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STATE OF THE NATION'S ENERGY INFRASTRUCTURE

TUESDAY, FEBRUARY 27, 2018

House of Representatives

Subcommittee on Energy

Committee on Energy and Commerce

Washington, D.C.

The subcommittee met, pursuant to call, at 10:00 a.m., in Room 2322 Rayburn House Office Building, Hon. Fred Upton [chairman of the subcommittee] presiding.

Members present: Representatives Upton, Olson, Barton, Shimkus, Latta, Harper, McKinley, Kinzinger, Griffith, Johnson, Bucshon, Flores, Mullin, Hudson, Walberg, Duncan, Walden (ex officio), Rush, McNerney, Peters, Green, Castor, Sarbanes, Tonko, Loeb sack, Schrader, Kennedy, and Pallone (ex officio).

Staff present: Mike Bloomquist, Staff Director; Daniel Butler, Staff Assistant; Kelly Collins, Legislative Clerk,

Energy/Environment; Jordan Davis, Director of Policy and External Affairs; Wyatt Ellertson, Professional Staff, Energy/Environment; Margaret Tucker Fogarty, Staff Assistant; Adam Fromm, Director of Outreach and Coalitions; Jordan Haverly, Policy Coordinator, Environment; Ben Lieberman, Senior Counsel, Energy; Milly Lothian, Press Assistant & Digital Coordinator; Mary Martin, Chief Counsel, Energy/Environment; Brandon Mooney, Deputy Chief Counsel, Energy; Mark Ratner, Policy Coordinator; Annelise Rickert, Counsel, Energy; Dan Schneider, Press Secretary; Austin Stonebreaker, Press Assistant; Madeline Vey, Policy Coordinator, DCCP; Hamlin Wade, Special Advisor, External Affairs; Priscilla Barbour, Minority Energy Fellow; Evan Gilbert, Minority Press Assistant; Tiffany Guarascio, Minority Deputy Staff Director and Chief Health Advisor; Caitlin Haberman, Minority Professional Staff Member; Rick Kessler, Minority Senior Advisor and Staff Director, Energy and Environment; John Marshall, Minority Policy Coordinator; Alexander Ratner, Minority Policy Analyst; and Andrew Souvall, Minority Director of Communications, Outreach and Member Services.

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44 Mr. Upton. Today's hearing, "The State of the Nation's  
45 Energy Infrastructure," will provide members with the opportunity  
46 to explore the challenges and the opportunities related to the  
47 maintenance, modernization, and development of energy  
48 infrastructure.

49 Two weeks ago, the White House unveiled its framework for  
50 rebuilding infrastructure across the country. Citing the need  
51 to maintain our country's global competitiveness and improve our  
52 citizens' quality of life, the president's plan seeks to stimulate  
53 at least \$1.5 trillion in new investment over the next decade.

54 And while the president's plan touches all sectors, from  
55 roads and bridges to airports and hospitals and dams, this hearing  
56 will focus on the state of the nation's energy infrastructure and  
57 how we can make meaningful improvements.

58 Joining us today is a panel of witnesses who can speak to  
59 the needs and challenges of a changing energy landscape. Since  
60 the start of the 115th Congress, this committee has held dozens  
61 of hearings related to infrastructure and the House has already  
62 passed legislation on interstate pipeline siting, hydropower  
63 licensing, and the development of cross-border energy  
64 infrastructure.

65 That being said, this committee's infrastructure efforts are  
66 ongoing as there is no question that more needs to get done and  
67 more projects need to get built, for to deliver our nation's

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68 abundant energy resources to consumers in a reliable, efficient,  
69 and cost-effective manner, new electric transmission lines and  
70 natural gas pipelines have got to be constructed.

71 And as we have heard during our series of Powering America  
72 hearings, the nation's electrical grid faces enormous challenges  
73 as needed infrastructure is not getting built fast enough in some  
74 areas of the country.

75 Additionally, we have got to face the fact that much of our  
76 existing infrastructure is in fact aging. The average age of a  
77 coal-fired power plant in the U.S. is 40 years old and the  
78 country's fleet of nuclear reactors isn't much younger.

79 Many of these power plants are now facing retirement due to  
80 their inability to compete economically in a market-based  
81 environment.

82 Notably, the Oyster Creek Nuclear Station in New Jersey,  
83 which is the oldest reactor in the country, recently announced  
84 that it will retire later this year after nearly 50 years of  
85 service.

86 So we can't afford to have the energy infrastructure that  
87 does not meet America's needs or reflect the evolution of our  
88 energy markets.

89 Instead, we have got to modernize our outdated system by  
90 encouraging innovative developments and state-of-the-art  
91 technology such as battery storage and advanced transmission

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92 devices.

93 I should recognize that much is already being done on this  
94 front with private capital largely funding these improvements.  
95 In fact, electric utilities and independent transmission  
96 developers spent an estimated \$23 billion in 2017.

97 A new transmission infrastructure alone while the natural  
98 gas utilities invested a record of \$25 billion last year across  
99 its industry.

100 Though these private sector investments are critically in  
101 a highly capital-intensive industry, we should be mindful that  
102 none of it will get built if we don't have a trained workforce  
103 that is capable of innovating, designing, and constructing this  
104 new infrastructure.

105 Not only do we need skilled linesmen and women and  
106 pipefitters but we also need the engineers to power systems in  
107 nuclear technologies in many other trades.

108 The challenge associated with developing a skilled workforce  
109 may be greater than the challenge of siting and constructing  
110 infrastructure projects.

111 So that's an important part of this conversation. I am glad  
112 we have some of the folks who can speak to us on that issue, and  
113 with that, I want to welcome our panel for sure and yield for an  
114 opening statement -- the balance of my time to Mr. Olson.

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

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118

119 Mr. Olson. I thank the chair, and welcome to our six  
120 witnesses.

121 Having a Texan on the panel gives me a chance to do what Texans  
122 love to do and that's to brag about my home state. The greater  
123 Houston region has some of the best technical colleges in the  
124 country and Texas-22, who I worked for, has the best of the best.

125 Schools like Houston Community College, Texas State  
126 Technical College, Alvin Community College, Wharton County Junior  
127 College, who actually built a new campus in Matagorda County to  
128 meet the needs of retiring workers at the South Texas Power Plant.

129 But the top gun at home is San Jacinto College and that's  
130 because of their chancellor, Brenda Hellyer. We are honored to  
131 have you here, Chancellor Hellyer.

132 When America's largest petrochemical complex has a need,  
133 they turn to Dr. Hellyer and San Jac. One example is their new  
134 maritime technological training center. It simulates all 51  
135 miles of the Port of Houston -- Houston Ship Channel and it's so  
136 real.

137 I was down there a year ago right by the Harbor Bridge. It  
138 snowed heavy snow -- blizzard. The waves started rocking my  
139 little tugboat. I got seasick in a simulator. It's real, and  
140 that's San Jacinto Junior -- San Jacinto College. Welcome, Dr.  
141 Hellyer. Glad to have you.

142 I yield back.

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143 Mr. Upton. Gentleman's time has expired.

144 The chair recognizes the ranking member of the subcommittee,  
145 the gentleman from Illinois, Mr. Rush.

146 Mr. Rush. Mr. Chairman, I am at a loss for words on that.  
147 But I want to thank you, Mr. Chairman, for holding this important  
148 hearing today on the energy infrastructure.

149 As you know, investing in the nation's aging infrastructure  
150 is a top priority for members on both sides of the aisle and it  
151 is my hope that we can address this issue in a bipartisan manner.

152 Unfortunately, Mr. Chairman, the proposal put forth by the  
153 Trump administration leaves a lot to be desired and, frankly, is  
154 a poor starting point, from my perspective.

155 The president's infrastructure plan fails to provide  
156 adequate federal investment in the nation's antiquated energy  
157 infrastructure.

158 But, rather, it attempts to short circuit environmental  
159 regulations and it places the vast majority of the funding burden  
160 on cash-strapped states and local municipalities.

161 In fact, under the administration's proposal, states will  
162 be prohibited from receiving more than 10 percent of the total  
163 grant fund and 80 percent of new investment must come from  
164 non-federal sources.

165 Mr. Chairman, this proposal resembles less of a national  
166 infrastructure plan and instead will simply pick winners and

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167 losers where only a limited number of states, localities, and  
168 affluent communities will actually benefit from the president's  
169 plan.

170         Instead, Mr. Chairman, I want to urge this subcommittee to  
171 look at a more serious alternative outlined in H.R. 2479, the  
172 Leading Infrastructure for Tomorrow's America, or LIFT America,  
173 Act introduced by Ranking Member Pallone, myself, and the rest  
174 of the minority members of the Energy and Commerce Committee back  
175 in May 2017.

176         This bill offers thoughtful recommendations that will surely  
177 benefit all Americans including providing provisions that would  
178 invest in cleaner water infrastructure, clean energy  
179 infrastructure, more resilient broadband, brownfields  
180 redevelopment, and last but not least, health care  
181 infrastructure.

182         Additionally, Mr. Chairman, I have also sponsored a bill that  
183 would strengthen the nation's workforce by investing in  
184 initiatives to train minority women and unemployed coal workers  
185 to compete for good-paying energy and manufacturing jobs and  
186 careers.

187         Mr. Chairman, it is not enough to simply curtail an  
188 environmental protection and pass the funding for immersion onto  
189 the same.

190         I look forward to hearing from our esteemed witnesses and

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191 I look forward to working with the majority.

192 Mr. Chairman, with that, I yield back -- I yield my time to  
193 my good friend, also from the great state of Texas, Mr. Green.

194 Mr. Green. Mr. Chairman, members, I thank you colleague --  
195 ranking member -- for yielding to me today.

196 First of all, I want to say that this is the first committee  
197 hearing we have had with -- that Pete Olson hasn't talked about  
198 the Astros.

199 So Pete, I want to tell you how much -- how proud we are on  
200 this side about the Castros.

201 Mr. Olson. It's coming. It's coming.

202 Mr. Green. But, more importantly, I want to welcome our  
203 panel and particularly our chancellor from San Jac North. I've  
204 worked for many years with San Jacinto College in training.

205 In East Harris County, we could have every union electrician  
206 in the country come to Houston and we'd still need more  
207 electricians because the expansion of our industries in East  
208 Harris County because of the Eagle Ford and now with Permian Basin.  
209 So we have refineries, chemical plants, and things like that.

210 But I am a native Houstonian and you all have heard a lot  
211 of times I've never not lived on a pipeline easement in Houston,  
212 Texas. No matter where I've lived, I have a pipeline easement  
213 there and I get all these nice letters during the year making sure  
214 I know what happens if there is an accident.

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215 But our infrastructure is so important. It's not just  
216 highways and rails and airports but it's also pipelines, and  
217 because of the success we are having in some of the states, I think  
218 we need to have that infrastructure on energy pipelines, too.

219 And with that, I'll thank my colleague. I know I've used  
220 up the time he yielded to me.

221 Thank you.

222 Mr. Upton. Gentleman's time has expired.

223 The chair will recognize the chairman of the full committee,  
224 the gentleman from the good state of Oregon, Mr. Walden.

225 The Chairman. I thank the gentleman, and we are having a  
226 lot of talk about aging infrastructure and I don't think that's  
227 fair to Adam Kinzinger just because it's his 40th birthday today,  
228 speaking of aging infrastructure.

229 [Laughter.]

230 Happy birthday. Today's hearing explores the state of the  
231 nation's energy infrastructure. It's another important step in  
232 our commitment to putting the needs of consumers first.

233 Energy, truly the driving force in our economy and our  
234 country, and our hearing today is focused on ways to expand and  
235 improve and modernize our infrastructure so we can deliver energy  
236 to consumers more safely, reliably, and cost effectively.

237 So this morning we have an excellent panel of witnesses who  
238 are going to share with us some challenges and opportunities that

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239 the country faces and you all face to modernize our infrastructure  
240 in the energy realm.

241 We will gather your perspectives and we will learn more about  
242 what we need to do in public policy. Just for the record, our  
243 committee has been very active in this area.

244 A lot of work has gone into our legislative initiatives on  
245 the nation's infrastructure. We know there is a lot more that  
246 needs to be done.

247 This hearing marks our forty-seventh -- forty-seventh  
248 hearing on infrastructure just in this Congress -- session of  
249 Congress alone.

250 We have 24 energy bills and environmental bills that have  
251 passed the House already and have gone over to the Senate. They  
252 address pipeline infrastructure, hydropower relicensing,  
253 brownfields, air quality standards, energy efficiency, drinking  
254 water improvement, and nuclear waste storage.

255 All this work is incredibly important for my district.  
256 These bills will have a direct positive impact for our local  
257 economies and our communities both in Oregon and across the  
258 country, and now we look forward to continuing our work with the  
259 United State Senate and the White House to get these measures  
260 signed into law.

261 I applaud President Trump for not only recognizing the need  
262 to improve all facets of our nation's infrastructure but also for

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263 demonstrating the leadership needed to push forward this major  
264 initiative for our country.

265         While there are many difficult details to work out, I believe  
266 there is support for a broad infrastructure bill. Just the other  
267 week I participated in a bipartisan bicameral infrastructure  
268 meeting hosted by the president at the White House where we talked  
269 about our shared priorities for rebuilding our nation's  
270 infrastructure from roads and bridges to pipelines and for  
271 broadband in our un-served and underserved areas of the country.

272         While much of the conversation around infrastructure has  
273 focused on ways to increase federal spending, we should be mindful  
274 that most of the nation's energy infrastructure is privately owned  
275 and operated.

276         We all know that financing is a crucial aspect of any  
277 infrastructure plan so we are thinking outside the box to see where  
278 we can make the most progress with the limited federal money that  
279 is available.

280         We are focused on fixing the regulatory environment,  
281 encouraging public-private partnerships, and strengthening our  
282 workforce.

283         Our nation's energy infrastructure, the traditional base  
284 load power plants, windmills, solar panels, hydroelectric dams,  
285 pipelines, power lines, fossil fuel production facilities, and  
286 import-export terminals, they make up the real backbone of

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287 America's economy.

288 With innovation and technological advancements driving  
289 change at a rapid pace it's our responsibility as members of this  
290 committee to understand the challenges and the opportunities  
291 associated with keeping these energy systems operating safely and  
292 reliably.

293 So we have got a lot of work to do but we are moving in the  
294 right direction, and with that, I want to thank our witnesses for  
295 appearing before us today.

296 I look forward to your testimony and the work going forward  
297 in this matter under Chairman Upton's leadership.

298 So with that, Mr. Chairman, unless anyone else wants the  
299 remainder of my time, I'd be happy to yield back and hear from  
300 our witnesses.

301 [The prepared statement of Mr. Walden follows:]

302

303 \*\*\*\*\*INSERT 2\*\*\*\*\*

304 Mr. Upton. Gentleman yields back.

305 The chair recognizes the ranking member of the full  
306 committee, the gentleman from New Jersey, Mr. Pallone, for an  
307 opening statement.

308 Mr. Pallone. Thank you, Chairman Upton.

309 Revitalizing and modernizing our nation's crumbling  
310 infrastructure should be an area where Democrats and Republicans  
311 can find common ground.

312 Unfortunately, the plan President Trump unveiled two weeks  
313 ago barely mentions energy and, as a whole, represents another  
314 cynical bait and switch.

315 After promising for more than a year to invest over a trillion  
316 dollars in America's infrastructure, the president's plan does  
317 not offer any new funding for infrastructure.

318 This anemic proposal calls for \$250 billion in federal  
319 spending but even that is offset by \$200 billion in cuts to vital  
320 existing programs.

321 Worse yet, the 80 percent match requirement will do little  
322 to help towns, cities, and counties all across this country that  
323 simply cannot afford this kind of spending.

