

UNITED STATE OF AMERICA

DEPARTMENT OF ENERGY

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: IN RE :  
: QUADRENNIAL ENERGY REVIEW :  
: NEW ENGLAND REGIONAL ENERGY :  
: INFRASTRUCTURE CONSTRAINTS :  
: PUBLIC MEETING NO. 2 :  
----- :

BEFORE:

RICHARD SCHEER  
LEVI TILLEMAN, DOE-EP  
COLIN BISHOPP, DOE-EP

OFFICIALS PANEL:

GOVERNOR LINCOLN D. CHAFEE  
SECRETARY ERNEST MONIZ  
MELANIE KENDERDINE

RHODE ISLAND CONVENTION CENTER  
One Sabin Street  
Providence, Rhode Island  
April 21, 2014  
9:03 a.m.

1                                   A P P E A R A N C E S

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3   PANEL 1:

4   Anthony Buxton, General Counsel,  
5   Industrial Consumer Group

6

7   Kevin R. Hennessy, Director, Federal, State & Local  
8   Affairs, New England Dominion Resources, Inc.  
9   Joseph Rose, President, Propane Gas Association of  
10   New England

11   Michael Trunzo, President & CEO, New England Fuel  
12   Institute

13   Andy Ronald, VP-Commercial Development/National  
14   Accounts, Crestwood LP

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17   PANEL 2:

18

19   Marion Gold, Commissioner, Office of Energy  
20   Resources, State of Rhode Island

21   William McCourt, Executive Director, Rhode Island  
22   Manufacturer's Association

23   David Caldwell, Secretary, Rhode Island Builders  
24   Association

25

26   Scott DePasquale, President & CEO, Utilidata, Inc.

27

28   Margaret Curran, Chair, Public Utilities Commission,  
29   State of Rhode Island

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1 P R O C E E D I N G S

2 MR. SCHEER: At this point, I'd like for the  
3 officials panel to come on out.

4 So let me begin by telling you who I am. My  
5 name is Rich Scheer. And I'm the facilitator here  
6 today.

7 As our panel comes out, I'd like to welcome  
8 everybody to the Public Meeting No. 2 of the  
9 Department of Energy, Quadrennial Energy Review.

10 And as you all know, the focus of our  
11 session today and then one later, the second part in  
12 Hartford, has to do with New England regional energy  
13 infrastructure constraints. That's our focus.

14 Before we get started, I have an  
15 announcement to make, and this is an official one.

16 Pursuant to the Federal Advisory Committee  
17 Act. I need to tell you that the purpose of today's  
18 meeting is to ask for your individual input or your  
19 organization's input regarding New England's regional  
20 energy infrastructure constraints and to provide a  
21 forum to exchange information.

22 To that end, it would be most helpful to us  
23 for you to provide these recommendations and  
24 information based on your personal experience, your  
25 individual advice, information or facts regarding the

1 topic.

2           The object of the session is not to obtain  
3 any group position or consensus. Rather, the  
4 Department is seeking as many recommendations as  
5 possible from all individuals at this meeting.

6           Understood?

7           Great.

8           And with that, I would like to introduce  
9 Governor Chafee.

10           GOVERNOR CHAFEE: Thank you, Rich.

11           MR. SCHEER: He's going to lead off the  
12 panel.

13           GOVERNOR CHAFEE: Thank you.

14           Thank you. Welcome Secretary Moniz, and  
15 thank you to Senator Reed for ensuring that the  
16 Department of Energy hears from Rhode Island.

17           On behalf of Rhode Island, I would also like  
18 to thank President Obama for his focus and attention  
19 to this issue.

20           As Rich said, the Department of Energy is  
21 holding a series of public meetings throughout the  
22 nation to discuss related Quadrennial Energy Review.

23           And QER was established earlier this year by  
24 President Obama to assess the nation's entire energy  
25 infrastructure and develop a comprehensive strategy

1 for affordable, clean and reliable energy sources.

2           The first phase of the QER to be completed  
3 January 31, 2015 focuses on infrastructure for  
4 transporting, transmitting and delivering energy. And  
5 this is very important to our economy, of course, and  
6 to our environment and to our quality of life. That's  
7 why we've been working very hard here in Rhode Island.

8           And as you know, in New England and here in  
9 Rhode Island, we are facing significant challenges in  
10 our energy sector.

11           New England does have some of the highest  
12 energy costs in the nation. And here in Rhode Island,  
13 we are continuing to see rate increases. Our  
14 increases are primarily driven by pipeline capacity  
15 constraints.

16           You hear it all the time: We are the end of  
17 the pipeline.

18           However, the problems become more pronounced  
19 in recent years as New England has increasingly  
20 transitioned over to natural gas for home heating as  
21 well as electricity generation.

22           Unfortunately, our pipeline capacity has not  
23 kept pace with this transition and the demand.

24           So when the temperature drops, as it did  
25 this winter all too frequently, we turn up our heat,

1 which of course, you have -- utility companies have to  
2 comply to make sure the houses are heated, and so the  
3 transmission capacity for natural gas, the wholesale  
4 price for natural gas spikes and it shows up in our  
5 electricity bills.

6           So last December, we saw 12 percent  
7 residential and 23 percent commercial rate increases,  
8 primarily driven by pipeline capacity constraints.

9           So without action, we can expect this price  
10 volatility to get worse, not better.

11           The regions's coal-fired power plants and  
12 aging nuclear generators are entering retirement,  
13 which is expected to increase our use of natural gas  
14 rather than reduce it.

15           At the same time, so many are not only are  
16 going to electricity generation, natural gas, but also  
17 to home heating.

18           So to put it simply, we cannot expect our  
19 economy to recover and grow with energy costs  
20 continuing to have these big price spikes.

21           And this is a regional problem. It requires  
22 a regional solution. And it is one that is so  
23 pronounced, it has brought together Democratic and  
24 Republican governors from across New England to take a  
25 look at our infrastructure and available resources to

1 determine an environmentally economic path forward.

2           My New England counterparts and I are  
3 working together in our regional energy infrastructure  
4 initiative. In our position to state energy  
5 efficiency, local renewable energy programs, it is  
6 critically important that we make these investments in  
7 our infrastructure.

8           It is equally important that we  
9 simultaneously capitalize on low- to no-carbon  
10 resources to our north, such as hydropower, which will  
11 improve energy diversity and ensure that we are making  
12 appropriate investments to secure a clean energy  
13 future for our state.

14           I am deeply committed to working with the  
15 other New England states to make these investments in  
16 our resources and infrastructure.

17           We do have legislation that will position  
18 Rhode Island to fully participate in this effort by  
19 empowering our utilities in collaboration with  
20 appropriate state agencies to advance regional  
21 national -- natural gas pipeline and north/south  
22 electric generation transmission.

23           And of course, we continue to support wind  
24 and solar power in our energy mix.

25           This isn't an easy path, but we appreciate

1 the support of the Department of Energy and our  
2 congressional delegation and the Obama administration  
3 as we work to achieve this initiative.

4 Over to your questions.

5 Thank you.

6 MS. KENDERDINE: Thank you, Governor. Thank  
7 you all for being here today.

8 My name is Melanie Kenderdine. I run the  
9 Energy Policy Systems Analysis Office at the  
10 Department of Energy. Our office is home to the  
11 executive secretary for this large White House led  
12 effort and we will be managing the interagency  
13 process, which is substantial. And we are also doing  
14 the analytical work for the QER.

15 I am here today to introduce Ernest Moniz.  
16 He is the U.S. Secretary of Energy. He was sworn in  
17 last May, just a little under a year ago.

18 Prior to becoming Secretary of Energy,  
19 Secretary Moniz was the director of the MIT Energy  
20 Initiative.

21 I had the pleasure of working at MIT with  
22 the Secretary for about six and a half years.

23 The MIT energy initiative, as many of you  
24 may know, I think is the premiere energy initiative at  
25 academic institutions across the country.

1           While he was the director of the energy  
2 initiative, among many things, Secretary Moniz ran  
3 several future-of studies. Those were multi-  
4 disciplinary, multi-year studies.

5           He did the future of coal, the future of  
6 nuclear, the future of natural gas, the future of the  
7 nuclear fuel cycle; looking at all of these fuels and  
8 processes in a carbon-constrained environment.

9           So those were highly influential studies and  
10 paved the way for enormous focus of the Secretary's  
11 and mine on energy policy and rigorous energy policy  
12 development.

13           Prior to that, Secretary Moniz was the  
14 under-secretary of energy. I had the pleasure of  
15 working with him there as well.

16           He was deputy at the Office of Science and  
17 Technology Policy prior to that and spent four years  
18 on the faculty at MIT.

19           While he was at MIT and the director of the  
20 MIT energy initiative, Secretary Moniz was on the  
21 President's Council of Science and Technology.

22           And in 2010, late 2010, PCAST released a  
23 report recommending that the government -- federal  
24 government conduct a Quadrennial Energy Review. And  
25 the Secretary said -- has said to me that he, as part

1 of PCAST, was able to toss the baseball on the QER.  
2 And he's now the Secretary of Energy and he is here to  
3 catch the baseball.

4           And the QER is -- that recommendation in  
5 PCAST was a recommendation that the federal government  
6 have energy policy that is based on data and rigorous  
7 analysis. And that's what we are doing. And it's  
8 exciting to be working on this effort.

9           Again, thank you all for coming today. And I  
10 want to introduce you to Secretary Ernest Moniz.

11           SECRETARY MONIZ: Thank you, Melanie and  
12 everyone else.

13           I acknowledge and thank Governor Chafee and  
14 Senator Reed.

15           First of all, their very participation here,  
16 I think highlights the importance that we attach both  
17 to the Quadrennial Energy Review and to the, as I will  
18 say a bit more about, the very strong regional focus  
19 that we have.

20           As the Governor said, New England is one of  
21 the end-of-the-pipe, end-of-the-line regions of our  
22 country. And so we will be exploring the very  
23 important regional variations that we -- that we see  
24 in front of us.

25           It's in some sense ironic that as we know

1 the United States overall, first of all, we have an  
2 abundance of new hydrocarbon resources and  
3 unconventional gas and unconventional oil. At the  
4 same time, we are lowering our CO2 emissions.

5           And yet, when we look in different regions  
6 of the country, like New England, we see very, very  
7 different challenges as we try to address  
8 simultaneously the economic energy security and  
9 climate risk mitigation challenges that we need to  
10 bring together.

11           So the Quadrennial Energy Review -- and I  
12 won't spend a lot of time here -- but the original  
13 motivation and the continuing motivation is that we  
14 need to address all of those issues: economy,  
15 environment, security, and different parts of the  
16 federal government within the Department of Energy.  
17 But essentially every other agency in the government  
18 has got important equities and stakes in one or the  
19 other of these major overarching drivers.

20           So the whole point here is to bring together  
21 all of those equities, all of those perspectives into  
22 a coherent and hopefully therefore sustainable energy  
23 policy, working with the Congress, but informing it  
24 through a very strong regional focus for the reasons  
25 that we've already described.

1           In fact, the -- another message that we have  
2 seen just in the last couple of years, how extreme  
3 weather, we can argue or not here, and its connection  
4 to global warming.

5           But the fact of the matter is whether it's  
6 Hurricane Sandy in 2012 or the polar vortex of 2014,  
7 and there are other examples; we have seen the  
8 vulnerabilities of our energy infrastructure as well  
9 during these kinds of events.

10           So in 2014, the decision was made. Our focus  
11 in the Quadrennial Energy Review is on the  
12 transmission, storage and distribution of energy,  
13 electricity and fuels, and that's going to be a  
14 strong, again, infrastructure focus.

15           Now, we've -- I've talked about the extreme  
16 weather implications there. But we can't forget  
17 another focus of integration:

18           extreme weather, modernization to have  
19 greater resilience in the 21st century, cyber threats,  
20 physical threats, interdependency threats, such as in  
21 Sandy when fuels couldn't be moved without  
22 electricity.

23           So the whole spirit of this Quadrennial  
24 Energy Review is also looking at multiple factors and  
25 how we must integrate them into a sound policy while

1 looking at our economic, environmental and security  
2 interests.

3 So that, again, is the major focus.

4 Finally, in looking at these issues, we will  
5 also have to be informed by an international  
6 perspective.

7 One part of that is North America. The  
8 Governor, in fact, mentioned hydro from Quebec. Is  
9 that part of our solution? Because certainly gas  
10 infrastructure is an issue for New England.

11 But of course, ultimately what we are  
12 looking at is providing heat, light, mobility and a  
13 good business environment. And we have to look again  
14 at multiple ways of accomplishing that.

15 In fact, in the -- one good example during  
16 the polar vortex period, New England ISO, I think  
17 deserves a lot of credit for the way they had the  
18 preparations in place for fuel switching.

19 So whether it's -- not whether it's -- it's  
20 probably all of the above. Its more gas  
21 infrastructure. It's fuel substitution possibilities.  
22 It's renewables, domestic and imports. All of these  
23 options come together to supply the services that  
24 ultimately are what drive us.

25 Finally, on the international, beyond North

1 America, we are seeing -- frankly, the Ukrainian  
2 situation today emphasizes another point. The energy  
3 insecurity of our friends and allies is a national  
4 security issue for us. So we have to take this broad  
5 perspective.

6           And this year, with our focus on U.S.  
7           energy infrastructure, we are trying to  
8 integrate all of these issues.

9           So I want to leave time for discussion and  
10 just introduce Senator Reed, who will say a few words.

11           I don't need a biography of Senator Reed in  
12 Rhode Island, but I just want to say that, first of  
13 all, actually, you all know his West Point, 82nd  
14 Airborne background. And Senator Reed is one of the  
15 major figures in the entire security discussion.

16           I didn't say it, but the Department of  
17 Energy does have some security responsibilities, such  
18 as nuclear weapons, nuclear proliferation, and the  
19 nuclear Navy is a certainly a passion of Senator  
20 Reed's. So on the security side, he is a major  
21 partner and a great friend.

22           I might also mention as a side, Senator  
23 Whitehouse, of course, is also one of the leaders in  
24 climate in particular.

25           So this state is playing a major role, and

1 again, Senator Reed is someone that we greatly enjoy  
2 working with.

3 So, Senator.

4 SENATOR REED: Well, thank you very much,  
5 Mr. Secretary.

6 I want to first thank Melanie for her  
7 leadership. She is taking this Quadrennial Energy  
8 Review across the country and making it work. Thank  
9 you very much.

10 And I'm particularly grateful that Secretary  
11 Moniz would join us here in Rhode Island. Your  
12 presence, Mr. Secretary, speaks volumes in terms of  
13 your personal commitment to this process.

14 We are very fortunate as a nation to have  
15 someone as talented as Ernie Moniz, his academic  
16 preparation and leadership at MIT.

17 But for us here in Rhode Island, it's more  
18 important that he comes from Fall River. And so when  
19 we talk about --

20 SECRETARY MONIZ: Properly pronounced.

21 SENATOR REED: I know.

22 And so we talk about the challenges of  
23 heating a triple-decker with oil, he understands that.  
24 It's part of the DNA. So we're very lucky to have the  
25 Secretary.

1 I also want to recognize the Governor.  
2 Governor Chafee has taken a leadership position in  
3 making these issues central, not just to Rhode Island  
4 but to his colleagues in the gubernatorial caucus in  
5 New England.

6 They all came together, wrote a very strong  
7 letter about infrastructure limitations.

8 We -- on a parallel track, every senator,  
9 Democrat or Republican in New England, wrote a similar  
10 letter so that we could really begin to focus on a  
11 huge problem, which my colleagues have described.

12 We will have, during the course of this  
13 morning's discussion, representation by many leaders  
14 in our community.

15 I want to particularly recognize Marion Gold  
16 who is our commissioner.

17 Marion, thank you for your efforts.

18 And Margaret Curran, the chairperson of the  
19 Public Utilities Commission.

20 Bill McCourt will be here from the Rhode  
21 Island Manufacturers' Association and Dave Caldwell  
22 from the Rhode Island Builders Association.

23 This energy issue is central to our economy,  
24 to our economic growth and to our jobs. And if we  
25 don't get it right, we will not have the growth and

1 the jobs we need here. So your leadership and your  
2 presence is absolutely critical.

3           Also I want to recognize Scott DePasquale.  
4 Scott is with Utilidata, which is a very innovative  
5 company which is using all of these sophisticated  
6 computer algorithms to help manage the load. And I'm  
7 pleased to see that National Grid and Utilidata are  
8 partnering together.

9           This is the innovation that we have to  
10 encourage, not just more pipes in the ground, but how  
11 do we use computer technology, new approaches to make  
12 sure our energy is used more efficiently.

13           But I think both the Secretary and the  
14 Governor have really sort of put their finger on the  
15 problem.

16           Here is the irony of all ironies: At a time  
17 where all through this country people are saying we  
18 have an energy revolution, energy is cheap, we can do  
19 anything with energy; here in New England, we're  
20 seeing it prohibitively expensive.

21           It inhibits our manufacturing. It inhibits  
22 our job creation. It inhibits our attractiveness to  
23 bring companies in. And as the differentials become  
24 wider between other parts of the country, guess what?  
25 Our ability to grow, to attract business becomes even

1 much more difficult.

2           So we have to do a great deal to sort of  
3 ensure that we benefit from the American energy  
4 revolution, and that's what we're doing today.

5           The high cost of energy in this region is  
6 sad. And I had -- I think Jason Froman came by.  
7 Jason is a student economist. And we were talking  
8 about the problems. He said, you know, all I've been  
9 hearing about is this national energy revolution where  
10 prices are falling everywhere. I didn't realize there  
11 was regional variation.

12           Well, there are regional variations. We've  
13 seen our energy costs go up about 7 to 10 percent over  
14 the last year.

15           We've seen, for example, in terms of home  
16 heating and natural gas, about a \$1,000 increase.  
17 That's a 47 percent greater increase than any place  
18 else in the country on average. So we're paying 50  
19 percent more roughly, and that's natural gas.

20           When you go to electricity, it's about 20  
21 percent more than the national average.

22           Then when you go to heating oil, it's \$2,200  
23 a year to heat a home, the average this year. I can  
24 attest to that, because I'm on the budget plan. But  
25 then when I got my extra bill this year for the first

1 time, it was like, wait a second, it must be a  
2 mistake. It wasn't a mistake. It was the cost of  
3 fuel coming in.

4           So we're seeing extraordinary increases in  
5 price. And we have to recognize this. And we also  
6 have to recognize, too, that we still get a double-  
7 whammy. Because of our requirements for EPA, we have  
8 to burn a lot of natural gas. I think 45 percent of  
9 our electricity in New England is natural gas.

10           Because we get a lot of the transmission  
11 effect from the Midwest; it goes up, it goes over and  
12 comes down. So guess what? Other parts of the  
13 country are the benefit of lower prices. They're able  
14 to pump their excess pollution into the air. It comes  
15 and hits us. So we get -- we get gifted twice, and we  
16 have to fix that.

17           So one of the areas, obviously, is the issue  
18 of natural gas and pipelines.

19           And again, another figure I think is so  
20 critical is in January, our spot prices for natural  
21 gas hit about \$80 per MMBTU. Most other parts of the  
22 country, it was \$6 per MMBTU. That's an extraordinary  
23 differential.

24           And again, we can't tolerate that. It will  
25 not allow us to grow. It will not allow us to recover

1 our jobs that we need.

2           So we are here. I think this is probably  
3 one of the most significant issues that we will face  
4 regionally in terms of economic growth and economic  
5 prosperity.

6           And that's, again, Mr. Secretary, why your  
7 presence here is so critically important, so we do  
8 appreciate it.

9           We have to work on pipeline capacity. But  
10 it's not just pipeline capacity. It's the expansion  
11 of renewable energy. It's demand reduction. It's  
12 mundane things like weatherization of buildings so  
13 that we don't use a lot of electricity. We can cut it  
14 down. It's a whole host of things that you will talk  
15 about.

16           But the whole point is really to give us a  
17 chance. If there is an energy revolution in the  
18 United States, we want to be part of it.

19           If the future of the United States is by  
20 sophisticated energy policies that lower the cost of  
21 energy, we want to be a part of it.

22           If the future is going to be about new  
23 technology, we want to be at the forefront of those  
24 new technologies.

25           With that, I thank you all, but

1 particularly, again, I thank the Secretary for his  
2 leadership.

3 Thank you.

4 MR. SCHEER: Thank you very much.

5 So we have some time for some questions.

6 What I would propose is that there's a  
7 standing mike in the middle of the room and we'll take  
8 them first come, first serve until we run out of time.

9 So it's a big opportunity to raise some  
10 questions.

11 Rob?

12 MR. THORNTON: Good morning, Secretary,  
13 Governor, Senator.

14 So we're here to talk about --

15 MR. SCHEER: Could you announce yourself.

16 MR. THORNTON: I'm sorry.

17 Rob Thornton, International District Energy  
18 Association.

19 So in this infrastructure investment, what  
20 about combined heat and power?

21 What about district energy?

22 What about more local resiliency?

23 Should we be looking at microgrids and  
24 strengthening the grid by harvesting heat rejected  
25 from power plants and use that in our cities,

1 communities, institutions? It works.

2 Is that something we should look for the QER  
3 to help with?

4 SECRETARY MONIZ: Yes, it's a good question.

5 Actually, before I address that, I want to  
6 address one little strange factoid to reinforce what  
7 Senator Reed said about this regional disparity.

8 Some years ago, we looked at the pay-back  
9 period for solar energy, and it was shorter in  
10 Connecticut than Arizona because the prices were so  
11 much higher.

12 You can kind of startle the -- it tells you  
13 what this means.

14 I'm sorry. So returning to your question.

15 So, first of all, I think microgrids are a  
16 very, very strong focus in what we are doing and  
17 clearly will be part of this QER. So that, of course,  
18 leads you to extreme generation.

