

1 RPTR SINKFIELD

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5 KEEPING THE LIGHTS ON: EXAMINING THE

6 STATE OF REGIONAL GRID RELIABILITY

7 TUESDAY, MARCH 25, 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 10:15 a.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, DeGette, Matsui,
21 Tonko, Veasey, Schrier, Fletcher, Auchincloss, and Pallone (ex officio).

22 Also Present: Representatives Carter of Georgia and Joyce.

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

26 Martin, Chief Counsel, Energy; Joel Miller, Chief Counsel; Ben Mullaney, Press Secretary;
27 Jake Riith, Staff Assistant; Jackson Rudden, Staff Assistant; Chris Sarley, Member
28 Services/Stakeholder Director; Emma Schultheis, Clerk, Health; Peter Spencer, Senior
29 Professional Staff Member, Energy; Kaley Stidham, Press Assistant; Matt VanHyfte,
30 Communications Director; Rasheedah Blackwood, Minority Intern; Waverly Gordon,
31 Minority Deputy Staff Director and General Counsel; Tiffany Guarascio, Minority Staff
32 Director; Perry Hamilton, Minority Member Services & Outreach Manager; Kristopher
33 Pittard, Minority Professional Staff Member; Emma Roehrig, Minority Staff Assistant;
34 Kylea Rogers, Minority Policy Analyst.

35 Mr. Latta. Well, good morning. The Subcommittee on Energy will now come to
36 order.

37 And the chair recognizes himself for 5 minutes for an opening statement.

38 Welcome to today's hearing, Keeping the Lights On: Examining the State of
39 Regional Grid Reliability. Today, we will continue the subcommittee's work to address
40 the ongoing electric reliability crisis facing our Nation.

41 The witnesses before us are each of the regional grid operators, and ERCOT, who
42 collectively cover two-thirds of the country. These organizations are charged with
43 overseeing reliability to their State or region, administering markets for the sale and
44 purchase of electricity products, and coordinating transmission development.

45 While each grid operator functions in a similar manner, they all take unique
46 approaches to addressing the regional and demographic differences of communities and
47 their footprints. But no matter where in the country they serve, they are confronting
48 the challenges facing our power sector.

49 It is no secret that our country is in the midst of a reliability crisis, and it could not
50 come at a worse time. The North American Electric Reliability Corporation, NERC,
51 recently stated that 52 gigawatts of generation will retire in the next 4 years. To put this
52 into context, that is the rough equivalent of 40 nuclear plants or 500 square miles of solar
53 panels.

54 While dangerous amounts of baseload generation are leaving the grid, we are
55 facing historic levels of demand entering the system and interconnection queues that are
56 backlogged with intermittent resources and battery storage facilities. We know that
57 renewables are not a one-on-one replacement for dispatchable baseload power that is
58 essential to reliability and provides spinning reserves needed to stabilize the system
59 through fluctuations.

60 It is not clear that the pace at which baseload generation is coming online will
61 bridge the gap of retiring supply and meet increasing demands over the next few short
62 years.

63 As we are well aware, these new demands are largely driven by developments in
64 artificial intelligence and domestic manufacturing. Achieving a leadership position in the
65 development of AI and reshoring domestic manufacturing is not a pipe dream to strive
66 for; it is a national security imperative that could shape America's future in the global
67 economy.

68 Regional grid operators before us today are on the front lines of the reliability
69 crisis and this is a new era of historic electricity demand.

70 When operating correctly, electricity markets should allow clear market signals to
71 drive investment into new generation, efficient interconnection of new resources should
72 address increasing demand, and coordinated transmission planning should bring needed
73 electricity supplies to growing load centers.

74 However, these organizations and electricity markets do not operate in a vacuum.
75 Excessive Federal overreach, like the Clean Power Plan 2.0, drove significant premature
76 retirements of baseload power and discouraged long-term investment into baseload
77 generation sources. Significant subsidies for intermittent generation undermine the
78 economies of baseload or on-demand dispatchable generation resources that are
79 essential to keeping the lights on.

80 These grid operators are also tasked with the difficult job of maintaining reliability,
81 resource adequacy as States implement restrictive policies designed to attack fossil
82 resources. Because the interconnected nature of much of our bulk power system, the
83 decisions of one State to drive out baseload power inherently impact the reliability of our
84 neighboring States.

85 All these problems are compounded by systematic permitting challenges that
86 make it nearly impossible to develop new infrastructure in large parts of our country.
87 Markets cannot build where governments do not let them do. We need to address
88 these challenges through a pragmatic whole-of-government approach that recognizes the
89 benefits of different source -- of fuel sources, the limitation of others, and prioritizes
90 energy expansion.

91 There is a value to ensuring a diverse resource mix, but it is important to recognize
92 that not all electrons should be treated equally. The variability of intermittent resources
93 like wind and solar innately require backup generation during inclement weather
94 conditions and where battery storage facilities are operationally restricted. Often it is
95 during these periods of inclement weather when we need electricity the most to protect
96 the health and safety of our communities.

97 I look forward to today's discussion regarding the ongoing reliability crisis and the
98 important steps regional grid operators are taking to correct market inefficiencies to keep
99 the lights on for all Americans.

100 And with that, I yield back the balance of my time, and at this time recognize the
101 gentlelady from Florida, the ranking member of the subcommittee, 5 minutes for an
102 opening statement.

103 [The prepared statement of Mr. Latta follows:]

104

105 ***** COMMITTEE INSERT *****

106 Ms. Castor. Well, thank you, Chairman Latta. And welcome to our witnesses
107 today. And I want to thank you and everyone working to keep America's power system
108 as modern and as efficient, affordable, and reliable as it can be, from the linemen who
109 were restoring power after the devastating hurricane season in my neck of the woods to
110 folks dealing with wildfires, extreme events, and just now the new calls for huge new
111 sources of energy and capacity across the country.

112 A resilient and reliable electric grid that utilizes the cleanest resources possible is
113 vital to all Americans. And decade after decade we have modernized energy sources in
114 the grid, and we must continue to do so.

115 And while I am pleased that we are focused on strengthening the grid, the hearing
116 ignores the damage being done by the Trump administration and Elon Musk to reliable,
117 affordable energy, including the investments under the infrastructure law and the Clean
118 Energy Climate Resilience Law, the IRA.

119 Since I started thinking about this hearing, I have had the lyrics from "Wicked,"
120 that great dance number stuck in my head, "Dancing Through Life." "We are dancing
121 through life, no need to tough it When you can slough it off as you do."

122 For example, the early Trump shutdown of grants and loans halted electricity and
123 grid projects, causing chaos and additional costs for co-ops and power producers and,
124 ultimately, consumers. Then you have the illegal layoffs of energy experts in various
125 agencies, the illegal firings of the Department of Energy Inspector General, and the
126 disruption of electricity trade between Canada and the U.S. It is all leading to higher
127 cost for American consumers.

128 For instance, the U.S. imposed a 10 percent tariff on Canadian electricity imports.
129 And Ontario retaliated with a 25 percent surcharge in electricity; exports to Michigan,
130 New York, and Minnesota. And although Ontario suspended the surcharge, the tariffs

131 have strained the integrated power grid shared by the two countries. This
132 interconnected system has historically provided reliability and cost benefits, but tariffs
133 now are threatening its efficiency.

134 So I urge colleagues to stand up to this chaos that is fueling higher costs and
135 uncertainties. It has weakened our ability to strengthen the grid.

136 And as Republicans hammer out their tax giveaways to billionaires, that should
137 not come at the expense of grid infrastructure investments and clean energy tax credits
138 for solar, wind, nuclear, and pollution reduction.

139 One analysis predicts that repealing the clean energy tax credits would increase
140 annual energy costs for each U.S. household. It would cost us about 800,000 jobs and
141 decrease our GDP.

142 Solar wind and battery storage are the cheapest and cleanest ways to add energy
143 supply to the grid now. They are driving down energy costs now. RTOs, ISOs, and
144 FERC are making progress on interconnection queues, and Congress should help them.
145 Because we understand there are over 2,000 gigawatts of energy and storage waiting in
146 line. That is equivalent to about one billion homes at peak demand.

147 Also, there are many commonsense practical policy solutions to help our grid
148 connect more resources and strengthen the grid. My bicameral Advancing GETs Act is a
149 great example. The bill would encourage FERC to implement shared savings, incentives
150 that promote the deployment of grid-enhancing technologies -- that is the cheapest way
151 to supercharge our power grid -- and would allow utilities to earn a profit for saving
152 money, and save consumers billions on their electricity bills every year.

153 Similarly, the Expediting Generator Interconnection Procedures Act would make
154 commonsense reforms to the outdated sluggish process that we use to bring energy of all
155 kinds onto the grid. We could promote the use of automation and standardization

156 studies, ensuring that grid upgrade costs are fairly allocated to customers who benefit
157 from the interconnection of new resources.

158 The energy affordability crisis we are grappling with today requires real
159 forward-looking policy solutions. It requires a politically independent and well-staffed
160 FERC, and it requires a consistent commitment to energy policy, one that keeps
161 Americans safe, helps us compete with our foreign adversaries, and continues to deliver
162 investments in jobs across America.

163 Thank you, Mr. Chairman. I yield back.

164 [The prepared statement of Ms. Castor follows:]

165

166 ***** COMMITTEE INSERT *****

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

168 And the chair now recognizes the gentleman from Kentucky, the chairman of the
169 Energy and Commerce Committee, for 5 minutes for his opening statement.

170 The Chair. Thank you, Chairman Latta, and thank you for the recognition.

171 Thank you for all of our witnesses being here. There is a lot of sayings that -- I don't see
172 my friend from Michigan in here on our committee this morning, but her husband. A lot
173 of sayings are attributed to Chairman Dingell, over looking at the globe and say that is the
174 jurisdiction of Energy and Commerce. Another one is, he always said, if it -- for our
175 jurisdiction, if it moves it is energy, if it is not moving it is commerce. So that is our
176 jurisdiction.

177 So I use the Dingell corollary. It takes energy to move commerce, and for us to
178 be successful to turn -- somebody said the other day that AI turns energy into
179 intelligence. And so it is vitally important that we as a country get together and figure
180 out how we are going to beat China, and it is by having affordable, reliable delivery of
181 electric power.

182 And the complicated question of how to deliver that power effectively is
183 compounded by the tremendous increase in demand projected over coming years for
184 specific purposes like AI, and broader increases in consumer demand.

185 I know we have met slower energy growth over the last generation and also more
186 efficiency, which is absolutely part of it is to be more efficient, but now we are seeing a
187 rising in demand. And so we have to ensure affordable, reliable delivery of power to
188 meet our needs, and the tremendous amount of energy it is going to require for the
189 utility grid.

190 So here in Congress we must identify and understand the forces impacting the
191 ability of engineers to plan and operate this system for better or for worse. And we

192 must address the commonsense policy reforms that will allow utilities and operators to
193 do their work cost-effectively.

194 Over the past decade, certain Federal and State policies have made it more
195 difficult for operators to keep the lights on. The threats of the Biden administration's
196 electricity policy was to shut down baseload coal and limit natural gas generation with
197 onerous new rules and regulations. During this time, many States also established
198 policies to transition away from fossil generation that is essential for maintaining grid
199 reliability. Momentum behind this so-called transition continues just as a generational
200 increase in power demand is emerging.

201 Consider how new demand growth is clashing with the residual Biden-Harris
202 policies today. In December, the North American Electric Reliability Corporation, NERC,
203 projected peak power demand to grow by 151 gigawatts -- 151 gigawatts over the next 10
204 years. Over the same period, NERC reports expected retirements of dispatchable
205 generation which is needed for reliability to be as much as 115 gigawatts. This gap
206 between retirements and growth in demand alone accounts over 240 gigawatts or an
207 equivalent amount of power needed to support 195 million homes over an entire year.

208 Ensuring the availability of reliable power will require stopping and reversing
209 retirements of dispatchable resources and billing out new natural gas generation and
210 eventually nuclear and other reliable sources. Yet the vast amount of the new
211 generation that is aligned today to connect the grid is intermittent wind and solar, which
212 cannot be relied upon when you need it the most. As a result, half of the Nation is at
213 risk of power shortfalls over the next 10 years; think about half the Nation.

214 For all the benefits of all the above resource policies, the current path that
215 incentivizes a massive renewable bill is putting the electric system out of balance and
216 dramatically increasing risk.

217 Today, we will talk to the grid operators that are caught at the center of the clash
218 between failing policies and strong economic demand affecting our Nation's generation
219 mix. They must deal with the consequences so understanding the challenges you face
220 and how you plan to meet the growing demand is essential for our work.

221 Last week, the Secretary of Energy noted that the existential security implications
222 of our race with China on AI and other advanced technologies, a focus on meeting the
223 China challenges and with the DeepSeek, that should wake us up that we are challenging
224 China. We can't always expect to be on top if we don't focus on being on top. So that
225 race should raise serious questions about what is necessary to clear the way in permitting
226 and regulatory policy, which will enable tremendous energy and power growth in the
227 coming years.

228 Recognize we have to be -- we have to be focused on making sure we do
229 everything in the right way and in a sustainable way as much as we can possible. But we
230 have to fully appreciate the scale of the pace of change coming because of the AI, the
231 data centers, and the demand. As well with Microsoft. Microsoft data -- not all, but
232 some Microsoft data centers can use as much power as the city of Seattle. That puts it
233 into perspective. I look forward to this discussion.

234 I will yield back.

235 [The prepared statement of Chair Guthrie follows:]

236

237 ***** COMMITTEE INSERT *****

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

239 The chair now recognizes the gentleman from New Jersey, the ranking member of
240 the full committee, for 5 minutes for an opening statement.

241 Mr. Pallone. Thank you, Chairman Latta.

242 For the third time this Congress, we have had an important hearing focusing on
243 the reliability and affordability of electricity in this country. And for the third time, my
244 Republican colleagues are going to purposely ignore the fact they are attempting to
245 repeal the single biggest incentive to build electricity capacity in this country, and that is
246 the Inflation Reduction Act.

247 Repealing billions of dollars in technology neutral funding for all types of new
248 energy is not the way to address the increasing need for energy.

249 It also ignores the fact that the Trump administration is freezing Federal funding
250 and trying to rescind grants for grid reliability projects that the grid operators sitting
251 before us today have said are vital to addressing increasing energy demand. It also
252 ignores the fact that President Trump is attempting to put tariffs on electricity imports
253 from Canada, which could seriously drive up energy costs for people in the Midwest and
254 the Northeast.

255 It is time that we recognize that the chaotic and constantly changing policies of
256 Trump and Elon Musk are the single greatest threat right now to grid reliability.

257 Just last week, another study came out, this time from Energy Innovation, showing
258 that repealing the Inflation Reduction Act would increase American families' power bills.
259 Republicans are talking about the importance of affordability, but their actions don't
260 match their words.

261 Despite continued Republican attacks on our grid's reliability and affordability,
262 today's hearing is still important. Regional grid operators play a critical role in keeping

263 the lights on for our customers. And 27 years ago, FERC Order 888 brought competition
264 to electricity markets around the country. Since that time, the competition encouraged
265 by these markets has broadly lowered wholesale energy prices and made the grid
266 cleaner, all while ensuring reliability.

267 But that is not guaranteed. And I am worried that some of the rules of the road
268 that govern regional transmission organization could start to harm consumers.

269 Last year, partially as a result of poor market design, capacity prices in the PJM
270 region exploded from \$29 to \$270 per megawatt/day. And these price increases are an
271 abstract. They are directly responsible for roughly \$25 per month increase in New
272 Jersey power bills that my constituents will start feeling this June.

273 So, Mr. Asthana, I want to be clear. This is completely unacceptable. PJM's
274 years of dragging its feet on reforming its capacity markets and interconnection queue
275 are finally coming home to roost, but it is my constituents who are stuck paying the bill.
276 PJM has demonstrated a complete inability to connect resources to the grid in a timely
277 fashion. And I recognize that PJM has taken a number of steps in the last few years to
278 rectify this but, frankly, it is too little too late.

279 The years of inaction have already taken their toll. A recent report found that if
280 PJM had implemented proactive transmission planning and simplified interconnection
281 processes years ago, it could have avoided half of these costs. And I am frustrated that
282 PJM is touting its progress in connecting more energy with its grid when it still has not
283 fully complied with FERC's requirements under Order 2023.

284 Meanwhile, PJM is spending my constituents' rate payer dollars -- ratepayer
285 dollars, I should say, suing for over Order 2023, creating further uncertainty for potential
286 developers of power plants.

287 And, Mr. Asthana -- I hope I am pronouncing it right -- your organization simply

288 must get its act together. I appreciate that PJM has introduced some short-term tweaks
289 to its market and is working together with States, including New Jersey, to find a pathway
290 to protect ratepayers, but this is all should have been figured out years ago.

291 And as we continue this discussion today, it is important we recognize that in this
292 time of increase demand for electricity, families are increasingly at risk of their power bills
293 becoming unaffordable. Grid operators and, frankly, FERC must remember that they
294 have a legal obligation to ensure that their policies are just and reasonable, and anything
295 else does a disservice to the American people who depend on you.

296 And with that, Mr. Chairman, I will yield back.

297 [The prepared statement of Mr. Pallone follows:]

298

299 ***** COMMITTEE INSERT *****

300 Mr. Latta. Thank you very much. The gentleman yields back the balance of his
301 time. And this now concludes member opening statements.

302 The chair reminds members that pursuant to committee rules all members'
303 opening statements will be made part of the record.

304 We want to thank all of our witnesses for being with us today and taking time to
305 testify before the subcommittee. Each witness will have the opportunity to give an
306 opening statement, followed by a round of questions from the members.

307 Our witnesses today are Manu Asthana, the president and CEO of PJM
308 Interconnection, LLC; Mr. Gordon van Welie, president and CEO of Independent Service
309 Operator of New England; Ms. Jennifer Curran, the senior vice president for Planning and
310 Operations at Midcontinent Independent Service Operator; Mr. Richard Dewey, president
311 and CEO of New York Independent System Operator; Mr. Lanny Nickell, the chief
312 operating officer of Southwest Power Pool; Mr. Elliot Mainzer, the president and CEO of
313 California Independent System Operator; and Mr. Pablo Vegas, the president and CEO of
314 the Electric Reliability Council of Texas, ERCOT.

315 Again, we appreciate all of our witnesses for being with us today. And before we
316 get started, just a quick reminder about our light system in front of you. You will have 5
317 minutes to give an opening statement. At 4 minutes, you will get a yellow light,
318 meaning you have 1 minute remaining. Red light signifies your time is up. So if you
319 please wrap up when you see the red light come on.

320 Also, just pull the mike up close to you as you are speaking.

321 And at this time, we will begin with our witnesses that are before us today. Mr.
322 Asthana, you have 5 minutes to give an opening statement. Thanks, again, for being
323 with us today.

324

325 **STATEMENTS OF MANU ASTHANA, PRESIDENT & CHIEF EXECUTIVE OFFICER, PJM**
326 **INTERCONNECTION, LLC; GORDON VAN WELIE, PRESIDENT & CHIEF EXECUTIVE OFFICER,**
327 **ISO NEW ENGLAND (ISO-NE); JENNIFER CURRAN, SENIOR VICE PRESIDENT FOR**
328 **PLANNING AND OPERATIONS, MIDCONTINENT ISO, (MISO); RICHARD J. DEWEY,**
329 **PRESIDENT & CHIEF EXECUTIVE OFFICER, NEW YORK INDEPENDENT SYSTEM OPERATOR**
330 **(NYISO); LANNY NICKELL, CHIEF OPERATING OFFICER, SOUTHWEST POWER POOL;**
331 **ELLIOT MAINZER, PRESIDENT & CHIEF EXECUTIVE OFFICER, CALIFORNIA INDEPENDENT**
332 **SYSTEM OPERATOR (CAISO); AND PABLO VEGAS, PRESIDENT & CHIEF EXECUTIVE**
333 **OFFICER, ELECTRIC RELIABILITY COUNCIL OF TEXAS, INC., (ERCOT)**

334

335 **STATEMENT OF MANU ASTHANA**

336

337 Mr. Asthana. Yeah. Chairman Latta, Ranking Member Castor, Chairman
338 Guthrie, Ranking Member Pallone, and members of the subcommittee, good morning.
339 My name is Manu Asthana. I am the CEO of PJM Interconnection. PJM works to
340 ensure the reliable flow of power to 67 million people across 13 States and D.C. We
341 serve about one in five Americans.

342 We are fully regulated by the FERC. As you know, FERC plays a critical leadership
343 role in our industry. And the value of having a fully staffed, well-functioning Federal
344 regulator particularly at this time cannot be understated.

345 We don't have a profit motive. Our core mission is grid reliability. Our work,
346 along with that of our member companies, has ensured a strong and stable grid for
347 almost a century since our founding in 1927.

348 More recently, however, we have seen three notable trends I wanted to share

349 with you that concern us. First, dispatchable thermal generation is retiring, often driven
350 by Federal or State policy.

351 Second, most of our interconnection queue is made up of intermittent renewable
352 generation. And I want to be clear. These generators play an important role on the
353 grid, and we want them, we want them to come online. But they are not a one-for-one
354 substitute for the machines that they are replacing.

355 And finally, third, electrical demand is growing, driven primarily by data center
356 load growth. Less supply, more demand; it adds up to increased reliability risk and
357 higher prices. And we are seeing this across large parts of our country. This is not just
358 a PJM phenomenon.

359 Our industry has been working hard on solutions. Specifically, in PJM, amongst
360 other things, we have reformed our generator interconnection process. We had a
361 queue of about 200,000 megawatts of generation. We have whittled that down to
362 67,000 megawatts, an incredible amount of progress, with another 50,000 megawatts
363 through the queue ready to go. And, actually, parts of it have started to construct, and
364 some has already come online. We have opened new pathways for generators to
365 connect to the grid, and we have implemented reforms to our market rules.

366 And the good news is these initiatives are having an impact. I am happy to
367 report several generators have withdrawn their retirement decisions. We have a
368 shuttered nuclear power plant that has announced its return and is working hard to come
369 back.

370 Pennsylvania's former largest coal plant is being studied to come back to life as a
371 gas generator. Demand response providers are looking for ways to bring more supply
372 onto the system, and developers are working hard to bring their projects to market. In
373 fact, just last week, one of the new pathways to interconnection that I talked about

374 resulted in 27,000 -- almost 27,000 megawatts of new generation applying to
375 interconnect to PJM, which is very exciting.

376 But our work is not done. It still takes roughly 18 months to build a data center.
377 Takes 5 years-plus to build a power plant. And global supply chains for grid components
378 like transformers and turbines are backlogged.

379 The stakes are high, and we remain committed to the task at hand. In our
380 opinion, we have six key areas of focus for the industry looking forward, and I wanted to
381 share them with you.

382 First, we must keep the supply that we have today. More retirements are going
383 to make it much harder for us to serve this load growth. Second, we must try to bring
384 back what we can from retirement, whether in its current form or repowered form with a
385 different fuel, or using those sites for different generators. Third, we need to connect
386 new generators rapidly, and that includes upgrades of existing generators. Fourth, we
387 need to harness demand flexibility, which I think is a real hidden opportunity. Fifth, we
388 do need siting and permitting reforms for generation and transmission, and we could use
389 help with that. And, finally, more investment in natural gas infrastructure is needed to
390 support power generation flexibility.

