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4 ``AMERICAN ENERGY SECURITY AND INNOVATION: THE ROLE OF
5 REGULATORS AND GRID OPERATORS IN MEETING NATURAL GAS AND
6 ELECTRIC COORDINATION CHALLENGES''

7 TUESDAY, MARCH 19, 2013

8 House of Representatives,

9 Subcommittee on Energy and Power

10 Committee on Energy and Commerce

11 Washington, D.C.

12 The subcommittee met, pursuant to call, at 10:04 a.m.,
13 in Room 2322 of the Rayburn House Office Building, Hon. Ed
14 Whitfield [Chairman of the Subcommittee] presiding.

15 Present: Representatives Whitfield, Scalise, Shimkus,
16 Pitts, Terry, Burgess, Latta, Cassidy, Olson, Gardner,

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17 Pompeo, Griffith, Barton, Rush, McNerney, Tonko, Green,
18 Barrow, Christensen, Dingell, and Waxman (ex officio).

19 Staff present: Nick Abraham, Legislative Clerk;
20 Charlotte Baker, Press Secretary; Allison Busbee, Policy
21 Coordinator, Energy & Power; Patrick Currier, Counsel, Energy
22 & Power; Tom Hassenboehler, Chief Counsel, Energy & Power;
23 Mary Neumayr, Senior Energy Counsel; Andrew Powaleny, Deputy
24 Press Secretary; Chris Sarley, Policy Coordinator,
25 Environment & Economy; Jeff Baran, Democratic Senior Counsel;
26 Kristina Friedman, EPA Detailee; and Caitlin Haberman,
27 Democratic Policy Analyst.

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|
28 Mr. {Whitfield.} I would like to call the hearing to
29 order this morning, and we certainly appreciate our witnesses
30 that will be with us today. I think we have two panels and I
31 will introduce the first panel in just a minute. But the
32 title of today's hearing is ``American Energy Security and
33 Innovation: The Role of Regulators and Grid Operators in
34 Meeting Natural Gas and Electric Coordination Challenges.
35 And I noticed the clock says 20 until 10:00; it is actually
36 10 o'clock so that is why we are starting right now. But I
37 want to welcome all of you here today.

38 As you know, EPA recently announced that they were going
39 to delay the finalizing of the rule on greenhouse gas
40 regulations of the nuke power plants, and I am delighted that
41 they made that decision. I know that one of the reasons they
42 are doing it is that they wanted to buttress their legal
43 case. And we have many witnesses that will be testifying
44 today about the increased use of natural gas, which is coming
45 about for a number of different reasons. One, of course, gas
46 prices are very low right now, and the second reason is that
47 the regulatory decisions coming out of EPA makes it extremely

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48 difficult to use coal. And if they do finalize that
49 greenhouse gas regulation for new coal power plants, you will
50 not be able to build a new coal power plant in America.

51 And those kinds of decisions, whether they are price
52 decisions or regulatory decisions, have tremendous impact on
53 the way we produce electricity in America. And it is
54 certainly true that generating power from natural gas has
55 many benefits, especially given that domestic supplies are
56 increasing and our current prices are relatively low. But we
57 are learning that there are some very real challenges to
58 integrating more natural gas into the power sector.

59 We are pleased, as I said, to have an excellent slate of
60 witnesses today who will discuss some of these challenges and
61 describe for us how they are meeting them to ensure the
62 continued supply of affordable and reliable electricity. At
63 the heart of the issue is the fact that electricity is a 24-
64 hour-a-day, 7-day-a-week, 365-day-a-year business with daily
65 and hourly changes in supply and demand. This complexity
66 poses challenges to grid owners and operators incorporating
67 more natural gas-fired generation into their system. Greater
68 coordination among the natural gas and electric industries is

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69 needed to ensure that these challenges can be met.

70 One challenge is there are certain physical constraints,
71 such as whether current natural gas pipeline and storage
72 infrastructure will be adequate to deliver increasing amounts
73 of natural gas to power plants. But there also are market
74 and regulatory challenges in some regions such as scheduling
75 natural gas supplies to match up with electricity needs.
76 Many of these challenges are state and regional issues as
77 well as federal ones, which is why we will hear from those
78 representing these levels of government today.

79 The challenges of heavier reliance on natural gas-fired
80 generation have been highlighted by recent cold spells.
81 Electricity demand goes up when the temperature goes down,
82 but so does demand for natural gas to meet the heating needs
83 of residential customers. As a result, regions with a high
84 proportion of natural gas-fired generation see a dual burden
85 on supplies during periods of unusually cold weather. We
86 need to take steps to ensure that the lights stay on at an
87 affordable rate through cold snaps, as well as other
88 occasional but inevitable events that put a strain on the
89 system.

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90 America's newfound abundance of natural gas is a
91 blessing and should play an important role in contributing to
92 our energy needs. But we need to take steps to properly
93 integrate, and I think the fact that FERC has had five
94 technical hearings on these kinds of issues within the last
95 year illustrates the importance of the issue, and I know they
96 have more conferences scheduled on this as well.

97 So with that, I yield back the balance of my time and
98 recognize the gentleman from Illinois, Mr. Rush, for a 5-
99 minute opening statement.

100 [The prepared statement of Mr. Whitfield follows:]

101 ***** COMMITTEE INSERT *****

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|
102 Mr. {Rush.} I want to thank you, Mr. Chairman, for
103 holding today's hearing which is part two on the
104 diversification of the Nation's electricity supply, and we
105 will focus on the role of regulators and grid operators in
106 meeting natural gas and electric coordination challenges.

107 As we discussed in the first hearing on electric
108 diversification, we know that in 1993 coal was responsible
109 for 50 percent of the electric generation in the U.S. while
110 natural gas accounted for less than 15 percent. However, the
111 Energy Information Administration reports that in 2012 there
112 was a shift in electricity generation away from coal-fired
113 generation, which declined by 12.5 percent and caused a
114 cleaner source of electricity including natural gas, which
115 increased by 21 percent.

116 In today's hearing, we will hear from federal and state
117 regulators, as well as the electric grid operators about the
118 challenges resulting from this shift to natural gas from
119 coal-fired plants in electricity generation. We will also
120 hear from two of the FERC commissioners on whether grid
121 operators are prepared for reliability issues stemming from

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122 the power sector shift from coal to natural gas. And we will
123 discuss solutions to better coordinate between the two
124 industries through communication and scheduling alignments to
125 make sure the grid operators have enough backup generating
126 capacity when gas supplies are tight. Last August, FERC held
127 five regional technical conferences where natural gas and
128 electric interdependence issues such as better
129 communications, infrastructure concerns, rules, and
130 reliability issues were discussed.

131 I understand Commissioners Moeller and LaFleur also
132 participated in a technical conference last month to discuss
133 more regional and national issues as they relate to natural
134 gas and electricity markets. While there were regional
135 differences in regards to gas and electric coordination
136 issues that was brought up in these conferences, work is now
137 being done by regional grid operators to improve information-
138 sharing among the grid operators, natural gas pipelines, and
139 electricity generators.

140 I understand that another technical conference is
141 scheduled for next month in April, where the discussion will
142 focus on whether there is going to be more coordination

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143 between the natural gas and electric industry market
144 schedules in order to achieve greater efficiency for both
145 industries.

146 Mr. Chairman, it is important to note that this shift
147 from older, dirtier, coal-fired plants to natural gas and
148 supplying the Nation's electricity demand is due more to
149 marketing realities than to EPA rules such as the Mercury and
150 Air Toxics rules and a new source performance schedule.

151 According to CRS, ``the primary impact of many of the
152 rules will largely be on coal-fired plants more than 40 years
153 old that have not, until now, installed state-of-the-art
154 pollution control. Many of these plants are inefficient and
155 are being replaced by more efficient combined-cycle natural
156 gas plants, a development likely to be encouraged if the
157 price of competing fuel, natural gas, continues to be low
158 almost regardless of the EPA's rule.''

159 So Mr. Chairman, I look forward to today's hearing. I
160 look forward to today's witnesses on the challenges and
161 opportunities of shifting from coal to natural gas in the
162 Nation's electricity generation. I yield back.

163 [The prepared statement of Mr. Rush follows:]

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164 ***** COMMITTEE INSERT *****

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|
165 Mr. {Whitfield.} Thank you, Mr. Rush. At this time I
166 recognize the gentleman from Texas, Mr. Barton, for 5
167 minutes.

168 Mr. {Barton.} Thank you, Mr. Chairman. I won't use
169 that 5 minutes.

170 I want to take a little bit of my time to welcome a
171 witness from the second panel, Mr. Barry Smitherman. He is
172 the chairman of the Texas Railroad Commission. That is an
173 elected position in Texas, and I was proud to vote for him
174 this past November. You remember that when I come to you for
175 favor later on. But he is going to testify about what is
176 happening in Texas. We are very proud of our home State that
177 alternative energy, wind power, and nuclear power--if you
178 want to consider nuclear as an alternative--is about 20
179 percent of our supply for electricity. We have about 50
180 percent that is generated by natural gas, which is the main
181 focus of your hearing today, Mr. Chairman.

182 And the rest of the country is beginning to come to
183 where Texas has always been, you know, large on natural gas.
184 But we also have about 30 percent of coal power, which I know

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185 you are very supportive of, Mr. Chairman.

186 This should be a good hearing and we are glad to have
187 our FERC chairman and one of the FERC commissioners, and I
188 hope that we have a productive hearing. I have still got a
189 lot of time I would be happy to yield if somebody else wants
190 to use some my time.

191 [The prepared statement of Mr. Barton follows:]

192 ***** COMMITTEE INSERT *****

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|
193 Mr. {Whitfield.} Does anyone want the balance of Mr.
194 Barton's time?

195 Mr. {Barton.} I believe Mr. Olson would like to say
196 some nice things.

197 Mr. {Olson.} I would really like to thank my colleagues
198 from Texas. I would like to join his comments and I voted
199 for you, too, Barry. Good, good vote. You are doing a great
200 job for our State. Thank you very much, Joe.

201 Mr. {Barton.} I will say that before Mr. Smitherman was
202 elected chairman of the Railroad Commission, he was appointed
203 chairman of the Public Utility Commission, so he has been
204 double-hatted in Texas and is truly an expert. And with
205 that, Mr. Chairman, I would be happy to yield back.

206 Mr. {Whitfield.} The gentleman yields back. At this
207 time I recognize the gentleman from California, Mr. Waxman,
208 for 5 minutes.

209 Mr. {Waxman.} Thank you very much, Mr. Chairman.

210 And Mr. Smitherman, I just didn't have a chance to vote
211 for you.

212 Today, this subcommittee hears from electricity

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213 regulators and grid operators about America's evolving
214 electricity generation portfolio. There is no question that
215 a significant transition is underway. Renewable energy
216 policies are paying off. We have doubled our capacity to
217 generate renewable electricity from wind and solar in just 4
218 years. This has cut pollution and invigorated clean energy
219 manufacturing.

220 Last year for the first time, wind power added more
221 electricity generation capacity than any other resource.
222 Nearly half of all new generation capacity came from wind.
223 Cheap natural gas is also helping to transform our
224 electricity sector. This market reality is causing some
225 utilities to retire their oldest, dirtiest, and least-
226 efficient coal plants, and new coal plants are simply not
227 cost-effective to build today.

228 These changes are positive developments. Until carbon-
229 capture technologies are developed, burning coal will
230 continue to emit dangerous pollution. We should avoid
231 investments in infrastructure that will lock in the worst
232 impacts of climate change or create stranded investments that
233 must be shut down before they have served their useful life.

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234 But these changes also create challenges for our
235 electricity grid. Clean, renewable energy sources like wind
236 and solar provide power when the wind is blowing or the sun
237 is shining, but not at other times. We need dispatchable
238 generation that can be integrated into the grid with these
239 intermittent supplies. That is a planning, funding, and
240 construction challenge.

241 We also need to be developing and deploying power
242 storage systems that can accommodate increasing generation
243 from renewable sources. EPA, the Department of Energy, and
244 the Federal Energy Regulatory Commission are working to
245 answer these challenges. But we in Congress could help by
246 crafting sensible energy legislation.

247 Two weeks ago we heard from executives from some of the
248 biggest utilities in the country--Entergy, AEP, Exel--operate
249 in different parts of the country with different fuel
250 portfolios. But they all agreed that the best way to respond
251 to climate change is through legislation from Congress. When
252 utilities tell us they are looking for regulatory certainty,
253 they are not talking about bills that delay action. They are
254 looking for real action and thoughtful policies. They want

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255 Congress to establish the rules of the road so that they can
256 plan and invest for the future.

257 Ideally, this committee will enact a responsible energy
258 policy that recognizes the reality of climate change. But as
259 the President said in his State of the Union Address, he will
260 act if we don't. And I think he better act before we fail
261 because the chances are we won't act even though I hope we
262 will.

263 EPA's proposed Carbon Pollution Standard for new power
264 plants is a good first step. It is a standard that requires
265 new power plants, whether they use coal or natural gas, to
266 keep their pollution below a specified level. The proposed
267 standards provide incentives for the deployment of carbon-
268 capture and sequestration technologies, and it creates a
269 level playing field for fossil fuel-fired generation.

270 It was valuable to hear from electric utilities at the
271 last hearing, and I am glad that we are hearing from grid
272 operators and regulators today. They have important
273 perspectives. But since policies that respond to climate
274 change are a major focus of the statements and questions at
275 these hearings, and we also need to hear from the scientists

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276 and technical experts who can inform this subcommittee about
277 the dangers of manmade climate change and the closing window
278 for effective action.

279 Two weeks ago I made that request at the last hearing.
280 Last week, Mr. Rush and I sent a letter reiterating that
281 request for an additional hearing. Mr. Chairman, I urge you
282 to respect this moral imperative and listen to all sides of
283 the issue.

284 I thank the witnesses for being here and I look forward
285 to today's testimony. And I yield back the balance of my
286 time.

287 [The prepared statement of Mr. Waxman follows:]

288 ***** COMMITTEE INSERT *****

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289 Mr. {Whitfield.} Thank you, Mr. Waxman.

290 That concludes today's opening statements, and so at
291 this time I will introduce our first panel of witnesses.

292 We have with us this morning Mr. Philip Moeller, who is
293 the Commissioner of the Federal Energy Regulatory Commission.
294 Mr. Moeller, we are delighted to have you back with us again.
295 And we have also Hon. Cheryl LaFleur, Commissioner, Federal
296 Energy Regulatory Commission. I thank both of you for being
297 here. We do look forward to your testimony and your
298 expertise in this area. And I am going to call on each one
299 of you, recognize you for 5 minutes. And there is a little
300 box on the table that, if it works, it will turn red when
301 your 5 minutes is up. And I am sure I won't cut you off, but
302 at least you will notice that the red light is on.

303 So at this time, Mr. Moeller, I will recognize you for 5
304 minutes and we look forward to your opening statement.

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|
305 ^STATEMENTS OF PHILIP D. MOELLER, COMMISSIONER, FEDERAL
306 ENERGY REGULATORY COMMISSION; AND CHERYL A. LAFLEUR,
307 COMMISSIONER, FEDERAL ENERGY REGULATORY COMMISSION

|
308 ^STATEMENT OF PHILIP D. MOELLER

309 } Mr. {Philip Moeller.} Mr. Chairman, thank you very
310 much. Ranking Member Rush, Chairman Emeritus Waxman, and
311 Barton, thank you for the chance to testify today.

312 My name is Phil Moeller. I am one of five sitting
313 commissioners. And I thank you for your attention to this
314 issue because I think it is one of the more pressing issues
315 in our country.

316 The convergence of the electric industry and the natural
317 gas industry is a result of several factors. It is kind of a
318 good problem to have. It just has to be managed as two very
319 different industries converge in a way that we want to make
320 sure that we maintain the reliability of the natural gas
321 supply and production and of course the electricity supply
322 and production as well.

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323 I always have to point out the most efficient use of
324 natural gas of course is direct usage, space heat, and water
325 heat. But the fact remains that we are in a major trend
326 pattern right now where we are using more gas to make
327 electricity. I ascribe five reasons for it.

328 First, it is usually easier to site, build, and finance
329 a gas plant than other alternatives. Secondly, oftentimes,
330 electric transmission is a cheaper alternative for consumers
331 but it is so hard to build electric transmission in this
332 country that oftentimes utilities build a generating plant
333 instead. The third reason alluded to earlier, we have an
334 abundance of renewable power that has been entering the grid
335 but it is intermittent nature. It is not always there. You
336 need something to back it up, to firm it up. That is almost
337 always a gas plant because of its ability to respond quickly.

338 The fourth reason, of course, also alluded to earlier,
339 is a suite of environmental regulations, air regulations, by
340 the EPA that is resulting in the shutdown and the
341 retrofitting of thousands of megawatts of coal plants in this
342 country.

343 And the fifth reason is that we appear to have a long-

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344 term period of moderate to low prices of natural gas. That
345 is coming domestically, quite amazingly, only in the last 5
346 or 6 years because of the new technologies of horizontal
347 drilling and hydrofracking that have allowed us to access
348 these resources that we didn't really even know we had 5 or 6
349 years ago.

350 I was honored and privileged to sit on the coordinating
351 subcommittee of the National Petroleum Council, and they put
352 out a 2-year study about a year-and-a-half ago called
353 ``Prudent Development.'' I brought the summary along today.
354 It outlines just the enormous resources we have in North
355 America on oil and gas, again, ones that we didn't even
356 realize we had a few years ago.

357 Now, we as a society may decide to restrict the use of
358 some of these new technologies. That won't be our decision.
359 But if we don't that or even if we do to some extent,
360 technology will only allow us to find more of these
361 resources, perhaps extract them and, absent a big change, we
362 appear to have a long-term period of stability of gas in this
363 country. And that leads to the fact that we will probably
364 have low to moderate prices for a relatively long time.

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365 Well, even despite this, we have had some challenges in
366 our country where, at times, there essentially hasn't been
367 enough gas to go around, usually in a cold weather event. My
368 colleague, Commissioner LaFleur, experienced it firsthand in
369 2004 in New England. A few other examples include some
370 rolling blackouts around Denver in 2006, almost a near
371 catastrophe in my home of the Pacific Northwest in December
372 of 2009 when some quick action averted a lot of outages.

373 But the event that really brought my attention to this
374 issue was the Southwest outage of February 2011, where over 3
375 million people in Texas, and over 50,000 gas consumers in
376 Texas, New Mexico, and Arizona lost service. It was a cold
377 weather event but it wasn't unprecedented. And we had
378 problems essentially on the gas side to deliver electricity
379 and then failure on the electricity side to deliver gas.

380 Again, our staff at FERC and also the North American
381 Electric Reliability Corporation put out a great report on
382 that outage that describes the industries in quite good
383 detail as a primer, what happened, recommendations for it.
384 So there was a failure to communicate, really, in that event.
385 And I was concerned going into the last couple of winters,

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386 that because of those failures to communicate, we could have
387 a repeat episode if we had some really cold weather. I mean,
388 in reality we have had some pretty warm winters the last
389 couple of years, but I am concerned that the system hasn't
390 been stressed under this new regime of moving toward more gas
391 to make electricity in addition to the traditional uses of
392 gas.

393 So about a year ago, I put out a series of questions to
394 the public asking where we should go on this. My colleague,
395 Commissioner LaFleur added some, and our chairman gave it a
396 docket number. It has been a public proceeding. Our
397 chairman has dedicated enormous staff resources to try to
398 deal with this issue. And as you eluded to, Mr. Chairman, we
399 have had a series of five technical conferences regionally
400 based in August, another one last month, another one next
401 month, another one in May where we **are** looking at the short-
402 term communication issues so that if we have another cold
403 winter event next winter that people can talk to each other,
404 medium-term issues of getting the markets aligned correctly
405 and longer-term issues of making sure we have the right
406 market rules, financial rules, and environmental rules to get

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407 more infrastructure built in this country to deal with the
408 long-term issue of enough pipe and supply to customers.

409 Again, thank you for giving this issue the attention it
410 is giving. That helps us along. We are not sure where we
411 are going on this, but I would be happy to answer any
412 questions when appropriate.

413 [The prepared statement of Mr. Moeller follows:]

414 ***** INSERT 1 *****

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415 Mr. {Whitfield.} Thank you, Mr. Moeller.

416 And Ms. LaFleur, you are recognized for 5 minutes.

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417 ^STATEMENT OF CHERYL A. LAFLEUR

418 } Ms. {LaFleur.} Thank you very much, Chairman Whitfield,
419 Ranking Member Rush and Phil, and the members of the
420 subcommittee. I appreciate your holding this hearing and the
421 opportunity to testify.

422 Since July 2010, I have served as a commissioner of the
423 Federal Energy Regulatory Commission. Earlier in my career,
424 I had the privilege of serving electric and natural gas
425 customers in New England and upstate New York. That
426 experience taught me firsthand how important reliability is
427 to customers in real communities. Since joining the
428 Commission, I have made reliability and grid security my top
429 priorities.

430 As everyone has said, our Nation is experiencing a
431 substantial growth in the use of natural gas to generate
432 electricity. In the past 15 years, gas used for generation
433 has increased at the rate of 6 percent per year, but in the
434 past 3 years it has accelerated to 10 percent per year more
435 gas being used for electricity. There are several reasons

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436 for this. The primary one is the increased availability and
437 affordability of domestic natural gas, which is leading to
438 sharply lower gas prices. In addition, natural gas is the
439 cleanest-burning fossil fuel, making it an attractive option
440 for new generation and for repowering generation that is
441 uneconomic to retrofit for new environmental regulations.
442 Finally, the flexible operating characteristics of natural
443 gas work well with the Nation's growing fleet of renewable
444 resources.