19 With regard to mining power, there still  
20 remains a tremendous capacity. Let's say  
21 institutional environments, shopping malls, et cetera,  
22 et cetera.

23 As we go to the smaller and smaller scale,  
24 let's say residential scale, micro-CHP, we know we  
25 still need a lot more cost reduction.

1           It is happening and penetration is growing.  
2 But clearly, that's some years away in terms of cost  
3 competitiveness, but it could be very important.

4           District heating, kind of return to the  
5 future, actually is something that I think is very  
6 interesting. And I think we'll be in a separate focus  
7 on that, see what we can do.

8           As you apparently know very well, in many  
9 other countries, this is being used extremely  
10 effectively, efficiently and economically.

11           GOVERNOR CHAFEE: Thank you.

12           Here in our region, as I said, we have to  
13 address this regionally.

14           New England, with our six states, each have  
15 different regulations, and so that's why it's so  
16 important for us all to get together, and not only in  
17 New England, but also in the provinces and New Jersey  
18 and New York and look at this regionally.

19           MR. SCHEER: Next question. Please announce  
20 yourself.

21           MR. GARRETT: I'm Gregg Garrett. I'm with  
22 ProsperityforRI.com.

23           I have a bunch of things, just from what you  
24 said.

25           First, I don't think Rhode Island's going to

1 get economic growth and it's probably a good thing for  
2 us to start to plan for a shrinking economy.

3           Given that with our 100-year-old  
4 infrastructure of industry, we should be just simply  
5 reducing our energy, not adding to it.

6           Almost -- if we look at the climate change  
7 issue and how much oil and gas is in the ground and if  
8 it comes out, what that's going to do to the climate?

9           We just -- it makes no sense to be taking  
10 that and increasing the amount of gas and oil we're  
11 drilling.

12           MR. SCHEER: And your question is?

13           MR. GARRETT: The question is, how do get  
14 real about climate and get real about understanding  
15 that Rhode Island needs to shrink, that the economy  
16 needs to shrink and our use of fossil fuels needs to  
17 shrink so much that we don't need a gas infrastructure  
18 increase and we need --

19           SECRETARY MONIZ: To answer the question --

20           MR. GARRETT: -- and we need to leave the  
21 oil in the ground because fracking not only destroys  
22 the water supply, it adds to the methane content.

23           MR. SCHEER: Thank you.

24           SENATOR REED: Let me just say, I mean, one  
25 of the points that I think we all agree upon is we

1 have to take a multi-faceted approach to this issue.  
2 It just can't be more production of energy and better  
3 distribution. It's got to be weatherization. It's got  
4 to be demand reduction. It's got to be looking at  
5 alternative energy like solar, light, wind, and we're  
6 doing that here in Rhode Island.

7           But I would suggest that we have to continue  
8 to grow. The question is do we grow based on the old  
9 technology and the old ways of more hydrocarbons? Or  
10 do we grow on new ways?

11           In fact, that growth can be tied directly to  
12 these alternate energies.

13           If with are constructing, for example, wind  
14 turbines at Quonset Point in Rhode Island for the  
15 deployment offshore, that's not only growth, but  
16 that's new energy technology that is much more  
17 environmentally sensitive than the old technologies.

18           So it's a combination of things.

19           And one final point, and it goes to this  
20 whole issue of -- I'm not the expert, but we've got  
21 enough here so they can fill in all of my gaps and  
22 knowledge.

23           One of our problems with our pipeline system  
24 is not only is it inadequate, but it's so old that we  
25 have a lot of methane leakage. So if we could replace

1 the pipelines, we could cut a lot of methane that is  
2 exhausted into the atmosphere as a pollutant.

3 So that it's a double-whammy.

4 Not only do you get a bigger throughput,  
5 more efficient use, more modern technology, you also  
6 cut down on one of the worst forms of pollution.

7 GOVERNOR CHAFEE: I would just add, Greg, as  
8 you know, this state was the birthplace of the  
9 industrial revolution and it all started with  
10 hydropower. It's almost back to the future with  
11 access to the reliable, clean hydropower from Quebec  
12 and Labrador.

13 We have the opportunity to really be the  
14 green energy capital of North America if we work  
15 together.

16 And as I said, at one time this economy in  
17 this area was world-renowned. And that's what we want  
18 to get back to.

19 So I dispute the premise that we want to see  
20 the economy shrink. We want good jobs for our people  
21 in this region.

22 SECRETARY MONIZ: I would just add that  
23 certainly, our policies are geared towards continued  
24 economic growth, but as it's already been said, and I  
25 won't repeat a lot of it, with cleaner energy and very

1 importantly with demand-side management, so energy  
2 efficiency.

3           There is no -- there is no solution, in my  
4 view, to meeting economic environment goals together  
5 without an enormous contribution on the demand side,  
6 and part of that's technology.

7           The LED revolution that we're seeing, part  
8 of it is programs, and as the Senator said,  
9 weatherization programs.

10           We have a ways to go.

11           This state, by the way, is already a leader  
12 in energy efficiency, but the more we do there, the  
13 better it is.

14           I will have to address one other question,  
15 however.

16           The President and the administration, myself  
17 personally, we are committed to what's called the all-  
18 of-the-above approach, even as we address climate  
19 change.

20           Let me just mention one part of that  
21 specifically.

22           We have set a goal of a 17 percent reduction  
23 of greenhouse gases by 2020.

24           Relative to 2005, we are approximately  
25 halfway there, and approximately half of that comes

1 from the natural gas revolution and the substitution  
2 that we have seen for coal in power generation.

3 Now, eventually as we squeeze down more and  
4 more on CO2 emissions, then natural gas will become  
5 carbon intensive as well and it will need carbon  
6 capture if it's to go forward in that very low carbon  
7 economy.

8 But let's make no mistake about it. When it  
9 is talked about as a bridge, it is acting that way and  
10 it has been a driver of our CO2 reductions.

11 But the last thing I'll say, and Senator  
12 Reed mentioned methane emissions, that non-CO2 remains  
13 the number one driver right now in terms of our  
14 greenhouse gas emissions, and it is the most  
15 persistent in the atmosphere. So it remains the  
16 highest priority to address.

17 But we should not forget the important  
18 contributions and opportunities from non-CO2  
19 greenhouse gases, methane, where things like replacing  
20 the old urban gas distribution systems could have an  
21 enormous impact and economic growth at the same time.

22 The reliance between environmental groups  
23 and labor, for example, is advocating that.

24 Hydrofluorocarbons, that's another.

25 These are probably the two major

1 opportunities in the near term to get our greenhouse  
2 equivalency down.

3           So we have to look across the board. And if  
4 we do not continue economic growth, it will be very  
5 difficult to sustain broadly in our society and a  
6 support for continuing our fight against climate  
7 change risk.

8           MR. SCHEER: Next, please.

9           Announce yourself.

10           MR. HANDY: Hi. Art Handy. I'm with the  
11 state representative here in Rhode Island. And I also  
12 work for the American Lung Association of the  
13 Northeast. So the second hat is the one I think I  
14 wanted to put a question out there on, which is  
15 around, I guess what Senator Reed was talking about,  
16 the conveyance of a lot of the pollutants we're  
17 seeing, that they're contributing to our ozone issues  
18 here in the Northeast.

19           As Senator Reed said, we kind of get the  
20 worst of both, or however you want to look at it, if  
21 you look at Governor Chafee's caucus of gubernatorial,  
22 and then Eastern Canadian is even worse because they  
23 get of our tail pipe as well.

24           But I was really pleased to hear, Secretary,  
25 you say that part of this effort is to look at

1 collaboration and cooperation between them.

2 I'm wondering where you see those kinds of  
3 things happening.

4 And if I could throw one more in, I agree, I  
5 think that potentially natural gas has that potential  
6 to be a bridge, but if it's a bridge, it still needs  
7 an endpoint and I'm wondering what you guys are doing  
8 in terms of looking at that endpoint and rather than -  
9 - I think there's a lot happening, but it doesn't  
10 necessarily feel like there's a grand plan to help us  
11 see where we're going to get off of that as well,  
12 whether it be 20, 50, however many years down the  
13 road.

14 MR. SCHEER: Thank you.

15 That's going to be the last question.

16 SECRETARY MONIZ: I would suggest that there  
17 is a plan.

18 And certainly, key -- you're absolutely  
19 right. Of course, if you have to have a bridge, you  
20 have to have a landing point.

21 We like to make the span of the bridge as  
22 small as it can be, of course, not space, but time.

23 Anyway, the -- but the key is that we have a  
24 very, very robust technology development program for  
25 clean technology.

1           It's across the innovation chain, research,  
2 development, innovation and deployment. And I would  
3 be happy to spend another hour to describe some of  
4 those.

5           The key is cost reduction. So we are  
6 driving innovation with the objective of cost  
7 reduction of low-carbon solutions.

8           The lower the cost of those solutions,  
9 frankly, the easier it is for the policymakers to put  
10 in stringent restraints, the type that we would need  
11 in the long term.

12           So in fact, what we have -- what we say is  
13 in this bridge context, if you like, the natural gas  
14 revolution, the impacts we are already seeing from,  
15 let's say vehicle efficiency standards, which are also  
16 contributing to the lower reductions, the developments  
17 we are seeing in terms of alternative fuels, et  
18 cetera.

19           They are -- one way to look at it is they  
20 are giving us some time to reduce the emissions in  
21 near term, but time we better not fitter away in  
22 developing the low-cost, long-term solutions. And  
23 that's, again, across the board: efficiency,  
24 renewables, solar, wind, but also the sometimes-  
25 forgotten renewables, geothermal, hydro, you name it.

1                   Nuclear power. Looking at potentially  
2 smaller modular reactors for the 2025 time frame and  
3 looking at things like carbon capture on a large scale  
4 to enable some fossil fuel combustion even in a low  
5 carbon economy.

6                   So that really is the agenda. We have to  
7 push efficiency now.

8                   The gas substitution for coal is having  
9 major impacts. And we've got to innovate to bring in  
10 those technologies in a timely way.

11                  I'll just add one last point to the last  
12 point, that innovation is critical for meeting our low  
13 carbon challenge, for meeting our energy security  
14 challenge and for having our economy grow in an  
15 economically restrained environment. But it really is  
16 also important for our place in the global economy.

17                  The clean energy markets are forming in  
18 front of our eyes internationally. And we want to be  
19 at the head of that train, not at the caboose. So we  
20 are investing very heavily.

21                  To give you a scale, Ceres, a well-known  
22 clean energy investment group, has estimated that over  
23 the next 40 years, the clean energy infrastructure  
24 prize, if you like, or need, is roughly a trillion  
25 dollars a year globally. That's the market we want to

1 be a big part of.

2 By the way, that number may sound  
3 exaggerated. It's not. That corresponds to about a  
4 half percent of GEP over that time period.

5 Those investments are going to be made. We  
6 want them to be made running on clean energy future  
7 and we want to be a huge part of the providers of that  
8 future.

9 MR. SCHEER: Thank you very much for the  
10 panel.

11 I'd just like to remind everybody that there  
12 will be an opportunity for public comments at the end.  
13 So if you have something else you want to say, you can  
14 sign up to do that.

15 And there is an e-mail address,  
16 QERcomments@HQ.DOE.gov, where you can send in your  
17 remarks.

18 So to segue into the next phase of this  
19 event, what I'd like to do is call to the podium here  
20 the first panel.

21 Our first panel has to do with  
22 infrastructure needs for heat and power.

23 And this would Anthony Buxton, Kevin  
24 Hennessy, Joe Rose, Michael Trunzo and Andy Ronald.

25 Please come up.

1                   Names tags are coming out and you can see  
2 where you sit.

3                                   (Pause In Proceedings)

4                   MR. SCHEER: We made that segue fairly  
5 smoothly, I would say.

6                   So I think we've got a very good start to  
7 our event here today.

8                   We have a good framework going as to what  
9 the challenge is and what the opportunities are here  
10 in New England with respect to energy infrastructure,  
11 and now we are lucky to have five practitioners in  
12 that area who have agreed to offer their perspectives  
13 on this topic.

14                   And so first off is Anthony Buxton. He's the  
15 general counsel with the Industrial Energy Consumer  
16 Group.

17                   Anthony, you get to kick this off.

18                   MR. BUXTON: Thank you very much.

19                   Good morning, everyone.

20                   I want to thank the organizers, Melanie and  
21 your terrific staff, for allowing the Industrial  
22 Energy Consumer Group to be represented here today.  
23 We don't get invited to many meetings.

24                   And I also -- I want to show you why. We  
25 tend to speak in hyperbole and it's because we're

1 afraid.

2           And the speakers this morning, who were  
3 superb in outlining the issues that we see as --  
4 highlighted some of the facts that we want you to  
5 know. And they highlighted the challenge and the  
6 problems.

7           What I want to tell you is a few little  
8 vignettes.

9           On one Friday this winter, the citizens of  
10 New England and businesses spent over \$100 million  
11 more for natural gas and electricity than they should  
12 have if they lived in, for example, New York or  
13 Pennsylvania.

14           A million BTUs of natural gas coming out of  
15 Marcellus Shale on that day sold for \$2.86. That's  
16 the equivalent of oil, No. 2 heating oil at 40 cents a  
17 gallon, which is a fantasy for most of us.

18           And when that gas got to New England, it  
19 cost \$32.88 solely because of the so-called basis  
20 differential in premium because of the shortage of  
21 pipeline capacity.

22           Now, these are abstract numbers. They are  
23 about stuff.

24           My clients closed one of their mills with  
25 800 people off and on for two consecutive months

1 throughout most of the two months.

2 Another plant which makes Chinette paper  
3 plates did so, and it makes it out of 100 percent  
4 recycled fiber, with most renewable energy. They were  
5 forced to shut down because of the cost of electricity  
6 on a shift-by-shift basis.

7 The Gorham paper mill shut down on a regular  
8 basis in New Hampshire.

9 This is a real cost. Those families weren't  
10 paid or paid as much and they suffered tremendously.  
11 And this is the human face of the shortage of the  
12 natural gas pipeline capacity.

13 The challenge here is to find a solution,  
14 and that's part of what our panel will talk about  
15 today, I'm sure.

16 Everyone -- virtually everyone, not  
17 everyone, but virtually everyone agrees we need more  
18 natural gas pipeline capacity.

19 I left a study out front for you to take a  
20 copy of showing that what we need is 2 BCF per day,  
21 more natural gas pipeline capacity than we currently  
22 have.

23 We commend the governors for recommending  
24 one BCF. The study was done to show that that would  
25 be very helpful, but not helpful enough.

1           We think the governors are now moving to a  
2 bit of a higher number, and that's a step in the right  
3 direction.

4           Now the question is the critical one and  
5 I'll close with this: We have a human tendency to  
6 recognize problems and not to see the solutions  
7 through to the end. It is a tragedy.

8           One of those, obviously, is climate change.

9           As the Secretary said, quite wisely, we have  
10 a limited amount of time, but every day or year we  
11 waste is a day or a year we don't get back. It takes  
12 away our latitude to try new technologies and to be  
13 successful.

14           It is also true, and this is the hyperbole  
15 that I engage in sometimes, and this is true: There  
16 has not been a famine in recent human history where  
17 the problem was a shortage of food. It has been an  
18 unwillingness of humans to give the food to the people  
19 who are starving.

20           We have a tendency to identify the problem  
21 and think that's enough.

22           It's not enough. The paradox that we're  
23 talking about is the lowest cost supply of natural gas  
24 on the planet in the Marcellus Shale, 250 miles from  
25 here, and not having the human will to get it here.

1           We have to overcome that. And I look  
2 forward to working with all of you in that solution.

3           Thank you.

4           MR. SCHEER: Thank you, Tony.

5           So if you can hold your applause until the  
6 end of the panel, it will just expedite things a  
7 little bit.

8           Next we're going to hear from Kevin  
9 Hennessy, the director of federal, state and local  
10 affairs for New England Dominion Resources.

11           I'd just like to remind everybody, all of  
12 the panelists, if you prefer to sit in your seat,  
13 that's fine, too. You don't have to use the podium.

14           MR. HENNESSY: Thank you.

15           Good morning, everyone.

16           I would like to thank Secretary Moniz and  
17 the Quadrennial Energy Review task force for inviting  
18 me to participate today, my distinguished panelists  
19 and guests here.

20           It's a critical issue.

21           My name's Kevin Hennessy. I'm the director  
22 of the federal, state and local affairs for Dominion  
23 in New England.

24           And most folks in this region hear Dominion  
25 and they think, well, what do we do in New England.

1 We own Millstone nuclear power plant, Manchester  
2 Street power station, but we are a larger entity.

3           What I always tell my family and friends  
4 that don't know what I do and I'm trying to explain my  
5 day-to-day job, who I work for, is we're an energy  
6 company. We're not just a utility; we're an energy  
7 company. And essentially, we have our fingers in every  
8 facet of the business.

9           So when Secretary Moniz was talking about an  
10 all-of-the-above policy that we need to pursue as a  
11 country, that's what Dominion is doing in practice  
12 right now.

13           I'm proud to say our leadership internally  
14 has been touting that for quite a while. And I'll be  
15 able to talk about some of the initiatives we're doing  
16 here in New England.

17           The two take-homes that I want to comment on  
18 today are fuel diversity and collaboration.

19           Obviously, everyone's aware of the  
20 infrastructure constraints we have right now. They  
21 need to be addressed. We're taking steps to start to  
22 address that problem. The issues's been pointed out  
23 and now it's time for solutions.

24           But in the interim, before we get to those  
25 solutions, fuel diversity is critical, as is

1 collaboration. Because as you'll see, energy touches  
2 -- here in the room, we've got federal interests.  
3 We've got regional interests. We have state  
4 interests. And we have local interests. And it's  
5 hard to kind of mesh all four of those together and  
6 come to the right solution.

7           A quick overview: Dominion, we are a  
8 utility in Virginia. We are the main Virginian power  
9 with 2.5 million customers in Virginia and North  
10 Carolina and the midwest Ohio, West Virginia,  
11 Pennsylvania, New York, some of that Marcellus Shales  
12 fields.

13           We are an energy company that has almost  
14 11,000 miles of natural gas pipeline; a local  
15 distribution company in Ohio, West Virginia with 4.2  
16 million gas customers.

17           And then Dominion Generation has about 23.5  
18 gigawatts or 23,000 megawatts of power. Almost 4,000  
19 of that is merchant up here, focused heavily in New  
20 England. That's the Millstone, Manchester Street.

21           The other assets that we have here in New  
22 England that are growing are some renewables.

23           And near by in Connecticut, in the last  
24 year, we've invested in a fuel cell facility, which is  
25 in Bridgeport, Connecticut, which is an urban center,

1 its largest city in Connecticut.

2           And on a two-acre facility in downtown  
3 Bridgeport, a former Brownfield site, we erected with  
4 our partner, Fuel Cell Energy, a 15-megawatt power  
5 plant. It's essentially a microgrid. It's connected  
6 to the distribution system at three interconnection  
7 points, and the power is going to a local utility  
8 company. And it's the largest fuel cell installation  
9 in North America. That's something that we're excited  
10 about.

11           We're excited about the technology. It's a  
12 base-load power plant. It doesn't run intermittently.  
13 It runs north of 90 percent of the time. And it's  
14 something that we're looking to as critical  
15 infrastructure.

16           We also opened up a 5-megawatt solar  
17 facility in Connecticut at the same time, both the end  
18 of last year.

19           So we're growing.

20           The story here that I think is important to  
21 know on fuel diversity is our Manchester Street  
22 station, which is the gas plant right along the  
23 highway here in Providence, that's a natural gas  
24 facility.

25           But in 2010, we invested in our facility and

1 upgraded our fuel oil ability. So now we've  
2 recommissioned our ability to be dual fuel.

3           And the reason it's critical is what  
4 happened this winter.

5           In the first quarter of this year, the plant  
6 ran 45 percent of the time on fuel oil. That's a  
7 phenomenal number, from a reliability standpoint, from  
8 an economic standpoint, because for most of this time  
9 this first quarter, fuel oil was about one-third  
10 cheaper than natural gas on an MMBTU basis.

11           So it helped customers. It helped the ISO  
12 New England grid remain liable and helped us to  
13 operate and run.

14           The other critical fuel diversity factor is  
15 our plant, Millstone, the nuclear power plant that I  
16 touched upon. That's down in Connecticut about an  
17 hour down 95.

18           That ran for the first quarter of this year  
19 at a 99.5 percent capacity factor. So it essentially  
20 ran nonstop, round the clock.

21           Now, I highlight that from a collaboration  
22 standpoint because in order for us to succeed from an  
23 economic, environmental standpoint and reliability  
24 standpoint, we all need to be pursuing the same end  
25 goal.

1           And not to be an alarmist, but there are  
2 various interest groups at every level. They all have  
3 different charges.

4           And one thing that I want to highlight is  
5 that you need to keep your eye on the bigger picture,  
6 and this is by no means a critique, but there's a  
7 cooling order coming out, expected next month by EPA.

8           Let's just take the worst-case scenario.  
9 Let's say they go as far afield as they can and demand  
10 closed-loop cooling systems.

11           What does that do to a region like New  
12 England, where you have three nuclear power plants  
13 along the coast? You've got Seabrook id New  
14 Hampshire. You've got Pilgrim in Massachusetts and  
15 Millstone in Connecticut.

16           That's 4,000 megawatts of power that we rely  
17 on as a region, that we rely on for environmental  
18 benefits. So it's critical that we work together and  
19 make sure we focus on those goals.

20           I'm happy to talk about these issues during  
21 the Q and A.

22           MR. SCHEER: Thank you, Kevin. I appreciate  
23 that very much.

24           Next we have Joe Rose, who's the president  
25 of the Propane Gas Association.

1 Joe, the floor is yours.

2 MR. ROSE: I'd like to thank the Secretary  
3 and his dedicated team at DOE. I've gotten lots of  
4 late-night phone calls and e-mails, so they're working  
5 hard.

