45X advanced manufacturing credit aimed to strengthen American manufacturing
1963 capability and reduce the engineering procurement and construction risks that have
1964 plagued major energy projects. With that, I yield back.

1965 Mr. Latta. Thank you. The gentlelady's time has expired and yields back.

1966 The chair now recognizes the gentlelady from Washington's Eighth District for 5
1967 minutes of questions.

1968 Ms. Schrier. Thank you, Chairman Latta. And thank you to our witnesses
1969 today. I am going to start with just a few questions for Mr. Brickhouse.

1970 Mr. Brickhouse, Basin Electric purchases electricity from hydro-power assets at
1971 the Western Area Power Administration, correct?

1972 Mr. Brickhouse. Yes, ma'am.

1973 Ms. Schrier. Thank you. And for those who don't know, this is one of just five
1974 Federal agencies that market electricity from Federally-owned hydro power. Can you
1975 talk about just how valuable the Western Area Power Administration's hydro power is to
1976 your co-op's energy mix?

1977 Mr. Brickhouse. Yes. So the Western Area Power Administration owns and
1978 operates about 17,000 miles of transmission through the Great Plains and down into the
1979 desert Southwest. And then Bonneville Power Administration, which we don't have

1980 adjacent service territory in about 15,000 miles of transmission, if memory serves me
1981 correctly.

1982 And with respect to WAPA specifically, their transmission lines will end at one of
1983 their substations. On the other end of that substation, Basin's transmission line will
1984 connect and take it to the rest of our members.

1985 Ms. Schrier. Got it.

1986 Mr. Brickhouse. So a key partner.

1987 Ms. Schrier. So you are focusing more on transmission. I was really focusing on
1988 hydro power, which is, of course, important because it is base load, and it is dispatchable,
1989 it is clean and affordable.

1990 Mr. Brickhouse. And we transact through the hydro power with them on a daily
1991 basis.

1992 Ms. Schrier. What would happen if this hydro power were to suddenly become
1993 unavailable?

1994 Mr. Brickhouse. My colleague from PJM says when you have a supply and
1995 demand imbalance on the demand side or the supply side shrinking, you are going to
1996 have higher prices immediately.

1997 Ms. Schrier. Higher prices, less reliability. Thank you. And in this context, the
1998 Bonneville Power Administration is a similarly public power that supplies Washington,
1999 Oregon, Montana, and Idaho, and is funded by our electric bills, not by the Federal
2000 Government.

2001 So I want to extrapolate what this means from my state of Washington. It has
2002 twice the generating capacity of WAPA. And, in fact, Bonneville is the largest of the five
2003 power marketing administrations. So I want to also mention that this is important to
2004 several of the Republican colleagues in this committee.

2005 Across the Pacific Northwest, Bonneville accounts for about 65 percent of the
2006 generating capacity in the region and most of the high-voltage transmission as you
2007 discussed. The operations, therefore, at Bonneville, are essential to maintaining the grid
2008 at existing energy rates. And again, you pointed out that we the rate payers pay for the
2009 operations and not the Federal Government.

2010 So despite all of that, the administration and Elon Musk queue have still set their
2011 sights and succeeded in cutting nearly 20 percent of the workforce there, and that
2012 includes a lineman who worked on downed power lines, the system operators that make
2013 sure that demand meets supply, and they are up 24/7, and then, of course, the vice
2014 president of transmission.

2015 I just want to point out that these deliberate words of probationary employees is
2016 really pretty disparaging. It implies that they are in trouble and are dispensable.
2017 Really, that is not the case. It just means they have been one or two years or just got
2018 promoted.

2019 So I am not saying BPA is perfect, but this decision is not saving taxpayer money.
2020 It is not just reckless, and it is also not helping to pay for the gigantic tax cuts that my
2021 colleagues are planning for the wealthiest people in corporations in the U.S.

2022 If this weren't even enough, the self-inflicted damage from trade wars with our
2023 allies with Canada just started yesterday. And the rates here again are going to be
2024 unprotected from rate hikes. So in this case, the majority in the administration may not
2025 know that the largest share of Washington State's natural gas actually comes from
2026 Canada.

2027 So this administration, the same one that promised to slash energy bills in half in
2028 the next year, is doing exactly the opposite. And over and over, either a basic
2029 misunderstanding of the facts, or lying to the public, or retaliation against the Northwest

2030 region, which includes Idaho and Montana, is hurting my constituents. And I sure hope
2031 that Secretary Wright is listening. Thank you, and I yield back.

2032 Mr. Latta. Thank you. The gentlelady yields back the balance of her time.

2033 The chair now recognizes the gentleman from South Carolina's Seventh District for
2034 5 minutes for questions.

2035 Mr. Fry. Thank you, Mr. Chairman, and thank you to our witnesses for being
2036 here today and your testimony. I come from the great State of South Carolina where we
2037 have seen record investments from an economic development standpoint, advanced
2038 manufacturing, AI, and, of course, a rapidly increasing population, Myrtle Beach, one of
2039 the towns that I represent, is the fastest growing city in the country, creating more of a
2040 demand on our grid. Companies like DC Blocks are investing in our critical
2041 infrastructure, including the Myrtle Beach Cable Landing Station data centers across the
2042 State, expanding connectivity and supporting high-performance computing.