445 This steady growth in natural gas for generation has led
446 to concerns about the interdependence of the gas and electric
447 markets. Because natural gas is generally delivered in a
448 pipeline network rather than stored onsite like other
449 generating fuels, it is important that we have both an
450 adequate network of pipelines and operating practices to
451 support reliability.

452 At the technical conferences we held last summer in five
453 regions of the country, we heard about two basic issues. The
454 first is infrastructure: making sure we have enough pipelines
455 in the right places to support both electric and gas
456 reliability. It is not a supply issue; we have plenty of

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457 gas. It is a pipeline issue. In some places the pipelines
458 are constrained in specific regions or localities.

459 Since deregulation of the gas network by the Congress
460 several decades ago, pipelines have been permitted by FERC
461 based on long-term commitments for firm supply. And that
462 system has worked well. We have permitted 10,000 miles of
463 gas pipelines in the last decade. However, in regions with
464 competitive electric markets, gas generators often don't
465 enter into the long-term firm contracts but instead rely on
466 interruptible contracts or buying gas that is resold by
467 others with firm contracts. This can lead to shortage of gas
468 at stress times, particularly in the winter heating season in
469 certain regions, most notably New England.

470 At the conferences we received a strong message, really
471 from folks across the country, that the need for
472 infrastructure is a regional issue that varies by geography,
473 the existing pipelines, fuel mix, and the structure of the
474 market. Many regions, particularly the mid-Atlantic, the
475 South, and the West didn't identify a systemic problem with
476 getting infrastructure built at this time. So the conference
477 participants urged FERC to work with the regions on their

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478 issues rather than impose a national solution. And on the
479 infrastructure issue, that is what we have been doing.

480 The operators of the markets you will hear from a little
481 later are working under our jurisdiction to make sure that
482 their market rules and their detailed operating rules support
483 reliable electricity. In particular, ISO New England is
484 working on both short-term and long-term enhancements to
485 better ensure that it builds fuel security into its
486 generation markets. We have already approved some market
487 rules for this winter.

488 The second basic issue is operations, making sure that
489 we coordinate the use of the pipelines we have to make sure
490 that we get the best use of the infrastructure that is in
491 place. As has already been mentioned, we had a tech
492 conference on communications and we are working on next steps
493 and have one coming up on scheduling to make sure the gas
494 electric days work together to promote getting the most value
495 from the pipelines we have in place. We are getting
496 quarterly reports on this and in-person reports from all the
497 regions at our open meeting so we can follow it closely.

498 This issue of gas electric interdependence is not a

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499 recent panic, but it is absolutely a reason to plan and do so
500 now. Viewed in the larger perspective, it is a byproduct of
501 an American success story, which is the growth of domestic
502 natural gas resources. The Nation's generation fleet has
503 historically experienced large turnovers in fuel mix and
504 large building cycles, and they inevitably require
505 adaptations of supporting infrastructure and operations. I
506 believe with diligent and timely effort, we can make this
507 adaptation as well, and I pledge to use the authority I have
508 at FERC to be proactive in meeting the challenge. Thank you
509 and I look forward to your questions.

510 [The prepared statement of Ms. LaFleur follows:]

511 ***** INSERT 2 *****

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|
512 Mr. {Whitfield.} Well, thank you, Commissioner LaFleur,
513 and we appreciate both of you for giving your statements.

514 Last year, we had a hearing before this subcommittee,
515 and FERC at that time talked about the importance of
516 coordination between EPA and DOE and other agencies regarding
517 reliability issues. And we have had EPA before us on many
518 occasions talking about--because they have been very
519 aggressive on regulations. And sometimes you get the
520 impression that EPA is the arbiter for reliability issues.
521 But in actuality, that is you all's responsibility. And I
522 would just ask both of you, can you comment on the
523 coordination between the agencies? Are we making progress in
524 that regard? And what is your personal view about that
525 issue? Mr. Moeller?

526 Mr. {Philip Moeller.} Well, I remember that hearing
527 quite well having testified at it. I guess we hear that
528 there is talk going on between the staffs at FERC and the
529 EPA. I will have to get back to you with more details as to
530 actually the substance of those discussions. We have talked
531 about the 5th year that plants would get--they were a year

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532 into it. It is effective April 16, 2015, MATS that is. Most
533 people think that entities will get another year if they are
534 going to be retrofitting. And then there is the question of
535 the 5th year. The industry has told us that until the
536 federal law is resolved between the Federal Power Act and the
537 Clean Air Act, that they are very reluctant to even ask for
538 the 5th year.

539 So that plays out differently in different load pockets
540 depending on how much coal is going to be retiring. We are
541 practically concerned about Northern Ohio and the timeline
542 there but there are other areas. So I would just hope, and I
543 think I have been consistent in urging the EPA that they be
544 very involved with the market operators, two of whom will be
545 on your next panel, so that if--you know, the faster you rush
546 a job, the more expensive it is to consumers. So as long as
547 they are engaged and they have some kind of a mechanism,
548 perhaps give another extension of time if they just can't get
549 the new generation or the new transmission built in
550 particular load pockets, that is where it gets so
551 complicated. It is about physics and it is about the flow of
552 electricity, and it is just not universally the same

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553 everywhere.

554 Mr. {Whitfield.} Right. Ms. LaFleur, do you have a
555 comment?

556 Ms. {LaFleur.} Yes. It is my understanding that there
557 are a couple of things in place. There is a regular monthly
558 telephone conference between all the RTOs, the DOE, FERC, and
559 the EPA, and then, in-person meetings ad hoc between FERC and
560 the EPA. In preparation for this hearing I got copies of a
561 lot of the--what do you call them--PowerPoints at the last
562 tech conference, which was really a report from the different
563 RTOs on what they are seeing.

564 In addition, I initiated, and Commissioner Moeller and I
565 co-chaired an ongoing forum between FERC and the state
566 regulators. We meet at every NARUC meeting and have EPA
567 there in person to hear what is coming out, what is emerging,
568 what do we think the issues are. In May of last year we put
569 out a policy statement on how FERC would approach the 5th
570 year if anyone came to us. We haven't heard from anyone yet
571 because they are still working on their 4th year. But we
572 wanted to be ready so we could hit the ground running.

573 I agree with Commissioner Moeller that Northern Ohio as

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574 one of the places that has been identified. I was there 3
575 weeks ago. I know we are going to hear from the Ohio
576 chairman today, and we have to work closely on all of those
577 things through these various fora.

578 Mr. {Whitfield.} Yes. Mr. Gordon van Welie is with us
579 with the ISO up in the Northeast and, of course, you
580 mentioned that there are a lot of concerns about the
581 Northeast, and I am sure he will get to that. But are there
582 any other areas that you all have particular concern about?
583 You mentioned the Northeast; you mentioned Northern Ohio.
584 What are some other geographical areas?

585 Mr. {Philip Moeller.} Well, the Midwest. And you will
586 hear from Clair Moeller from MISO later, too. But just the
587 number of megawatts that are either being closed down or
588 retrofitted is enormous in a relatively short amount of time.

589 Mr. {Whitfield.} Right.

590 Ms. {LaFleur.} New England is clearly at the cutting-
591 edge but the Midwest and also New York were places that had a
592 lot to say when we had our tech conferences.

593 Mr. {Whitfield.} And we still have a lot of unknowns
594 out there, too, because, as we say, EPA is looking at

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595 greenhouse gas regulations. Are they going be applicable to
596 the existing plants? They haven't quite finalized the new
597 construction, so we have a lot of question marks out there, a
598 lot of unknowns.

599 And at that this time my time is expired, so I will
600 recognize the gentleman from Illinois, Mr. Rush, for 5
601 minutes.

602 Mr. {Rush.} I want to thank you, Mr. Chairman. Mr.
603 Chairman, I have a different line of questions. I am going
604 to begin with Commissioner LaFleur.

605 Commissioner LaFleur, in your testimony you cite the
606 lack of pipeline infrastructure as your first area of concern
607 in ensuring adequate pipeline capacity to support most gas-
608 fired electric generation and other gas customers. Lack of
609 access in pipeline infrastructure is also an issue that I
610 have concerns about. But for me, the concerns are regarding
611 the lack of access for minorities and women when it comes to
612 jobs and contracts and economic opportunity available in the
613 pipeline industry.

614 Specifically, over the last Congress, this subcommittee
615 heard from witnesses from all aspects of the pipeline

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616 industry, including private companies and associations, as
617 well as from federal agencies. And each time, I posed a
618 simple question. Are there women, are there minorities who
619 are owners, builders, and operators of pipelines in this
620 country and what are their levels of participation?

621 Because I can never get a straight answer on this
622 question, I drafted language in the Pipeline Safety
623 Regulatory Certainty and Job Creation Act of 2011 which calls
624 for a comprehensive GAO report examining the levels of
625 engagement and participation of minority-owned, women-owned,
626 and disadvantaged business enterprises and contractors
627 involved in the construction and operation of pipelines in
628 this country. So absolutely no one was surprised when the
629 GAO report came back stating that the levels of minority
630 participation in the pipeline industry was so small that it
631 was almost negligible.

632 Now, I understand this is not your area of expertise,
633 but I want you to know that my office will be working with
634 you, reaching out to you, and reaching out to FERC in general
635 to work with us on establishing strategies for increasing
636 access for minorities and women in the pipeline industry.

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637 As you stated in your testimony, over the next few years
638 we will have to build up the Nation's pipeline infrastructure
639 in order to address the shale oil and gas boom, and make sure
640 the energy is getting to urban areas, rural centers, wherever
641 it is needed at. As policymakers, it is our responsibility
642 to ensure that all segments of the population are able to
643 participate in building this critical infrastructure and that
644 all communities have access to the economic opportunities
645 that will be available in the pipeline industry over the next
646 decade.

647 Mainly, I look forward to working with FERC, engaging
648 FERC on this issue, and I would like to ask both of you, do
649 you have any responses or any comments to share with this
650 subcommittee, now that I have raised this particular issue?

651 Ms. {LaFleur.} Well, thank you, Congressman Rush, for
652 bringing up an important issue and one I probably haven't
653 thought enough about. I am involved in several organizations
654 for women in energy. I actually was meeting with one group
655 of women last night and we were talking anecdotally about how
656 they were more women in electricity than in natural gas as an
657 anecdotal impression. And that backs up what you are saying.

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658 And more of them are on the regulatory legal side than on the
659 construction side. I have also met with the Association of
660 Blacks in Energy, which is headquartered here in the city,
661 and that is an issue they are working on.

662 We don't at FERC give out contracts or choose who would
663 construct the pipelines, but there is going to be a period of
664 infrastructure opportunity, so I would be willing as, you
665 know, a citizen in the industry to work further with any of
666 the groups to help make that happen. There certainly should
667 be opportunities.

668 Mr. {Philip Moeller.} Congressman, I think we want to
669 get all kinds of new people into the energy industry.
670 Minorities, women, young people--it is an aging industry.
671 There is a great need for skilled labor, so to the extent
672 that vocational education can be emphasized again in this
673 country as it once was, that will help on the skilled labor
674 side.

675 I have tried to go out and be a force for involvement in
676 what is, I think, a very exciting industry. I was the guest
677 speaker at the annual meeting of the Association of American
678 Blacks in Energy in Columbus, Ohio, a few years ago. So I

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679 have certainly tried to get a greater involvement from
680 everyone in this industry because I think it is the greatest
681 industry and it is a great future and great jobs.

682 Mr. {Whitfield.} Thank you.

683 At this time I recognize the gentleman from Louisiana,
684 Dr. Cassidy, for 5 minutes.

685 Dr. {Cassidy.} Yes. And Mr. Rush, I agree with you.
686 This industry has tremendous opportunity for folks who are
687 minorities. One of the reasons I represent firms in which
688 there is female and minority participation, and one the
689 reasons our side is so interested in Keystone XL is that
690 those 20,000 direct jobs created will be just among the
691 working class that are most in need of jobs right now.

692 So I agree with you, Mr. Moeller. It is a great
693 opportunity for many people. I just wish that the President
694 would sign on to creating those jobs.

695 I got asked at a bipartisan dinner last night, actually,
696 put on by one of my colleagues. The point was made that EPA
697 is currently driving our energy policy. I am struck that you
698 mentioned the potential for shortages in New England and the
699 mothballing, I gather, of many coal-fired plants. This must

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700 be billions of dollars worth of investments being replaced by
701 other billions of investments, all paid by families
702 struggling to meet their current bills.

703 So I guess my point being, is that a fair assessment
704 that EPA's environmental regulations are now driving our
705 electrical market?

706 Mr. {Philip Moeller.} It certainly is a factor, yes.

707 Dr. {Cassidy.} Now, a factor could be 1 percent or it
708 could be 90 percent. But I gather that these mothballed coal
709 plants, it is 90 percent EPA. Is that a fair statement?

710 Mr. {Philip Moeller.} I do not know if I would pick a
711 number, but--

712 Dr. {Cassidy.} Give me a ballpark. I am not going to
713 hold you to it. I mean, is it 1 or is it 100 or is it some--
714 where would you make it closer to with 100 being the highest?

715 Mr. {Philip Moeller.} Well, it depends on the plant but
716 in some plants it is 100 percent. I mean, they are being
717 shut down clearly because of air regulations. In other
718 cases, you would probably say 50 percent because they are
719 being retrofitted. They will still burn coal but they are of
720 a right vintage where that investment makes sense. And so--

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721 Dr. {Cassidy.} Now, I am from a natural gas state. I
722 am all about natural gas. On the other hand, I am all about
723 having a diversified fuel source. It really does seem as if
724 we are putting a heck of a lot of our eggs in the natural gas
725 basket for no other reason than EPA is driving this. Is that
726 correct?

727 Mr. {Philip Moeller.} That is a major factor. Prices
728 and the access is also part of it, but that is where we are
729 concerned from a reliability perspective. If you are
730 dependent on a pipeline and just-in-time fuel will supply, it
731 is a lot different than a 60-day pile of coal.

732 Dr. {Cassidy.} Yes, it seems that way. And if you are
733 dependent on one plant and the other has been with--the
734 diversified fuel has been mothballed, then your whole supply
735 chain is, if you will, just in time. Fair statement?

736 Mr. {Philip Moeller.} Yes. If you have more pipeline
737 to access, that helps diversify your options. But that is
738 one of the problems. Some plants are dependent on one pipe.

739 Dr. {Cassidy.} Now I am struck, Ms. LaFleur--a good
740 Louisiana name--I don't know if you are but could be. You
741 speak specifically of New England and the problems that they

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742 have. Will the development of the Marcellus Shale bring some
743 relief there? Obviously, the supply is closer. Will further
744 development of that benefit?

745 Ms. {LaFleur.} Well, my dad was French-Canadian but
746 there is a lot of LaFleurs in Louisiana.

747 The fact that gas is being extracted much closer to the
748 Northeast in the Marcellus means pipelines have a shorter way
749 to go but that makes the issues we are working on somewhat
750 more limited, but we are trying to pipeline that last couple
751 hundred miles to the plant because most of the suppliers
752 bring gas to the major junction points and then you need to
753 build laterals to specific plants. But definitely the supply
754 from the Marcellus helps, yes.

755 Dr. {Cassidy.} Okay. And I also understand that there
756 is a market issue in terms of how the New England plants buy
757 their gas. You allude to that. I don't understand it well
758 enough. Could you elaborate?

759 Ms. {LaFleur.} Well, in general terms, natural gas and
760 electric markets attract capital differently. Pipelines
761 build based on 10- or 15-year commitments and electricity,
762 because it is a real-time product, is priced in a 3-year

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763 forward market or in the day-ahead market. So the generators
764 might not have certainty of their long-term future to make a
765 15-year commitment, which means they are going to have to get
766 creative about how we structure these things and get
767 pipelines built.

768 Dr. {Cassidy.} So ideally, a plant in the South, for
769 example, which does not have this problem, is it because we
770 already have the pipeline infrastructure or because they are
771 able to enter into these 15-year commitments?

772 Ms. {LaFleur.} A little bit of both. In some of the
773 vertically integrated states, the state regulators have
774 decided that customers should backup the long-term gas
775 contracts. They also have considerably less gas dependency
776 in general so they don't have the--if you made every
777 generator in New England by a firm contract, pretty soon, you
778 would have way too many. You would be having customers pay
779 for way too many pipelines. So it is a combination of
780 factors.

781 Dr. {Cassidy.} Okay. Well, I am out of time. I yield
782 back. Thank you both.

783 Mr. {Whitfield.} Thank you. At this time I recognize

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784 the gentleman from Michigan, Mr. Dingell, for 5 minutes.

785 Mr. {Dingell.} Mr. Chairman, your courtesy is
786 appreciated, thank you.

787 These questions for Mr. Moeller are yes or no, I think.
788 In your testimony you state the country is increasing natural
789 gas electricity generation because EPA air regulations will
790 force coal-fired plants to be retired or retrofitted. Do you
791 believe that the increased availability and the lower cost of
792 natural gas has played an equally important role in our
793 transition to natural gas? Yes or no?

794 Mr. {Philip Moeller.} Yes.

795 Mr. {Dingell.} Now, it is my understanding that some
796 coal-fired plants undergoing retrofits have been granted
797 revised air permits and extensions in order to comply with
798 EPA regulations, such as Mercury and Air Toxic Standard. For
799 older coal-fired plants that will not be retrofitted, do you
800 believe will be necessary to allow them to continue operating
801 past the compliance deadline of the Mercury Rule in order to
802 maintain reliability? Please answer yes or no.

803 Mr. {Philip Moeller.} In some cases, yes.

804 Mr. {Dingell.} Now, do you believe that renewable

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805 electrical generation such as wind and solar should the
806 factored into resource adequacy? Please answer yes or no.

807 Mr. {Philip Moeller.} Yes.

808 Mr. {Dingell.} Would you want to submit for the record
809 an explanatory statement to that, if you please?

810 Mr. {Philip Moeller.} I would be happy to.

811 Mr. {Dingell.} Now, in FERC's response to a letter
812 signed by myself and other members of the Michigan
813 delegation, FERC indicated that it was in the process of
814 preparing an environmental assessment on the issue of the
815 Trunkline Mainline Abandonment Project. Has the EA been
816 completed, and if not, when will it be?

817 Mr. {Philip Moeller.} I don't know.

818 Mr. {Dingell.} All right.

819 Mr. {Philip Moeller.} I will have to check that and get
820 back to you.

821 Mr. {Dingell.} Would you submit that, please?

822 Mr. {Philip Moeller.} Sure.

823 Mr. {Dingell.} Now, when do you anticipate FERC making
824 the final decision on the project proposal?

825 Mr. {Philip Moeller.} I will have to get back to on

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826 that.

827 Mr. {Dingell.} All right. Now Commissioner LaFleur,
828 thank you for your presence. In your testimony, you note
829 that more planning to address the issue of gas electric
830 interdependence will be necessary. As you also note, there
831 is no requirement that generators enter into long-term gas
832 pipeline contracts. Do you believe FERC needs the authority
833 to require longer-term contracts? Yes or no?

834 Ms. {LaFleur.} I don't think we need more authority at
835 this time.

836 Mr. {Dingell.} At the end of your testimony you state
837 that you will find ways to use FERC's authority to address
838 this issue. Do you believe that FERC needs additional
839 authority in order to ensure reliability for all of our
840 natural gas needs? Would you please answer yes or no?

841 Ms. {LaFleur.} No.

842 Mr. {Dingell.} Mr. Chairman, I note that I have
843 completed my questions with 2 minutes remaining. I return
844 them to you with thanks.

845 Mr. {Whitfield.} Very impressive. Thank you, sir.

846 At this time I would like to recognize the gentleman

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847 from Texas, Mr. Olson, for 5 minutes.

848 Mr. {Olson.} Thank you, Mr. Chairman. And welcome to
849 the witnesses. Commissioner Moeller, Commissioner LaFleur,
850 thank you so much for your time and your expertise.

851 With the Administration's war on coal, service capacity
852 shrinking in many States across the country. My home State
853 of Texas needs five large power plants by 2014, 2015, to keep
854 growing or we risk rolling blackouts, as you alluded to in
855 2011. One way we can prevent these brownouts or blackouts
856 from happening is to order power plants to keep generating
857 beyond the 24/7 limits that they have, keep that power up
858 online. And that is for emergency conditions only, and again
859 these may lead to, you know, power generation collapses.

860 Unfortunately, we have got two examples recently where
861 power plants have been kept up online and then third parties
862 have come back in behind them and sued them for damages. And
863 some of these have been seven figures in damages.

864 I introduced a bill last Congress that passed
865 unanimously from this committee, unanimously on the Floor.
866 Unfortunately, it died in the Senate, which many, many bills
867 did last Congress.

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868 But I just want to talk to guys about that. Do you
869 support that bill? Is that something viable to adjust this
870 power capacity, power shortage capacity we may have in Texas?