6 So you're probably saying, what is propane?  
7 Well, that's the stuff I cook with in my backyard  
8 barbecue.

9 Well, propane is the natural gas that goes  
10 beyond the means. And here in New England, we have  
11 the Granite City. It's not especially conducive to  
12 expanding natural gas mains, nor are lots of areas in  
13 rural New Hampshire, Maine even Vermont.

14 It's amazing to me how much propane exists  
15 inside the 495 beltway in Boston.

16 So where natural gas can't go or it's too  
17 expensive to go, propane is the solution.

18 Propane comes out of same pipe in the ground  
19 as the natural gas. So it's an American fuel.

20 This past winter brought tremendous  
21 challenges to the propane industry, as it did to every  
22 other form of energy in New England. We recognized  
23 early on that we were going to have some problems.

24 Crop demand in the Midwest, farmers used  
25 propane to dry their corn. Well, the corn crop was

1 huge and came in late. And the demand for propane  
2 this past winter was five times what it was last year.  
3 So that eats up supply.

4 We had colder than normal weather. We  
5 talked about the polar vortex this morning. We all  
6 know what impact that had on us personally. It had  
7 tremendous impact on our propane supply.

8 So we recognized early on that we were going  
9 to have a problem.

10 We have a tremendous asset here in New  
11 England that other regions of the country don't have.

12 We have two import terminals that can bring  
13 propane from other countries in by ship in large  
14 quantities. One of them is right down on the harbor  
15 here in Providence. The other one is in Wilmington,  
16 New Hampshire.

17 So we got together and we ordered propane  
18 back in November and December that was unplanned.

19 This graph just gives a little bit of an  
20 illustration of the surplus of demand in the United  
21 States from October to March, which was 750 -- I mean,  
22 570 million gallons higher than normal.

23 So we brought propane into these two import  
24 terminals, 87 million gallons of one plant supply for  
25 the New England market, which is about 15 percent of

1 the normal annual demand. Otherwise, we would have  
2 been hearing here in New England, like they were in  
3 the Midwest, about customers who were having to go  
4 without.

5 I'm happy to say that no New England  
6 customer went without propane this winter.

7 So our national organization, Natural  
8 Propane Gas Association, has formed the task force to  
9 study the circumstances and to try to come up with  
10 solutions, because as several of the other panelists  
11 have said, solutions is what it's all about.

12 So I want to focus on a couple of the  
13 impacts here in the Northeast.

14 First of all, we sell 7 percent of nation's  
15 propane, but we only have 1 percent of the storage.  
16 And New England happens to be the only region of the  
17 country where propane sales are growing. And we're  
18 growing at about 8 percent annually.

19 There's a combination of converting some  
20 homes that are heated with fuel oil now and the  
21 evolution of our auto gas business where propane is  
22 becoming more and more popular as an automotive fuel.

23 So why don't we have more storage? Andy  
24 Robbins is going to be speaking about a big project in  
25 New York that would help with more detail in a minute.

1                   But the real issue with storage is the fact  
2 that we're having trouble getting permits. The  
3 propane companies and the industry as a whole pay for  
4 their own projects. No government money. But we do  
5 need help to get permits.

6                   And while we all want to be able to turn on  
7 the light switch and turn off the thermostat and have  
8 all the energy that we want, a lot of us have a real  
9 hard time with storage projects in our communities.  
10 So that's a real concern.

11                   One of the issues -- and the reason I  
12 mentioned we have these import terminals, they've been  
13 pretty much in mothballs for the last two years  
14 because of economics.

15                   Propane in the rest of the world is about 80  
16 cents to the dollar a gallon higher than it is here in  
17 the United States. So there's been a huge reluctance  
18 to bring propane in because nobody wants to charge  
19 customers more money.

20                   And so rail's become the predominant  
21 transportation mode for New England propane. And you  
22 may see railcars like this going through Rhode Island.

23                   We've been working hard to try to permit  
24 more rail facilities, more reliable rail.

25                   I knew I couldn't do this in five minutes,

1 so I'll wrap up.

2 MR. SCHEER: You were right.

3 MR. ROSE: Here's one of the examples: this  
4 winter when rail became a problem, we talked about the  
5 vortex and Mother Nature.

6 Again, just to wrap up, the third way we  
7 bring propane into the region is by pipe. It's an 8-  
8 inch pipe. It comes from Texas, ends outside of  
9 Albany, New York.

10 So lots of transportation in New England;  
11 lots of issues.

12 To recap, even though our production in the  
13 United States is at record levels of propane, we still  
14 have infrastructure and supply issues. And the  
15 biggest and most critical need that we have in New  
16 England is for more supply that we can fill, storage  
17 that we can fill in the summer, even out the curve on  
18 the infrastructure and be able to continue to keep New  
19 England consumers safe and warm.

20 So thank you.

21 MR. SCHEER: Thank you very much, Joe.

22 Hold the applause to the end. That was a  
23 great talk, it was.

24 Next we're going to hear from Michael  
25 Trunzo, President and CEO of New England Fuel

1 Institute.

2 Michael, the floor is yours.

3 MR. TRUNZO: Thank you. Good morning.

4 Mr. Secretary and distinguished guests,  
5 thank you for the opportunity to represent the home  
6 heating oil industry here today.

7 The New England Fuel Institute members serve  
8 more than 2 million homes in New England, and they  
9 directly support more than 14,000 jobs in the region.

10 Let me begin by saying that today's home  
11 heating oil is much different than even what your  
12 father used. And it's an important part of the energy  
13 mix in this region. Today it's increasingly abundant.  
14 It's clean. It's efficient. And yes, it's even  
15 renewable.

16 So our policy choices and investments and  
17 decisions will make the United States truly energy  
18 independent. And the home heating industry is well  
19 positioned to be part of the solution.

20 There are opportunities for the  
21 administration to assist New England in addressing its  
22 energy future.

23 They include support for the implementation  
24 of a consistent sulfur specification for diesel and  
25 home heating oil, to maximize refinery capacity, fuel

1 supply and regional storage infrastructure, enhancing  
2 and incentivizing national and regional biodiesel  
3 production and promoting a more efficient  
4 transportation of crude oil to East Coast refineries  
5 via rail, pipeline and more Jones Act eligible  
6 vessels.

7           To support these initiatives, our industry  
8 has a downstream fuel distribution network that is  
9 fully operable and is already delivering the newest  
10 generation of clean, efficient and renewable heating  
11 oil to millions of homes in the region that has  
12 developed without the support of taxpayer money and  
13 none is needed to maintain it.

14           The sulfur content in heating oil in most of  
15 the region would dramatically reduce in July of this  
16 year to 500 parts per million and again in July 2018  
17 to 15 parts per million. Thus, heating oil will  
18 become the same product as diesel fuel.

19           Why is this important? Because it provides  
20 for better air quality, consumer savings and increased  
21 regional storage infrastructure, as eventually we'll  
22 be dealing with one fuel for multiple purposes.

23           America's fuel dealers and our biodiesel  
24 production partners are reinventing the home heating  
25 industry. And it's really part of the great American

1 energy success story.

2           By increasing biodiesel blends with  
3 ultimately low-sulfur heating oil or diesel, we  
4 produce a fuel that is renewable and at certain  
5 funding levels is environmentally cleaner than natural  
6 gas.

7           We achieve these gains because NSTM diesel  
8 has no carbon footprint. They're being -- it's being  
9 blended right now up to 5 percent and the industry  
10 will be applying for up to a 20 percent specification  
11 for fuel in the upcoming months.

12           We find terms of the administration to  
13 explore ways to increase production. This includes  
14 the support of the retroactive renewal of the recently  
15 expired one-dollar-per-gallon biodiesel tax credit and  
16 keeping the volumetric requirement for biodiesel  
17 production in EPA renewable fuel standard on parity  
18 with current and future production levels.

19           As we continue to transition to a  
20 sustainable supply, the region also needs to  
21 strengthen this petroleum transportation  
22 infrastructure.

23           As I said, this includes transportation by  
24 rail, pipeline and ocean-going vessel.

25           As you may know, the Jones Act restricts

1 U.S. port-to-port deliveries to vessels that are  
2 American made, flagged and crude. This limits the  
3 number of vessels eligible to deliver product into New  
4 England, and this must change. We need more ships.

5           With regard to pipelines, there has been  
6 discussion about reversing the flow of the  
7 Portland/Montreal pipeline to allow transportation of  
8 Canadian oil into Maine, South Portland marine  
9 terminal facilities. This will help bring crude oil to  
10 the East Coast refineries and the urban oil refinery  
11 in New Brunswick, Canada.

12           As mentioned earlier, the region has also  
13 seen a public policy movement to expand access to  
14 natural gas using state and taxpayer funds.

15           The recent winter provided a perfect example  
16 of the stresses caused by simultaneous demands for  
17 industry, electrical generators and space heating  
18 needs.

19           Large-scale energy users, including power  
20 generators, had to return to the more reliable energy  
21 source, heating oil. This reinforces the fact the  
22 heating oil industry has a proven track record of  
23 bridging the gap without costly public investment.

24           What is needed to fix this is not extensive  
25 pipeline expansion, but rather adequate planning by

1 utilities and their customers to eliminate and reduce  
2 dramatic shifts in demands which cause price spikes.

3 Our members do this every day through the  
4 quantities market.

5 Policy makers must also consider much of the  
6 natural gas infrastructure is aging and obsolete and  
7 is prone to leaks. We have -- we believe it should be  
8 fixed, not necessarily replaced.

9 In conclusion, we appreciate the Secretary's  
10 comments that the all-of-the-above energy strategies  
11 does include all fuels, and we look forward to working  
12 with you in the future.

13 Thank you.

14 MR. SCHEER: Thank you very much, Michael.

15 And our last speaker, before we get into our  
16 round-table conversation here, is Andy Ronald. He's  
17 the vice president of commercial development and  
18 national accounts with Crestwood.

19 The mic is yours.

20 MR. RONALD: Thank you very much, Secretary,  
21 and the rest of the group of the Department of Energy,  
22 for giving us an opportunity to be here today.

23 Briefly, my responsibilities are to seek and  
24 develop assets that bring value to both the producer  
25 as well as the consumer for the movement of natural

1 gas. Mostly propane is my specific area of expertise.

2 I've been in the industry for 44 years.

3 I've been in the NGL business for 28 years.

4 What I'd like to do today is to take you  
5 through a quick slide deck, and I don't know whether I  
6 can speak as fast as Senator Reed, but I will try.

7 A brief introduction to our company.

8 Next slide.

9 Our company is basically categorized by  
10 performing two functions: We gather energy,  
11 particularly natural gas. We process it. We take the  
12 liquids out of it. We gather it from exploration  
13 wells that the producer drills. We process it. And  
14 we return cash to the producer.

15 We operate all the major areas in the United  
16 States with gathering and processing systems.

17 You can see here a quick run-down of our  
18 asset summary. We handle 1.3 BCF natural gas  
19 transmission capacity daily. We have 2.1 BCF  
20 gathering capacity, 1,260 miles of pipe and 80 BCF of  
21 natural gas storage capacity, four of which are  
22 located here in New England.

23 We have eight natural gas processing plants  
24 with 600 MCF processing capacity daily. 125,000  
25 barrels per day of crude oil gathering systems. We

1 operate NGL and crude and logistics businesses with  
2 trucks, railcars and other assets.

3           These are our customers -- this is an  
4 example of our customer deck. We provide producers  
5 and refining customers. We take away achieving flow  
6 assurance and optimal net back for their product  
7 value.

8           We offer hedging activities in the major  
9 hubs, liquidity in price discovery.

10           We're well positioned to manage local supply  
11 dislocations.

12           We have a supply facility, a storage  
13 facility located in Bath, New York. And we handle  
14 about 118,000 barrels a day of natural gas liquids.

15           The facilities -- the Bath facility, the  
16 Seymour terminal and the South Jersey terminal are all  
17 facilities that we operate daily.

18           The project that we're talking about  
19 developing that we've been in permitting for almost  
20 five years is 2.1 million barrels of underground NGL  
21 storage in Watkins Glen, New York. It will connect --  
22 it is connected to the Teppco pipeline, which allows  
23 us to bring product in from Marcellus in Utica  
24 production and take it out further to Selkirk  
25 (phonetic) by pipeline.

1           It will have rail. It will have receipt  
2 capability to rail and truck. And we've been avoiding  
3 regulatory approval for five years.

4           This right here is a quick example.

5           And in summary, what it says is, markets  
6 where there's an abundance of product, the price is  
7 low. Markets where their product supply and demand  
8 are balanced, the price is in equilibrium. And in  
9 markets where demand exceeds supply, the price is very  
10 high.

11           That's what everybody has referenced here  
12 recently in the periods that we've recently been  
13 approved.

14           The chart on the upper right shows you what  
15 is going to happen in Marcellus and Utica Shale with  
16 energy in the United States.

17           It -- by 2023, we'll have 700,000 barrels of  
18 gas liquids produced in that area coming out in  
19 natural gas. Of that 700,000, about 300,000 is  
20 ethane, leaving about 400,000 barrels a day of propane  
21 and butane, equally split about 50-50 of each one,  
22 giving about 200,000 barrels a day of propane in this  
23 region.

24           Our job is to figure out ways to get that  
25 and keep that in this market.

1           You can see on the right, the bottom line is  
2 -- top line is -- the blue is production.

3           The middle black line is the capacity.

4           The Teppco pipeline annualized at 65,000  
5 barrels a day.

6           When you stop and think of 200,000 barrels a  
7 day of propane production up here, it has no place to  
8 go. It has no infrastructure to hold it. It has to  
9 be exported.

10           I'm going to wrap up real quickly.

11           These -- I had a lot of slides here about  
12 pricing.

13           But in essence, product is going to flow to  
14 the demand. And in this case, there's no way to store  
15 it.

16           We have a storage facility proposed in  
17 Watkins Glen, New York for 2.1 million barrels. It's  
18 a \$40 million facility that we're prepared to build  
19 with private funds. It's connected to the Teppco  
20 pipeline.

21           We've been in a very challenging regulatory  
22 market for four years. It's completed a strategic  
23 risk analysis. The outcomes were extremely favorable  
24 and satisfied all engineering and subsurface  
25 requirements. It's ready to go. And we would do our

1 best to bring it on as quickly as possible.

2 Just in conclusion, growing Shale production  
3 in Marcellus and Utica provide a significant amount of  
4 propane for this region, if we could figure out ways  
5 to use it. The seasonality of propane requires  
6 storage up here, because it's here.

7 We're producing it. All we need to do is  
8 store it. So it's ready for your demand.

9 Last winter we imported 2. -- roughly 2  
10 million barrels of propane. As Joe said, that would  
11 have been unnecessary with our facility.

12 Thank you very much.

13 And if there are any questions, I'd be glad  
14 to answer them.

15 MR. SCHEER: Thank you very much, Andy. We  
16 appreciate that very much.

17 To remind the audience here that the slides  
18 that speakers show, they will be available on the  
19 [www.Energy.gov/QER](http://www.Energy.gov/QER) web site in a couple of days.

20 So thank you for your opening remarks. Much  
21 appreciated.

22 So now we're going to have a little bit of a  
23 conversation.

24 I've got some questions I'm going to pose.  
25 And the way to get us started is we'll just go down

1 the row here and get your responses to them.

2           Some of you may have provided answers to  
3 this already in your remarks, but we can give you an  
4 opportunity to refine them and hone them down, make  
5 them as hard-hitting as you can.

6           So the first thing I'd like to put on the  
7 table for you is: What are your specific  
8 recommendations regarding appropriate federal roles,  
9 in particular, and hoping to address these energy  
10 infrastructure constraints for heating power,  
11 including possibilities that you might have for  
12 executive, legislative, regulatory or administrative  
13 actions?

14           So what suggestions do you have?

15           And Tony, we'll start off with you.

16           MR. BUXTON: Thank you very much.

17           Specific to the natural gas pipeline  
18 efficiency or deficit, the governors, as everyone here  
19 knows, in New England have gathered together, joined  
20 together, and through Nesco have sent a letter to ISO  
21 New England asking ISO to develop a tariff that would  
22 be filed with FERC and hopefully approved by FERC.

23           That would make up for, that would  
24 compensate for the absence in New England of any  
25 creditworthy energy that can sign up the kind of

1 contract as FERC requires for pipeline contracts and  
2 allow pipeline expansions or greenfield construction  
3 to begin.

4           The challenge here is aggregating consumers  
5 and their credit through governmental processes.

6           And there are, obviously, people who oppose  
7 this, who oppose natural gas. So there will be a  
8 fight at FERC.

9           So specifically, I would ask, Secretary,  
10 since there's no case pending presently, to do  
11 whatever he can with the administration to make sure  
12 that FERC takes the steps that have to be taken of  
13 approving the ISO tariff.

14           The only other option available -- there are  
15 two other options available.

16           The first is, we can eliminate competition  
17 among generators and reregulate generators in New  
18 England.

19           I'm not sure there are a lot of people who  
20 want to do that. That would be a big step backwards  
21 away from competition.

22           The second choice would be for each of the  
23 six states to do what Maine has done and authorize  
24 their state to enter into 200, 400 million cubic feet  
25 of capacity or whatever it would take to meet their

1 need.

2 That is a study in the failures of  
3 federalism and, frankly, over time probably won't  
4 work.

5 So we don't have much of a choice. We need  
6 to focus on, as I said in my initial remarks, getting  
7 people to do what obviously has to be done.

8 MR. SCHEER: Thank you, Tony.

9 Kevin, specific suggestions, recommendations  
10 for federal executive action, legislative, regulatory,  
11 administrative?

12 MR. HENNESSY: I don't have a specific  
13 recommendation other than what I kind of closed on in  
14 my prepared comments where I think it's critical, and  
15 I think today is one of the first steps of that, is  
16 having all the entities engage: federal, regional,  
17 New England, NESCO involved, states, Hartford this  
18 afternoon and here in Providence.

19 And I think having DOE talk with FERC, as  
20 Anthony mentioned, having EPA involved in the  
21 conversation, I think that's -- the critical  
22 infrastructure is stepping back trying to realize that  
23 there are goals we need to address, not only here in  
24 New England but throughout the country, and not all of  
25 the goals are aligned.

1           So we need to try to prioritize. And that,  
2 I think, is the critical first step for the federal  
3 government.

4           MR. SCHEER: Thank you, Kevin.

5           Joe, do you have some specific  
6 recommendations you would like to provide?

7           MR. ROSE: I do.

8           For our industry this season, we had this  
9 perfect storm of a huge crop of corn which depleted  
10 inventory, then also the extreme cold.

11           One of the things that the propane industry  
12 would like to see is increased visibility from EIA on  
13 inventories and exports so that we could have real-  
14 time data that would allow the user to build a  
15 forecasting model based on certain consumption  
16 assumptions.

17           And then as I mentioned, we in New England  
18 brought propane in from overseas to avoid a crisis  
19 even though it drove up prices.

20           If we had more increased visibility and  
21 availability of real-time data from EIA, we would be  
22 able to build forecasting models in lieu of having  
23 additional storage.

24           So the two things that I guess I would ask  
25 is that we work with the EIA on the increased

1 visibility of the data. And then if there's anything  
2 we can do to regulate or encourage the approval of  
3 some of this storage permitting, it would really take  
4 the edge off and provide a tremendous amount of  
5 stability, not only in the availability of the product  
6 but also in the price.

7 MR. SCHEER: Thank you very much, Joe.

8 Michael, specific recommendations?

9 MR. TRUNZO: Thank you.

10 I pretty much outlined them in my testimony.

11 But in Connecticut, Rhode Island, Vermont  
12 and Massachusetts, those states are all moving to  
13 lower sulfur fuel in July of 2014, and again, 15 parts  
14 per million.

15 And I think the region will see a change in  
16 distribution. And we're hoping that given that New  
17 York, Connecticut, New Jersey are already moving to  
18 those same specs, that the infrastructure will move to  
19 15 BPM quicker than the statutory rules allow.

20 So we would like to see the administration  
21 support whatever move we can to have a regional fuel  
22 to that lower spec.

23 As I said, the biodiesel production is very  
24 big for our industry. We use biodiesel as a blending  
25 agent to truly make heating oil a very, very clean

1 fuel. It has a number of uses across the spectrum.  
2 And it will be a truly important part of our future  
3 and the region's future.

4 As pipeline expansion is discussed, I don't  
5 believe that they can reach everyone in those 2.3  
6 million homes that we serve. The majority of them  
7 will continue to stay on heating oil.

8 Lastly, dealing with the Jones Act is  
9 probably one of the bigger issues we have, trying to  
10 figure out how to get Gulf Coast oil crude up to New  
11 England refineries. That's a big issue for us.

12 The last thing I mentioned was the ASTM  
13 standards for biofuels.

14 In June, I believe the power industry will  
15 be going before ASTM to move to a B20, which is  
16 heating oil blended with 20 percent biodiesel. As the  
17 heating oil spec right now, it's MB5. We'd like the  
18 administration's support for that because we work  
19 hand-in-hand with Brookhaven National Lab and their  
20 tests have truly found that blending to B20 and even  
21 to B100 have greater efficiencies for appliances and  
22 to home energy systems and they reduce maintenance and  
23 cost to the consumer and the biodiesel is less  
24 expensive than traditional fuel oil.

25 MR. SCHEER: Thank you, Michael.

1           Any specific things you would like to  
2 suggest?

3           MR. RONALD: I think that the United States  
4 is in the middle, as several people pointed out, of a  
5 tremendous energy revolution or evolution, if you  
6 will. I think it's early in the stages of this.