2043 And as these industries grow and as people continue to move to South Carolina,
2044 energy must keep up. Nuclear is key in my mind to meeting some of that demand. In
2045 fact, South Carolina already generates 55 percent of its electricity from nuclear thanks to
2046 initiatives like the Paul Meadow Nuclear Coalition. We have a strong industry-led effort
2047 to advance large-scale reactors and small modular technologies.

2048 But we can't rely on the status quo for long. We have to meet that challenge in
2049 Congress. We need policies that prioritize energy expansion, modernize transmission
2050 and regulatory certainty to ensure that American industry has the power it needs when it
2051 needs it. So I look forward to talking with y'all today.

2052 Mr. Norris, you discussed in using demand response and load management
2053 programs to incorporate massive new loads onto the grid. You also mentioned how this
2054 creates headroom for more expansion in the short term.

2055 But I am curious, how do utilities and grid operators approach the demand side
2056 response, which if I understand correctly, expands existing energy conservation
2057 measures?

2058 Mr. Norris. Yeah, so what we are talking about is a little different from existing
2059 demand response programs, because what we are trying to do is in this planning realm,
2060 right, we are all trying to plan for this large load that is coming. We want to connect the
2061 dots between the large customer and the electric utility and say, We recognize, say, this
2062 data center, You are going to have some onsite power -- it could be natural gas, by the
2063 way -- you are going to have onsite natural power plants already. So let's not have
2064 redundant capacity so that we are going to have to install a new gas power plant and all
2065 the transmission to deliver the power.

2066 In response, that data center could get online even more quickly, right, so we
2067 could compete in the AI race.

2068 Mr. Fry. Okay.

2069 Mr. Norris. So I think that is what we are trying to create here.

2070 Mr. Fry. Mr. Black, I saw you writing down some stuff. Do you care to respond
2071 to that same question.

2072 Mr. Black. Yeah, so to do what he was just reflecting on, we need what we call
2073 the abilities: the visibility, the dispatchability, the predictability of these loads. If we
2074 don't have that kind of control, we can't frankly pay that customer an appropriate
2075 amount so that they provide benefits to our system. And we have been -- Southern has
2076 a long history of doing this from our RTP, real-time pricing, to interruptible standby
2077 generation rates. We have been doing this a long time. And it is an important part of
2078 sort of rate world. We trim the peaks and fill the valleys. And that improves the
2079 efficiency of our system. So absolutely necessary, but those abilities are probably the

2080 key to unlocking that value.

2081 Mr. Fry. Mr. Brickhouse, the same question to you. And by the way, I am a big
2082 fan of co-ops. South Carolina co-ops are some of the best. We love them. The same
2083 question to you.

2084 Mr. Brickhouse. Thank you. I live in Congresswoman Fedorchak's district, but I
2085 was born in the great State of South Carolina. So thank you.

2086 Mr. Fry. Good game Friday.

2087 Mr. Brickhouse. I guess from our perspective, as a load-serving entity, we have
2088 to look at it with some skepticism and say, What happens if the load does not respond?
2089 And that can happen. And we are in a regional transmission organization, and we were
2090 obligated to abide by their rules. I will let Mr. Haque talk about this a little more
2091 specifically if he would like.

2092 But a number of years ago, PJM adjusted their demand response rates because
2093 they had -- and I don't want to mischaracterize this -- but they had significant demand for
2094 those demand response rates, and they changed the rules and gave it less capacity
2095 accreditation.

2096 So it is a utility that is not subject to PJM's RTO rules, but to STP's RTO rules, you
2097 do have to have that in the back of your mind is a load going to show up when you curtail
2098 that demand, and is the regional transmission organization going to change the rules
2099 down the road, and we are suddenly going to have to come up with more capacity?

2100 Mr. Fry. Thank you for that. Mr. Brickhouse, as a utility operator, what are the
2101 benefits of policies that promote energy abundance rather than scarcity management.

2102 Mr. Brickhouse. Permitting reform is a concern. And I think that there are a
2103 number of changes that Congress can make to the National Environmental Policy Act that
2104 would be very helpful to have additional resources come online more quickly.

2105 Mr. Fry. Thank you for that. Mr. Chairman, I see the balance of my time has
2106 just now expired, and with that, I yield back.

2107 Mr. Latta. The gentleman's time has expired and yields back.
2108 The chair now recognizes the gentlelady from Florida's 15th District for 5 minutes.

2109 Ms. Lee. Thank you, Mr. Chairman. And welcome to all of our witnesses here
2110 today. Ensuring the reliability and affordability of our electric power system is crucial
2111 for our national security, our economy, and the well-being of our communities.