324 In fact, the Wharton School at the University of Pennsylvania  
325 where President Trump attended college provides a withering  
326 criticism of his so-called infrastructure plan, stating that it  
327 really won't leverage funds and that, quote, "There will be little

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to no impact on the economy."

To call the Trump plan worthless isn't partisan. It's the reality. In stark contrast, Democrats actually have a real plan, a better deal for investing and rebuilding America. This plan includes important parts of the committee Democrats' bill, the LIFT America Act.

This legislation would create jobs and boost the economy by putting real money towards infrastructure like replacing drinking water pipes, cleaning up brown field sites, supporting energy efficiency and clean energy, extending broadband service and revitalizing our hospitals and health care infrastructure.

Democrats are committed to delivering a better deal for Americans, providing cheap clean energy for consumers and modernizing our aging energy infrastructure so that it's secure, efficient, and resilient.

We will make key investments that will transport our energy infrastructure into the 21st century energy economy while creating jobs of the future that lessen our carbon footprint.

We do this by expanding renewable energy and by investing in energy efficiency programs that will lower Americans' monthly bills and these programs are good for the environment and good for consumers.

The Democrats' LIFT America Act is a bold proposal that will revitalize our infrastructure, grow our economy, and create new

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352 jobs, and to ensure good family-sustaining wages for workers we  
353 are committed to maintaining Davis-Bacon community-based wage  
354 standards and other worker protections. We will invest in  
355 workers through robust training, provide job opportunities for  
356 veterans, and level the playing field for small businesses  
357 including women and minority-owned businesses.

358 And what we won't do is buy into the false choice between  
359 a strong economy and a healthy environment. President and  
360 Republicans keep pushing this outdated false narrative, but the  
361 reality is that a clean and safe environment supports a strong  
362 economy.

363 Environmental safeguards are not the obstacle to  
364 infrastructure improvements. The real obstacle is the lack of  
365 funds.

366 President Trump spared no expense and required no offsets  
367 for tax breaks to fuel profits on Wall Street, but when it comes  
368 to helping Main Street all he's offering is Monopoly money.

369 And we can and must do better. I hope my colleagues on the  
370 other side of the aisle agree and will work with us to invest in  
371 America and truly make our infrastructure great again.

372 And I yield the balance of my time to the gentleman from New  
373 York, Mr. Tonko.

374 Mr. Tonko. And I thank the ranking member of the standing  
375 committee for yielding.

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376           It's my pleasure to thank Chair Upton and Ranker Rush for  
377 hosting this hearing, which is going to enable us to better  
378 understand the full range of possibilities of energy  
379 infrastructure that should be considered.

380           So I welcome the panel here this morning and in particular  
381 want to offer my welcome to one of the mayors of the communities  
382 that I represent in the 20th Congressional District of New York,  
383 the Honorable Gary McCarthy, mayor of the great city of  
384 Schenectady, New York, in the 20th District.

385           And I thank the mayor for being here. He's a great friend,  
386 a super colleague, and a very thoughtful leader, a progressive  
387 leader, and one who has brought great vision to leading the city  
388 of Schenectady, which is dubbed the electric city, as it opened  
389 its gates to Thomas Alva Edison at one time, and we have great  
390 heritage as it relates to energy development.

391           But I want to bring attention to the city of Schenectady's  
392 report under the tutelage of Mayor McCarthy, the 2017 Smart City  
393 Report, which is just filled with all sorts of wonderful ideas  
394 and has enabled Gary McCarthy to be a national leader in Smart  
395 City demonstration projects.

396           I encourage members to check out this report. It offers many  
397 opportunities that, when proven, could be replicable around the  
398 country and will hold a number of type of projects that are  
399 possible to improve energy efficiency, public safety, and

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400 internet access.

401 It's a tremendous report. I thank the mayor for his  
402 leadership and I thank him for being here with the rest of the  
403 panel here this morning.

404 So thank you, Mayor McCarthy, and welcome.

405 Mr. Upton. Well, we are grateful for all the witnesses  
406 today.

407 We are joined by Brian Slocum, the VP of operations for ITC  
408 Holdings, Jim Ross, the director of International Brotherhood of  
409 Electrical Workers, Brenda Hellyer, chancellor of San Jacinto  
410 College, John Devine, senior VP for HDR, Inc., Jennifer Chen --  
411 I think -- is that right, Chen -- sustainable FERC project  
412 attorney, Natural Resources Development Council, and the  
413 Honorable Mr. McCarthy, mayor of Schenectady, New York.

414 We welcome you all. Your statements are made part of the  
415 record in their entirety. Thank you for submitting them early,  
416 and each of you will be given five minutes to summarize that  
417 testimony.

418 And Mr. Mayor, we will start with you. Welcome.

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STATEMENTS OF THE HONORABLE GARY MCCARTHY, MAYOR, CITY OF  
SCHENECTADY; JOHN DEVINE, SENIOR VICE PRESIDENT, HDR INC.; BRIAN  
SLOCUM, VICE PRESIDENT, OPERATIONS, ITC HOLDINGS CORPORATION; JIM  
ROSS, DIRECTOR, INTERNATIONAL BROTHERHOOD OF ELECTRICAL WORKERS  
CONSTRUCTION AND MAINTENANCE DEPARTMENT;  
JENNIFER CHEN, ATTORNEY, SUSTAINABLE FERC PROJECT CLIMATE & CLEAN  
ENERGY, NATURAL RESOURCES DEFENSE COUNCIL; BRENDA HELLYER,  
CHANCELLOR, SAN JACINTO COLLEGE

STATEMENT OF MR. MCCARTHY

Mr. McCarthy. Chairman Upton, Ranking Member Rush,  
distinguished members of the committee and, of course, New York's  
20th District Congressman Tonko, thank you for the opportunity  
to appear before you today.

While I am the mayor of the city of Schenectady and serve  
in the leadership of the New York Conference of Mayors, I want  
to make available to you the resources and staff of the U.S.  
Conference of Mayors.

Under the capable leadership of Conference President New  
Orleans' mayor, Mitch Landrieu and Executive Director Tom  
Cochran, the conference team is ready and able to assist you in  
research, identifying problems and opportunities in the adoption  
of a national energy infrastructure policy and the appropriate  
budgetary support to ensure the successful implementation of that

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443 policy.

444 We live in an exciting time, one of rapid change, a time of  
445 disruptive technologies, a time of great opportunity. The city  
446 of Schenectady has a long and proud history of innovation in the  
447 creative use of technologies.

448 Congressman Tonko pointed out Thomas Edison founded the  
449 General Electric Company in our city over 125 years ago. The  
450 x-ray was developed in Schenectady.

451 The first television broadcast occurred in the city of  
452 Schenectady. Many of the world-changing products and  
453 technologies we use today have their roots in Schenectady.

454 Today, some of the most valuable real estate in Schenectady  
455 and communities across the country are our light poles. The  
456 conversion of conventional street lights to LED fixtures is  
457 happening everywhere.

458 It makes sense. There is an immediate savings of over 50  
459 percent in electrical costs. But what we are doing in Schenectady  
460 and in some communities across the country is looking at the  
461 opportunity to add additional features.

462 Sensor-based technologies to the light pole when the  
463 conversion to LED fixtures is happening, environmental sensors  
464 measure temperature and precipitation, device-based  
465 utility-grade meters that will allow different owners to place  
466 devices in a light pole and pay for the electricity that's used

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just by their device, optical sensor providing deterrence and documentation for policing, traffic and pedestrian analytics, dimming controls for additional electrical savings, acoustical sensors, Wi-Fi, and cellular communication protocols are just a few of the possible additions to a standard light pole.

These devices will better enable a more cost-effective delivery of municipal services, the valuable exchange of data and information, improved educational opportunities within our city school district, and help with cost containment in providing health care.

Schenectady is partnering with National Grid, our local utility, in implementing a REV demonstration project in our city. REV is reforming the energy vision, a program with New York Governor Cuomo's comprehensive energy strategy to build a clean and more resilient affordable energy system.

We are working with National Grid, GE, AT&T, Cisco, Presidio, CIMCON Lighting, and other local partners to do a citywide deployment of Smart City technology as we do the conversion to LED lights.

We hope the National Grid project in Schenectady will create a replicable model for utilities in other communities across the state and, hopefully, the country.

The ongoing efforts of Schenectady to further invest in infrastructure by leveraging convergent technologies including

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distributive generation resources, intelligence services, buildings in the electrification of transport will not only make the city more energy productive, economically and environmentally sustainable, but will assist New York State in its individually adopted economy wide target of an 80 percent reduction in greenhouse gas emissions by 2050, commonly referred to as the 80x50 Program.

The 80x50 challenge is a significant goal and will require fundamental changes, which means that the early cost savings and sustainable applications of Schenectady and National Grid's initiatives could serve as a model for other communities and utilities.

This type of project has the potential to transform communities and has clear implications for the global competitiveness of this country.

But it's based on a stable and an adaptable electrical grid. There are many components of the Smart City or Smart Grid projects that are self-financing. Conversion to LED light fixtures is a clear example.

Some lend themselves to partnerships between utilities, communities, and companies -- public Wi-Fi in commercial areas is an example. Others, like the upgrading of utility resiliency to deal with physical and cyber-attacks, the possibility of electromagnetic pulses, economic warfare, or proof of concept for

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515 emerging or yet to be developed concepts or technologies will  
516 likely require 100 percent funding from the federal government.

517 Mr. Chairman, again, I thank you for the opportunity to be  
518 here and look forward to the committee's questions.

519 [The prepared statement of Mr. McCarthy follows:]

520

521 \*\*\*\*\*INSERT 3\*\*\*\*\*



522 Mr. Upton. Thank you very much.

523 Mr. Devine, welcome.

524 STATEMENT OF MR. DEVINE

525

526 Mr. Devine. Good morning, Chairman Upton, Ranking Member  
527 Rush, and members of the subcommittee.

528 I am John Devine, a past president of the National Hydropower  
529 Association, and I am here today on behalf of NHA to share my  
530 thoughts about the value and needs of hydropower's part of this  
531 nation's infrastructure.

532 My engineering career spans 45 years focused on water  
533 resources and hydropower, working both in the public and the  
534 private sector. That also makes me part of the aging  
535 infrastructure, I might say.

536 I was also a founding member of a hydropower consulting firm  
537 that started with two people in Portland, Maine, and grew into  
538 a practice with over 250 professionals with offices in six states.  
539 I hope this provides a small example of the jobs that hydropower  
540 can create.

541 I will emphasize three points today. First, investment in  
542 new and existing hydropower projects produces economic benefits  
543 and creates jobs.

544 Second, policies that support hydropower deserve to be part  
545 of any infrastructure package Congress develops, and third, in  
546 order to preserve investment in hydropower, I believe changes in  
547 federal policy, particularly in the licensing process, will be

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548 necessary.

549           So to my point one, investment in hydropower infrastructure  
550 doesn't just create jobs. It creates the kind of jobs that  
551 require skill and education and are therefore valued, meaning in  
552 demand and well paid.

553           We are talking about many field technicians, electricians,  
554 highly-skilled mechanics, biologist, hydrologists, computer  
555 modelers, suppliers of all kind in virtually every field of  
556 engineering.

557           Hydropower is also often a part of -- a cornerstone part of  
558 multipurpose projects that provide water for irrigation and  
559 natural resource protection, water supply for millions of people,  
560 drought mitigation, flood control, and other benefits.

561           Which leads me to my second point. Ensuring more investment  
562 in hydropower would be -- should be a piece of any national  
563 infrastructure plan. Hydropower is a key part of the national  
564 infrastructure.

565           Just consider the role played by hydropower in pulling the  
566 Northeast and the upper Midwest out of the 2003 blackout that  
567 affected 45 million people in the U.S.

568           Hydropower's black start capability did that, and isn't that  
569 the very definition of important infrastructure? Consider our  
570 federal hydropower system. The average federal hydropower  
571 facility is over 50 years old.

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572 While this demonstrates reliability and durability, it also  
573 highlights the potential to increase efficiency and add capacity,  
574 therefore, more renewable energy from the same plant and more  
575 jobs.

576 This leads me to my third point. I report to you today as  
577 a practitioner in the field of federal hydropower licensing.  
578 Here is what I can report to you from the field.

579 First, the federal licensing and relicensing process is  
580 broken but maybe not for the reasons that you're thinking. It's  
581 not because of Congress passing the EP Act of 2005. Congress took  
582 a significant step to bring efficiency, transparency, and  
583 accountability to agency decision making. This committee in  
584 particular has done yeoman's service in support of hydropower.

585 It's not because of FERC. In its promulgation of the  
586 integrated licensing process, FERC made a bold attempt to bring  
587 order, efficiency and better fact-based decision making to the  
588 process.

589 In general, in my opinion, FERC is performing its role as  
590 a neutral arbiter of the facts. So how is it broken? It is broken  
591 today because many federal and state resource agencies do not  
592 adhere to the basic ground rules of the federal licensing process.

593 Here are three examples that I can share with you. First,  
594 what I am seeing is that all too frequently the scientific studies  
595 conducted as part of the licensing process are being ignored by

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resource agencies when the study results do not comport with the agency's notions of a project's environmental impacts.

This is despite the fact that these studies are performed for the express purpose of informing development of license conditions. Such disregard can lead to agency conditions which are not considered with the available and therefore are likely not to be effective.

Second, state and federal resource agencies' recommendations for license conditions including mandatory conditions with FERC -- which FERC cannot balance are often made without due consideration of their full impacts and are only focused on narrow agency goals.

Third, in many cases, the federal licensing process can drag on for years, even a decade or more after the filing of a complete application, while the applicant waits for the various federal and state agency decision making processes to be completed. Together, these provide a very chilling effect on investment.

To conclude, hydropower offers many benefits to society. IT supports the grid and, as I mentioned, literally keeps lights on. It integrates other renewable generation.

It supports clean air for our communities. These values are being eroded and U.S. hydropower has much more to offer, but only if it is given the policy support to unlock its potential.

I thank the subcommittee for allowing me to testify and I

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620 look forward to answering your questions.

621 [The prepared statement of Mr. Devine follows:]

622

623 \*\*\*\*\*INSERT 4\*\*\*\*\*

624 Mr. Upton. Thank you very much.

625 Mr. Slocum, welcome.

STATEMENT OF MR. SLOCUM

Mr. Slocum. Thank you, Chairman Upton, Ranking Member Rush, and the distinguished members of the subcommittee.

As you know, my name is Brian Slocum. I am the vice president of operations for ITC Holdings, Corp., and I appreciate the opportunity to speak before you today.

ITC is the largest independent electricity transmission company in the country and we own and operate electric transmission assets that has a footprint that expands to eight Midwest and Great Plains states.

We have no geographic constraints and we invest in the grid and we do that to improve reliability, to expand access to markets, and lower the cost of delivered energy to our customers.

We also allow for diverse and new generating resources to interconnect to our transmission systems. At the conclusion of today's hearings, I hope to leave the committee with two very clear takeaways -- first, that investment in the transmission grid is needed now, and secondly, the private sector utility industry, which we are a part of, are ready to make these investments if we are provided with the right regulatory and planning environment.

While there have been some efforts made by the Trump administration and Congress to reform the existing regulatory

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650 process for electric transmission, additional reforms in federal  
651 permitting and environmental review processes are needed.

652 We also need to continue to take proactive steps to reform  
653 procedures for planning the transmission system to ensure that  
654 we are examining the full value of the transmission investments.

655 I would like to highlight the growing importance of  
656 transmission infrastructure to our economy. In the earliest  
657 incarnations of the grid, the transmission lines were built for  
658 a single purpose and that was just to move electricity from  
659 generating plants to homes and businesses. It was usually within  
660 a single utility footprint.

661 Things have certainly involved as FERC and individual states  
662 have opened up electricity markets to competition and  
663 transmission lines became more than just a one-way delivery system  
664 for individual utilities.