7           I think what we have to step back and take a  
8 look at is, in New England it's not a shortage of  
9 product. We have plenty of product. It's getting --  
10 and I've heard this time and time again, it's getting  
11 that product to the consumer in an efficient manner.

12           It takes pipeline expansion and rejuvenation  
13 for natural gas. And it takes increased storage  
14 capacity to keep this energy that's produced in the  
15 United States here in New England where it's needed  
16 when it's needed.

17           Otherwise, there's no alternative if this  
18 product is going to be exported offshore. And it's --  
19 it will be the American consumer, and it will be the  
20 Northeast consumer that pays the bill for that.

21           We have a shelf-ready project to that effect  
22 in Watkins Glen, New York. It's permitted. It's  
23 ecologically sound. It's -- the subsurface structure  
24 has been approved. It's safe. We operate them all  
25 over the United States.

1           We'd like to recommend in any way that in  
2 everybody's support that we seek to get that project  
3 approved as quickly as possible.

4           MR. SCHEER: Thank you very much, Andy.

5           That's a good segue into my next question  
6 for you all.

7           Because we -- the constant theme, as you  
8 just pointed out, is the need. It's not a fuel supply  
9 issue. It's a transport and delivery and storage  
10 issue. And that involves capital investment for new  
11 pipelines, new storage facilities, et cetera.

12           So what I'd like to have you all comment on  
13 is -- the following question is kind of a two-part  
14 question having to do with your suggestions for either  
15 financial, market or other kinds of incentives to  
16 stimulate investment in these kinds of new capital  
17 assets.

18           But before you talk about your ideas for  
19 what to do about it, maybe you could also comment on  
20 what are the main barriers that are standing in the  
21 way from the project, like Andy just explained in  
22 Watkins Glen, but others as well.

23           What's holding these projects back and what  
24 sort of incentives might be needed before --

25           Okay. Well, let's -- thank you. The

1 Secretary, he has to go off to Hartford.

2 MR. MONIZ: I apologize. But thank you very  
3 much.

4 MR. SCHEER: We won't miss a beat. We'll  
5 keep going here. Thank you.

6 And so getting back to the question,  
7 everybody kind of catches the drift of it. We've got  
8 this capital investment in pipelines and storage  
9 facilities.

10 What are the opportunities, investment  
11 opportunities?

12 What are the barriers to them?

13 What sort of incentives, market financial  
14 and otherwise, would you recommend to the QER people  
15 who are still here listening to you?

16 Tony, you can go first.

17 MR. BUXTON: I think we just saw the answer  
18 as the Secretary left. The Secretary has to get from  
19 here to Hartford, and apparently it's not easy, and so  
20 he has a State Trooper to get him there.

21 I think what we need for our projects is a  
22 State Trooper.

23 But not being facetious, but I think that we  
24 have the mechanisms in many instances, particularly in  
25 the natural gas pipeline area to make decisions and to

1 implement decisions.

2           We need people to make the decisions and to  
3 not let things get further bogged down when there is a  
4 virtual consensus on what needs to be done.

5           That's easily said, I know, and hard to do.  
6 But it's there. And it's just a matter of deciding to  
7 do it.

8           We do have a problem with inconsistency with  
9 regulatory paradigms.

10           I think I've heard several examples of that  
11 from this panel.

12           MR. SCHEER: You mean among federal, state,  
13 local jurisdictions?

14           MR. BUXTON: Yes. And even within the  
15 federal government.

16           Let's just take, for example, the one that's  
17 been referred to about air quality.

18           We've taken a huge step backwards. We've  
19 made great strides -- we've made tremendous strides in  
20 the industry without necessarily any requirement to do  
21 so based on the availability of fuels, and yet this  
22 winter we had many days when we burned more coal and  
23 oil than gas.

24           Stated the other way, if we were able to  
25 switch people off heating oil in their homes and

1 businesses in New England, we could save 17 billion  
2 tons of CO2 per year. I calculated that. It may be  
3 wrong. It may be 15 or 18.

4 But that's an incredible change in our  
5 profile that would be very beneficial for health and  
6 lung associations here. It would reduce asthma,  
7 reduce costs. There's virtually no negative to this.  
8 However we get it done, it's really just a matter of  
9 deciding that we're going to do it and creating the  
10 political consensus to make it happen.

11 There are some needs. And I'll be quick  
12 with this -- there's a lot of work being done or  
13 attempting to be done on transparency, not just for  
14 propane but also for natural gas and trading systems  
15 so we know where what is.

16 Those things would be affected by a federal  
17 solution that's going to be, I think, years in coming.

18 Unfortunately, we need to solve the  
19 immediate problem before we solve that problem.

20 MR. SCHEER: Thank you, sir.

21 Kevin.

22 MR. HENNESSY: As far as barriers go, I  
23 think everyone's heard about NIMBYism and perhaps  
24 people have heard about

25 BANANA. But I think that's the issue we

1 have in New England where it's: Build Absolutely  
2 Nothing Anywhere Near Anyone. We need to get rid of  
3 that mentality.

4           The example I like to use is, we used to own  
5 a facility on the North Shore of Massachusetts, Salem  
6 Harbor. It was a coal-fired generating plant. We  
7 sold it to a company whose business model is to  
8 deconstruct that plant, to build a new gas plant on  
9 its site. They have the support of the community.  
10 They have the support of elected officials. They have  
11 all the infrastructure in place.

12           Yet they've been bogged down in litigation  
13 to try to move forward. They're still not locked into  
14 financing.

15           If we as a region can't build a power plant  
16 there, I don't know where we're going to build  
17 anything.

18           That flows over on the pipeline side.

19           So as far as barriers, I think there are  
20 proposals right now from the pipeline company to  
21 increase capacity on existing pipelines. There's even  
22 new pipelines that have been quoted.

23           So those are market -- the market signals  
24 are out there and you've got folks responding to them.

25           I think the government's best role is to

1 come in and to help be that State Trooper to clear the  
2 path to make sure that the market solutions don't get  
3 blocked.

4 So that's the recommendation with regard to  
5 that.

6 MR. BUXTON: That's two for Troopers.

7 MR. SCHEER: So, Joe, do you have some  
8 thoughts here on what the barriers to this investment  
9 would be and what we can -- what the government can do  
10 to unleash market forces?

11 MR. ROSE: Obviously, the BANANA and the  
12 NIMBYism is important to our industry as well. But I  
13 think one of the longer-term solutions that the  
14 government can have a tremendous impact on would be to  
15 overhaul the tax system so that businesses would have  
16 long-term planning ability, because they would know  
17 long term what the tax implications of this capital  
18 investment would be.

19 And I use the example of the alternative  
20 fuel tax credits, which several people in this room  
21 have worked very hard to try to promote alternative  
22 fuels to protect our environment and stimulate our  
23 economy.

24 And yet every year we get a one-year  
25 extension on a tax credit or no extension or it

1 lapses, then ten months later it comes back. And  
2 businesses can't plan. They need -- businesses need  
3 to understand, these are the rules, this is what I can  
4 be looking forward to for the next four or five years  
5 so I can decide to make these investments.

6 MR. SCHEER: Thank you, sir. Michael.

7 MR. TRUNZO: I would talk about two issues,  
8 maybe one, as I mentioned the investment and to  
9 incentivize increased biodiesel production in this  
10 country.

11 And I think related to Anthony's point,  
12 while we don't want -- we wouldn't want to see a lot  
13 of people off heating oil, if that's what they choose.

14 As we continue to blend biodiesel at higher  
15 levels, that becomes a much cleaner fuel. And  
16 actually, the Northeast States Coordinated Air  
17 Management Group, NESCAUM, found both in their report  
18 that blending low-sulfur fuel with biodiesel further  
19 reduces SOx, nitrogen oxide, particulate matter and  
20 mercury emissions, and that a 20 percent blend  
21 produces at least 16 percent reduction in carbon  
22 dioxide emissions.

23 So the industry is on the right track.

24 I would say that all this R&D that's moved  
25 us in this direction has been paid for by the industry

1 itself, so there's been no public dollars in this R&D.

2 In fact, we've invested maybe over the past  
3 ten years about \$14 million.

4 What we've been able to do is decrease the  
5 household consumption use of oil for space heating  
6 from about 1,200 gallons per home to about 700 gallons  
7 per home; a 40 percent decrease in use that's been  
8 generated by the industry itself.

9 At the same time, we worked on biodiesel and  
10 lower-sulfur fuels that have helped bring more  
11 efficient appliances into people's homes where their  
12 systems run more efficiently and have less emissions.

13 So I think continued investment maybe by the  
14 government in those areas instead of just the industry  
15 would help bring more forward.

16 MR. SCHEER: Thank you, Michael.

17 Andy, have you a thought to offer?

18 MR. RONALD: First of all, I would say that  
19 our project in Finger Lakes, there's no federal  
20 financial assistance required to bring it about. It's  
21 tailored around the fact that Marcellus and Utica  
22 productions of propane and natural gas are going to  
23 produce enormous amounts of energy in that area. And  
24 basically, originating that propane supply in those  
25 two regions, which is going to grow again

1 tremendously, is already connected to our region with  
2 a pipeline.

3           Our facility will not only serve New York,  
4 the state of New York where it's located, but it will  
5 serve Maine, New Hampshire, Vermont, Connecticut, with  
6 product that comes into that facility by pipeline and  
7 goes north to the facility where it's distributed  
8 throughout the rest of New England.

9           I think there's a financial incentive for  
10 every consumer that helps support this.

11           Last winter, by avoiding the imported  
12 product that came into the country in the two import  
13 terminals that had to price in against world prices,  
14 it would have saved the average consumer of propane in  
15 New England from 4- to  
16 \$600.

17           So it's infrastructure; that's all we need.

18           It's NIMBY. I understand that.

19           Now it's no longer the issue of let the  
20 product be produced in the Gulf for -- wherever it's  
21 being produced, it's being discovered.

22           Here in the Northeast, Pad 1-A and 1-B, and  
23 the trick is to get it to stay in these pads to the  
24 point that it equals what the demand is.

25           MR. SCHEER: Thank you, Andy.

1 Yes, Michael.

2 MR. TRUNZO: Actually, I might just ask Andy  
3 a question, so if I can.

4 In our fuel, we have our own infrastructure  
5 throughout the Northeast. And I know you talked about  
6 the need, and I know, speaking with Joe, the need for  
7 more regional storage in the Northeast and New  
8 England.

9 Is it a state or federal barrier you're  
10 running into in New York relative to the approval?

11 MR. RONALD: Certainly not a federal  
12 barrier.

13 But our permitting process in the state of  
14 New York where the facility is located goes through  
15 the DBC and the DEC commission. We've been going  
16 through that process for four years. And to say that  
17 we've answered every issue and every concern about the  
18 project that there is from a mechanical, from an  
19 engineering standpoint and from a subsurface, we have  
20 satisfied every requirement that they have asked for.  
21 And yet we still are waiting for approval.

22 MR. SCHEER: Yes, quickly, Tony.

23 MR. BUXTON: I can't do it quickly, so let's  
24 move on.

25 MR. SCHEER: Thank you. Lots of good ideas.

1 Lots of good suggestions.

2 I need to remind you, though, that all of  
3 these views are those of our panelists here, not the  
4 Department of Energy's views, and that through this  
5 QER process, which is multi-phased and -- over the  
6 next few months, there will be plenty of opportunities  
7 for other experts and individuals to contribute their  
8 ideas to this process.

9 So before we wrap this panel up, though, I  
10 would like to just come down the row here and give  
11 each of you an opportunity to quickly provide a final  
12 thought on the deliberations and any advice that you  
13 might have.

14 MR. BUXTON: Thank you.

15 I recommend that we follow the rule our  
16 parents tried to teach us, which is that we finish our  
17 homework.

18 In fact, in New England, the transition of  
19 natural gas was deliberately engineered politically by  
20 a combination of utilities, generators and  
21 environmental groups. And some of those environmental  
22 groups now oppose finishing the homework; that is,  
23 this footprint power plant that Kevin's talked about  
24 requires getting rid of coal, putting in natural gas.

25 That was the plan in the years 1995 to 2000.

1 And it's being carried through.

2 Now, the same people who supported that, who  
3 strongly encouraged it, are opposing supplying gas or  
4 allowing that plant to even become a gas pipeline.

5 Part of our job here is to finish creating  
6 the bridge that we described and using that bridge  
7 properly as it should be once we've got it fully  
8 established.

9 MR. SCHEER: Final thought?

10 MR. HENNESSY: A final thought. I would be  
11 remiss if I didn't mention this.

12 Every time I have the opportunity to speak,  
13 I like to draw the distinction that energy policy and  
14 energy politics are like oil and water. They don't  
15 mix. And yet we always see them kind of hitting up  
16 against one another.

17 I mean, it's -- energy politics are in two-  
18 and four-year cycles. Energy policy, you're looking  
19 at 10, 20, 30, 50 years.

20 I think we're -- we're trying to put the  
21 politics behind us here. So kudos to the folks for  
22 doing that. I think we're going down the right path.

23 The politics that Tony mentioned that I  
24 raised up in the North Shore, those exist. There's  
25 politics in play.

1           If you're concerned with energy as  
2 reliability, if it's price, if it's carbon,  
3 environmental, whatever your concern is, there's  
4 politics that are impacting folks.

5           So an example that we just went through in  
6 this region, many folks probably don't even know of  
7 it, it's -- Connecticut adopted a tax on the  
8 production of power in 2011. They had a two-year  
9 production tax of \$2.50. Power prices were fairly  
10 low. They've skyrocketed since. That's an extra cost  
11 that is being borne by the rate bearers of this  
12 region. It's now off the books.

13           But as the states are now trying to get  
14 together to collaborate, you need to say, okay, we as  
15 a group need to focus on the end goal and put these  
16 one-off political measures behind us and focus on  
17 what's going to help the region.

18           So that -- the final thought is stick with  
19 the fuel diversity, stick with the collaboration and  
20 get rid of the politics and focus on the policy.

21           MR. SCHEER: Thank you, Kevin.

22           Joe, final points?

23           MR. ROSE: What he said.

24           MR. SCHEER: There you go.

25           MR. ROSE: Actually, what I wrote down --

1 what I was going to say -- I guess I will say this:

2 More consumers using less energy, that's the key.

3 Michael mentioned it.

4           It's happening in our world. It's happening  
5 in all worlds.

6           And the last thing I wrote was: Let the  
7 free markets work. Get out of the way. And to have  
8 government deciding what type of energy we're going to  
9 use can be dangerous. I think on that we would all  
10 agree.

11           MR. SCHEER: Thank you, Joe.

12           Michael, final thought?

13           MR. TRUNZO: Just as the United States is  
14 really poised to be truly energy independent, and it  
15 is, as the administration says, an all-of-the-above  
16 energy policy.

17           I think that for U.S. to move down that  
18 road, we need to keep that in mind, that there are all  
19 fuels that are going to make this country move in the  
20 right direction, and we don't have to rely on imports  
21 because we're producing all of the power and energy  
22 that we need right in this country.

23           We just need, as Kevin said, to get the  
24 politics behind us and move on with policy.

25           Thank you.

1 MR. SCHEER: Thank you, Michael.

2 Andy, final thought?

3 MR. RONALD: I think the energy revolution  
4 that's going on in our country right now is something  
5 that needs every one of our rethinking, about what it  
6 means to me, what it means to my family, and what it  
7 means to the region that I live in.

8 The situation that we have today in the  
9 Northeast is one that says that this tremendous change  
10 in energy supply, availability, clean energy supply is  
11 a tremendous opportunity.

12 It's an opportunity to run our garbage  
13 trucks and our school buses on cleaner burning fuels.

14 It's about -- it's about air quality. It can  
15 bring about a better air quality standard than we  
16 have.

17 We have to get out of the way and get the  
18 politics out of the decisions that inhibit the ability  
19 to bring that product to the consumers in the  
20 Northeast at the lowest value that they'll ever have  
21 in their lives.

22 It's here. It's now. Be a part of that.

23 MR. SCHEER: Well, thank you, Andy.

24 And now is the time to thank you, thank all  
25 the panelists for a really super presentation.

1 Thank you very much.

2 So now we segue into our second panel. If I  
3 could have our second panel come on down. Just like  
4 the Price is Right.

5 (Pause In Proceedings)

6 MR. SCHEER: That will be Marion, Bill and  
7 Dave and Scott and Margaret.

8 In our infinite wisdom, we didn't plan for  
9 any breaks here. So I really want to try to get as  
10 much input as possible.

11 Welcome to all of you.

12 So this is our second panel.

13 The focus of it is on reliability and  
14 affordability.

15 And our first speaker, you can either come  
16 to the podium or stay in your seat.

17 This is Marion Gold, as many of you know.  
18 She's the commissioner of the Office of Energy  
19 Resources for Rhode Island.

20 So Marion, the mic is yours.

21 MS. GOLD: All right. My challenge today  
22 will be to stick to my script, because I don't have a  
23 tendency to do this. But if I want to finish in five  
24 minutes before that buzzer goes off, I have to. And  
25 here I'm already off script.

1           Thank you very much to the Department of  
2 Energy and to Senator Reed's office for organizing  
3 this. It's really a great honor to have the Secretary  
4 and DOE come to Rhode Island to listen about our  
5 concerns.

6           And I'm pleased to have the opportunity to  
7 speak today about infrastructure needs for reliability  
8 and affordability from the state's perspective.

9           My name is Marion Gold, and I am the  
10 Commissioner of the Office of Energy Resources for the  
11 Lead State Energy in Rhode Island on energy policy and  
12 programmatic matters.

13           Our mission is to lead Rhode Island to a  
14 secure, cost-effective and sustainable energy future,  
15 working with the diverse set of energy stakeholders  
16 who are involved in the issue.

17           One of the most valuable and unique roles of  
18 the state energy offices across the country really is  
19 their ability to look at the energy issues from a  
20 holistic and comprehensive perspective, and also to  
21 take advantage of the tremendous resources and  
22 technology that we have available through the  
23 Department of Energy.

24           And I have my colleague, Wendy Lauder, who  
25 is the executive director of the Ocean State Clean

1 Cities Program. And I know if I have a question about  
2 alternative fuels, I can call Wendy. She will get  
3 right to her DOE contact to get the answers.

4 And the same is true with almost every other  
5 aspect of the energy system here today; a tremendous  
6 wealth of resources at the national level.

7 And again, I'm off script.

8 Going back to my script, in -- as the state  
9 energy office, in 2013 we undertook the first  
10 databased assessment of Rhode Island's energy system  
11 in order to develop both an aspirational and  
12 achievable goal for our -- roadmap for our energy  
13 future.

14 Our energy plan looks at the energy system  
15 in three different sectors: the electricity sector,  
16 thermal and transportation.

17 The first thing we did was to model our  
18 baseline energy data.

19 And this slide shows the energy in the three  
20 sectors.

21 The noteworthy point in this slide is that  
22 we use about the same amount of energy. We spend about  
23 the same amount of money on energy in each of the  
24 three sectors, but we emit more carbon from the  
25 transportation sector.

1           So this is both a challenge and an  
2 opportunity for us.

3           You can also see the dependence of the  
4 region of the state on natural gas as the green, so  
5 largely dependent on one fuel source.

6           What's in store for the future?

7           So as part of a plan, we modeled what our  
8 energy future would look like given current energy  
9 policies. We found the same trend in all three  
10 sectors.

11           Our electricity -- because of our energy  
12 efficiency policies that we have in this state, which  
13 are reflected in many of the other states throughout  
14 New England, and because of the federal CAFE standards  
15 for transportation, our energy use is already on track  
16 to decline over the next few years.

17           And interestingly enough, this is confirmed  
18 by ISO New England's forecast of electricity demand in  
19 New England. They now incorporate our efficiency  
20 projections into their estimates of how much  
21 electricity will be needed throughout the region. And  
22 we're predicting a decline.

23           So Rhode Island is already poised to make  
24 very good progress towards a secure, cost-effective  
25 and sustainable energy future.

1                   But can we do better?

2                   Our scenario modeling that we conducted with  
3 consulting shows that, in fact, Rhode Island has a  
4 potential to increase fuel diversity in each sector  
5 above 2013 levels and to do this by producing economy-  
6 wide net benefits and reducing greenhouse gas  
7 emissions, 45 percent below current levels on track to  
8 an 80 percent reduction by 2013. So this, we thought,  
9 was really quite remarkable news.

10                  But investments will be needed.

11                  The Rhode Island State Energy Plan supports  
12 the need for both local and regional investments in  
13 our -- continuing our robust energy efficiency program  
14 investing in the local, renewable energy and also  
15 pursuing importation of clean renewable energy from  
16 northern Maine and from Canada, significant  
17 investments in the transportation and the thermal  
18 sector as well as in the resilient, reliable power  
19 grid.

20                  If we pursue all of these -- all of the  
21 above clean energy strategy, we have the potential for  
22 8.8 to over \$14 billion of benefits to the Rhode  
23 Island economy.

24                  But we will need to make significant  
25 investments to accomplish this.

1 I do want to get to this.

2 One of the challenges we face is how to  
3 better leverage both private and public sector dollars  
4 to transform the energy system.

5 It's just not realistic for these costs to  
6 be borne entirely on the backs of energy ratepayers.

7 In fact, as we've heard this morning, the  
8 high costs are jeopardizing our ability to meet our  
9 goals in the short-term.

10 There's been a lot of news in the -- well,  
11 we're all kind of feeling the pinch of the high energy  
12 prices.

13 I will continue, really fast.

14 Because of this crisis of the New England  
15 governors, as you heard this morning, we believe we  
16 have to act together to find a way to spur investment  
17 in critical energy infrastructures. If we don't act,  
18 our power system will become increasingly vulnerable  
19 to electric service disruption, consumers will have to  
20 pay more for energy than consumers in nearby states,  
21 and our region is really going to be at a competitive  
22 disadvantage.