2112 My home State of Florida is one of the Nation's largest producers of electricity,
2113 with a rapid population growth, increased manufacturing, and advances in technology,
2114 including artificial intelligence, and the data centers needed to power it are in demand,
2115 and production will only continue to rise.

2116 It is imperative that our electric grid is prepared to meet this growing demand for
2117 power. Our generation and transmission systems must be reliable and resilient with the
2118 ability to ensure continuous power supply and to respond quickly to unforeseen
2119 circumstance and changes in demand.

2120 Mr. Brickhouse, in your testimony, you mentioned the rapidly evolving threat
2121 landscape, and that the electric sector faces considerable challenges from our cyber
2122 adversaries. Would you expand, please, on the types of cyber threats that our electric
2123 power system faces?

2124 Mr. Brickhouse. Well, it is not terribly different than what you and I face every
2125 day when we go home. If you click on a wrong link and your computer gets some type
2126 of virus in it that can spread rapidly, and it shuts your computer down, and, obviously, in
2127 the utility space or at any business we have, large networks in that can be shut down and
2128 harmed relatively quickly by those.

2129 Ms. Lee. You also mentioned several specific programs that Basin Electric has

2130 leveraged to strengthen its cybersecurity posture, including the Threat Analysis Center,
2131 Rural Municipality Utility Cybersecurity Program. Are there any specific programs or
2132 best practices related to cyber that you want to highlight or share as success stories?

2133 Mr. Brickhouse. Well, I will answer it a little bit differently is that we appreciate
2134 the Federal Government's support here, because these are national security issues, and
2135 many of the bad actors are people from overseas. And so, we need to work in a
2136 coordinated fashion with intelligence agencies in order to make sure that we understand
2137 the threats and can defend ourselves and our networks from those threats.

2138 Ms. Lee. And, Mr. Black, in your testimony you mentioned that energy policy is
2139 highly regional due to some variations and factors like weather, geography, and
2140 resources. And Florida, like several of the other Southern States that your company
2141 serves, experienced devastating hurricanes last year.

2142 I am interested in discussing further with you how utility companies like yours
2143 prepare for these types of events?

2144 Mr. Black. We are certainly practiced, unfortunately, at dealing with hurricanes.
2145 We have one of the largest hurricanes in our company's history this last year as it moved
2146 through Georgia. More polls, but I can go through all the statistics. It is devastating.

2147 Our ability to work with our friends in a coordinated manner to get customers
2148 back on is probably better than it has ever been, right? I think the investment in our
2149 system from a resilience perspective and the investment in our system in recovery has
2150 been -- it improves year to year.

2151 These events get more remarkable, it seems, as the South continues to grow and
2152 proliferate. But our ability to invest in the system for resilience so that we can get back
2153 on quicker and work with our peers and colleagues around the country to bring those
2154 resources in is better than it has been ever.

2155 Ms. Lee. And you just touched on something that I want to ask a follow-up
2156 question about, and that is, I understand the Investor-Owned Utilities Mutual Assistance
2157 Program has been beneficial for getting customers' lights back on in the wake of these
2158 extreme weather events.

2159 Can you share with us what that program is, and how it has helped you work on
2160 disaster recovery?

2161 Mr. Black. Certainly. It is the processes and communication and the network
2162 that is required to call in crews from all over the country. And again, these last few
2163 storms we had trucks and folks as far away from the West Coast coming into Georgia and
2164 North Carolina and so many of these States that were devastated.

2165 So the Mutual Assistance Program, again, at this point so well practiced. And the
2166 ability of companies to get people quickly on the work is the challenge. Having just the
2167 resources is step one. Getting them on the work is where the practice and the training
2168 and the commitment comes from.

2169 Ms. Lee. Thank you, Mr. Chairman, I yield back.

2170 Mr. Latta. Thank you. The gentlelady yields back the balance of her time.
2171 The chair now recognizes the gentleman from New York's 23rd District for 5
2172 minutes for questions.

2173 Mr. Langworthy. Thank you, Mr. Chairman.

2174 Mr. Brickhouse, in his 2024 long-term reliability assessment issue last month,
2175 NERC ranked the middle part of the country in the MISO area as high risk for energy
2176 shortfalls with elevated risks throughout many other regions. And NERC notes at
2177 Section 111 standards, Matt's rule -- coal ash regulations and affluent limitations
2178 guidelines, specifically, are quote, "regulations that impose considerable, financial, and
2179 operational challenges on coal-fired generators." And quote, "have the potential to

2180 influence generators to seek deactivation during the 10-year assessment period of NERC
2181 study."

2182 For the first time in years, we are facing increasing demand for electricity, in part,
2183 due to ballooning demand from data centers and increased electrification. But the
2184 previous administration under President Biden tried to engineer an accelerated shift in
2185 the mix of electricity generation in a country with the goal of trying to force the shutdown
2186 of coal-fired power plants while discouraging natural gas transmission in generation.