665 Today, the transmission grid serves as a non-discriminatory  
666 regional platform for connecting consumers to energy markets. As  
667 customer expectations have increased, so too have the drivers for  
668 new investment in transmission infrastructure.

669 Whatever the energy future may bring, let's be clear that  
670 we need a modern transmission system to provide the optionality  
671 to facilitate that future.

672 Moving forward, the story is clear as well. Our economy is  
673 becoming more and more dependent on reliable and affordable access

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674 to electricity and the transmission grid becomes more stressed  
675 as that occurs.

676 Planning the grid to address these demands requires  
677 consideration of many complex factors including potential threats  
678 to the system.

679 We now understand that the redundancy that we planned into  
680 the transmission system -- in other words, the different ways and  
681 pathways that we can connect to consumers -- that offers a pretty  
682 strong protection against adverse events that can impact  
683 generation resources or the transmission system itself.

684 Investing now will ensure the resilience of the grid and the  
685 resource diversity while keeping electricity prices low for  
686 consumers and for businesses.

687 I would like to emphasize that, theoretically, no federal  
688 dollars are needed to strengthen the grid, increase resilience,  
689 and create jobs.

690 The private sector which we are a part of is ready to make  
691 these investments, provided that regulatory and planning  
692 environment is conducive to the investment.

693 We applaud the efforts by Congress to streamline the  
694 permitting process for new infrastructure. Even still today,  
695 permitting for a major transmission line can take nearly a decade  
696 to secure a range of federal, state, and local permits.

697 In order to ensure that the NEPA process can be completed

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in a reasonable amount of time while maintaining the strong commitment that we have to environmental stewardship that we all share this commitment, then Congress could consider a number of options including requiring concurrent NEPA analysis and environmental reviews by all the permitting agencies involved, requiring those agencies to use the information that's already contained in the lead agency's NEPA document as the basis for their reviews, and then, finally, setting some firm deadlines for the NEPA process.

To make the necessary investments in transmission infrastructure that we are ready to do, we need a supportive regulatory environment and to use the latest and most comprehensive methodologies to plan and approve new transmission lines.

Planning the grid proactively requires that benefits of a potential investment be viewed more comprehensively by integrating a range of project benefits and planning drivers into criteria for approving projects.

Finally, we need also to support the construction of new transmission lines that connect RTOs and ISOs in various regions which, as of today, are still highly separated.

More interregional connections will increase system flexibility and resilience against potential threats while still allowing regional flexibility and approaches to joint planning.

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722           Thank you again for the opportunity to testify before the  
723 committee and I look forward to answering any questions you might  
724 have.

725           [The prepared statement of Mr. Slocum follows:]

726

727           \*\*\*\*\*INSERT 5\*\*\*\*\*

728 Mr. Upton. Thank you very much.

729 Mr. Ross.

STATEMENT OF MR. ROSS

Mr. Ross. Thank you.

Chairman Upton, Ranking Member Rush, and the members of the committee, on behalf of our president, Lonnie Stephenson, thank you for inviting me here today to participate in this important discussion.

Energy generation and power distribution is an \$800 billion a year business. With 775,000 active members and retirees, the International Brotherhood of Electrical Workers -- the IBEW -- represents approximately 400,000 workers employed in generation, transmission, distribution, construction, and rail jobs all in some way related to the electrical grid.

The IBEW supports a diverse balance and resilient energy portfolio that includes renewables like wind, solar, and hydro while preserving key base load energy's sources like natural gas, coal, nuclear power.

These base load power sources are extremely important to the United States security and vital to future planning. The need to upgrade is getting its rightful attention these days.

But left out of the recent conversation is that the United States has not made meaningful upgrades to its energy infrastructure since the 1970s.

Unfortunately, our current electric distribution system,

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754 which functions on a regional or localized basis, is outdated and  
755 inefficient and the permitting and approval process for  
756 large-scale transmission projects is more than burdensome. It's  
757 an outright barrier to construction.

758         The large-scale solar installation in the desert of  
759 California, a massive new hydro power generation project in  
760 eastern Canada, and a wind farm in the plains -- these are major  
761 renewable energy development projects the members of the IBEW have  
762 been proud to help construct in recent years.

763         But these generation projects of the future are only as good  
764 as the transmission network they will rely on. Their value is  
765 diminished if there is no infrastructure to take power from the  
766 source to the demand for electricity.

767         New investment in the transmission network is a necessary  
768 component of these renewable energy projects and the good news  
769 is that plans exist and, in some cases, are years into the  
770 necessary permitting and approval stages.

771         In fact, approximately \$140 billion in private capital is  
772 awaiting permit approvals for aging transmission system overhauls  
773 and development of new clean lines to move more renewable sources  
774 to market.

775         One important method of financing infrastructure projects  
776 is through bonds and regulatory decisions can dramatically impact  
777 the bond market.

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778 Congress can also play a key role in project financing by  
779 expanding access to private activity bonds. Your support for  
780 legislation that encourages market predictability and stability  
781 will foster job creation.

782 It is also important to support legislation that would  
783 streamline permitting and siting processes. There are plenty of  
784 energy infrastructure projects across the United States that have  
785 been involved in the permitting process for years.

786 An example of a project pending approval is the 192-mile  
787 Northern Pass project which will build high-voltage transmission  
788 lines through New Hampshire, carrying clean hydropower from  
789 Canada to New England.

790 It would create 2,600 jobs during peak construction and many  
791 of these would be skilled IBEW construction linemen. Recent  
792 storms and frigid temperatures have challenged the ability to the  
793 region to meet demand for heating and electric generation.

794 As a result, wholesale gas prices spiked more than 10 times  
795 the 2017 average price and oil-fueled turbines were employed,  
796 triggering a release of greenhouse gases and pollutants into the  
797 atmosphere.

798 Northern Pass will relieve the massive imbalance of supply  
799 and demand in New England and introduce necessary renewable  
800 diversity into its energy portfolio.

801 Another 750-mile high-voltage clean line project will

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802 deliver 4,000 megawatts of wind-generated power to major load  
803 centers in the Midwest and the East Coast, enough to power 720,000  
804 homes.

805 Both of these projects bring economic and job growth,  
806 preserve local communities, and grow the tax base. A regulatory  
807 resistance from state and local jurisdictions has effectively  
808 stopped them before they could get off the ground.

809 For this reason, we need to empower federal authorities to  
810 approve large-scale projects of national importance that cross  
811 state lines and local government jurisdictions.

812 With all due respect to local authorities, we need a new  
813 approach that trims unnecessary red tape and streamlines the rules  
814 created by numerous regulatory authorities.

815 Additionally, the federal government should take  
816 responsibility for right sizing by incentivizing development of  
817 capacity in excess of current market demands.

818 Accounting for future demand avoids the possibility of under  
819 building and encourages future development renewable electricity  
820 sources because there will be a market case to make to investors,  
821 providing that they can move their generation to major markets.

822 Lastly, we are encouraged by recent one-agency one-decision  
823 proposals which will reduce the time line for federal  
824 environmental reviews and permitting processes.

825 We do not support efforts to diminish current environmental

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826 protections. We simply need an efficient process. We cannot  
827 afford to continue postponing the necessary upgrades.

828 The United States lags behind China and Brazil, Germany, and  
829 many other countries in transmission infrastructure investment.

830 With the federal government taking a decision making lead,  
831 market predictability will improve as well as the IBEW's ability  
832 to plan for training the next generation of construction linemen.

833 It takes three years to train a journeyman lineman to perform  
834 transmission line construction and maintenance, and we anticipate  
835 the need for approximately 50,000 new power linemen over the next  
836 10 years.

837 While projects are held up, we are losing valuable training  
838 time. By the way, our privately-operated apprenticeship  
839 training programs invest approximately \$200 million annually to  
840 equip students with the skills the markets demand.

841 For more than 70 years, the IBEW and our employer partners,  
842 the National Electrical Contractors Association, have been the  
843 largest private sector trainer of electrical workers in the  
844 nation.

845 Together, the IBEW and NECA operate hundreds of training  
846 centers in communities across the country. Our training programs  
847 guarantee a steady stream of skilled electrical workers necessary  
848 for the important work of modernizing and expanding our grid.

849 We ask for your leadership on making our modern electrical

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850 grid a reality. We remain a ready partner with our employers and  
851 elected officials from both sides of the aisle.

852 Thank you for the opportunity to testify here before you  
853 today.

854 [The prepared statement of Mr. Ross follows:]

855

856 \*\*\*\*\*INSERT 6\*\*\*\*\*

857 Mr. Upton. Thank you.

858 Dr. Chen.

STATEMENT OF MS. CHEN

Ms. Chen. Good morning, Chairman Upton, Ranking Member Rush, and members of the committee.

Thank you for the opportunity to testify. I am Jennifer Chen, an attorney with the NRDC. I am also a board member with the Americans for a Clean Energy Grid, a coalition including transmission owners and developers. We are jointly working to achieve a modern, efficient, and clean consumer-friendly transmission grid.

NRDC supports a range of infrastructure modernization projects that deliver economic, social, and environmental benefits.

We support programs promoting energy efficiency and distributed energy resources, and we need to ensure that transmission planning counts for them to avoid over building.

Today, I will focus my comments on the main barrier to transmission infrastructure improvements most needed to modernize the electric grid -- a severely fragmented transmission planning process and how we can overcome that barrier.

But first, I want to emphasize that environmental laws are not driving a delay in modernizing our grid and President Trump's infrastructure plan that would severely undermine these protections is not the solution.

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883 As DOE noted in its quadrennial energy review on energy  
884 infrastructure, the environmental review and permitting  
885 requirements are accomplished effectively and efficiently. This  
886 is due in large part to progress made by Congress in the Energy  
887 Policy Act of 2005 as well as by the last two administrations.

888 NEPA is only triggered if there is a federal nexus like when  
889 a project receives federal funding. NEPA and federal permitting  
890 requirements are important components for smart from the start  
891 planning.

892 They disclose a project's impact to the public and provide  
893 opportunities for input including alternate solutions. Early  
894 robust public engagement is also key through reducing conflicts  
895 and mitigating impacts.

896 Such input has resulted in better outcomes and stakeholder  
897 engagement helps avoid protracted legal battles, bad publicity,  
898 and protests.

899 On the other hand, President Trump's plan to short circuit  
900 environmental projections and public processes would be  
901 counterproductive because experience has shown that insufficient  
902 public engagement breeds local opposition that can delay  
903 projects.

904 It's far better to fix the disjointed planning process we  
905 can all agree is a barrier to something a wide range of  
906 stakeholders wants. We want our nation's transmission backbone

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to be able to deliver clean low-cost electricity from the windy heartland and sunny states to more densely populated regions.

Importantly, that kind of grid modernization effort will create jobs, improve the efficiency of our electricity markets, promotes emissions-free electrification of our economy that is key to addressing climate change, and produce billions of dollars in benefits to electricity consumers.

The problem is our transmission planning process is too small scale to produce a robust transmission backbone needed to accomplish these goals.

Currently, interregional transmission planning proposals are dying on the vine, if proposed at all, far in advance of the environmental review stage. This is largely due to mismatched planning between neighboring regions.

Smaller regional projects, on the other hand, have seen more success. FERC tried to facilitate interregional project development by requiring neighboring grid planners to coordinate with each other.

But that's not the same as requiring them to jointly plan for transmission because neighboring regions use different methods in their planning. Asking them to simply coordinate is not -- has not facilitated these interregional projects.

FERC sought public input in June of 2016 to revisit this issue but it has not acted on it since. Interregional planning --

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931 interregional transmission planning, not just coordination  
932 between regions, must be FERC's next priority.

933 As a next step, Congress could encourage FERC to use existing  
934 authority to implement a rule on interregional transmission  
935 planning and to truly modernize the grid, Congress could encourage  
936 FERC to require planning that anticipates the impact of public  
937 policies and the falling costs of wind and solar power.

938 FERC should also require planning that accounts for  
939 technologies that facilitate environmentally responsible siting,  
940 reduces energy loss along the wires, and maximizes the use of  
941 existing transmission lines and other infrastructure.

942 Infrastructure is long lived and expensive, but it's an  
943 investment and it's important to get it right. And to do so, it's  
944 critical to take steps now to improve the planning process.

945 President Trump's plan to circumvent environmental  
946 protections would encourage rushing to solve the wrong problem.

947 Thank you, and I look forward to answering your questions.

948 [The prepared statement of Ms. Chen follows:]

949

950 \*\*\*\*\*INSERT 7\*\*\*\*\*



951 Mr. Upton. Thank you.

952 Dr. Hellyer.

STATEMENT OF MS. HELLYER

Ms. Hellyer. Good morning, Chairman Upton, Ranking Member Rush, and Vice Chair Olson and members of the subcommittee.

My name is Dr. Brenda Hellyer and I am chancellor of San Jacinto College, and I am pleased to testify this morning on the role that community colleges and San Jacinto College specifically can play in contributing to the nation's energy infrastructure and developing the workforce and the talent pipeline that's necessary to support that infrastructure.

San Jacinto College is located in East Harris County, the Gulf Coast region of Texas, and serves approximately 45,000 credit and non-credit students each year.

Last year, the college was recognized as an Aspen Rising Star Award, representing as one of the top five community colleges in the country for community college excellence.

We are located in the heart of an energy industry. Our service area incorporates the Houston Ship Channel, home to the nation's largest petrochemical complex, and we also support the NASA Johnson Space Center, Ellington Airport, and the Port of Houston, which is ranked number one in U.S. ports for foreign tonnage.

In my written testimony, I outline some of the workforce challenges in the Houston region. Briefly, Houston's skills gap

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has reached critical proportions among the middle skilled jobs -- those that require more education and training than a high school diploma but less than a four-year degree.

Of the 3.6 million jobs in Houston, 1.4 million, or approximately 40 percent, are middle skills jobs. The best way to address this need is through collaboration and partnership.

We have taken a national state and regional approach. No one entity or group can fix this challenge alone. From a regional standpoint, we engage area economic development corporations, our school districts, our universities, and our industries to build the pipeline for future workers.

We are at the table together, addressing this issue from multiple angles. San Jacinto College -- I am going to give you some examples of that -- San Jacinto College invites 6,000 sixth graders each year to gain hands-on experience in STEM experiments. This is through an event called Mind Trekkers. It's supported and it's sponsored by industry partners.

We offer summer camps to kick-start students so they understand the jobs that are available in STEM, petrochemical, and maritime.

We also have a speakers' bureau that's a grassroots effort -- community colleges, our economic development group, and our industry partners going in to our high schools and our eighth graders talking about the careers and the jobs in our area. Last

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1001 year, 12,000 students and their parents were contacted and spoken  
1002 with about these jobs.

1003 We partner with industry to understand the types of employees  
1004 they need, the skill sets required, and we adjust our curriculum  
1005 to meet those needs.

1006 To that end, we are building 145,000 square foot center for  
1007 petrochemical energy and technology. This facility is being  
1008 built based on the input from industry. It's for industry by  
1009 industry and it's funded from taxpayer dollars and also private  
1010 donations.

1011 More than a dozen industry leaders serve on a petrochem  
1012 advisory council working directly with me to guide the project.  
1013 This facility will house an exterior glycol unit. It'll have  
1014 programs in process technology, instrumentation, electrical,  
1015 non-destructive testing, the craft trades, and it'll also build  
1016 on our construction management program.

1017 All of the programs will emphasize and build on a safety  
1018 culture. The program will replicate a day in the life of plant  
1019 operators and technicians. The programs are designed not only  
1020 for the new worker coming into the field but also to upgrade the  
1021 skills of the incumbent worker.

1022 Our partnership in providing a skilled energy workforce is  
1023 enhanced through our work with you, the federal government. We  
1024 understand that a well-educated technically trained energy

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1025 workforce is essential to advancing the president's America First  
1026 energy plan and growing the nation's energy infrastructure.