23 So by way of conclusion, in Rhode Island,  
24 we're continuing to robustly invest in energy,  
25 efficiency in the local renewable energy, in the local

1 economic opportunities and job creation that this  
2 offers. And I think some of my colleges will be  
3 discussing this, perhaps.

4 We also need to act regionally working with  
5 other New England states to make strategic investments  
6 in infrastructure, putting downward pressure on prices  
7 and strengthen our economic competitiveness.

8 I wanted to just conclude, and I have a  
9 really good chart here, by emphasizing the important  
10 role in the value of energy and efficiency.

11 We heard that from Secretary Moniz. It is  
12 the lowest-risk, lowest-cost resource. It locks in  
13 savings for future years. So now is the time to  
14 really step up the efforts to keep more dollars in the  
15 local economy by investing in these energy-saving,  
16 cost-saving technologies and programs.

17 Thank you very much.

18 MR. SCHEER: Thank you, Marion. I'm sorry  
19 that the slides failed on you there.

20 MS. GOLD: I can pass this around.

21 MR. SCHEER: As I mentioned earlier, all of  
22 the slide decks presented here will be up on the  
23 website in a day or two, so...

24 Thank you.

25 And moving right along, our next speaker is

1 Bill McCourt.

2 Bill is the executive director of the Rhode  
3 Island Manufacturers Association.

4 The mic is yours.

5 MR. McCOURT: Good morning, everyone. I  
6 hope everybody's enjoying the presentation this  
7 morning.

8 I did want to thank the secretary for  
9 gathering this group together. I think this is an  
10 important topic of discussion.

11 Energy and natural resources are lifeblood  
12 of manufacturing. And I'm here today to talk a little  
13 bit about the business perspective of a reliable,  
14 cost-effective supply chain.

15 We rely on adequate, secure and affordable  
16 energy in the raw materials we need in order to  
17 compete in the global market base.

18 We use about one-third of the nation's  
19 energy and are directly impacted by the cost of  
20 energy; not only in making the products that we sell  
21 but also in the cost of maintaining our operations,  
22 both administrative, office, warehousing.

23 We've achieved great efficiency over the  
24 cost effective distributive generation, combining heat  
25 and power technologies, waste heat recovery systems,

1 water use and recycling intelligent energy systems and  
2 more.

3           And through innovation, research and  
4 development, local manufacturers have played a  
5 significant role in energy efficiency outside of our  
6 own industry.

7           Despite the increase in productivity and the  
8 exchange that we gain by trading off labor with  
9 technologies and increasing the GED over the years,  
10 from an electricity output and energy standpoint,  
11 manufacturing has remained at the same level since  
12 1975.

13           That's the top line.

14           The green line is the manufacturing sector.

15           While other sectors, like the commercial and  
16 industry -- the commercial sector, residential and  
17 transportation, they all increased over 1975.

18           We've also been a leader in energy  
19 efficiency in alternative uses.

20           You can see here that in this chart, we far  
21 outpace and we've used almost 20 percent more than the  
22 transportation, residential and commercial sectors  
23 combined when it comes to energy efficiency.

24           And I think also our usage across the board  
25 -- and again, we rely on all different fuel sources in

1 order to power our operations and you can see in all  
2 instances, we are down and we continue to go down  
3 because we're using more energy efficient  
4 technologies.

5 A lot of this, I just wanted to put out  
6 there, because it's all about dispelling some of the  
7 myths regarding what we do in business and what  
8 business actually consumes.

9 Here I want to draw a correlation, too, that  
10 almost 50 percent of the gas-fired generation is a  
11 significant portion of the generation mix for New  
12 England.

13 You can see on the pie, on the right, the  
14 half over there is gas, and that eats up 43 percent of  
15 the mix.

16 So we still have a high reliability on  
17 natural gas here in New England.

18 But we're also starting to move away into  
19 industrial gases, and that's up also.

20 You can see the consumption of industrial  
21 gas, and also what's been happening at L&G fueling  
22 stations across New England and what that means.

23 What I thought was interesting here is that  
24 if you look in the New England section, there are no  
25 planned refueling stations in New England. I think

1 that's problematic, again, because we look to other  
2 sectors.

3           Some of the driving forces behind what's  
4 happening in New England is going to be the retirement  
5 of some key energy sources over the next couple of  
6 years.

7           You can see here we have a high relationship  
8 on coal and energy and we need to -- and nuclear  
9 energy. And part of the dependence on these plants  
10 needs to be replaced. We need to plan for this.

11           I guess in conclusion, I just want to  
12 reiterate the fact that we are a significant consumer  
13 of energy in the country, and we recognize that energy  
14 efficiency has to be an important player in what we're  
15 trying to do today.

16           We rely like everybody else on an above-all  
17 approach. We also are concerned about the amount of  
18 regulation and intervention.

19           We're also concerned about the amount of  
20 energy programs and energy efficiency program and the  
21 fact that sometimes the government is betting on one  
22 strategy over the other. I think that's apparent in  
23 deep water wind. That is something that we do oppose  
24 because of the cost impact.

25           While we do agree that wind is an

1 alternative energy source and something that needs to  
2 be explored, we're very concerned about what that's  
3 going to do to our cost competitiveness as that  
4 project comes on-line and I think we have to be  
5 concerned as we look at financing other projects.

6 We like to rely on the private sector and we  
7 believe that they will come up with the answers given  
8 the chance. And I think government's role is in smart  
9 regulation and not picking winners and losers when it  
10 comes to energy consumption.

11 Thank you.

12 MR. SCHEER: Well, thank you very much,  
13 Bill. We appreciate your comments.

14 The next speaker is David Caldwell. He's the  
15 secretary of the Rhode Island Builders Association on  
16 the end use of the energy side of the equation.

17 MR. CALDWELL: Good morning. Thanks to the  
18 Department of Energy for inviting me here today on  
19 behalf of the Rhode Island Builders Association and  
20 our company, Caldwell & Johnson Custom Builders, which  
21 is a partner of the Department of Energy Building  
22 Technology's Office Challenge Home Program.

23 So part of what my role here today -- they  
24 asked me to come and be on a panel about  
25 infrastructure. I said, I don't know anything about

1 that, but I do know about what happens at the very end  
2 of the line.

3           What's at the end of that line is going to  
4 be your house or your job or your building.

5           Buildings consume about 70 percent of the  
6 energy in this country, more or less. That's a global  
7 number. So we're talking about millions and billions  
8 and trillions of numbers around here, and things,  
9 again, I still don't really understand.

10           There's a lot of it. The numbers are really  
11 big.

12           But what I can bring home to you is what  
13 happens at your house or your apartment or your place  
14 of business when you open these electric bills and gas  
15 bills. And they're getting big. Everybody seems to  
16 grasp that pretty closely.

17           So what we have is a test project from last  
18 year. And this is on the website of the Department of  
19 Energy, which I didn't get my slides in on time.

20           But take a basic 2,000-square-foot house.  
21 It looks like a nice house. I would put an energy  
22 label on that. It looks like this.

23           And this is all on-line if you just Google  
24 it.

25           That house scored on the channel zone

1 originating of 46. It's part of the program of DOE,  
2 taking that residential house and making it 40 to 50  
3 percent more efficient than a comparable brand-new  
4 home, just right off the bat, without even talking  
5 about solar. Bam. This house is going to save the  
6 homeowner about \$200 a month. Pretty good. And a  
7 little bit off from that, and it actually works.

8           So these are the efficiency-type things that  
9 we're talking about as far as this entire paradigm and  
10 infrastructure; but the end-use user who still needs  
11 electricity, how can we drive that lower, part of the  
12 whole global solution.

13           Also, on the other end of the spectrum, I  
14 chair the economic development board in the town of  
15 North Kingstown where Quonset Point is located.  
16 They've been there a long time; even had a facility in  
17 Quonset Point.

18           And I can tell you, years ago nobody really  
19 talked much about electricity. It's something, you  
20 know, you kind of had a discussion, yeah, we have to  
21 monitor that, but it wasn't a driver. But now it's  
22 becoming a significant driver on businesses, even  
23 places that aren't equipped, like Toray Plastics that  
24 are huge companies, national conglomerates, companies.  
25 Seafood processing companies, a tremendous amount of

1 refrigeration they use down there. They're seeing  
2 some pretty significant impacts on their bottom line.  
3 Some of that they can't pass along. If they do pass  
4 it along, again, it's once again borne by the consumer  
5 down the end of the line.

6 A lot of these energy costs are dollars I  
7 hate to say are leaving your house, leaving your  
8 business, leaving the state.

9 So having to recapture that one house,  
10 \$2,500 a year, they don't have to spend any more.  
11 They're very happy. They actually perform slightly  
12 better.

13 One customer and one house saved, just  
14 energy efficiency alone.

15 And if we put solar panels on the back of  
16 that house, that house would be net zero.

17 That's the second part of that type of  
18 program.

19 So these are programs that save a lot of  
20 money, create a lot of good jobs. These are  
21 construction jobs. These are local jobs. Puts money  
22 in the economy. It's saving money for consumers.  
23 It's trying to get you down the barrier why that  
24 cheapest price isn't the lowest cost.

25 So I have this conversation with a lot of

1 people. I show them the product. They say, That's a  
2 great idea. Why doesn't everybody do this?

3 I say, Usually people don't know.

4 If I brought you out to buy new car and you  
5 looked at two cars on the new dealer's lot, they're  
6 identical in every respect, you can't tell the  
7 difference. They look exactly the same. One costs  
8 \$20,000 and one costs \$20,400. Which one would you  
9 buy if that's all you knew? You'd buy the one for  
10 less money.

11 But if I said the one for 2 percent more  
12 money more than doubled your gas mileage, without even  
13 running the numbers, intuitively which one do you  
14 think is the better value proposition?

15 It's the same thing with the houses we're  
16 building. It's about 2 percent more money to do it  
17 right, cut the load down by less than half. It's a  
18 few hundred dollars a month extra in the pocket. Stay  
19 in the state, contribute to the economy, creates jobs,  
20 follows that cycle.

21 That's what my role here today was, to kind  
22 of bring that thing home, and I did intend the pun.  
23 So everybody can understand, touch the utility bill,  
24 while the really smart people are really working on  
25 the really big stuff, spending billions of dollars.

1           Thank you again for having me here today. I  
2 look forward to any questions you might have.

3           MR. SCHEER: Thank you, Dave.

4           Save the applause to the end, please.

5           The built environment is in a way part of  
6 our infrastructure. So while you don't know much  
7 about infrastructure, there is the built environment  
8 to consider.

9           So next we're going to hear from Scott  
10 DePasquale. And Scott is president and CEO of  
11 Utilidata.

12          MR. DePASQUALE: Thank you.

13          Good morning, ladies and gentlemen. And  
14 thank you for giving me an opportunity to speak. And  
15 thanks to Secretary Moniz who has played such a  
16 leadership role in catalyzing the investments in  
17 innovation and technology.

18          Technology is the one thing that can allow  
19 us to grow the economy and still -- and do it in a way  
20 where we're not increasing the energy infrastructure.

21          A lot of investments have been made there.  
22 We have done some well. We're still learning on  
23 others.

24          My company specializes in equipment and  
25 software that allows utility companies to better

1 automate and manage their power distribution assets.

2 I said to my wife yesterday, I said, I have  
3 five minutes to deliver a message about the nexus of  
4 the Smart Grid and cyber security and how we need to  
5 invest in it over the next five years.

6 And she said, Scott, you can't deliver a  
7 message on anything in less than five minutes, let  
8 alone cyber security and grid.

9 So with that, I will apologize for some  
10 scripted remarks.

11 But today nations face the challenge of  
12 increasing the availability and reliability of power  
13 while at the same time reducing the carbon footprint.

14 The answers in information communication  
15 technologies will allow utilities to minimize power  
16 loss and downtime and harness alternative and  
17 distributed power resources. These changes utilizing  
18 technology are leading in the development of a smart,  
19 more resilient efficient grid.

20 However, while Smart Grids bring about  
21 improvements in system reliability and cost and  
22 performance, they also make security a more prominent  
23 and complex issue.

24 The primary driver behind the Smart Grid is  
25 the increased reliance on supervisory control and data

1 acquisition systems, which is also known as SCADA.

2 SCADA is a category of software and hardware  
3 components that gather data in real-time from remote  
4 locations in order to control specific elements on the  
5 power grid.

6 Most aspects of electric power from  
7 generation to distribution are controlled by SCADA  
8 systems. Many of these systems are intensively  
9 networked, and in many cases are networked wirelessly.  
10 This interface between cyber space and physical space,  
11 sort of the Internet of things, is vulnerable to  
12 attack by hackers who may be criminal terrorists or  
13 agents of foreign governments or militaries.

14 Let's look at the traditional infrastructure  
15 of the grid. Currently, the grid consists of  
16 generation, transmission, distribution and the  
17 consumption on the demand side.

18 Our work towards a Smart Grid represents an  
19 evolution of digital upgrades to the existing power  
20 distribution infrastructure, which is over 100 years  
21 old in many parts of the Northeast.

22 The integration now connected in intelligent  
23 grid devices with advanced information and  
24 communications technology represents a bigger  
25 opportunity to nefarious hackers than the Internet by

1 itself has exposed us to in the past.

2           Traditionally, power coordination systems  
3 have been isolated from corporate networks or the  
4 Internet.

5           Today, the decreasing costs associated with  
6 mass scale of wireless communications are allowing  
7 utilities to network many more field devices.

8           Couple that with the advances in automation  
9 technologies which drive deficiencies, and the result  
10 is a greatly increased threat surface for cyber  
11 attack.

12           Let me break down the typical types of cyber  
13 attack that we routinely see in a power grid.

14           The component attack. The nefarious  
15 attacker remotely attacks a specific field component  
16 of the remote telemetry.

17           Once they have command and control of this  
18 unit, they essentially have an open door to the  
19 control network of the utility.

20           The second attack classification is a  
21 protocol attack. This involves reverse engineering  
22 data acquisition protocols which could allow nefarious  
23 hackers the ability to damage field equipment, send  
24 misleading data back to the control systems and  
25 ultimately create widespread and sustained loss of

1 service.

2           The third type of attack is policy attack  
3 that involves denial of service (inaudible). This  
4 typically stops real-time data flows, resulting in  
5 control centers failing to have a complete picture of  
6 the grid, which in turn can lead to incorrect  
7 decisions, downtime and costly interruptions.

8           As I mentioned before, the development of a  
9 more distributed Smart Grid requires new thinking when  
10 it comes to cyber security. Traditional cyber security  
11 solutions exist today to protect IT networks.

12           However, IT-based security solutions fall  
13 short of protecting critical control and automation  
14 functions of the grid.

15           SCADA systems were not designed to be a  
16 general -- for the general IT environment, and they  
17 weren't designed to be connected to the Internet.

18           In stark contrast, the Smart Grid security  
19 priorities are safety, reliability, protection of  
20 equipment, power lines and consumers.

21           Let's factor in one more layer of  
22 complexity, the blend of Smart Meters. Each Smart  
23 Meter wirelessly communicates with the utility and,  
24 therefore, each Smart Meter could potentially be  
25 hacked and used as a route of attack.

1           We know that nefarious actors in countries  
2 are consistently working on U.S.

3           critical infrastructure, including the grid.  
4 It's not a matter of if; they're doing it today.

5           Take, for example, the recent events in  
6 Connecticut where elements of power grid were  
7 penetrated.

8           Richard Clark is one of many security  
9 experts who have identified the power grid as a major  
10 national security vulnerability.

11           The smarter the grid becomes, the more  
12 attractive and vulnerable it may be to hackers. And  
13 this is precisely why collaboration between the public  
14 sector and private sector is essential. It's  
15 important that regulators work closely with utilities  
16 to support programs and investments in cyber security,  
17 in parallel with broader investments and distributed  
18 generation energy efficiency and the Smart Grid in  
19 general.

20           Additionally, it is important to the  
21 government to work closely with industry and the  
22 venture capital community to foster innovation in this  
23 space.

24           A strong public/private partnership can  
25 catalyze action for more security in the future.

1 Thank you.

2 MR. SCHEER: Thank you very much, Scott.

3 Much appreciated.

4 Our last speaker is Margaret Curran. And

5 Margaret is the chair of the Rhode Island Public

6 Utilities Commission.

7 And, Margaret, the mic is yours.

8 MS. CURRAN: Thank you. Good morning.

9 I want to also thank Secretary Moniz,

10 Governor Chafee and Senator Reed for supporting this

11 important discussion on the need for infrastructure to

12 support affordable and reliable energy in New England.

13 I think that I'd probably side with the

14 speakers who spoke of being fearful looking forward.

15 The Public Utilities Commission doesn't have

16 any direct involvement in our control of

17 infrastructure. But questions of reliability and

18 affordability are of tremendous concern to us.

19 From the Commission's viewpoint, something

20 has to be done to figure out how to reduce energy

21 prices and price volatility in our region to provide

22 long-term, affordable reliability.

23 New England, as previous speakers have

24 alluded to, is out of step with the rest of the

25 nation's energy prices. We're paying more. And much

1 of the extra costs and average and peak prices have  
2 been connected to our existing energy infrastructure.

3 We need the type of infrastructure that can  
4 perform during the cold winter without inflicting  
5 serious economic harm to ratepayers.

6 As many of the prior speakers have  
7 discussed, this past winter provided evidence that we  
8 currently lack such infrastructure.

9 I think also that residential ratepayers  
10 largely have been protected so far from the tremendous  
11 volatility in the natural gas market during the low  
12 temperatures that prevailed for so much of the country  
13 and so much for our region. But those increases that  
14 the industrial and commercial ratepayers have seen  
15 more closely will be coming to the residential  
16 ratepayers also. And I think that the shock of these  
17 increases will continue to drive us towards solutions  
18 as quickly as possible.

19 As chairperson of the commission, indeed,  
20 the commission wouldn't advocate any particular  
21 solution. But we can see what's possible for  
22 increasing fuel delivery and transmission in New  
23 England and as well as creating new generation and  
24 energy efficiency within our borders.

25 Looking at all of those possibilities for

1 the sake of rates and reliability, it's easy for the  
2 commission to be able to support any of the plans or  
3 any combination of plans currently moving forward.

4           Whether some problems are solved by rule  
5 changes that ISO-New England can make to signal to the  
6 market that it's time to put in a new infrastructure  
7 or by the New England governors having discussions on  
8 creating new infrastructure, that's not as important  
9 to ratepayers who are at risk for continually  
10 skyrocketing gas and electric bills.

11           It's one thing to ask ratepayers to cover  
12 increases in their bills for programs that provide  
13 benefits. Rhode Islanders are out there looking at  
14 the components of their bills for renewable and energy  
15 efficiency and programs and put trust in all of us  
16 that these increases -- that these components provide  
17 benefits to them.

18           And indeed, the research shows, as  
19 Commissioner Gold spoke, it's an important component  
20 of the energy picture for ratepayers.

21           The thought that last winter was just a  
22 small taste of what's to come should have all players  
23 and all solutions on the table.

24           I'm happy to be here with the diverse panel  
25 of business and energy leaders to discuss the

1 prospectives on those needs and solutions, and I look  
2 forward to continuing to provide the Department of  
3 Energy and the Quadrennial Energy Review task force  
4 with that perspective.

5 Thank you very much.

6 MR. SCHEER: Thank you, Margaret. Much  
7 appreciated.

8 So Panel, I'm going to move my chair here so  
9 I can see all of you.

10 Try to -- I guess you know the drill if you  
11 were here for the first session, we're going to try to  
12 follow that same one here.

13 I've got a couple of questions and we'll  
14 kind of come down the line and proceed that way.

15 So Marion, get ready.

16 MS. GOLD: I'm ready.

17 MR. SCHEER: The first question is -- the  
18 very same first question I asked before, kind of a  
19 cut-to-the-chase question in a way because we've got  
20 the Quadrennial Energy Review and would like to give  
21 each of you the opportunity to provide specific  
22 recommendations for -- regarding appropriate federal  
23 roles and helping to address the infrastructure  
24 constraints, reliability and affordability with this  
25 panel in terms of executive, legislative, regulatory,

1 administrative action.

2           So if you have some specific ideas to share  
3 with the department on federal -- appropriate federal  
4 rules, this is your opportunity to do so.

5           MS. GOLD: No pressure. What do they say on  
6 "It takes a Millionaire? Can I call on somebody?"

7           Well, I would say that I think that the  
8 Quadrennial Energy Review -- I was chatting with  
9 someone earlier. We talked for a long time, when I  
10 was teaching down at the University about the fact  
11 that there was no national energy policy. So the fact  
12 that the nation is taking -- doing what we're doing,  
13 taking a database look at our energy future and in  
14 convenient groups like this across the country,  
15 bringing groups together, it's incredibly important.

16           That's one thing.

17           I support what was said here about the need  
18 for federal support for the proposals that are going  
19 before FERC. We really do need to come up with a  
20 solution to this.

21           The fact that Senator Reed and Secretary  
22 Moniz are aware of the problem for New England and  
23 watching closely for opportunities to advocate on  
24 behalf, I think is very important.

25           Three, I think one of the issues that we see

1 in the public sector is that these issues are  
2 incredibly complicated. And it's really important  
3 that we have the resources in the state to deal with  
4 them, which means in some cases continued federal  
5 funding along with the technical assistance.

6           And we have some really terrific national  
7 research labs that are run by DOE. And one of the  
8 perennial challenges they have is how do we get that  
9 information out to the public.

10           I think channeling it down through the  
11 states out to the localities is a really important  
12 role for the federal government.

13           MR. SCHEER: Thank you.

14           Thank you, Marion.

15           So, Bill.

16           MR. McCOURT: Not an easy act to follow.  
17 But I think -- as I said earlier, I think part of  
18 government's role is to set smart regulations. I  
19 think we tend to look a little bit too narrowly  
20 focused.