2187 Mr. Brickhouse, should we have requirements that any environmental push to
2188 shift the mix of electricity production be fully vetted by reliability authorities like FERC
2189 and NERC? Or should we have reliability at the center of electricity planning moving
2190 forward?

2191 Mr. Brickhouse. I think that in terms of regulations, we have to be careful of
2192 unintended consequences and regulations that are put in by well-intentioned people
2193 today have the threat of being misused in the future. As a utility, and I think Mr. Black
2194 referenced this earlier as well, it is our obligation to balance supply and demand.

2195 Mr. Langworthy. Thank you. In the last 4 years and looking even earlier than
2196 that, Democratic administrations have put their own public policy agenda items ahead of
2197 real issues like reliability and affordability. We saw this play out with former President
2198 Biden's work to shut down generation. And we see it on a State level where States like
2199 my home State of New York where radical, even irresponsible public policies like the
2200 Climate Leadership Community Protection Act are putting zealous goals for emissions
2201 reductions and electrification ahead of basic questions about reliability, affordability, and
2202 the safety of residents.

2203 So I would like to go down the row here and ask: Have you seen State policies
2204 lead to or have an effect on higher rates and lower reliability? Mr. Brickhouse?

2205 Mr. Brickhouse. Yes.

2206 Mr. Langworthy. Mr. Haque?

2207 Mr. Haque. Absolutely.

2208 Mr. Langworthy. Mr. Norris?

2209 Mr. Norris. Yes.

2210 Mr. Langworthy. Mr. Black?

2211 Mr. Black. I will say our region in support of our States, and that regulation close
2212 to the States has resulted in affordable and reliable power for our companies -- so in our
2213 customers. So I would say State alignment around that issue, at least in our region, and
2214 this is back to that regionalism has been strong.

2215 Mr. Langworthy. Now, the New York grid plans to add 3.5 gigawatts of new large
2216 loads to its system by 2030, including Micron's microchip fabrication facilities in the
2217 Syracuse area, which are creating thousands of new jobs and leading to billions of dollars
2218 of new investment.

2219 Now, currently, my State relies on energy supplies from other States and Canada
2220 to meet more than 80 percent of its total energy needs and has the country's seventh
2221 highest average residential electricity rates.

2222 Now meanwhile, vast natural gas, hydro power, and geothermal resources in New
2223 York remain untapped. I mean, I find this to be unacceptable. Unlocking our abundant
2224 energy resources can lower the cost of electricity, while adding new loads to the system
2225 can put downward pressure on consumer rates.

2226 Mr. Black, we have heard today about the demand needs of various technologies
2227 like AI computing, crypto currency mining, and expanded manufacturing, such as the
2228 Micron facility that I mentioned. What policy consideration should be made to ensure
2229 grid reliability and efficiency while accommodating very energy-intensive industries

2230 coming into new areas?

2231 Mr. Black. So I think two important points there. Firm gas pipes. And we
2232 have talked a little bit about today this interconnection sort of accountability and affected
2233 systems. Those are processes at our State level that we see that results in a more
2234 ubiquitous transmission and gas system. You don't build a gas pipeline without a firm
2235 gas contract. And that could be some of the struggles. I don't know. I am not as
2236 familiar with your region. I am sorry for that. But our area is committed to that. And
2237 again, those firm gas contracts are resulting in more infrastructure to support the region.

2238 Mr. Langworthy. Thank you. These policies and their consequences are being
2239 felt across the country and will be felt in the coming years. They clearly warrant greater
2240 scrutiny, even vetting. As a New Yorker whose constituents experience the results of
2241 such irresponsible policies as they relate to our electricity needs firsthand, I believe
2242 strongly that we need to ensure reliability and affordability are always at the forefront of
2243 energy policy moving forward in all levels of policymaking.

2244 And with that, Mr. Chairman, I yield back.

2245 Mr. Latta. Thank you very much. The gentleman's time has expired and yields
2246 back.

2247 The chair now recognizes the gentleman from Colorado's Eighth District for 5
2248 minutes of questions.

2249 Mr. Evans. Thank you, Mr. Chairman. Thank you, Ranking Member. And
2250 thank you, of course, to the witnesses for coming today.

2251 In Colorado's Eighth Congressional District, I represent a working-class district,
2252 northern suburbs of Denver for whom energy is a major, major driver in the economy.
2253 In fact, the loyal electric utility that provides power to our area also services one of the
2254 major oil and gas fields in the area. And in my conversations with them, they have said

2255 that they are forecasting needing three times as much electricity in the next 10 years as
2256 they are currently using now, and that is after doubling the amount of electricity that they
2257 have to provide over the last 10 years.

2258 And so, Mr. Brickhouse, the first question to you is I have also heard directly from
2259 these utilities that because of Colorado's just very draconian laws around greenhouse
2260 gases emissions and the so-called carbon-free roadmap in Colorado, they are being
2261 forced to pull gigawatts of coal-fired generation off of the grid in Colorado.