391 Thank you for the opportunity to testify today. I look forward to your questions.

392 [The prepared statement of Mr. Asthana follows:]

393

394 ***** COMMITTEE INSERT *****

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

396 Mr. van Welie, you are now recognized for 5 minutes for your opening statement.

397

398 **STATEMENT OF GORDON VAN WELIE**

399

400 Mr. van Welie. Good morning, Chairman Latta, Ranking Member Castor,
401 Chairman Guthrie, Ranking Member Pallone, and members of the subcommittee. Thank
402 you for the opportunity to appear here today.

403 Like other regions, New England's electric system is undergoing an energy
404 transition. Historically, power system planning has focused on having enough resources.
405 We refer to this as resource adequacy. However, as we transition to more
406 weather-dependent resources, one of the biggest challenges facing New England is
407 making sure that there is sufficient energy in the system to meet expected electricity
408 growth.

409 The wholesale markets run by ISO New England effectively price supply and
410 demand conditions, providing important signals to developers when investment is
411 needed. However, the wholesale markets alone cannot assure resource adequacy.
412 State and Federal policies also play a key role in achieving regional resource adequacy.

413 While the wholesale markets operate on shorter timeframes, the States have the
414 ability to structure longer term commitments, through various hedging strategies, to
415 incentivize to develop the sufficient resources to meet the resource adequacy standard
416 that is priced in our capacity market. Moreover, the States have the ability to address
417 barriers to entry for resources participating in wholesale electricity markets. These
418 longer term commitments can also protect consumers against price volatility in both the
419 energy and the capacity markets.

420 In short, the ISO and the New England States have a joint and complementary role
421 in achieving resource adequacy. Furthermore, investor confidence in the wholesale
422 markets is dependent under supportive policy and regulatory framework at both the
423 State and the Federal level.

424 As a region, New England has made progress in evolving the market design to
425 align with the resources that are coming forward. We are implementing new
426 approaches to plan the transmission system to meet the States' policy objectives, and we
427 have new tools to help us better quantify our reliability risks in a rapidly changing power
428 system across the region.

429 Incentivized by State policies, the region has invested heavily in energy efficiency
430 and behind-the-meter solar resources, which have effectively reduced demand for
431 electricity from the grid operated by us in New England. These investments, coupled
432 with relatively little interest from data centers and other AI-driven activities, has meant
433 that New England has thus far not seen the rapid growth in consumer demand forecasted
434 in other regions.

435 The reliability and market outlook for the near term is favorable, though potential
436 challenges lie ahead. Our latest 10-year forecast projects regional electricity
437 consumption will increase by about 17 percent over the next decade. It remains to be
438 seen whether that load growth will outpace the net effect of generator retirements and
439 new supply coming online.

440 It is difficult to build new grid-scale energy infrastructure in New England. And
441 recent developments give us cause for concern about the region staying on pace with
442 maintaining resource and energy adequacy as load grows. This may have implications
443 towards the end of this decade.

444 Due to recent Federal executive actions, New England is facing new uncertainty

445 about the timing of offshore wind development, which has been planned as a major new
446 domestic source of energy for our region.

447 As of January, battery storage and wind resources make up the largest proposals
448 in our interconnection queue at 47 percent and 45 percent, respectively. There are
449 currently no other categories of resources proposed at that scale. And this could have
450 implications in both the near and the short term.

451 The current deliberations about new tariffs on imports have the potential to affect
452 not only the price of electricity in New England, but also the availability of power to New
453 England from our longstanding electricity trading partners in eastern Canada. This could
454 also have implications in both the near and the long term.

455 As demand grows for electricity in New England, the region will need new
456 resources to meet resource adequacy needs, and it will be critical to ensure that we have
457 a supportive policy and regulatory framework in place to allow for the entry of those
458 resources.

459 Thank you.

460 [The prepared statement of Mr. van Welie follows:]

461

462 ***** COMMITTEE INSERT *****

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

464 And, Ms. Curran, you are recognized for 5 minutes for your opening statement.

465

466 **STATEMENT OF JENNIFER CURRAN**

467

468 Ms. Curran. Thank you.

469 Good morning, Chair Latta, Ranking Member Castor, Chairman Guthrie, Ranking

470 Member Pallone, and members of the subcommittee. I am Jennifer Curran, vice

471 president of Operations and Planning for the Midcontinent Independent System

472 Operator, or MISO as we are more commonly known. It is a pleasure to be here today

473 as you consider the state of regional grid reliability and its impact on our Nation. I hope

474 MISO's experiences and insights will be helpful as you continue your work on this.

475 MISO serves over 45 million customers in a territory that spans all or part of 15

476 States. We created in 2024 alone \$5 billion in value for the region. That in turn has an

477 impact on cost for consumers in the region.

478 Unlike some other RTOs, in MISO, our utilities and load-serving entities are the

479 ones with the responsibility for resource to adequacy. We work closely with them to

480 ensure that there is an accurate picture of the evolving and current resource risks that

481 exist, so that as they make their investment decisions they can be better informed.

482 We are fuel-source and policy-neutral in MISO. That means we do not advocate,

483 prefer, or favor any kind of fuel type or electric policy. Instead, we work to implement

484 State and Federal policies and the goals and objectives of our members. That doesn't

485 mean, of course, that we are disinterested observers. Reliability of the bulk electric

486 system is our mission, and that is the topic today.

487 And as we consider the energy landscape, I think we have already talked about a

488 number of the factors, and MISO is no different. We see rapid retirement of existing
489 resources, significant growth of noncarbon-emitting resources, many of which do not
490 have the same attributes in terms of duration of operation as those retiring resources.
491 And, of course, load growth driven not just by data centers, but also the reshoring of
492 manufacturing into the U.S.

493 We have been following and working to get ahead of these issues for a number of
494 years through an initiative we call the Reliability Imperative. Over the last several years,
495 we have made a number of changes, including instituting changes to how we accredit
496 generation resources. That is how we determine how they will perform during those
497 most high-risk hours and gives us all a more accurate picture of the resource adequacy
498 picture.

499 We are updating our markets. Things like market pricing signals to ensure that
500 we are sending the right signal to incent generation output during the times of the
501 tightest operating conditions.

502 Over the past few years, we have approved over \$30 billion of new regional
503 transmission lines that will substantially improve electric transfer capability across the
504 region and ensure electric reliability and the associated economic growth.

505 We like others have instituted a number of improvements to the generator
506 interconnection queue process to hasten the approval of generation. And we are
507 currently seeking approval at FERC for something we call the Expedited Resource Addition
508 Study. That study is a temporary framework to provide an ability to expedite certain
509 new-generation projects that are desperately needed to meet resource adequacy and
510 reliability risks.

511 But much more work remains to be done. One of the easiest approaches is to
512 slow down the retirement of the existing resources. We need to keep as many of the

513 resources as we have online until adequate replacements are in place to ensure that we
514 are able to continue to provide customers 24 hours a day, 7 days a week, 365 days a year.

515 But that doesn't mean we can slow down investment in new infrastructure. We
516 need to continue at a very rapid pace the development of new-generation resources of all
517 types to serve that growing electricity need, and we need to ensure that we are investing
518 in the transmission assets that are needed to deliver that energy to where it is needed.

519 Finally, we need to continue to work on process reforms to ensure that our
520 markets and planning processes enable the changes to meet the changes we need in the
521 future. Things like the Expedited Resource Adequacy Study that I mentioned. Things
522 like ensuring that we have the right accreditation for demand side and other resources,
523 the addition of market products and the like are all going to be important to our future.

524 MISO's extensive analytical work and operational experience make it clear that no
525 single electric-generating resource type, transmission line, new technology, or process
526 change is going to solve all of our problems on its own. It is a multifaceted problem that
527 is going to take a coordinated approach that leverages all of these tools.

528 I appreciate your attention to these vital issues, and I look forward to working with
529 Congress and Federal and State regulators to ensure a reliable electric system.

530 [The prepared statement of Ms. Curran follows:]

531

532 ***** COMMITTEE INSERT *****

533 Mr. Latta. Well, thank you for your opening statement.

534 And, Mr. Dewey, you are recognized for 5 minutes for your opening statement.

535

536 **STATEMENT OF RICHARD J. DEWEY**

537

538 Mr. Dewey. Thank you, Mr. Chairman.

539 On behalf of the NYISO, I would like to thank Chairman Latta, Vice Chairman
540 Weber, Ranking Member Castor, and Ranking Member Pallone, subcommittee members,
541 staff, and all, for the invitation to discuss the state of grid reliability with you today.

542 My name is Rich Dewey. I am the president and CEO and a 25-year veteran of
543 the New York ISO. My full statement has been filed with your offices, but I want to
544 share a couple of key points with you at the start here.

545 For the past 25 years, New York ISO has operated the New York State power
546 system to the strongest reliability criteria in the Nation. In addition to standards
547 enforced by the North American Electric Reliability Corporation, or NERC, we comply with
548 standards by the NPCC, or the Northeast Power Coordinating Council, as well as the New
549 York State Reliability Council, which is specific to New York.

550 We are champions of the essential role that the power grid plays in preserving the
551 health and safety of New Yorkers, empowering our modern economy. It is our number
552 one priority. In addition or in filling this role, we perform essential planning studies that
553 are continuously monitored to ensure reliability. And we administer wholesale
554 electricity markets that allow for the most efficient scheduling and solutions to meet the
555 reliability needs for consumers, which is a critical piece.

556 In New York State today, primarily driven by public policy, and like many other
557 parts of the country, the power system is rapidly transitioning to a cleaner supply

558 resources. This transition presents significant challenges because firm dispatchable
559 generation, primarily powered by fossil fuels, is being replaced by intermittent wind and
560 solar and storage resources that are dependent on the weather.

561 At the same time, demand is growing significantly due to the electrification of the
562 economy and welcome economic development and manufacturing. More than twice as
563 much legacy generation has been retired in recent years as the entry of this new supply.

564 In my filed comments and these remarks, I am going to highlight how our planning
565 processes and how our markets position us to tackle these challenges.

566 From a planning perspective, we have a comprehensive reliability planning
567 process that examines the future in three ways. We do a 20-year scenario-based
568 analysis to show options of how the power system could transform over the next
569 20 years. We have detailed reliability studies that look for potential reliability violations
570 over a 10-year horizon. And on a quarterly basis, we do short-term assessments to
571 allow us to rapidly react to changing conditions.

572 In short, we are continuously studying the reliability of the grid and are prepared
573 to take actions when it is necessary.

574 Our most recent reliability study which looks at the 10-year horizon identifies
575 reliability violations as early as 2033. Acceleration of load growth or unplanned
576 generator retirements could accelerate these deficiencies. Our report also highlighted
577 the increased reliance on electricity in winter; the heightened severity of winter reliability
578 events; the uncertainty of fuel supply, as well as the reliance on a rapidly aging
579 generation fleet.

580 In order to satisfy load growth projections necessary to meet these economic
581 factors, more generation and transmission assets are needed.

582 From a markets perspective, our wholesale electricity markets play a crucial role in

583 delivering reliable outcomes and at the least production costs. Properly designed
584 markets ensure pricing signals attract necessary new resources to the right location,
585 incentivize needed performance response from existing resources, and shift investment
586 risk from consumers.

587 The NYISO markets optimize schedules to supply resources to maximize value to
588 consumers, performance from suppliers, and provide the right attributes for reliability.
589 Recent innovative market products at the NYISO encourage dynamic scheduling of
590 reserves, encourage flexibility of load through demand response, and signal entry of
591 distributed energy resources and energy storage that will improve the flexibility of the
592 system. This flexibility will be crucial to manage the intermittency inherent in the grid of
593 the future and are important components of the market.

594 I want to thank you for the opportunity to share these thoughts with you. I look
595 forward to your questions and future dialogue.

596 Thank you.

597 [The prepared statement of Mr. Dewey follows:]

598

599 ***** COMMITTEE INSERT *****

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

601 And, Mr. Nickell, you are now recognized for 5 minutes for your opening
602 statement.

603

604 **STATEMENT OF LANNY NICKELL**

605

606 Mr. Nickell. Well, good morning. Chairman Latta, Vice Chairman Weber,
607 Ranking Member Castor, Ranking Member Pallone, and members of the subcommittee,
608 thank you for the opportunity to speak to you this morning about grid reliability.

609 I am Lanny Nickell. I am currently executive vice president and chief operating
610 officer of Southwest Power Pool, and I am the incoming CEO as of April 1. We are a
611 regional grid operator, serving 18 million people across 14 States in the central part of our
612 country. We are responsible simply for keeping the lights on today and in the future.

613 Our industry is at an inflection point as it experiences a rate of change I have not
614 previously seen in my 32-plus-year career. Over the last decade, the transition and
615 resource mix and demand growth has drastically increased operational complexity and
616 has almost exponentially increased risk of having to interrupt electric service due to
617 insufficient supply.

618 We have already witnessed significant growth in both our summer and winter
619 peak demands. Our current summer peak was 10 percent higher than the highest peak
620 set 2 years earlier. And this winter we set a winter peak that was 2.5 percent higher
621 than the previous winter record demand.

622 Electricity use in our region grew about 25 percent over the last 10 years. This
623 growth in demand is expected to continue in unprecedented fashion as we are
624 forecasting peak demand to be as much as 50 percent higher over the next 10 years,

625 mostly driven by the AI data center boom.

626 As consumption has grown, we have also witnessed a rapid shift from a more
627 steady source of dispatchable generation to a more intermittent renewable heavy
628 generation mix. In other words, many aging coal and gas plants have been retired and
629 replaced with wind generation in our region, shrinking the firm capacity margin that we
630 have long depended on for reliability. This growing imbalance between the rising
631 demand and a less dispatchable, more intermittent resource mix lies at the heart of what
632 we have referred to as our generational challenge.

633 Without a collective set of corrective actions, we will struggle to keep up with
634 future needs, and our risk of not being able to continuously supply electric service to
635 consumers will be at an all-time high.

636 On our end, in SPP, we have been acting to increase regional requirements for
637 excess capacity, and we are urging generators to stay online until sufficient replacement
638 capacity is ready. We are working feverishly to accelerate our study processes for
639 generator interconnections, and we have recently approved a transmission expansion
640 plan requiring over five times the transmission investment of our previous largest project
641 portfolio. We need significantly more generation and more transmission to meet the
642 growing demands, and we need it to be interconnected much quicker than we have
643 historically seen.

644 We will also need more of the generation being interconnected to be dispatchable
645 so that it is available when needed to offset the variability of intermittent
646 weather-dependent generation. Simply put, we need a lot more steel in the ground,
647 and time is short. Meeting this challenge will require everyone's cooperation. We
648 have to work together.

649 For example, we need a fully functioning FERC so that they can continue their

650 good work ensuring reliability, permitting infrastructure, and supporting competitive
651 energy markets.

652 Additionally, utilities can bring generation and transmission. RTOs can work
653 together to lead and envision this future that we are all depending on.

654 We all have to do our part to safeguard the grid so that the life-enhancing and
655 life-sustaining product of power can continue to be provided as affordably as possible. I
656 am confident that we can meet this challenge, that we cannot do it alone. We need
657 your help.

658 Thank you, and I look forward to your questions.

659 [The prepared statement of Mr. Nickell follows:]

660

661 ***** COMMITTEE INSERT *****

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

663 And, Mr. Mainzer, you are recognized for 5 minutes for your opening statement.

664

665 **STATEMENT OF ELLIOT MAINZER**

666

667 Mr. Mainzer. Chairman Latta, Ranking Member Castor, Chairman Guthrie,
668 Ranking Member Pallone, and members of the subcommittee, thank you for the
669 opportunity to testify today. My name is Elliot Mainzer. I serve as president and CEO
670 of the California Independent System Operator Corporation, commonly referred to as the
671 CAISO.

672 The CAISO is a nonprofit public benefit corporation that does not own any
673 generation or transmission assets. We play a number of key roles to ensure the grid is
674 reliable, including transmission planning, overseeing interconnection of new resources,
675 operation of electricity markets, and providing reliability coordinator services to entities
676 across the Western interconnection. We do not operate a centralized capacity market
677 but work with State and municipal entities to ensure adequate procurement and
678 deployment of generation and storage resources.

679 Like other regions of the country, California has faced extreme weather and other
680 challenges. But the CAISO and our State partners have made major advances in
681 reliability in recent years due to commonsense approaches to expanding energy supply,
682 efficiently interconnecting new resources, and proactively planning for transmission
683 upgrades. New resources are coming online at a rapid pace.

684 Since 2020, over 24 gigawatts of new generation capacity has been added to the
685 CAISO grid, including approximately 7 gigawatts last year. This new capacity includes
686 over 11 gigawatts of battery storage. The CAISO relies on these new resources as well as

687 a diverse generation mix that includes solar, wind, geothermal, bio gas, hydro, natural
688 gas, and nuclear generation to maintain reliability. During the next 5 years, we expect
689 resource growth to continue to be comprised largely of battery storage, solar, and wind
690 resources.

691 At the CAISO, we work to ensure safe and reliable service to our electricity
692 customers through collaboration with California State agencies and other local regulatory
693 authorities.

694 The CAISO, the California Public Utilities Commission, and the California Energy
695 Commission have entered into a memorandum of understanding to help synchronize load
696 forecasting, power and transmission planning, interconnection queueing, and
697 procurement of new resources. This enhanced coordination has been essential to
698 onboarding the thousands of megawatts of new generating capacity and battery energy
699 storage that have come online in recent years, and will continue to guide our approach to
700 ensuring reliability and resource adequacy in California.

701 The reliability of our grid has also been advanced by thoughtful and timely
702 oversight by FERC. Last year, FERC approved a comprehensive set of interconnection
703 queue reforms, resulting from an extensive CAISO stakeholder process that was anchored
704 in our approach to coordinated planning. Based on our implementation so far, we have
705 observed a significant reduction in projects clogging our interconnection study process.

706 The CAISO's most recent transmission plan included 26 new projects at an
707 estimated cost of \$6.1 billion to support over 85 gigawatts of new resources by 2035.
708 We are also actively engaged in several interregional transmission projects that will
709 access clean energy resources identified in the CPUC's resource planning efforts that will
710 also help deliver new generating resources and support reliability for utilities in other
711 States.

712 Electrification of transportation and buildings has been the primary driver of load
713 growth today within the CAISO's footprint. The CEC's latest demand forecast shows a
714 33 percent growth in peak demand over the next 10 years and a 45 percent growth in
715 peak demand over the next 15.

716 Currently, there is about 1 gigawatt of data center load connected to the CAISO
717 system. The CEC projects an increase in data center loads over the next 15 years with a
718 sharp increase projected to start around the 2028 timeframe. The CAISO is working
719 diligently to serve emerging large electric loads within our footprint, including major
720 transmission enhancements to the transmission system in the Silicon Valley.

721 Reliability in the West is further enhanced by the success of the CAISO's Western
722 Energy Imbalance Market, which has been in operation since 2014. Optimizing supply
723 and demand in 15-minute and 5-minute intervals, the Western Energy Imbalance Market
724 today spans 22 market participants in 10 States and leverages the significant transmission
725 connectivity and resource diversity across parts of the West, which is particularly valuable
726 during extreme weather events.

727 We are now working to extend a new day-ahead market platform to others in the
728 West. Fully approved by FERC in 2024, the Extended Day Ahead Market will expand the
729 ability to optimize supply and demand in the day-ahead timeframe, which will further
730 enhance market efficiency and reliability and reduce cost to the ratepayers of
731 participating utilities.

732 The CAISO recognizes that our work continues in order to maintain the pace of
733 new resource development to meet growing electric demands and State policy goals.
734 We remain focused on implementing our coordinated planning and interconnection
735 processes in extending our market service offerings to other entities across the West.

736 We look forward to further engaging with the Federal Government to ensure

737 reliability and cost savings for electricity consumers.

738 Thank you again for the opportunity to be here this morning, and that concludes
739 my testimony.

740 [The prepared statement of Mr. Mainzer follows:]

741

742 ***** COMMITTEE INSERT *****

743 Mr. Latta. And thank you very much for your opening statement.

744 And, Mr. Vegas, you are recognized for 5 minutes for your opening statement.

745

746 **STATEMENT OF PABLO VEGAS**

747

748 Mr. Vegas. Chairman Latta, Ranking Member Castor, Chairman Guthrie, Ranking
749 Member Pallone, and Vice Chairman Weber, and members of the subcommittee, it is an
750 honor to be here representing the Electric Reliability Council of Texas, or ERCOT as we are
751 referred to, where we manage the flow of electricity to over 27 million Texans.

752 Texas continues to experience unprecedented economic and population growth,
753 driving electricity demands to record levels each year. At the same time, the energy mix
754 that powers Texas is evolving rapidly, with intermittent resources and battery storage
755 playing an ever-increasing role in system operations. This transition presents
756 opportunities but also real challenges that require planning and investments to ensure
757 system reliability.

758 Today, I want to share how ERCOT is managing this shift while keeping reliability
759 at the forefront. The lessons that we have learned from recent weather events and why
760 ensuring a balance and resilient power supply remains essential for the future.

761 In the summer of 2023, ERCOT set a new all-time peak demand record of 85,508
762 megawatts. Last month, we set a new winter peak demand record of 80,525
763 megawatts, a demand level that is normally seen and experienced in the summer.

764 This isn't just about a growing population. Texas has become a magnet for
765 industries that require increasing amounts of electricity from semiconductor plants to
766 data centers, broad industrial growth, and large-scale industrial electrification in the
767 Permian Basin.

768 Today, wind and solar make up 42 percent of our installed generation capacity.
769 Both of those represent the most installed capacity in the United States, with thousands
770 of megawatts being added each year.

771 Battery storage, which was just emerging a few years ago, is playing a critical role
772 in balancing supply and demand during tight grid conditions, and it is acting as a growing
773 bridge asset during critical hours.

774 From an operations perspective, solar generation helps to meet peak afternoon
775 demand, and batteries provide rapid response to system fluctuations with their growing
776 presence in the ancillary services market.

777 Wind and solar power are variable by nature, meaning that their output is not
778 always available when it is needed most. Batteries help significantly, but current
779 storage technology is still limited in duration, in our market typically 1 to 2 hours,
780 meaning that it cannot fully replace the need for traditional, long-duration dispatchable
781 generation.

782 Natural gas, coal, and nuclear power still supply 65 percent of the delivered
783 energy on the ERCOT grid in 2024. Those long-duration dispatchable resources remain
784 the backbone of reliability, providing critical generation around the clock.

785 We are seeing an uptick in the generation interconnection queue from gas
786 generation, and efforts that have been spearheaded by the Texas legislature, such as the
787 Texas Energy Fund, are providing incentives for dispatchable power plant development.

788 We cannot lose sight of a fundamental reality: A reliable grid must have a
789 balanced mix of generation resources, especially with the all-of-the-above approach we
790 see in the ERCOT power region.

791 Additionally, flexible demand is becoming a more critical component of reliable
792 operations, and we are exploring ways to best leverage that potential in the face of a

793 significant forecast of demand growth ahead of us.

794 Immediately following Winter Storm Uri, the Texas legislature put in place a set of
795 weatherization standards during the 2021 legislative session. And to date, ERCOT has
796 conducted over 3,300 inspections of generation resources and transmission facilities.
797 The weatherization program inspects facilities for various preparation measures intended
798 to reasonably ensure sustained operation at weather zone-specific cold and hot
799 conditions. And new programs such as the Firm Fuel Supply Service is available to
800 ensure reliability during winter events in the event of a fuel curtailment for gas
801 generation resources.