871 Mr. {Philip Moeller.} And last year I testified in
872 support of that bill in front of this committee.

873 Mr. {Olson.} I just wanted to make sure something
874 didn't change your mind. Commissioner LaFleur?

875 Ms. {LaFleur.} Yes. I support that targeted bill to
876 give relief if you are ordered to stay on.

877 Mr. {Olson.} Great. Commissioner Moeller, you talked
878 about the 2011 power crisis we had in Texas, basically the
879 wind power crisis, and 12 percent of our demand dropped
880 offline almost automatically. About 50 power plants were
881 impacted by that. Most importantly for Texans, the Super
882 Bowl was in Dallas that weekend, almost got canceled because
883 no power could run to Cowboy Stadium. Could you please
884 elaborate on what you learned from that incident and what
885 advice you can give me for my State to take away from this?
886 You have got the report there.

887 Mr. {Philip Moeller.} I will again commend the report
888 that FERC and NERC did together on it. It is a great read.

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889 It is a good primer. It has 32 recommendations, mainly to
890 the legislatures and the Public Utility Commissions of those
891 States. And I think they are at various phases of
892 implementing those recommendations. To me what hit home was
893 that people felt like they either legally couldn't talk to
894 each other or they felt there was a perception that they
895 couldn't talk to each other legally, in addition to a number
896 of problems with inadequate weatherization of a lot of those
897 power plants. So I think they are on the weatherization.

898 The communication set of issues, though, I think is an
899 issue in every region of this country. And that is where, I
900 think, we will really be pushing over the summer to make
901 sure--we don't know whether we have to take formal action at
902 FERC or informal action, but to make sure that when we have
903 another one of these cold weather events--it is a matter of
904 when not if--and the systems are stressed, and they can be
905 stressed anywhere but New England and the Midwest are our top
906 concerns--that the right operators of the grid, the electric
907 system, the pipelines, the generators, are all in a position
908 where they can share information without a fear of breaking
909 the law so that people's service isn't disrupted.

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910 In the cases of the Northwest in 2009, there was a power
911 plant they could have relieved a lot of the problems that was
912 around Portland, Oregon, but the utility in Washington State
913 was afraid to call that utility thinking they might be
914 violating the law if they did.

915 So that is what I will be pushing on and I think the
916 rest of the Commission as well going into next winter since
917 we have had two such warm winters in a row, it is not going
918 to last very much longer.

919 Mr. {Olson.} Commissioner LaFleur, anything to add
920 ma'am?

921 Ms. {LaFleur.} I agree that communication was one of
922 the big lessons and that is what we need to work on and have
923 already given some guidance as to what is allowed so that
924 people don't think our regulations are stopping that. I
925 think also situational awareness between different operators,
926 both adjoining electric operators and different gas
927 operators, was a big lesson of that incident.

928 Mr. {Olson.} Another lesson learned in Texas is we got
929 power from Mexico. When that crisis happened, we had to go
930 across the border to get that power from another country.

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931 And that scares me a little bit, that we are dependent upon a
932 foreign nation as opposed to taking care of our needs.

933 And also, it is not just cold there, I mean cold
934 weather. We had the summer of 2011, every city in Texas,
935 every single one of them was over 100 degrees the whole month
936 of August. If that happens again, with the war on coal, we
937 have tried to get the Las Brisas power plant up online, the
938 White Sand power plant, coal power plant, Pepco plant shut
939 down. They pulled back because of EPA regulations and these
940 lawsuits. We have got to get the legal system out of here
941 and let the people do what the people need to do.

942 Thank you. I yield back the balance of my time.

943 Mr. {Whitfield.} At this time I recognize the gentleman
944 from California, Mr. McNerney, for 5 minutes.

945 Mr. {McNerney.} Well, thank you, Mr. Chairman. I thank
946 you for having this hearing. I think it is an important and
947 interesting issue.

948 Ms. LaFleur, you mentioned that reliability and security
949 were your top issues. You must be familiar with the San
950 Bruno explosion a few years ago. How typical is the
951 condition of those pipelines throughout the country? It

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952 seemed to me that it was a combination of lack of maintenance
953 or age of the pipes, plus lack of inspections to make sure
954 that they were operating. There was also people didn't have
955 access to the valves to turn them off, and so on. How
956 vulnerable are we to those just due to natural causes?

957 Ms. {LaFleur.} Well, I certainly hope the pipelines in
958 San Bruno were not typical that, as I am sure you know, both
959 the State of California and FISMA, which is part of the
960 Department of Transportation here, have put out some strong
961 new regulations that require more inspection to make sure
962 that particularly older pipelines in high-consequence areas
963 are maintained correctly. And I think our job at FERC is to
964 make sure that we have supportive regulation for those gas
965 pipeline requirements.

966 Mr. {McNerney.} So there will be a little bit higher
967 rates for--

968 Ms. {LaFleur.} It is more a matter of we have had a few
969 cases--we have some pending so I have to be careful--of how
970 pipelines are required to cover additional expenses that
971 might be required for inspection and how that works
972 technically within their tariffs.

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973 Mr. {McNerney.} So how vulnerable are our national
974 pipeline network to cyber attacks? I mean, could a cyber
975 attack result in something like that or other types of
976 disruptions, major disruptions?

977 Ms. {LaFleur.} I think any major critical network that
978 is run by computer systems--and that includes gas and
979 electric--are vulnerable to cyber attack. And that is why
980 both voluntary--and in the case of electricity--mandatory
981 standards are very important.

982 Mr. {McNerney.} Well, that is good. So part of the
983 legislation that is being considered is to require sharing of
984 information, but there aren't that many advocates for
985 actually require utilities to do certain things to protect
986 themselves. So where do you think we need to fall on that
987 issue?

988 Ms. {LaFleur.} Well, on electric side, we do have
989 mandatory regulations under the Energy Policy Act of 2005.
990 We do regulate that at FERC. I think the biggest thing we
991 need in legislation is that information-sharing, as well as
992 someone having emergency authority in the case of an
993 emergency. And I think most of the proposals I have seen

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994 have both of those elements in them.

995 Mr. {McNerney.} But they don't have standards then for
996 equipment or software?

997 Ms. {LaFleur.} I think if I were the queen of the
998 world, mandatory standards would be good. I think getting
999 some legislation passed, even the more modest legislation,
1000 would help a lot. I think information-sharing is the top
1001 priority.

1002 Mr. {McNerney.} Thank you. Mr. Moeller, you mentioned
1003 that we need increased flexibility to address the pipeline
1004 capacity issue. Is this a regulatory or a statutory issue in
1005 your opinion?

1006 Mr. {Philip Moeller.} Well, it is a regulatory issue
1007 primarily. If you ask me for statutory recommendations with
1008 the intent of getting more pipeline in, I could come up with
1009 some. But I think, for the most part, people have been
1010 fairly satisfied with the process we have at FERC for new
1011 pipelines. If you cross the state line, you come to FERC for
1012 a certificate to build it. And it is a public process. The
1013 routes always get changed and then there is the regulatory
1014 cost recovery that we handle with. I mean, it could be done

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1015 quicker. Again, if you want recommendations, I can give you
1016 those.

1017 Mr. {McNerney.} When you say flexibility, do you mean
1018 increased capacity, more pipelines? Is that what you mean by
1019 flexibility?

1020 Mr. {Philip Moeller.} I think both operationally and
1021 additional infrastructure. We clearly need more pipe in New
1022 England. They are at the end of the pipe; they are more
1023 dependent. On the other hand, as you will hear from the
1024 Midwest later on, there is some question as to which power
1025 plants that the grid operates are fed by which pipes. And I
1026 am not suggesting this, but there is no equivalent kind of
1027 regional oversight of the pipeline network like there is on
1028 electricity. So the coordination fact, it is just different.
1029 And that is where we need kind of the communication
1030 flexibility. Particularly, we get to times when the system
1031 is very stressed and there is the worry of not enough gas to
1032 go around.

1033 Mr. {McNerney.} Thank you. Good timing, Mr. Chairman?

1034 Mr. {Scalise.} [Presiding] You got it. You hit the
1035 number. Perfect. I thank the gentleman. I recognize myself

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1036 for 5 minutes to ask questions.

1037 Mr. Moeller, in response to the chairman, after some
1038 questions I think you responded specifically about some
1039 concerns in northern Ohio related to their coal plants. Can
1040 you expand on the concerns that you have there?

1041 Mr. {Philip Moeller.} Yes. And I know we have the
1042 chairman of the Ohio Commission coming up later so I wouldn't
1043 want to usurp his expertise. But we have a zone in northern
1044 Ohio where a number of plants are being shut down in the next
1045 2 years. Perhaps there is a need for greater either
1046 generation in that load pocket or more transmission or both.
1047 And when the market did--Commissioner LaFleur alluded to the
1048 3-year forward-capacity market and new generation did not
1049 clear in that market because the prices were suppressed by a
1050 lot of demand response. There is some concern whether that
1051 demand response is actually going to be there in the summer
1052 of 2015.

1053 So there are a lot of issues. They come together in the
1054 summer of 2015 when, of course, the load is the highest and,
1055 you know, it is something we are watching very closely.

1056 Mr. {Scalise.} Thank you. And you were also talking

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1057 about kind of a concern about regulation, if there is a haste
1058 to put regulations in place quickly that in order to add more
1059 on top that it can actually add to the cost of electricity
1060 for consumers. Can you expand on what you were referring to
1061 there?

1062 Mr. {Philip Moeller.} Yes. Well, given the number of
1063 megawatts in this country and they are spread out around most
1064 of the country. They are not a lot in the Northwest or the
1065 Northeast anymore or California. But the number of coal
1066 plants that are being retrofitted in a short amount time,
1067 there is a squeeze on the engineering talent, the skilled
1068 labor component. There is some argument they are not enough
1069 boilermakers to go around. Just the supplied chain gets
1070 squeezed the shorter that time frame is to try and get it all
1071 done to meet the regulations. So like any job in your house,
1072 if you want it done quicker, you are going to pay more. And
1073 in this case, consumers will bear that, and I hope that that
1074 is kept in mind.

1075 Mr. {Scalise.} Is there any one agency that you are
1076 referring to in terms of regulation? We see the EPA throwing
1077 a lot of this on top of industry. Again, you know, when

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1078 industry talks to us, they talk about the added cost that it
1079 forces on consumers as they are doing this so there is
1080 definitely a cost associated with it. Is it EPA? Are there
1081 others as well that you are referring to?

1082 Mr. {Philip Moeller.} No, it is primarily EPA. I am
1083 talking about the air regulations, and I am not here to bash
1084 them but--

1085 Mr. {Scalise.} We do that, don't worry. When we hear
1086 about a lot of the things that they do that, you know, don't
1087 have anything to do with improving health or safety, it is
1088 more just to kind of put burdens to, it seems like, pursue an
1089 agenda. And you know this isn't a question to you; this is
1090 more things we see in the hearings when we have them before
1091 us. And, you know, it just seems like they keep going in
1092 their own direction to pursue an agenda, you know, whether it
1093 is kind of a cap-and-trade de facto regulation when Congress
1094 is, you know, has expressed in a number of different ways
1095 that that is not the direction that we would like to go.
1096 And, you know, hopefully I know we have got legislation and
1097 many of us are supporting to say Congress shouldn't put some
1098 kind of carbon tax in place. You know, and maybe we will

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1099 have more hearings on that. But, you know, to see them going
1100 off in their own direction anyway to try and pose regulations
1101 that just carry an agenda, there is a cost to that, and I
1102 think those costs need to be brought up.

1103 I do want a touch on something you talked about your
1104 opening statement where you were talking about this
1105 revolution in natural gas that has come about through
1106 hydraulic fracturing, through horizontal drilling, that
1107 technology that has allowed us to open up vast reserves of
1108 new energy here in America. And, you know, of course, we
1109 hear about EPA looking at trying to get into that and trying
1110 to regulate what States already do. States do a great job of
1111 regulating hydraulic fracturing. It has been very
1112 successful, created great jobs, but also a great potential
1113 for American energy security. And of course that is
1114 threatened.

1115 You talked about technology allowing us to find more
1116 natural resources. And I do have concerns, you know, that is
1117 these natural resources are found, that the government
1118 regulators themselves could impede that innovation, that
1119 technology if they do try to regulate it in a way that

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1120 doesn't allow us to access those natural resources. So I
1121 don't know if you want to touch on that, if either of you,
1122 both Mr. Moeller or Ms. LaFleur.

1123 Mr. {Philip Moeller.} Well, those will not be our
1124 decisions because that is not in our jurisdiction, but
1125 hydrofracking and horizontal drilling and the shale
1126 revolution, it has been a revolution. A few years ago at
1127 FERC, the most controversial things we dealt with were LNG
1128 import facilities. Now they are LNG export facilities.

1129 Mr. {Whitfield.} And then, Ms. LaFleur, before the
1130 clock expires, any--

1131 Ms. {LaFleur.} Well, I agree that we are going to have
1132 to closely monitor regulations that come out that might
1133 affect gas extraction because they could affect gas supplies.
1134 It is not something we are specifically responsible for. We
1135 really just certificate the pipeline network.

1136 Mr. {Scalise.} All right, thank you. I think the
1137 ranking member, Mr. Waxman, is up next.

1138 Mr. {Waxman.} Thank you very much, Mr. Chairman.

1139 The Nation's electricity generation portfolio is in the
1140 midst of a significant transition. We doubled our capacity

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1141 to generate renewable electricity from wind and solar in just
1142 4 years. And last year, nearly half of all new generation
1143 capacity came from wind. There has also been a large
1144 increase in natural gas generation. Commissioner LaFleur,
1145 what is the primary reason utilities are increasing their
1146 natural gas generation?

1147 Ms. {LaFleur.} I would say the primary--if I had to
1148 point to one reason--is the reduced cost of natural gas.

1149 Mr. {Waxman.} Um-hum.

1150 Ms. {LaFleur.} I mean, most of the Nation's coal fleet
1151 was built when that was by far the cheapest fuel, and now
1152 that gas is the cheapest fuel, people at the market are
1153 responding.

1154 Mr. {Waxman.} In your testimony you discussed how
1155 natural gas generation also supports the expansion of
1156 renewable energy. Could you explain how wind and solar power
1157 benefit from the increased use of natural gas for electricity
1158 generation?

1159 Ms. {LaFleur.} Yes. Because wind and solar, they don't
1160 consume fuel, but they can only operate when the wind is
1161 blowing or the sun is shining, for the most part, you need

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1162 quick-ramping resources that can fill in when they ramp-down,
1163 and because natural gas machines tend to be more flexible,
1164 they are well adapted to that filling in with wind and solar.

1165 Mr. {Waxman.} As utilities move from coal-fired
1166 generation to cheaper, cleaner, and more flexible sources of
1167 power, we hear complaints about the retirements of coal-fired
1168 plants. Commissioner LaFleur, my understanding is that most
1169 of the planned retirements are the oldest, least-efficient
1170 coal plants. These are plants that have operated for 50 or
1171 60 years or even longer. Is that right?

1172 Ms. {LaFleur.} Yes, for the most part. I mean, we are
1173 monitoring this. We get reports from the different regions
1174 of the country, and most of the first coal plants to retire
1175 are the older, built in the '50s and '60s, most expensive to
1176 run, and for that reason, they were rarely operated. It is
1177 like if they came up with a new rule that you needed some
1178 expensive braking system for your car, the first thing you
1179 would do is put it on the car you drive to work every day.
1180 But if you car you only drove on vacation, you might say,
1181 gee, do I want to spend the money on a car I drive once a
1182 year? Some of these plants were kind of on the edge of the

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1183 system.

1184 Mr. {Waxman.} Okay. While moving away from the oldest,
1185 dirtiest generation is reducing our carbon pollution, many
1186 other coal-fired power plants are going to be installing
1187 modern pollution controls to reduce their toxic emissions.
1188 For the first time, that is going to provide tremendous
1189 health benefits. This transition in our energy sector is
1190 important for the climate and for public health. It is a
1191 positive development, but like all major transitions, it
1192 requires planning.

1193 Commissioner LaFleur, in your testimony you said that
1194 this is the time to plan, not to panic. Do you believe the
1195 communications scheduling infrastructure issues we are
1196 talking about today are manageable?

1197 Ms. {LaFleur.} Yes, I do.

1198 Mr. {Waxman.} Is this an area where FERC should be
1199 promulgating national rules or is regional action more
1200 appropriate?

1201 Ms. {LaFleur.} Well, as I said in my testimony, right
1202 now, I think the infrastructure issues are better tackled
1203 regionally because the different markets have different

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1204 rules. But if we do something on either the schedules or on
1205 communication, those might lend themselves to national
1206 action.

1207 Mr. {Waxman.} Um-hum. Well, it sounds like FERC and
1208 grid operators are doing exactly what they should be doing,
1209 identifying the challenges posed by this transition and
1210 developing solutions to address those challenges while moving
1211 away from a coal-heavy energy portfolio to a truly diverse
1212 energy portfolio. If we want to prevent the worst impacts of
1213 climate change, our energy infrastructure will need to
1214 continue changing in the years and decades to come.

1215 Commissioner LaFleur, as regional action is taken to
1216 accommodate the energy transition we are seeing, in your
1217 view, would it be prudent for regional planners to anticipate
1218 that greater carbon pollution emission reductions are likely
1219 to be required in the future?

1220 Ms. {LaFleur.} Most of the planners, whether they are
1221 at the state level or at the regional level, do scenario
1222 planning. And it is probably prudent to model, well, what if
1223 there is new carbon legislation? We don't have that
1224 legislation now, so it is not an immediate thing to plan for.

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1225 But they probably model multiple futures, and I think they
1226 should.

1227 Mr. {Waxman.} Well, I would think that they would
1228 anticipate not having the same do-nothing Congress we have
1229 now forever. And even a stopped clock is correct twice a
1230 day, so perhaps we will get bipartisan support and do
1231 something about climate change, and that would be, I think,
1232 all to the good. Thank you very much for your time.

1233 Mr. {Whitfield.} At this time, I recognize the
1234 gentleman from Kansas, Mr. Pompeo, for 5 minutes.

1235 Mr. {Pompeo.} Thank you, Mr. Chairman. I want to talk
1236 about the pipeline permitting process.

1237 So there was a recent GAO study on this from February of
1238 this year, February 2013, that talked about the process. And
1239 in that report, it said that FERC does not track the time
1240 frames for these permits being granted. And in light of
1241 stakeholder concerns, do you think that FERC should be
1242 tracking--I will ask you both, yes or no--do you think FERC
1243 should be tracking the time that permits are being granted
1244 from application to completion?

1245 Ms. {LaFleur.} I think we should be aware of that. My

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1246 understanding of the NGER report is that it said FERC did a
1247 pretty good job meeting deadlines--

1248 Mr. {Pompeo.} This was the GAO. I am talking about the
1249 GAO report that said--

1250 Ms. {LaFleur.} Oh, I am sorry.

1251 Mr. {Pompeo.} --that you all are tracking how long it
1252 takes. They had to go to public records to identify the
1253 lengths of the permit process, that you all kept no such
1254 records? Is that true?

1255 Ms. {LaFleur.} I don't want to say something I am not
1256 positive of, but I think we should know how long our process
1257 takes, yes.

1258 Mr. {Pompeo.} Great. That is my question.
1259 Commissioner, do you agree?

1260 Mr. {Philip Moeller.} Absolutely.

1261 Mr. {Pompeo.} Yes. Now, NGER did a report that said
1262 that 20 percent of natural gas pipelines experienced delays
1263 of 6 months or more, largely because the delays occurred
1264 after FERC's NEPA analysis had been completed, which has a
1265 90-day requirement under EPOA. Is that statement also
1266 correct?

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1267 Ms. {LaFleur.} Yes, it is my understanding that it is.
1268 A lot of the delays are in the conditions that are put on in
1269 the FERC environmental permits that have subsequent
1270 conditions.

1271 Mr. {Philip Moeller.} As far as I know, that is
1272 correct.

1273 Mr. {Pompeo.} So a) FERC doesn't know how long it has
1274 taken; and, b) it is not complying with EPAct. So in my
1275 view, there is work that needs to be done in this permitting
1276 process. I am actually going to propose legislation that
1277 does that. I hope it to be bipartisan. I think it is a good
1278 government solution which puts cabined risk and allows
1279 pipelines to move forward where they can have a little more
1280 certainty.

1281 I guess I would ask each of you--I am happy to share
1282 with you and talk to you and get your input--but Commissioner
1283 Moeller, you suggested that you had some ideas on how we
1284 might do this permitting process more quickly. Would you be
1285 willing to share a couple of those thoughts with us this
1286 morning?

1287 Mr. {Philip Moeller.} Yes. I think the challenge that

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1288 you alluded to is that the resource agencies typically don't
1289 have the accountability to come back with an answer. We see
1290 the same thing in hydropower relicensing. And it is the way
1291 the statute is. And if you created some timeline of
1292 accountability, I think they would be a lot more responsive.

1293 Mr. {Pompeo.} Do you agree with that, Commissioner
1294 LaFleur?

1295 Ms. {LaFleur.} Yes, I do. I agree both on the problem
1296 and that we do not control all of the other agencies who have
1297 to act to get a permit out, and I would be happy to look at
1298 legislation.

1299 Mr. {Pompeo.} Great. Great. Thank you. I would love
1300 to give you all more capacity to control those processes and
1301 legislation I am drafting, I think, will move us along that
1302 way.

1303 I wanted to just say one more thing on permitting that I
1304 want to talk about. I won't go through the list of permits.
1305 There is a very long list of folks who you have got to go
1306 please before you get to build some of this new capacity.
1307 But I want talk about a statement that the President has made
1308 about NEPA process. He says now NEPA process will have to

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1309 include and analysis of climate change, at least as reported
1310 in an article in the Bloomberg on March 15.