2262 And so the question to you is, when you or your members are faced with those
2263 draconian regulations that require gigawatts of electrical generation to be pulled off of
2264 the grid, how does that impact your ability and the ability of other electrical providers to
2265 be able to keep up with the growing demand for electricity and keep it affordable?

2266 Mr. Brickhouse. We had a very short period of time in the late teens where our
2267 growth was slowing, and it quickly reaccelerated after COVID, and we have grown
2268 basically 5 to 7 percent in unit sales every year after that. And that dramatically
2269 changed our expected path of our resources. We had tentative plans to evaluate
2270 closure of some facilities, and those are gone today. And I concur with the distribution
2271 cooperative you have been talking to down there that demand growth that we have in
2272 the future is going to require every existing resource, and it is going to require utilities to
2273 build enormous amounts of dispatchable generation in the future.

2274 Mr. Evans. How would you characterize the decision to retire coal-fired
2275 generation in the United States and in Colorado?

2276 Mr. Brickhouse. We have a member in Colorado that serves that load. So they
2277 had dealt with it one way. In North Dakota and other parts of our service territory,
2278 Wyoming, close proximity to Colorado, we are keeping all-of-the-above resource strategy
2279 intact.

2280 Mr. Evans. Do you think it is wise to be retiring coal-fired generation when we
2281 need additional capacity, not less?

2282 Mr. Brickhouse. No.

2283 Mr. Evans. Thank you. Moving on to NEPA reform. We know how critical it is
2284 that we not be our own worst enemy when we are trying to expand electrical generation
2285 so that folks have access to affordable and reliable electricity. And we have often heard
2286 conversations about how NEPA can sometimes get in the way of that.

2287 So do you have any examples that you might be willing to elaborate on about how
2288 Congress can streamline the permitting of getting more electrical generation onto the
2289 grid?

2290 Mr. Brickhouse. I think with NEPA, the best example is there is a project that we
2291 were doing with two partners. It was a natural gas development. And we got caught
2292 up in an extra review. And it, as a result of that, will likely write off a significant portion,
2293 if not all of the development costs of that project.

2294 Mr. Evans. Thank you. Switching to Mr. Haque. I represent a truly and
2295 all-of-the-above energy district. We have a major oil and gas footprint, but we also have
2296 wind, we have solar, we have geothermal. We used to have nuclear generation. We
2297 don't have that anymore in Colorado. We are trying to get that back.

2298 And so my question to you is as we are looking at, again, in my area needing three
2299 times as much electricity in the next 10 years, are there any emerging technologies,
2300 SMRs, geothermal, that you would like to see us be able to move forward to help meet
2301 some of this demand, and then also be able to co-locate the generation with the demand
2302 knowing that we have certain shortcomings in the transmission?

2303 Mr. Haque. Representative, great question. In the near term, here is what we
2304 are going to see: We are going to see quite a few of the renewables, hopefully, that are

2305 in our queue connect to the system. We are going to see up-rates of existing generating
2306 units. I think I described some of the nuclear up-rates. There is a possibility of gas
2307 up-rates as well. And I think you are going to see more demand response participate in
2308 our marketplace, long-term. We are going to get more renewables into the system.
2309 We are going to need new natural gas. And we are going to need new, you know, new
2310 technologies.

2311 SMRs are, you know, very promising technology, but they are some years away.
2312 So we were dealing with the technology that exists today. And that technology is -- you
2313 know as we sit here today, again, we have got, you know, effectively, our existing fleet
2314 and then new renewables, new storage, new natural gas.

2315 Mr. Evans. Thank you. I yield back.

2316 Mr. Latta. The gentleman's time has expired and yields back.

2317 The chair now recognizes the gentlelady from North Dakota for 5 minutes for
2318 questions.

2319 Mrs. Fedorchak. Thank you, Mr. Chair. Thank you all for being here and
2320 sharing your expertise with us. I have a few rapid-fire questions I want to ask to start,
2321 just because I want to hear from all of you. So just a yes or no on the first one.

2322 In your opinion, can you both support renewables and support the urgent need
2323 for more dispatchable fuel-secure resources? Mr. Brickhouse?

2324 Mr. Brickhouse. Yes.

2325 Mr. Haque. Yes.

2326 Mr. Norris. Yes.

2327 Mr. Black. Yes.

2328 Mrs. Fedorchak. Thank you. Secondly, is the call for more dispatchable
2329 fuel-secure power generation driven by partisan politics or grid physics and mechanics?