802 This combination of efforts has shown to be beneficial over the last several winter
803 seasons where the performance held to the standard that Texans have come to expect
804 from their grid.

805 As we look to the future, ERCOT remains focused on ensuring that Texas has a grid
806 capable of supporting its continued growth and economic success. That means
807 encouraging investment in dispatchable generation, expanding and modernizing
808 transmission infrastructure, leveraging demand-side solutions and new technologies, and
809 enhancing grid security and resilience.

810 The ERCOT grid is not alone at being at an inflection point. We are balancing
811 record-breaking demand growth with a rapidly evolving generation mix, all while ensuring
812 that we are focused on reliability for millions of Texans. It is a challenge, but it is also an
813 opportunity to build a smarter, stronger, and more resilient grid that can continue to
814 support Texas and the United States for generations to come.

815 I appreciate the opportunity to testify today, and I look forward to your questions.

816 [The prepared statement of Mr. Vegas follows:]

817

818 ***** COMMITTEE INSERT *****

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

820 And that concludes our opening statements from our witnesses. And at this
821 time, we will start questions from our members. And I will start with myself for 5
822 minutes. And I am going to ask the same question I have asked for the last 2 years,
823 maybe just get an answer more or less from everyone.

824 We would like to have more or less power produced in this country?

825 Mr. Asthana. More.

826 Mr. van Welie. More.

827 Ms. Curran. More.

828 Mr. Dewey. More.

829 Mr. Nickell. A lot more.

830 Mr. Mainzer. Significantly more.

831 Mr. Vegas. Agreed. We need more.

832 Mr. Latta. Thank you very much.

833 Mr. Asthana, if I can start my questions with you. There are reports of supply
834 chain delays for dispatchable generation resources as well as ongoing delays for essential
835 grid components such as distribution transformers. How important is it to address
836 these delays quickly?

837 Mr. Asthana. Yeah, I think it is both critical to address the delays quickly as well
838 as try to be creative with the tools that we do have immediately. And we are trying to
839 do both.

840 Mr. Latta. Well, let me follow up. Your testimony also details a striking graph
841 explaining the data between grid additions and deactivations. How much value is there
842 to bring back mothballed power plants back online immediately or short-term or
843 long-term reliability challenges?

844 Mr. Asthana. I think it is an important part of the mix. And I think it is an
845 important part of the mix because it requires less reliance on the supply chain. Because
846 these plants exist, and so it is easier in some cases to actually restore them than to build a
847 whole new one. But I think it is part of the solution. If we can get plants back from
848 mothball, we would appreciate it.

849 Mr. Latta. Let me just follow up real quick on that. In your testimony, you had
850 mentioned -- you said -- how long does it take to build an AI plant?

851 Mr. Dewey. Data center, maybe 18 months.

852 Mr. Latta. Okay. And then how long to build a power generation station?

853 Mr. Asthana. Five-plus years.

854 Mr. Latta. Is that including the permitting?

855 Mr. Asthana. Including the permitting, yeah.

856 Mr. Latta. Okay. Thank you.

857 Ms. Curran, your testimony similarly discusses the need to allow reliability to
858 inform the pace of retiring generation resources. How can we ensure that the pace of
859 retiring generation resources does not outpace the addition of new resources?

860 Ms. Curran. So first and foremost, it is considering reliability in those retirement
861 decisions. Today, as those decisions are made, they are generally driven by policy, in
862 some cases, economics. But there is not a check, at least at the MISO, to determine
863 what the impact would be on the ability to have sufficient energy to serve the system.

864 Mr. Latta. Okay. Thank you.

865 Mr. Asthana, if I could go back to you again. Your testimony went on to highlight
866 some of the barriers of generation growth, including Federal and State energy policies,
867 supply chain constraints, and systematic permitting challenges. As I stated in my
868 opening remarks, that you administer do not operate in a vacuum.

869 How are the policies outside the purview of your electricity markets and grid
870 operations causing premature retirements and inhibiting growth in generation
871 development?

872 Mr. Asthana. Absolutely. So there is multiple, mostly decarbonation policies
873 that are State and Federal that have either forced generators to choose between really
874 expensive upgrades that they couldn't afford or to go offline and have pushed generation
875 offline.

876 And, you know, I wrote down something you said, Chairman. Markets cannot
877 build what governments do not let them. I think we are seeing that. It is also true for
878 power plants cannot operate if governments do not let them. And we have seen
879 policies that do that.

880 An example of that is the EPA 111 decarbonization policy. I mean, again, I don't
881 make a value judgment. Climate change, in my opinion, is real and needs to be
882 addressed. But I think reliability needs to be addressed also and simultaneously.

883 Mr. Latta. Let me follow up one last question to you. I have heard concerns
884 from workers in an Ohio coal plant about what are the detrimental effects of the previous
885 administration's policy and recent State level initiatives that could threaten their jobs.

886 As you grapple with challenges resorting from rapid and widespread retirements
887 of dispatchable generation without adequate replacement, is there merit in pausing the
888 adoption of harmful policies at the Federal and State levels?

889 Mr. Asthana. For a reliability perspective, definitely there is merit in making sure
890 that we don't retire generation that we will need to keep the lights on.

891 RPTR DETLOFF

892 EDTR ZAMORA

893 [11:15 a.m.]

894 Mr. Latta. Thank you.

895 In my last 38 seconds, Mr. Nickell -- it will be real quick, if I may -- while much of
896 the focus of our electric grid is on increasing demands for electricity from data centers
897 and domestic manufacturing, we also have to make sure the ratepayers are not unduly
898 burdened. As you mentioned in your testimony, SPP enjoys some of the lowest
899 wholesale electricity prices in the country because of your diverse generation mix in
900 renewables and baseload.

901 Will new investments into energy intensive industries raise costs on ratepayers, or
902 how can these new investments lower price for households? I only have about 3 or 4
903 seconds.

904 Mr. Nickell. Yes, it could. It depends on how you do it, and I think we have to
905 be really smart about how we move forward with that. Today, transmission needed to
906 serve new load is spread across the region. It is cost-shared. We may not be able to
907 do that when large data centers are located in certain very specific locations. So we are
908 evaluating that now.

909 Mr. Latta. Okay. Thank you very much. My time has expired.

910 I recognize the gentlelady from Florida, the ranking member of the subcommittee,
911 for 5 minutes for her questions.

912 Ms. Castor. Well, thank you, Mr. Chairman.

913 Last week, the President fired -- illegally fired the commissioners from the Federal
914 Trade Administration. Two of those members, commissioners on the Federal Energy
915 Regulatory Commission and the Nuclear Regulatory Commission, enjoy basically the

916 identical statutory protections as the FTC commissioners, meaning that the President
917 likely thinks he can fire the FERC and NRC commissioners too.

918 And I think the politicization of our energy regulators, allowing the President's
919 whims to dictate which FERC and NRC commissioners can serve is an awful idea, and it
920 follows the National Nuclear Security Administration firings by Elon Musk. All of this
921 really socks it to consumers, whether we are talking affordability, reliability. It is just
922 dangerous and costly.

923 Mr. Asthana, I heard you talk explicitly about a stable FERC and what that means
924 to your operation. In fact, at one of our last hearings, a witness said they never want to
925 see proceedings before FERC and State utility commissions to become politicized.

926 So I would like to ask each of you: Is more politicalization of FERC a good thing
927 or a bad thing?

928 Mr. Asthana. Yeah. I would say FERC is an incredibly professional body, and I
929 think they make technical decisions, and we rely on that -- on that technical expertise.

930 Ms. Castor. So just if you could answer maybe more or less, should FERC be
931 more politicized or less politicized?

932 Mr. Asthana. I think less between those two choices, for sure.

933 Mr. van Welie. So my observation over the years is FERC has tried to stay in the
934 middle to the extent possible, and I think that less politicization is helpful.

935 Ms. Castor. Thank you.

936 Mr. van Welie. The other point I would make is it needs to be alignment
937 between Federal and State policies.

938 Ms. Castor. Thank you.

939 More or less politicized?

940 Ms. Curran. For the same reasons, I will also say less. The stability of FERC is

941 very important to move all of these things forward.

942 Mr. Dewey. A less politicized, balanced approach would make all this
943 transition a whole lot easier.

944 Mr. Nickell. Less politicized, independent absolutely is important for keeping the
945 lights on.

946 Mr. Mainzer. A strong and independent FERC is essential to the success of our
947 industry, so I would say less politicization.

948 Mr. Vegas. Speaking on behalf of my peers since FERC really doesn't provide
949 much oversight in Texas, I think a stable, independent FERC works best.

950 Ms. Castor. Thank you.

951 One of our greatest challenges today is getting new sources of electricity onto the
952 grid as quickly as possible in this era of increased electricity demand. Interconnection
953 processes, while critical to maintaining the reliability of the grid, can also take far too long
954 under the current framework.

955 Last week, FERC Commissioner David Rosner wrote a letter to each of you
956 detailing new opportunities to streamline the interconnection process. In a recent study
957 by the Midcontinent Independent System Operator, MISO, an automated process was
958 able to nearly replicate in 10 days the results of an interconnection study that took nearly
959 2 years to conduct.

960 So, Ms. Curran, can you briefly talk about what MISO found? What are the
961 results? How can other grid operators start looking at automating and speeding up their
962 interconnection studies?

963 Ms. Curran. Sure. Absolutely. One of the challenges, actually, in operating
964 the grid is that there is not a lot of software development that happens in this space.

965 There is a vendor that has come to market that has put some automation around

966 work that currently takes more of a guess-and-check approach by our engineers, and by
967 automating some of that work with a codified rule set, we have been able to speed up on
968 small samples the progress of the queue study by quite a bit. We are very optimistic
969 about it. We are starting to apply it to larger samples. We do spend a lot of time with
970 our peer RTOs sharing best practices, including information about what we are doing
971 here.

972 Ms. Castor. Thank you.

973 And, Mr. Nickell, you have also had some success here. What else can FERC do
974 to support this kind of innovation?

975 Mr. Nickell. Encourage us, which clearly is happening with the letter from
976 Commissioner Rosner. Very much appreciate what he has tried to do with that.

977 Ms. Curran spoke about the fact that we share best practices already, and we have
978 got a lot that we are really focusing on. We call it transformative technology. We are
979 going to have to rely on that, and we are going to have to depend on artificial intelligence
980 to make the solutions not only quicker but much better.

981 So thank you for your support, and we will need that support from FERC and the
982 encouragement that they have already begun to provide.

983 Ms. Castor. Thank you very much.

984 I will yield back.

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

986 The chair now recognizes the gentleman from Kentucky, the chairman of Energy
987 and Commerce Committee, for 5 minutes for questions.

988 The Chair. Thanks. Thanks, Mr. Chair. I appreciate the recognition.

989 Thank you all for being here.

990 You know, on the FERC and then the other agencies, we just can't assume that the

991 members of those agencies don't have agendas as well. And so we want them to work,
992 want them to work properly, but we also have oversight and checks and balances we
993 need to have.

994 When I first came into the role that I have this Congress right before -- actually, I
995 have kind of been associated more with the healthcare side of this committee. Our
996 committee has a broad -- as I pointed to Mr. Dingell earlier, we have a lot of broad
997 jurisdiction.

998 And I had an opportunity that -- we are actually going to have a great opportunity
999 in a couple of weeks to have a hearing with Eric Schmidt from -- Google Eric Schmidt, not
1000 Senator Eric Schmitt -- wrote a book with Henry Kissinger called "Genesis," presented it at
1001 the Library of Congress, and I walked away with my mouth open, my heart beating, going,
1002 wow, this is the fight of our lives. Are we going to win the AI battle with China? And it
1003 really is. It is the fight of this committee, I think, or at least the direction I want to take
1004 the committee.

1005 And he didn't say this. These are my words, not his, but essentially he said it.
1006 He said that it is like being the dollar being the world currency. Somebody is going to
1007 have the world currency. Europe has chosen not to be that by their energy policies and
1008 their regulatory policies, which is right in the purview of this committee. China -- we
1009 don't want to have the regulatory policies of China, but we -- so if you talk to people in
1010 this area, they say we have the brain power. We have the capital. We have to have a
1011 stable regulatory environment, and we have to have the energy. We absolutely have to
1012 have the energy.

1013 And so if you look at the demand and growth of energy, what the scary thing
1014 about it is, even if we said, all right, let's go full bore, we are still probably a decade
1015 behind where we need to be.

1016 And so when I talked in my opening statement -- so this is for Mr. Asthana and
1017 Mr. Nickell. In my opening statement, I mentioned that we are going to take offload
1018 power, baseload power. We are going to take it offline as much as -- almost as much as
1019 we are going to -- demand is going to grow in the next few years.

1020 And so what do we need to do, Mr. Asthana -- is that how you say it correctly?

1021 Mr. Asthana. Yeah.

1022 The Chair. And Mr. Nickell. So what do we need to do to reverse just
1023 retirement of generation we know that produces energy that we need?

1024 Mr. Asthana. I think there are a couple of things, Chairman. One is just sending
1025 the right price signals so that those generators can afford to stay. Those do lead to
1026 increases in prices for customers, but I think that is --

1027 The Chair. How do we send the right price signal?

1028 Mr. Asthana. Our markets are doing that. Our markets are holding up a mirror
1029 and reflecting back the supply and demand situation, and this pricing is being --

1030 The Chair. So that happens without government doing anything? There is no
1031 initiative we need to do to --

1032 Mr. Asthana. Not for Congress, I would say. I think FERC is critical in making
1033 sure that the markets are holding up a true mirror to the supply and demand situation
1034 but not for Congress. I think --

1035 The Chair. What would be a not-true mirror if they are holding up -- what would
1036 FERC do to hold up not a true mirror?

1037 Mr. Asthana. Well, I would say there is a lot of tweaking that can happen around
1038 the market rules, and we have been continuously improving them. But the fact is I think
1039 that all of our markets are in some shape or form signaling we need more supply, and
1040 that is --

1041 The Chair. But that is my question, I guess.

1042 So if the market is signaling you need more supply, and you are saying -- you are
1043 taking baseload power offline -- not because of what Congress or the government is
1044 doing; it is because the market signal is not there -- I don't understand that then.

1045 Mr. Asthana. Yeah. So let me get to the second part of my answer, which is
1046 the markets cannot keep a power plant open if it is illegal to operate the power plant, no
1047 matter what price signal you sent.

1048 The Chair. Okay.

1049 Mr. Asthana. And I think -- so there are laws, whether they are environmental
1050 laws passed by the States or the Federal Government --

1051 The Chair. I get your point. There is not a role in the market. There is a role
1052 in us to allow you to participate in the market.

1053 Mr. Asthana. Yeah.

1054 The Chair. Okay. Okay. That makes sense. All right.

1055 Mr. Nickell?

1056 Mr. Nickell. You bet. And thank you for the question.

1057 So I mentioned in my testimony earlier that RTOs have a role to play, and that role
1058 consists of leadership and vision and communication. We have to be more visible, and
1059 within SPP's footprint, we have done just that. We have been communicating the
1060 challenge that we are facing.

1061 Mr. Asthana talked about market signals. For us, what that looks like is setting a
1062 requirement that all Load Serving Entities have to meet for excess generation, and that
1063 requirement has been increased now three times over the last 2 years.

1064 The Chair. You need stability in the market.

1065 Mr. Nickell. So utilities know that in order to be able to meet that requirement,

1066 they can't retire generation until significant replacement generation is available.

1067 The Chair. All right. Thanks. And I only have 20 seconds,

1068 So, I mean, if the world existential threat is climate change or if you believe it -- I
1069 am simplifying this to two. It is a little more complicated -- dominating AI over -- being
1070 the world platform for AI.

1071 If you go the European route and say it is all climate change and we are going to
1072 let AI not participate in that market, that world -- if you go that route, you are going to
1073 cede the AI to China. And China is building a coal plant every 2 weeks to support the
1074 energy, first of all. So you are not going to win. You are going to lose both. And that
1075 is why we have to focus on making sure we win this battle in a responsible way.

1076 So thank you, and I will yield back.

1077 Mr. Latta. Thank you. The gentleman yields back.

1078 The chair now recognizes the gentleman from New Jersey, the ranking member of
1079 the full committee, for 5 minutes for questions.

1080 Mr. Pallone. Thank you, Chairman Latta.

1081 You know, I want to say with the full committee chairman, I want to win the AI
1082 battle with China, too, but you have got a national security advisor who can't even send
1083 an email without jeopardizing national security. I mean, I don't know how the hell we
1084 are going to win an AI battle with China with these characters running the show, including
1085 the Vice President and the Secretary of Defense and the others. I mean, it is like a clown
1086 show. But, in any case, let me go back to the issue at hand.

1087 Mr. Asthana, as I alluded in my opening statement, I am incredibly frustrated at
1088 the cost that PJM's failures are imposing on my constituents. The vast majority of the
1089 rate increase on New Jersey families is due to what happened with PJM's capacity market.

1090 So do you think it is fair that families around the region are seeing their bills spike?

1091 Simple question.

1092 Mr. Asthana. Let me correct the record. So New Jersey imported last year 43
1093 percent of the energy that it consumed, okay? And that is New Jersey's right to have
1094 that plan. That is a benefit of being a PJM.

1095 New Jersey's plan to make up that gap was to build offshore wind from 2018
1096 onward. And New Jersey came to us and said, hey, can you help us with the offshore
1097 wind plant? And we put in probably more effort than we have with any other State to
1098 help New Jersey with the offshore wind plant, and we were proud to do it. And, in fact,
1099 the New Jersey BPU gave us credit for saving New Jersey consumers \$900 million through
1100 our work.

1101 Now, the problem is there is not one turbine spinning --

1102 Mr. Pallone. I have to get to my other questions. But, yeah, the Trump
1103 administration is doing whatever they can to stop any kind of offshore wind. They
1104 repealed all the permits and whatever. So to talk about offshore wind when you have
1105 an administration that is totally opposed to any kind of wind power, I don't even know
1106 what the point is.

1107 But, look, you said in your testimony more supply, more demand. You said that
1108 you are trying to create more supply now. But I just think it is a shame that New Jersey
1109 families are paying for what I consider PJM's mistake. The changes that PJM is making
1110 that you talked about, whether it is the processes to get NG hooked up to the grid or for
1111 regional plant transmission planning or capacity markets -- all of these changes should
1112 have been made years ago, in my opinion.

1113 So why didn't PJM make its reforms to its interconnection queue and
1114 grid-planning processes a decade ago? Why did it wait so long?

1115 Mr. Asthana. Well, just to clarify my answer earlier since you asked, the reason

1116 we don't have turbines spinning offshore in New Jersey -- it happened before the current
1117 administration.

1118 Mr. Pallone. No, I know. But, look, Trump has killed the whole thing. So, you
1119 know, he made that decision to pull it all. It is a political decision. It is a mistake.

1120 Back to this. Why didn't PJM make its reforms to its interconnection queues and
1121 grid-planning process a decade ago? Why did it wait so long? I appreciate you
1122 testified about how you are trying to increase supply and address these things, but what
1123 was the reason for the delay?

1124 Mr. Asthana. It wasn't a delay, Ranking Member. We have been making
1125 continuous reforms for the last decade, and the process for interconnection needs to
1126 match the type of generators that are interconnecting. And so when the generators
1127 shifted to more intermittent renewable generators, we shifted our process with the
1128 support of FERC.

1129 And I would point to you, we have 50,000 megawatts of generation ready to
1130 go -- ready to go -- on a system that only consumes 150,000 at peak --

1131 Mr. Pallone. Well, I just think you should have made these changes sooner, and
1132 the pace of change just hasn't been acceptable.

1133 But I want to shift to a national problem. The Inflation Reduction Act is, in large
1134 part, responsible for making nearly all the planned new electricity generation in this
1135 country feasible. Without it, the economics for many of these projects simply wouldn't
1136 work, driving rates up even higher for families.

1137 So let me just ask -- I know there is only a minute -- Mr. van Welie. In your
1138 testimony, you mentioned the battery storage, wind resources, and grid-scale solar make
1139 up nearly the entire of ISO New England's interconnection queue. Would it be good or
1140 bad for your grid's reliability if the repeal of the Inflation Reduction Act meant that none

1141 of those projects were ever built, if you will?

1142 Mr. van Welie. I think it is going to make it harder for the supply resources to
1143 come forward.

1144 Mr. Pallone. All right. See, I mean, my point with the two -- both gentlemen is I
1145 think that we need more supply. There is greater demand. We need to have all kinds
1146 of energy generation. I am an advocate for wind, for solar, for nuclear, and I understand
1147 that we also need more with fossil fuels. We need all of the above.

1148 But what I see happening here is that, you know, right now, because of the efforts
1149 by the Republicans, you know, to repeal the Inflation Reduction Act, that is not going to
1150 happen. And there is going to be less supply and greater demand, and that is not a good
1151 thing.

1152 So thank you. Thank you, Mr. Chairman.

1153 Mr. Latta. Thank you. The gentleman's time has expired and he yields back.

1154 The chair now recognizes the gentleman from Texas, the vice chair of the
1155 subcommittee, for 5 minutes for questions.

1156 Mr. Weber. I thank the chairman for the recognition.

1157 I do want to make note that the Member from New Jersey calling the
1158 administration clowns was an editorial statement and not necessarily reflecting the view
1159 of the management. I want to get that in the record.

1160 But I also want to ask some of you all -- we will start over here with you on the
1161 left. Do you ever feel or hear -- or you feel about hearing about you are somewhat
1162 unfairly criticized because sudden environmental changes happen which you had zero
1163 control over? Do you all ever feel like you are unfairly criticized in that regard?

1164 Mr. Asthana. Thank you for the question. I think I would say yes, but I also
1165 think it is fair to hold us to a high standard. We want to be held to a high standard.

1166 Mr. Weber. Okay.

1167 You are next. You are feeling. Yes or no, unfairly criticized?

1168 Mr. van Welie. Yes.

1169 Mr. Weber. Okay.

1170 Ma'am?

1171 Ms. Curran. Sure.

1172 Mr. Weber. Sir?

1173 Mr. Dewey. Absolutely. We strive to be the authoritative source, the

1174 independent source of information. So as long as we can stick to the facts and its

1175 balanced assessment of what the impact to some of these policies are, that is generally a

1176 safe place to be and it is helpful --

1177 Mr. Weber. Kind of like Sergeant Friday. They just stick to the facts.

1178 Sir?

1179 Mr. Nickell. You asked a difficult question. We deserve the criticism that we

1180 deserve. There are things that we can do better and we will do better, and we deserve

1181 criticism for those.

1182 Mr. Mainzer. I think at the end of the day it all starts with accountability -- with

1183 extreme accountability for reliability. If we get criticized, we will take it, but we are

1184 always going to stay focused on producing results.

1185 Mr. Weber. Mr. Vegas?

1186 Mr. Vegas. Vice Chairman, we are always working to get better. Continuous

1187 improvement is our motto.

1188 Mr. Weber. Absolutely. And I hope people watching this interview or seeing it

1189 later -- this hearing -- recognize that you all have a very critical place to play -- a role to

1190 play.

1191 So I am going to come back to you, Mr. Vegas. In Texas, as you discussed in your
1192 testimony, Texas is seeing significant investments into data centers and manufacturing
1193 facilities because of our business-friendly State posture and access to reliable and
1194 affordable power, quite frankly. Can you discuss how these particular opportunities are
1195 important to potential economic development projects?