1311 From a natural gas infrastructure perspective, it seems
1312 to me this could be very problematic in terms of extending
1313 the timelines to get pipelines built. As the lead agency for
1314 approving the interstate natural gas pipeline constructions,
1315 tell me what you think the impact would be if FERC were
1316 required to take into account climate change as part of each
1317 of its NEPA analysis.

1318 Mr. {Philip Moeller.} Well, it is not make any faster.

1319 Mr. {Pompeo.} Do have the capacity and resources to do
1320 that analysis? Where would you begin?

1321 Ms. {LaFleur.} I think a lot of it comes down to what
1322 is the scope of our review. There has been a lot of
1323 controversy about does FERC review the pipeline it is
1324 certificated or the entire lifecycle of the gas? And there
1325 have been some court cases on that. As long as we are
1326 working on the pipeline or the project we are looking at, I
1327 think if new laws are passed, we will incorporate them in our
1328 review.

1329 Mr. {Philip Moeller.} That is a good statement. We are

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1330 cabined by the certificate in front of us, and that is not
1331 something we have done and I do not know how we develop that
1332 expertise. I would leave it to our Office of Energy
1333 Projects.

1334 Mr. {Pompeo.} Yes, I don't know how you do either. You
1335 don't have the expertise, in fact. Yes or no, do you think
1336 you have statutory authority to do that today, to consider
1337 climate change as part of a NEPA project?

1338 Mr. {Philip Moeller.} Maybe we should review the court
1339 decisions on that before we answer that.

1340 Mr. {Pompeo.} Okay. I am happy to let you do that.
1341 But I would appreciate a response to whether FERC believes or
1342 you as commissioners believe you have the statutory authority
1343 to consider climate change as a part of an interstate
1344 pipeline approval process.

1345 Ms. {LaFleur.} I would also like to get back to you on
1346 that.

1347 Mr. {Pompeo.} Thank you. I yield back.

1348 Mr. {Whitfield.} Thank you very much.

1349 At this time I recognize the gentleman from Texas, Mr.
1350 Green, for 5 minutes.

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1351 Mr. {Green.} Thank you, Mr. Chairman.

1352 And I agree with my colleague that FERC is not prepared
1353 to do that but there was a bill here last session that was
1354 going to give FERC the authority to approve the TransCanada
1355 pipeline and I think your testimony was that you are not
1356 prepared to do that either. And so, hopefully, we have
1357 problems on both sides of our aisle with giving agencies
1358 responsibilities that they are not ready for.

1359 But let me get back to my line of questioning. Both
1360 commissioners, welcome and thank you both for being here
1361 today. I represent a district in Texas and so ERCOT is our
1362 RTO, and I have heard that there are some pretty serious
1363 concerns about there not being enough forecasted power
1364 generation to ensure reliability in the ERCOT market in the
1365 future. Could both of you please speak to whether you think
1366 that the market structure under ERCOT is enough to
1367 incentivize the creation of new generation? And if you don't
1368 think it is, what can we do?

1369 And I know our next panel, we have a former Public
1370 Utility Commissioner for Texas and also our Railroad
1371 Commission Chairman, so I will ask him the same question.

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1372 Mr. {Philip Moeller.} Well, Congressman, thank you for
1373 the question.

1374 ERCOT jealously guards its own jurisdiction so that FERC
1375 does not tread in it, but of course we watch what is going on
1376 and we have a responsibility on the reliability side, not on
1377 the market administration side.

1378 Mr. {Green.} Um-hum.

1379 Mr. {Philip Moeller.} And you have two very fine public
1380 utility commissioners in Texas that are debating this very
1381 issue of do you need a capacity market? What do you do with
1382 the real-time energy prices because of the reserve margins
1383 declining for some of the reasons that have been discussed
1384 today?

1385 As I look to the summer, you know, the summer concerns
1386 are southern California, Texas, and Boston. They were last
1387 summer. They are going to be this summer again. If we have
1388 a really, really hot summer in Texas, you will see this
1389 debate probably on a daily basis.

1390 Ms. {LaFleur.} I would add that most of the U.S.
1391 markets that have gone to competitive electric markets do
1392 have some sort of a forward market as is being considered in

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1393 Texas right now, and that is for the very purpose of
1394 attracting capital for future reliability. It is not within
1395 our jurisdiction. I feel Mr. Smitherman's eyes on my back,
1396 so I will let him take it from there.

1397 Mr. {Green.} Well, and I appreciate it. And being from
1398 Texas, we stand shoulder-to-shoulder in protecting ERCOT. I
1399 just want to make sure--and we did have rolling blackouts in
1400 February of 2011. And it seemed like I heard that our wind
1401 power growth, which has been phenomenal in Texas, helped
1402 stabilize that situation. Is that the information FERC has?

1403 Mr. {Philip Moeller.} We can get back to you. But the
1404 focus of the report was really on the outages as opposed to
1405 the role that wind had, but I will get back to you on that.

1406 Mr. {Green.} Okay, I appreciate it.

1407 In light of the increase in natural gas electricity
1408 generation, in February of 2012 FERC issued a request for
1409 comments regarding natural gas electric coordination. In
1410 August of 2012, over 1,200 stakeholders attended five
1411 regional technical conferences hosted by FERC to discuss
1412 these issues. What are each of your biggest takeaways from
1413 those conferences that FERC received?

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1414 Ms. {LaFleur.} I think our takeaway was that a lot of
1415 the issues are regional in nature but there are some cut-
1416 across issues that we should work on, particularly
1417 communications and scheduling, the harmonization of the days.
1418 I think another takeaway is that the situation is involving
1419 fast so we need to really stay on top of it. New England is
1420 where the issues are right now, but it is evolving
1421 everywhere. And we have heard that in the conferences.

1422 Mr. {Philip Moeller.} I would agree that this is an
1423 issue everywhere to varying degrees, and the gratifying thing
1424 is that a year ago, not everybody thought it was an issue.
1425 Now, almost universally, people agree that there are
1426 challenges out there, and we are trying to keep the momentum
1427 going at the Commission to keep people focused on solutions.

1428 Mr. {Green.} Commissioner Moeller, after the Southwest
1429 outage of February of 2011, FERC and the North American
1430 Electric Reliability Corporation conducted a study for the
1431 cause of the event, issuing a report that was issued in
1432 August of 2011 that had 32 recommendations for industry and
1433 the regulators in an attempt to avoid a similar occurrence.
1434 What are some of the more important recommendations, and is

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1435 there a plan for enacting these?

1436 Mr. {Philip Moeller.} There is a plan. I haven't had
1437 an update for a couple of months, but the focus of most of
1438 the recommendations was to regulators and legislators in
1439 those three States. The primary recommendation on the
1440 electric side was winterize the system, go into the winter
1441 with the same kind of urgency you go into the summer in
1442 ERCOT. And I think there has been a lot of progress, and I
1443 think Barry Smitherman can answer a lot of those questions.

1444 Some of the others are tougher, like Arizona doesn't
1445 have any storage. We had a conference to try to promote
1446 storage, gas storage, underground, but that doesn't seem to
1447 be materializing.

1448 So I expect another report on the status of the 32
1449 recommendations sometime later this year, but it is something
1450 I am very concerned about.

1451 Mr. {Green.} Well, and I only have a couple seconds
1452 left, but I appreciate what FERC does and the stability that
1453 it does, and I am glad you came for our committee. I
1454 appreciate it.

1455 Mr. {Whitfield.} The gentleman's time has expired.

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1456 At this time I recognize the gentleman from Virginia,
1457 Mr. Griffith, for 5 minutes.

1458 Mr. {Griffith.} Thank you, Mr. Chairman. I appreciate
1459 that, your courtesies in recognizing me.

1460 I would also say to the witnesses here that it was very
1461 refreshing to hear folks from an agency come in, and on two
1462 occasions said I don't believe we need more authority at this
1463 time. It is very unusual to hear those comments in this
1464 committee at least.

1465 Also, Ms. LaFleur, I note--and it has been mentioned
1466 before--but I would note again because sometimes some of the
1467 folks on the other side of the aisle want to think it is just
1468 gas prices that are causing a problem, and you did
1469 acknowledge in your written testimony on page 2 that it is
1470 repowering older fossil generation that is uneconomic to
1471 operate or to retrofit for new environmental regulations when
1472 talking about the shutdown of coal. I do appreciate you
1473 recognizing that it is this combination.

1474 And likewise, in light of the fact that experts have
1475 previously testified in another hearing in this committee
1476 that they anticipate that gas will rise back up to about \$4

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1477 by the end of the year, and that at that point coal once
1478 again becomes competitive on pricing. Would you not
1479 acknowledge that at that point if we get to that point--and
1480 there is some speculation there--but once we reach that
1481 point, that then it would be predominantly the new
1482 environmental regulations that are shutting down our
1483 facilities, our coal facilities? Yes or no?

1484 Ms. {LaFleur.} I don't see it exactly that way, no.

1485 Mr. {Griffith.} All right.

1486 Ms. {LaFleur.} Okay.

1487 Mr. {Griffith.} But it is still a major concern and you
1488 having acknowledged that and I appreciate that.

1489 Ms. {LaFleur.} Absolutely.

1490 Mr. {Griffith.} You know, I thought it was interesting
1491 somebody else brought up the cyber attacks, and apparently in
1492 2012, we had a series of cyber attacks on gas pipeline
1493 companies and so forth. Do recall seeing that information?

1494 Ms. {LaFleur.} Yes.

1495 Mr. {Griffith.} And the concern was, I mean, they might
1496 have been trying to steal some information on how to do the
1497 fracking because we have been so successful on it, but also

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1498 there were concerns that there were cyber attacks on the
1499 valves and the on-off switches, basically. Isn't that
1500 correct?

1501 Ms. {LaFleur.} It was on the energy management system
1502 that regulates the pipelines and that opens valves and runs
1503 compressors and so forth, yes.

1504 Mr. {Griffith.} So theoretically, a successful cyber
1505 attack could close down or open up gas pipelines, close down
1506 ones we don't want closed down and open up ones we don't want
1507 opened, isn't that correct?

1508 Ms. {LaFleur.} Yes. Theoretically, yes.

1509 Mr. {Griffin.} Now, I am no expert on using the
1510 computer, but I was sitting here when that question was asked
1511 and I started looking for, you know, attacks and cyber
1512 attacks, et cetera, on coal facilities, and the only thing I
1513 could find were EPA attacks on coal. I didn't find anything
1514 about foreign powers. Have you run across any instances
1515 where it appears that foreign powers are attempting to figure
1516 out ways to disrupt our supply of coal?

1517 Ms. {LaFleur.} There have been cyber attacks on the
1518 energy management systems that turn plants on and off. And

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1519 like FERC, cyber attacks are fuel-neutral. They would mess
1520 up whatever was being turned on and off. I am not aware that
1521 I remember of any specifically at a coal unit.

1522 Mr. {Griffith.} But I do think that in regard to your
1523 concerns about the pipelines, you previously indicated that
1524 one of the concerns was getting the pipelines to the
1525 facilities and so forth and that it was a whole lot easier to
1526 have a supply of coal sitting there on the ground than it was
1527 to have the natural gas automatically show up when it was
1528 needed at the power plant. Didn't you indicate that to us
1529 earlier?

1530 Ms. {LaFleur.} I think I said that was what was
1531 different about gas, that it came in a pipeline, yes.

1532 Mr. {Griffith.} And so if an energy production plant
1533 had a supply of coal and it was a coal-burning plant, it
1534 would be less likely that for a few hours or even for a day,
1535 that somebody could affect that supply of energy at that
1536 power plant than it would be if somebody did a successful
1537 cyber attack on our pipeline. Isn't that true?

1538 Ms. {LaFleur.} Certainly, the coal pile doesn't have
1539 the cyber risk, but I think you could still affect the energy

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1540 management system that turns the plant on and off. I mean,
1541 we need to guard against these risks wherever they are.

1542 Mr. {Griffith.} All right. I do appreciate that as
1543 well.

1544 In regard to the natural gas supply, we are already
1545 having trouble getting the pipelines there. Do you think
1546 that there needs to be a redundancy built in on those
1547 pipelines? I know that you don't want to charge the customer
1548 too much and you don't want to have too many pipelines, but
1549 at the same time, don't you think we would need more than
1550 just one pipeline to the facilities to make sure that if
1551 something happened to one supply that there be another supply
1552 readily available, if we are going to put all of our eggs in
1553 that basket or in one of those baskets?

1554 Ms. {LaFleur.} Well, I am not even sure I would use the
1555 word redundancy. You need a robust grid, a robust network of
1556 more than one source of supply in different regions and
1557 localities. Yes.

1558 Mr. {Griffith.} And it is always a little bit dangerous
1559 to put a huge percentage of your energy into one fuel source.
1560 It is always better to have multiple sources available to

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1561 supply the electricity for the American citizen, isn't that
1562 true?

1563 Ms. {LaFleur.} Yes, I believe that.

1564 Mr. {Griffith.} And so it would be ill-advised for our
1565 country to completely eliminate coal as an energy source in
1566 light of the fact that we have the world's greatest supply of
1567 coal. Wouldn't that also be true?

1568 Ms. {LaFleur.} I think we are much better off with the
1569 coal plants being retrofitted, as the vast majority of them
1570 are, than losing all of them.

1571 Mr. {Griffith.} I thank you, and yield back.

1572 Mr. {Whitfield.} At this time I recognize the gentleman
1573 from New York, Mr. Tonko, for 5 minutes.

1574 Mr. {Tonko.} Thank you, Mr. Chairman. Thank you for
1575 this very interesting topic today. And let me welcome
1576 Commissioner Moeller and Commissioner LaFleur, and your
1577 expertise is very helpful in this discussion.

1578 And further, Commissioner LaFleur, let me thank you, as
1579 a representative in upstate New York in the capital region in
1580 Mohawk Valley, for your prior service before your
1581 commissioner status. It was much appreciated then and much

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1582 appreciated now.

1583 Commissioner LaFleur, the pipeline capacity issues in
1584 the Northeast region appears to be a greater constraint on
1585 natural gas distribution than in other areas. We have had a
1586 lot of focus on that today, but I am primarily concerned
1587 about the Northeast. And are issues related to the siting of
1588 pipelines a constraint or is this primarily a matter of
1589 needing to speed up the investments in natural gas
1590 infrastructure?

1591 Ms. {LaFleur.} I think it is more of an investment
1592 issue. I mean pipelines are harder to build in urban areas
1593 but we have had a number of them built. So I have confidence
1594 that they will be constructed if the investment comes
1595 forward.

1596 Mr. {Tonko.} And in terms of the investment, what, if
1597 anything, could be a response to that? What could enhance
1598 the investment opportunity?

1599 Ms. {LaFleur.} Well, ISO New England, I think they will
1600 talk about is working on--is ways in which to structure the
1601 generation markets to motivate the generators to build in
1602 more fuel security so invest or increase their commitments to

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1603 pipelines or other dual fuel commitments or other gas
1604 storage. We do have LNG storage in the Northeast, other ways
1605 of getting fuel security. So it is pricing the fuel security
1606 into the generation I think is the big response.

1607 Mr. {Tonko.} Thank you. And as utilities have reduced
1608 their coal-fired generation, we have seen reductions in
1609 carbon pollution from the energy sector, and increased
1610 natural gas generation is one factor in this drop of carbon
1611 pollution but it is obviously not the only factor. So
1612 Commissioner, would you agree that state-level renewable
1613 energy policies have helped to reduce emissions from the
1614 power sector?

1615 Ms. {LaFleur.} Yes. I think they are driving a lot of
1616 renewable investment including in upstate New York, as you
1617 know. If you drive up near Niagara Falls, you just see
1618 windmills as far as the eye can see.

1619 Mr. {Tonko.} Absolutely right. And as a result of
1620 their renewable energy policies, States like New York and
1621 Colorado and California are displaying a significant amount
1622 of renewable generation capacity. So to both commissioners,
1623 which state policies would you note have been the most

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1624 effective in deploying renewable energy?

1625 Ms. {LaFleur.} I think that renewable portfolio
1626 standards are certainly starting to be felt. We don't
1627 regulate it, but I would point to Texas but also other
1628 States. You mentioned upstate New York has a lot of wind.
1629 Some of the States have very effective small solar policies.
1630 States as diverse as California and New Jersey, which clearly
1631 have different weather, have very heavy penetration of home-
1632 and business-level solar, and the programs they have in place
1633 appear to be very effective at getting those done.

1634 Mr. {Philip Moeller.} Congressman, I am not really an
1635 expert on all 29 different renewable portfolio standards
1636 throughout the country, but I think the ones have been most
1637 successful are the ones that have adequate transmission
1638 infrastructure to make sure that that power can move around
1639 from, typically, where it is generated to where it is
1640 consumed and have the kind of flexibility that don't overly
1641 favor one or two sources.

1642 Mr. {Tonko.} And I would assume that the upgrades in
1643 interconnection are important in that regard?

1644 Mr. {Philip Moeller.} They are vital, absolutely

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1645 important. And it is usually difficult to site this
1646 transmission so that is part of the challenge as well.

1647 Mr. {Tonko.} And to the policy area, which federal
1648 policies would you suggest have helped deploy renewable
1649 energy?

1650 Ms. {LaFleur.} Well, certainly, right now, the
1651 Production Tax Credits are having an impact on investment in
1652 that area. I also think federal R&D, as well as private R&D,
1653 has helped bring down the cost of some of the technologies.

1654 Mr. {Philip Moeller.} I go more toward market access in
1655 making sure that the transmission infrastructure is there to
1656 move the power around. And there are a variety of things we
1657 could talk to you later about that could promote that. We
1658 are doing an exercise at FERC, Order 1000, which is an
1659 attempt to make the planning better on transmission.

1660 Mr. {Tonko.} Thank you. And Mr. Chair, I note my time
1661 is expired so I yield back.

1662 Mr. {Whitfield.} Thank you.

1663 At this time I recognize the gentleman from Illinois,
1664 Mr. Shimkus, for 5 minutes.

1665 Mr. {Shimkus.} Thank you. And Mr. Chairman, it is

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1666 great having you here.

1667 Ms. LaFleur, you mentioned many coal-fired power plants
1668 have been retrofitted. Can we retrofit a coal-fired power
1669 plant to an existing plant to address site greenhouse gas
1670 rule or regulation?

1671 Ms. {LaFleur.} I am not an expert on that but I think
1672 it is much harder than scrubbing things out of the stacks.

1673 Mr. {Shimkus.} It is impossible. There is no
1674 technology right now. The cost would triple the amount of
1675 infrastructure costs and the electricity required to run this
1676 was probably about 30 percent of the generation capacity of a
1677 power plant at this time. So that just goes into the
1678 emissions, kind of the whole debate, what is toxic, what is
1679 not is not, just that debate. And it does segue into this
1680 fear on reliability because, as we have this debate and
1681 concern about environmental rules and regulations, the
1682 pulling off of generation should be of major concern. Is
1683 that correct?

1684 Ms. {LaFleur.} Well, in the case of other EPA
1685 regulations, like when we worked on Mercury and Air Toxics,
1686 as the rules become final, we had to work at FERC and with

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1687 the EPA to make sure we had the coordination and flexibility
1688 that was needed to make sure we protected reliability. If
1689 there are other suites of regulations, that will be equally
1690 necessary.

1691 Mr. {Shimkus.} Well, let's talk--and Commissioner
1692 Moeller, you are more than welcome to chime in, too.

1693 We know based upon MACT that anywhere from 50 to 70
1694 gigawatts of coal-fired generation may be retired over the
1695 next decade. That is a lot, with 90 percent coming within
1696 the next 5 years. So this next 3- to 5-year window aligns
1697 with the compliance deadlines for EPA's Utility MACT Rule in
1698 places like the Midwest. Some of this coal-fired generation
1699 will be replaced with natural gas-fired power plants and that
1700 is part of the debate of having them and also getting the
1701 natural gas in the pipeline siting.

1702 From your perspective--and this is for Commissioner
1703 Moeller--would you agree that the short compliance time frame
1704 for EPA's Utility MACT rule is compounding reliability
1705 concerns for regions heavily relying on coal such as the
1706 Midwest and the mid-Atlantic?

1707 Mr. {Philip Moeller.} Yes, I do. You bet.

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1708 Mr. {Shimkus.} It is just a matter of numbers, isn't
1709 it?

1710 Mr. {Philip Moeller.} Well, the environmental benefits
1711 are coming. The question is, if you squeeze them on too
1712 tight a timeline, there can be reliability challenges that
1713 are probably going to land in our lap. So that is why I have
1714 urged the EPA to be flexible if certain areas need a little
1715 more time, to give it to them.

1716 Mr. {Shimkus.} It is reliability that segues into cost,
1717 too. And an unreliable grid is a costly grid, wouldn't you
1718 argue? So from the individual consumer's point of view that
1719 if the reliability of the grid becomes uncertain and there is
1720 a risk premium then paying for reliability, that will get
1721 passed onto the individual consumer, would it not?

1722 Mr. {Philip Moeller.} It will, depending on the market
1723 structure, in different ways.

1724 Mr. {Shimkus.} Given your background as a state public
1725 utility commissioner and now your experience at FERC, do you
1726 believe having a diverse range of fuel resources available to
1727 generate electricity is important to provide affordability
1728 and reliable service to customers?