1027 To that end, community colleges have been working on the  
1028 development of new legislation for energy workforce training  
1029 Centers of Excellence. Two bills have passed and we encourage  
1030 the enactment on funding of this type of legislation.

1031 We also encourage Congress to continue investing in  
1032 America's labor force through grants with the Departments of  
1033 Labor, Education, and Energy.

1034 San Jacinto College is working with the federal government  
1035 to provide workforce training programs through the Ready to Act  
1036 workforce grant, the Carl Perkins Grant, the Trade Adjustment Act.

1037 All of these are designed around building that workforce and  
1038 they're critical to the citizens of my region but they're also  
1039 critical to the 1,100 community colleges throughout the country  
1040 that provide the critical workforce training.

1041 While this committee doesn't oversee Pell, I would be remiss  
1042 if I didn't mention the impact of Pell and how that really can  
1043 define how we are going to continue to feed the workforce and make  
1044 sure that we build that workforce.

1045 There's 2.7 million community college students using the  
1046 Pell system, which is building our workforce.

1047 In conclusion, San Jacinto is working collaboratively in the  
1048 Gulf Coast region to increase the number of students looking to

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1049 go into these careers and workforce training, STEM, and the fields  
1050 that really build this infrastructure.

1051           These programs improve the lives across our region. In the  
1052 Gulf Coast region we are actually driving the economy of the nation  
1053 also.

1054           And so I can tell you from San Jacinto's perspective this  
1055 program, how we really are going to help support the  
1056 infrastructure is critical. But it's also critical that we have  
1057 the support for all community colleges.

1058           Thank you.

1059           [The prepared statement of Ms. Hellyer follows:]

1060

1061 \*\*\*\*\*INSERT 8\*\*\*\*\*

1062 Mr. Upton. Thank you all for your testimony. And this  
1063 point, we'll move to questions from our subcommittee.

1064 Mr. Devine, I appreciate you being here for sure and from  
1065 my perspective I want you to keep your job. I believe in an  
1066 all-of-the-above strategy.

1067 Renewables are a big part of that. In Michigan, we've got  
1068 a minimum mandate. Hydro is part of that. Not as much in  
1069 Michigan as it is particularly in the Northwest, but we -- as you  
1070 may know, we have passed with a number of Democrats a hydropower  
1071 licensing bill that moved through this committee and has passed  
1072 in the House now and is waiting for action in the Senate.

1073 You talked about the -- a number of hydropower facilities  
1074 that are more than 50 years old. We need to add capacity. This  
1075 is a renewable piece that most of -- most Americans would like  
1076 but with, obviously, no carbon emissions, basically, from that  
1077 source of power.

1078 If our legislation became law, went to the president's desk,  
1079 how would this help the hydropower industry in terms of dollars  
1080 invested in kilowatts generated?

1081 Mr. Devine. Well, Chairman Upton, I think that improving  
1082 the time lines involved in the licensing process will reduce some  
1083 of the perception of the risk in the process.

1084 Risk is anathema to investment. So I think those -- that  
1085 aligns very well with increasing investment in hydro power.

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1086 There's many opportunities for upgrades and improvements and  
1087 increasing energy at existing hydro power facilities and at  
1088 non-power dams, and I think it's viewed as from the -- these have  
1089 to be financed and the financing is susceptible to a risk and  
1090 reward effects.

1091 So the proposals that increase the efficiency of the process  
1092 and will help in terms of the -- improving the overall investment  
1093 opportunity.

1094 Mr. Upton. So I am one that believes that there ought to  
1095 be an energy title within the infrastructure bill that, hopefully,  
1096 moves through the Congress this year.

1097 Dr. Hellyer, I had -- as you know, the president had many  
1098 of the nation's governors here for the last couple days. A whole  
1099 number of different issues were discussed. One of them was  
1100 infrastructure.

1101 I had the opportunity last night to have dinner with my  
1102 Michigan governor, Rick Snyder. He told me -- he said, "You know,  
1103 if there's one thing you can really do to help create jobs and  
1104 move on infrastructure is to expand Pell to make sure that it's  
1105 involved in community colleges and job training."

1106 In my district, we've got two nuclear plants. We've got a  
1107 new LNG plant that they're almost ready to break ground on, which  
1108 will, as I am told, double the tax base for that particular  
1109 community. It's a couple years away from being complete but

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1110 they're ready to break ground, I believe, this spring.

1111       As I meet with my IBEW folks, they have a very active group  
1112 in Michiana, as we say -- Indiana and Michigan. I've been to a  
1113 number of their events over the years and they are very proud,  
1114 rightly so, of the work that they do creating the jobs, the  
1115 internships.

1116       I am fascinated with your -- with what's happened in Houston  
1117 and the leading role that you play because I do believe that that  
1118 skills gap and worker training out of be part, again, perhaps,  
1119 of an infrastructure bill creating the jobs that we want, knowing  
1120 that we are going to improve the infrastructure across the  
1121 country.

1122       How do you both see perhaps an expanded role as it relates  
1123 to worker training, working through our community colleges which,  
1124 again, in my view, is so important?

1125       Maybe Mr. Ross, start with you and come back to Dr. Hellyer.

1126       Mr. Ross. I mean, I reference to -- I mean, we are always  
1127 looking for skilled craftsmen or top-rated individuals that come  
1128 out of the community colleges because we love getting those  
1129 individuals directly out of the community college because that  
1130 makes our job easier -- transition them right into our  
1131 apprenticeship program.

1132       I mean, at least for linemen it's a three-year program --  
1133 our inside program for a journeyman wireman like myself is a

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1134 five-year program. So any advanced training they get it gives  
1135 them a leg up on someone trying to apply for our program and get  
1136 in our program.

1137 So we are always -- we work directly with community colleges.  
1138 I know where I am from, from West Virginia, we work directly with  
1139 our community colleges there to get those individuals.

1140 I would go out and visit those community colleges encourage  
1141 them to take an application for our program. So we work -- I mean,  
1142 I know throughout the country IBEW always works with the community  
1143 colleges.

1144 Mr. Upton. And Dr. Hellyer, I would just say we've got a  
1145 great -- we've got a lot of good -- really great community colleges  
1146 in my district.

1147 One of them is Kalamazoo Valley -- KVCC. They actually have  
1148 a wind turbine school training folks and they have jobs right away  
1149 as the graduate.

1150 Ms. Hellyer. So there's a couple of things I think could  
1151 be done. Right now, they're -- the Higher Education  
1152 Reauthorization Act is being looked at.

1153 There's some talks about making it where Pell can be used  
1154 for short-term programs. For us, that could be very helpful,  
1155 especially with programs like commercial truck driving that don't  
1156 qualify right now.

1157 As far as working with IBEW, apprenticeship, programs, we

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1158 do that quite often. I was in Austin yesterday for a meeting  
1159 around a new program in trying to take high school students and  
1160 move them into apprenticeship and going into licensing for  
1161 plumbing, electrical, and one of the comments came up how do they  
1162 use their Pell dollars for that.

1163 So I think there needs to be some more flexibility built into  
1164 the program and because some of these programs are going to take  
1165 longer than what you have Pell dollars available and so how do  
1166 you leverage that.

1167 So you need short-term but then you also need some of the  
1168 long term where students are going out and working and then coming  
1169 back.

1170 Mr. Upton. I know Virginia Foxx would like me to say that  
1171 that looks like additional jurisdiction for this committee.

1172 With that, I yield to the ranking member of the subcommittee,  
1173 Mr. Rush.

1174 Mr. Rush. I want to thank you, Mr. Chairman.

1175 Mr. Ross, I really want to commend the IBEW Local 134 in my  
1176 city and my state. They're doing a remarkable job rebuilding the  
1177 -- in terms of a grammar school -- a closed grammar school and  
1178 they're turning that into a union hall -- really, really nice --  
1179 right next to another of our vocational high schools.

1180 And so they're in the forefront of really taking CTE students  
1181 and giving them skills and training and I really want to commend

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1182 your union for that. I mean, they're wonderful people.

1183 Dr. Hellyer, the city of Houston has a number of  
1184 comprehensive workforce development strategies that includes  
1185 training and in K to 12 levels, community college levels,  
1186 university, and vocational educational levels. This decision  
1187 allows candidates to be trained and developed throughout all  
1188 stages of the educational spectrum.

1189 My workforce development bill attempts to run this model to  
1190 a national level and is aimed at training minorities, women,  
1191 veterans, and unemployed energy workers for good-paying jobs and  
1192 careers.

1193 And then I want to ask -- first of all, I want to commend  
1194 you on your leadership in San Jacinto College and I hope that you  
1195 will work with my office to help make my bill a reality as part  
1196 of a broader infrastructure package.

1197 I think that you have shown tremendous insight into the needs  
1198 of our nation by what you're doing at San Jacinto and I also want  
1199 to commend you. I think that your leadership is surely and truly  
1200 inspirational, notwithstanding the comments of my friend Chairman  
1201 Upton's subcommittee.

1202 Mayor McCarthy, you are on the forefront on trying to  
1203 reconcile the needs and priorities of your constituents with the  
1204 budgetary restraints so many of our states and cities are facing.

1205 What are your thoughts on the administration's proposal

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1206 asking states and local municipalities to cover 80 percent of new  
1207 funding for infrastructure projects?

1208 Is this realistic, in your view? Are you concerned with the  
1209 federal government's attempt to shirk its responsibility of  
1210 investing in a serious and meaningful way in our nation's aging  
1211 energy infrastructure?

1212 Mr. McCarthy. Thank you, sir.

1213 I approach it that the 80/20 funding formula that's proposed  
1214 is really over simplistic. There are, again, many components  
1215 that could be financed within the revenue streams that exist  
1216 today.

1217 But some of the emerging technologies are new. You have to  
1218 do the proof of concept. They're going to happen. They're  
1219 happening in other countries. You're seeing things in South  
1220 Korea.

1221 You're seeing things in the Mideast where they're developing  
1222 and deploying technologies faster than we are doing here in the  
1223 United States.

1224 And so how do you build that resiliency into the grid and  
1225 at the same time create a platform that really positions not only  
1226 our communities but the country as a whole to take advantage of  
1227 it and go forward so that you're creating jobs, you're creating  
1228 economic opportunities, and you're improving just the quality of  
1229 life and, hopefully, in your deliberations that you will look at

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1230 those formulas and create the regulatory environment that allows  
1231 things that are self-financing to go forward but at the same time  
1232 look at those things that are new and emerging that we need  
1233 assistance and are going to need some subsidy or large amount of  
1234 financing from the federal government to ensure that they're  
1235 developed, deployed, and continue to allow this country to lead  
1236 in a global environment.

1237         Mr. Rush. My second question to you, Mayor, is the  
1238 administration -- under this administration the agencies that had  
1239 been previously preparing plans to increase resilience to  
1240 climatic events for access under their purview are now forbidden  
1241 from even uttering the phrase "climate change," much less  
1242 preparing for its consequences and its symptoms.

1243         Do you see the need for significant federal investment in  
1244 local energy assurance plans to advance resiliency efforts  
1245 including proposals to combat climatic events? Do you --

1246         Mr. McCarthy. I am sorry. Directed to me again?

1247         Mr. Rush. Yes, sir.

1248         Mr. McCarthy. Climate change is happening. There's debate  
1249 in terms of what's causing that but it's happening. And so we  
1250 have to take that into account in terms of public policy and how  
1251 do you look to reduce greenhouse gases.

1252         Most of the scenarios that are out there also allow for cost  
1253 savings, improved efficiencies, and job creation when you do the

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1254 reduction in greenhouse gases so that you're improving the  
1255 environment at the same time creating opportunities for some of  
1256 these emerging technologies and emerging skill sets where we have  
1257 to have a work force -- and some of the other panellists have talked  
1258 about -- that are able to provide these skill sets that we need  
1259 for products -- services that people demand.

1260 Mr. Rush. I yield back, Mr. Chairman.

1261 Mr. Olson. [Presiding.] The gentleman's time has expired.  
1262 The chair now calls upon the chairman of the full committee from  
1263 the Beaver State, Mr. Walden, for five minutes.

1264 The Chairman. I thank the gentleman. As an Oregon Duck,  
1265 I don't always refer to it as the Beaver State, although that is  
1266 our mascot.

1267 [Laughter.]

1268 So, Mr. Ross, thank you for being here. To all of our  
1269 panellists, again, thank you for your testimony on this very  
1270 important set of issues.

1271 I know I've worked closely with IBEW out in Oregon -- Local  
1272 48 and 659, I think -- and toured the apprentice operation there.  
1273 It's very impressive.

1274 Where's the gap? What do we need to be doing? I know we  
1275 don't directly have that jurisdiction but this is important  
1276 because we can help streamline projects without diminishing the  
1277 environmental piece of this.

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1278           We can, you know, do a lot of work here to get pipelines and  
1279 power lines and broadband going. But if we don't have the skilled  
1280 workforce necessary to do the work, we got a problem.

1281           So can you talk about your apprenticeship programs and where  
1282 you're at and what we need to be thinking about?

1283           Mr. Ross. Well, we need a lot more, quite frankly. I mean,  
1284 we are doing our level best to try to attract individuals into  
1285 our programs. I mean, for our outside program we have  
1286 approximately 4,600 registered apprentices for the line side and  
1287 around 32,000 for our inside program and we certainly could use  
1288 a lot more.

1289           But what you run into, we are unique in construction and most  
1290 people is familiar -- we work ourselves out of a job. So we are  
1291 always looking for the next one.

1292           So good steady work forecasts certainly helps our  
1293 apprenticeship programs, certainly attract individuals into our  
1294 programs but also keeps them working. So it's hard for a local  
1295 union to accept a bunch of apprentices if they don't have a place  
1296 for them to work.

1297           The Chairman. Right. Right.

1298           Mr. Ross. So that's our dilemma. It's kind of a catch-22.  
1299 So we are always looking at the next job, and we certainly went  
1300 through a major recession in 2007 and '08.

1301           The Chairman. Yes, sir.

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1302 Mr. Ross. We would call it depression for our industry.

1303 The Chairman. I would, too.

1304 Mr. Ross. I mean, we had tremendous unemployment. Most of  
1305 the locals weren't taking apprentices in because they couldn't  
1306 keep them working.

1307 So we are trying to get caught up because we are in an economic  
1308 boom for construction right. We are having some skills shortage.  
1309 That's why we are working with community colleges and different  
1310 groups trying to get those individuals help.

1311 The Chairman. Yes. I know in the town of my birth, The  
1312 Dalles, there's Columbia Gorge Community College, actually, in  
1313 both Hood River and The Dalles and they had -- they started a wind  
1314 program -- wind energy program a long time ago, teaching safety  
1315 and some of the electrical skills as well.

1316 I would like to touch on too when I did a series of town halls  
1317 last spring we got some development underway or proposed in Oregon  
1318 and some who tried to block this sort of development ridicule these  
1319 jobs as temporary jobs.

1320 I heard it a lot at the meeting, and it kind of perplexed  
1321 me because while my wife and I have never constructed our own  
1322 house, I think if we ever did when the carpenters were done I  
1323 wouldn't want them to, like, move into one of the bedrooms.

1324 I would want them to move on to the next house. But this  
1325 is an argument and it's an argument on the left, and I heard it

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1326 a lot. Can you speak to those temporary jobs and are they not  
1327 worthy? That's a rhetorical question.

1328 Mr. Ross. It is rhetorical, yes. Like I said, we are always  
1329 looking for the next project no matter how short. I mean, there's  
1330 been times -- I mean, I am an electrician by trade, okay.

1331 I just happen to be working in Washington, D.C. now. But,  
1332 I mean, I've taken projects that was only supposed to last three  
1333 weeks and be there two and a half years.