2330 Mr. Brickhouse. Physics.

2331 Mr. Haque. Physics.

2332 Mr. Norris. It is a more complex answer.

2333 Mrs. Fedorchak. You only get one choice. Grid mechanics or partisan politics?

2334 Mr. Norris. So I think there are cost considerations that come into play as well.

2335 But other than that, physics.

2336 Mrs. Fedorchak. Okay.

2337 Mr. Black. Physics. And finance. But physics, yes.

2338 Mrs. Fedorchak. Thank you. I am glad you brought up finance, because I want

2339 to talk about that next. As it relates to cost, there is a lot to talk about. This is the

2340 lowest cost. That is the lowest cost.

2341 As it relates to cost, does the cost per kilowatt cover the full cost of any

2342 generation source? And if not, what is the left out of that? What goes into the bill

2343 that customers pay? Because I had a lot of customers tell me as a regulator, if

2344 everything is so cheap, why is my bill going up?

2345 So, Mr. Brickhouse, what else besides the cost per kilowatt do you include in your

2346 bills to customers?

2347 Mr. Brickhouse. We include the hundreds of millions of dollars of year of costs

2348 related to environmental compliance. So that is one area. And then, when we talk to

2349 our members, a good example for Basin is that our existing generation assets are on our

2350 books for \$800 of KW installed. A new generation of a dispatchable baseload sort would

2351 cost about \$2,600 of KW installed. So there is a cost aspect to that as well.

2352 Mrs. Fedorchak. Mr. Black, what goes into your customer bills that we haven't

2353 talked about.

2354 Mr. Black. So certainly the wires cost. You know, transmission distribution.

2355 The variable O&M and the capital required to run our plants and keep them up to
2356 compliance, you know, EPA requirements along those lines. So, you know, it is the
2357 capital and the variable aspects of fuel and such. And so, it is a lot of components.

2358 And I would say it differs a little bit, too, in the structure that you have.

2359 Obviously, we are a vertically integrated structure. We build, and then they pay, you
2360 know, a share of the capital costs in our bills as opposed to sort of the market component
2361 maybe that PJM has that is broken out. It is a little more complex, I think.

2362 Mrs. Fedorchak. Okay. Thank you. Mr. Haque, the one most disappointed
2363 thing for me in this new role is that partisan politics gets way too involved in the
2364 management of the grid, in any opinion.

2365 You are the smart person, you are the one ultimately keeping the grid running in
2366 the PJM area. MISO does it. STP does it. What do you wish that Federal and State
2367 policymakers understood, or knew more about before they made policies affecting
2368 energy?

2369 Mr. Haque. All policy choices that exacerbate our supply, demand challenges
2370 will have direct consumer impact. They will have impact on reliability degradation, they
2371 will have impact on cost. And I would say the other thing is that, again, I think we are all
2372 collectively trying to find this balance of, you know, our north star's reliability, but we are
2373 very conscious of costs. And, you know, I have got two little boys at home. I mean, I
2374 would want them to breathe cleaner air as well. And so we are trying to find this sort of
2375 balance and sweet spot between all three of these.

2376 But in order to find that balance and sweet spot, we also have to understand the
2377 physics of these resources and what they can provide to the grid. That is also essential.

2378 Mrs. Fedorchak. Mr. Brickhouse, and I have one minute left. So I will ask two
2379 more questions. You are seeing significant demand increase. Do you expect that you

2380 can meet that demand with renewables alone?

2381 Mr. Brickhouse. No.

2382 Mrs. Fedorchak. How about you, Mr. Black?

2383 Mr. Black. No, not renewables alone.

2384 Mrs. Fedorchak. Mr. Haque, do you think that we can meet the demand for
2385 what we are seeing in terms of AI manufacturing --

2386 Mr. Haque. Not based on our forecast, no.

2387 Mrs. Fedorchak. All right. Sir, I forgot your name because I don't have it in
2388 front of me. Mr. Norris, do you think we can meet demand with renewables alone?

2389 Mr. Norris. No, but that also includes storage and nuclear and thermal
2390 resources, so yes.

2391 Mrs. Fedorchak. With all of those you think we can.

2392 Mr. Norris. And demand response and energy efficiency too.

2393 Mrs. Fedorchak. Okay. Well, I have only got 10 seconds, so I yield back.

2394 Thank you.

2395 Mr. Latta. Thank you. The gentlelady yields back.

2396 And the chair now recognizes the gentleman from Pennsylvania for 5 minutes for
2397 questions.

2398 Mr. Joyce. First, I want to thank Chairman Latta for allowing me to waive on to
2399 this important hearing. When it comes to energy generation, I believe in all of the
2400 above, but all of the above, I believe that we can all agree we need to utilize accessible,
2401 affordable energy, and that is the coal and the natural gas that is under the feet of my
2402 constituents.

2403 Our generation is not created equal. The capacity factors of wind and solar are
2404 simply too small to provide the reliable energy that our grid requires. What we need in

2405 simple terms is more baseload generation. We need more coal, more gas, and more
2406 nuclear. It doesn't matter how many gigawatts of wind and solar capacity that are built
2407 if they are not generating them when you need them. Unfortunately, we were doing
2408 worse than not building dispatchable generation. We are actually retiring it. We are
2409 shutting it down.