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1729 Mr. {Philip Moeller.} Yes. I have never been a state
1730 commissioner but optionality is always good.

1731 Mr. {Shimkus.} And I understand that FERC does not have
1732 jurisdiction over generation, but would you agree that an
1733 overreliance on any one particular fuel source could be
1734 problematic from a reliability perspective?

1735 Mr. {Philip Moeller.} Yes.

1736 Mr. {Shimkus.} Thank you, Mr. Chairman, and I yield
1737 back my time.

1738 Mr. {Whitfield.} The gentleman yields back his time. I
1739 would like to recognize the gentleman from Colorado, Mr.
1740 Gardner, for 5 minutes.

1741 Mr. {Gardner.} Thank you, Mr. Chairman, and I welcome
1742 the commissioners to today's hearing. Thanks for being here
1743 to share your expertise.

1744 And Chairman Moeller, I wanted to talk to you a little
1745 bit about some of the comments made in your testimony. You
1746 talk a little bit about traditional base load generation will
1747 be needed to firm renewable energy resources. We hear a lot
1748 of talk about that, whether it is wind, solar, what backup
1749 will be needed. Is there a percentage that you can give me

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1750 of that base load generation so, for instance, if you have a
1751 megawatt of wind production, what percent of firming base
1752 load would you need for that 1 megawatt of wind?

1753 Mr. {Philip Moeller.} Well, it depends on the wind
1754 because your home State of Colorado has some really good wind
1755 and--

1756 Mr. {Gardner.} I live on the Eastern plains so--

1757 Mr. {Philip Moeller.} Your chairman can talk about it
1758 later, but because of the characteristics of how it comes off
1759 from the Rockies, it is really good wind. So they don't have
1760 as much of a challenge firming it--they still have a
1761 challenge. Another area that, you know, might have a
1762 capacity factor of 20 percent, you know, that means that 80
1763 percent of the time you have to back it up. So wind quality
1764 differs.

1765 Mr. {Gardner.} So for every 5 megs, you need 4 megs of
1766 base load in that instance? Is that one way look at it?

1767 Mr. {Philip Moeller.} Yes. Right.

1768 Mr. {Gardner.} Okay. And then, talking about pipeline
1769 issues, talking about production of natural gas, we have in
1770 Colorado several cities that are banning hydraulic

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1771 fracturing. We also are hearing rumors that there may be a
1772 statewide initiative to ban hydraulic fracturing. If they go
1773 that direction, is there an interstate commerce issue that
1774 FERC would have to look at based on this transition to
1775 natural gas power generation?

1776 Mr. {Philip Moeller.} Congressman, I don't think it
1777 would be in our jurisdiction to do that, but I am sure
1778 someone would be thinking about it.

1779 Mr. {Gardner.} And I would love to hear your further
1780 thoughts on that and perhaps maybe even somebody in the
1781 Council's office talking a little bit about that issue
1782 specifically. When it comes to the EPA, we have seen a
1783 growing, sort of, decisions by the EPA when comes to things
1784 like LNG export facilities where EPA is asking targeted
1785 questions in their environmental assessments and analysis on
1786 pipelines and whether or not an LNG facility would require
1787 additional pipelines. Is the EPA consulting with FERC when
1788 they are requiring an analysis of pipeline need or capacity?

1789 Mr. {Philip Moeller.} I don't believe so. I will get
1790 back to you, but they certainly have submitted comments for
1791 the record on the environmental analysis.

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1792 Mr. {Gardner.} Okay. And then I think Mr. Pompeo may
1793 have touched a little bit on this, but do you have an average
1794 time that it takes to site a pipeline in the U.S. on private
1795 land?

1796 Mr. {Philip Moeller.} We might but I would have to get
1797 back to you on that.

1798 Mr. {Gardner.} That would be great. And if you could
1799 get back to me on the federal land as well, do you have that
1800 answer of the top your head?

1801 Mr. {Philip Moeller.} Okay.

1802 Mr. {Gardner.} Perfect. And then, are you working on
1803 ways--and you can follow up with me on this as well--working
1804 on ways that FERC can improve upon the time it takes to site
1805 a pipeline? I think that is an important conversation with
1806 those answers in mind.

1807 Mr. {Philip Moeller.} Well, I have a lot of confidence
1808 in our Office of Energy Projects. They are doing the best
1809 job they can under the given circumstances and statutory
1810 responsibilities, as I alluded to earlier. One way to speed
1811 up the process would be to create some timelines and the
1812 accountability that come with timelines on the resource

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1813 agencies that a pipeline is also dependent on getting permits
1814 from.

1815 Mr. {Gardner.} Okay. And do you believe that coal
1816 still plays a role in our electric generation and that it
1817 would be unwise to move too quickly to natural gas if there
1818 is no infrastructure if it is not currently supported?

1819 Mr. {Philip Moeller.} Well, coal is still an extremely
1820 significant part of our electricity mix and will be for the
1821 foreseeable future.

1822 Mr. {Gardner.} Mr. Chairman, I yield back my time.

1823 Mr. {Whitfield.} The gentleman yields back the balance
1824 of his time. Thank you.

1825 Well, I believe that is it. Commissioner Moeller and
1826 LaFleur, thank you all again for your testimony and we look
1827 forward to your providing the additional information that was
1828 requested. And you all are dismissed at this time. But we
1829 do look forward to working with you as we move forward.

1830 I would like to call the second panel of witnesses. On
1831 the second panel today, we have Hon. Barry Smitherman, who is
1832 the chairman of the Railway Commission of Texas. We have
1833 Hon. Joshua Epel, who is chairman of the Colorado Public

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1834 Utilities Commission. We have Mr. Clair Moeller, who is
1835 executive vice president, Transmission and Technology for the
1836 Midwest Independent Transmission System Operator. We have
1837 Mr. Gordon van Welie, President and CEO of ISO New England.
1838 And we have Mr. Paul Hibbard, who is the vice president of
1839 the Analysis Group. Todd Snitchler, who is the chairman of
1840 the Public Utilities Commission of Ohio, was scheduled to be
1841 with us, but because of an unexpected development, he is not
1842 here today.

1843 So welcome all of you. Thank you for agreeing to come
1844 and testify. And Mr. Smitherman, we will begin with you.

1845 Each one of you will be given 5 minutes for your
1846 statement, and the little red light will come on when your
1847 time is expired. So we thank you for being with us, we look
1848 forward to your testimony, and we welcome your expertise as
1849 we try to deal with these significant issues.

1850 So Mr. Smitherman, you are recognized for 5 minutes.

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|
1851 ^STATEMENTS OF BARRY T. SMITHERMAN, CHAIRMAN, RAILROAD
1852 COMMISSION OF TEXAS; JOSHUA B. EPEL, CHAIRMAN, COLORADO
1853 PUBLIC UTILITIES COMMISSION; CLAIR J. MOELLER, EXECUTIVE VICE
1854 PRESIDENT, TRANSMISSION & TECHNOLOGY, MIDWEST INDEPENDENT
1855 TRANSMISSION SYSTEM OPERATOR, INC.; GORDON VAN WELIE,
1856 PRESIDENT AND CEO, ISO NEW ENGLAND, INC.; AND PAUL J.
1857 HIBBARD, VICE PRESIDENT, ANALYSIS GROUP

|
1858 ^STATEMENT OF BARRY T. SMITHERMAN

1859 } Mr. {Smitherman.} Thank you very much, Chairman
1860 Whitfield, Ranking Member Rush, members of the committee,
1861 including my good friends from Texas.

1862 My name is Barry Smitherman. I am the chairman of the
1863 Texas Railroad Commission. I was electing statewide last
1864 November with 74 percent of the vote, apparently receiving at
1865 least two votes from this room.

1866 The Railroad Commission of Texas was created by an
1867 amendment to the Texas Constitution in 1891, and we are the
1868 oldest regulatory body in Texas, one of the oldest in

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1869 America. While we no longer regulate railroads, we have for
1870 almost 100 years regulated the oil and natural gas
1871 industries. We also regulate intrastate pipelines, surface
1872 mining for lignite, and natural gas utility rates.

1873 I am also the former chairman of the Public Utility
1874 Commission, as you heard earlier, which regulates the
1875 electric and telecommunications industries. In that
1876 capacity, I was a member of the ERCOT Board of Directors,
1877 which is the grid operator for most of Texas.

1878 I am honored to be the only person in Texas history to
1879 serve as commissioner on both the PUC and the Railroad
1880 Commission. I am also the chairman of the NARUC Gas
1881 Committee, although I am not appearing in that capacity
1882 today.

1883 Today's hearing focuses on natural gas and electric
1884 coordination challenges, and my focus in these comments will
1885 be on upstream production issues. In analyzing these two
1886 issues, we must keep in mind two significant developments.
1887 The first of which is been touched upon is that EPA, under
1888 this Administration, has ramroded through a suite of anti-
1889 fossil initiatives led by six new greenhouse gas rules, which

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1890 effectively make it impossible to build a new coal plant in
1891 America.

1892 Texas has refused to comply with these sweeping EPA
1893 regulations, and therefore, EPA has rejected our permitting
1894 authority through the first-ever imposition of a Federal
1895 Implementation Plan, or FIP. The Texas Attorney General has
1896 assured me that he will challenge these greenhouse gas rules
1897 in the U.S. Supreme Court if it is granted.

1898 When I last appeared before this committee, I spoke of
1899 the Cross-State Air Pollution Rule. CSAPR is the successor
1900 to the Clean Air Transport Rule, and had it been implemented
1901 in early 2012, it would have caused the premature closing of
1902 several coal-fired power generation plants in Texas. Such
1903 closures would have increased the likelihood of rolling
1904 blackouts last summer and this coming summer. Fortunately,
1905 Texas and the other litigants were successful at the Court of
1906 Appeals for the District of Columbia when the Court vacated
1907 CSAPR by concluding that the EPA had exceeded its authority.

1908 I could talk about the remaining rulemaking initiatives,
1909 but I would prefer a focus on the second development, which
1910 is actually very positive, timely, and quite fortuitous. We

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1911 now have abundant supplies of natural gas in America.
1912 Through horizontal drilling and hydraulic fracturing
1913 techniques developed by the private sector, we have seen a
1914 180 degree turnabout from just 5 years ago. In late 2008 it
1915 was believed that we were running out of natural gas in America.
1916 And in fact, the price was very high, over \$12 MMBtu, and
1917 several firms were considering importing LNG.

1918 Today, America is awash in natural gas. And whether it
1919 is a 100-year or 200-year supply of natural gas supply of
1920 natural gas, we have a lot of it, and Texas is leading the
1921 way. We produce almost 20 Bcf of gas per day, which is about
1922 30 percent of all U.S. production. The Barnett Shale, for
1923 example, has produced 12 trillion cubic feet of gas and we
1924 believe there are 44 trillion cubic feet of gas remaining.

1925 The importance of this is that electricity prices in
1926 many parts of the country are driven by the price of natural
1927 gas. For example, in Dallas, where Chairman Emeritus Barton
1928 is from, you can get electricity for less than .05 a kilowatt
1929 hour, .05 a kilowatt hour. That is 1/3 of what the price was
1930 5 years ago, almost directly related to the cheap price of
1931 natural gas.

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1932 However, I must point out that there are potential storm
1933 clouds on the horizon, whether it is potential endangered
1934 species listing, which would take prime gas-producing areas
1935 off the table; new source performance standards; new fugitive
1936 methane emissions requirements; frac-water-use studies and
1937 possible restrictions on supply and disposal; overly onerous
1938 permitting requirements to fracture oil on federal land. The
1939 list goes on and on and we could potentially kill the goose
1940 that lays the golden egg.

1941 In conclusion, I would say new nuclear power
1942 construction is prohibitively expensive, renewable power is
1943 variable and not yet scalable, and coal-fired power plants
1944 are under constant attack from the EPA. Natural gas is the
1945 only fuel source that makes electricity today, at scale, with
1946 reasonable prices to the consumer.

1947 However, let's be clear. Without hydraulic fracturing,
1948 this incredible supply of natural gas disappears, and prices
1949 for both gas and electricity will skyrocket and our economy
1950 will stop dead in its tracks again. Thank you for the
1951 opportunity.

1952 [The prepared statement of Mr. Smitherman follows:]

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1953 ***** INSERT 3 *****

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1954 |
 Mr. {Whitfield.} Thank you.

1955 And Mr. Gardner, I will call on you to make some
1956 comments about our next witnesses.

1957 Mr. {Gardner.} Thank you, Mr. Chairman. And I would
1958 just like to welcome Chairman Epel to the committee. I have
1959 worked with the chairman on a number of issues over the
1960 years, and as chairman of the Public Utilities Commission, he
1961 has jurisdiction over not only some of the regulations that
1962 we are talking about here today but also taxicabs and all
1963 kinds of other fun stuff in Colorado. But certainly
1964 appreciate your work as chairman of the Colorado Oil and Gas
1965 Conservation Commission as well, and welcome to the
1966 committee. Thanks for sharing your expertise with us.

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|
1967 ^STATEMENT OF JOSHUA B. EPEL

1968 } Mr. {Epel.} Well, thank you Congressman. Thank you,
1969 Chairman Whitfield, Ranking Member Rush, and members of the
1970 subcommittee for the opportunity to testify at today's
1971 hearing.

1972 My name is Joshua Epel. As the Congressman mentioned, I
1973 am the chairman of the Colorado Public Utilities Commission.
1974 Prior to my appointment to the Commission, I was chairman of
1975 the Colorado Oil and Gas Commission, so I understand a little
1976 bit of the issues, and we are sort of the baby brother to the
1977 Railroad Commission.

1978 The State of Colorado began to diversify its source of
1979 electric generation in 2005 when it adopted its Renewable
1980 Energy Standard through a valid initiative. Subsequently,
1981 the Colorado legislature increased the renewable energies
1982 requirement twice with bipartisan support. The Colorado
1983 legislature also adopted minimum standards for electricity
1984 savings through energy efficiency resulting in a decrease in
1985 the amount of fossil fuel necessary to meet the electric

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1986 demands of Colorado.

1987 In 2010, the Colorado General Assembly did something
1988 extraordinary. It passed the Colorado Clean Air-Clean Jobs
1989 Act. Representative Gardner was a supporter of the Act.
1990 What made the Act remarkable and instructive for today's
1991 hearing is the Act mandated that the State's largest
1992 investor-owned utility undertake a process of significantly
1993 reducing its coal usage in Colorado. And most importantly,
1994 certainly to me, is the legislature did not mandate the fuel
1995 mix. It left that decision to the Colorado Public Utilities
1996 Commission.

1997 The decision adopted by the Commission, and ultimately
1998 approved by EPA, is instructive on a way to meet the
1999 challenge of natural gas and electric coordination and also
2000 to meet the potential EPA regulations for existing generation
2001 sources.

2002 First, the Air Quality Control division, our regulatory
2003 agency in Colorado, was instructed to aid the Commission.
2004 And second, it was the Commission that determined the correct
2005 mix of fuel switching to natural gas, plant retirement, and
2006 retrofitting of existing coal-fired units.

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2007 The plan adopted by the Commission will allow our
2008 largest utility to be in compliance with the Regional Haze
2009 Rule, the Mercury and Air Toxics Rule, and reduce greenhouse
2010 gases by 30 percent by 2020 from 2005 levels. By the very
2011 nature of the plan, the cost will be reasonable and ensure
2012 that we have safe and reliable electric generation in
2013 Colorado.

2014 A central element of this plan is Colorado has made a
2015 conscious decision to switch some generation, not all, from
2016 coal to gas. We are assured that we will not have a conflict
2017 with electric and gas generation because Public Service
2018 Company of Colorado signed a 10-year long-term contract with
2019 the gas producer in Colorado.

2020 Now, at this point, I have got to be fair to the other
2021 regions. Colorado is unique. We have a surplus of gas and
2022 we also have an existing pipeline infrastructure that allowed
2023 that signing of a long-term contract. But this program does
2024 not come without cost to Colorado. The estimated price tag
2025 of Clean Air-Clean Jobs is around \$900 million. Colorado
2026 will also be required to make additional infrastructure
2027 changes, and as was asked in the previous questions, assured

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2028 the safety of the gas distribution system.

2029 As the members of the subcommittee know, an additional
2030 challenge for the electric generation system are the EPA's
2031 rules for existing sources. I believe Colorado's approach
2032 provides a lesson on how to address existing and future
2033 rules. However, to be successful, key principles must be
2034 observed.

2035 The Clean Air-Clean Jobs Act enabled Colorado to meet
2036 numerous federal air quality requirements. And because the
2037 Commission selected a suite of controls, fuel switching, and
2038 plant retirements--and what we did was we examined the entire
2039 fleet of Public Service Company. If each generation plant
2040 were controlled individually, it would have been
2041 prohibitively expensive and politically impossible. By being
2042 technology agnostic, Colorado selected the right balance of
2043 fuel switching, retirements, and retrofits to provide both
2044 the necessary reductions and keep rates reasonable and the
2045 system safe and reliable.

2046 Finally, implementation of the Renewable Energy Standard
2047 in the Clean Air-Clean Jobs Act is a major investment. As
2048 EPA develops its new rules for existing sources, if Colorado

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2049 is not given credit for this investment, it will be penalized
2050 unfairly when compared to States that have not taken early
2051 action.

2052 Thank you for the honor of representing Colorado before
2053 this subcommittee, and I will be pleased to answer any
2054 questions.

2055 [The prepared statement of Mr. Epel follows:]

2056 ***** INSERT 4 *****

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|
2057 Mr. {Whitfield.} Thanks very much, Mr. Epel.

2058 Mr. Moeller, you are recognized for 5 minutes.

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|

2059 ^STATEMENT OF CLAIR J. MOELLER

2060 } Mr. {Clair Moeller.} Thank you, Chairman Whitfield,
2061 Ranking Member Rush. Thank you for the opportunity today to
2062 present before this committee.

2063 I am Clair Moeller, the Executive Vice President of
2064 Transmission Technology for the Midwest ISO, or MISO. We are
2065 a nonprofit public interest organization charged with
2066 operating a wholesale market in the States we serve, as well
2067 as ensuring reliability to the consumers. It is important
2068 that we guard both the reliability and consumer cost as we
2069 work our way through those issues.

2070 My task as a planner for the Midwest ISO is to be the
2071 early warning system to ensure that consumers have both low
2072 cost and high reliability at the end of the day. To protect
2073 that, we look towards various scenarios about how the effect
2074 of changing policies might reduce reliability or increase
2075 costs for our customers.

2076 Recent economic and regulatory pressure is having the
2077 effect of reducing excess capacities in the Midwest.

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2078 Historically, we were blessed with an excessive capacity
2079 which frankly made the reliability job fairly easy. These
2080 pressures, we believe, by the end of the day will have
2081 reduced our coal fleet by approximately 18 percent. That
2082 will bring our required reserve margins to their minimum
2083 level.

2084 The low cost of gas, in addition to these regulatory
2085 pressures, are what are driving those retirements in the
2086 older coal fleet. Almost 90 percent of the resulting fleet
2087 will have to be retrofitted to comply with the rules. Our
2088 concern at that point is accommodating those outages
2089 simultaneously as we reach the end of the compliance period.

2090 It is important to note that the gas industry and the
2091 electric industry have grown up very differently. The
2092 flexibility that we require on the gas industry is simply not
2093 part of the design requirement of the historic gas
2094 infrastructure. So our best friend in the electric business
2095 is a simple cycle combustion turbine because it is very fast
2096 and very flexible. It is the hardest thing for gas pipelines
2097 to manage because it changes their pressure so quickly and
2098 has the prospect of having an unannounced start.

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2099 So the two industries have different requirements in
2100 terms of flexibility, and part of the friction between the
2101 two industries that we are working our way through is about
2102 how to manage the flexibility that, for example, renewable
2103 portfolios have caused electricity markets to need to be more
2104 flexible. We are trying to reflect that need for flexibility
2105 into what we are asking the gas industry to do.

2106 The mismatch between the electric industry and the gas
2107 industry is both the infrastructure, its design--the gas
2108 infrastructure is designed around long-term firm contracts
2109 with fairly slow changes in terms of what the off-takes are.
2110 The electricity now has a 5-minute market; we re-price
2111 electricity every 5 minutes. Gas typically has a day that
2112 closes around nine o'clock and you wait other day in order to
2113 make significant changes. So it is both the pipeline
2114 capacity needs to be engineered to accommodate the
2115 flexibility, and the market rules need to be engineered to
2116 accommodate the flexibility.

2117 In that regard, the MISO is working with the FERC, our
2118 state commissions through an organization of MISO states,
2119 which is essentially a representative from each State that we

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2120 serve, the load-serving entities, which at the end of the day
2121 have the interface with the customers, the gas pipelines who
2122 have been very accommodating in terms of beginning this
2123 conversation, as well as a gas suppliers. So we can look to
2124 what these issues are in aggregate in the hopes of achieving
2125 a single solution that both protects consumers from
2126 unnecessarily high costs and maintains the reliability of the
2127 system, which after all is a public safety matter that we all
2128 must guard.

2129 With that, I look forward to your questions.

2130 [The prepared statement of Mr. Moeller follows:]

2131 ***** INSERT 5 *****

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|
2132 Mr. {Whitfield.} Thanks very much.