1334 So I think it's a pretty sad state of affairs, because all  
1335 our -- all our jobs are temporary in construction. Quite frankly,  
1336 if you didn't work yourself out of a job you wouldn't get the next  
1337 job --

1338 The Chairman. That's right.

1339 Mr. Ross. -- because the idea is to get the job done on  
1340 time and on budget. So --

1341 The Chairman. As you know, we are spending a lot of time  
1342 here trying to streamline the permitting process. Again, we get  
1343 criticized that somehow we are diminishing the environmental  
1344 nature of it. But that's not what we are up to.

1345 I have a tiny little community in central Oregon that I think  
1346 spent years trying to get four power poles on BLM land -- Bureau  
1347 of Land Management land -- to go through the permitting process,  
1348 and I know others say, "Oh, it never slows you down." It does.

1349 Half of my district -- more than that -- is federal land.

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1350 So we encounter this everywhere we go, and it took them three or  
1351 four years to get these four power poles sited so that they could  
1352 get three-phase power into Mitchell, Oregon for the first time.

1353 Do you run into -- these permitting delays?

1354 Mr. Ross. Well, I kind of addressed that in my testimony.  
1355 But yes, we will run into those issues all the time.

1356 Unfortunately, some of these projects would put a lot of people  
1357 to work.

1358 Most of them have been through the siting permitting process  
1359 and are just sitting there basically to get done but being held  
1360 up through someone on the other side doesn't want -- I mean, I  
1361 get where people don't want a power line in their back yard. I  
1362 get that.

1363 The Chairman. Sure.

1364 Mr. Ross. But in some cases --

1365 The Chairman. They do want the power to come on when the  
1366 switch is thrown, though.

1367 Mr. Ross. Exactly. I mean, the same case -- when people's  
1368 lights go out they want their power back on. They don't really  
1369 care what they look like.

1370 The Chairman. Well, I thank you and I thank all our  
1371 witnesses for your input.

1372 And Mr. Chairman, I yield back.

1373 Mr. Olson. Gentleman's time has expired.

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1374           The chair now calls upon the gentleman from the thirteenth  
1375 largest city in California -- Stockton, California -- Mr.  
1376 McNerney, five minutes, sir.

1377           Mr. McNerney. Well, thank you for that little statistic,  
1378 Mr. Chairman, and I thank the panel for coming and testifying this  
1379 morning.

1380           The U.S. clearly needs to modernize our electrical  
1381 infrastructure. The technology exists today to do that. We can  
1382 make our grid resilient and responsive.

1383           We can meet consumer demands that are changing by the day.  
1384 We can meet the demands of intermittent resources, physical and  
1385 cyber-attacks, and the changing weather patterns that are brought  
1386 on by climate change that have brought down grid in Puerto Rico,  
1387 in Texas, in New York, New Jersey, and in California.

1388           So we have the resources -- the capabilities to do that and,  
1389 fortunately, my good friend, Bob Latta, and I have formed a Grid  
1390 Innovation Caucus to make people aware of what's available and  
1391 the need to move forward on that. So I just wanted to make that  
1392 clear.

1393           Mr. Devine, I worked on the Hydropower Modernization Act and  
1394 one of the things that struck me was definitely how long it took  
1395 to get permits, how expensive it was to get permits.

1396           Could you say a little bit about how much hydropower we could  
1397 expect if that was improved?

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1398 Mr. Devine. I would hate to guess in terms of the total  
1399 amount of capacity involved but it's thousands of megawatts.  
1400 It's very significant.

1401 It's -- as I mentioned to Chairman Upton, the view of the  
1402 risk in the amount of time it takes to improve even somewhat  
1403 straightforward projects is very difficult for investors to  
1404 accept.

1405 So I think there is considerable amount of available upgrade  
1406 potential and power to be added to existing dams that have no power  
1407 and I think it's in -- I think in my testimony I reported this  
1408 as well -- in the thousands of megawatts.

1409 I am working on a project right now where we have an upgrade  
1410 potential of something on the order of -- an existing -- an  
1411 existing station -- something on the order of 20 or 30 megawatts.

1412 Now, that may not seem large but that's just one station in  
1413 location. That's a significant amount. We are now in our  
1414 seventh or eighth year of licensing. It's not the only issue,  
1415 of course, but this is -- the licensing process can hold up these  
1416 upgrades and these improvements for a considerable amount of time.

1417 It's very difficult for the investors to wait that long in  
1418 order to realize a return on that.

1419 Mr. McNerney. Thank you.

1420 Mr. Ross, you mentioned private activity bonds. Could you  
1421 expand on that a little bit? I've done some legislative work on

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1422 that. How important would that be in terms of municipal bonds  
1423 and other tools?

1424 Mr. Ross. I am going to have to take a pass on that one and  
1425 get our political department or someone get you an answer to that,  
1426 okay?

1427 Mr. McNerney. Dr. Chen, you mentioned pretty pointedly that  
1428 we would require regions to coordinate transmission planning.

1429 Could you go into that a little bit? I mean, how would that  
1430 -- how would that work? How would that speed up our process? How  
1431 would it make it more easy to put in transmission?

1432 Ms. Chen. All right. So there are two parts to that and  
1433 I appreciate that question.

1434 So first, in the transmission planning process, the  
1435 different regions -- the different ISOs and RTOs plan separately  
1436 and they're required to coordinate by FERC for interregional  
1437 projects.

1438 But, unfortunately, that's not really producing any  
1439 projects. So what we really need to see is a full joint  
1440 interregional planning process.

1441 FERC can use its existing authority to extend order number  
1442 1000 to require this and Congress could write letters to FERC,  
1443 hold a hearing for FERC to ask how they can move forward in that  
1444 process.

1445 Separately, in terms of siting, especially some of these long

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1446 lines, coordinating between state and federal processes as well  
1447 as locals and other stakeholders -- landowners -- would be greatly  
1448 helpful.

1449 We've seen great success and, for example, in the Department  
1450 of Energy and Department of Interior working together with the  
1451 state of California to site 9 megawatts of solar in just nine  
1452 months by coordinating together, doing as much of the  
1453 environmental review concurrently and jointly, and that sped  
1454 things up a lot.

1455 There is a great example about a Midwestern project,  
1456 CapX2020, that I can go into further. But that also highlighted  
1457 -- a University of Minnesota report highlighted a lot of successes  
1458 that arose out of the coordination there as well.

1459 Mr. McNerney. Very briefly, does anyone have anything to  
1460 say about ARPA-E? Would that -- the elimination of ARPA-E, is  
1461 that going to set us back in terms of our electrical infrastructure  
1462 development? Anybody on the panel.

1463 Mr. Devine. In terms of the, Congressman McNerney, the  
1464 renewable portfolio standards that you're referring to?

1465 Mr. McNerney. No, ARPA -- that's the advanced renewable  
1466 energy or advanced energy research based on DARPA.

1467 Ms. Chen. Very briefly -- I am sorry -- very briefly, I think  
1468 that would set us back.

1469 Mr. Olson. The gentleman's time has expired. The chair now

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1470 calls upon the gentleman who was the former chairman of the full  
1471 committee, the current vice chairman of the full committee and  
1472 a proud Texas Aggie, Mr. Barton.

1473 Mr. Barton. Well, we thank you, Mr. Chairman. Thank you  
1474 for that introduction.

1475 This is a difficult hearing for me to kind of get my arms  
1476 around because we are trying to put a government spin, apparently,  
1477 on private sector investment in infrastructure.

1478 I do believe there's a legitimate public interest certainly  
1479 in the permitting and licensing part of these big infrastructure  
1480 projects. We certainly need to protect our environment.

1481 And I think you could argue that if you look at public sector  
1482 infrastructure -- highways, bridges, ports -- compare it to  
1483 private sector infrastructure -- pipelines, refineries,  
1484 transmission lines -- the private sector has done a better job.

1485 We seem to be more up to date in our private sector  
1486 infrastructure than our public sector infrastructure. So, you  
1487 know, I think while it's important to look at permitting reforms  
1488 and things like that, if it's not broke don't fix it.

1489 I guess one question I have to the mayor of Schenectady --  
1490 it's always good to have local officials here -- you're closer  
1491 to the problems.

1492 There's been an ongoing problem for decades in the Midwest  
1493 and the Northeast. When you need power, electricity, natural gas

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1494 it's hard to get the permits for the transmission lines or the  
1495 pipelines to get that power or that product to your part of the  
1496 country.

1497 Do you have the solution on how to balance the legitimate  
1498 needs of the state and local government against the public good  
1499 and interstate commerce of getting the product from point A to  
1500 point B if it cross state lines?

1501 Mr. McCarthy. I don't, Congressman.

1502 Mr. Barton. That's an honest answer.

1503 [Laughter.]

1504 Mr. McCarthy. Even though I think the opportunity is out  
1505 there, as you see some of the emerging technologies where you had,  
1506 you know, centralized points of generation and the distribution  
1507 network was, clearly, in one direction that is changing.

1508 So where you have solar and wind that are being added to it  
1509 that can provide supplemental points of generation and the ability  
1510 to balance the load so that you don't get the peak demand anymore,  
1511 those will take some of the pressure off the need to have the  
1512 central points of generation at the same time will hopefully be  
1513 able to allow it to be done in a cost-effective manner for the  
1514 consumers who will take advantage of some of the newer concepts  
1515 and products that are out there.

1516 Mr. Barton. That's actually a very good answer. If you  
1517 eliminate the need to cross the state line, you have solved the

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1518 problem and so more of these alternative energy projects that are  
1519 on site. Those eliminate that need.

1520 But it's -- I think you're still going to need to somehow  
1521 figure out a way to move power from -- or natural gas or oil from  
1522 Texas to New York or Chicago. There are going to be occasions  
1523 where you still need to cross state lines. But your solution is  
1524 --

1525 Mr. McCarthy. And I agree with that. I don't have a  
1526 solution, though, for the regulatory environment or the ability  
1527 to make sure that adequate capacity is there.

1528 Mr. Barton. This last question is a little bit off subject  
1529 but it is -- it is infrastructure related and that's who should  
1530 be the lead and who should pay to protect our infrastructure, our  
1531 power plants and things like that against cyber-attacks? So  
1532 okay, Mr. Slocum, just --

1533 Mr. Slocum. Yes. We own quite a bit of that infrastructure  
1534 and we certainly do a lot to protect especially our most critical  
1535 facilities and our critical systems that we use to operate the  
1536 bulk electric system from cyber-attacks.

1537 So we cover those costs and ultimate those go to our  
1538 ratepayers today. But I do think there is a need for a discussion  
1539 about at what point does that stop for private industry and what  
1540 point does the government help to do that in areas where we are  
1541 getting into even acts of war and things of that nature.

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1542           So I have a concern that private industry not have to be  
1543           burdened with those costs. But we are certainly ready to work  
1544           together with government to meet those needs and make sure their  
1545           infrastructure is protected.

1546           Mr. Barton. I see my time has expired.

1547           Final question -- are you any kin to the former football coach  
1548           who's my great friend, R.C. Slocum of Texas A&M?

1549           Mr. Slocum. I can't say that I am but it's not the first  
1550           Slocum I've been asked if I am related to. So thanks.

1551           Mr. Barton. Okay. Thank you, Mr. Chairman.

1552           Mr. Olson. Gentleman's time has expired.

1553           The chair now calls upon a friend who rooted against the L.A.  
1554           Dodgers in the World Series and for our Houston Astros, Mr. Peters,  
1555           for five minutes.

1556           Mr. Peters. Thank you. I always enjoy what -- hearing what  
1557           my introduction is going to be, Mr. Chairman. So thank you very  
1558           much.

1559           Thanks for being here. I want to ask Dr. Chen a couple  
1560           questions.

1561           Dr. Chen, I have to say I read your testimony and, you know,  
1562           we hear all the time from businesses and investors that regulatory  
1563           system can cause uncertainty and the length of delay can cause  
1564           projects not to get built or be more expensive or result in  
1565           investors not wanting to take these risks.

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1566           The citations in your testimony to the Department of Energy's  
1567 own statistics, the Center for American Progress, I get -- I mean,  
1568 I understand that people argue that it isn't a problem. But we  
1569 hear from people who are actually doing the investing that it is  
1570 a problem and I just don't think that we do ourselves any favors  
1571 on this side of the aisle by not thinking about what we could do  
1572 to improve the process to achieve high standards and yet do it  
1573 more quickly in a way that's more certain for people.

1574           What happens, I think, when we don't do that is that we get  
1575 the kinds of things that President Trump has proposed, which is  
1576 an evisceration of the regulatory system that doesn't get us high  
1577 standards.

1578           So I wanted to just ask you about a couple things that Mr.  
1579 Slocum suggested which seem, to me, reasonable and see if you have  
1580 an issue with them.

1581           Could Congress require concurrent NEPA analysis and  
1582 environmental reviews by all permitting agencies? Is there an  
1583 issue you have with that?

1584           Ms. Chen. No. So, certainly, there are a lot of provisions  
1585 in place that enable a joint review so --

1586           Mr. Peters. Could it be required?

1587           Ms. Chen. It could be. I haven't --

1588           Mr. Peters. Okay. How about requiring concurrent NEPA  
1589 analysis -- well, that's the same thing -- requiring cooperating

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1590 agencies to use the information already contained in the lead  
1591 agency's NEPA document as the basis for their permit-related  
1592 reviews?

1593 Ms. Chen. I think it's something to consider. I think  
1594 there are a lot of efficiencies that can be explored. But our  
1595 main issue is eliminating or curtailing environmental  
1596 protections.

1597 Mr. Peters. I understand, too, and I think that's not where  
1598 I want to get to. The other thing is that whether we should set  
1599 a deadline, and I got to tell you I was shocked when I got on this  
1600 committee and heard that hydropower which, you know, is,  
1601 basically, clean base load energy -- takes 10 years to get a permit  
1602 for.

1603 And the thing that we learned is something you suggested,  
1604 too, in your references to success stories. In the success  
1605 stories you have these people who are remarkably talented and  
1606 well-motivated to work together and they get it done in nine  
1607 months.

1608 That's a really ad hoc kind of cross-your-fingers approach  
1609 to permitting, I think, because you might not get people who are  
1610 so willing to work together. You might not get -- you might get  
1611 opponents who are more vociferous.

1612 And for me, it would be much more comfortable if we could  
1613 -- if we could find a way to get these decisions made in the right

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1614 way, in a way that protects the environment but also gives an  
1615 answer.

1616 I've always said no is the second best answer. You know,  
1617 let people know. And I do -- I was just actually looking at  
1618 Twitter because there is some down time in these hearings, believe  
1619 it or not, and NRDC is opposing a pipeline very vociferously right  
1620 now on Twitter, and that's fine.

1621 But I just don't think there's any excuse for not getting  
1622 this done in a quicker way. And so I would like to work with you.

1623 By the way, you went to the finest law school in the United  
1624 States of America. I would like to work with you, as a former  
1625 alum of the same school, to see if we can't come up with better  
1626 responses to the concern that we are hearing from the economy that  
1627 this permitting process is in the way.

1628 It's getting -- it's too inefficient. I think we can do it  
1629 in a way that's useful.

1630 Mr. Devine, I wanted to ask you, just in case we haven't  
1631 covered it, you said in your testimony that you didn't think that  
1632 Congress was at fault for the length of time it takes to do  
1633 hydropower.

1634 So I want to make sure that -- you tell me if there's anything  
1635 Congress should do to address the situation out there.

1636 Mr. Devine. Yes. Thank you, Congressman Peters.

1637 I think there is, definitely. Let me do it by example,

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1638 possibly. So I think what FERC tried to do with the integrated  
1639 licensing process was try to bring some order and some efficiency  
1640 to that process.

1641 It was a collaborative rulemaking process, which meant that  
1642 all of the agencies and all conservation groups and the industry  
1643 was involved in coming up with that process.