2410 PJM, which is the Nation's largest RTO, it includes my district in Pennsylvania,
2411 released a report in 2023 projecting 40 gigawatts of reliable, dispatchable generation will
2412 retire by 2030. PJM labels the majority of these retirements as, quote, "policy-driven
2413 decisions." This is at a time when demand is growing. Tech leaders, like Elon Musk,
2414 have said, AI could lead energy demand to be as much as twice as what it currently is
2415 today.

2416 Pennsylvania is in a great position to benefit from the investment in the jobs of
2417 the AI revolution. We have already begun to see this benefit with agreements between
2418 AWS and Talen Energy at the Susquehanna Nuclear Generation Facility, and the
2419 reopening of Three Mile Island thanks to the power purchase agreement between
2420 Constellation Energy and Microsoft.

2421 Mr. Haque, successfully deploying and empowering new AI data centers at the
2422 speed demanded to compete on the global stage will be heavily dependent on the actions
2423 taken by FERC to address co-location. How is PJM approaching the issue of co-location,
2424 both in its work with FERC and on its own.

2425 Mr. Haque. Thank you, Representative. It is still an evolving story. And the
2426 FERC recently, actually had -- they issued an order that requires us and the transmission
2427 owners to come to them with a potential solution. We are in the throes of working with
2428 our membership and our States to try and figure out what that solution should look like.
2429 I would have more information for you in 30, 60 days, but we are working that solution

2430 right now with, again, our States and members.

2431 Mr. Joyce. Mr. Haque, I hope you will agree with me that we need more
2432 generation built within PJM. And what are the tools in PJM's toolbox to encourage the
2433 investment and the building of new generation?

2434 Mr. Haque. The tools in the toolbox, depending on whether you are a
2435 restructured or deregulated State or a vertically integrated State -- Pennsylvania is a
2436 restructured or deregulated State -- who are reliant on markets to try and incentivize new
2437 investment.

2438 Now, you know, we have a capacity market that is meant to be a residual market.
2439 So parties like the ones you are referencing, you actually referenced TMI and Microsoft,
2440 they can enter into bilateral transactions in order to make sure that they
2441 have -- Microsoft in this instance -- has the power that they need. And the capacity
2442 market can be relied upon to send what I would say are directional price signals as well as
2443 to incentivize new investment.

2444 Mr. Joyce. So, Mr. Haque, are capacity auctions one of the tools in your toolbox?
2445 And do you believe that capacity auctions are working to incentivize building new
2446 generation? And if not, what can be used to attract that new generation, that new
2447 investment.

2448 Mr. Haque. Yeah, so Representative, for our deregulated States, the capacity
2449 market is the primary tool that is utilized to try and incentivize new investment to the
2450 marketplace. However, I continue to think that as we see this proliferation and demand
2451 driven by data centers, driven by the on-shoring or U.S. manufacturing, I think you will
2452 see more, again, bilateral transactions that occur within the footprint.

2453 And the other thing I would say is, you know, there are tools that can be utilized
2454 that have not been utilized yet. For instance, we have got the potential if we clear

2455 3 years below our reserve margin that we can use a competitive procurement
2456 mechanism. That is a tool that is currently in our toolbox that we can utilize. States
2457 have taken action as well depending on the resource types that they prefer in order to try
2458 and advance new generation. And those actions can find their way into our marketplace
2459 as well.

2460 Mr. Joyce. As we see the expansion of AI, we are going to rely more on you
2461 expanding those tools in your toolbox.

2462 Mr. Chairman, I thank you for allowing me to waive on, and I yield back.

2463 Mr. Latta. The gentleman's time has expired and yields back.

2464 The chair now recognizes the gentleman from Georgia's First District for 5 minutes
2465 of questions.

2466 Mr. Carter. Thank you, Mr. Chairman. I appreciate the opportunity to waive on
2467 to this committee, and thank all of you for being here. I suspect I am the last one to ask
2468 questions. So you are almost done.

2469 Business is booming. We need more electricity. We are counting on y'all. I
2470 don't want you to feel any pressure, but we were counting on you, okay? We need you.

2471 My own State of Georgia, 11 years in a row, the number one State to do business
2472 in. I am very proud of that, and there is a reason for that. Because we have created a
2473 probusiness environment. Our legislature, our Governors, they have created a
2474 probusiness environment. And we have available energy. We have affordable, reliable
2475 energy. That is another reason why people and businesses want to locate to Georgia.

2476 I know firsthand that the demand for more electricity is one of the top challenges
2477 that we face right now, and we will continue to face that going forward.

2478 Mr. Black, in your written testimony, you also note that the State of Georgia is
2479 open for business. In fact, companies are flocking to Georgia because we have good

2480 policies, as I say, for business.

2481 Mr. Black, what is unique about Georgia? What should Congress do to make

2482 sure that Georgia can remain open for business?