21           This is a global marketplace. Businesses  
22 provide a very real benefit to people. We are not  
23 just the abusers of the environment and the abusers of  
24 people. We provide high-quality jobs, well-paying  
25 jobs. We provide career pathways.

1           And again, the emphasis on the global  
2 environment. I think when we're setting both our  
3 energy policies -- and as Marion said, it's very  
4 encouraging to see that we're setting a policy. I  
5 think that's great.

6           I think we need to stop shortpicking winners  
7 and losers. I think we need to let some of the  
8 natural competitive juices come to play. But I think  
9 we also have to look at it even from an environmental  
10 standpoint.

11           I think a lot of times we've done a lot of  
12 great work here in the United States, increasing  
13 regulations on air emissions and so on and so forth.  
14 That's terrific.

15           However, at times, the costs that we've  
16 imposed on some of the local businesses, we've done  
17 nothing but export these products to our competitive  
18 nations across the globe, who are not nearly as  
19 efficient as we are here in the United States.

20           So in essence, by some of these policies,  
21 we've actually worsened the worldwide pollution  
22 problem while doing a lot better here on our home  
23 soil.

24           So I think we have to pay a little bit more  
25 attention to the balance here.

1 MR. SCHEER: Thank you.

2 Dave.

3 MR. CALDWELL: I thought Senator Reed had --  
4 of course, Marion knows the most about this -- which  
5 is a very good programs coming down in Rhode Island  
6 right now in current legislature.

7 But Senator Reed's basic synopsis is  
8 conservation, efficiency; some of the things that  
9 aren't too exciting, weatherization, a little bit of  
10 distributed generation in there, talking polar vortex,  
11 wind, thermal, hydro.

12 That is becoming very cost effective even in  
13 the Northeast.

14 I think one of the other panelists, say in  
15 Connecticut, it is more effective than Arizona on a  
16 cost basis.

17 There's a lot of ways to look at that.

18 So I look at the aspect for that right down  
19 to the end user. How do you keep those dollars in the  
20 economy?

21 How do you create good jobs for the people  
22 to do that work?

23 Let the consumer know, yes, this is money  
24 well spent right now. Many of the consumers don't  
25 know that or have the financing available to

1 understand that the upfront cost over the time is a  
2 good deal.

3           And, last, there is a pretty significant  
4 piece of this with, you know, climate change-type  
5 evolutions.

6           We all agree we want to do what's good for  
7 the environment, specifically those of us who have  
8 children want to leave this a better place.

9           I'd like to see personally more clean energy  
10 to move forward in that regard, because we are  
11 exporting so many jobs.

12           If you've been overseas to the Third World,  
13 we've seen the epic pollution that goes on there.  
14 I've seen it firsthand. I've lived it. I believe the  
15 best thing we can do for the environment is a healthy  
16 economy that gives you an economically and  
17 environmentally sustainable future. That's my own  
18 opinion.

19           This energy discussion requires a big piece  
20 of that as well.

21           Scott.

22           MR. DePASQUALE: Yes. Reliability is not  
23 something that you think about at 2:00 in the morning  
24 when you have a mass scale power outage on Thursday or  
25 Friday morning.

1           Reliability comes from systemic or long-term  
2 planning infrastructure. It contemplates working with  
3 regulators at the state level and working with the  
4 federal government to understand what is the right  
5 balance between investments in infrastructure,  
6 security and hardening. Not everything is practical.  
7 And there's ratepayer expenses associated with some of  
8 these investments.

9           What is the right balance?

10           What I worry about is -- I think there are a  
11 lot of technologies that can make wind less expensive  
12 and less impactful to the grid, to the power grid of  
13 technologies and other storage technologies, some of  
14 which don't need subsidies anymore to be profitable  
15 and funded from the private sector.

16           And other communications, we're seeing now  
17 in California, mass scale wireless devices that are  
18 allowing homes to be networked. And we'll see what  
19 the long-term benefits of that program are from a  
20 demand/response standpoint.

21           But more and more, these technologies are  
22 financed without deep government subsidies.

23           But on the other side of that, back to my  
24 point about cyber security, we're building this thing  
25 called the Smart Grid. We're hoping that it makes

1 resources available in a very economic way, to your  
2 point, David. And as we do that, we have to invest in  
3 parallel international security elements of it.

4           For me, I think it makes sense for the  
5 federal government to play an active role in  
6 catalyzing some research in that area to make sure  
7 that we're building those technology capabilities up  
8 in tandem.

9           And I think that work at the state level  
10 with the regulators could really help us think about  
11 how we make those investments and rationalize it to  
12 the ratepayers.

13           Our company is a digital technology company.  
14 We automate processes. We create efficiencies. We  
15 don't require any subsidies to get a two-, three-year  
16 payback for the ratepayer.

17           We have never taken any federal dollars to  
18 support the research or development of our product to  
19 take it to commercialization. Yet where we found a  
20 good public/private partnership and where we found the  
21 intention to continue on both federal and state levels  
22 from a regulatory standpoint, how do we qualify these  
23 tools as energy efficiency tools?

24           How do we rethink about energy efficiency?

25           Is it just a compact fluorescent light bulb?

1           Are there subsidies to do retrofits?

2           There's a broader suite of opportunities to  
3 allow the utilities to create operational efficiencies  
4 where the consumers don't ever have to change their  
5 behaviors.

6           So I would like to see a continued effort on  
7 that.

8           And, frankly, I worry, coming out of six  
9 years of a tough economy, the dollars that were spent.  
10 Some of them were spent well. Some of them were not  
11 spent well. Some of that was done really well by the  
12 federal government and other parts of it were not.  
13 Right? We learned from that process.

14           But what I think is important is that as a  
15 country, we took risk. We saw international interest  
16 and we moved forward. And we are learning how to do  
17 that in a time where even Rhode Island and even Maine  
18 and Vermont are exposed to global issues. We are now  
19 exposed.

20           The vendors who sell technology to help  
21 drive these efficiencies may or may not come from the  
22 United States. They may be affiliated with state  
23 actors.

24           We may export natural gas some day. The gas  
25 is \$14 a decatherm, you see through L&G trade. Right?

1 And the rest of the world doesn't have a lot of it.  
2 So I don't think we can afford to be insular and I  
3 would like to really see more investments being made  
4 in technology, particularly on the cyber side by the  
5 DOE.

6 MR. SCHEER: Thank you.

7 Margaret, specific recommendations for  
8 appropriate federal roles in this?

9 MS. CURRAN: Thank you.

10 I think I have to certainly rely on the  
11 comments of all of the prior speakers and also  
12 recommend to the Department of Energy to the extent  
13 that they can that they assist with the appropriate  
14 federal rules being able to drive forward the current  
15 needs of New England that have been presented by all  
16 of the politicians. More, perhaps, federal support  
17 through FERC for driving the necessary infrastructure  
18 changes that New England needs, and that FERC notes  
19 the need problems that New England and Rhode Island,  
20 as part of New England, face in rising energy prices.

21 MR. SCHEER: Thank you very much.

22 We've heard consistently in both panels  
23 about the rising prices, the volatility of prices, the  
24 need for capital investment, and we've also heard  
25 about the role that planning at the state level, at

1 the regional level, comes in helping to organize all  
2 the different stakeholders to reach agreement, move  
3 forward.

4           And my next question is a little bit of a  
5 brainstorming here, and I don't want to throw curve  
6 balls at you necessarily, but I'm happy to as well.

7           But the idea about public/private  
8 partnerships to achieve those and private industry and  
9 government agencies at the local, state, regional,  
10 federal levels and engaged with each other, and New  
11 England's been a pioneer in many respects in those  
12 kinds of public/private partnerships. There's a whole  
13 alphabet soup laundry list of them.

14           And so my specific question is: What are  
15 your suggestions for either revising some of the  
16 existing public/private partnerships that are out  
17 there, or maybe there are some opportunities to  
18 develop new ones that are focused on some of these  
19 specific areas that we've been bringing up that you  
20 would recommend involving either state, local,  
21 regional, federal efforts and entities coming together  
22 to address these regional infrastructure constraints.

23           So it's public/private partnerships, the  
24 existing ones, changes, or do you see an opportunity  
25 for new ones?

1           So Marion, we'll start with you.

2           MS. GOLD: I'll lead off. I don't have a  
3 detailed answer, but I think there's great opportunity  
4 in the infrastructure area in terms of financing.

5           If we can get the public/private partnership  
6 together to leverage both public funds and some  
7 private capital to say, transform our building stock  
8 or build out the energy infrastructure. I believe  
9 that there's some very good work going on in the  
10 Pacific Northwest that we're going to be looking into  
11 to see if that might provide a model.

12           One of concerns we have in Rhode Island in  
13 particular is the affordability of the infrastructure,  
14 and we have a changing demographic in the state where  
15 we have a more growing minority, immigrant population.  
16 I guess it's going to be up to 40 percent. We have  
17 more people living in rental housing. There's a  
18 tremendous -- and they can't afford to make some of  
19 the investments that others can make.

20           So how do we leverage private and public  
21 capital to help transform our system?

22           So in the finance area, I guess is the  
23 conclusion. This is something that we've done in the  
24 clean water area in Rhode Island quite effectively.

25           MR. SCHEER: So there are models for it.

1 MS. GOLD: There are models. And we're  
2 starting to do it with the transportation center. And  
3 I think that's a great opportunity for our state.

4 Thank you.

5 MR. SCHEER: So Bill, do you have some  
6 thoughts on this public/private partnership question?

7 MR. McCOURT: I do.

8 Apparently, we're talking about changing  
9 demographics. I thought you were going to say looking  
10 older.

11 MS. GOLD: That too. Present company  
12 excluded, of course.

13 MR. SCHEER: Absolutely.

14 MR. McCOURT: I think the other area and the  
15 finance end is certainly one, and we agree, the aging  
16 infrastructure, especially in New England.

17 And we still see gas as being a significant  
18 player in what we're trying to do and align losses.  
19 Those are all challenges.

20 We acknowledge the fact that there has to be  
21 significant investment, not only just in the natural  
22 gas pipelines, but all the various strategies that are  
23 out there.

24 Perhaps one way that the business community  
25 needs to get involved and the government agencies need

1 to embrace their involvement is in trying to find  
2 creative solutions to solving some of these  
3 challenges.

4           Businesses have done this all the time  
5 through innovation and a lot of other research and  
6 they've solved other problems. And I think what we  
7 need to do is we need to get them sitting around the  
8 table with the government players, trying to outline  
9 what some of the strategies are and try to see how we  
10 can help tap into the business community and come up  
11 with some solutions.

12           MR. SCHEER: Thank you.

13           David.

14           MR. CALDWELL: Sure. I moved back from the  
15 West Coast, so I'm a little more familiar with BPP  
16 projects than many people back here.

17           But it's an excellent model moving forward  
18 in terms of scarce government resources, which are  
19 going to continue to be scarce; extraordinarily cheap  
20 capital available right now, whether it's with the  
21 backing, the implicit guarantee from the government,  
22 you know. I'm pretty confident you'll find that.

23           There's a lot of appetite in the marketplace  
24 that involves infrastructure funding.

25           Additionally, on the same theory, the clean

1 water fund revolving funds, perhaps, would be an idea  
2 for triple-deckers in Pawtucket that are losing a lot  
3 of money. They're going out the window, with the  
4 rental population, where that dollar figure is huge.  
5 That has an enormous economic impact on many of our  
6 urban core buildings, those triple-deckers. That can  
7 be a substantial, in my opinion, win for Rhode Island,  
8 for our economy. A little bit of construction  
9 activity to fix them up. Save a lot of money in the  
10 pocketbook of a lot of the people living in those  
11 buildings, below-average incomes, working hard, trying  
12 to get ahead, but they're throwing dollars out the  
13 window literally.

14           So if we could figure out a way to close  
15 that gap too and create some sort of public/private  
16 venture revolving fund, that would probably be very  
17 well received, just that initial upfront cost, try to  
18 get that long-term value.

19           MR. DePASQUALE: Thank you.

20           So this is a fairly diverse panel. I'll  
21 speak very discretely about the power industry.

22           You need -- as I said before, if you have  
23 aging infrastructure, you can't rip it out of the  
24 ground to replace it because it would cost trillions  
25 of dollars. You start with intelligent devices, then

1 you use resources like solar and battery, wind and  
2 batteries and other things to solve these problems,  
3 and you reduce your carbon footprint to the extent you  
4 practically can.

5           As you're doing that, you're networking  
6 devices. Communications are cheap. Right?

7           And as we move into these two things  
8 together, what I think we see a lot of, where we see a  
9 lot of gray space, where even our large utility  
10 partners really don't have a full grasp on is on the  
11 security side, DHS and various government agencies  
12 have been working with the commission critical  
13 infrastructure thing for a long time.

14           Back in the utility sector, a couple of  
15 exemplary utilities are really good at this, but by  
16 and large, they don't really have any insight into  
17 what the government has learned, and there are some  
18 obvious practical reasons the government doesn't share  
19 some of these threat assessments.

20           So what we find out, we're deploying, for  
21 example, Utilidata, we automate and we communicate  
22 with the devices in the field that drop -- lost power  
23 by 3 to 5 percent.

24           The consumer never has to do anything. It  
25 pays back quickly. Right?

1           And so in the process of doing that, we open  
2 the grid up for attack, because you can sit in a cafe  
3 in Tel Aviv and then access something from somewhere  
4 that you probably shouldn't be, on less money that it  
5 would cost you to go build a fighter jet or train an  
6 army somewhere. Right?

7           So as we look at the work that DHS and  
8 others do, we look at what DOE has done, with the  
9 nuclear software security, and we would like to see  
10 some kind of a working group with the utilities that  
11 give them more access to information in the  
12 appropriate ways so that we can get the utilities to  
13 understand they are moving passive traditional IP  
14 constraints they have on security, which is network  
15 administration and data privacy and security and the  
16 financial issues to this new kinetic piece of it.

17           We think there could be a better interaction  
18 and we include DOE to facilitate some of those  
19 discussions.

20           MR. SCHEER: Thank you.

21           Margaret, do you have a thought here on  
22 public/private partnerships?

23           MS. CURRAN: Well, I think it's difficult  
24 from a commission vantage point to say that any  
25 particular ones that are already existing should

1 remain or new ones.

2           We would just want to encourage all of the  
3 creativity that's been expressed by the panel members  
4 to bring those things to the commission for  
5 ratepayers, getting better reliability that they know  
6 that they can count on and trying to keep the overall  
7 cost down, showing that the programs that private --  
8 public/private partnerships may create are, indeed,  
9 cost effective for ratepayers.

10           I think that, unfortunately, in Rhode  
11 Island, a number of people have been and continue to  
12 have difficulty paying their bills, including utility  
13 bills. And for at least the near future, that looks  
14 like it's getting worse.

15           So I encourage all of the ideas that people  
16 are advancing here.

17           MR. SCHEER: Thank you.

18           This affordability is a thorny problem. And  
19 to come up, both panels, and we've talked about it,  
20 I'm going to give you a chance to talk about it again  
21 in yet another way, one of the mechanisms for bringing  
22 cost down is research and development. And there are  
23 technology gaps within the energy infrastructure space  
24 and in supply, storage delivery demand.

25           And so I would be interested in hearing your

1 thoughts about -- your priorities, your technology  
2 development priorities.

3           This is an area where the federal government  
4 has played a large and significant role and will  
5 continue to do so.

6           So a chance for you to offer your ideas on  
7 what you believe the most significant or important  
8 research and development priorities are for developing  
9 new technologies and innovations in this space to  
10 address the infrastructure constraints that we have.

11           So Marion, you get to go first. That's  
12 always your good fortune.

13           MS. GOLD: I was fascinated when I was out  
14 in Golden, Colorado a few weeks ago on the State  
15 Energy Advisory Board to DOE. Again, as I mentioned  
16 earlier, their longstanding challenge has been how to  
17 make people aware of the really amazing research  
18 that's going on in Golden. That is something that DOE  
19 continues to grapple with and we're talking about a  
20 lab voucher system where we could send someone like --  
21 someone on Scott's team out to Golden or have someone  
22 from Golden come here to work on an exciting, new  
23 technology under development.

24           MR. SCHEER: Golden is?

25           MS. GOLD: Golden, Colorado is the home of

1 the one of the national --

2 MR. SCHEER: National Renewable Energy Lab?

3 MS. GOLD: Yes. It's really an amazing  
4 facility where they're doing all kinds of research on  
5 grid integration.

6 So I know in Rhode Island, the issues that  
7 Scott has brought up about the cyber security and  
8 Smart Grid, those are issues that are obviously  
9 paramount, along with the cyber security. And that's  
10 something I think where we are going to need the DOE-  
11 level involvement. That's critically important.

12 Energy storage is the other issue that we're  
13 highly linked to the small extent here in Rhode  
14 Island, but we need more research on that.

15 MR. SCHEER: Thank you, Marion.

16 Bill, do you have thoughts on research and  
17 development priorities?

18 MR. McCOURT: Well, maybe not so much on  
19 priorities.

20 And I think Scott's point about cyber  
21 security and threats as more of this data becomes in  
22 the cloud-type information and accessible, I think we  
23 have to be worried about hacks and breaches and so on  
24 and so forth because it is a national security issue.

25 I think particularly the research and

1 development, again, may sound like a little bit of a  
2 broken record, but it's reliance on the private sector  
3 and embracing the private sector.

4           I think -- I'll go back to -- one of the  
5 earlier panelists mentioned about this stability and  
6 lack of stability of the business planning. And  
7 research and development credits are just another  
8 prime example where there's been inordinate  
9 discoveries by the private sector that the government  
10 has then leveraged off of and taken -- and used in  
11 their domain. And those things happen because the  
12 public sector has a means -- or the private sector has  
13 a means of going out and tapping into that potential.  
14 So I think just adding some stability to the research  
15 and development.

16           And that said, I think the next thing would  
17 be embracing private sector discoveries, whether or  
18 not we need to do a better job of taking some of these  
19 new technologies that are being developed by private  
20 citizens and trying to help them along and perhaps  
21 being a little bit more open to interpretation of  
22 rules and regulations.

23           If it seems like it's a viable opportunity,  
24 let's expand the applicability a little bit to give it  
25 a try.

1 MR. SCHEER: Thank you, Bill.

2 Dave?

3 MR. CALDWELL: Sure.

4 We've been very fortunate to work with the  
5 DOE's Building Technologies Office. And I happen to  
6 know they work with the National Rebuilding Programs.  
7 So you're starting to see some private sector, public  
8 sector, little bit of academic research starting to  
9 get together to the end user.

10 Business on my end of the world hasn't quite  
11 caught up that to that yet. But they're doing some  
12 really great things down there. They're probably not  
13 getting as much publicity as they should. There's  
14 some really smart people doing the work. I can attest  
15 to that.

16 They've been a big help to me. I've used a  
17 lot of their research in what I've been doing. It was  
18 essentially free me to use; free for anybody to use.  
19 It's been a great resource. I think they're doing a  
20 good job.

21 I'd like to see more publicity on your end  
22 for the good work you're doing.

23 The same thing with Marion's office.  
24 Hopefully that will be coming forward this year.

25 It's all coming together a little bit on my

1 end of the world and I hope to keep that moving in  
2 that direction.

3 MR. SCHEER: Thank you, sir.

4 Scott, you've already spoken on this topic,  
5 but you'll have an opportunity to say more if you'd  
6 like.

7 MR. DePASQUALE: The only thing I'd add to  
8 the comment, as far as areas for investment, we've  
9 watched the generation side. I don't know what or how  
10 exciting or what new innovation there is there.

11 It seems like what I've seen is there's a  
12 lot of investments in this middle space.

13 How do we deliver it? How do we make it  
14 more operationally efficient? What are the tools and  
15 utilities and consumers can use to do that?

16 But I would say that at the very end of the  
17 distribution circuit, the commercial and industrial  
18 customers have an opportunity to become more self-  
19 reliant on the grid, so everything from building  
20 automation systems that help them more intelligently  
21 manage and control their own usage, and their own  
22 potential generation is a generation resource to help  
23 cost them down.

24 I think the development of microgrids and  
25 the ability for communities and businesses and

1 industrial parks and the military to island themselves  
2 is going to be very important.

3 I think the technology that allows them to  
4 manage that now, reliability, because utilities have  
5 been in the business of developing and selling low-  
6 cost, reliable, safe power. People take that for  
7 granted, when you start talking about this concept of  
8 microgrids where you're islanded. Right?

9 Well, then how are those microgrids going to  
10 maintain reliability? How are you going to interact  
11 back with the grid?

12 I think there's a lot of development work  
13 that should be focused on there.

14 As far as the -- you know, going to the labs  
15 in Colorado, we spent some time in the national labs.  
16 What I realized is we sell a product that had to do  
17 with efficiency for the utility and now we're being  
18 forced, for national security reasons, to sell a  
19 security product.

20 We didn't get into that business. And to be  
21 competitive doing it as a company, right, we're not  
22 asking for big subsidies, but we need some help.

23 And I think that when we went out and set up  
24 a joint venture with American Electric Power to bring  
25 them our R&D process and we're doing a similar with

1 our utilities.

2           Having the government involved in that  
3 process and bringing them here, getting the government  
4 not to just to write a check but to send people,  
5 allocate resources, that could be a game changer.

6           Thank you.

7           MR. SCHEER: Margaret? A thought on R&D  
8 priorities?

9           MS. CURRAN: I think that encouraging  
10 research and development in those areas where there's  
11 been shown demonstrated economic advantage for  
12 ratepayers, people have already referred to storage,  
13 energy efficiency, demand reduction. So that would be  
14 it.

15           MR. SCHEER: Thank you. Thank you. Thank  
16 you.

17           Just excellent thoughts and good discussion.

18           Before we wrap this up, I want to give each  
19 of you an opportunity to provide a final thought, a  
20 little word of wisdom to the Quadrennial Energy Review  
21 team that's here listening.