2133 And Mr. van Welie, you are recognized for 5 minutes.

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|

2134 ^STATEMENT OF GORDON VAN WELIE

2135 } Mr. {van Welie.} Thank you. Chairman Whitfield--

2136 Mr. {Whitfield.} Be sure and turn the--

2137 Mr. {van Welie.} Yes. Thank you. Chairman Whitfield,

2138 Ranking Member Rush, and members of the subcommittee, thank

2139 you very much for the opportunity to appear before the

2140 subcommittee this morning.

2141 My name is Gordon van Welie. I am the president and CEO

2142 of ISO New England. Today, I plan to highlight the serious

2143 operational challenges facing New England's power system. In

2144 the past decade, natural gas has become the predominant fuel

2145 used to produce electricity in New England. However, the

2146 limitations of the current market design and the consequent

2147 inadequate fuel arrangements by natural gas and oil-fired

2148 generation, have led to serious reliability threats to the

2149 bulk power system. Therefore, we are moving at an urgent

2150 pace to develop short- and long-term plans to address these

2151 issues, primarily through changes to New England's wholesale

2152 electricity markets.

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2153 New England has seen a major shift in its generation
2154 suite, from a diverse mix of oil, coal, nuclear, and natural
2155 gas generators, to a system with more than half of the
2156 region's electricity being produced by power plants using
2157 natural gas. In addition, we are observing the retirement of
2158 coal and oil generators and the introduction of a diverse set
2159 of renewable and demand resources.

2160 Wholesale electricity prices are now primarily driven by
2161 natural gas-fired generation. The natural gas and electric
2162 industries operate under different structures but are
2163 increasingly interdependent. Electricity supply and demand
2164 must be balanced on an instantaneous basis and problems on
2165 the electric system require immediate action, often through
2166 the operation of fast-responding gas generators. However, if
2167 generators have not contracted for gas prior to the electric
2168 operating day, the gas system may not be able to respond to
2169 the real-time instantaneous demands of the electric system.

2170 For power grid reliability to be maintained, we need to
2171 have adequate levels of fuel inventory within the region
2172 either through storage, or reliable transportation
2173 arrangements so that the electric sector is ready to respond

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2174 whenever called on by the ISO. Those arrangements should be
2175 incentivized through changes to the wholesale electricity
2176 market design so as to provide strong economic signals for
2177 generators to perform when needed. It is likely that this
2178 will result in incrementally higher wholesale prices in order
2179 to pay for the improved reliability that we seek.

2180 New England cannot access the full benefit of the
2181 domestic shale gas deposits because of pipeline constraints
2182 leading to New England from both the West and the South.
2183 Interstate national gas pipelines operate under a business
2184 and regulatory model that requires a long-term, firm
2185 commitment by the pipeline customer. Because the current
2186 wholesale electricity market design does not provide gas
2187 generators with the necessary performance incentives, we have
2188 found that generators often do not make arrangements to
2189 ensure that they have an adequate and reliable fuel supply
2190 for the output of their facilities.

2191 The region has historically relied on its oil and coal
2192 generation to provide fuel diversity and offset the
2193 operational risks associated with the constrained gas
2194 transportation system. However, the confluence of low

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2195 wholesale market prices, high oil prices, and increasing
2196 environmental costs is causing its generators to retire
2197 and/or limit the output of fuel inventory that they carry.
2198 Thus, our dependence on gas generation is poised to increase,
2199 and our operational options are becoming more limited.

2200 The New England States are studying the ability of the
2201 natural gas pipeline system to set aside both heating and
2202 electric market demand in the region. These efforts are
2203 intended to provide information to policymakers and market
2204 participants on a range of possible solutions to deficiencies
2205 in natural gas infrastructure.

2206 This winter, New England did not experience record or
2207 sustained cold temperatures or unusually high demand for
2208 electricity. However, wholesale electricity prices rose
2209 significantly during this period because of physical
2210 constraints moving the lowest price natural gas into New
2211 England. During that period, as well as during a significant
2212 winter storm in early February, ISO operators had to cope
2213 with multiple instances where generators could not get fuel
2214 to run. Our experiences this winter lead us to conclude that
2215 the status quo is not sustainable.

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2216 ISO New England is working with the New England States
2217 and its stakeholders to develop market changes to provide the
2218 economic incentives necessary to ensure that generators have
2219 adequate and reliable fuel supplies. Additional flexibility
2220 in the natural gas industry would also help address the
2221 challenges of increasing interdependency between the two
2222 industries. The gas sector could assist with reliability
2223 efforts if gas supplies provided generators with additional
2224 opportunities to obtain fuel outside of normal business
2225 hours, and if pipelines would offer more flexible scheduling,
2226 additional services, and provide real-time information on the
2227 status of the pipeline system.

2228 In the long-run, it would be helpful for the Federal
2229 Energy Regulatory Commission to improve the operational
2230 alignment between the electric and gas systems.

2231 In conclusion, we recognize that we have to address
2232 these issues with a sense of urgency. Discussions are
2233 underway with our stakeholders and we will be making multiple
2234 findings at the FERC over the next 12 months to address the
2235 many components of our action plan.

2236 Thank you and I look forward to your questions.

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2237 [The prepared statement of Mr. van Welie follows:]

2238 ***** INSERT 6 *****

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|
2239 Mr. {Whitfield.} Thanks very much.

2240 And Mr. Hibbard, you are recognized for 5 minutes.

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|
2241 ^STATEMENT OF PAUL J. HIBBARD

2242 } Mr. {Hibbard.} Thank you. And good morning, Chairman
2243 Whitfield, Ranking Member Rush, and members of the committee
2244 for the opportunity to testify before you today.

2245 The challenges associated with coordination of natural
2246 gas and electric markets is particularly important from both
2247 the perspectives of electricity and natural gas users
2248 throughout the U.S. and from the perspectives of reliability
2249 and cost. So considering these issues now is both
2250 appropriate and very well-timed.

2251 So let me summarize my view on coordination issues with
2252 just five key points. First, we shouldn't forget the
2253 benefits of improved coordination and we should focus on it.
2254 As a former chairman of the Public Utility Commission in
2255 Massachusetts, at a time when natural gas prices were both
2256 very high and very volatile, I want to emphasize the consumer
2257 rationale for better coordination.

2258 The emergence of shale gas has dramatically lowered the
2259 cost of living and doing business across many States and has

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2260 generated significant economic benefits. When considering
2261 coordination challenges, this should be front and center. We
2262 need to improve coordination because that will allow electric
2263 ratepayers to realize the benefits that our expanded domestic
2264 natural gas resource base represents.

2265 Adding new gas-fired generating capacity to a region can
2266 lower costs, expand use of a domestic fuel, provide
2267 environmental benefits, and facilitate the integration of
2268 variable, renewable resources. Improving the stability and
2269 efficiency of electric gas market transactions must thus be
2270 viewed not as a challenge but as an opportunity.

2271 The second point I want to make is that power grids can
2272 be operated reliably with a significant reliance on natural
2273 gas with a critical caveat that I will mention in a minute.
2274 Heavy reliance on natural gas-fired generation does not, by
2275 definition, diminish the reliability of power grid
2276 operations. New and efficient gas-generating technologies
2277 can provide numerous reliability advantages. They are
2278 relatively easy to develop and site, can be built in various
2279 sizes and configurations, and can be located close to where
2280 electrical load is. They offer the ability for continuous

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2281 operation, faster startup, and faster response to grid-
2282 operated dispatch instructions over many competing resource
2283 types.

2284 Finally, as our States seek to integrate vast amounts of
2285 renewable resources, gas-fired power plants offer the best
2286 physical operating characteristics for managing the
2287 variability associated with these sources.

2288 The third point I want to make--the critical caveat--is
2289 that natural gas infrastructure must be sufficient to meet
2290 the coincident demands of heating, industrial processes, and
2291 electric generation at all times. In the time frame of
2292 short-run transactions between electric and natural gas
2293 markets, the prevailing profit motives of market participants
2294 are extremely effective at overcoming short-term supply and
2295 transportation issues, but they simply cannot overcome
2296 physical constraints on the flow of gas.

2297 In summary, gas infrastructure is or will become
2298 increasingly constrained, particularly in the winter. Where
2299 pipeline and LNG infrastructure is sized primarily to meet
2300 winter heating demands, there is limited space on the
2301 region's pipelines to carry gas for electricity generation

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2302 during cold winter conditions. Addressing this is the
2303 fundamental challenge of the coordination issues before us
2304 today.

2305 Forth, given these circumstances in regions with
2306 inadequate natural gas infrastructure, grid operators and
2307 regulators must focus on relieving these infrastructure
2308 constraints, and in the meantime, ensuring reliable
2309 operations in the face of constraints. Grid operators need
2310 to ensure that under adverse power system conditions,
2311 including constraints on the flow of gas for power
2312 generation, there is sufficient capacity to reliably operate
2313 the system.

2314 There are a number of tools operators can use to
2315 accomplish this, such as retaining non-gas units needed for
2316 reliability, requiring switching at units that have dual fuel
2317 capability, dispatching resources that otherwise might be
2318 uneconomic, calling on demand-response resources and
2319 activating operating procedures where necessary to avoid
2320 power disruptions.

2321 In addition, regulators and grid operators can take
2322 actions to relieve prevailing constraints in the longer-term

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2323 through regulatory orders and market structures that promote
2324 development of dual fuel capability, enhanced demand
2325 response, or investment in new natural gas transportation
2326 infrastructure where it is economic.

2327 Finally, in regions that currently have adequate natural
2328 gas infrastructure, operators and regulators must not let
2329 down their guard. Their decisions and actions are key to
2330 appropriately planning for avoiding such infrastructure
2331 constraints in the future.

2332 In short, regulators and grid operators play vital roles
2333 roles in advancing the coordination of natural gas and
2334 electric markets, and promoting the development of needed
2335 natural gas system infrastructure and in managing the
2336 reliable operation of power systems in the face of gas supply
2337 constraints. Given the potential economic reliability and
2338 environmental benefits of expanded use of natural gas in
2339 electric sector, the efforts of regulators and grid operators
2340 in this area should receive heightened attention and effort.

2341 So with that, again, I want to thank you and look
2342 forward to your questions.

2343 [The prepared statement of Mr. Hibbard follows:]

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2344 ***** INSERT 7 *****

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2345 Mr. {Whitfield.} Thank you, Mr. Hibbard.

2346 And I will recognize myself for 5 minutes of questions.

2347 Mr. van Welie, recently, the New York Times wrote an
2348 article about the power shortages in the Northeast, and I
2349 know Commissioner LaFleur, in her testimony, pointed out the
2350 Northeast as an area of concern, as did you in your
2351 testimony. Now, the New York Times article focused a lot on
2352 nuclear power, and I would ask--of course you have got the
2353 Vermont Yankee plant, you have got the Indian Point plant.
2354 Both of them, there are groups trying to shut them down. If
2355 that occurred, what impact would that have upon the Northeast
2356 and its ability to generate enough electricity?

2357 Mr. {van Welie.} So both New York and New England have
2358 got market mechanisms for replacing that capacity if those
2359 two nuclear generators were to retire. So I cannot predict
2360 with precision what will replace it. It does seem like the
2361 most economic resource to replace at capacity would be
2362 additional gas-fired generation, so it would create
2363 additional stress on the gas system.

2364 Mr. {Whitfield.} Well, do you have any concerns about

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2365 blackouts or brownouts in the immediate future?

2366 Mr. {van Welie.} We do. We got dangerously close this
2367 winter and hence, we are moving with a sense of urgency. I
2368 think it is all about making sure that in this transition
2369 period, we will have to rely on oil and coal generation and
2370 LNG imports in the region. And so the reason I say that is
2371 it is going to take 3 to 5 years to build new pipeline into
2372 New England. So we are going to be in a situation where we
2373 have to optimize the use of existing infrastructure within
2374 the region, and so we are working closely with our
2375 stakeholders to try and identify intra-mechanisms to bridge
2376 this transition period.

2377 Mr. {Whitfield.} Yes, and we also appreciate in your
2378 testimony your setting out some specific things that needed
2379 to be done, which we appreciate your setting that out as
2380 well.

2381 Mr. Epel, in your testimony--I was trying to find it
2382 real quick here--you made a comment--and I may be
2383 paraphrasing. Maybe I can find it real quick. But you made
2384 a comment that ``Congress and EPA must acknowledge that it is
2385 the exclusive province of the Utility Commission to determine

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2386 the mix of strategies to achieve standards at EPA.' ' And
2387 recently, we had three forums on the Clean Air Act and
2388 regulators came in from all over the country, and many of
2389 them expressed some concerns about their flexibility. So
2390 would you elaborate on this just a little bit?

2391 Mr. {Epel.} Certainly. Thank you, Mr. Chairman.

2392 My concern is I believe we have to have a bifurcated
2393 system for EPA or the Congress to establish what are the
2394 goals, what are the targets. But really, when it comes down
2395 to who is going to have the capability of making decisions,
2396 looking at the entire system, for example, with Colorado,
2397 what plants should be retrofitted? Which ones should have
2398 fuel switching? How much energy efficiency can we utilize?
2399 That is really the expertise of the state commissions or the
2400 regional bodies. And that is a complex equation not only of
2401 the air quality impacts, but the financial impacts. How much
2402 infrastructure has to be built?

2403 I think really it is the state commissions or the
2404 regional bodies which have that intricate understanding of
2405 the system. And so neither Congress or EPA really can delve
2406 into that level of detail. They certainly can say here is

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2407 the goal, here is the slope of how quickly it has to be
2408 achieved, but when it gets down to the real nitty-gritty of
2409 economically making these decisions so we balance both the
2410 environmental needs and the financial consideration of the
2411 State, I think that is really where our expertise lies.

2412 Mr. {Whitfield.} Okay, thanks.

2413 Mr. Smitherman, are there any other States that EPA has
2414 issued a Federal Implementation Plan for other than Texas?

2415 Mr. {Smitherman.} Not that I am aware of, Mr. Chairman.

2416 Mr. {Whitfield.} Okay. And of course you all won your
2417 flex permit case, and you also won the Cross State Air
2418 Pollution Control case as well. Is that correct?

2419 Mr. {Smitherman.} We did. The 5th Circuit ruled that
2420 the EPA had acted in an arbitrary and capricious manner with
2421 regard to our flex permitting program.

2422 Mr. {Whitfield.} Um-hum. Now, you testified regarding
2423 wind power, subsidizing wind power, and you talked a little
2424 bit about wind generators bidding negative prices into the
2425 ERCOT and how that distorts the system. Would you just
2426 briefly explain this negative pricing?

2427 Mr. {Smitherman.} I will. Just to give you a quick

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2428 snapshot, for the first 2 months of this year we have had 39
2429 percent natural gas, 38 percent coal, 11 percent nuclear, and
2430 11 percent wind. That has been our power mix. With the PTC
2431 in effect, wind basically can offer in at negative prices.
2432 And because we run a market-dispatch model, the cheapest
2433 generation, which is wind and nuclear, is dispatched first.
2434 So when the wind is blowing, it creates negative prices,
2435 basically pushing off of the dispatch curve occasionally gas
2436 and coal.

2437 Mr. {Whitfield.} Okay. Thank you. My time has
2438 expired.

2439 I recognize the gentleman from Illinois, Mr. Rush, for 5
2440 minutes.

2441 Mr. {Rush.} I want to thank you, Mr. Chairman.

2442 I would like to go out on a line and just ask each
2443 witness a simple question, and maybe each of you could answer
2444 with a yes or no because I do have a follow-up question.

2445 Do you think that the transition from coal-fired power
2446 plants to natural gas is mostly a positive development or a
2447 negative development for our Nation?

2448 Mr. {Smitherman.} Well, Mr. Rush, I think we need a

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2449 balance. We need a portfolio as we have in Texas because if
2450 gas prices were to rise back to their 2008 levels, then coal
2451 would provide a hedge against that. When gas prices are low,
2452 then gas is the right thing to dispatch. So if you put all
2453 your eggs in one basket, you run the risk of having not a
2454 portfolio but a situation which doesn't give you any options.

2455 Mr. {Rush.} Mr. Epel?

2456 Mr. {Epel.} Mr. Rush, I would say in the affirmative
2457 the transition to utilization of gas is a net positive for
2458 society and certainly for Colorado, but as Chairman
2459 Smitherman said, we do need to keep that diverse portfolio.

2460 Mr. {Rush.} Mr. Moeller?

2461 Mr. {Clair Moeller.} I apologize. I am going to have
2462 to not take a position. Our not-for-profit independent
2463 status precludes me from choosing between fuels.

2464 Mr. {van Welie.} So I think the evidence in New England
2465 has been that the transition to natural gas has been a
2466 beneficial thing for the region, both from an economic and an
2467 environmental point of view. I think to Mr. Hibbard's
2468 earlier point, it is vital that we make sure that the fuel
2469 infrastructure can support that gas generation.

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2470 Mr. {Hibbard.} And I would agree as well, that given
2471 the economic, environmental, and reliability benefits, the
2472 transition is a good one.

2473 Mr. {Rush.} Mr. Moeller, in your testimony, you
2474 expressed some concerns about the impact of expected coal
2475 plant retirements and retrofits on the MISO reserves of
2476 electricity generation capacity. When MISO briefed the
2477 Committee's staff, they focused on the winter of 2016. By
2478 that time, most of the retirements would have occurred. MISO
2479 said there was a ``potential shortfall'' of 11,700 megawatts
2480 of generation capacity at that time.

2481 And I know your job is to keep the lights on and that
2482 means considering the worst-case scenario. I can appreciate
2483 that, but I want to make sure that the Subcommittee gets a
2484 realistic picture of some of the resource adequacy situation
2485 in MISO. So I would like to ask you a couple of questions
2486 about it, about this potential shortfall. MISO's suggestion
2487 assumed that 3,000 megawatts of new gas capacity would be
2488 available in the next 3 to 4 years. That seems to be kind of
2489 low. Would you consider that to be a conservative
2490 assumption?

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2491 Mr. {Clair Moeller.} That conservative assumption is
2492 based on people who have requested to interconnect new gas-
2493 fired generation to the MISO transmission system.

2494 Mr. {Rush.} As I understand, the MISO's calculation
2495 doesn't count any new wind capacity, is that right?

2496 Mr. {Clair Moeller.} Wind capacity in our market,
2497 should the owner of the wind choose to count it, gets a 12
2498 percent capacity credit for its participation.

2499 Mr. {Rush.} Wind is an intermittent resource but it is
2500 also the single-largest source of new generation capacity
2501 last year, a calculation that doesn't account for any new
2502 wind capacity. I may be missing a piece of that puzzle. The
2503 MISO analysis also assumes that almost 19,000 megawatts of
2504 natural gas generation would not have the fuel to operate in
2505 the winter of 2016. That is significantly more than the
2506 entire ``potential shortfall.''

2507 We heard a lot today about the challenge of making sure
2508 that the natural gas infrastructure is adequate. Do you have
2509 any comments about the adequacy of the shortfall?

2510 Mr. {Clair Moeller.} Yes, sir. The point I was
2511 attempting to illustrate in that conversation was that the

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2512 majority of the gas-fired generation in the MISO market was
2513 constructed around a summer utilization and it did not
2514 purchase firm transportation for their gas. In July and
2515 August there is typically sufficient gas and gas
2516 transportation to meet those requirements because it is not
2517 coincident with the heating load. Our concern is that as we
2518 move towards using that gas in the winter periods with the
2519 competition for heat load, it is unclear how much that
2520 capacity would be available.

2521 So our conversation was it is clear that 100 percent of
2522 that capacity won't be available. It is probably also true
2523 that zero of that capacity will be available, but at this
2524 point in time as we discuss with the gas pipe suppliers, it
2525 is unclear how much of that gas we can count on to be there
2526 for us in the wintertime. The New England situation is a
2527 harbinger of problems we seek to avoid, and so that
2528 conversation was to point out how large the problem might be,
2529 frankly, sir, to peak people's interest so that we can get
2530 the solution in time.

2531 Mr. {Rush.} Thank you, Mr. Chairman.

2532 Mr. {Olson.} [Presiding] The ranking member yields

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2533 back.

2534 The chair recognizes the gentleman from Ohio, Mr. Latta,
2535 for 5 minutes.

2536 Mr. {Latta.} Well, thank you very much. I appreciate
2537 it, Mr. Chairman. And thank you very much for our panel and
2538 I am sorry this is one of those days we have two hearings
2539 going on at the exact same time. But we appreciate you being
2540 here and joining us.

2541 And if I could just go back to Mr. Smitherman, if I
2542 could just ask you a few questions. I found your testimony
2543 very interesting that you had given. Now, you say on page 1,
2544 you say, ``however, because the Federal Government and EPA
2545 continue to set unreasonable roadblocks to diverse fuel
2546 production, the natural gas industry is challenged to boost
2547 supply enough energy for the Nation.'' And then you go on to
2548 state that ``the EPA has implemented such onerous
2549 restrictions on the ability to build new coal-fired coal
2550 plants that it has greatly impacted fuel supply in Texas and
2551 the Nation.'' You know, when you are talking about these
2552 onerous restrictions, I am just curious, have you heard of
2553 the EPA doing any cost-basis analysis for the State of Texas,

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2554 how it would affect you all?

2555 Mr. {Smitherman.} Congressman, I am not aware of any
2556 analysis that they have done with regard to the State of
2557 Texas, though when they put forward many of these
2558 regulations, they proffer a certain cost-benefit analysis,
2559 and not surprisingly, the benefits, in their minds, always
2560 outweigh the cost.