1644 And yes, it's still a long process but it's very structured  
1645 and you go through the process and FERC, I think, has brought some  
1646 efficiency to the -- in their effort to bring to the federal  
1647 hydropower licensing process.

1648 The difficulty that we have in the process is you get to a  
1649 certain point and it -- and there are other federal and state  
1650 licensing processes that then interact with that process and they  
1651 don't have any sort of schedule particularly and I think the courts  
1652 have actually said -- I am not an attorney -- that FERC is not  
1653 in a position to force those agencies to meet any particular  
1654 deadlines. So that means there is no deadline.

1655 Mr. Peters. So we should look at action-forcing, perhaps?

1656 Mr. Devine. Yes, I think so.

1657 Mr. Peters. All right. Thank you. My time has expired.  
1658 I really to appreciate all the witnesses being here.

1659 I yield back.

1660 Mr. Olson. Gentleman yields back.

1661 The chair now calls upon himself for five minutes.

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1662           My first question is for you, Dr. Hellyer, and again, it's  
1663 so great to have you here this afternoon. You are the best of  
1664 the best.

1665           As we both know, incredibly, I think kids these days still  
1666 think they have to get a four-year Bachelor's degree to be  
1667 successful in America.

1668           But as San Jac shows, there are incredible opportunities and  
1669 jobs related to American energy and infrastructure for kids  
1670 without a B.A.

1671           Can you please tell me a little about what draws your students  
1672 to your programs and how you're actively in the community to raise  
1673 the profile of energy industry courses?

1674           Ms. Hellyer. Excuse me. I think it comes down to our  
1675 relationship across all the sectors -- with our K through 12  
1676 partners, with our university partners, but mostly with our  
1677 industry partners -- and we tackle that together.

1678           As I mentioned, we bring 6,000 sixth graders onto campus.  
1679 That is based on hands-on experiments so that they can be working  
1680 with industry partners at the table, seeing what happens in our  
1681 petrochem facility, seeing what's happening on -- in the maritime  
1682 industry.

1683           Then we also reconnect with them again as they're going  
1684 through eighth grade and we give those teachers experiments so  
1685 they can refresh that in the classes.

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1686           And in ninth grade, there is the speakers' bureau where we  
1687 are going out into the high schools with, again, industry partners  
1688 talking about the jobs.

1689           We had had many years where we weren't really focussing on  
1690 the jobs in our region, and when you can become a process operator  
1691 making \$100,000 a year with an Associate degree, you start to look  
1692 at that differently -- when you can be a welder and making \$75,000  
1693 a year.

1694           And so we are really putting that marketing campaign together  
1695 but that marketing campaign is for students, it's for parents,  
1696 and it's also for teachers and counselors in our -- in our high  
1697 schools because they don't necessarily understand all the pieces  
1698 of our region.

1699           But then having industry really engaged in our programs,  
1700 having internships, having apprenticeships where they can get  
1701 hands-on training and then being involved in that interview  
1702 process.

1703           So it's across the board partnerships.

1704           Mr. Olson. I would just ask you to brag. Can you talk about  
1705 how you work with employers and local high schools to help students  
1706 transition into industry?

1707           We've heard some confirm this -- one day in May every year  
1708 some young men and women walks across the stage, gets his high  
1709 school diploma, spins around, puts on a different cap and gown

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1710 and walks by and gets an AA from San Jacinto.

1711 Please explain that success you had with merging the  
1712 education sector with your work there at San Jacinto College.

1713 Ms. Hellyer. So we have eight early college high schools  
1714 and these are early college high schools designed for high school  
1715 students to be earning an Associate degree at the same time as  
1716 they're getting their high school diploma.

1717 So they will actually earn an Associate degree two weeks  
1718 before they graduate from high school, and it's a great program.  
1719 It's an intense program and people say, "Well, how are those kids  
1720 ready?" It's because of the screening process. It's because of  
1721 support systems.

1722 And where do those go to? I can tell you I've had students  
1723 going to Princeton, UT, Penn State -- just all across the country  
1724 they're going to the top colleges after they graduate from us.

1725 But we also have a similar program for career and technical  
1726 education. So, again, they're getting their career and technical  
1727 process tech degree or a welding degree so they can go into the  
1728 workforce right away.

1729 So at our graduation the youngest graduate can be 17 earning  
1730 an Associate degree and in December the oldest was 72. So we serve  
1731 everybody.

1732 Mr. Olson. That includes my alma mater Rice, Mr. Flores'  
1733 alma mater, A&M -- Texas A&M -- is that correct -- along those

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1734 litany of UT and other schools?

1735 Ms. Hellyer. Yes. Our top five transfer universities, A&M  
1736 and UT, are right there, and then all the University of Houston  
1737 universities.

1738 Mr. Olson. Thank you.

1739 One question for you, Mr. Slocum. We know that building a  
1740 new transmission line, especially longer ones across the state  
1741 lines or electricity markets is remarkably complex. You said a  
1742 decade, in some cases, in your opening statement.

1743 What is the largest driver for these delays? Is there  
1744 anything Congress can do to make this move faster?

1745 Mr. Slocum. Yes. I would say the largest delays that we  
1746 have -- we have an example of a project between Iowa and Wisconsin  
1747 that we got approval for I believe back in 2011, if I have my date  
1748 correct, and we don't expect to complete that project until 2023.

1749 So we plan the project and we stand ready to build the  
1750 project. But it's getting that permitting process done in the  
1751 middle.

1752 And so I agree with a lot of what's been said today, that  
1753 there are ways that we can more efficiently move through that  
1754 process such that we can get to the point where we are building  
1755 the lines, building the projects and those benefits are flowing  
1756 to consumers rather than waiting and going through a serial  
1757 permitting process.

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1758 Mr. Olson. Thank you.

1759 One final question for you, Dr. Hellyer. My dear colleague,  
1760 Mr. Green, in his opening statement mentioned I've not talked  
1761 about the Houston Astros, and that's true. I didn't do that  
1762 because I knew you could talk about the Houston Astros for me.

1763 [Laughter.]

1764 They went to the World Series in 2005 for the first time in  
1765 the Astros' history. Two star players were on that team -- Hall  
1766 of Famers -- Roger Clemens, Andy Pettitte.

1767 Where did they start playing there all beyond high school?  
1768 What school was that?

1769 Ms. Hellyer. San Jacinto College.

1770 [Laughter.]

1771 Mr. Olson. Thank you. I yield back and yield to the  
1772 gentleman from Texas, Mr. Green, for five minutes.

1773 Mr. Green. Thank you, Mr. Chairman, and I thank you for  
1774 allowing me to testify or to ask questions, rather.

1775 I was shocked because one of the successes of San Jacinto  
1776 College, Andy Pettitte -- a great baseball player but he comes  
1777 back every year and has a great golf tournament that supports San  
1778 Jacinto College. And I am not a very good golfer. I haven't had  
1779 a chance to play but I will at least go to the reception.

1780 So but thank you, and thank all our witnesses for being here.  
1781 I have a very urban district in Houston and one of the campuses

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1782 of San Jacinto College is there and I have students from our  
1783 district who go to the other two campuses.

1784 And I just want to thank Dr. Hellyer and the leadership both  
1785 of the board of trustees but over the years at San Jacinto College  
1786 because I was a state senator before I got to Congress I saw San  
1787 Jacinto College doing some of the things that are so important  
1788 today.

1789 Dr. Hellyer, you can liberate -- can you elaborate on the  
1790 partnership with local industry -- the college heads and the  
1791 Center for Petroleum Energy and Technology?

1792 I am interested in sharing more about how the industry  
1793 guidance towards the curriculum is getting students ready for  
1794 those real jobs today and not just generalized certificates,  
1795 because I've been there and seen that partnership between the  
1796 industry -- the people who hire our constituents and the college.

1797 Ms. Hellyer. So one of the things with industry we have 90  
1798 petrochemical plants right there around us and it really is how  
1799 do you partner.

1800 And so I make it very clear I want the good, bad, and the  
1801 ugly around our programs and we are going to fix the bad and the  
1802 ugly, and that's what the conversations are.

1803 And so, for example, our electrical program, as we've dug  
1804 into that, it was too focused on residential. We have redesigned  
1805 it where it has a commercial and industrial phase. Industry has

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1806 come to the table and gotten us almost \$2 million in donations  
1807 so that we can really have the program that they need.

1808 We have built in the kind of testing they want, the kind of  
1809 components they feel are so critical, the safety components, and  
1810 we are just constantly revising our programs.

1811 One of the things that we needed to do was hire somebody from  
1812 industry to run the program and so we have hired a man named Jim  
1813 Griffin who has been a plant manager or in the industry for about  
1814 30 years and he's retired to work with us.

1815 He has the respect of industry and he has -- is working with  
1816 us on how we continue to develop and develop our faculty around  
1817 that. It's the same approach we took with our maritime programs.

1818 But it really is creating the environment where you're having  
1819 the conversations and then you're responding and you're bringing  
1820 the resources to the table as partners.

1821 Mr. Green. I want to ask a question of Mr. Ross.

1822 Mr. Ross, when I was going to college I didn't play football  
1823 well enough to get a scholarship so I was -- I did my apprenticeship  
1824 as a printer while I was going to school.

1825 Can the IBEW or other trades partner with programs like San  
1826 Jacinto College? How hard is it to get credit for -- college  
1827 credit, for example, for what may be the standard apprentice  
1828 program for IBEW or plumbers or pipefitters or anything like that?

1829 Mr. Ross. Well, as I stated earlier we certainly work with

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1830 community colleges in an attempt to try to steal their graduates  
1831 and to get them into our program, definitely.

1832 Second, we also -- our five-year inside apprenticeship  
1833 program we work with community colleges for those individuals once  
1834 they complete our program to get an Associate's degree.

1835 So we work with -- once they graduate they work with the  
1836 community colleges to get their Associate's degree. So they --  
1837 our program is accredited for -- toward an Associate's degree.  
1838 So that's what we do.

1839 Mr. Green. And I think that's important because most folks  
1840 getting out of high school want to earn a living and they may not  
1841 be able to afford a college and go to college and they also may  
1842 not want to take out loans that -- so they could actually get a  
1843 -- both get a job and do an apprenticeship.

1844 And I always remember my third year in my apprenticeship I  
1845 actually started making decent money and -- but and I was able  
1846 to get a business degree.

1847 And, you know, so that's why I would like to see if we could  
1848 structure that with our trades and also our community colleges.  
1849 That's really important in my area in Houston and San Jac is part  
1850 of it.

1851 And I know you're getting competition from some of our other  
1852 community colleges. I am trying to get them to realize that  
1853 trades skills are really important and, frankly, I remember when

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1854 I was graduating from college I had an offer of \$600 a month --  
1855 1971 dollars, by the way -- and I explained to those companies  
1856 that offered me that -- I said, "Well, I am making \$850 now and  
1857 so I think I will stay in Houston and help manage this printing  
1858 business."

1859           So but -- so that can be done but we -- mine was just lucky.  
1860 I would like to see it structuralized so whether they be in our  
1861 district or anywhere else they can get that training and if they  
1862 want to go on and get an electrical engineer's degree, that's  
1863 great. But they can at least support their families.

1864           So Mr. Chairman, I want to thank you and but -- and you and  
1865 I both are Astros fans and I know we'll be at the White House next  
1866 week.

1867           Mr. Olson. Yes, we will. Gentleman yields back.

1868           The chair now calls upon the gentleman from the Commonwealth  
1869 of Virginia, Mr. Griffith, for five minutes.

1870           Mr. Griffith. Thank you very much, Mr. Chairman, and since  
1871 you always like to talk about sports I would be remiss, coming  
1872 from the Commonwealth of Virginia, if I didn't mention the  
1873 number-one basketball team in the country is UVA.

1874           But we are particularly proud in my district of the fact that  
1875 our Virginia Tech Hokies beat the number-one team a couple week  
1876 back and last night dispatched with the number five Duke team.  
1877 So we are very proud of that.

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1878           The district is one that has a lot of assets. We are a coal  
1879 mining district. We have natural gas. Last week, I attended a  
1880 meeting with a solar company in district.

1881           But, Mr. Devine, we also have a lot of water and hydropower  
1882 is an essential component of an all-of-the-above strategy, which  
1883 I have always supported, and I believe should be included in any  
1884 infrastructure package that passes through this committee.

1885           I had a bill earlier or last fall -- earlier in the session  
1886 -- H.R. 2880, which streamlines the licensing process for the  
1887 construction of closed-loop pump storage hydropower projects.

1888           I see those as giant batteries that are very energy  
1889 efficient. I enjoyed reading your testimony where it talks about  
1890 how hydro is the number-one, quote, unquote, "clean energy source  
1891 in the country," and I was wondering if you could explain to folks  
1892 exactly how closed-loop pump storage hydro projects provide to  
1893 our grid.

1894           Mr. Devine. Thank you. Be a pleasure to do so.

1895           So one of the aspects about pump storage is that it does help  
1896 to bring in and -- bring in other renewable energy sources. It  
1897 helps to regulate the grid in being able to incorporate those other  
1898 renewable energy sources.

1899           The closed-loop part of pump -- basically, what pump storage  
1900 is is that during periods -- historically, during periods of high  
1901 demand an upper reservoir would throw water down to the lower

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1902 reservoir and generate electricity in doing that.

1903           And then during periods of lower demand, base load stations  
1904 like nuclear or coal would use energy to pump that water back up  
1905 to use it at a more peak time.

1906           I think the role of pump storage is now changing. It's  
1907 changing significantly, because it's now very critical to bring  
1908 stability to the grid during the -- and incorporating the other  
1909 renewable energy generation opportunities into the grid and  
1910 keeping stability to the grid.

1911           So the closed-loop part of this would be that while some pump  
1912 storage projects are using water from, say, a river system that  
1913 -- in flowing by that would pump up water to the upper reservoir  
1914 and then release it back to the river.

1915           A closed-loop system basically brings water into the system  
1916 for one time and then is just constantly moving that water back  
1917 and forth between the upper and lower reservoir.

1918           It only takes a little bit of water then to make up for some  
1919 evaporation losses. So that closed-loop system, once built,  
1920 basically operates by itself alone without any additional water  
1921 flow or impact to the environment once built.

1922           Mr. Griffith. And as a result of that, do you agree that  
1923 that warrants expedited consideration by FERC and with some  
1924 relaxed regulations because we are using the same water over and  
1925 over again so that we don't have as much impact on the environment?

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1926 Mr. Devine. I do, and one of the main reasons is because  
1927 oftentimes what's indicated to be the primary issue with respect  
1928 to those is the effect of the river, where the water is being  
1929 flowing into and pumping out of -- fishery impacts, sediment  
1930 impacts, other related potential impacts.

1931 With a closed system -- a closed-loop system, once you have  
1932 built and filled these reservoirs and take care of that in the  
1933 original licensing, you don't have that issue -- potential issue  
1934 any further.

1935 So I do believe that it deserves that more efficient process  
1936 and expedited licensing process.

1937 Mr. Griffith. And we've been kind of interested in --  
1938 because we hear all the time from folks who oppose coal that, you  
1939 know, you all need to transition, we've been kind of interested  
1940 in maybe putting one of these inside an abandoned coal mine because  
1941 then there's really virtually no impact to the environment.  
1942 Would you agree with that?

1943 Mr. Devine. Yes. I think there's opportunities for -- with  
1944 a lower reservoir potentially to be inside old mining facilities.  
1945 I think there have been several of those in the past proposed and  
1946 some actually moved through the -- back in the '80s I think it  
1947 was, or early '90s, move through the processing and were not able  
1948 to get the financing, not able to get built at that point but moved  
1949 through the whole process of permitting and were closed-loop

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1950 systems and using old mines for the lower reservoir.