2483

2484 RPTR KERR

2485 EDTR ZAMORA

2486 [12:58 p.m.]

2487 Mr. Black. Yes. So the load coming to Georgia is remarkable. I mean, we
2488 have line of sight on 10,000 megawatts. I know we have said a lot of numbers today,
2489 but that is a lot of electricity. In the queue, another 50,000 of proposed and projects
2490 that may come our way.

2491 I believe some of the structures, sort of the electricity structure that we have is
2492 incredibly important. It will result in firm gas pipelines. It will result in firm electric
2493 transmission. But those pipelines and the need for those and some of the reforms we
2494 have talked about in and around NEPA and the Clean Water Act and some judicial reform
2495 to get the pipelines done in time is essential.

2496 Mr. Carter of Georgia. Okay.

2497 Mr. Black. That is a national issue.

2498 Mr. Carter of Georgia. Let me ask you something. And if I get any of this
2499 wrong, you are the expert, so please correct me, okay?

2500 But I think it is important to note that the State of Georgia is the only State that
2501 has built nuclear reactors in the last 30 years. We have two new nuclear reactors at
2502 Plant Vogtle, and I believe that Plant Vogtle right now, with the four nuclear reactors that
2503 are there, is providing about 22 percent of the electricity needs in the State. And if you
2504 combine that with Plant Hatch, which is in my district, in the First District, they are
2505 providing about 8 percent. Therefore, about 30 percent of the energy in the State of
2506 Georgia is coming from nuclear.

2507 Mr. Black. That sounds accurate, yes.

2508 Mr. Carter of Georgia. Yeah. So let me ask you something, because I heard
2509 SMRs. A lot of people have been talking about SMRs. But we don't have any under
2510 construction right now, do we? Does anybody on the panel know of any that we have
2511 under construction?

2512 Mr. Black. Not domestically that I am aware of, no.

2513 Mr. Carter. Okay.

2514 Mr. Black. AP1000s, as you know --

2515 Mr. Carter of Georgia. Well, the reason I ask this is because -- and hang with me
2516 here, if you will. If Georgia Power were to build more nuclear, would it be SMRs, or will
2517 you continue with the reactors like you have at Plant Vogtle? Because it is my
2518 understanding that you would rather do that than to do the SMRs.

2519 Mr. Black. Well, we learned a lot, and we have, I think, understand the risks and
2520 the time. I mean, the improvement from three to four was about 20 percent.

2521 Mr. Carter of Georgia. That is what I understand.

2522 Mr. Black. It is remarkable. So, you know, if you could go five, six, seven, you
2523 know, either in our State or some other States within the country, the AP1000, I think the
2524 risk -- the cone of risk, if you will, is much smaller than some technology we haven't quite
2525 developed fully.

2526 Mr. Carter of Georgia. Well, I would submit to you that Georgia following
2527 through on that project, even though it was challenging, no question about that, but I
2528 would submit to you that following through on that project gave the blueprint, if you will,
2529 for nuclear reactors in the United States. Because as you say, we had a 20 percent
2530 saving between number three and four and learned a lot of important lessons that can be
2531 shared.

2532 Mr. Black. Yeah, absolutely. Hard but worth it. And, again, the fact that it is

2533 on all the time is such a remarkably important element.

2534 Mr. Carter. And it is the largest provider of clean energy in the United States.

2535 Is that correct?

2536 Mr. Black. That is correct. Number one.

2537 Mr. Carter. Number one.

2538 Mr. Black. Yes.

2539 Mr. Carter. Plus, Georgia is the number seven State in the country for solar.

2540 Mr. Black. Why are we the number seven State?

2541 Mr. Carter. Georgia is the number seven State. Is that correct?

2542 Mr. Black. That is. It is in the top 10. There are a number of States in the

2543 Southeast that have solar resources. I think we are finding -- I think it is important to be

2544 resource agnostic but resource aware, and we are able to find ways to get solar on

2545 because it is an asset and a resource within our State we can bring on the system --

2546 Mr. Carter. Well, Mr. Chairman, I thank you for the opportunity to come in here

2547 and brag about my home State of Georgia, as I have done for the last 5 minutes.

2548 So thank you all very much for being here.

2549 Mr. Weber. But the gentleman of Georgia, Texas is number one, just so you

2550 know.

2551 Mr. Latta. Well, let's not get into that.

2552 Okay. The gentleman's time has expired and yields back.

2553 And seeing no other members wishing to ask questions of our witnesses today, I

2554 remind members if they do have additional written questions that they might be

2555 submitting to you, that we would ask that you get those back to us within 10 business

2556 days.

2557 And I ask unanimous consent to insert in the record the documents included on

2558 the staff hearing documents list.

2559 Without objection, so ordered.

2560 Without objection, the subcommittee is adjourned.

2561 And, again, thank you to our witnesses for appearing today.

2562 [Whereupon, at 1:04 p.m., the subcommittee was adjourned.]

2563

2564