2561 What we have challenged is, what is the cost of failed
2562 reliability? What is the cost of not having enough
2563 electricity, of the lights going out? And that is a real
2564 possibility if we prematurely close down some of our coal-
2565 fired power generation plants or we limit the ability to
2566 recover natural gas. Either of those could lead to
2567 shortages.

2568 Mr. {Latta.} Well, and we were talking about looking at
2569 those issues, and especially we were here talking about coal-
2570 fired plants, especially where I am from, the State of Ohio,
2571 up in the northern part of the state, where we are well over
2572 60 percent coal-fired. Anyway, you know, as Republicans have
2573 said back in 2008, we all want to have an all-of-the-above
2574 energy policy that takes in, you know, clean coal, natural

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2575 gas, nuclear, hydro, and all of the alternatives. But we
2576 want to make sure that they are out there for the people
2577 because in a question like what could be going on here,
2578 especially when they are not doing any cost-basis analysis,
2579 and were not really sure how the impact is, you know, that
2580 really in the end when you are starting to close down these
2581 plants, you know, whose is going to pay for this in the very
2582 end?

2583 Mr. {Smitherman.} Well, in regulated markets if you are
2584 retrofitting these coal plants to come into compliance with
2585 everything except carbon capture, which is another technology
2586 altogether, then the ratepayers are going to pay for them.
2587 If you are talking about in deregulated or competitive
2588 markets, then you are going to see many of these plants close
2589 down, which is going to end up giving us a fuel mix which is
2590 heavily weighted toward natural gas, which is great if
2591 natural gas prices stay low and the supply remains high.

2592 Mr. {Latta.} Well, and again, you know, in the State of
2593 Ohio we have been very fortunate that with the Utica Shale
2594 being found--and actually, some geological surveys that have
2595 been done recently, they are actually moving farther across

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2596 the State, which, you know, it is great, but you are right,
2597 we have to have that blend out there.

2598 And the thing that I worry about is that, like my
2599 district, I have 60,000 manufacturing jobs and we have to
2600 have base load capacity to make sure that when the big
2601 machines go on in the morning or at night, that they stay on.
2602 And we want to make sure that folks can compete out there.

2603 Mr. Moeller, if I could just move over to ask you--you
2604 know, you were talking about some things up in the Northeast,
2605 but what about in the Midwest? You know, when you are
2606 looking at heating and taking precedence over electric
2607 generation, should the two compete for natural resources?
2608 What do you think about the Midwest and how things could be
2609 impacted?

2610 Mr. {Clair Moeller.} So we have got a very complicated
2611 situation in the 21 different interstate pipelines that serve
2612 the Midwest region. Each one of those pipelines has a
2613 different set of facts and circumstances in terms of how
2614 constrained they are, but all of them were constructed on a
2615 subscription basis around residential heat load. So we
2616 continue to be concerned that as we begin to rely more on gas

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2617 more in the winter months, we will see conflicts around
2618 competition for that gas pipeline capacity. We are trying to
2619 understand what that conflict might look like across those 21
2620 gas pipes to see with the cost to consumers might be.

2621 Mr. {Latta.} Thank you very much.

2622 And Mr. Chairman, I yield back.

2623 Mr. {Olson.} The gentleman yields back.

2624 The chair now recognizes the gentleman from California,
2625 Mr. McNerney, for 5 minutes.

2626 Mr. {McNerney.} Thank you, Mr. Chairman.

2627 You know, I have heard this morning and today a lot
2628 about pipeline infrastructure being inadequate or
2629 flexibility. I haven't heard anything about storage. Is
2630 storage a viable option for local utilities? Can they build
2631 storage for natural gas or is there some reason why that is
2632 not on the table, whoever wants to answer it?

2633 Mr. {Clair Moeller.} Historically, there has been some
2634 natural gas storage in local distribution companies in the
2635 form of small liquid natural gas.

2636 Mr. {McNerney.} All right.

2637 Mr. {Clair Moeller.} There are also geologic

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2638 opportunities to store it, but they are not universally
2639 available across the entire country, sir.

2640 Mr. {McNerney.} Mr. van Welie?

2641 Mr. {van Welie.} Sir, I presume your question was with
2642 regard to electrical storage.

2643 Mr. {McNerney.} No, no.

2644 Mr. {van Welie.} Oh, fuel storage?

2645 Mr. {McNerney.} Natural gas storage.

2646 Mr. {van Welie.} Yes. I think the most practical
2647 solution, at least for our region in terms of fuel storage,
2648 is LNG. And there are some large LNG facilities around the
2649 region, and I think that ultimately the solution is a
2650 combination of pipeline and storage because one has to think
2651 of the possibility that a pipeline could be compromised in
2652 some way and you need to be able to ride through that event.
2653 And one way of dealing with that is through local storage.

2654 Mr. {McNerney.} Is storage more expensive than
2655 pipelines?

2656 Mr. {van Welie.} Typically, yes. I think LNG from some
2657 of the numbers that I have seen--it is the energy required in
2658 order to compress and liquefy the gas that makes it

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2659 relatively expensive compared to gas in the pipe.

2660 Mr. {McNerney.} Okay. Thank you. So what would be the
2661 best way, then, Mr. van Welie, to get the flexibility you
2662 need for reliability from natural gas?

2663 Mr. {van Welie.} So I think it depends where you are,
2664 and if you are in a restructured wholesale electricity
2665 market, such as exists in New England, what we need to do is
2666 to make sure that the incentives for our generators are such
2667 that they will seek reliable fuel supplies. They will then
2668 have a number of options open to them.

2669 So, for example, if we have created a strong performance
2670 incentive for them and they are out there looking for
2671 reliable fuel supply, they could choose to put in dual fuel
2672 infrastructure, a tank of oil, and switch from gas to oil if
2673 their gas system becomes constrained or they can enter into a
2674 contract, bilateral contract, with an LNG storage provider to
2675 draw gas from the LNG storage facility, or contract with the
2676 pipelines for no-notice service or phone service from the
2677 pipes.

2678 So I think the starting point in solving this problem is
2679 to have the generators feel like they have to have adequate

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2680 fuel in order to meet the call from the--

2681 Mr. {McNerney.} So in other words sort of a free-market
2682 approach with the right incentives?

2683 Mr. {van Welie.} That is right. We won't dictate what
2684 their solution is; we just want them to produce electrical
2685 energy when we need them to.

2686 Mr. {McNerney.} Mr. Moeller, I think it was you that
2687 mentioned there was a conflict between when certain natural
2688 gas pipelines are only approved to deliver during certain
2689 periods of time. Does that sound familiar?

2690 Mr. {Clair Moeller.} No. I was commenting about the
2691 fact that gas pipelines are constructed typically based on a
2692 subscription form of service where the original owners of the
2693 gas capacity have typically been residential heat loads. And
2694 so the pipe has been sized based on the original use. And
2695 typically those original users--it is 20 years gone by since
2696 those pipes have been constructed. So it is unclear in terms
2697 of how much capacity is available during what times of the
2698 year to supply this new use.

2699 Mr. {McNerney.} So that wasn't a contractual issue more
2700 as a physical capacity issue?

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2701 Mr. {Clair Moeller.} Yes. It is two issues. One is
2702 the physical issue and the other is a contractual issue, and
2703 because they are both fairly opaque, it is a little hard to
2704 figure out what the actual fact circumstance is.

2705 Mr. {McNerney.} Do you have the resources to make that
2706 work better?

2707 Mr. {Clair Moeller.} We have engaged with the natural
2708 gas pipelines that serve our region, and they are working
2709 with us to answer those questions.

2710 Mr. {McNerney.} Okay. Mr. Epel, you mentioned that you
2711 felt that Colorado was ahead of the curve on these issues.
2712 What has given Colorado that sort of wherewithal to get into
2713 that position?

2714 Mr. {Epel.} Congressman, this is actually driven by the
2715 voters of Colorado. Our renewable energy portfolio is really
2716 adopted by a balanced initiative, which the legislature then
2717 enhanced. And there has been a consistent desire for
2718 Colorado to have as much fuel diversification as possible.
2719 We spend quite a bit of time on energy efficiency also to
2720 reduce overall fuel usage, but it really comes from the
2721 voters of Colorado. They have spoken pretty clearly on this

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2722 topic.

2723 Mr. {McNerney.} Okay, thank you.

2724 And I yield back, Mr. Chairman.

2725 Mr. {Olson.} The gentleman yields back. The chair, in
2726 applying the gavel-in rule, recognizes himself for 5 minutes.

2727 And first, I would like to welcome all of you for coming
2728 but a very special welcome for the chairman of the Texas
2729 Railroad Commission, a man I voted for this past November,
2730 Chairman Barry Smitherman. And as they say in College
2731 Station, Texas, home of the fine Texas Aggies, howdy whoop.

2732 Commissioner Smitherman, this question is for you. As
2733 you discussed in your testimony, Texas very clearly has
2734 reliability challenges ahead of it. Starting as early as
2735 next year when resource reserve margins could slip below the
2736 13.75 target that ERCOT has. And while FERC works to address
2737 the impacts of increasingly depending on natural gas, would
2738 you agree that on the other side of Washington the EPA is
2739 working to help make it all but impossible to build any new
2740 coal plants that would diversify our power sources?

2741 Mr. {Smitherman.} Certainly, Congressman Olson. It is
2742 great to see you.

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2743 You referenced earlier in your remarks a couple of
2744 projects which have been taken off the table in Texas because
2745 they were unable to meet new federal greenhouse gas
2746 regulations. So what that leaves us with in Texas is
2747 maintaining the current coal fleet and hoping that generators
2748 will add additional combined-cycle gas. It looks like we are
2749 going to get a couple of new projects built that are going to
2750 be combined-cycle, but probably going forward, that is the
2751 only type of generation that we will see built in Texas. It
2752 will be combined-cycle gas. And with that we are trying to
2753 design a market to incent additional generation, but we
2754 essentially have found ourselves with only one tool in the
2755 toolbox.

2756 Mr. {Olson.} And what tool is that, sir?

2757 Mr. {Smitherman.} That is modifying the market designed
2758 to incent new natural gas-fired generation. Since we will
2759 not get any new coal plants built, we will struggle to
2760 maintain the existing coal fleet operational and I think it
2761 is almost impossible to build new nuclear in Texas.

2762 Mr. {Olson.} Yes, sir. I understand all of that. And
2763 you heard my exchange with Commissioner Moeller in the

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2764 previous panel about the incident on February of 2011, this
2765 cold incident--the freezing that was across our State and
2766 also the extreme heat wave we had in the State as well in
2767 August of that year. The February 2011 event has been held
2768 up for a while now as a clear example of the interdependence
2769 of the electrical and natural gas industries and what can
2770 happen. The systems only run into trouble. Would you say
2771 that Texas had learned from that incident, and if so, are the
2772 steps you have taken alongside with the PUC and ERCOT so they
2773 can be shared nationwide?

2774 Mr. {Smitherman.} We have learned a number of things.
2775 One, that communication among all the agencies is incredibly
2776 important. So we have a task force today that meets
2777 regularly to investigate and communicate issues of fuel
2778 supply, of weatherization. In fact, one of the things we
2779 required after that event was additional weatherization on
2780 the bowler level, to make sure that these plants are prepared
2781 for extraordinarily cold weather, and to encourage firm gas
2782 supply contracts to our power generating stations. And if we
2783 know that a firm supply contract is not in place, that the
2784 ERCOT grid operators do not count on that unit to be

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2785 available during those periods of time.

2786 We are also working on demand response initiatives and
2787 other things to give us a few additional tools. But I think
2788 it is important to be mindful of the fact that that was a
2789 very, very cold weather event. And for the most part, power
2790 generation plants in Texas are designed for summer heat, not
2791 for sub 32 degree temperatures for 3 straight days.

2792 Mr. {Olson.} And one final question, this is taking a
2793 page from Chairman Emeritus Dingell's playbook, but I am
2794 going to ask a question for all of you as an answer of yes or
2795 no. Starting with you, Mr. Hibbard, on the end there, yes or
2796 no. As things stand now, do you see the need for a full FERC
2797 rulemaking on the topic of gas electric coordination, or is a
2798 focus on regional action and clarification of the existing
2799 regulations enough? Yes or no please, sir.

2800 Mr. {Hibbard.} I think FERC's approach looking at the
2801 issue regionally is correct.

2802 Mr. {Olson.} And Mr. van Welie?

2803 Mr. {van Welie.} I think it is yes and no. So I think
2804 most of this can be handled regionally, but I think there are
2805 certain issues that Commissioner LaFleur indicated could be

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2806 looked at nationally.

2807 Mr. {Olson.} Yes, I guess I should rephrase that.

2808 Regional or FERC regulation? Mr. Moeller?

2809 Mr. {Clair Moeller.} Regional.

2810 Mr. {Olson.} Regional. Mr. Epel?

2811 Mr. {Epel.} Regional.

2812 Mr. {Olson.} Mr. Smitherman?

2813 Mr. {Smitherman.} Texans can take care of Texas.

2814 Mr. {Olson.} Amen, brother. And one more, Mr. Hibbard,

2815 regional? It sounds like you are regional as well? Okay.

2816 Well, there you go. So five for five. It looks like I am

2817 out of time.

2818 I yield back the balance of my time and recognize the

2819 gentleman from New York, Mr.--no. The chairman emeritus

2820 slipped in here behind me. Mr. Dingell, are you ready to ask

2821 questions, sir?

2822 Mr. {Dingell.} If you let me get my feet under me

2823 first.

2824 Mr. {Olson.} Okay. Then, we will move on with my

2825 colleague from Texas, Mr. Green.

2826 Mr. {Green.} Thank you, Mr. Chairman. And I know some

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2827 of my questions of our chair of the railroad commission that
2828 his earlier hat was on the Public Utility Commission. I
2829 can't make the same statement that I voted for him last fall,
2830 but I did vote for his mom a few times. But, Barry, it is
2831 good to see you, and I know as a railroad commissioner, you
2832 have a different hat on in the Public Utility Commission, and
2833 I appreciate all your work on the PUC because at one time--
2834 and you heard my questions earlier--we are proud in Texas to
2835 have ERCOT. And we have never had a reliability issue. And
2836 I know we have been rationing it on what we can do. We don't
2837 one of burden ratepayers too much, but you also don't want to
2838 have some of the incidents that we have. And believe me, in
2839 D.C., we protect ERCOT on a bipartisan basis.

2840 You talked about expansion of coal plants in Texas, and
2841 I know EPA, when they did the Carbon Rule, it was for future
2842 plants, not current plants on sequestration for coal. In all
2843 honesty, I can't imagine building a coal plant unless you
2844 actually did, like we did in Texas, with lignite right over
2845 it. The economics seem like with natural gas, if you have
2846 access to natural gas you wouldn't build a coal plant even if
2847 the EPA extended that rule to coal plants. Is that true?

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2848 Mr. {Smitherman.} Well, first, let me say I would hope
2849 that you would have voted for me because I didn't have a
2850 Democrat in my race. So let's remember that we have a lot of
2851 Monmouth coal in Texas. And actually, today, Monmouth coal
2852 is economic when compared to gas at \$3.80 gas prices. So we
2853 want to make sure that we keep those units running. And that
2854 was really the thrust of our pushback on CSAPR.

2855 Mr. {Green.} Well, and congratulations because that was
2856 a part of summer of our hearings over the last few years on
2857 the transport rule which never made sense to me, and I grew
2858 up there. And the wind comes from the south. At certain
2859 times of the year it comes from the north, but I never knew
2860 it went to Indiana. Be that as it may--

2861 Mr. {Smitherman.} Me neither. I think the important
2862 thing is to maintain the optionality. Remember in our
2863 market, not only did we run a competitive wholesale market,
2864 but we also have communities and co-ops like San Antonio and
2865 Austin, as well as fully regulated companies on the periphery
2866 of the ERCOT market. And for them, having the optionality to
2867 build new coal, even if it is Powder River Basin coal, could
2868 be an important consideration.

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2869 So we want to make sure that we don't have such onerous
2870 greenhouse gas regulations that building new coal, unless it
2871 has CCS, is completely off the table. Gas prices are low
2872 now. That is great. We are long gas; it is terrific. And I
2873 would just remind, though, that gas prices have gone from
2874 \$1.99 to \$3.80 over the last 2 years. I think they will
2875 stabilize somewhere in the, you know, 4 to 5.50 range. At
2876 that point, it becomes probably a break even for coal. So
2877 again, having that balance--and we have a really nice balance
2878 right now. I think it is important for consumers.

2879 Mr. {Green.} Okay. I know when you talked about
2880 nuclear--and we would have gotten our nuclear loan guarantees
2881 in South Texas--we only have the two plants, Glen Rose and
2882 South Texas--so except for financial problems of one of the
2883 investors who was Tokyo Power--and after Fukushima, Japan,
2884 what, are you going to send us \$125 million? But I know
2885 nuclear needs to be part of ours along with our success in
2886 natural gas.

2887 I am curious because you had both hats on, both on the
2888 Railroad Commission and the PUC. Is there a market structure
2889 that we can do under ERCOT that working both with your

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2890 example from the Railroad Commission with regulation of oil
2891 and gas in PUC, to have that reliability we have become
2892 accustomed to in Texas?

2893 Mr. {Smitherman.} I would say several things in support
2894 of, one, we need an upstream supply, robust supply, of all
2895 the resources; two, we need to build midstream
2896 infrastructure, pipelines, and transmission lines. And then
2897 we need to continue to tinker with the market design to
2898 incent new generation.

2899 You know, the ERCOT market is like an airplane ride.
2900 You take midcourse corrections along the way until you get
2901 your destination. You don't put it on autopilot. And I am
2902 confident that the current commissioners are doing that.

2903 Mr. {Green.} Well, and I understand. I have been
2904 through Eagle Ford, and seeing the amount of gas we are
2905 flaring, of course, nothing compared to what they are doing
2906 in North Dakota. So that infrastructure is really important
2907 because I know those producers. We would rather have
2908 somebody buying that gas then it would be just flaring it.
2909 So the pipeline is important. Mr. van Welie, in New England
2910 how many LNG import facilities--I am well aware of the one in

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2911 Boston Harbor, that has been a debate in our committee for
2912 many years. Are there other LNG facilities in New England?

2913 Mr. {van Welie.} There are two buoys in the ocean off
2914 Boston, which are--and I don't think they have ever been
2915 utilized, maybe once-- but the other one that is sort of a
2916 dominant resource for the region is in New Brunswick in
2917 Canada.

2918 Mr. {Green.} Okay.

2919 Mr. {van Welie.} So it is owned by Repsol. And they
2920 have 10 BC of storage just across the main border.

2921 Mr. {Green.} About a dozen years ago I kept hearing the
2922 Austin to Boston connection with natural gas. Is there not
2923 enough pipeline capacity to send some of that Eagle Ford gas,
2924 instead of flaring it, up to Boston?

2925 Mr. {van Welie.} That is the basic problem. So the
2926 pipelines from the West and the south are fully utilized.

2927 Mr. {Green.} And there is not enough new subscriptions.
2928 You know, people won't build a pipeline unless they have
2929 customers. And if you want to expand a pipeline, you need to
2930 have those customers committed to that because, you know, it
2931 is an investment. And is there not enough potential

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2932 expansion for those to expand those pipelines where we have
2933 the natural gas?

2934 Mr. {van Welie.} Yes. So there is a regulatory, what I
2935 call a regulatory conundrum here. On the one hand you have
2936 the electric sector and the wholesale markets where
2937 generators are thinking short- to medium-term at best. So
2938 year-by-year, sometimes day-to-day, the pipelines, they will
2939 only build the pipe if they get somebody to commit to them
2940 for 15, 20 years. So how do you actually make those two
2941 business models work together? It is--

2942 Mr. {Green.} Mr. Chairman, one last question. How long
2943 is that LNG--

2944 Dr. {Burgess.} [Presiding] The gentleman's time has
2945 expired. And the only reason I point that out is because you
2946 do have chairman emeritus who is waiting patiently to
2947 question.

2948 Mr. {Green.} Far be it from me to stand in the way of--

2949 Mr. {Dingell.} This member is not complaining.

2950 Dr. {Burgess.} This member is complaining.

2951 Mr. {Green.} Well, if I could just say--you don't have
2952 to answer just how long has that LNG import facility been in

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2953 Boston Harbor?

2954 Mr. {van Welie.} Yes, about 20 years.

2955 Mr. {Green.} You could probably build a pipeline.

2956 Thank you.

2957 Dr. {Burgess.} I thank the gentleman for yielding back.

2958 The chair now recognizes himself for however much time

2959 he wants for questions. And I do--

2960 Mr. {Dingell.} You are a good friend and are always

2961 remarkably courteous. I thank you.

2962 Dr. {Burgess.} Well, I actually recognized myself, Mr.

2963 Chairman.

2964 Mr. {Dingell.} Oh, I thought you were--

2965 Dr. {Burgess.} I referred to myself as chairman

2966 because--

2967 Mr. {Dingell.} Well--

2968 Dr. {Burgess.} I think there is an aspirational goal

2969 involved here.

2970 I do want to thank the members on the panel who stood

2971 with us so long today. Mr. Smitherman, and I am going to

2972 join the parade, I voted for you as well. I voted for

2973 myself, coincidentally, on the same day. But I am going to

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2974 ask you, but really the question may be one that could be
2975 answered or should be answered by everyone on the panel.
2976 National Geographic cover story this week or last week was
2977 ``America Strikes Oil.'' I realize the cover is a little
2978 incendiary, a little inflammatory, to coin a pun there.