22           Marion, a final thought?

23           MS. GOLD: I'll take advantage of my final  
24 thought to talk about the really good work that's  
25 going on within the state, regionally and nationally,

1 on preparing our nation's energy system to be more  
2 resilient in the face of climate change, induced  
3 weather events and sea level rise.

4           As we speak, there's a terrific panel, the  
5 Governor's executive council on climate change, which  
6 is focusing on both climate adaptation and mitigation.  
7 So the recommendations from our energy plan will be  
8 wrapped into that.

9           We're very much working with partners very  
10 closely with the utilities who've done some great work  
11 in Rhode Island to harden up our electric and gas  
12 system, also working regionally and nationally.

13           So I think this is really important and  
14 encompasses all of the challenges that we face.

15           The last thing I want to say is I think it's  
16 really important that we do keep our eyes on the  
17 international ball, because we do not want to be just  
18 transferring our environmental problems over to China,  
19 which is in a lot worse shape than we are  
20 environmentally, and they're building a new coal power  
21 generation plant every week.

22           Sometimes the interests of our business  
23 community are to expand in our areas where it's  
24 cheaper. It's just a complicated, brave new frontier,  
25 I believe, for the United States and our business

1 community.

2 MR. SCHEER: Thank you.

3 Bill, do you have anything?

4 MR. McCOURT: Thank you, Marion.

5 I'm going to have to put her on my payroll  
6 for that last comment. That was terrific.

7 I think one of the messages from a previous  
8 panelist is he indicates that we need to finish our  
9 homework. I guess we would add we need to finish our  
10 homework perhaps with a twist.

11 I think we are very, very quick to condemn  
12 some older technologies based upon what we knew at  
13 that point in time. And what we failed to embrace is  
14 that every day, things are changing. Every day people  
15 are creating different ways to do things, more  
16 efficient ways, safer ways, so...

17 We can take the fracking discussion and we  
18 can weigh the pros and cons of fracking and you can  
19 talk about where they are today and look at where they  
20 were five years ago and where we've come in technology  
21 from a safety perspective and environmental protection  
22 perspective.

23 So I think we need to keep an open mind to  
24 some of these things that we're working on. Just  
25 because it's a no today doesn't mean it should be no

1 forever.

2 MR. SCHEER: Thank you, sir.

3 Dave, a final comment to offer?

4 MR. CALDWELL: Sure. I'd like to emphasize  
5 Scott's point when he said, we don't need money, we  
6 need people.

7 I'm seeing the DOE and I can tell you,  
8 Marion's office having a more collaborative role,  
9 rather than regulatory, which has historically been  
10 the case, thou shall do or not do, and smack you  
11 around or send fines.

12 I think that's a very different paradigm  
13 shift. I'm starting to see it. It was a big help to  
14 me. And I think there's a role for DOE to have a very  
15 strong leadership position and also be collaborative  
16 with the business moving forward. It's developing and  
17 been very good to me.

18 MR. SCHEER: Scott, a final thought?

19 MR. DePASQUALE: I'm going to stay with the  
20 same theme. There's a lot of "Rubber meets the road"  
21 here as far as technology and things we can do from a  
22 regulatory standpoint, a policy standpoint.

23 I'm back to the things that people have a  
24 hard time understanding. If we don't see it, we think  
25 it's not real.

1           And with cyber space, I would leave you with  
2 the departing thought that in five years, you will  
3 have ten-fold the amount of devices connected to the  
4 Internet on the grid itself, if not a multiple of that  
5 even.

6           And in five years, that means that conflict  
7 in Russia, conflict in Korea, in China or somewhere  
8 else in the world that we haven't envisioned yet could  
9 have a real kinetic impact on your reliability and  
10 whether you get power inside of your home and your  
11 business.

12           And I would just recommend that as we think  
13 about all of these things, that the investment in the  
14 national security side and the dollars that need to go  
15 to supporting that today are important because, again,  
16 the reliability isn't figured out at 2:00 p.m. on a  
17 Thursday morning or a Friday morning when the power's  
18 out and we've got to back-fit it. We're just not  
19 seeing the level of connective tissue.

20           I would say the call to action here is not  
21 just at the federal level of DOE or DHS, it's at the  
22 state level and it's making sure the state regulators  
23 are part of the discussion about where do ratepayers  
24 need to invest to support all of these other things in  
25 technology -- investing in when we talk about

1 efficiency.

2 MR. SCHEER: Thank you, Scott.

3 Margaret, you get to offer the final, final  
4 thought.

5 MS. CURRAN: I would actually like to echo  
6 Commissioner Gold's comments about the current level  
7 of collaboration and cooperation in the region  
8 particularly, but also nationally, just given the fact  
9 that we're all sitting here addressing the part of  
10 energy.

11 While it may unfortunately be largely  
12 crisis-driven in New England, I think that that level  
13 of collaboration and cooperation is probably one of  
14 the most heartening things that we can now see on the  
15 horizon. So that gives me at least some comfort that  
16 these great ideas will be able to get put into  
17 practice for the ratepayers.

18 MR. SCHEER: Thank you very much.

19 And a round of applause for the panelists.

20 (Pause In Proceedings)

21 MR. SCHEER: Very important, very good  
22 discussion and much appreciated.

23 So in the spirit of moving right along, if I  
24 could ask the Department of Energy staff to come on up  
25 and take a seat at the table here, we're going to move

1 into our open microphone, open public comment phase.

2 (Pause In Proceedings)

3 MR. SCHEER: This is the way this process is  
4 going to work. It's a little bit different.

5 Each of the speakers or public commenters  
6 are going to have three minutes to offer their remarks  
7 and we will listen and make note of them.

8 But please recognize that all of the people  
9 who come up to comment and then any of you or anybody  
10 else can send comments via e-mail to the Department of  
11 Energy. And the e-mail address for that is QER  
12 comments, one word, QER comments, at HU.DOE.gov.

13 So if for some reason I have to cut you off,  
14 and I apologize in advance, three minutes, and I'm  
15 told I just have to cut people off. That's how we'll  
16 proceed. There's the light system here. So you can  
17 take a look at that. A minute.

18 Then when you registered to come in, you had  
19 the opportunity to check a box for yes, no, yes, no,  
20 if you wanted to speak.

21 So I'm just going to go down this list in  
22 order.

23 If people did not sign up but still wish to  
24 say something, we'll be here for as long as you want  
25 to be here, except we have to be out of here in ten

1 minutes. No, I'm just joking.

2 So with that, Jerald Katch, if you're still  
3 here.

4 MR. KATCH: I am.

5 MR. SCHEER: If you'd identify yourself and  
6 spell your name. And then your clock will run on your  
7 three minutes.

8 MR. KATCH: Sure. My name is Jerald Katch,  
9 J-E-R-A-L-D, K-A-T-C-H.

10 I am an educator and associated with  
11 Environmental Rhode Island, Cranston, Rhode Island.

12 And it's really a comment and a question.

13 I've been disappointed in the decades since  
14 I've been involved with starting with first Earth Day  
15 because there's been so little education in the  
16 schools, public and private, about the seriousness of  
17 the climate crisis.

18 It's clearly a crisis. I think a lot of  
19 people agree with that. But we don't see very much in  
20 the way of consistent education. We educate for a lot  
21 of areas, but not for that.

22 I was wondering if possibly Commissioner  
23 Gold had some thoughts about how we might integrate  
24 our educational system with your commission -- I mean,  
25 your system to develop a much stronger educational

1 policy that is for all of our kids.

2 MR. SCHEER: Excellent question. You'll have  
3 to catch Commissioner Gold on the margins outside.

4 This is your chance to offer public comment.

5 MR. KATCH: Okay. Well, that's my comment.

6 Thank you.

7 MR. SCHEER: Thank you very much.

8 Next is Rob Thornton.

9 MR. THORNTON: Good morning. Rob Thornton,  
10 T-H-O-R-N-T-O-N.

11 I'm the CEO of the International District  
12 Energy Association.

13 The last QER, the executive summary, the  
14 very first page cited inefficiency of our central  
15 power plants, 32 percent efficiency, as really the  
16 gorilla in the room that we're wasting two-thirds of  
17 the fuel that goes into our power stations as waste  
18 heat.

19 In fact, 36 percent of all the energy  
20 consumed in the U.S. is wasted as heat.

21 We have a better solution. The case in  
22 point is Brayton Power Plant where the secretary grew  
23 up.

24 For 50 years, since 1964, it has been  
25 wasting 47 trillion BTUs per year on average into

1 Mount Hope Bay. The last owners just invested \$580  
2 million in cooling towers. So instead of wasting it  
3 into the bay, they're wasting it into the sky.

4           If this were Denmark or Germany or Sweden,  
5 we would be putting that heat in a pipe and using it  
6 to heat the cities instead of wasting \$400 million a  
7 year in useful heat.

8           Now, just up the road where the secretary  
9 spent a lot of time at Kendall Station near MIT, they  
10 actually have also been wasting heat in the Charles  
11 River. And in order to comply, a power plant investor  
12 was to put a pipe between the plant and Downtown  
13 Boston. So instead of heating the Charles, now  
14 they're heating Mass. General Hospital and 150  
15 buildings in Downtown Boston.

16           The efficiency gains on this are traumatic.  
17 The resiliency gains are dramatic. But this pipe has  
18 the equivalent emissions reduction of 600 football  
19 fields of (inaudible).

20           So the low-hanging fruit is our generating  
21 fleet, making it more efficient, using the heat, and  
22 it can be done. It is being done and that will also  
23 drive resiliency.

24           I see a green light, but -- so with Sandy,  
25 we really -- the power plants that stood up to Sandy

1 were district heating, combining power plants at  
2 Princeton, Co-op City.

3 So I would argue the QER should take a very  
4 hard look at local infrastructure like district  
5 energy, combined heat and power.

6 Thank you.

7 MR. SCHEER: Thank you very much.

8 Next on our list is Scott Gustafson. Scott,  
9 are you in the room?

10 MR. GUSTAFSON: It's Scott  
11 G-U-S-T-A-F-S-O-N.

12 I am the regional organizing coordinator for  
13 the Laborers' International Union of North America;  
14 heavily involved in a lot of energy initiatives.

15 Colin, as you know, weatherization, our  
16 union was the lead union with the Opti Home Alliance  
17 and a lot of those programs that the administration  
18 put out in 2008.

19 During the economic recession, I don't know  
20 if there was -- while we talked about jobs, I don't  
21 know if there was a work force that was hurt worse  
22 than construction.

23 And I'd like to -- if you're going to --  
24 this was a fantastic, fantastic discussion today.  
25 I've been going to meetings every night. I've got

1 three this week with the Kinder Morgan project, which  
2 is a major pipeline running through -- hopefully going  
3 to run through northern Massachusetts.

4 We support those jobs. They're very, very  
5 good family supporting jobs. Much like the project  
6 that we built in Maine.

7 I heard Anthony Buxton talk about what was  
8 going on with the paper mills. Well, I think that we  
9 have an opportunity to create more jobs and more  
10 economic benefit for this entire region if we support  
11 -- and we support all energy infrastructure, certainly  
12 not just natural gas.

13 But there's a lot of propaganda, a lot of  
14 rhetoric and a lot of misinformation that's put out  
15 there at a lot of these meetings.

16 So I don't know where I might be able to  
17 find more information so that I can present the truth  
18 at a lot of these public meetings, but that project  
19 that we just built in Maine, the Kennebec Valley, 80-  
20 mile pipeline, we were able to train and put to work  
21 300 laborers on that project.

22 Now, they may have been temporary jobs, but  
23 those workers are all well-trained guys now going to  
24 build out the new distribution infrastructure  
25 throughout the state of Maine.

1           We can continue to do that. We have two of  
2 the best training centers in the whole country right  
3 here in Hopkinton, Mass., Pomfret, Connecticut. We're  
4 connected with Helmets and Hard Hats and a lot of the  
5 other programs for returning veterans.

6           So thank you very much. This has been very  
7 informative. An excellent meeting. And I'm looking  
8 forward to more of them in the future.

9           MR. SCHEER: Thank you very much.

10           I was just reminded that you can send in  
11 comments to the e-mail address: QER comments, one  
12 word, at HU.DOE.gov.

13           Thank you for those comments. And we'll  
14 move on.

15           Our next person is Jeffrey Petrash.

16           Are you here?

17           MR. PETRASH: Yes, sir.

18           Good morning. I'm Jeffrey Petrash from the  
19 National Propane Gas Association. P-E-T-R-A-S-H.

20           As many of you and your colleagues know, we  
21 in the propane industry had a challenging winter, and  
22 we appreciated the opportunity to work with you as  
23 partners in getting through it and serving consumer  
24 needs.

25           The QER process is really quite timely for

1 us, because the propane situation, both in New England  
2 and in the Midwest in particular, was almost entirely  
3 an infrastructure problem.

4           As my colleagues mentioned this morning on  
5 the panel, there is a huge issue with regard to  
6 propane storage, both primary, secondary and tertiary.  
7 NIMBY issues are huge there. But the infrastructure  
8 issues go beyond that.

9           To rail -- as Joe Rose mentioned, rail  
10 congestion has been a particular issue. We plan to be  
11 with you in North Dakota to talk about that where it's  
12 an issue.

13           Pipeline issues are huge. We need more  
14 pipeline pumping capacity.

15           We need more truck terminal off-loading  
16 capacity in order to meet consumer needs. Propane  
17 also comes by ship.

18           The irony of this winter is that we exported  
19 propane from Texas to Europe while having foreign  
20 ships bring foreign propane from Europe to New  
21 England, yet we have no capacity to move propane from  
22 Texas to New England or to Florida and other places.

23           The other point I want to mention is what I  
24 call infrastructure transparency. The way the propane  
25 pipelines are regulated today, there is a considerable

1 lack of transparency. No one other than pipeline knows  
2 what's moving through pipelines, in what volumes,  
3 where it's going, et cetera.

4           Another transparency issue, Joe Rose  
5 mentioned. We found ourselves this winter in  
6 instrument flying conditions without instruments. And  
7 we think that the EIA needs to fine-tune their data,  
8 both as to storage inventories to make it more  
9 localized and we need them to fine-tune their price  
10 data to separate propane and propylene, to collect  
11 data based on different kinds of sales, whether  
12 they're agricultural, firm contracts, spot sales.

13           Because as we got through this crisis this  
14 winter, there was a surprising lack of data, both on  
15 the transmission of energy and prices of energy.

16           And we really -- and EIA has worked with us  
17 on this. We really need to focus on that in the years  
18 ahead.

19           Thank you very much.

20           MR. SCHEER: Thank you very much. You  
21 stayed within your limit just perfectly. You set a  
22 high bar.

23           Chris Rine. Are you in the room, Chris?

24           Moving right along. I'm not sure about this  
25 name, but Greg Gerritt.

1 MR. GERRITT: Gerritt.

2 MR. SCHEER: I'm sorry about that.

3 MR. GERRITT: Greg Gerritt from Prosperity  
4 for RI.com. G-E-R-R-I-T-T.

5 I have a long list here. I'll try -- I'll  
6 stop at three minutes.

7 Fracking. So much of your process is  
8 dependent on fracking. And if the people of the  
9 United States stop fracking, then you're wasting all  
10 your money with all of these pipeline upgrades.

11 And, you know, the resistance is growing.  
12 And I think the Department of Energy needs to  
13 understand that that resistance will continue to grow.  
14 So I would not bet the farm on fracking.

15 HydroQuebec. HydroQuebec is part of 500  
16 years of genocide. It is the killing of the forest  
17 people and the destroying of their culture that goes  
18 on -- you know, here in New England we started with  
19 the great swamp massacre. But HydroQuebec is removing  
20 people from the land.

21 And this is the same kind of thing that the  
22 energy industry is continuing to do all over the  
23 world. You've got this in Peru, in Colombia, Brazil,  
24 all of these places that you are -- basically, if you  
25 think you want to do this, and it's all genocide

1 based. You know, you get rid of the forest people so  
2 you can steal their resources.

3 The American government does it, so we  
4 figure everybody else is going to do it.

5 Full cost accounting. We do not count --  
6 you know, when we grow the GDP, we do not take into  
7 account the cost of growing the GDP. And we just keep  
8 adding -- we add -- when you have been damaged from  
9 something like Sandy, we add that to GDP rather than  
10 subtracting it from GDP.

11 If we started to actually do full cost  
12 accounting, we would find that most of what we're  
13 calling growth is uneconomic growth as Herman Dailey  
14 refers to it.

15 Let's see.

16 Biofuels. I just saw another article today  
17 that says biofuels are less useful in terms of carbon  
18 reduction than even burning gasoline. So I don't know  
19 how good that is, but you should all think really  
20 carefully about that.

21 Thank you.

22 MR. SCHEER: Thank you very much.

23 Lisa Petry.

24 MS. PETRY: Hi, I'm Lisa Petry. I'm a stay-  
25 at-home mom and concerned citizen.

1           Twenty years from now it won't matter what  
2 the price of natural gas was in 2014, 2017 or 2020.  
3 The only thing that will matter is whether or not  
4 we've avoided a catastrophic global warming.

5           I'm sorry. I get a little emotional  
6 sometimes.

7           MR. SCHEER: That's okay.

8           MS. PETRY: But I'll try to stay fluent.

9           Natural gas is a false solution to the  
10 climate crisis. Yes, it burns 50 percent cleaner than  
11 coal, but that's very misleading because it leaves out  
12 the serious problem of methane leaks in the extraction  
13 and the transport phase.

14           Methane is an extremely potent greenhouse  
15 gas. It's about 23 times as potent as carbon dioxide  
16 over a 100-year time frame, but it's much worse, 80 to  
17 100 times as potent, over a 10- to 20-year time frame.

18           And researchers at Cornell University have  
19 found that overall -- overall greenhouse gas footprint  
20 of fracked gas, which is what we're talking about with  
21 the expansion of the Algonquin pipeline, is worse than  
22 coal when you look over a 20-year time frame.

23           It's that next 10 to 20 years that will be  
24 absolutely pivotal if we want to avoid catastrophic  
25 climate change.

1           And another problem with relying on natural  
2 gas as a bridge fuel, as already suggested earlier, is  
3 the idea that we can drastically grow a for-profit  
4 industry like natural gas and then expect it to simply  
5 step aside when we're ready to make the transition to  
6 renewable energy.

7           Excuse me. I'm really nervous.

8           MR. SCHEER: That's okay. Take your time.  
9 Up to three minutes, of course.

10           MS. PETRY: I'm really happy to have the  
11 opportunity to speak. So I'll try to just stick to my  
12 message.

13           To see how realistic this is, we only need  
14 to look at the track record of the oil industry. Far  
15 from stepping aside and making way for renewable  
16 energy, the oil industry has spent millions of dollars  
17 blocking progress from climate change. The more we  
18 invest in the natural gas industry, the more we're  
19 feeding the beast that we ultimately need to subdue if  
20 we want to stop global warming.

21           In fact, the ready availability of cheap  
22 natural gas is already slowing the growth of renewable  
23 energy by providing the cheaper alternative that's  
24 perceived as clean.

25           By the way, this is only cheaper, as Greg

1 indicated, if we exclude all the externalized costs in  
2 terms of healthcare costs, lost productivity and  
3 environmental destruction, et cetera.

4 We also need to remember that whenever we  
5 build new infrastructure or expand existing  
6 infrastructure, we're choosing our energy future for  
7 the next 30 to 50 years.

8 The IEA --

9 MR. SCHEER: I'm sorry, Lisa, but that's it.

10 MS. PETRY: Please, one more thing.

11 The IEA, (inaudible) radical environmental  
12 group, warned in 2011 that anything built now from now  
13 on that produces carbon will continue to do so for  
14 decades. And this blocking effect will be the single  
15 factor most likely to produce irreversible climate  
16 change.

17 We can meet all of our energy -- green  
18 energy. I have --

19 MR. SCHEER: Thank you very much.

20 MS. PETRY: I have here a plan that was --

21 MR. SCHEER: Please, you can submit it by e-  
22 mail.

23 MS. PETRY: -- with clean energy.

24 MR. SCHEER: But your time is up.

25 I'm sorry. I'm sorry.

1 MS. PETRY: We can do it here in Rhode  
2 Island.

3 MR. SCHEER: Thank you very much.

4 Wendy Luck. Finally. Because you were the  
5 first at the mic.

6 MS. LUCK: Hi, there. Can you all hear me?  
7 I'm Wendy Luck.

8 I am the Ocean State Clean Cities  
9 coordinator hosted at the University of Rhode Island  
10 Outreach Center.

11 And first, I did want to -- something that  
12 hasn't been mentioned today in terms of one of our  
13 achievements with infrastructure is the 50 electric  
14 charging station that was funded through the Office of  
15 Energy Resources.

16 But the truth is, one of our challenges is  
17 that we need more infrastructure for alternative fuels  
18 and transportation. The Clean Cities Program needs  
19 further support.

20 I am one of almost 100 coalitions  
21 nationwide. And to have a project like that, it takes  
22 resources. If you want to make us energy independent,  
23 wean us off of farm petroleum, we need resources to  
24 build the infrastructure, whether -- for any of those  
25 alternatives fuels.

1           None of these industries are going to  
2 flourish whether you talk about biofuels or natural  
3 gas or electric vehicles or hydrogen if you don't put  
4 resources there, for deployment, very much into  
5 vehicle deployment and infrastructure deployment.

6           So that's it. That's just the comments I  
7 wanted to make.

8           So thank you.

9           MR. SCHEER: Thank you very much.

10           I apologize in advance if I don't get this  
11 name right, but Gary Sifoski (phonetic)? Are you in  
12 the room. He's not here. Then he wasn't embarrassed  
13 by my pronunciation.