1196 Mr. Vegas. It is critical. Economic growth is directly correlated with energy
1197 reliability and affordability, and we recognize that in Texas. The light regulatory
1198 environment that we have enables resources to be added to our grid more quickly than
1199 virtually anyplace else in the U.S. on both the supply and on the demand side. That is
1200 the engine for economic growth, and we continue to try to do everything to --

1201 Mr. Weber. And we recognize that. I am glad you all do.

1202 And for our colleagues across the aisle who have filed a proposition to make
1203 ERCOT join the rest of the grid, you know, we have a bumper sticker that says "Don't
1204 mess with Texas." So we want to adhere to that.

1205 How do you conduct generation and resource planning to ensure all electricity
1206 consumers are paying the lowest possible rates and yet still have reliable power? You
1207 actually alluded to it in your testimony.

1208 Mr. Vegas. Yeah. Affordability is something that is at the front of our strategic
1209 pillar and focus. So we think about reliability as well as affordability.

1210 And the way we do allocations in Texas, you know, everything just flows down to
1211 load, to consumers, large and small alike. And so it is really important, especially as we
1212 go into a growth environment -- which we are all going into -- to look at how that cost
1213 allocation is done to make sure it is continued to be done fairly.

1214 We have a method that we have been using for the last 20 years. It has been
1215 working, but we are going into a new phase. Looking forward, it is a good time to look

1216 at that again and make sure it remains fair.

1217 Mr. Weber. Well, thank you for that. And ERCOT leads the Nation in
1218 renewable energy. Of course, you weren't there when the CREZ project went into
1219 effect. You know, I spent 4 years in the Texas House before I got demoted to Congress.
1220 And so we passed that project. We made sure that energy was efficient.

1221 So wind and solar are compromising 42 percent of ERCOT's installed generation
1222 capacity, and yet Texas remains well-balanced with dispatchable sources providing 65
1223 percent of deliverable energy. Given that solar is one of the fastest energy generation
1224 sources and its role that it plays in ERCOT, how important is it in Texas that solar
1225 technology is manufactured right here in the U.S. of A.?

1226 Mr. Vegas. It is critical that we see the supply chain move here to the United
1227 States. The security and the reliability of that supply chain is fueling the growth and a
1228 lot of the energy supply in the country. So the ability to have that supply chain
1229 protected here in America is critical.

1230 Mr. Weber. So when you see restraints on supply chains -- I know this is a
1231 question for each and every one of you, but I am down to 27 seconds -- on those supply
1232 chains, and these things are getting built in China as well as other countries, you all have
1233 to cringe. You have to know in your heart of hearts that this stuff needs to be done in
1234 the United States of America.

1235 Mr. Chairman, I am going to yield back you 10 seconds.

1236 Mr. Latta. The gentleman yields back.

1237 And the chair now recognizes the gentleman from New Jersey's Eighth District for
1238 5 minutes of questions.

1239 Mr. Menendez. Thank you, Chairman.

1240 This summer, my constituents in New Jersey are bracing for a 17 percent increase

1241 in their utility bills. This jump is completely unacceptable and unsustainable, especially
1242 considering it was avoidable. PJM blames these increases on increasing demand and
1243 decreasing supply. I would like to understand these claims a bit better, specifically the
1244 point on decreasing supply.

1245 One of the biggest drivers in the last capacity auction was a significant change in
1246 how dependable PJM assumed natural gas plants were. According to its independent
1247 market monitor, fully half of the price increase we saw in this auction was due to the
1248 change in how reliability was calculated. To put it in plain English, it turns out that
1249 natural gas plants were less reliable than we thought and now our constituents are paying
1250 the price.

1251 Mr. Asthana, can you talk about why PJM only updated those accreditation values
1252 for natural gas plants last year and not earlier, especially after Winter Storm Uri in Texas
1253 where we saw thermal plant outages drive a huge amount of the unexpected outages?

1254 Mr. Asthana. Thank you for that. That is a great question.

1255 The answer to that is because after Winter Storm Uri in Texas -- we get our natural
1256 gas from the Marcellus and Utica shales from our region. And we went to the industry
1257 in that region and said, hey, are we protected? Are we winterized? Are we protected
1258 against this sort of winter outage risk in the fuel supply system? And the answer was
1259 yes. And then we had Winter Storm Elliott, and we learned that we weren't. We lost
1260 almost a quarter of our generation.

1261 And so immediately after Winter Storm Elliott, we said we have to recognize this
1262 risk that we have now seen in how we accredit generation, and that is when we took
1263 action.

1264 Mr. Menendez. Okay. But we have to acknowledge, right, there is increasingly
1265 changing weather patterns, right? And so we have to sort of be a little bit more on the

1266 forecast front than we can do in sort of historical trends, because these changes are
1267 happening so quickly that to prevent these types of outages and shortages, we need to be
1268 a little bit more forward-thinking and think about redundancy to ensure we are not just
1269 hoping for the best-case outcome but preparing for the worst-case outcome.

1270 I know you have also referenced eight policies driving generator retirements. I
1271 just want to make the point that even though policy may have influence on such
1272 retirements, PJM and its partners have reasonably known for years about a large number
1273 of these retirements. Surely the capacity market has known about these retirements for
1274 a long time as well and priced them in.

1275 The discussion about transitioning to clean energy sources has been ongoing for
1276 decades. These retirements of decarbonization policies which PJM blames for
1277 decreasing supply should not have been a surprise.

1278 As Ranking Member Pallone mentioned, PJM by far has the worst backlog and
1279 slowest interconnection process of any other grid operator in the country. Thousands of
1280 projects are waiting to get connected. As you talk to us about the importance of
1281 building more power, your organization has lagged in its ability to actually connect power
1282 to the grid. Now our constituents are paying for this mismanagement, and I am
1283 concerned that my constituents will continue to foot the bill with additional increases in
1284 2026 and beyond.

1285 So will PJM commit to taking every step possible to bring new generation online,
1286 including the clean energy sources already in the queue, and bring down costs for New
1287 Jerseyans?

1288 Mr. Asthana. Yes. We are definitely committed to that.

1289 I do have to correct you. We do not have the worst queue in the country,
1290 particularly when you adjust for the size of our system. We serve 21 percent of U.S.

1291 GDP. We believe we have less than 20 percent -- much less than 20 percent of the
1292 national queue. So the work that we have done on our queue is showing dividends.

1293 But to your question, absolutely. New Jersey is critical to us. We want to do
1294 everything we can to support you, and we are committed to accelerating our queue
1295 continuously as much as we can.

1296 Mr. Menendez. I appreciate it. What immediate steps is PJM taking to address
1297 their interconnection backlog?

1298 Mr. Asthana. Well, the steps we have taken already that I pointed out have got
1299 us from almost 200,000 megawatts in the queue down to 67,000 left to go, with 50,000
1300 more through the queue signed, ready to build, some of which we are building.

1301 So for that 67,000, we have a FERC-approved process. We are executing it now.
1302 We will get 17,000 of that by the end of this year, the other 50,000 by the end of next
1303 year. Then we will be on a regular 1-to-2-year queue cycle, which is a huge
1304 advancement from where we have come, and we are not stopping there.

1305 On top of that, we have just opened two additional windows for generators to
1306 come into the queue to add to what we already have. So we are growing the queue by
1307 opening the door, and we have a lot of people that want to come through that door, and
1308 we are committed to processing them as well.

1309 Mr. Menendez. And just real quickly, with respect to the energy capacity that is
1310 cleared but is yet to be connected to the grid, what challenges are those developers
1311 facing in getting their projects online?

1312 Mr. Asthana. A lot of supply chain issues, financing issues, and a lot of what we
1313 call NIMBY issues -- not in my backyard. People don't want the infrastructure where
1314 they live.

1315 Mr. Menendez. And with respect to supply chain and financing, does the

1316 disruptive nature of this administration help with supply chain issues and with financing
1317 issues? Yes or no.

1318 Mr. Asthana. I am not sure.

1319 Mr. Menendez. I think the answer is no.

1320 Thank you so much. I yield back.

1321 Mr. Weber. [Presiding.] The gentleman yields back.

1322 The chair now recognizes the gentleman from Alabama, Mr. Palmer.

1323 Mr. Palmer. Thank you, Mr. Chairman.

1324 Ms. Curran, MISO issued warnings about brownouts and blackouts. What was
1325 the basis for those warnings?

1326 Ms. Curran. If you are speaking to the NERC assessment that recently came out,
1327 we do a forward projection of the expected supply and demand balance.

1328 Mr. Palmer. That was the basis? The NERC assessments?

1329 Ms. Curran. The NERC assessment, I think, was where that forecast was made
1330 via NERC.

1331 Mr. Palmer. Wasn't the NERC assessment that the biggest challenge for meeting
1332 power demand and avoiding the blackouts and brownouts the change to the resource
1333 mix?

1334 Ms. Curran. No. The NERC assessment laid the information that we showed,
1335 which says that our forecast of the amount of supply that is available to meet the demand
1336 that we expect faces shortfalls in the coming years.

1337 Mr. Palmer. But I think the MISO report also indicated that it was the shutting
1338 down of hydrocarbon-produced power and trying to replace it with renewables had
1339 created basically, in my terminology, a deficit in power output that has not yet been met.

1340 The NERC report, particularly in 2023, in assessing the challenges facing our power

1341 grid, said that the single biggest challenge or threat for power output was the change in
1342 resource mix. In other words, to put it in lay terms, we have shuttered too many
1343 hydrocarbon plants without bringing online enough renewables to meet the demand.

1344 When you take that in context to the fact that we are in an arm's race with China
1345 for development of artificial intelligence and quantum computing, I think it really
1346 becomes problematic. And we keep talking about -- we get into my colleagues on the
1347 other side of the aisle and their concerns about the climate. We all are concerned about
1348 climate issues, but we are losing sight of what I think is a major national security issue.

1349 If China -- whoever takes the lead in artificial intelligence and quantum computing,
1350 they are going to be the superpower. And we don't have the power generation capacity
1351 right now that we are going to need. We have got to build these data centers. They
1352 are going to require mass amounts of power.

1353 So I am glad to hear -- and I am not sure I have heard this before from some of my
1354 colleagues that they support all of the above, including nuclear, which is where I think we
1355 need to go.

1356 I am going to ask Mr. Vegas, Mr. Asthana, Ms. Curran, Mr. Nickell. In your
1357 opinion, did the EPA take -- each of you coauthored comments -- I will set this up -- to the
1358 EPA during the previous administration which expressed strong concerns about the Clean
1359 Power Plant 2.0 because of the impact it would have on reliability within each of your
1360 footprints. And then those in charge of ensuring grid reliability in your respected
1361 areas -- it should have been imperative that the EPA -- who does not have the necessary
1362 expertise to analyze reliability -- listen to those concerns.

1363 And what I would ask each of you, in your opinion, did the EPA take your concerns
1364 into consideration when they were finalizing the Clean Power Plant 2.0?

1365 Mr. Vegas?

1366 Mr. Vegas. No, I don't think EPA adequately considered reliability in making their
1367 final determinations --

1368 Mr. Palmer. Mr. Asthana?

1369 Mr. Asthana. Yeah. I would say the same thing as Mr. Vegas said.

1370 Mr. Palmer. Ms. Curran?

1371 Ms. Curran. So a little more nuance from me. I think that they did make some
1372 changes in response to our feedback, but as my colleagues noted, not nearly sufficient to
1373 address the issue at hand.

1374 Mr. Palmer. Mr. Nickell?

1375 Mr. Nickell. Congressman Palmer, I would agree with Ms. Curran. I think they
1376 did listen. I don't think they went far enough.

1377 Mr. Palmer. But would you all agree that the Clean Power Plant 2.0 impacts
1378 reliability in your area and ultimately will impact the ratepayer?

1379 Mr. Vegas?

1380 Mr. Vegas. Yes. It has the potential to shut down nearly 14,000 megawatts of
1381 coal plants in our region, which would affect reliability and cost.

1382 Mr. Palmer. Which goes back to the point I am making earlier that we have shut
1383 down too much hydrocarbon-generated power without bringing renewable power online
1384 or some other form of power generation to meet the demand.

1385 Same question to you, Mr. Asthana.

1386 Mr. Asthana. Yeah. It definitely raises reliability concerns for us.

1387 Mr. Palmer. Ms. Curran?

1388 Ms. Curran. Yes. Reliability concerns.

1389 Mr. Palmer. Thank you.

1390 Mr. Nickell?

1391 Mr. Nickell. Yes. Absolutely increases our reliability concerns and increases our
1392 concerns about the affordability of electricity as long as those units are needed to be
1393 maintained online.

1394 Mr. Palmer. Real quickly, in my last second here, would it have been more
1395 workable if FERC or some other agency had done the actual reliability assessment?
1396 Quickly, yes or no.

1397 Mr. Vegas?

1398 Mr. Vegas. I am sorry. I didn't understand the question.

1399 Mr. Palmer. Would the EPA rule have been more workable if the Agency or FERC
1400 had conducted an actual reliability assessment of the rule's impacts and adjusted the rule
1401 to prevent these impacts?

1402 Mr. Weber. Very quickly, please.

1403 Mr. Vegas. It would have been more -- yes, it would have been more effective.

1404 Mr. Palmer. Mr. Asthana?

1405 Mr. Asthana. That is a tough hypothetical for me to answer.

1406 Mr. Palmer. Ms. Curran?

1407 Ms. Curran. Somebody needs to be doing reliability analysis on retirement.

1408 Mr. Palmer. That is a good answer. Thank you.

1409 Mr. Nickell?

1410 Mr. Nickell. I agree with Ms. Curran.

1411 Mr. Palmer. Mr. Chairman, I yield back.

1412 Mr. Weber. The gentleman yields back.

1413 The gentleman recognizes the lady from Virginia, Ms. McClellan, for at least 5
1414 minutes.

1415 Ms. McClellan. Thank you, Mr. Chairman and Ranking Member Castor, for

1416 having this hearing.

1417 Mr. Asthana, I am glad that you mentioned the lessons learned from Winter Storm
1418 Elliott. As you know, Virginians will never forget Winter Storm Elliott in 2022 when more
1419 than 100,000 people in the Commonwealth and 1.5 million others in nearby States lost
1420 power. And while we expected some outages, 40 gigawatts of coal and natural gas
1421 plants failed, shutting down, as you said, a quarter of PJM's generation capacity. Gas
1422 plants alone, whether due to the issues at the power plant or issues with gas availability,
1423 were responsible for 70 percent of the outages.

1424 Now, that didn't need to happen. And with more clean energy generation and
1425 smarter long-term transition planning, we could have kept the lights on and saved
1426 families money.

1427 Renewables actually performed well during the storm, and wind power exceeded
1428 expectations thanks to the strong winds of the hurricane.

1429 As you mentioned, we can't afford to ignore these lessons, particularly as climate
1430 change continues to make winter storms and other extreme weather events more
1431 frequent and severe. And so while we want to ensure that we have enough generation
1432 to meet demand, we want to also make sure it is reliable and can meet peak demand.

1433 And so when clean energy combines with energy storage, these generation
1434 sources can play a key role in stabilizing the grid during peak demand, and clean and
1435 renewable energy are also becoming cheaper to operate than fossil fuel-based generation
1436 and help protect consumers from fuel cost spikes.

1437 So the Coastal Virginia Offshore Wind Project is one that we care very much about
1438 in Virginia, Democrats and Republicans. And if it had been up and running during
1439 Winter Storm Elliott, it is estimated it could have saved ratepayers an estimated \$10
1440 million in a single day.

1441 So, Mr. Asthana, would you agree that adding renewable energy paired with
1442 storage to the grid can benefit grid reliability?

1443 Mr. Asthana. Yes, it definitely can, and we would love more of that, and we
1444 support Coastal Virginia Offshore Wind significantly.

1445 If I may, I just wanted to add one clarification. The outages that consumers saw
1446 during Winter Storm Elliott in Virginia were not because we didn't have generation. It
1447 was because of icing and storm damage for more local power lines.

1448 Ms. McClellan. Okay. But it was the gas power plants, right?

1449 Mr. Asthana. It wasn't really because of the gas power plants. It was because
1450 of storm damage to the local -- even though we had a lot of gas power plants fail, in part
1451 thanks to exports from Rich in New York, we had enough power to serve all our
1452 customers.

1453 Ms. McClellan. But the point is you had gas power plants fail, and if the wind
1454 project had been up, the wind generation could have helped to keep people online during
1455 that.

1456 Mr. Asthana. It would have helped us import less from New York.

1457 Ms. McClellan. I am going to take that as a yes.

1458 So you can understand why I am perplexed that the Trump administration has this
1459 all-out war on wind and wants to prohibit any new wind projects, when we keep hearing
1460 from our friends on this committee on the other side of the aisle that we need more
1461 generation. That includes more renewables in the mix. And so I am glad we agree that
1462 that would help.

1463 And I hope PJM keeps this in mind as it makes selections for its projects that it is
1464 expediting under the new Reliability Resource Initiative framework, because I am
1465 concerned that if frameworks like that are used for more than a one-time fix, it could

1466 permanently imperil the benefits that consumers see from regional grids and
1467 competition.

1468 So can you confirm that PJM views RRI as a one-time intervention into its
1469 interconnection queue?

1470 Mr. Asthana. Yes.

1471 Ms. McClellan. Thank you.

1472 Now, I was very glad to hear all of the witnesses talk about how important an
1473 independent FERC is, and I agree. But FERC is not the only Federal agency that is
1474 important to whether new generation projects come online. Is that right?

1475 Mr. Asthana, I will start with you.

1476 Mr. Asthana. Yeah. There are various agencies that have a role.

1477 Ms. McClellan. And two of those are the Department of Energy and EPA, right?

1478 Mr. Asthana. [Nonverbal response.]

1479 Ms. McClellan. And you cannot have new generation come online without
1480 mandated-by-law reviews by EPA, right?

1481 Mr. Asthana. I think it depends on the State. So I don't know the answer to
1482 that question specifically.

1483 Ms. McClellan. Okay. Well, subject to check, it is yes.

1484 But you would agree that the Department of Energy and EPA play an important
1485 role in new power generation coming online?

1486 Mr. Asthana. Yes, I agree.

1487 Ms. McClellan. Okay. And yet, President Trump and DOGE have led to the
1488 firing of over a thousand employees from the Department of Energy --

1489 Mr. Weber. The gentlelady's time has expired.

1490 Ms. McClellan. -- and the EPA, and that is going to take us in the wrong

1491 direction.

1492 And I yield.

1493 Mr. Weber. The gentlelady's time has expired.

1494 The chair now recognizes the gentleman from Georgia, Mr. Allen, for 5 minutes.

1495 Mr. Allen. Thank you, Chair Weber and Chair Latta, for convening this hearing to
1496 hear our Nation's regional grid operators. I would also like to thank all of you for your
1497 testimony today.

1498 Obviously, we pointed out the importance of grid reliability as paramount. We
1499 have rising electricity demand, and we must ensure that our grid's capacity meets that
1500 demand.

1501 Georgia benefits from a vertically integrated energy system which I believe
1502 delivers reliable and affordable power tailored to our State's unique needs. Nuclear
1503 energy plays a vital role in this equation. My district is the location of Plant Vogtle.
1504 We are very proud of this achievement. It is the Nation's largest clean nuclear energy
1505 facility, the first two new reactors built in over 30 years, and it exemplifies our
1506 commitment to sustainable, dependable power.

1507 Mr. Asthana and Mr. Dewey, while State and Federal efforts have aimed to
1508 prevent the premature closure of nuclear power plants, some facilities have nonetheless
1509 shut down earlier than anticipated. Had those plants not been allowed to close, what
1510 effect would they have had on wholesale energy and capacity prices, and how would
1511 open plants have impacted consumers in your region?

1512 Mr. Asthana?

1513 Mr. Asthana. Yeah. We need more nuclear, and if we had it, it would -- other
1514 things being equal, result in lower prices.

1515 Mr. Allen. Okay. Mr. Dewey?

1516 Mr. Dewey. Same situation in New York. The closure of the Indian Point plant
1517 was deemed to be a safety issue by New York State as a policy matter. That eliminated
1518 2,000 megawatts of carbon-free supply close to New York City that would have
1519 certainly -- certainly did impact capacity prices.

1520 Mr. Allen. Okay. Ms. Curran and Mr. Vegas, Congress has been working to
1521 speed the licensing and deployment of nuclear reactor technologies. Are either of you
1522 working to develop incentives in how prices are formed to encourage investment in the
1523 very long-term assets nuclear power provides to the systems?

1524 Mr. Vegas. Yes. Congressman Allen, we are looking at opportunities inside of
1525 the Texas Legislature to incentivize the development of nuclear power in the State of
1526 Texas.

1527 Mr. Allen. Okay. Mr. Curran? Oh, Ms. Curran. I am sorry.

1528 Ms. Curran. That is okay. Just making sure it was me.

1529 So our States are largely vertically integrated, and so it is the State utility
1530 regulatory commissions that are making those resource decisions. So while our market
1531 signal does provide information about the overall supply/demand balance, ultimately,
1532 those choices are made in the States.

1533 Mr. Allen. A question for all of our witnesses. Nearly 20 percent of our
1534 Nation's electricity is generated by 94 nuclear reactors constructed 40 to 50 years ago.
1535 These reactors represent enduring assets, continue to deliver significant value long after
1536 the visionary decisions to build them were made. Today's market conditions, however,
1537 would likely discourage companies from pursuing such generational investments. As
1538 States grapple with rising power demands, they are seeking innovative tools to drive the
1539 deployment of next-generation nuclear facilities.

1540 So I offer this question to all of our witnesses: How can these potential State

1541 actions fit within your markets?

1542 Starting with you, Mr. Asthana.

1543 Mr. Asthana. Yeah. I would like to clarify. About half of our States are
1544 actually vertically integrated where the States can make that decision on what they want
1545 to build, and then the other half, it is based on the market.

1546 But I do think it is difficult for private capital to build nuclear power plants today.
1547 It is just really difficult. It is very risky and very expensive. And so I think if we as a
1548 Nation want more nuclear power, we should think about ways to support it federally.

1549 Mr. Allen. Uh-huh. Mr. van Welie?

1550 Mr. van Welie. Good question. So it really comes down to the States. I
1551 mentioned in my testimony that the States have the ability to select resources and make
1552 longer term commitments to certainly resource classes. There is renewed entry in small
1553 modular reactors in New England. So there are conversations happening in State
1554 legislatures and with governors.

1555 And so, you know, ultimately, I would make the same point Ms. Curran made,
1556 which is the ISO does not select these resources. It is really up to State policymakers to
1557 decide how they want to go about incentivizing or contracting for certain resource types.

1558 Mr. Allen. Yeah. Ms. Curran?

1559 Ms. Curran. Yes. I have nothing to add to that.

1560 Mr. Allen. Okay. Mr. Dewey?

1561 Mr. Dewey. New York State has initiated a blueprint process for exploring the
1562 development of new nuclear, specifically small modular reactors. We would welcome
1563 that from a grid operation standpoint, and with our all-in approach towards generation,
1564 we think it would be a good mix for our fleet.

1565 Mr. Allen. Okay. I am out of time. So if you would submit for the record the

1566 answer to that question, I would appreciate it. And I have an additional question that I
1567 will submit to you, and if you would answer that for the record.