2979 But you know, for me was phenomenal to sit in the State
2980 of the Union Address 3 years ago and have the President of
2981 the United States wax eloquently over the benefits of
2982 fracking and how important that was to our economy and ignore
2983 his Affordable Care Act which he had worked so hard to get.
2984 But I think this speaks how important this activity is for
2985 the future of our economy.

2986 In the budget on which will be voting in just a few
2987 hours, Chairman Ryan from the Budget Committee has placed a
2988 number in the budget for the future development of natural
2989 gas on federal lands--and I realize that is not really Texas
2990 but on federal lands--of \$11 billion for the next 10 years.
2991 That strikes me as an awfully light figure for what really
2992 should be a real boon to the American economy. Mr.
2993 Smitherman?

2994 Mr. {Smitherman.} Well, Dr. Burgess, it is phenomenal

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2995 what is happening in the oil and gas patch these days. And
2996 again, it is all driven by technology, horizontal drilling
2997 and hydraulic fracturing. We are now producing 1.5, 1.6
2998 million barrels a day of crude oil in Texas. That is more
2999 than the rest of the country gets from Saudi Arabia. That
3000 number could double or triple within the next 10 years, and
3001 literally, we could be energy secure in America by 2020.
3002 That will quickly displace imported oil from Africa, from the
3003 Middle East, and ultimately from Russia. So America is on
3004 the cusp of having energy security, and with that, great
3005 paying jobs and revenue streams that you speak of staying
3006 here in America.

3007 Dr. {Burgess.} Now, does anyone else on the panel have
3008 a feeling as to whether or not that \$11 billion figure from
3009 oil and gas produced on federal lands--does that seem high,
3010 low, or just about right?

3011 Mr. {Smitherman.} Let me just say that this biennium
3012 Texas, oil and gas severance taxes will be over \$7 billion
3013 just from Texas private lands. So that seems to me like a
3014 low number.

3015 Dr. {Burgess.} Is that \$7 billion for 1 year or for 10

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3016 years.

3017 Mr. {Smitherman.} For the biennium. For 2 years.

3018 Dr. {Burgess.} For 2 years. Okay. Does anyone else
3019 have a sense? Is \$11 billion high, low? And again, that is
3020 a 10-year figure that is calculated in our budget. I rather
3021 think those numbers will be much more robust.

3022 Mr. Smitherman, you are correct to point out, and I am
3023 in absolute agreement that Texas is unique unto itself.
3024 There are aspects of the Texas oil and gas production that
3025 are unique to Texas because of archaeology. And the efforts
3026 that the Environmental Protection Agency to write rules for
3027 the entire country recognizing that Mr. Epel's home State of
3028 Colorado is vastly different geologically from our home State
3029 of Texas, do you have a feeling as to where those regulations
3030 should be written and enforced? Is it at the state level or
3031 is at the federal level?

3032 Mr. {Smitherman.} Certainly, we believe at the state
3033 level. The Railroad Commission employees and TCEQ employees
3034 know the underground geology of Texas better than regulators
3035 either in Washington D.C. or with the EPA. We have been at
3036 this for over hundred years and I think the proof is in the

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3037 pudding. The amount of oil and gas that we produce and our
3038 safety record and our environment stewardship is a real
3039 testimony to the fact that we are proud of what we do and we
3040 want to take every proactive step to maintain it. In fact,
3041 as you recall, we passed the first Frac Fluid Disclosure Rule
3042 in Texas 2 years ago. We are on the cusp, and next week we
3043 will adopt a recycling rule for flow back water we think will
3044 be one of the first, and some additional well integrity
3045 rules. So we are actually being proactive.

3046 Dr. {Burgess.} And you bring up an excellent point,
3047 although the concept of horizontal drilling and hydraulic
3048 fracturing was, if I recall correctly, part of that was
3049 developed in the Barnett Shale, my home county of Denton
3050 County, and has been extrapolated worldwide. But the
3051 technology changes and the technology that is available today
3052 is not the technology that was available 5, 10, 15 years ago.
3053 And I am grateful that you brought that point up because I
3054 think Texas and your office, in particular, has been a leader
3055 in addressing some of the environmental concerns that have
3056 occurred as a consequence of this very, very valuable energy
3057 source.

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3058 And just to wrap up, all of the economists with the
3059 benefit of the retrospectoscope were able to tell us that a
3060 recession started in December 2007. The area that I
3061 represent overlying the Barnett Shale had to read about it in
3062 the newspaper because we didn't feel it for almost 14 months.
3063 Now, yes, the natural gas price eventually came down to under
3064 \$2 as you pointed out, and the effect on the job market was
3065 felt. But it was astounding, the economic effect of the
3066 Barnett Shale in the area of North Texas that I represent,
3067 and my only wish is we could see that economic benefit be
3068 extrapolated to the rest of the country.

3069 And I am going to yield at this point to the chairman
3070 emeritus of the full committee such time as he may consume.

3071 Mr. {Dingell.} Chairman, I will repeat what I said.
3072 You are always very courteous and I thank you for your
3073 kindness.

3074 These questions are for Mr. Moeller. Mr. Moeller, as
3075 utilities build new natural gas electric generating
3076 facilities, they retire older coal-fired plants and retrofit
3077 other coal-fired plants to comply with EPA regulations such
3078 as the Mercury Rule. Do you believe that the Midwest region

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3079 will have the capacity necessary, in terms of electrical
3080 generation, to meet the demand?

3081 Mr. {Clair Moeller.} Yes, sir.

3082 Mr. {Dingell.} Now, is more time needed for compliance
3083 under the Mercury Rule to give time for new gas
3084 infrastructure and generation to be built?

3085 Mr. {Clair Moeller.} There may be a small number of
3086 projects that will require additional time as they work their
3087 way through the construction process.

3088 Mr. {Dingell.} I would appreciate if you would add some
3089 remarks for the record later on these two points.

3090 Mr. {Clair Moeller.} Yes, sir.

3091 Mr. {Dingell.} Now, sir, in her testimony, Commissioner
3092 LaFleur said that FERC has been told that the need for
3093 infrastructure is a regional issue that requires regional
3094 solutions. You also noted that to keep up with demand, the
3095 current system will need to be expanded. Given demands for
3096 natural gas, both now and projected in the future, how long
3097 do you anticipate it will take to build the infrastructure
3098 necessary to serve the Midwest region?

3099 Mr. {Clair Moeller.} Typically, construction of the

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3100 natural gas pipeline takes between 3 and 5 years. It will
3101 take us on the order of 3 years to understand what pipelines
3102 we should ask for.

3103 Mr. {Dingell.} Now, do we add also to that some
3104 permitting time? Because pipelines are not always greeted
3105 with vast acclaim when somebody comes forward.

3106 Mr. {Clair Moeller.} Three years is the quick time and
3107 5 years is if there are permitting issues that need to be
3108 worked through, sir.

3109 Mr. {Dingell.} Now, what will the approximate cost be
3110 for this new infrastructure?

3111 Mr. {Clair Moeller.} Our first guess at that cost would
3112 be in the range of 3 to \$5 billion.

3113 Mr. {Dingell.} Now, who will ultimately bear the burden
3114 of these costs? The ratepayers, the utilities, or the owners
3115 of the pipeline?

3116 Mr. {Clair Moeller.} Ratepayers, at the end the day,
3117 pay for the infrastructure, sir.

3118 Mr. {Dingell.} And that is a standard rule? That just
3119 always happens?

3120 Mr. {Clair Moeller.} Yes, sir.

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3121 Mr. {Dingell.} Thank you. Now, in your testimony you
3122 note that given the nature of pipeline contracts with
3123 utilities, some natural gas-fired plants cannot run to
3124 provide additional generation during certain peak events. Do
3125 you believe that there are changes to be made to ensure
3126 utilities have the contracts in place that provide the supply
3127 they need to run longer? Please answer yes or no.

3128 Mr. {Clair Moeller.} Yes.

3129 Mr. {Dingell.} Would you like to add to that for the
3130 record later, if you please?

3131 Mr. {Clair Moeller.} We can do that, yes, sir.

3132 Mr. {Dingell.} Now, with improved weather forecasting
3133 and the increased use of wind to generate electricity, do you
3134 believe that this and other forms of renewable electricity
3135 should be included in the resource adequacy predictions? Yes
3136 or no?

3137 Mr. {Clair Moeller.} Yes.

3138 Mr. {Dingell.} And would you submit to us your comments
3139 as to why this would be so for the record?

3140 Mr. {Clair Moeller.} Yes, sir.

3141 Mr. {Dingell.} Mr. Chairman, you have been most

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3142 gracious. Thank you to our panel.

3143 And I would just like to make one observation. I have
3144 been dealing with these energy questions for years and years
3145 and years. And the free economic system always surprises us
3146 by how well it works, but it has a lot of other surprises in
3147 it for us. And technology seems to change under our feet.
3148 We find that where we were anticipating shortages, we all of
3149 a sudden have abundance. Where we anticipated abundance, we
3150 all of a sudden have shortages.

3151 And I just worry constantly about the way things change
3152 under our feet and how it is that we must act to see to it
3153 that we are ready when the next set of difficulties comes
3154 upon us. Whether we get gas lines or cold winters and
3155 shutdowns and the gas pipelines crater and we have all kinds
3156 of troubles, and I am hopeful that the nice picture that I
3157 see today is one which is going to be as nice or nicer
3158 tomorrow.

3159 But having been a little like the dog that backed into
3160 the hot stove, I am not backing into any stoves hot or cold
3161 right now. So having said these things, your additional
3162 comments for the record would be appreciated. Mr. Chairman,

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3163 I thank you.

3164 Mr. {Whitfield.} Thank you, Mr. Dingell. At this time

3165 I recognize the gentleman from Virginia, Mr. Griffith, for 5

3166 minutes.

3167 Mr. {Griffith.} Thank you, Mr. Chairman. I appreciate

3168 all of you all being here today and appreciate the testimony

3169 that I have heard.

3170 I think that Mr. Dingell's comments in regard to the

3171 circumstances are always changing is one of the reasons that

3172 I feel so strongly that we ought not to throw coal out, or

3173 treat coal as if it were a bad word, because long-term, we

3174 know we have got plenty of coal. It may be a little bit

3175 harder to get out, but if we run into circumstances that we

3176 need it, it is there. And we just need to make sure we have

3177 the capabilities when we need it to be able to use it.

3178 Likewise, it is great that we have natural gas at fairly

3179 reasonable prices and that, you know, do anticipate one of

3180 our--in a previous hearing some of you may have heard this

3181 earlier--witness indicated that they thought it was going to

3182 actually hit \$4 by the end of the year. At that point, coal

3183 does become competitive again. And then the question

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3184 becomes, you know, who wants to use it and are they going to
3185 be allowed to use it by regulations?

3186 And I would ask you all--and I don't care who wants to
3187 volunteer to answer this question--but we hear a lot about
3188 retrofitting some of the coal plants, which is a good thing
3189 and some coal plants are fairly new. In light, though, of
3190 some of the new regulations that are out there,
3191 notwithstanding some comments this week that the White House
3192 may back off of some of the greenhouse gas regulations in
3193 regard to power plants, how likely is it that you all would
3194 anticipate that your power producers are going to be
3195 anxiously looking to find ways to retrofit coal plants in
3196 light of the uncertainty that is out there with what they
3197 might have to do with CO2?

3198 Do you want to start, Mr. Smitherman?

3199 Mr. {Smitherman.} Yes. Congressman, you raised a great
3200 issue because that is the unknown. You could retrofit to
3201 capture SO2, mercury, particulate matter, everything else
3202 that goes up that flue except for CO2 and then find yourself
3203 5 or 10 years from now having to make a major retrofit to
3204 capture carbon or it be cost-prohibitive and you just have to

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3205 close the plant down and then you have lost all that capital.

3206 Mr. {Griffith.} Does anybody disagree with that?

3207 Mr. Moeller, did you want to make an additional comment

3208 on that?

3209 Mr. {Clair Moeller.} In the Midwest with traditionally

3210 regulated States, the generation owners in conjunction with

3211 their regulators have committed to retrofitting 54,000

3212 megawatts of the 66,000 megawatts on our system.

3213 Mr. {Griffith.} Okay. Thank you.

3214 Mr. van Welie, let me ask you this, just because, as Mr.

3215 Dingell also pointed out, sometimes pipelines aren't so

3216 popular, that LNG storage facility just over the line in

3217 Canada, is there already a pipeline into the States?

3218 Mr. {van Welie.} Yes.

3219 Mr. {Griffith.} Okay.

3220 Mr. {van Welie.} There is a pipeline that comes over.

3221 Mr. {Griffith.} Because we had had some difficulty

3222 getting the pipelines across the Canadian border of late, and

3223 I just wouldn't want to see us run into that problem.

3224 I will tell you that I suspect that some of the natural

3225 gas comes out of a pool of natural gas that we have been

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3226 trying in my home State of Virginia now since 2004 to get
3227 permission to explore and figure out what is out there. And
3228 many geologists have told us that natural gas the Canadians
3229 are getting offshore is in a pool that stretches all the way
3230 down to northern North Carolina, which covers a big chunk of
3231 Virginia in that patch. We would love to have you have a
3232 source of American natural gas from just offshore. If you
3233 don't want to do it in Massachusetts, we are glad to do it
3234 Virginia.

3235 Mr. {van Welie.} We would be happy to have you build a
3236 pipe. That would be great.

3237 Mr. {Griffith.} And we would love to create jobs for
3238 all Americans.

3239 Mr. Rush asked about minorities earlier, and we just
3240 think there is huge potential for not only the United States
3241 but also for the Commonwealth of Virginia if we can get that
3242 permission.

3243 Mr. Chairman, that being said, you know, this has been a
3244 great hearing, but I believe a lot of questions that I would
3245 have asked have already been asked and I will yield back.

3246 Mr. {Whitfield.} Well, thank you, Mr. Griffith.

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3247 At this time I recognize the gentleman from Colorado,
3248 Mr. Gardner, for 5 minutes.

3249 Mr. {Gardner.} Thank you, Mr. Chairman. And again
3250 thank you to the witnesses for joining us today. Chairman
3251 Epel, just a couple of questions from your testimony and the
3252 experiences that we have shared. Could you talk a little bit
3253 about the long-term contracts that you mentioned, natural
3254 gas, and how does the ability to enter into long-term
3255 contracts help with certainty and pricing for utilities?

3256 Mr. {Epel.} Thank you, Congressman. We could not have
3257 developed Clean Air-Clean Jobs without a long-term contract.
3258 We had to take the volatility out. And so when we developed
3259 the program with this long-term contract, it just gave us
3260 that opportunity to have the smooth glide path for the next
3261 10 years. And we don't anticipate any type of rate impact.
3262 In fact, we entered into a multiyear rate case with
3263 Pelletier's Company of Colorado with only 5 percent increase
3264 in rates for the next 3 years.

3265 Mr. {Gardner.} And, I believe it was Mr. Burgess from
3266 Texas who talked about just the differences between
3267 Colorado's unique needs and Texas' uniqueness and just the

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3268 variety of States and the differences between the geography
3269 in the mountains versus the plains. And so when we came up
3270 with the solutions unique to Colorado, I think that is
3271 important.

3272 Mr. {Epel.} Um-hum.

3273 Mr. {Gardner.} And you hear people talk about the
3274 single stack solutions versus letting a State do a broader
3275 whole approach. And so I guess what I am leading into is
3276 this: when you have a rule that allows you to make a decision
3277 for a State, that is a better way than individualizing,
3278 targeting specific sites. Is that correct?

3279 Mr. {Epel.} I agree with you completely. It has to be
3280 a system benefit. If we did not look at the full suite of
3281 the older plants, the gas availability, including the energy
3282 efficiency opportunities, the program could not have gone
3283 forward.

3284 Mr. {Gardner.} And so Colorado is best-equipped to make
3285 decisions for Colorado just as Texas is best-equipped to make
3286 decisions for Texas?

3287 Mr. {Epel.} Well, I think the basic point is the West
3288 is the best and I am pleased to brag about it. But

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3289 absolutely--

3290 Mr. {Gardner.} I wholeheartedly agree with you. Thank
3291 you, Mr. Chairman. Yes. And to the point of allowing a
3292 holistic solution versus stack specific. Would everybody
3293 else agree on the panel that that is the better way to
3294 proceed?

3295 Mr. {Clair Moeller.} Yes.

3296 Mr. {van Welie.} Yes.

3297 Mr. {Gardner.} Thank you. And you talk a little bit
3298 about greenhouse gas reductions. You indicate in your
3299 testimony that greenhouse gas reductions must establish
3300 targets that are achievable through this suite of strategies,
3301 tailored specifically to a State and the State with
3302 vertically integrated utility or by a region in an organized
3303 market. Do you think that the proposals we see from this
3304 Administration have done that?

3305 Mr. {Epel.} You know, we have not yet seen the existing
3306 source rule which to me is the critical rule that all of us
3307 are concerned about. I mean clearly, in Colorado, we have
3308 addressed Regional Haze at least for our industrial and
3309 utilities, Mercury Air Toxics. This is the biggest wildcard

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3310 but I think if we have a sensible slope and length of time,
3311 it is manageable. But that really has to be driven by the
3312 State once EPA or the Congress defines that goal.

3313 Mr. {Gardner.} And you talked a little bit about, in
3314 addition to the cooperation that we have in Colorado, we also
3315 had a very cooperative process on our Regional Haze issue in
3316 the SIP that we developed bipartisan support, but we have
3317 seen now several groups in Colorado that choose not to
3318 participate in the process despite its wide bipartisan
3319 support. Wild Earth Guardians National Parks Conservation
3320 Association have sought to upend the process of the SIP that
3321 we got through bipartisan efforts. Through the PUC, do
3322 support the Colorado Regional Haze SIP in its entirety?

3323 Mr. {Epel.} Absolutely.

3324 Mr. {Gardner.} Yes. And then you agree that the
3325 Department of Justice and the EPA should defend the SIP in
3326 its entirety and should oppose modifications which could be
3327 entering into a consent decree if that is what they would end
3328 up pursuing that changed the balance approach agreed to by
3329 the diverse parties involved. You would agree that the
3330 Department of Justice ought to defend the whole thing?

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3331 Mr. {Epel.} Well, I am reluctant to ever tell the
3332 Department of Justice what to do, but I think Colorado did as
3333 fine a job as possible on Regional Haze, and clearly, the EPA
3334 supported it. They have turned around the approval of our
3335 State Implementation Plan as quickly as possible, I mean, in
3336 record time.

3337 Mr. {Gardner.} And did this Administration consultant
3338 with--Texas, Colorado, I will ask all of you--did the
3339 Administration consult with your State before issuing rules
3340 like Utility MACT?

3341 Mr. {Smitherman.} Not at all. Let me just add,
3342 Congressman, quickly, SO₂, NO_x, particulate matter, CO₂ down
3343 to 1992 levels in Texas, in the face of a growing economy
3344 without cap-and-trade.

3345 Mr. {Gardner.} Chairman Epel?

3346 Mr. {Epel.} I am not familiar with that.

3347 Mr. {Gardner.} Yes, I understand. Anybody else care
3348 to--okay. Thank you very much, Mr. Chairman. I yield back
3349 my time.

3350 Mr. {Whitfield.} Well, thank you, Mr. Gardner. And
3351 thank all of you for your testimony.

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3352 I think everyone agrees that the wildcard is the CO2
3353 regulations. And speaking for myself, all of this came about
3354 as a result of the Supreme Court decision, and there really
3355 has not been a national legislative debate on this issue.
3356 And something that we are going to be focused on is drafting
3357 some legislation in which we can have a national debate on it
3358 and let the legislative body decide.

3359 But the ramifications are big, the uncertainties are
3360 big, and we are going through great changes today. And so
3361 that is why we feel like this hearing is so important and to
3362 hear from experts who are dealing with it in various ways, we
3363 appreciate that very much.

3364 And without objection, I would like to enter into the
3365 record this statement of our chairman, Fred Upton.

3366 [The prepared statement of Mr. Upton follows:]

3367 ***** COMMITTEE INSERT *****

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|
3368 Mr. {Rush.} Mr. Chairman, I just hope and sincerely
3369 wish that along with your plans for future hearings, I mean,
3370 you know, you know how crazy I am about these hearings that
3371 we are holding. I wish you would also certainly consider a
3372 hearing where we will have some scientists come in and
3373 discuss climate change.

3374 Mr. {Whitfield.} Yes, well, we have had a lot of
3375 hearings on climate change. That is for sure.

3376 Mr. {Rush.} But no scientists.

3377 Mr. {Whitfield.} Well, over the last 5 years, we have
3378 had 22 some hearings on climate change with scientists. But
3379 thank you for you and Mr. Waxman reminding us of that and for
3380 the letter that you sent.

3381 Mr. {Rush.} We certainly would like to hear from--

3382 Mr. {Whitfield.} Thank you.

3383 Mr. {Rush.} --some scientists.

3384 Mr. {Whitfield.} Thank you.

3385 Thank you all once again for being with us. And the
3386 record will remain open for 10 days. Some of you made
3387 commitments to provide additional information. And we look

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3388 forward to working with all of you as we strive to meet the
3389 energy demands of our country and make sure we have adequate
3390 supply as well. Thank you.

3391 And with that, the hearing is adjourned.

3392 [Whereupon, at 1:08 p.m., the subcommittee was
3393 adjourned.]