1951 Mr. Griffith. We have a lot of people who are very  
1952 interested in this and anybody that is interested in investing  
1953 in the 9th Congressional District for doing one of these we've  
1954 got plenty of water to put into the system.

1955 Mr. Slocum. I will just quickly mention ITC may be  
1956 interested in that and we do have a project just as -- exactly  
1957 what you just mentioned in northwest Arizona that we've proposed  
1958 and we've submitted that to FERC. And so I agree with everything  
1959 that was just said. Thanks.

1960 Mr. Griffith. Thank you, and appreciate it and yield back,  
1961 Mr. Chairman.

1962 Mr. Olson. Gentleman yields back.

1963 The chair now calls upon the gentle lady from Florida, who  
1964 is a huge fan of the chancellor of U of H -- University of Houston  
1965 -- Dr. Renu Khator, just like Dr. Hellyer and myself, Ms. Castor,  
1966 has five minutes.

1967 Ms. Castor. Well, thank you, Mr. Chairman.

1968 I do have great respect for the University of Houston  
1969 Chancellor Dr. Khator and I am sure she was as excited as you that  
1970 her old alma mater, the University of South Florida, defeated the  
1971 University of Houston in women's basketball last week.

1972 But thank you for giving me time to be ready with that one.  
1973 I want to thank the witnesses for being here today. Many of you

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1974 have cited in your testimony the importance of modernizing  
1975 America's electrical grid and how that would be a very important  
1976 piece of an infrastructure plan for the country, and I agree.

1977 Many of you have cited benefits of modernizing our grid.  
1978 There is creating higher-paying jobs, building in greater grid  
1979 resiliency, greater efficiency for our businesses and electric  
1980 utilities and so much more.

1981 Many of you know that the Democratic colleagues on this  
1982 committee have drafted a piece of legislation called the LIFT  
1983 America Act.

1984 My contribution to the LIFT America Act has been to promote  
1985 a modern grid that includes clean energy distribution and really  
1986 trying to bring the most modern technology that we have developed  
1987 to bear in an infrastructure plan.

1988 I think it's clear that if we were to make a real investment  
1989 in clean, reliable, and cost-effective energy resources, we --  
1990 the country would reap huge benefits.

1991 Ms. Chen, in your testimony you highlight the importance of  
1992 technological innovations like expanded grid technology, smart  
1993 meters, energy storage as part of upgrading the nation's power  
1994 infrastructure.

1995 Can you elaborate on that -- on your vision for a more modern  
1996 electrical grid with expanded distribution and greater technology  
1997 and what would we need to build that?

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1998 Ms. Chen. Sure. That response -- I probably don't have  
1999 enough time to fully flesh that out. But I think the number-one  
2000 thing to think about here, especially when we talk about more clean  
2001 innovative technologies on the distribution system is being able  
2002 to integrate it with the larger bulk transmission grid so that  
2003 that way whatever savings in electricity that you don't have to  
2004 purchase from the bulk electricity system you can reap through,  
2005 you know, less requirements on the transmission grid  
2006 infrastructure, lower requirements on generation infrastructure  
2007 that could be very costly for your consumers.

2008 But at the same time, if you integrate these distributed  
2009 energy resources like storage, demand response, energy  
2010 efficiency, solar panels, you can also allow them to recover  
2011 revenues from the wholesale electricity markets.

2012 So one of the great things that FERC recently did was finalize  
2013 the storage rule that enables storage, at least, to compete in  
2014 the wholesale electricity markets.

2015 What it left behind is the distributed energy resources.  
2016 There's a component to that rule that would have enabled those  
2017 resources to also participate in the wholesale electricity  
2018 markets.

2019 So FERC is going to convene a proceeding to investigate it  
2020 further and we would love to see distributed energy resources to  
2021 be -- to be able to participate in the bulk electric transmission

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2022 system.

2023           So that kind of integrated system would be the overall large  
2024 framework picture that we have for the modern grid.

2025           Ms. Castor. So you would encourage the committee to urge  
2026 FERC to move forward on that along with greater -- I am hearing  
2027 the message from a number of witnesses -- greater planning in  
2028 advance across regions to help save money and become more  
2029 efficient and put all those technological tools to use?

2030           Ms. Chen. Right. Absolutely.

2031           So this all goes hand in hand in the transmission planning  
2032 process and the regional operators' load forecasting process.  
2033 They have a lot of planning that goes on. Sometimes it's not  
2034 holistic enough to account for everything that's on the  
2035 distribution system.

2036           So, certainly, including these distributed energy resources  
2037 in those plans would ensure that we don't overbuild and, again,  
2038 it would ensure that if they can participate in the markets they  
2039 could reap some of those revenues.

2040           Ms. Castor. And I just want to close by saying that I think  
2041 there was bipartisan concern that President Trump's  
2042 infrastructure plan, when it was released, it included nothing  
2043 in regard to modernizing America's electrical grid, no -- just  
2044 simply no mention, and I think that was a real absence of vision.

2045           Just like the plan included no mention of broadband expansion

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2046 across the country, and I think this committee has a  
2047 responsibility to kind of take up that charge on a bipartisan basis  
2048 with the matters that are in our jurisdiction and help lead the  
2049 way.

2050 We can't do infrastructure and create these high-paying jobs  
2051 and take our country to the next level unless we are --  
2052 infrastructure also means a modern electrical grid and greater  
2053 broadband.

2054 So I yield back my time. Thank you.

2055 Mr. Olson. The gentle lady yields back and the chair wishes  
2056 to inform the gentle lady that she publicly called Dr. Khator --  
2057 her new home getting defeated by her old home. I've sent her a  
2058 text message about the statement so be prepared for a response  
2059 if it hasn't come already.

2060 The chair now calls upon the gentleman from Indiana, the  
2061 Hoosier State, Mr. Bucshon, for five minutes.

2062 Mr. Bucshon. Thank you, Mr. Chairman.

2063 Earlier this Congress, the House unanimously passed my bill,  
2064 H.R. 2872, the Promoting Hydropower Development at Existing  
2065 Non-powered Dams Act.

2066 H.R. 2872 would promote hydropower development at existing  
2067 non-powered dams by establishing an expedited licensing process  
2068 for qualifying facilities that will result in a decision on an  
2069 application in two years or less.

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2070           The bill also requires FERC, the U.S. Army Corps of  
2071 Engineers, and the Department of the Interior to develop a list  
2072 of existing non-powered federal dams that have the greatest  
2073 potential for non-federal hydropower development.

2074           Developing hydropower generation over -- at over 50,000  
2075 suitable dams across the country has the potential to have 12  
2076 gigawatts of clean energy to the grid, create good-paying jobs,  
2077 and bring billions of dollars of investment.

2078           In fact, in the 8th District of Indiana, which I represent,  
2079 there are six suitable dams that can benefit from this expedited  
2080 permitting process.

2081           This legislation modernizes our existing infrastructure and  
2082 I believe should be included in any infrastructure package passed  
2083 out of Congress.

2084           So Mr. Devine, in your testimony you state that enacting  
2085 legislation like this, and you quote, "in a way to move investments  
2086 in hydropower infrastructure forward without major cost to the  
2087 U.S. government."

2088           Can you speak to the impact H.R. 72 and other hydropower  
2089 legislation but specifically this would have on hydropower  
2090 development across the country as well as its role in our country's  
2091 infrastructure?

2092           Mr. Devine. Yes. Thank you, Congressman Bucshon.

2093           I think it's a fine example -- an excellent example of trying

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2094 to improve the investment picture for small hydropower and  
2095 hydropower in the country.

2096 It's also an example of moving forward hydropower at existing  
2097 dams recognizes that the main aspect of these dams are usually  
2098 run-of-river dams.

2099 Run-of-river dams are known to have very minor impacts,  
2100 generally, to the water resources of the -- of the river.  
2101 Therefore, a two-year expedited process in this is not incongruent  
2102 with protecting environmental resources.

2103 I think it's also an example of an expedited process which  
2104 also continues to protect the environment because these  
2105 environmental analyses will be done and completed in a reasonable  
2106 time frame and fully evaluated from the scientific perspective.

2107 I think it also combines the expedited time frame for the  
2108 licensing process and is a good example of also -- of not trying  
2109 to rescind any environmental laws or regulations.

2110 I think it's a fine example of encouraging new investments  
2111 in hydropower and recognizing that some of these projects have  
2112 minimal environmental effects and could move forward  
2113 expeditiously.

2114 Mr. Bucshon. Thank you very much.

2115 I just want to point out this bill was passed unanimously  
2116 out of the House with bipartisan support. We worked with both  
2117 parties to develop language that people were comfortable with and,

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2118 again, I want to reiterate that the environmental review process  
2119 is still there in place.

2120 We are just getting federal agencies to move the process more  
2121 quickly rather than 10 years or 12 years to a process that would  
2122 be over a two-year period, which the potential for expanding this  
2123 form of clean energy is tremendous.

2124 And I look forward to our Senate colleagues taking this up  
2125 and I do think there's a lot of interest over there and I think  
2126 in a bipartisan way. I am hoping to get this type of legislation  
2127 to the president's desk.

2128 So thank you very much, Mr. Chairman. I yield back.

2129 Mr. Olson. The gentleman yields back.

2130 The chair now calls upon the pride of Schenectady, New York,  
2131 right behind Thomas Edison, as we learned this morning -- Mr.  
2132 Tonko, for five minutes.

2133 Mr. Tonko. Thank you, Mr. Chair. I think the pride may be  
2134 the mayor of Schenectady. But that's up for discussion.

2135 Mayor, again, I want to thank you for a very comprehensive  
2136 report. It is so innovative and it allows us to go into the next  
2137 stage of energy resources, and I thank you, again, for the vision  
2138 that, obviously, will lead many people down a path of sound energy  
2139 policy.

2140 Schenectady has, I believe, over 5,000 street lights and what  
2141 is considered when a city decides to make a major infrastructure

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2142 investment such as converting to LED streetlights?

2143 Mr. McCarthy. Again, there's approximately 5,000 street  
2144 lights in the city of Schenectady, 500 of which the city owns.  
2145 Forty-five hundred, approximately, are owned by the utility. So  
2146 the 500 that the city owns are fairly easy to deal with.

2147 Where you get utility-owned streetlights it becomes a more  
2148 complicated process to either buy those or purchase the residual  
2149 value of the fixtures that had been installed and that's why we  
2150 are trying to work with National Grid -- New York Public Service  
2151 Commission to come up with a model that would allow that transition  
2152 to the LED lights.

2153 When you're doing that it's not to miss the opportunity to  
2154 put some of the other available technology on the light pole, which  
2155 will, again hopefully help the utility, help the city, then help  
2156 the residents and businesses within the community take advantage  
2157 of some of the emerging and wireless and sensor-based  
2158 technologies.

2159 Mr. Tonko. So as you convert to LED, what are the potential  
2160 savings for the city when adopting a smart lighting system?

2161 Mr. McCarthy. We -- the initial savings -- our number is  
2162 just under \$400,000 -- about half of our electrical costs.

2163 We are looking -- also, when you put the optical sensors on  
2164 the poles that you can then pick up additional savings when you  
2165 dim the lights further when there's less activity on the street.

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2166           When you put some of the -- either a Wi-Fi or cellular  
2167 communication protocol on the pole it might be able to extend that  
2168 savings to residents or businesses so that your control is on the  
2169 sensor on the street but you would enable homeowners or businesses  
2170 to be able to dim their either porch lights or advertising on their  
2171 buildings or other fixtures that they might have when there's no  
2172 activity -- you could dim that.

2173           When there is activity you'd be able to turn them up. So  
2174 it becomes really an integrated deployment where, hopefully,  
2175 everybody will benefit from it.

2176           Mr. Tonko. Tremendous. In addition to lighting,  
2177 Schenectady has developed other clean energy and efficiency  
2178 projects. Amongst them a few years ago the city installed a CHP  
2179 system -- a combined heat and power system -- at the wastewater  
2180 treatment facility and more recently installed a solar array, I  
2181 believe, at that facility.

2182           Mr. McCarthy. Yes.

2183           Mr. Tonko. What are the benefits of these types of projects?

2184           Mr. McCarthy. Our wastewater treatment plant, the co-gen  
2185 facility there, saves us approximately \$30,000 a month in utility  
2186 costs, capturing the methane gas and burning it on site and then  
2187 our solar deployment at the time was the largest municipal solar  
2188 array in New York State.

2189           It's done on top of an enclosed reservoir. The Bevis Hill

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2190 Reservoir supplies hydrostatic pressure for the water system  
2191 within the city.

2192 Mr. Tonko. So there's, obviously, long-term benefits there  
2193 to the city with these projects?

2194 Mr. McCarthy. Correct. It was just really unused land and  
2195 so now we get 711 kilowatts of electricity generated there that  
2196 we use a remote metering package to offset the costs of some of  
2197 our higher utility bills of the municipal -- primarily city hall  
2198 and some of our fire stations.

2199 Mr. Tonko. Right.

2200 Just make mention here for the record that the city  
2201 established a smart city advisory commission chaired by Mark  
2202 Little, the former chief technology officer and director of GE  
2203 Global Research, which includes businesses and important  
2204 institutions from around the area. So it's really pulling in the  
2205 private sector-public sector partnership.

2206 Back to those public sector partnerships, are there -- you  
2207 know, earlier you were quizzed about the 80/20 match with, you  
2208 know, Ranker Rush. But are there opportunities for public  
2209 partnerships at the state and federal level that you would  
2210 encourage?

2211 Mr. McCarthy. I believe everybody has to look at the  
2212 emerging technologies. Things are changing so fast. I was here  
2213 at a NIST event three weeks ago and they talked about that 90

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2214 percent of the data that exists in the world today had been created  
2215 in the last 36 months.

2216 I went back and used that statistic at an event at our  
2217 community college. Somebody came up to me and corrected me. He  
2218 said, "Mr. Mayor, that's wrong. Ninety percent of the data that  
2219 exists in the world today has been created in, roughly, the last  
2220 24 months."

2221 So there is so much information out there that, if properly  
2222 managed, it will allow us to do predictive analytics.

2223 It will enable us to drive better outcomes, whether it's  
2224 government services, products that are produced in business, and  
2225 educational opportunities within our communities.

2226 But, again, it's happening so fast that we have to have policy  
2227 standards and an environment that allow those things to be fully  
2228 utilized and taken advantage of in a rapid manner. Again, it's  
2229 really our global competitiveness is a key component of that  
2230 because other countries are moving faster in some areas.

2231 Mr. Tonko. Thank you very much, again, for the vision. And  
2232 I agree, the challenge to us now is to determine how we utilize  
2233 the great compilation of data that we acquire.

2234 And with that, Mr. Chair, I yield back.

2235 Mr. Olson. Gentleman's time has expired.

2236 The chair now calls upon the Motorcycle Riders Foundation  
2237 2017 Legislator of the Year, Mr. Walberg, for five minutes.

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2238 Mr. Walberg. Wow.

2239 [Laughter.]

2240 Tell you what, always -- always wondering what in the world  
2241 you do to get all of the research done with all of our members  
2242 here. It's impressive, Mr. Chairman. Impressive.

2243 Thanks to the panel for being here. Mr. Ross, I certainly  
2244 appreciate the work the Brotherhood does in training people to  
2245 do jobs whether it's at my Fermi plant -- the DTE Fermi plant --  
2246 or at the -- down Lake Erie a bit at the big coal-fired plant or  
2247 in all of the consumers' power -- gas-powered plants, et cetera  
2248 to get the electricity to the lines and ITC and others. We  
2249 appreciate the work you do.

2250 I want to -- I want to ask you to give us some examples, if  
2251 you could, or ideas how we can expand access to apprenticeships.

2252 But I would preface it by saying I was greatly excited with  
2253 what our governor was proposing in Michigan last week called the  
2254 Marshall Plan for talent and, specifically, as he talked about  
2255 pushing means towards short-term certification programs,  
2256 education programs, whether it's the community college level or  
2257 apprenticeships, et cetera.