1568 With that, I yield back, Mr. Chairman.

1569 Mr. Weber. The gentleman yields back.

1570 The chair recognizes the gentlelady from Colorado for at least 5 minutes.

1571 Ms. DeGette. Thank you so much, Mr. Chairman.

1572 Mr. Allen, I have such good news for you because in the last Congress when we
1573 had Chair Duncan of this subcommittee and I was the ranking Democrat on this
1574 subcommittee, we passed the ADVANCE Act, which we actually all voted for on both sides
1575 of the aisle in this committee. It went to the floor. We passed it, and President Biden
1576 signed it.

1577 And what this bill was designed to do is exactly what you are concerned about,
1578 which is to streamline and modernize the regulations around nuclear power.

1579 And as Mr. Pallone said, my colleagues on the other side of the aisle really every
1580 time seem stunned that Democrats support an all-of-the-above approach. But as we are
1581 seeing large loads like data centers and increasing demand for electricity all across
1582 America, we recognize that we are going to have to have an all-of-the-above approach,
1583 including renewables and everything else.

1584 So, you know, let's stop acting like we haven't done anything, because the last
1585 Congress we did some very important things. One of the important things we did was
1586 the Inflation Reduction Act. I want to talk to some of you about that.

1587 Now, all of the panelists early in this hearing, all of you said that demand for
1588 electricity is going to increase in this country. Is there anybody who disagrees with that?

1589 No. They are all shaking their heads no.

1590 And so the second question is, regardless of the source of the power to

1591 accommodate the increase, we are just going to need to have a variety of sources for
1592 electricity transmission, and we are going to have to increase reliability. Does anybody
1593 disagree with that statement?

1594 No. They are all shaking their heads no.

1595 Well, so one other question is, all of your grids that you are talking about here
1596 today, they don't just rely on fossil fuels. They also rely increasingly on renewable
1597 energy. Does anybody disagree with that statement?

1598 No. They are all shaking their heads no.

1599 Here is why I ask that. Because my colleagues on the other side of the aisle are
1600 implying that the way we are going to solve the issue of increased demand and increased
1601 reliability is by just simply jettisoning renewable energy and going, I guess, to nuclear and
1602 fossil fuels.

1603 Is there anybody who thinks that your agencies and the people who you are
1604 running the grids could jettison all renewable energy?

1605 No. They are all shaking their heads no.

1606 There was a recent study that was published by a think tank called RMI, and what
1607 it said is that the Inflation Reduction Act made clean energy cheaper than more than 90
1608 percent of proposed gas plants.

1609 And, Mr. Chairman, I would ask unanimous consent to put that article into the
1610 record.

1611 Mr. Weber. So ordered.

1612 [The information follows:]

1613

1614 ***** COMMITTEE INSERT *****

1615 Ms. DeGette. Thank you.

1616 Now, collectively, the IJA and the IRA allocated almost \$17 billion in loans and
1617 grants for grid development, but despite that, the Republicans voted 54 times to repeal
1618 the clean energy plan since the Democrats passed the IRA.

1619 So I don't have time to ask all of these wonderful witnesses today. So the one
1620 closest to me is Mr. Asthana. I am sorry for you. But what I want to ask you is, if we
1621 repealed all of that money going for grid development from the IRA, would that help or
1622 hurt our ability to stabilize the grid and to increase production?

1623 Mr. Asthana. I think in the near term, the interconnection queue is full of a lot of
1624 renewable projects, many of whom are, I am sure, counting on the IRA. And so I am
1625 sure it would make those less likely to come, and we do need them to come.

1626 Ms. DeGette. Okay. Does anybody disagree with that on this panel?

1627 No. They are all shaking their heads no.

1628 Now, I just want to ask one more thing to follow up on what Ms. McClellan was
1629 asking.

1630 Mr. van Welie, in your written testimony, you talked about offshore wind as a
1631 potential vital resource for grid reliability in New England. Is that right?

1632 Mr. van Welie. Correct.

1633 Ms. DeGette. Now, were you aware that, as part of the very early executive
1634 orders, President Trump signed an executive order putting a halt to wind production
1635 offshore nationwide?

1636 Mr. van Welie. Yes.

1637 Ms. DeGette. What would that do to the ability to have reliable grid production
1638 in New England?

1639 Mr. van Welie. It has an impact, as I said in my testimony, towards the end of

1640 the decade because we were counting on these resources coming into the system by the
1641 end of the decade.

1642 Ms. DeGette. Thank you.

1643 And, Mr. Chairman, I would ask unanimous consent to put a copy of that executive
1644 order into the record.

1645 Mr. Weber. Without objection, so ordered.

1646 [The information follows:]

1647

1648 ***** COMMITTEE INSERT *****

1649 Mr. Weber. The gentlelady's --

1650 Ms. DeGette. Thank you so much. I yield back.

1651 Mr. Weber. -- time has expired. She yields back.

1652 The gentleman now recognizes the gentleman from Texas, Mr. Pfluger, for 5
1653 minutes.

1654 Mr. Pfluger. Thank you, Mr. Chairman.

1655 I want to state that I believe in the best of the above, not all of the above, and I
1656 think that differs from State to State. In west Texas, we have no access to hydropower,
1657 unfortunately, like they do in the Pacific Northwest. But if you have access to
1658 affordable, reliable sources, then we should use those.

1659 Mr. Vegas, I think we need to do a math problem here. So sorry for math in
1660 public, but let's talk about what the current demand is in Texas for what ERCOT is serving.
1661 What are we seeing annually?

1662 Mr. Vegas. Current demand peak in the summer is around 80- to 85,000, and in
1663 the winter, about 80,000.

1664 Mr. Pfluger. Okay. And in the next 3 or 4 years with added industrialization,
1665 added population, data centers, what do we think that is going to grow to in Texas?

1666 Mr. Vegas. We are now forecasting that, by 2030, we expect around 150,000
1667 megawatts. So that is an additional 65,000 megawatts over where we are today.

1668 Mr. Pfluger. Almost double?

1669 Mr. Vegas. Almost double.

1670 Mr. Pfluger. In 3 to 4 years. This is incredible.

1671 So what I want to get to is, when you look at the balance, you are balancing price.
1672 You are balancing reliability. You are balancing all these different things. You know,
1673 what are the best sources that you are looking for today at 85- and, in 3 years, at

1674 150-plus?

1675 Mr. Vegas. So we are getting to a point on the Texas grid where you can start to
1676 see that the peak demand is exceeding the dispatchable generation that we have
1677 available on the grid. So it is important, as we look forward, to meet the demands of
1678 this growth to grow the supply in a balanced way.

1679 The balanced resource mix brings, I think, the best portfolio for consumers. It
1680 brings cost combinations that vary and give the optimal price, and it also brings
1681 characteristics around reliability and resilience that are important.

1682 So as we look forward, we need to make sure we keep up with firm dispatchable
1683 generation in addition to the strong growth that we continue to see on renewables.

1684 Mr. Pfluger. Firm dispatchable generation.

1685 So I just looked it up on your website, ERCOT.com. And right now in my
1686 hometown, it is 78 degrees. And we have got a little bit of wind which is serving 18
1687 percent of the grid, 45 percent solar.

1688 But talk to us about when it is hot or when it is cold and how reliable on those
1689 days where you have 100 degree-plus -- which we have about 90-plus days in the summer
1690 in Texas of 100 degrees or more -- or when it is cold. How reliable are those sources?

1691 Mr. Vegas. Yeah. As I said earlier, over the course of a year, the actual
1692 delivered energy on the Texas grid, 65 percent of it comes from our thermal fleet, which
1693 is our coal, our natural gas, and our nuclear. They are the backbone of reliability. They
1694 complement what we are getting from the renewable mix as well. And right now we
1695 need all of the supply that is there. It is clear that we need it all. We are seeing 63
1696 percent right now coming from renewables.

1697 But when the wind isn't blowing and when it is nighttime and in the summer when
1698 it is hot, you still need a lot of energy to support that air-conditioning load, and that

1699 requires long-duration, dispatchable resources to do that.

1700 Mr. Pfluger. I have only taken a few weather classes in my life, but I would invite
1701 my colleagues on the other side of the aisle to come out to west Texas in the summer.
1702 It is miserable. When the wind blows in the springtime, it at least cools you off, but not
1703 in the heat of the summer.

1704 NERC said that we are in a reliability crisis. That is their 2024 overview, their
1705 analysis. Do you agree with that going forward?

1706 Mr. Vegas. I think the concern with the pace of load growth and the pace of
1707 retirements, coupled with the lack of dispatchable, long-duration resources coming
1708 online, leads to that being a logical conclusion.

1709 Mr. Pfluger. Mr. Asthana, I feel like there were responses that you had in a
1710 previous line of questioning, and I would like to give you a minute or so if you want to
1711 clear up anything or talk about the role of natural gas, which, obviously, I think as you
1712 look at ERCOT is very important, and it seems like it is to you as well.

1713 Mr. Asthana. Thank you for that. The only clarification I would make is about
1714 half of our system, our capacity is natural gas. And the rate of investment in natural gas
1715 infrastructure has significantly lagged the rate of growth of natural gas utilization. And
1716 so natural gas is becoming less flexible for us, and that is why one of the things I
1717 mentioned in my top six hit list is making sure that we invest in natural gas infrastructure,
1718 because we need it to be flexible.

1719 Mr. Pfluger. Mr. Vegas, I will end with you in the last few seconds. When
1720 government dictates policy that doesn't allow you to have the right capacity or the right
1721 mixture, what does that do to affordability, reliability, and, at the end, what does it do to
1722 our national security?

1723 Mr. Vegas. It is absolutely detrimental to affordability and to reliability, and it

1724 risks our energy security.

1725 Mr. Pfluger. Thank you. Mr. Chairman, I yield back.

1726 Mr. Weber. The gentleman yields back.

1727 The chair now recognizes the gentlelady from California, Ms. Matsui, for at least 5
1728 minutes.

1729 Ms. Matsui. Thank you, Mr. Chairman. I want to thank the chairman and the
1730 Ranking Member Castor for calling this hearing today.

1731 And I want to have a special welcome to the California ISO president, Elliot
1732 Mainzer. You haven't been asked many questions, so I will ask you a lot of them today.

1733 At any rate, grid operators face many challenges today: rising electricity
1734 demand, aging infrastructure, rising energy costs, and the need to reduce greenhouse gas
1735 pollution. My Republican colleagues often say we need more energy, not less. Well, I
1736 agree. We need more energy, but it must be cleaner, cheaper, and built faster than we
1737 have in decades.

1738 Yet President Trump is deliberately obstructing energy projects, freezing funding,
1739 halting critical projects, and firing Federal employees responsible for maintaining and
1740 permitting our energy infrastructure. Reuters reported last week that President Trump
1741 and Elon Musk's mass layoff have predictably slowed Federal energy permitting.

1742 Mr. Mainzer, hypothetically, if many energy projects in California were delayed
1743 because there is no Federal employees to review permits, how would that impact grid
1744 reliability?

1745 Mr. Mainzer. Given the increasing demand for electricity, anything that crimps
1746 the supply will have detrimental impacts on reliability.

1747 Ms. Matsui. Okay. It has also been reported that President Trump and Elon
1748 Musk have fired Bureau of Reclamation employees that operate and maintain critical

1749 hydropower infrastructure.

1750 Mr. Mainzer, hypothetically, if we see a significant reduction in hydropower
1751 output because these systems are not adequately maintained, how would that impact
1752 grid reliability?

1753 Mr. Mainzer. Well, hydropower plays a critical role not only within California but
1754 in the broader West, also in the Pacific Northwest. So maintaining and maintaining the
1755 health of those assets is critically important.

1756 Ms. Matsui. Okay. The Federal Government is not Twitter. We cannot let
1757 Elon Musk play around and gamble with our critical infrastructure. If a dam fails or the
1758 electric grid goes down, the consequences could be catastrophic.

1759 Meanwhile, congressional Republicans are planning to repeal Federal energy tax
1760 credits that are currently financing hundreds of energy projects across the country.
1761 Independent analyses from Aurora Energy Research and Energy Innovation show that
1762 repealing the IRA tax credits would cost American families billions in higher energy costs
1763 and reduce new energy deployment by hundreds of gigawatts.

1764 Mr. Mainzer, hypothetically, if there is a significant drop in the number of
1765 financially viable energy projects over the next 10 years, how would that affect reliability?

1766 Mr. Mainzer. Again, I think as I and my other colleagues have mentioned here
1767 today, anything that is going to impact the supply of commercially viable projects to meet
1768 the rapidly growing demand in our grids is going to be problematic and could potentially
1769 compromise reliability and affordability.

1770 Ms. Matsui. Okay. So that would impact our ability to meet new energy
1771 demand and slow down the time to power up our new data centers?

1772 Mr. Mainzer. Yes.

1773 Ms. Matsui. Okay. I know a lot of my Republican colleagues think clean energy

1774 is unreliable, and many of my colleagues like to point to California as proof that clean
1775 energy is unreliable, but that view is really badly outdated.

1776 Mr. Mainzer, very briefly, can you talk about how grid reliability has improved in
1777 California over the last few years?

1778 Mr. Mainzer. A reliable grid relies on a portfolio of resources of different
1779 attributes and complementary characteristics. What we have found in California, as we
1780 have seen the State choose to elect a much larger proportion of solar energy in particular,
1781 that by pairing those resources with dispatchable batteries, that that has helped to
1782 increase reliability in recent years.

1783 So it is a portfolio effect. We need to plan carefully, but by carefully considering
1784 all the different resource attributes and making sure that they are all available to the
1785 system, we have been able to significantly improve reliability in recent years.

1786 Ms. Matsui. Okay. Thank you.

1787 CAISO has also worked to improve reliability in meeting rising demands by
1788 supporting the build-out of long-distance transmission infrastructure and by participating
1789 in larger energy markets spanning 10 western States.

1790 Mr. Mainzer, can you briefly explain how improving interregional energy transfer
1791 across the Western U.S. helps to improve reliability and meet rising demand?

1792 RPTR SINKFIELD

1793 EDTR ROSEN

1794 12:15 p.m.]

1795 Mr. Mainzer. Yes, thank you. We have been very fortunate over the last
1796 decade to be able to take advantage of the significant transmission connectivity that
1797 exists between California and the Northwest and the desert Southwest. And by
1798 leveraging that transmission connectivity and resource diversity, we have been able to
1799 operate a Western Energy Imbalance Market that has significantly improved reliability
1800 and affordability. We are also engaged in working with other States and other utilities
1801 to further enhance the Western grid, which will make a big difference in reliability going
1802 forward.

1803 Ms. Matsui. Okay. Thank you very much. My time is up. I yield back.

1804 Mr. Weber. [Presiding.] The gentlelady yields back. The chair now recognizes
1805 the gentlelady from Tennessee for at least 5 minutes.

1806 Mrs. Harshbarger. At least 5 minutes. Thank you, Mr. Chairman. Thank you
1807 to the witnesses for being here today.

1808 Mr. Nickell, I am going to start with you so listen closely. I am going to come up
1809 with a scenario for you. And in this scenario, let's assume that Southwest Power Pool
1810 increases its wind capacity by 30-fold over two decades. And let's say that on a very
1811 windy day, as much as 90 percent of your regent's demands met by wind power. The
1812 date is February 27. And let's just say that changing wind speed caused generation to
1813 plummet by 12,000 megawatts in just 2 hours. So what are you going to do when the
1814 wind dies down in this scenario?

1815 Mr. Nickell. That is an interesting scenario. I don't know where you picked up
1816 on that.

1817 Mrs. Harshbarger. Right out of my head.

1818 Mr. Nickell. It is a real scenario. It is something we have experienced. And
1819 what we were forced to do is to rely on the backup generation that we had available, and
1820 that primarily consists of gas generation, because it can be started quickly, it can be
1821 ramped up quickly, and it could meet the need very reliably. So that is what we did.

1822 Mrs. Harshbarger. Okay. Thank you for that answer.

1823 Ms. Curran, it is your turn. In this scenario, let's say that you experience a wind
1824 drought that lasts 40 consecutive hours. How do you make up for that?

1825 Ms. Curran. Thank you, another familiar scenario that did happen to us. The
1826 way you make up for it is with resources that do have fuels that are available on demand.
1827 So in MISO, that would be coal and gas generation that is able to run for that duration.

1828 Mrs. Harshbarger. Yeah. Thank you, ma'am.

1829 Now Mr. Asthana, it is your turn. The date is December 24, 2022, during one of
1830 the coldest days that the Tennessee Valley Region's ever experienced in decades. And
1831 TVA calls and says it doesn't have enough power to meet this demand. So what do you
1832 do, sir?

1833 Mr. Asthana. That is a great question. Thank you. They did call. They called
1834 me directly.

1835 Mrs. Harshbarger. Yes, they did.

1836 Mr. Asthana. And we did our best to support them with a significant amount of
1837 exports.

1838 Mrs. Harshbarger. So what kind of exports?

1839 Mr. Asthana. They were on the margin, natural gas and oil.

1840 Mrs. Harshbarger. And why did you still have enough power on your wires to
1841 help TVA while still meeting your own needs?

1842 Mr. Asthana. Well, we had healthy reserves then, and so, we were able to
1843 support our neighbors. And it wasn't just TVA. We were exporting power to multiple
1844 neighbors at the same time.

1845 Mrs. Harshbarger. Yeah. I remember that, and I had a lot of companies that
1846 had to shut down from some brownouts and blackouts. You know, I have looked at all
1847 your testimony, and the key challenges every one of have you talked about was the rising
1848 demand in energy due to electrification, manufacturing growth, data centers, you know,
1849 producing AI. And then you talk about generation transition, accelerated retirements of
1850 transitional power plants who are outpacing new renewable generation capacity. You
1851 talked about extreme weather impacts and then transmission limitations. And current
1852 infrastructure is inadequate to meet growing needs. And new projects face regulatory
1853 and logistic hurdles.

1854 And, you know, the testimony paints a really clear story, and for one, wind energy
1855 may have valued the power companies, but it cannot be depended upon when people
1856 need it most. And this wind energy has been widely deployed around the country
1857 because of generous government subsidies which increase reliability problems, as it
1858 crowded out more reliable sources.

1859 So I personally think that it is astonishing that wind continues to receive
1860 government subsidies, and especially while the utility companies still have to keep their
1861 other power plants online, even when they aren't making any money just to make up for
1862 the overbelt wind. As long as the policies that we make here continue to emphasize
1863 unreliable weather, dependent energy, rather than supporting the no-fail grid, blackouts
1864 are going to keep happening, aren't they?

1865 And so, I think it is time we have to revisit our priorities and focus our efforts
1866 toward keeping the lights on, ladies and gentlemen. So with that, Mr. Chairman, I yield

1867 back. Thank you all.

1868 Mr. Weber. The gentlelady yields back.

1869 The chair now recognizes the gentlelady from Washington for at least 5 minutes.

1870 Ms. Schrier. Thank you, Mr. Chairman. Thank you to our witnesses as well.

1871 As all of you know, the Pacific Northwest does not have an RTO or ISO represented here.

1872 Our energy markets and balancing authorities are very different. RTO are not, though.

1873 Most of us are seeing exploding load growth in the Northwest because of affordable

1874 energy. In the Pacific Northwest, it is chip fabrication and data center expansion that

1875 are the demand drivers.

1876 Now, depending on who you ask, we are likely facing a nearly 16 percent increase

1877 in load growth by the end of the decade, five-fold increase in what was previously

1878 forecasted, and we have heard today about how long it takes to interconnect and to build

1879 new energy.

1880 Now, I say likely, because we don't have great quality of data inputs for these

1881 models. And accurately forecasting load growth from data centers is difficult because

1882 they are notoriously secretive. We also know these companies shop around to multiple

1883 utilities, potentially duplicating the same load in several service territories.

1884 For the existing data centers, operators often don't want to share data about their

1885 energy uses for proprietary or national security concerns.

1886 Mr. Asthana, you have been on a lot today. I have got another one for you.

1887 Given the surge of demand that you are seeing at PJM, I am more concerned about

1888 making sure we are building strategically than about overbuilding. But considering all of

1889 these challenges, how do we ensure that power planters have the right tools to

1890 accurately predict load growth?

1891 Mr. Asthana. A wonderful question. Thank you for that. We are at a time

1892 where growth demand is growing rapidly, and the rate of the growth is incredibly
1893 uncertain. I mean, it is really hard all the issues you talked about, whether you are
1894 double-counting something or not, and so we significantly discount down from the gross
1895 numbers that are being submitted to our utilities. In fact, they will discount their
1896 numbers based on their own criteria, some of which are -- have people put up money
1897 behind this project, or is this just a conversation or a signed contract? But I do think this
1898 is an opportunity for continued refinement.

1899 Ms. Schrier. Does discounting numbers mean lowballing the estimate?

1900 Mr. Asthana. No, not lowballing, but applying criteria; so if you start with a gross
1901 pool that is huge, and it is not just plausible, how do you cut down to what you think is
1902 reasonable? Their filters apply, have these people, you know, put up money. Do they
1903 have a signed contract? Have they acquired the land?

1904 Ms. Schrier. Got it. Okay, thank you.

1905 We all agree, we are going to need a lot of energy and really fast and we want
1906 more domestic manufacturing. We talk about that all the time. We are going to win.
1907 That we need to win the AI race with China. And that is going to require a ton of energy.
1908 And no power planter is saying natural gas won't be part of that puzzle. Absolutely will.
1909 But really, we should all have the goal of deploying more non-GHD-emitting energy. So
1910 let's do these things. Like nuclear and geothermal and the like.

1911 My next question is for Mr. Mainzer and Mr. Nickell. At the last hearing with
1912 your organizations, I asked both CAISO and SPP about the governing structures of
1913 day-ahead markets developing in the West. And there have been significant
1914 developments since then with Bonneville's draft decision to join SPP markets plus. But I
1915 would love to hear from each of you how utility membership in your market would
1916 uniquely benefit the Pacific Northwest in the face of surging growth from data centers

1917 and manufacturing? And I am going to start with Mr. Nickell.

1918 Mr. Nickell. So thank you for that question, Congresswoman. SPP's current
1919 14-state footprint is flush with a lot of wind generation. In fact, you heard it earlier
1920 today that we have seen as much as 90 percent of our demand served by wind
1921 generation. We know it is not always available. It is plenty available when the wind is
1922 blowing. And the same thing can be said of the solar generation that is in the desert
1923 Southwest part of the United States. When the Sun is shining, it is a tremendous
1924 resource, and we love having it available to us.

1925 The same thing is true of the hydro generation of the Pacific Northwest. We find
1926 that for those participants that want to participate in our market, a tremendous
1927 opportunity to leverage a diverse portfolio of renewable generation that is very important
1928 to you and to your constituents in the Northwest.

1929 Ms. Schrier. Thank you. Mr. Mainzer.

1930 Mr. Mainzer. Which I would just add that from a physics and economics
1931 perspective, we have that connectivity today to the Bonneville system. We have been
1932 leveraging it for years and providing billions of dollars of economic and reliability benefits,
1933 and I give Bonneville a lot of credit for pushing the envelope on governance. And we're
1934 also reforming our governance structure to address their concerns. Thank you.

1935 Ms. Schrier. And thank you for heading up on development for so many years.
1936 Thank you. I yield back.

1937 Mr. Latta. The gentlelady's time has expired and yields back.

1938 The chair now recognizes the gentlelady from Iowa's First District for 5 minutes for
1939 questions.

1940 Mrs. Miller-Meeks. Thank you, Chairman Latta and Ranking Member Castor for
1941 holding this important hearing on grid reliability. Iowa's First District has emerged as a

1942 national leader in renewable energy, including wind energy with 59 percent of our
1943 electricity now generated from this renewable resource. It has the power to be
1944 transformative to our region, driving down energy costs for families and businesses, while
1945 also creating jobs in manufacturing.

1946 Our success with wind demonstrates how quickly clean energy can be deployed at
1947 scale. In just 5 years, we have reduced coal dependence from 45 percent to 23 percent,
1948 while maintaining some of the lowest electricity rates in the country.

1949 However, as I have already heard, we have to recognize that a balanced diversified
1950 approach is critical for grid reliability. Our natural gas facilities in Coralville and
1951 Burlington provide flexible generation needed. Our historic Keokuk Hydroelectric Plant
1952 contributes baseload renewable power that has been operating reliably since 1913. And
1953 we have an additional hydroelectric plant at Lake Red Rock.

1954 The closure of Iowa's only nuclear plant, Duane Arnold, represented a loss of 601
1955 megawatts of carbon-free baseload power. And I am encouraged by next year's
1956 discussion about potentially restarting operations at this facility.

1957 And as we listen to testimony from the regional grid operators today, I am
1958 particularly interested in MISO. I have been there. I had a wonderful tour, and I
1959 encourage all Members to visit their grids, and how they are integrating increasing
1960 amounts of renewable energy while ensuring we maintain sufficient dispatchable
1961 resources to address the reliability challenges highlighted in your memorandum.

1962 The recent loss of load expectation, a 2025, 2026 study found that wind's effective
1963 load carrying capability in winter dropped drastically from 53 percent to 29 percent year
1964 over year. And we, of course, saw that in the polar vortex in Texas. As a State that is
1965 invested heavily in wind, this is concerning. What is driving this change and what are
1966 the implications for future wind development.

1967 And, Ms. Curran, what is your approach to maintaining reliability?

1968 Ms. Curran. Thank you. One of the implications of this portfolio shift that is
1969 underway is that we have increasing dependencies and correlations between our type of
1970 generation, and we are increasingly looking at what is available when it is most
1971 challenging from an operational perspective, including the time when you most need
1972 resources maybe changing. And that certainly affects that accreditation.

1973 We are very focused on making sure that we are coming up with the right values
1974 so that those that are making the decisions to invest in resources can understand what
1975 value they provide, both from that capacity perspective as well as energy.

1976 The other piece of the equation that we have not talked a lot about today is
1977 transmission. So transmission is necessary to get the resources from where they are
1978 generating to where they are needed. At MISO, we benefit from a large geographic
1979 diversity, and that means we have the opportunity to transport power across multiple
1980 States that may have different weather patterns at different times to help meet that
1981 reliability need.

1982 Mrs. Miller-Meeks. Thank you.

1983 Mr. Asthana, President Trump has made it clear that he sees co-location as a key
1984 arrangement to power data centers. However, co-location arrangements and PJM have
1985 become a major policy topic at FERC and in States that inhibited timely access to energy
1986 for data centers. When structured correctly, co-location can provide timely access to
1987 energy while ensuring other ratepayers are held harmless. How can PJM ensure that
1988 co-location arrangements are allowed to move forward in a timely manner?

1989 Mr. Asthana. We actually made a filing with FERC yesterday highlighting three
1990 different ways in our current rules that you can actually accomplish co-location, and then
1991 we suggested five other mechanisms to do that. And now we are awaiting feedback

1992 from FERC on how best to proceed.

1993 Mrs. Miller-Meeks. Thank you. In the 2024 long-term reliability assessment
1994 report, NERC recommends that to maintain demand and supply balance, dispatchable
1995 generators, including carbon-based fuel generators, must be available and capable of
1996 following changing electricity demand.

1997 And for the past 2 years when I was on this committee, we have hammered on
1998 this. To ensure reliability, what measures are you taking to discourage premature
1999 retirement of carbon-based fuel generators, such as the Power Plant 2.0 rule? How are
2000 we able to maintain dispatchable -- our energy when we are retiring carbon-based fuel
2001 generators prematurely?

2002 Mr. Asthana. Yeah, I mean, for me, I think I partially answered this earlier, but
2003 part of it is through sending the right market price signal to induce in the State. Part of
2004 it is through working with our States and, you know, Federal regulators to try to ensure
2005 that we don't have rules that force these generators offline prematurely.

2006 Ms. Curran. And I would say the same market rules that ensure that these
2007 resources get appropriate compensation, and then in our ability as having a regional view
2008 providing information about what the supply demand balance really is. And we have
2009 seen States taking action based on that information that we have provided.

2010 Mrs. Miller-Meeks. Thank you so much. Mr. Chair, I have a question to submit
2011 for the record, and I yield back.

2012 Mr. Latta. Thank you. The gentlelady's time has expired and yields back. The
2013 chair now recognizes the gentlelady from Texas' Seventh District for 5 minutes for
2014 questions.

2015 Mrs. Fletcher. Well, thank you so much, Chairman Latta. And thank you to our
2016 witnesses for your time and your testimony today. I am glad to have Mr. Vegas here

2017 from ERCOT as a fellow Texan for this important hearing. And no surprise, I will have a
2018 few questions for you.

2019 But I think there has been a really important theme that has come out of today's
2020 hearing. And as we have discussed, the United States is on the brink of a new boom in
2021 energy demand. And demand arises from things we have touched on from data centers
2022 and AI development, from widespread electrification, to, as you noted, Ms. Curran,
2023 efforts to reshore American manufacturing that we have undertaken over the last 4 years,
2024 including through some very important legislation passed by Congress.

2025 And I think you all have made clear that this is an area where smart policy is
2026 needed, and that this committee and this Congress have an important role to play in
2027 setting that policy.

2028 It is kind of contrary to the efforts underway to take a chain saw to the Federal
2029 Government. This is precisely where we need smart policy and nationwide coordination
2030 and sharing of knowledge.

2031 This is really core to what government is about, right, pooling our resources and
2032 our expertise to keep us safe, right. To make sure that the lights come on 24 hours a
2033 day, 365 days a year, to make sure that we have power when we need it. It is important
2034 to our safety. It is important to our national security. It is important to our ability to
2035 grow our economy. It is important to life, liberty, and the pursuit of happiness.

2036 And so, before we look forward to some of the issues that have been raised, I
2037 want to look back on one thing, Chairman Latta, just to touch on this. I understood you
2038 to say something in your opening statement about wind and solar not being as reliable
2039 during weather events. And I just want to point out that during Winter Storm Uri, we
2040 actually found that solar generation was the only one of the resources to outperform, or
2041 cuts worst-case scenario expected output.

2042 So I do think that there are lessons to be learned from our experience in Texas,
2043 and I would be glad to share them when we have more time on this committee.

2044 But I do want to talk about this energy demand and growth. I know it varies by
2045 region. And in Texas, we are already home to 330 data centers. Approximately 60,000
2046 Texans employed there. More on the way. And I understood that ERCOT is forecasting
2047 nearly 76 percent load growth by 2030.

2048 And while we have seen commitments to build a variety of generation, we know
2049 that demand is going to exceed current generation capacity without continued
2050 investment.

2051 So Mr. Vegas, I want to ask you: Last month, ERCOT released its capacity to
2052 demand and reserves report for 2025 through 2029, and it indicates that absent major
2053 changes, ERCOT's reserve margins will drop to negative values within 2 years.

2054 Can you just explain what that means for consumers? In real terms, does that
2055 mean rolling blackouts, higher energy bills? How are you protecting ERCOT customers
2056 from the market shock that the large data centers might bring in this increased demand?

2057 Mr. Vegas. So I think it is helpful to set a little context on that report. That
2058 report is a very rigidly structured report that requires us to report effectively the amount
2059 of generation that is in our queue that we expect to come online the amount of load that
2060 is expected to be built based on the rules in how we count load.

2061 And so, what it does not reflect is as important as what it does. What it does not
2062 reflect is the response of the market to the conditions as they evolve over time. So
2063 what we would expect to see as we get to a condition where demand is growing, supply
2064 needs to keep up, we would expect to see prices start to be more elevated on a
2065 consistent level in the wholesale market, that would send signals to developed resources.
2066 It would also send signals to slow down load growth. Load is very responsive to prices.

2067 And so, it doesn't reflect those dynamics of the market working. And so I don't want
2068 consumers to think it is forecasting blackouts or brownouts in the future. What it is
2069 forecasting is that there needs to be a concerted effort to match the demand growth with
2070 supply. The market economics should deliver that. But without that market dynamic,
2071 we are looking at shortfalls in the future.

2072 Mrs. Fletcher. Okay. Well, I think that that is helpful so that folks aren't too
2073 worried. But I do know that there are proposals in the legislature, for example, that
2074 would sort of hamstring ERCOT's ability, I think, to quickly add some renewable assets to
2075 the grid, and that, you know, you are forced to pair them with natural gas and/or coal
2076 plants.

2077 So I think, you know, from your perspective as a grid operator, do those kinds of
2078 policies that limit the development of certain energy resources help or hurt your ability to
2079 meet demand?

2080 Mr. Vegas. Right now, we need policies that support the growth of all the
2081 resources that can come onto the grid. And I emphasize, again, the balance of those
2082 resources is so critical to meet the future demand that is coming, because it is such a
2083 large growth. We need to have a balanced portfolio going forward.

2084 Mrs. Fletcher. Thank you so much. I have gone over my time. But, again,
2085 thank you all, and thank you, Mr. Chairman, and I yield back.

2086 Mr. Latta. Thank you very much. The gentlelady's time has expired and yields
2087 back. The chair now recognizes the gentleman from South Carolina's Seventh District
2088 for 5 minutes of questions.

2089 Mr. Fry. Thank you, Mr. Chairman. I really appreciate that. This issue is
2090 especially critical for South Carolina in the Seventh District where economic growth and
2091 energy security really go hand in hand. As we continue to witness rising energy

2092 demands with manufacturing, with data centers, and electrification efforts, we have to be
2093 prepared to ensure our grid remains reliable and resilient. Your testimony has talked
2094 about that a lot.

2095 South Carolina has faced fewer reliability risks thanks to our strategic decisions.
2096 But they still do exist.

2097 Ms. Curran, as we have discussed today, it is unclear whether the generation
2098 expected to come online will be enough to meet future demand and replace retiring
2099 resources. Developers seeking to enter the market are hampered by permitting delays,
2100 supply chain issues, and overly burdensome environmental regulations.

2101 Are there changes to market rules or new technologies that can help us maximize
2102 the capacity and efficiency of our current grid to improve reliability over the next few
2103 years?

2104 Ms. Curran. Sure. So having some of those new technologies or other changes
2105 are one of the pieces of the portfolio we will have to do maximizing our existing system is
2106 important. One of the most important tools from the MISO perspective is actually the
2107 operations of the MISO market. One of the things we do is seek to actually get the most
2108 out of the existing assets we have within the constraints of reliability, which means we
2109 are not leaving excess capacity on the system, be that generation or transmission
2110 capacity. And I think that is a model for all electricity operation.

2111 Mr. Fry. Do you find that model duplicated across other sectors? I mean, like
2112 with your neighbors here, do they do the same thing roughly?

2113 Ms. Curran. So we have and do that maximization, for example, with our
2114 neighbors, PJM and SPP. It is not necessarily, though, the same across the country,
2115 including in those areas that don't have a regional transmission organization.

2116 Mr. Fry. Thank you for that. Is MISO currently utilizing AI models to improve

2117 operational efficiencies and system management? And if so, can you expand on how
2118 these tools are enhancing your ability to forecast demand, manage resources, and
2119 mitigate reliability risks?

2120 Ms. Curran. Absolutely. As we have talked about a lot today, there are a lot of
2121 new variables in the system. You have this intermittent generation, you have changing
2122 load patterns, be it from data center or just consumer changes, weather impacts, and the
2123 like. There is a lot more uncertainty in the system.

2124 We use in our operation something we call an uncertainty management model
2125 where we leverage artificial intelligence to better forecast what the next day might look
2126 like with all of that variability, thought, taking in all of those very hard-to-forecast
2127 variables, and trying to come up with an impact.

2128 We have seen tremendous results both in reliability, but probably more
2129 importantly getting that reliability more affordably. So we have been able to plan
2130 better, invest result in lower cost for customers from using that technology.

2131 Mr. Fry. Thank you for that.

2132 Mr. Asthana, your testimony highlights the importance of reliability must-run,
2133 RMR agreements, as a critical tool for ensuring short-term reliability as plants retire and
2134 new resources come online. Can you describe how PJM utilizes these agreements to
2135 maintain grid reliability during those transitions?

2136 Mr. Asthana. Yeah, we like to use reliability must-run contracts as little as
2137 possible. They are really only used for local transmission constraints. So when a
2138 generator wants to retire and submits that request to us, and we feel like we need that
2139 generator to keep the grid reliable for local transmission constraints until we can build
2140 the transmission system, then we enter, or seek to enter into a reliability must-run
2141 agreement with that generator. But we want to use it as little as possible and let the

2142 markets work as much as possible.

2143 Mr. Fry. You want to build new plants, or a new generation, right?

2144 Mr. Asthana. We definitely want new generation, yeah.

2145 Mr. Fry. Are there ways in which these agreements can be improved to offer
2146 additional flexibility, particularly in light of the supply chain challenges and infrastructure
2147 delays that we have?

2148 Mr. Asthana. Are you asking about reliability must-run contracts, or just in
2149 general?

2150 Mr. Fry. Right. Yes, sir.

2151 Mr. Asthana. Yeah, we are working with our members right now on ways that
2152 we might improve our reliability must-run process.

2153 Mr. Fry. And how would that look? Just curious.

2154 Mr. Asthana. We haven't decided. But some of the things that we are thinking
2155 about are whether we have a standard contract with every generator that wants to -- or
2156 that ends up needing to sign up, or with the spoke contract. So that is an example.
2157 But there is a host of issues that are on the table and being considered.

2158 Mr. Fry. Okay. Thank you for that. Mr. Chairman, I yield back.

2159 Mr. Latta. Thank you. The gentleman yields back.

2160 And the chair now recognizes the gentleman from New York's 20th District for 5
2161 minutes for questions.

2162 Mr. Tonko. Thank you, Mr. Chair. I associate myself with the consensus that
2163 we have heard from our witnesses -- and thank you all for being here -- on the
2164 importance of building new transmission for improving reliability and bringing new
2165 resources online. But I would also like to hear more about how New York is pursuing
2166 other strategies for addressing reliability challenges.

2167 So, Mr. Dewey, first let me thank you for your leadership at my home ISO. I
2168 appreciate the work you and the team at the ISO do each and every day and respond to
2169 New York's needs.

2170 We know New York is dealing with increasing electric demand, especially chip
2171 manufacturing upstate, and an aging generation fleet. For the past several hearings, I
2172 have been trying to highlight the role that demand management, including energy
2173 efficiency, and demand response, can play in reducing peak demand, improving system
2174 reliability.

2175 So can you discuss what New York is doing to simultaneously support grid
2176 reliability and energy-intensive economic development? And do you see a role for
2177 demand-side policies to contribute to New York's ISO's efforts?

2178 Mr. Dewey. Thank you, Congresswoman. I would say that the ability for
2179 demand to be flexible and to recognize the opportunities for flexibility in demand,
2180 whether it be demand response, whether it be load shifting to different hours of the day
2181 is going to be absolutely crucial to maintain reliability in this modern grid where the
2182 intermittency of variable resources, like wind and solar, can vary a lot over time. We are
2183 going to need to have that flexibility in the load profile. We are going to need to be able
2184 to recognize which loads can be flexible. Some of the data center loads, and some of
2185 the chip manufacturing, which is so crucial to both jobs and national security issues to
2186 onshore more of that processing.

2187 They have a very constant fixed demand, and they can't be as flexible. So we
2188 have got to look for opportunities that other loads that can participate in that way can do
2189 so and coming up with the appropriate market mechanisms in place to provide the right
2190 kind of incentives and provide the right kind of revenues to recognize the willingness to
2191 do that.

2192 Mr. Tonko. Thank you. And part of the challenge of meeting this new demand
2193 is certainly interconnecting new resources. So what changes have you made to your
2194 interconnection process, and have they been working?

2195 Mr. Dewey. So we have reformed our interconnection process really three times
2196 over the last 6 years. Most recently, the reform process culminated in our filing. We
2197 mentioned -- I think the gentleman from New Jersey mentioned for a quarter 2023, we
2198 have issued and filed our compliance filing to be completely compliant with that new
2199 rulemaking from FERC. And we have initiated our transition cluster that does the
2200 combined study of all the resources in that mix.

2201 We have the largest interconnection queue that we have ever seen at the New
2202 York ISO. And we are proceeding along a timeline that will allow us to finish it quicker
2203 than we ever have.

2204 Mr. Tonko. Thank you. And if the overwhelming majority of projects in the
2205 queue today are battery and solar and wind projects, is it fair to say these technologies
2206 are important to future reliability in New York?

2207 Mr. Dewey. I would clarify that the entirety of the New York ISO queue is wind,
2208 solar, and storage. So it is crucial that we bring these resources online; that we locate
2209 them and site them at the right location so the maximize the benefit and reliability of the
2210 system. And we come up with the necessary upgrades, including transmission
2211 expansion that would enable that reliable operation, yes.

2212 Mr. Tonko. There has been much talk in Congress about repealing Federal tax
2213 energy incentives like the ITC and PTC through the reconciliation process. If those
2214 credits were to disappear, I think it is pretty safe to assume it will be, you know, a huge
2215 implication for the wholesale market. Project developers may need to bid into the
2216 energy market at higher prices to make their projects economically viable. Capacity

2217 payments may need to be higher to introduce, or to induce a stronger investment signal
2218 that fewer projects are going to be developed.

2219 So, Mr. Dewey, I realize you may not have done independent analyses on this
2220 issue yet. Maybe you could just talk in hypotheticals. Does what I am suggesting
2221 check out? What could be the impact on energy prices and investments in the ISO
2222 market if these tax incentives go away?

2223 Mr. Dewey. In a hypothetical sense, I would expect that some of the viability of
2224 these projects, generally, would come into question based on the financing arrangements
2225 that they have to develop and construct them. At a minimum, I would anticipate higher
2226 costs when they come, interconnect into the system, which would ultimately result in
2227 higher costs passed down to consumers.

2228 Mr. Tonko. And we know that there have been considerable -- much
2229 considerable confusion about how tariffs on Canadian energy might affect New York's
2230 electricity. Our systems are interconnected, and New York has long benefited from that
2231 importation of clean, reliable Canadian hydropower. We also know that Ontario has
2232 considered imposing a surcharge on its electricity exports.

2233 How is the ISO prepared for the possible imposition of tariffs and export charges
2234 on Canadian power?

2235 Mr. Dewey. I would say that the interconnection between New York ISO, and
2236 really, the whole northeastern United States and Canada is mutually beneficial from both
2237 the reliability and an economic standpoint. And I say mutually beneficial because it
2238 works both ways across the border with tremendous benefits throughout the region.

2239 We have put in mechanisms to collect and remit those tariffs if we need to. And
2240 we are working closely from a reliability standpoint to make sure that at least on an
2241 energy basis, but hopefully on an economic day-to-day basis that power will continue to

2242 flow. Thank you.

2243 Mr. Tonko. Thank you so much. And with that, Mr. Chair, I yield back.

2244 Mr. Latta. Thank you. The gentleman's time has expired and yields back.

2245 The chair now recognizes the gentlelady from Florida's 15th District for 5 minutes
2246 of questions.

2247 Ms. Lee. Thank you, Mr. Chairman, for convening this important hearing. And
2248 thank you to all of our witnesses for being here today to testify.

2249 As our energy demand continues to rise due to growth and manufacturing,
2250 advances in technology, like artificial intelligence, and increasing electrification, it is
2251 critical that our electricity production and transmission are prepared to meet these
2252 needs.

2253 Alarmingly, in their 2024 long-term reliability assessment, the North American
2254 Electric Reliability Corporation found that most of the continent is at risk of experiencing
2255 electricity shortfalls within the next 5 years. Considering these developments, I look
2256 forward to speaking with our witnesses who represent regional grid operators from
2257 across the country on how we can best strength our electric grid, prevent shortfalls, and
2258 meet this growing demand for power.

2259 Mr. van Welie, in your testimony, you mentioned that independent system
2260 operators in States play a joint and complementary role in resource adequacy. I am
2261 interested in discussing further the role that state policies can have on reliability and
2262 affordability of the electric grid. The Trump administration recently discussed moving
2263 forward with building national gas pipelines across New York and into New England to
2264 help supply energy to that region.

2265 What would additional natural gas capacity mean for reliability in the New
2266 England area? And what impact do you see winter weather conditions having on

2267 consumer demand for natural gas?

2268 Mr. van Welie. So I will start at the end of your question, which is New England
2269 have lived with a natural gas pipeline constraint for 20 years. So we know what
2270 happens. When it gets cold, it will switch to burning other stored fuels; typically, oil and
2271 imported LNG.

2272 So the question, you know, with regard to the benefits of relieving that pipeline
2273 constraint, clearly the region recognizes, and I think the States understand that additional
2274 pipeline capacity would be beneficial. But they have made very distinct policy choices
2275 over the last several decades to work around that issue. So there are workarounds.
2276 But, ultimately, this decision about fuel infrastructure is really in the States' hands.

2277 Ms. Lee. And if you would tell me about some of those workarounds. And as
2278 lawmakers seek to address the growing electric demand, what factors are the most
2279 important for them to be considering?

2280 Mr. van Welie. Well, I think in New England, what policymakers are generally
2281 doing is trying to weigh affordability versus decarbonization objectives. And so, as they
2282 think about the relative weight of those two objectives, they tend to steer the policies
2283 one direction or the other,

2284 Ms. Lee. In my home State of Florida, a recent report from Tampa Electric found
2285 that 70,000 Florida businesses are directly fueled by natural gas. Would more natural
2286 gas capacity drive investments into economic development projects, like manufacturing
2287 facilities, that require significant amounts of affordable energy?

2288 Mr. van Welie. I think it is -- there is a complex answer to a simple question in
2289 the sense that ultimately to build new gas infrastructure into New England, you need to
2290 have a custom for that. So the pipelines will not build on speculative need. They need
2291 customers to do this. And, ultimately, the customer decision risk with the States

2292 ultimately. And we have had this conversation about a decade ago. So I think the
2293 prevailing policy wisdom has been to rely on stored fuels and imported LNG. I think the
2294 conversation is starting to turn to whether or not it makes sense to relieve those
2295 constraint directly.

2296 Ms. Lee. Thank you.

2297 And Mr. Asthana, you mentioned in your testimony that PJM facilitates the
2298 transfer of power to and from interconnected neighboring systems, including the
2299 Midcontinent Independent System Operator and the Southwest Power Pool to help meet
2300 electricity demands. Can you elaborate on how PJM works with neighboring
2301 jurisdictions to coordinate operations?

2302 Mr. Asthana. Yeah, thank you. We have joint operating agreements with our
2303 neighbors. So when we export to the Southwest Power Pool, they are not an immediate
2304 neighbor. We go through the Midwest ISO. But, particularly, with the Midwest ISO
2305 and with New York, we are continuously coordinating power flows back and forth. And
2306 then with Duke in the Carolinas and with TVA, also, all of their operators are talking
2307 between our systems. Because our systems impact each other. It is actually one big
2308 electrical system. And so you do have to coordinate at the seams.