2258 The PROSPER Act that we passed out of the House Education  
2259 and Workforce Committee just a couple months ago that reauthorized  
2260 the Higher Education Act has a one-loan one-grant one-work study  
2261 program that can be done for that very purpose -- those Pell

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2262 grants, et cetera, that can go towards short-term training  
2263 opportunities as well in the professional trades, as we are  
2264 calling now in Michigan.

2265 I know they're skilled but they're professional as well and  
2266 we want to give that idea out to our students that could look to  
2267 fill spots that you have -- that can be an asset to what we have.

2268 The SKILLS Act we passed several years ago and was signed  
2269 by President Obama, again, pushed education for real-world jobs  
2270 back to the states and the local communities and private entities  
2271 like yourself. So we want to build on that.

2272 What would be the best way to do this, to expand recruiting  
2273 and apprenticeships for the next generation of electric workers  
2274 as well as how can the U.S. encourage more individuals pursue these  
2275 programs?

2276 Mr. Ross. I think we should start by introducing the trades  
2277 earlier on in school. I mean, when I came through school you were  
2278 introduced in shop class or you had to go to electrical class just  
2279 to introduce individuals to those programs, and there's not much  
2280 vocational training, at least I haven't seen much, in the high  
2281 schools anymore.

2282 They've kind of gone away from that and certainly guidance  
2283 counselors have gotten away from trying to push individuals to  
2284 our industry -- the trades.

2285 Unfortunately, not everyone is cut out for college or even

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2286 community colleges, in some cases. I mean, we take individuals  
2287 with basically a high school education, at a minimum, and for an  
2288 electrician basically high school algebra is a bare minimum for  
2289 us and we train them to be electricians.

2290 We certainly need to do a better job of promoting that program  
2291 to individuals out there and, quite frankly, we need to do a lot  
2292 better than what we have been.

2293 And I think reintroducing them in the high schools would  
2294 certainly be a starter -- even earlier in junior high -- to get  
2295 them exposed to what the trades are -- have them hands-on. We  
2296 also have pre-apprenticeship programs out there that our  
2297 electrical training alliance has developed to put individuals --  
2298 high school graduates into those programs.

2299 It gets them exposed to what's expected of them when they  
2300 become selected as an apprentice. So some of those programs we  
2301 are -- we are trying to promote.

2302 Mr. Walberg. That's great. I mean, the push to encourage  
2303 people toward their sweet spots -- it would be a waste of time  
2304 for some to go the university or four-year college route.

2305 We would waste the skills and the talents that they have,  
2306 and if we think about professional skills these are jobs like  
2307 you're talking about that are careers -- that are good paying and  
2308 can continue to expand. I wish you well on that. We need the  
2309 juice.

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2310 [Laughter.]

2311 We need the electricity to our homes.

2312 Mr. Slocum, earlier this Congress with the help of this  
2313 committee we passed H.R. 1109. This was legislation that in  
2314 introduced to reduce red tape on both industry and FERC to free  
2315 up resources and lower utility bills. This made a simple fix to  
2316 Section 203 of the Federal Power Act and harmonize the language  
2317 in that particular section.

2318 We know there needs to be serious permitting reform. Simple  
2319 or technical fixes such as 1109 that Congress can pass to remove  
2320 red tape and reduce burdensome paperwork -- other low-hanging  
2321 fruit ideas as well. What would you have to move us forward to  
2322 get past this red tape and bureaucracy?

2323 Mr. Slocum. Thank you, Congressman, and we appreciate the  
2324 work that was done there to make things more efficient with respect  
2325 to that 203 process.

2326 And I think, as mentioned in my testimony, I talk about some  
2327 changes that could be made to the NEPA process that seems to have  
2328 a level of agreement and seems to make some straightforward sense  
2329 as far as making sure that we can get through the permitting  
2330 process in a timely manner but we can do that efficiently.

2331 And so that would be one of the biggest things that I would  
2332 see that would be a low-hanging fruit type opportunity.

2333 Mr. Walberg. My time has expired. I yield back.

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2334 Mr. Harper. [Presiding.] Gentleman yields back.

2335 The chair will now recognize the gentleman from West  
2336 Virginia, Mr. McKinley, for five minutes.

2337 Mr. McKinley. Thank you, Mr. Chairman.

2338 This now is the thirteenth we've had out of those -- two hours  
2339 ago we heard this is the forty-seventh hearing we've had on  
2340 infrastructure and this is the thirteenth dealing with grid  
2341 resiliency regarding the infrastructure.

2342 We've heard a lot of good solutions over those 47 and, clearly  
2343 -- clearly, we have a growing problem with the adequacy of our  
2344 energy infrastructure and the grid being at risk.

2345 But, unfortunately, I can tell you, I am not sure the messages  
2346 are being heard because just a few years ago we had with the Polar  
2347 Vortex we came within just minutes -- just minutes of having a  
2348 blackout through the PJM. PJM was reporting that.

2349 And now ISO is just -- New England has just come out with  
2350 a very well-documented report that says the possibility of the  
2351 power plants in the New England area won't have or be able to get  
2352 the fuel they need to operate and they claim -- and their quote  
2353 was, "This is the foremost challenge to a reliable power grid in  
2354 New England."

2355 And then further in the report it says New England has a  
2356 better than 80 percent chance -- 80 percent chance of a blackout  
2357 in the next bad weather storm. But in the meantime, New England

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2358 is becoming increasingly reliant on Russian LNG to be able to  
2359 satisfy their energy demands instead of using American energy.

2360 So if we are truly committed as a country for energy  
2361 dominance, what are we doing about it? Are we listening to the  
2362 hearings that have been taking place?

2363 And then one that particularly disturbs me is that New  
2364 England is apparently importing subsidized Canadian electricity  
2365 at the expense of American jobs -- 80 -- or 73 gigawatts of power  
2366 coming in from Canada.

2367 I've got to think that the impact of that -- instead of having  
2368 the jobs that we could have as a result of that, nearly a hundred  
2369 coal-fired or nuclear or wind or solar -- the equivalent of power  
2370 plants, we could have those in America instead of importing from  
2371 other -- overseas or from Canada.

2372 I don't understand why the governments in the New England  
2373 area are withholding permits to be able to build pipelines so that  
2374 we could use America power -- America resources to be able to do  
2375 that.

2376 As a result, we seem to be prematurely closing a lot of our  
2377 coal and nuclear power plants unnecessarily so. So I think we  
2378 have to be careful and I hope that these hearings will underscore  
2379 that because what we've talked about is just last -- a couple weeks  
2380 ago we passed a 45Q, which was a tax credit.

2381 We need to give more people the chance to use that 45Q to

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2382 find out if we don't get carbon capture with this tax credit that  
2383 we were able to pass. And then working with Congressman Tonko,  
2384 we keep pushing the efficiency idea with turbines. We have  
2385 capabilities of doing this but it doesn't look like Congress --  
2386 there's a commitment to do it.

2387 The fuel -- the fuel security is, I believe, a national  
2388 security and that's what these two reports are saying. So is  
2389 government is -- if both sides of the aisle -- if they're really  
2390 serious about all-of-the-above energy resources instead of just  
2391 empty rhetoric, isn't it about time that we paint or get off the  
2392 ladder? Think about that.

2393 So Mr. Ross, I know you're -- you have got a connection back  
2394 to Parkersburg. What's your response to the fact that we are  
2395 importing electricity from Canada rather than creating American  
2396 jobs and using American ingenuity and American efficiency and  
2397 American clean environment?

2398 Mr. Ross. I hate to say too much to our brothers in the north  
2399 because we represent IBEW members out there. So the power line  
2400 I talked about earlier on would be done with IBEW.

2401 So I understand where you're coming from. There's plenty  
2402 of resources here in the United States we can use if we could just  
2403 get the permitting process sped up and create the national grid  
2404 that we need.

2405 Mr. McKinley. Can any of you explain why the grid is being

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2406 held -- or excuse me, the pipelines are being held up so that we  
2407 can use American resources to create American jobs?

2408 Mr. Slocum. I will just say I can't speak to pipelines but  
2409 certainly with the electric transmission infrastructure I think  
2410 it's a lack of that interregional planning where you can get buy-in  
2411 to a project and the reasons for the project and then from there  
2412 you can move forward with the permitting and get something that's  
2413 actually an interregional project built.

2414 Until you have the impetus behind the project, it becomes  
2415 very difficult to cross state lines, especially multiple state  
2416 lines, where there's going to be winners and losers between those  
2417 two areas unless you have a project that has some sort of ultimate  
2418 approval that's going to proceed and move forward.

2419 Mr. McKinley. I know I am running out of -- I know my time  
2420 is over. But I find it just offensive that, according to this  
2421 article -- Bloomberg article that we are importing natural gas  
2422 from Russia instead of using our own supplies, especially with  
2423 all the gas that we have discovered in America that makes us such  
2424 a large producer. I hope that we can reverse that.

2425 I yield back.

2426 Mr. Harper. Gentleman yields back.

2427 The chair will now recognize himself for five minutes. And  
2428 Dr. Hellyer, I would like to ask you a few questions and certainly  
2429 you know very well how the energy landscape of the United States

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2430 is constantly changing.

2431 And according to the U.S. Department of Labor, the average  
2432 age of the U.S. energy workforce is over 50 and the energy sector  
2433 will need more than 100,000 new skilled workers by 2024 just to  
2434 replace those retiring workers, and by some estimates more than  
2435 twice as many workers are expected to retire as are currently  
2436 involved in the apprenticeship or certificate programs, and  
2437 degree completion and engineering has remained relatively  
2438 stagnant since the 1980s.

2439 So from your perspective, what incentives are needed to  
2440 expand community college access and apprenticeship programs?

2441 Ms. Hellyer. One of the conversations we had mentioned  
2442 earlier was around Pell, and Pell is an important component for  
2443 all students of higher education, specifically community college  
2444 students.

2445 And there's 2.7 million community college students using  
2446 Pell. From our standpoint and in my community, 75 percent of the  
2447 students are first generation to college. They are -- about 75  
2448 percent are also going part time, and if you dig into our ISDs  
2449 they are about 70 percent economically disadvantaged.

2450 And so Pell does play a critical role. I think it's what  
2451 Mr. Ross said earlier also is that awareness around those jobs,  
2452 which is something that we have really done well in our region  
2453 trying to build that awareness much younger and then putting that

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2454 all together and allowing that Pell -- the resources to be put  
2455 in place, the industry partnerships to build the apprenticeships.

2456 We have registered approved apprenticeships at San Jacinto  
2457 College and we have unregistered programs and, again, designing  
2458 them based on what the industry partner needs but realizing that  
2459 it's a combination that's going to be needed.

2460 Mr. Harper. So how do you communicate to these students that  
2461 these are the types of jobs in the energy and manufacturing sector  
2462 that they can have a good life, support their family on? How is  
2463 that communication made to the students?

2464 Ms. Hellyer. So it becomes -- in our region what we are doing  
2465 is first we are engaging in sixth graders around -- bringing them  
2466 onto campus and seeing hands-on around what happens in our  
2467 petrochemical plants, what's happening in the maritime industry  
2468 so having that hands-on, reengaging them again in eighth grade.

2469 In eighth grade in Texas, students decide an endorsement --  
2470 an area of study -- and so we are engaged with them around that  
2471 process. Again, how does this tie back to the jobs in our  
2472 community, and then we also have a speakers bureau, which is led  
2473 by industry with community colleges going in to the eighth grade  
2474 and then the high schools.

2475 Those conversations are directed at parents, teachers,  
2476 counselors, and students. You need that broad awareness and, to  
2477 be honest, just as Mr. Ross said, there hadn't been that kind of

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2478 awareness in our communities for a lot of years and so we are  
2479 building that pipeline.

2480 But when you can talk that a process operator will make  
2481 \$100,000 or a welder \$70,000 with the proper credentials, that  
2482 starts speaking.

2483 And those students need to hear it from people that are  
2484 younger than me. They need to hear it from, you know, people who  
2485 went to their high school and that are reengaging and that's what  
2486 industry has done.

2487 They bring in those people working in their plants back into  
2488 the high schools where they can get a role model and then get their  
2489 questions answered. And then it's us putting in place the support  
2490 systems at the college -- having industry partners at the table,  
2491 being real clear what the expectations are, defining, you know,  
2492 how's the safety culture built in -- what's the work ethic and  
2493 reinforcing that in all your programs. Our industry partners at  
2494 the table with us are the critical factors.

2495 Mr. Harper. That's great. You know, what we -- what we  
2496 observed is students just by nature, when they're in high school,  
2497 the earliest time that they are able to opt out of math and science  
2498 classes they try to do that and get it done and then you lose those  
2499 skills.

2500 So are you seeing any connection with that to where you're  
2501 seeing more and more students maintain the STEM curriculum in high

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2502 school so they don't opt out of those possible job opportunities?

2503 Ms. Hellyer. So, again, it's working with our high schools  
2504 and with the industries but also with the universities because  
2505 some of those jobs do require university and so how do you have  
2506 that pipeline.

2507 And then for us in the higher education we can redesign math  
2508 a little bit. We are not directing all students to college  
2509 algebra.

2510 If you're moving in to a business degree you're doing more  
2511 statistics. If you are going into process technology it's more  
2512 of a technical math and showing how that reinforces with what  
2513 you're going to do -- welding, more geometry. And so we try to  
2514 redefine some of that.

2515 We take the same approach with English. Our operators need  
2516 English. They need the math skills. They need more of a  
2517 technical English and so how do you redesign that and being very  
2518 prescriptive again, take math early, take the sciences early  
2519 because it does reinforce the rest of the courses in your degree  
2520 program.

2521 Mr. Harper. Thank you, all of you, for being here. It's  
2522 provided a lot of important insight to the committee. And seeing  
2523 that there are no further members wishing to ask questions I would  
2524 like to thank all of our witnesses again for taking the time to  
2525 be here today.

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2526           Before we conclude, I would like to ask unanimous consent  
2527 to submit the following letters for the record -- one, the  
2528 Utilities Technology Council letter, and the second is the  
2529 American Public Gas Association.

2530           [The information follows:]

2531

2532           \*\*\*\*\*COMMITTEE INSERT 9\*\*\*\*\*

2533 Mr. Harper. Without objection, those are so entered and I  
2534 will ask if Mr. Rush has any similar documents.

2535 Mr. Rush. Mr. Chairman -- yes, I have a -- I would ask the  
2536 unanimous consent to enter into the record different letters, one  
2537 from the Center for American Progress, these are statements, one,  
2538 and the American -- the Center for American Progress has a  
2539 statement debunking the false claims of the environmental review  
2540 component.

2541 Additionally, there's the Center for American Progress  
2542 statement on Trump's infrastructure scam that will gut the  
2543 environmental protection to benefit corporate polluters.

2544 And we have a series of others -- BlueGreen Alliance  
2545 entitled, "The Right Way to Repair America's Infrastructure" --  
2546 the Earth Justice statement, which is entitled, "Congress Should  
2547 Support an Infrastructure Plan that Builds Infrastructure, Not  
2548 Gut Health and Environmental Protection."

2549 And lastly, a New York Times article that's entitled,  
2550 "Trump's Infrastructure Plan Puts the Burden on State Environment  
2551 Money."

2552 [The information follows:]

2553

2554 \*\*\*\*\*COMMITTEE INSERT 10\*\*\*\*\*

2555 Mr. Harper. Without objection.

2556 Pursuant to committee rules, I remind members that they have  
2557 10 business days to submit additional questions for the record  
2558 and I ask that witnesses submit their response within 10 business  
2559 days upon receipt of the questions.

2560 Without objection, the subcommittee is adjourned.

2561 [Whereupon, at 12:24 p.m., the committee was adjourned.]

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