2309 Ms. Lee. Thank you, Mr. Chairman. I yield back.

2310 Mr. Latta. Thank you very much. The gentlelady yields back.

2311 And the chair now recognizes the gentleman from Texas' 33rd District for 5
2312 minutes for questions.

2313 Mr. Veasey. Thank you, Mr. Chairman. I think everybody knows, and it has
2314 been briefly talked about -- Mr. Vegas knows this very well -- that Texas is growing very,
2315 very rapidly. We are having record-setting growth. We are also having record-setting
2316 heat. And every now and again, we will have some record-setting cold. And demand is

2317 likely to continue growing. And as I stated in our last hearing in the subcommittee,
2318 ERCOT does a great job in enabling new generation in its interconnection process. And
2319 to its credit, ERCOT vastly outpaces other regions in bringing new generation online, but
2320 that is only part of the question.

2321 You know, we are constrained by our grid infrastructure. And our failure to
2322 invest in grid infrastructure is a threat to our economic and national security. And
2323 unfortunately, I don't think that we are doing enough.

2324 There has been a lot of talked today about generation and load growth and rightly
2325 so. But today, I would like to hear from Mr. Vegas about a couple of other things
2326 focusing on Texas and our grid, and that is ERCOT's transmission planning and its demand
2327 response initiatives.

2328 And, Mr. Vegas, how is ERCOT considering transmission planning given ongoing
2329 congestion issues around the State?

2330 Mr. Vegas. Thank you for the question, Congressman. Transmission planning is
2331 absolutely one of the critical legs of the stool to ensuring the reliability, resiliency, and
2332 to enable the growth that we have been talking about.

2333 We have recently actually published a new regional transmission plan which lays
2334 out what the grid in ERCOT needs over the next 10 years, and it has new elements in it.

2335 Today, the ERCOT transmission system operates at a peak of 345,000 volts. We
2336 have laid out a plan that continues that strategy, but also one that adds a new extra high
2337 voltage network at 765,000 volts. That is helping to address the large power flows that
2338 are going to have to move around the State, it helps with congestion management, could
2339 eliminate a lot of the congestion constraints that we have, and will support the kind of
2340 growth that we are talking about.

2341 Mr. Veasey. Yeah, I also wanted to ask, too, when we had the Winter Storm Uri

2342 that, you know, we were, what, one minute and 30 seconds away from the entire grid
2343 crashing down, you know, one of the things that hasn't been talked enough about that I
2344 think we should talk more about is the winterization of Texas infrastructure. You know,
2345 we saw failures in both renewable and, you know, natural gas components during that
2346 storm.

2347 And I want to ask you in a State like Texas, it would be fairly inexpensive to do
2348 things like winterize, you know, wind turbine blades. But you wouldn't want to spend a
2349 lot of money in closing, for instance, outdoor, you know, gas facilities, and things like that.
2350 That could end up being very, very costly.

2351 And in a State like Texas, what can they do to protect those larger, older,
2352 platforms that are going to be much, much tougher to winterize?

2353 Mr. Vegas. Yeah, the kind of tactics that they are using are putting in wind
2354 breaks, putting in thermal heaters near where there is critical components and valves,
2355 compressors; element that when they are exposed to the wind typically are the ones that
2356 are at highest risk.

2357 Historically, Texas has always been weatherized their system for the heat of the
2358 hot summers so that they could run. So in closing, it was never really a strategy. So
2359 that now we are seeing more significant cold winter weather, what we need to do is deal
2360 with the changes that that brings in, and that is what they are doing to those gas plants as
2361 well as to the natural gas facilities is managing the wind chills, the weather breaks, and
2362 things like that.

2363 Mr. Veasey. If we have another storm like Uri next winter, has enough already
2364 been done to prevent those older, larger platforms from crashing again?

2365 Mr. Vegas. I think the weatherization measures we have in place today are very
2366 good. During any extreme weather event, there is always a risk of impact. Remember,

2367 these are 40-, 50-, 60-year-old machines that we are talking about. They do fail under
2368 duress and extreme conditions. But we are much better prepared today than we were
2369 during Winter Storm Uri.

2370 Mr. Veasey. And also, too, I wanted to just ask very briefly in the last remaining
2371 seconds here. Everybody is always concerned about reliability and affordability and not
2372 just the large industrial loads that we talk a lot about here. What strategies are being
2373 implemented to increase demand response participation among our residential and small
2374 business customers?

2375 Mr. Vegas. Thank you for that question. We actually have initiated a strategic
2376 program this year to initiate a new Consumer Residential Demand Response Program that
2377 is going to be financially supported by ERCOT. That work is going to be done in
2378 conjunction with the Public Utility Commission. And our goal is to have that
2379 meaningfully advanced throughout this year and available for residential consumers soon.

2380 Mr. Veasey. Thank you.

2381 Mr. Vegas. I would like to also add, we do have good residential programs in
2382 place today, but we want to grow them even further.

2383 Mr. Veasey. Right.

2384 Mr. Vegas. I think it is a great opportunity.

2385 Mr. Veasey. Thank you very much. Thank you, Mr. Chairman, I yield back.

2386 Mr. Latta. The gentleman yields back the balance of his time.

2387 The chair now recognizes the gentleman from Texas' -- oh, I am heading that way.
2388 Okay. Let's see, we have the gentleman from Texas for the next 5 minutes for his
2389 questions.

2390 Mr. Goldman. Thank you, Mr. Chairman. Thank you all very much for being
2391 here and for your time.

2392 Mr. Vegas, just for the record, so everyone knows, you were not there during
2393 Winter Storm Uri?

2394 Mr. Vegas. That is correct.

2395 Mr. Goldman. And have done a remarkable job since then. ERCOT has, the
2396 entire team has, the entire new team that has been put there. It was a perfect storm.
2397 It was extremely unique as people said, 100-year storm. And just for the record as well,
2398 have y'all had to shed load at all or request a shedding of load in the State of Texas since
2399 you have been in power?

2400 Mr. Vegas. No, we have not.

2401 Mr. Goldman. Thank you very much. I kind of rest my case with that. It is my
2402 opinion that there certainly was human error involved during the record storm. And I
2403 just want to thank you for your leadership and all of ERCOT for what you have been able
2404 to accomplish and do in the last several years. So thank you very much.

2405 Mr. Vegas. Thank you.

2406 Mr. Goldman. With that I will turn to a little bit of the panel.

2407 Mr. Asthana, you talked about permitting reform. What reform needs to happen
2408 in permitting? I am sorry if these questions have been asked, and we are here at the
2409 end, get the very last questions. And so, I am sorry if that was asked earlier. But if you
2410 don't mind, what kind of reforms need to be put in for permitting?

2411 Mr. Asthana. Yeah, I mean, there was bipartisan permitting reform that was
2412 being advanced in Congress before, and we were supportive of that. But I think the
2413 broader point is, it is taking too long to build new generation and very difficult to build
2414 new transmission, and there are good reasons for that. People don't want large
2415 infrastructure on their property and near them, and we need to respect that. But I think
2416 we are going to have to solve this issue. And I think giving authority to -- and there are

2417 various bodies you could give authority to -- but giving centralized authority to approve
2418 permitting, I think, is one idea.

2419 Mr. Goldman. Something like the nuclear modular reactor, does that excite you
2420 or concern you?

2421 Mr. Asthana. I think it is exciting. Definitely exciting.

2422 Mr. Goldman. Good. Okay.

2423 Mr. van Welie, you said there was new supply coming online. What type of new
2424 supply is coming online in your area?

2425 Mr. van Welie. Well, sir, so the proposed new supply was offshore wind. So as
2426 I mentioned in my testimony, given --

2427 Mr. Goldman. Sorry to interrupt. You said the new supply is wind coming
2428 offline?

2429 Mr. van Welie. Offshore wind.

2430 Mr. Goldman. Offshore wind.

2431 Mr. van Welie. Yeah.

2432 Mr. Goldman. What happens if the wind doesn't blow?

2433 Mr. van Welie. I think the region is going to have to -- well, your question is
2434 whether the wind doesn't blow or whether the offshore wind comes online.

2435 Mr. Goldman. So you said the new generation is offshore wind coming online.

2436 Mr. van Welie. Right.

2437 Mr. Goldman. What happens if the offshore wind doesn't blow?

2438 Mr. van Welie. I think you have to have enough resource on the system to back
2439 that up.

2440 Mr. Goldman. So will you have enough? If that is the new coming online, what
2441 is the backup to that if the wind doesn't blow?

2442 Mr. van Welie. Well, sir, the good thing about offshore wind in the wintertime, it
2443 actually helps with the gas constraint that we have on the system because the wind
2444 profiles in the winter are actually quite favorable. So it helps displace the use of stored
2445 fuels. Of course, there will be times when an offshore wind does not blow, and at those
2446 times, you have to depend on other resources like natural gas or oil resources.

2447 Mr. Goldman. Do you have enough natural gas?

2448 Mr. van Welie. Now modeling, we have enough in combination with the
2449 offshore wind to make it work.

2450 Mr. Goldman. Right now?

2451 Mr. van Welie. Right now.

2452 Mr. Goldman. So what is the solution moving forward?

2453 Mr. van Welie. The solution moving forward is that the regional is going to have
2454 to deal with the energy constraint. It really comes down to storage of energy in some
2455 form. The question is, what does that look like? Or you could solve this problem
2456 through moving to other technologies like small modular reactors. So there is a variety
2457 of options. And the States are going to have to think about where they want to see a
2458 policy to address this over time.

2459 Mr. Goldman. And what is your personal position on the modular reactors?

2460 Mr. van Welie. I am in favor of them.

2461 Mr. Goldman. Okay. Thank you very much.

2462 Mr. Chairman, I will yield the rest of my time. Thank you, panel, very much for
2463 your time.

2464 Mr. Latta. Well, thank you very much.

2465 The gentleman yields back the balance of his time.

2466 The chair recognizes the gentleman from California's 50th District for 5 minutes of

2467 questions.

2468 Mr. Peters. Thank you, Mr. Chairman, I had to step out a little bit. I didn't hear,
2469 and I don't think there has been any discussion whatsoever of conservation as part of this
2470 conversation. The idea that you don't even think about not burning energy as part of
2471 this approach to supply, I think we are letting it get away from us. And, in fact, this
2472 week what we are voting on, the business of the House of Representatives is to overturn
2473 efficiency standards for refrigeration that would help us save energy and make us have to
2474 produce that much less energy. And I just think it is crazy.

2475 The other thing I still recommend, and I am still interested in, is the Energy
2476 Innovation and Carbon Dividend Act, which is a way to price carbon and then return the
2477 dividends to people so that their overall tax burden doesn't go higher, but they have an
2478 incentive to conserve energy. We should provide that incentive from every economic
2479 decisionmaker in the economy from a household to the biggest corporation. It just
2480 makes sense to me.

2481 As we face a challenge, which is really unprecedented, I certainly think we ought
2482 to build everything we can. We ought to build as much generation as transmission as
2483 we can. And for years, I have said I have sounded the alarm that our energy grid is too
2484 small, it is too old, and it is done. And we have to do better.

2485 But the construction of new high-voltage transmission in the U.S., which allow us
2486 to send energy from it is abundant to where it is needed is slow to a trickle. In 2023, we
2487 built just 55 miles of new high voltage transmission.

2488 At our current pace, we will build in this decade a fifth of the transmission we did
2489 a decade ago. The truth is that building big projects in America has become
2490 extraordinarily difficult. Our agencies don't have enough people who are funding to
2491 permit these projects in a timely manner. Large-scale projects also face litigation,

2492 complex environmental review, bureaucratic delays. And we all ought to be about fixing
2493 that. And certainly, this committee knows that I have been working on permitting
2494 reform to the displeasure of some of the incumbents on the environmental side because
2495 we have to get this done. But I think conservation ought to be something that we think
2496 about as well.

2497 Let me just ask -- you know, Mr. Asthana, you were asked for some specifics on
2498 permitting reform. I am going to just say, what I would ask for all of you, and maybe you
2499 can provide this in writing, is if your companies have experiences that they have -- you
2500 can go to your lawyers about this, if you need to -- but if you have got experiences that
2501 this committee should understand that you think don't make any sense, that could be
2502 improved, just specific recommendations on laws that could be changed, I would love to
2503 hear them. I think we are ready for that here. And I think all of the above means all of
2504 the above.

2505 You know, credit to Texas, by the way, which has the closest thing to a free market
2506 in energy that we have. They are building more wind than anybody, because that is
2507 what the market demands. And good for them. You know, they deserve our
2508 congratulations. And I think in some ways we could learn some lessons from them.

2509 Mr. Mainzer, I know in California we have been working hard on interconnection
2510 as a priority for years. California has added 20 gigawatts of new resources, 11 gigawatts
2511 of storage while investing in transmission. Can you talk about how grid capacity is a
2512 barrier to getting new resources on the grid and how CAISO is trying to interconnect in
2513 smarter ways that we might learn from here?

2514 Mr. Mainzer. Absolutely. Thank you, Congressman. So we have also been,
2515 just actually just last year submitted very significant package of reforms to our
2516 interconnection community process to FERC that were fully approved. We have already

2517 put them into place. Last fall, we have seen a 67 percent reduction in request in queue
2518 in our current cluster.

2519 So we are absolutely taking friction out of the system there. We need to keep
2520 moving. We need to keep going. And that process is grounded in the coordination
2521 that we have with the State agencies to on-board up to 85 gigawatts in new resources
2522 over the next decade.

2523 Mr. Peters. I put forward a number of bills to help efficiently plan and permit
2524 transmission projects. And one of them is my bipartisan Speed and Reliability Act, which
2525 streamlines permitting for lines that significantly relieve grid congestion and improve
2526 reliability.

2527 Ms. Curran, you say in your testimony that approving and building new high
2528 voltage transmission lines is a complex and lengthy process. Congratulations on that.
2529 That is well stated. But maybe you could give me a little bit of color on that. What do
2530 you find is a challenge for you? And what is the complexity you think doesn't need to be
2531 so complex?

2532 Ms. Curran. Sure. So really, I think about the length of time and the complexity
2533 in three phrases: First planning, then permitting, then actually building it. And the role
2534 of the ISO is really on the side of the planning. We have been successful in taking an
2535 approach where we look at multiple values for transmission, not just economic, but also
2536 reliability, also enabling whatever the State or member needs are and have gotten a fair
2537 amount of transmissions built. Our States have really leaned in on the permitting
2538 questions. But we have also made decisions like trying to utilize existing transmission.

2539 The key in our world is who pays for it? And so having a business case that
2540 shows benefits well in excess of cost has been, I think, the secret to getting that
2541 transmission approved.

2542 Mr. Peters. Okay. I am out of time, Mr. Chairman. But I would ask that I be
2543 permitted to ask that those questions be submitted in the record, answers on specific
2544 ideas from the operators on permit reform, and I yield back.

2545 Mr. Latta. Thank you very much. The gentleman yields back.

2546 And the chair now recognizes the gentlelady from North Dakota for 5 minutes for
2547 questions.

2548 Mrs. Fedorchak. Excellent. Thank you. Thank you all for being here. I have
2549 said to a few of you that this panel is the most powerful panel of people in our whole
2550 country. And I mean that sincerely. Because at this table -- and I hope my colleagues
2551 appreciate just how much, experience technical expertise exists at this table -- you have
2552 the power to pretty much bring us all to our knees and shut our whole country down.
2553 So thank you for everything that you do every day to keep our economy going and our
2554 communities safe.

2555 So a couple of questions I would like to dig into here. First of all, are government
2556 incentives affecting what types of resources are coming into the market getting into the
2557 queue? And if you could each just kind of say, like, either in your view, in your market,
2558 the impact that the government incentives are having on what resources come would be
2559 either significant, modest, minimal, or any qualification you want to say? Starting with
2560 you, Mr. Asthana.

2561 Mr. Asthana. Yeah, I would say they are significant and the incentives from the
2562 Federal Government are significant, and then our different States have different
2563 incentives that make a difference as well.

2564 Mrs. Fedorchak. Okay.

2565 Mr. van Welie. I would agree with that point.

2566 Mrs. Fedorchak. Significant?

2567 Mr. van Welie. Significant, yes. State and Federal.

2568 Mrs. Fedorchak. Excellent.

2569 Ms. Curran. Yeah, also significant. We have seen over a number of years, that
2570 depending on what the incentive is, the makeup of our queue and the volume of
2571 generation in it does change fairly dramatically.

2572 Mrs. Fedorchak. Okay.

2573 Mr. Dewey. It is a very significant driver in New York, yes.

2574 Mrs. Fedorchak. Okay.

2575 Mr. Nickell. I agree with everything that has been said so far. Significant.

2576 Mr. Mainzer. I would probably characterize it as modest to significant only
2577 because the major driver of our queue is really State policy at this particular juncture.
2578 So, but it is certainly an impact.

2579 Mr. Vegas. And in Texas it is significant impact as well.

2580 Mrs. Fedorchak. Okay. And so across the board, significant and State policy
2581 also being significant. What I didn't hear, or what I think is missing in there is that it is
2582 market forces that is driving what comes into the queue or even like the demand -- what
2583 you need, what the markets need doesn't seem to be factoring in there. That to me is a
2584 pretty significant problem that we all ought to be thinking about moving forward.

2585 There is a lot of talk about costs. And, you know, what is low cost? You know,
2586 everyone wants low costs. Everyone wants to keep the cost down for consumers.

2587 Mr. Nickell, in SPP -- and I am going to ask Ms. Curran, too, in MISO -- what costs
2588 are often not included in this calculation of different comparisons between fuel, you
2589 know, in terms of their total cost to the grid? What costs are not included in that often,
2590 in your opinion?

2591 Mr. Nickell. I think, you know, the cost of reliability risks are often not included.

2592 We know from Winter Storm Uri at least reports have indicated \$200 billion-plus of cost
2593 just as a result of that one event. And I think we oftentimes too quickly forget about the
2594 cost of not being able to provide reliable electric service. We think all too often about
2595 the cost of investment.

2596 Mrs. Fedorchak. Yeah.

2597 Mr. Nickell. The cost to invest new transmission, the cost to invest new
2598 generation. We forget about the benefits of resilience, and we forget about the cost of
2599 not having reliable service.

2600 Mrs. Fedorchak. Okay. Very good. And, Ms. Curran, I am going to skip you
2601 for now and ask everybody one quick question.

2602 If you could tell us -- if you could pick one thing -- I know there is many things you
2603 have highlighted today that you want us to take away -- but what is the one thing -- if you
2604 could pick one thing that we need to correct to meet and maintain reliability, meet the
2605 demand, what is the sort of one thing you would say we need to do quickly or first?

2606 Mr. Asthana. I think hang onto the generation that we have already to start
2607 with.

2608 Mrs. Fedorchak. Okay.

2609 Mr. van Welie. I will add the paying attention to the gas, electric
2610 interdependency because we need to view this as one system, not separate systems.

2611 Mrs. Fedorchak. Excellent.

2612 Ms. Curran. I will also say hold onto the generation we have, slow down those
2613 retirements of existing units.

2614 Mr. Dewey. I would say hold onto the generation, but also make sure that the
2615 market signals and the development of the markets align with the type of reliability
2616 attributes that you need so we attract the right kind of investment.

2617 Mrs. Fedorchak. Excellent.

2618 Mr. Nickell. Only because I want to be a little different.

2619 Mrs. Fedorchak. It is okay to be the same.

2620 Mr. Nickell. I think we need to more effectively use the grid we already have.

2621 Mrs. Fedorchak. Okay.

2622 Mr. Mainzer. I would say we want to ensure we have strong accountability
2623 mechanisms to resource adequacy.

2624 Mr. Vegas. I agree with all of my peers. And I will just add, incentivizing
2625 reliability discretely and explicitly will be very helpful.

2626 Mrs. Fedorchak. Excellent. Thank you all. I yield back.

2627 Mr. Latta. The gentlelady's time has expired and yields back.

2628 The chair now recognizes the gentleman from Massachusetts' Fourth District for 5
2629 minutes for questions.

2630 Mr. Auchincloss. Thank you, Chairman. Before I begin the questions, I do want
2631 to dig into the concept of the market for energy production, because Democrats actually
2632 really agree. We want competition in the market for energy generation, because as the
2633 gentleman from Texas, Mr. Pfluger, said earlier, different types of generation portfolios
2634 make sense in different States. And we want low cost and reliability to be rewarded,
2635 which is why we passed the Inflation Reduction Act, which said, one, there is an overall
2636 negative externality associated with fossil-fuel emitting types of generation. And so, we
2637 are going to issue a tech-neutral tax credit to all clean sources of generation that don't
2638 have greenhouse gas emissions, which have a negative externality. But we are not going
2639 to pick winners or losers in that form of clean energy generation.

2640 The IRA was an energy pro-market piece of legislation. And it is, in fact, the
2641 Trump administration who is picking winners and losers and distorting energy markets.

2642 They are doing so with tariffs on electricity from Canada. They are doing so by canceling
2643 offshore wind contracts, despite the fact that in some States, offshore wind is an
2644 important part of that generation portfolio. They are doing so by trying to get fossil
2645 fuels to jump the queue.

2646 So when we talk about energy markets, it is Democrats who are supporting
2647 well-functioning energy markets, and it is the Trump administration that is impairing
2648 them.

2649 Let's talk now about how this is affecting Massachusetts, Mr. van Welie. First of
2650 all, tariffs. New England is a net importer of electricity, correct?

2651 RPTR DETLOFF

2652 EDTR ROSEN

2653 [1:14 p.m.]

2654 Mr. Van Welie. Correct.

2655 Mr. Auchincloss. And we get that from Canada?

2656 Mr. Van Welie. And from New York.

2657 Mr. Auchincloss. But New York gets some from Canada, too?

2658 Mr. Van Welie. Correct.

2659 Mr. Auchincloss. Now, under chapter 27 of the Harmonized Tariff Schedule of
2660 the United States, electrical energy is identified as a good but has a, quote, "free tariff
2661 designation that is not subject to the border entry procedures through which custom
2662 duties are imposed."

2663 Public statements have suggested that it would not be tariffed, but do you know?

2664 Mr. Van Welie. We do not know. We have asserted what you have just said,
2665 but we have also put in a backstop, which is to ask the FERC to give us the permission to
2666 allocate the cost if we need to collect those monies.

2667 Mr. Auchincloss. And what is the cost of that uncertainty to New England
2668 ratepayers?

2669 Mr. Van Welie. It depends on the level of the tariffs. At the level of 25 percent,
2670 there is probably of the order of about \$160 million a year.

2671 Mr. Auchincloss. And even the uncertainty is impairing your ability to run the
2672 grid?

2673 Mr. Van Welie. Not at this point. So tariffs, you know, will affect price in some
2674 way, but they shouldn't -- it shouldn't affect reliability.

2675 Mr. Auchincloss. But are you having to spend resources and time on figuring out

2676 how you would levy that tariff?

2677 Mr. Van Welie. Yes, of course.

2678 Mr. Auchincloss. Yeah. And that has an indirect cost.

2679 Let's talk about our reliance on liquefied natural gas. That is our sort of swing
2680 winter source of energy, yes?

2681 Mr. Van Welie. Correct.

2682 Mr. Auchincloss. And it comes mostly from Trinidad and Tobago?

2683 Mr. Van Welie. Correct.

2684 Mr. Auchincloss. And the Everett port terminal?

2685 Mr. Van Welie. Correct.

2686 Mr. Auchincloss. And it is subject to global spot prices?

2687 Mr. Van Welie. Well, I would say it is another major import point for New
2688 England, which is the same joint terminal in New Brunswick. Between that terminal --

2689 Mr. Auchincloss. Between those two.

2690 Mr. Van Welie. -- and Everett is where the gas comes.

2691 Mr. Auchincloss. But it is subject to the spot price globally, right? That LNG?

2692 Mr. Van Welie. Correct.

2693 Mr. Auchincloss. So Massachusetts is at the whim of global movements in LNG
2694 prices, right? So when something exogenous happens like, I don't know, Russia invades
2695 Ukraine, we bear the brunt of higher LNG prices?

2696 Mr. Van Welie. That is correct.

2697 Mr. Auchincloss. So Massachusetts is not in control of its own energy destiny
2698 right now?

2699 Mr. Van Welie. Correct. I think Massachusetts can do some things to reduce
2700 those effects.

2701 Mr. Auchincloss. Yeah. And those things could include offshore wind?

2702 Mr. Van Welie. And -- yes -- or dual fueling, or relieving the gas pipeline
2703 constraints.

2704 Mr. Auchincloss. Let's talk about some of those in the next minute.

2705 Mr. Van Welie. Uh-huh.

2706 Mr. Auchincloss. Offshore wind, as you said -- actually, the wind does blow in
2707 the wintertime pretty consistently, which is exactly when we have that peak LNG
2708 demand. So offshore wind would be very helpful in offsetting our vulnerability to global
2709 LNG spot prices.

2710 Nuclear. Would it help us if we built a nuclear power plant in Massachusetts?

2711 Mr. Van Welie. It would, but I think that will be some time before that would be
2712 practically realized.

2713 Mr. Auchincloss. Well, the best time to plant a tree is 20 years ago, but the
2714 second best time is now, right?

2715 Mr. Van Welie. I agree.

2716 Mr. Auchincloss. And then tell me about dual use in our last 30 seconds.

2717 Mr. Van Welie. Say again?

2718 Mr. Auchincloss. Dual use. The dual fueling.

2719 Mr. Van Welie. Dual fuel. So that is really to allow -- we have some 7,000
2720 megawatts of gas on these resources that cannot access gas from the pipelines when it
2721 gets cold. So one way of working around the gas constraint is for the New England
2722 States to allow for permitting of dual fueling --

2723 Mr. Auchincloss. Dual fueling.

2724 Mr. Van Welie. -- which would allow them to switch to fuel oil and utilize that
2725 fuel instead of gas.

2726 Mr. Auchincloss. Thanks for your time and your expert testimony, Mr. Van
2727 Welie.

2728 I yield back.

2729 Mr. Latta. Thank you. The gentleman yields back.

2730 The chair now recognizes the gentleman from New York's 23rd District for 5
2731 minutes for questions.

2732 Mr. Langworthy. Thank you very much, Mr. Chairman.

2733 Mr. Dewey, the New York ISO has repeatedly raised strong concerns over our
2734 State's aggressive transition away from sources of energy, like natural gas, and towards,
2735 quote, "renewables" like wind and solar. In a 2023 report, the ISO stated, "It is
2736 important to note that commercially available technologies to provide dispatchable,
2737 non-emitting supply do not exist at scale at this time."

2738 Does the ISO's definition of "dispatchable" encompass the ramp-up time for this
2739 non-emitting supply mentioned in this and other reports?

2740 Mr. Dewey. Yes, it does. When we talk about dispatchable, emission-free
2741 resources, we are projecting the need and the necessity to have a resource that can both
2742 meet the State's climate legislation, which mandates a carbon-free electric system by
2743 2040, as well as continuing to meet the dispatchability requirements of managing the
2744 grid. That gap, that resource, does not exist today. The technology does not exist
2745 today.

2746 Mr. Langworthy. What impact does a longer ramp-up time for these sources of
2747 generation like wind and solar have on grid reliability in a State, particularly when we
2748 experience weather events like Winter Storm Elliott that hit my district in the winter of
2749 2022?

2750 Mr. Dewey. It requires extensive planning. It requires a lot of focused

2751 attention on the planning models so that we are not caught surprised by those swings in
2752 weather. It requires us to have additional and subsequent resources on standby in case
2753 we get those forecasts wrong so that we can quickly shift to fill in the gap that can
2754 sometimes surprise us if it happens too quickly.

2755 Mr. Langworthy. Thank you. As you point out in your testimony today, the
2756 2024 to 2034 RNA directly implicates our State's own public policies in the concerns over
2757 declining reliability margins. Specifically since the enactment of New York's Climate
2758 Leadership and Community Protection Act, more than twice the capacity of generation
2759 has been deactivated than has been added to the system. You go on here in your
2760 testimony to mention how this transition is raising new challenges for grid reliability in
2761 the event of significant weather events.

2762 Mr. Dewey, has any oversight been conducted by the Federal Energy Regulatory
2763 Commission into these reliability concerns voiced by New York ISO, and has FERC given
2764 any warning signals to the State of New York based on what seemed to be very consistent
2765 concerns with reliability resulting from public policy choices?

2766 Mr. Dewey. We had a lot of engagement and a lot of oversight with the North
2767 American Electric Reliability Corporation or NERC, which is the reliability arm of the FERC.
2768 They are predominantly the enforcement arm to make sure reliability criteria is met.
2769 We work very closely with them to make sure that the market rules that we develop that
2770 we administer under the FERC tariffs contemplate some of the changes that we are going
2771 to see on the electric power grid.

2772 So, primarily, that engagement is with NERC on reliability and with FERC on the
2773 implementation of the market rules necessary to be able to meet those reliability criteria.

2774 Mr. Langworthy. Okay.

2775 And on this subject of State-level policy choices impacting reliability and

2776 affordability, Mr. Van Welie, in 2013, you testified before this committee that there were
2777 concerns in ISO New England that insufficient natural gas infrastructure would result in
2778 increased costs, increased emissions, and reduced reliability. You reiterated your
2779 testimony in 2017, and in today's testimony, you stated that ISO New England gets more
2780 than 50 percent of its electricity from natural gas. Yet, it doesn't have enough natural
2781 gas pipeline capacity in the winter.

2782 With this history, Monday's Washington Post reports that electricity costs in New
2783 England are 40 percent more than in the rest of the country. Do you continue to have
2784 fuel security concerns, and would additional pipeline capacity sourcing domestic supplies
2785 to source efficient natural gas lower costs for consumers and address fuel security
2786 concerns?

2787 Mr. Van Welie. So, the actions that States have taken in the last decade have
2788 mitigated some of the price effects of the gas constraint by essentially taking demand off
2789 the system, and they have done that through investment in generation and demand
2790 response and energy efficiency, but the long-run concern still is there.

2791 And to your point, I think the gas constraints have resulted in big costs every
2792 winter when it gets cold and we have had to rely on LNG or oil. So I think the policy
2793 question for the States is how best to mitigate those effects.

2794 Their actions have also focused on trying to add offshore wind into the mix
2795 because that would be beneficial. To the extent offshore wind is delayed, I think the
2796 conversation will turn to what are the other possibilities. And so the options on the
2797 table would be additional pipeline infrastructure, the dual fueling that I mentioned, and I
2798 would say one thing Congress could help us with here is the Jones Act.

2799 So I saw an article just earlier this week that Puerto Rico is now finally getting
2800 domestic LNG shipped to it, and it would be helpful if New England could access domestic

2801 LNG. We export it at \$6 for million Btu, but we are having to import it at \$35 to \$40 per
2802 million Btu. So I think Congress -- that is something that could help.

2803 Mr. Latta. I am sorry. The gentleman's time has expired.

2804 Mr. Langworthy. My time has expired. Thank you, and I yield back.

2805 Mr. Latta. Thank you very much.

2806 The chair now recognizes the gentleman from Ohio's 12th District for 5 minutes
2807 for questions.

2808 Mr. Balderson. Your colleague from Ohio. Thank you, Mr. Chairman.

2809 Thank you all for being here today. I do have to -- just in case, Mr. Vegas, I don't
2810 get to you, I have a question for you. But we miss you in Ohio. Good seeing you.

2811 My first question is for Mr. Asthana. I would like to start with you and follow up
2812 on a conversation I had with your colleague, Asim Haque, during a hearing this
2813 subcommittee held earlier this month.

2814 PJM's existing install capacity mix is overwhelmingly made up of dispatchable
2815 power generation such as natural gas, nuclear, and coal. However, as of a few days ago,
2816 only 5 percent of the active projects in the PJM queue are thermal generation.
2817 Additionally, between 2022 and 2023, PJM saw over 11,000 megawatts of generation
2818 deactivated, and only 4,000 megawatts of new generation added to the grid.

2819 Do you have any concerns with the lack of dispatchable power generation
2820 entering PJM's interconnection queue, and are there enough of these projects to offset
2821 premature retirements and meet the rising growth demand?

2822 Mr. Asthana. Yes. We do have concerns with the lack of dispatchable
2823 generation in the queue, and we have taken significant action to deal with that, including
2824 our Reliability Resource Initiative. And I am happy to talk about that if you would like.

2825 Mr. Balderson. Thank you. FERC recently approved PJM's Reliability Resource

2826 Initiative, or RRI, to allow shovel-ready projects that enhance grid reliability to get built
2827 and connected to the grid as quickly as possible. So I do want you to expand on it a little
2828 bit. PJM recently announced that the RRI received 94 applications, totaling over 26
2829 gigawatts of nameplate capacity.

2830 Mr. Asthana, I understand PJM is actively reviewing these applications. Can you
2831 discuss how you will score or weigh these projects to ensure they will get built and online
2832 as quickly as possible?

2833 Mr. Asthana. Yeah. Thank you for the question, Representative.

2834 So our goal with this initiative was to get shovel-ready projects that had certain
2835 attributes, and those attributes were really reliability-supporting attributes. We are
2836 really excited that we have gotten almost 2x subscription of this opportunity -- 27
2837 gigawatts, almost -- and now we are scoring them. We are scoring them based on
2838 100-point scale based on criteria like ELCC and UCAP, which are technical terms for just
2839 firmness and reliability support; also on viability and project support and things like
2840 location. So if they are located -- projects are located in a more constrained area, they
2841 will get extra points.

2842 So there is a set of criteria. It adds up to 100 points. And, really, we are looking
2843 for viability, constructability, how quickly they can come online, and how much they can
2844 support the reliability of the grid.

2845 Mr. Balderson. Okay. A follow-up to that is how can grid operators, FERC and
2846 Congress, build off this initiative to get more generation built and connected?

2847 Mr. Asthana. Yeah. I am happy to ask my colleagues here.

2848 I know we have all talked about this, and some other systems are considering
2849 similar initiatives, but I think it is really important when we are facing a problem without a
2850 clear solution -- which is generators are retiring -- we need to serve more load, and that

2851 we be creative and come up with ways to fill the pipeline with the type of generators that
2852 will serve that load, and that is what we are trying to do with this initiative. And we are
2853 happy to share our experience with others.

2854 Mr. Balderson. Thank you very much.

2855 Mr. Vegas, I did have time for you, but it is also for Asthana. I would like
2856 Mr. Vegas to go first.

2857 Last year, PJM, ERCOT, SPP, and MISO jointly filed an amicus brief with the D.C.
2858 Circuit Court against the Biden EPA's Clean Power Plant 2.0. I am extremely grateful
2859 that, just a few weeks ago, Administrator Zeldin announced that EPA will be reconsidering
2860 the Clean Power Plant 2.0 along with dozens of other Biden-era rules and regulations.

2861 Since I am limited on time, Mr. Asthana and Mr. Vegas -- and, Mr. Vegas, you go
2862 first -- if the Clean Power Plant 2.0 were to remain in effect, would your service territory
2863 see an increased risk of rolling brownouts and blackouts?

2864 Mr. Vegas. Yes. That plan had risked more than 14,000 megawatts of existing
2865 coal plants that are serving the grid today. They would be at risk, and that would be a
2866 significant reliability concern.

2867 Mr. Balderson. Thank you very much.

2868 Mr. Asthana?

2869 Mr. Asthana. Yes. That plan would have increased the reliability risk and will in
2870 our region if it goes forward.

2871 Mr. Balderson. Thank you both.

2872 Thank you, everybody.

2873 Mr. Chairman, I yield back.

2874 Mr. Latta. Thank you very much.

2875 I will just let everyone know they did just call votes. It is the only way we will get

2876 through, we still have about six members that are still on the list.

2877 And so, at this time, we are going to go to the gentleman from Colorado for 5
2878 minutes for questions.

2879 Mr. Evans. Thank you, Mr. Chairman and Ranking Member.

2880 Thank you, of course, to the witnesses for coming today.

2881 Mr. Nickell, my first question will be to you. We have heard a lot of conversation
2882 today about how we need more power, and I don't know that I have fully wrapped my
2883 mind around some of the nuances that I am sure you are much more familiar with,
2884 particularly when it comes to power versus dispatchable power and things like
2885 cost-efficiency versus reliability in terms of actually obtaining that power.

2886 And so what I mean by that is I have been on the floor for some of my largest
2887 electric utility providers in Colorado where they are talking about not just what is
2888 currently powering the grid, but looking forward into the future in terms of weather
2889 reporting to figure out what is the weather going to be. Is the wind going to be
2890 blowing? Is the sun going to be shining? Where is not only the affordable power going
2891 to come from or forecasted to come from in the next couple of hours to days, but is it the
2892 most cost-efficient? Is it the most reliable?

2893 So can you just speak a little bit to the complexities of managing a grid,
2894 understanding that not all power is created equal and drawing some of the distinctions
2895 between the dispatchable power and the variable power and also the most affordable
2896 power versus the most reliable power?

2897 Mr. Nickell. Sure. And thank you for the question. It is a difficult question to
2898 answer, but I will do my best.

2899 So, when I think of dispatchable power, that is generation that has fuel that can be
2900 stored. It is not weather-dependent. And so, gas, for example, is a primary source of

2901 dispatchable generation today in SPP's footprint, as is coal generation. Nuclear as well is
2902 a dispatchable, although not as quickly dispatchable as gas and coal.

2903 So, when we have weather-dependent situations on the grid, we have to depend
2904 on dispatchable generation to show up in order to deal with that intermittent nature of
2905 renewable generation.

2906 I will give you an example. On June 6 of 2024, last year, out of 32,000 megawatts
2907 of nameplate wind capacity, only 100 megawatts were produced. One hundred divided
2908 by 32,000 megawatts is a really small number. It is practically zero. And that is across
2909 14 States in the middle part of America where wind is supposed to be at its strongest
2910 potential.

2911 So we have to have dispatchable generation that has fuel available to be able to
2912 offset the fact that that wind generation didn't show up.

2913 Mr. Evans. So, in that space, we talked about the dispatchability and the
2914 reliability. Can you also speak to the affordability? I am from a State that does
2915 wholesale power, and so, I have had conversations with the folks that are looking to the
2916 next 24 hours and the next 72 hours for those bulk power purchases.

2917 Can you speak to the end impact for the consumer in terms of not only the
2918 reliability but the affordability in looking at the power mix that is going to supply the grid?

2919 Mr. Nickell. So affordability comes into play, one, at the State level. For SPP,
2920 we still have vertically integrated utilities, and the State regulators have jurisdiction over
2921 the affordability equation.

2922 I will say that if, for example, a power plant that is a wind generator only gets a
2923 certain amount of capacity credit and, for example, it only -- let's say on average -- is
2924 about 20 percent -- a gas generator gets about 90 percent capacity credit -- it would take
2925 five times as much nearly of wind generation to offset the cost of a single gas plant.

2926 So that is the equation. That is the cost equation that each of our utilities and
2927 their States have to manage in order to figure out what is the most affordable plan going
2928 forward to serve demand.

2929 Mr. Evans. So, to your previous example, you were talking about 32,000
2930 megawatts of wind generation, and you have seen that dip down to 100 megawatts of
2931 wind generation. You have still got to be able to fuel the grid.

2932 Mr. Nickell. That is right.

2933 Mr. Evans. Is it more or less expensive in those situations to have to go get
2934 power from a dispatchable source versus from a 32,000 megawatt facility that, at that
2935 particular moment, is only producing 100?

2936 Mr. Nickell. Well, it is not a matter of affordability at that point, it is a matter of
2937 keeping the lights on. So you have no other choice but to use what is available and what
2938 has actually already been paid for by the ratepayers in the footprint. So at that point, it
2939 is not a matter of affordability, it is a matter of reliability.

2940 Mr. Evans. Thank you.

2941 I yield back, Mr. Chairman.

2942 Mr. Latta. The gentleman yields back.

2943 The chair now recognizes the gentleman from Georgia for 5 minutes for questions.

2944 And, again, we are about 5 minutes into votes right now.

2945 Mr. Carter of Georgia. Mr. Chair?

2946 Mr. Latta. I am sorry. I guess they had the order wrong on my sheet.

2947 The gentleman from Pennsylvania.

2948 Mr. Joyce. First, I want to thank Chairman Latta for allowing me to waive on to
2949 this important hearing.

2950 When it comes to energy production, all energy is not created equal. The

2951 capacity factors of wind and solar are simply too small to provide the reliable energy that
2952 our grid requires today. What we need in plain terms is more baseload generation.
2953 We need more coal, more gas, and more nuclear. It does not matter how many
2954 gigawatts of wind and solar capacity are built if they are not generating them when you
2955 need them. Unfortunately, we are doing worse than not building dispatchable
2956 generation. We are actually retiring it. We are shutting it down.

2957 PJM -- and I thank you for testifying here today -- is the Nation's largest RTO, and
2958 includes my district in Pennsylvania. PJM released a report in 2023 projecting 40
2959 gigawatts of reliable dispatchable generation will retire by 2030, roughly 25 percent of
2960 the system's installed capacity at that time. PJM labels the majority of these
2961 retirements as policy-driven decisions.

2962 This is a time when demand is actually growing. Pennsylvania is in a great
2963 position to benefit from the investment in jobs of the AI revolution, but we need to have
2964 the energy available to build it. With Microsoft and Amazon poised to build colocated
2965 data centers in Pennsylvania, we need to steady the ship. We need to encourage
2966 investment to unleash the energy that is underneath the feet of my constituents.

2967 Mr. Asthana, do you agree with me that we need more dispatchable generation
2968 built within PJM?

2969 Mr. Asthana. Yes, very much so.

2970 Mr. Joyce. Mr. Asthana, PJM has a variety of tools to incentivize building new
2971 generation, and I am encouraged by the success of the Reliability Resource Initiative, but
2972 it is a one-time fix, and the potential 26.6 gigawatts of additional power is simply not
2973 enough. Holding consistent capacity auctions are critical to providing long-term
2974 solutions for the PJM market.

2975 Do you believe that the capacity auctions are working to incentivize building and

2976 retaining that generation, and if not, how can it be changed to attract new investment?

2977 Mr. Asthana. Yes. We are seeing the capacity auctions work. So we have
2978 seen multiple generators withdraw their retirement notices, for example. We have seen
2979 a nuclear power plant, the Crane Clean Energy Center -- 835 megawatts -- announce that
2980 it is coming back. Homer City in Pennsylvania, the plant was demolished, but they are
2981 looking at repowering -- using that site to build a very large gas generator. And, while
2982 the capacity market isn't the only reason, it is definitely setting the stage for these
2983 decisions.

2984 Now, I think the challenge that we are facing looking forward is that there is a big
2985 backlog for turbines. And so there is a big price premium for turbines. And so, the
2986 price of the capacity market will have to ascend to incent new generation that is not
2987 already -- beyond what is in the queue already is going to be really high, and I think it is
2988 going to create affordability issues that we are going to have to deal with.

2989 Mr. Joyce. Mr. Asthana, I am concerned that PJM gave into political pressure of
2990 some of the governors of its member States, and this is a very distressing precedent.
2991 What are the dangers of governors in the future influencing PJM's market to score
2992 short-term political points?

2993 Mr. Asthana. Yeah. Thank you for that question. We did have fairly
2994 bipartisan support for instituting, I think, a short-term price gap, if that is what you are
2995 referring to. We had 11 of our 13 States write to us and support that and five
2996 governors.

2997 But I do think it is important to let our markets work, and we are going to have to
2998 make sure that we really allow that in the future.

2999 Mr. Joyce. I think that the path that PJM currently is on is unsustainable.
3000 When some member States shut down baseload power plants and others harm

3001 investment in new generation, this is creating a situation that will make the grid unstable.
3002 If this continues, it will be blackouts during extreme weather events, and my concern is
3003 that this will ultimately cost human lives.

3004 I thank you, Chairman Latta, for holding this important hearing and allowing me to
3005 waive on. I yield the balance of my time.

3006 Mr. Latta. Thank you. The gentleman yields back the balance of time.

3007 The chair now recognizes the gentleman from Georgia for questions.

3008 Mr. Carter of Georgia. Thank you, Mr. Chairman. Thank you for allowing me to
3009 waive on. I will be very brief.

3010 I thank all of you for being here. This is extremely important, particularly in the
3011 State of Georgia. Eleven years in a row, the number-one State in which to do business.
3012 We have over 50 major data centers. So as you can see, we have a great need for
3013 electricity.

3014 We are very blessed to have providers in our State who have -- Georgia Power and
3015 Oglethorpe Power have invested in a nuclear reactor. So that is very important, but
3016 delivery of that is extremely important, too.

3017 So, in the brief time that I want to ask you just a couple of questions -- and I will go
3018 to you, Mr. Nickell. I will ask you.

3019 Tell me about the permitting process, because that is one thing that we really
3020 want to concentrate on in this administration and in this session and in this Congress, is
3021 the permitting. I don't care what sector of our economy you are talking about.
3022 Whether you are talking about energy, whether you are talking about healthcare,
3023 technology, I have people in my office all the time. Permitting. Regulations. It is
3024 crushing us. It is crushing us. All the same. So tell me about that.

3025 Mr. Nickell. So I think a bipartisan permitting process is absolutely fundamental

3026 and critical to support a quicker build-up of the resources and the transmission
3027 infrastructure that we need.

3028 We hear all the time about how projects have been slowed down because they
3029 can't get built for a various number of reasons, and I think that is the number-one
3030 problem that we have that we have to deal with in order to speed up the construction of
3031 the actual infrastructure that we need.

3032 Mr. Carter of Georgia. Mr. Curran, would you have an opinion on that as well?
3033 Ms. Curran. I am sorry.

3034 Ms. Curran. That is fine.

3035 I think it is the same kind of answer. We have seen good work in our States to
3036 accelerate permitting particularly of transmission lines, but there are still a number of
3037 roadblocks that we run into. We recently had a transmission line go into service
3038 after -- I think it was about 13 years after approval due to permitting issues.

3039 Mr. Carter of Georgia. Great. Again, I thank all of you for being here. This is
3040 extremely important, and we appreciate your attention to it.

3041 I yield back, Mr. Chairman.

3042 Mr. Latta. I thank the gentleman for yielding back.

3043 Seeing no other members wishing to ask questions, I want to thank our witnesses
3044 for appearing today. Members have 10 additional questions -- or may have additional
3045 questions for you.

3046 I remind members they have 10 business days to submit additional questions for
3047 the record, and I ask the witnesses to submit their responses within 10 business days
3048 upon receipt of the questions.

3049 I also ask unanimous consent to insert in the record the documents included on
3050 the staff hearing documents list. Without objection, so ordered.

3051 And, without objection, the subcommittee is adjourned. I want to, again, thank
3052 our witnesses for their excellent testimony today.

3053 [The information follows:]

3054

3055 ***** COMMITTEE INSERT *****

3056 [Whereupon, at 1:41 p.m., the subcommittee was adjourned.]

3057

3058