14           Next, Art Handy.

15           MR. HANDY: I won't take three minutes  
16 probably.

17           Art Handy, state representative from  
18 Cranston here in Rhode Island.

19           And I also work with the American Lung  
20 Association of the Northeast.

21           Reflecting back on what Mr. McCourt was  
22 saying about the idea of picking winners and losers, I  
23 think the more we can look to bring a lot of the costs  
24 that we're talking about that are out there -- and  
25 some of the other speakers I think also referred to it

1 -- the public health impact, but the flooding impact  
2 as well, the other kinds of pieces of these equations,  
3 as we're looking at our energy infrastructure, making  
4 our choices around becoming more resilient and  
5 prepared for climate change.

6           And the fundamental impact's obvious in the  
7 state of Rhode Island, very high asthma rates, but  
8 also with relative very limited ability to control a  
9 lot of things, like the ozone predecessors, the  
10 constituent chemicals that are going to come over from  
11 energy production out in the Midwest and so forth. I  
12 think it's really vital.

13           And that's why, again, I appreciate the  
14 Department of Energy looking at trying to find ways to  
15 cooperate.

16           But I would urge you, as an agency, I know  
17 obviously there's some limitations. You have to look  
18 for congressional approval for certain choices, many  
19 choices that are maybe not available to you. But look  
20 for those opportunities. I think they are there.

21           The EPI was just looking at carbon rules  
22 around the new coal plants and new -- other new energy  
23 sources.

24           Look at ways that you guys can work together  
25 trying to find ways to bring in those external costs

1 in benefits into these projects, whether it's a  
2 renewable project, an avoided project through energy  
3 efficiency or, again, maybe a completely avoided  
4 project in some cases as well.

5           So, again, I think the public health  
6 benefits are only one of those many things. But the  
7 climate impacts, a lot of things are going to be  
8 fundamentally important to us in the long term, and I  
9 would urge everyone to work together on that.

10           Thank you.

11           MR. SCHEER: Thank you very much.

12           Next, William Garrett.

13           MR. GARRETT: Yes. Hi. I'm William  
14 Garrett. I'm the president of American Hydrogen  
15 Northeast. We're a research development and  
16 applications group focused on providing proven  
17 technologies to make a transition from depletable  
18 energy to highly efficient and of course, clean  
19 renewables.

20           I'm going to be skipping through this  
21 because I have a longer piece, so I'll try to cut it  
22 down.

23           The IPCC and the IEA last year produced  
24 three very important documents. They primarily say  
25 that we are nowhere near on track for leading the 2

1 degree increase in global temperatures. They also  
2 point out that we are experiencing the impact of  
3 global warming now, and that most of the damaging  
4 portion of what happens between now and the end of the  
5 century will happen in the first half of the century.

6           Very different things. A very different  
7 look than what we've been used to.

8           They propose a 450 policy, called a 450  
9 policy, and they have a new policy scenario. But each  
10 and every report stresses that these things are  
11 unlikely to happen. They describe them as extremely  
12 challenging and have a lot of reasons why they say  
13 that.

14           So we're looking to market that is all;  
15 we're looking at other ways to find to cut global  
16 warming emissions.

17           To understand this, 70 percent of all the  
18 oil in the world goes through an internal combustion  
19 engine, the ones that are out there. There's over a  
20 billion of them. They run every day.

21           To give you an idea what this is, IEA  
22 predicts oil consumption rising from -- rising to  
23 4,666,000,000 U.S. gallons per day. That comes to  
24 1,701,630,000,000 U.S. gallons per year. And, of  
25 course, these engines and the oil market are the

1 second largest contributor to global warming  
2 emissions. And we largely ignore focusing on greater  
3 efficiency in this market. And we largely ignore  
4 really opening the market to a broad range of  
5 renewable and other fuels.

6           So the technology significantly increased  
7 the efficiency over a billion ICEs while cleaning the  
8 emissions, opening them to most all clean renewable  
9 fuels, including hydrogen or renewable hydrogen.  
10 That's here and now.

11           Shell Oil in the 2001 futures book predicts  
12 the rebound of the venerable --

13           MR. SCHEER: Time is up.

14           MR. GARRETT: -- stating that --

15           MR. SCHEER: Finish the --

16           MR. GARRETT: -- at 100 miles per gallon.

17 That's Shell Oil. That's not us or anybody else.

18           And in a very quick conclusion, this market  
19 represents a great opportunity for us to move in a  
20 different direction and make a major impact on cutting  
21 global warming emissions.

22           MR. SCHEER: Thank you very much.

23           MR. GARRETT: -- And --

24           MR. SCHEER: Thank you.

25           That's all the names I have on my list.

1           Is there anybody else who would like to make  
2 a comment? If you just form a line, and we'll just  
3 take you one at a time.

4           Remember to state your name and affiliation.

5           Three minutes.

6           MR. MEYERS: I'm Charlie Meyers. I'm the  
7 president of the Massachusetts Hydrogen Coalition, the  
8 chairman of the Massachusetts Fuel Cell Electric  
9 Vehicle Working Group and a founding member of the H2  
10 U.S.A. Program.

11           As we start looking around the United  
12 States, we start saying we're going to shift  
13 transportation onto the grid so that we can clean up  
14 the grid easier than we can. Transportation is all  
15 that moves through in the process. But in doing so,  
16 we're now making transportation something that we  
17 would as a component to the grid.

18           So I don't see it being discussed widely as  
19 we make zero emission electric vehicles part of the  
20 grid on that. It's going to be in the Northeast. It  
21 will impact natural gas. It will impact the other  
22 demands on it.

23           The energy efficiency gains that we make  
24 will be offset by -- to some degree the plug-in  
25 electric vehicles, the hydrogen fuel cell electric

1 vehicles.

2 We can make hydrogen on a site-based  
3 approach. We don't have to have it as distributed on  
4 that.

5 So there's a lot of options that we have for  
6 hydrogen on that.

7 The vehicles that we're putting on can serve  
8 an energy storage play. They can be vehicle to grid.  
9 They can be energy storage when you come to the site-  
10 based hydrogen generation.

11 So I'd like to echo what Wendy's comments  
12 were earlier and suggest that we spend more money on  
13 the infrastructure side and the research and the  
14 efficiencies associated with the infrastructure  
15 because they're going to be playing a greater  
16 dependency role on the grid and interfacing with it  
17 for the fuel demands on that.

18 Thank you very much.

19 MR. SCHEER: Thank you very much.

20 Next?

21 MS. RYAN: Hi. My name is Bridget Ryan. I  
22 am with Emerald Cities Providence.

23 I just wanted to emphasize the importance of  
24 energy efficiency in these discussions and in the  
25 energy plan with -- it's been stated 70 percent of

1 energy is being used by existing buildings.

2           There's a huge opportunity to address the  
3 supply and demand issues and delivery and generation  
4 issues of energy if we actually reduce significantly  
5 the amount that we use. And that's actually something  
6 that we have the ability to do. We just need to do it  
7 better.

8           I think there's great opportunities for  
9 greater economic impacts in quality job creation and  
10 especially addressing equity issues within our  
11 communities, creating jobs for most needy of our  
12 communities, the people who need the better wage  
13 paying jobs to support families.

14           I also agree with Commissioner Gold's  
15 comments about public/private partnerships. I think  
16 there's huge opportunities there.

17           And I would like to also stress that line  
18 with that, we need to have better interior  
19 departmental collaboration and cooperation to address  
20 energy efficiency.

21           So energy efficiency shouldn't just be seen  
22 in its own silo, that all -- many of the programs,  
23 community programs, government programs need to  
24 include energy efficiency.

25           So for instance, just in the production of

1 housing, when Dave Caldwell was talking the production  
2 of affordable housing, those policies need to have a  
3 greater emphasis on energy efficiency and more  
4 collaboration between all of the agencies.

5 Thank you very much.

6 MR. SCHEER: Thank you very much.

7 Next?

8 MR. CURRY: Yes. My name is Christopher  
9 Curry from Pascoag, Rhode Island.

10 I want to comment about the remark that was  
11 made that the Smart Grids that are being developed are  
12 going to depend on wireless technology.

13 That was pointed out that this wireless  
14 technology is vulnerable to hacking. And they really  
15 mess with our system if a foreign government or a  
16 hacker of some kind decides to start playing with that  
17 system.

18 But there's also another threat to relying  
19 so much on a wireless technology and that is sun  
20 spots. Especially if there's sun spots in such a way  
21 that they directly go toward us as opposed to  
22 elsewhere. The sun spots can wipe out the satellites  
23 that you're relying on to -- for wireless technology.

24 Therefore, I would hope that the Smart Grids  
25 that are being developed would be a combination of

1 wireless technology and wired technology designed to  
2 operate either way.

3 Thank you.

4 MR. SCHEER: Thank you very much.

5 Just a reminder that if you would like to  
6 submit comments in writing, you can do so and send  
7 them to -- by e-mail to the Department of Energy at  
8 QER comments, one word, at HU.DOE.gov.

9 Does anybody else want to offer public  
10 comment?

11 (Pause In Proceedings)

12 MR. SCHEER: I guess hearing none, with that  
13 we are adjourned.

14 Thank you so much.

15 (Proceedings concluded at 12:16 p.m.)

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C E R T I F I C A T E

I, Darlene M. Coppola, Registered Merit Reporter,  
Certified Realtime Reporter, do hereby certify that  
the foregoing transcript, Volume I, is a true and  
accurate transcription of my stenographic notes taken  
on April 21, 2014.

\_\_\_\_\_  
Darlene M. Coppola  
Registered Merit Reporter  
Certified Realtime Reporter

Capital Reporting Company  
 Quadrennial Energy Review 04-21-2014  
 Page 1

<u>\$</u>	<b>14,000</b> 49:9	<b>2013</b> 83:9 85:5,8	<b>44</b> 54:2
<b>\$1,000</b> 18:16	<b>15</b> 45:25 50:17	<b>2014</b> 1:22 12:6,10	<b>45</b> 19:8 42:6 85:7
<b>\$100</b> 35:10	63:13,19 69:3	63:13 147:2	<b>450</b> 154:8
<b>\$14</b> 73:3 85:22	<b>150</b> 139:14	161:8	<b>46</b> 94:1
114:25	<b>15-megawatt</b> 41:4	<b>2015</b> 5:3	<b>47</b> 18:17 138:25
<b>\$2,200</b> 18:22	<b>16</b> 72:21	<b>2017</b> 147:2	<b>495</b> 44:15
<b>\$2,500</b> 95:10	<b>17</b> 27:22 69:1	<b>2018</b> 50:16	<u>5</u>
<b>\$2.50</b> 78:9	<b>18</b> 69:3	<b>2020</b> 27:23 147:2	<b>5</b> 51:9 121:23
<b>\$2.86</b> 35:15	<b>1964</b> 138:24	<b>2023</b> 56:17	<b>50</b> 18:18 30:12
<b>\$20,000</b> 96:8	<b>1975</b> 89:12,17	<b>2025</b> 32:2	77:19 90:10 94:2
<b>\$20,400</b> 96:8	<b>1995</b> 76:25	<b>20-year</b> 147:17,22	138:24 147:10
<b>\$200</b> 94:6	<b>1-A</b> 74:22	<b>21</b> 1:22 161:8	149:7 150:13
<b>\$32.88</b> 35:19	<b>1-B</b> 74:22	<b>21st</b> 12:19	<b>500</b> 50:16 145:15
<b>\$40</b> 57:18	<u>2</u>	<b>23</b> 6:7 147:15	<b>50-50</b> 56:21
<b>\$400</b> 139:6	<b>2</b> 1:9 2:11 3:8	<b>23,000</b> 40:18	<b>570</b> 45:22
<b>\$580</b> 139:1	35:16 36:20 49:8	<b>23.5</b> 40:17	<b>5-megawatt</b> 41:16
<b>\$6</b> 19:22	58:9 96:11,16	<b>250</b> 37:24	<u>6</u>
<b>\$600</b> 74:16	153:25	<b>28</b> 54:3	<b>600</b> 54:24 139:18
<b>\$80</b> 19:21	<b>2,000-square-foot</b>	<u>3</u>	<b>65,000</b> 57:4
<u>1</u>	93:20	<b>3</b> 121:23	<u>7</u>
<b>1</b> 2:3 46:15	<b>2.1</b> 54:19 55:20	<b>30</b> 77:19 149:7	<b>7</b> 18:13 46:14
<b>1,200</b> 73:6	57:17	<b>300</b> 141:21	<b>70</b> 93:5 154:17
<b>1,260</b> 54:20	<b>2.3</b> 64:5	<b>300,000</b> 56:19	157:25
<b>1,701,630,000,000</b>	<b>2.5</b> 40:9	<b>31</b> 5:3	<b>700</b> 73:6
154:24	<b>2:00</b> 111:23	<b>32</b> 138:15	<b>700,000</b> 56:17,19
<b>1.3</b> 54:18	134:16	<b>36</b> 138:19	<b>750</b> 45:21
<b>10</b> 18:13 77:19	<b>20</b> 18:20 30:12	<u>4</u>	<u>8</u>
147:17,23	51:10 64:16	<b>4</b> 74:15	<b>8</b> 46:18 48:7
<b>100</b> 36:3 99:20	72:20 77:19	<b>4,000</b> 40:18 43:16	<b>8.8</b> 85:22
147:17 150:20	89:21 147:23	<b>4,666,000,000</b>	<b>80</b> 47:15 54:20
155:16	<b>200</b> 60:24	154:23	85:8 141:19
<b>100-year</b> 147:16	<b>200,000</b> 56:22 57:6	<b>4.2</b> 40:15	147:16
<b>100-year-old</b> 24:3	<b>2000</b> 76:25	<b>40</b> 32:23 35:16	<b>800</b> 35:25
<b>11,000</b> 40:14	<b>2001</b> 155:11	73:7 94:2 117:16	<b>82nd</b> 14:13
<b>118,000</b> 55:14	<b>2005</b> 27:24	<b>400</b> 60:24	<b>87</b> 45:24
<b>12</b> 6:6	<b>2008</b> 140:18	<b>400,000</b> 56:20	<u>9</u>
<b>12:16</b> 160:15	<b>2010</b> 9:22 41:25	<b>43</b> 90:14	
<b>125,000</b> 54:24	<b>2011</b> 78:8 149:12		
	<b>2012</b> 12:6		

<p><b>9:03</b> 1:22  <b>90</b> 41:13  <b>95</b> 42:17  <b>99.5</b> 42:19</p> <hr/> <p style="text-align: center;">A</p> <hr/> <p><b>a.m</b> 1:22  <b>ability</b> 17:25              42:1,2 71:16              80:18 82:19 86:8              100:23 128:25              152:8 158:6  <b>able</b> 10:1 19:13              39:15 47:6 48:18              62:22 68:24 73:4              105:2 115:14              135:16              141:16,20  <b>above-all</b> 91:16  <b>absence</b> 59:24  <b>absolutely</b> 17:2              30:18 70:1              118:13 147:24  <b>abstract</b> 35:22  <b>abundance</b> 11:2              56:6  <b>abundant</b> 49:13  <b>abusers</b> 108:23  <b>academic</b> 8:25              15:15 127:8  <b>access</b> 26:11 52:13              122:3,11  <b>accessible</b> 125:22  <b>accomplish</b> 85:25  <b>accomplishing</b>              13:14  <b>account</b> 146:7  <b>accounting</b>              146:5,12  <b>accounts</b> 2:9 53:18  <b>accurate</b> 161:7</p>	<p><b>achievable</b> 83:12  <b>achieve</b> 8:3 51:7              116:8  <b>achieved</b> 88:23  <b>achievements</b>              150:13  <b>achieving</b> 55:5  <b>acknowledge</b>              10:13 118:20  <b>acquisition</b> 99:1              100:22  <b>across</b> 6:24 8:25              15:8 29:3              31:1,23 64:1              82:18 89:24              90:22 107:14              109:18  <b>act</b> 3:17 50:5 51:25              64:8 86:16,17              87:4 108:16  <b>acting</b> 28:9  <b>action</b> 6:9 61:10              102:25 107:1              134:20  <b>actions</b> 59:13  <b>active</b> 113:5  <b>activities</b> 55:8  <b>activity</b> 120:9  <b>actors</b> 102:1              114:23  <b>actually</b> 14:13              22:5 23:5 72:16              75:2 78:25 90:8              94:7 95:11              109:21 135:5              139:10 146:11              158:4,5  <b>adaptation</b> 131:6  <b>add</b> 26:7,22 32:11              128:7 132:9              146:8,9  <b>adding</b> 24:5              126:14 146:8</p>	<p><b>additional</b> 62:23  <b>Additionally</b>              102:20 119:25  <b>address</b> 11:7,14              22:5,6 23:13              27:14,18 28:16              33:15 39:22 59:9              61:23 106:23              116:22 124:10              136:11 142:11              158:2,19  <b>addressed</b> 39:21  <b>addressing</b> 49:21              135:9 158:10  <b>adds</b> 24:22  <b>adequate</b> 52:25              88:15  <b>adjourned</b> 160:13  <b>administration</b> 8:2              27:16 49:21              51:12 60:11              63:20 79:15              122:15 140:17  <b>administration's</b>              64:18  <b>administrative</b>              59:12 61:11              88:22 107:1  <b>adopted</b> 78:7  <b>advance</b> 7:20              136:14 151:10  <b>advanced</b> 99:23  <b>advances</b> 100:8  <b>advancing</b> 123:16  <b>advantage</b> 82:21              130:11,23  <b>advice</b> 3:25 76:12  <b>Advisory</b> 3:16              124:15  <b>advocate</b> 104:20              107:23  <b>advocating</b> 28:23</p>	<p><b>affairs</b> 2:6              38:10,22  <b>affected</b> 69:16  <b>affiliated</b> 114:22  <b>affiliation</b> 156:4  <b>afford</b> 115:2              117:18  <b>affordability</b>              81:14 82:8              103:18 106:24              117:13 123:18  <b>affordable</b> 5:1              88:15 103:12,22              159:2  <b>afield</b> 43:9  <b>afraid</b> 35:1  <b>afternoon</b> 61:18  <b>against</b> 29:6 74:13              77:16  <b>agencies</b> 7:20              116:9 118:25              121:11 159:4  <b>agency</b> 11:17              152:16  <b>agenda</b> 32:6  <b>agent</b> 63:25  <b>agents</b> 99:13  <b>aggregating</b> 60:4  <b>aging</b> 6:12 53:6              118:15 120:23  <b>ago</b> 8:17 22:8              94:18 124:14              132:20  <b>agreed</b> 34:12  <b>agreement</b> 116:2  <b>agricultural</b>              144:12  <b>ahead</b> 120:12              144:18  <b>air</b> 19:14 50:20              68:17 72:16</p>
---	---	---	--

<p>80:14,15 109:13  <b>Airborne</b> 14:14  <b>alarmist</b> 43:1  <b>Albany</b> 48:9  <b>Algonquin</b> 147:21  <b>algorithms</b> 17:6  <b>align</b> 118:18  <b>aligned</b> 61:25  <b>Alliance</b> 140:16  <b>allies</b> 14:3  <b>allocate</b> 130:5  <b>all-of-the-above</b>              39:10 53:10              79:15  <b>allow</b> 19:25 52:7              60:2 62:14 63:19              97:18 98:15              100:22 114:3  <b>allowing</b> 34:21              77:4 100:6              112:18  <b>allows</b> 55:22 97:25              129:3  <b>alluded</b> 103:24  <b>alone</b> 95:14 98:8  <b>alphabet</b> 116:13  <b>already</b> 11:25              26:24 27:11              31:14 50:9 59:3              63:17 74:1 81:25              84:15,23 122:25              128:4 130:12              148:2,22  <b>alternate</b> 25:12  <b>alternative</b> 25:5              31:17 65:17              71:19,21 83:2              89:19 92:1 98:16              148:23 150:17  <b>alternatives</b>              150:25  <b>am</b> 3:4 7:14 8:15</p>	<p>82:9 137:4,10              140:12 150:8,20              157:22  <b>amazing</b> 44:14              124:17 125:3  <b>America</b> 1:1 13:7              14:1 26:14 41:9              140:13  <b>American</b> 18:3              29:12 44:19              50:25 52:2 65:19              129:24 146:3              151:19 153:14  <b>America's</b> 50:23  <b>among</b> 9:2 60:17              68:12  <b>amount</b> 24:10              37:10 58:3 63:4              83:22,23              91:17,19 94:25              134:3 158:5  <b>amounts</b> 73:23  <b>analysis</b> 8:9 10:7              57:23  <b>analytical</b> 8:14  <b>Andy</b> 2:9 33:24              46:23 53:16              58:15 66:4,21              73:17 74:25 75:2              80:2,23  <b>announce</b> 21:15              23:19 29:9  <b>announcement</b>              3:15  <b>annual</b> 46:1  <b>annualized</b> 57:4  <b>annually</b> 46:18  <b>answer</b> 24:19              58:14 67:17              117:3  <b>answered</b> 75:17  <b>answers</b> 59:2 83:3              92:7 98:14</p>	<p><b>Anthony</b> 2:4 33:23              34:14,17 61:20              141:7  <b>Anthony's</b> 72:11  <b>anybody</b> 127:18              136:9 155:17              156:1 160:9  <b>anymore</b> 112:14  <b>Anyone</b> 70:2  <b>anything</b> 17:19              63:1 70:17 92:25              98:7 121:24              132:3 149:12  <b>Anyway</b> 30:23  <b>Anywhere</b> 70:2  <b>apartment</b> 93:13  <b>apologize</b> 67:2              98:9 136:14              151:10  <b>apparent</b> 91:22  <b>apparently</b> 23:8              67:19 118:8  <b>appetite</b> 119:23  <b>applause</b> 38:5              48:22 97:4              135:19  <b>appliances</b> 64:21              73:11  <b>applicability</b>              126:24  <b>applications</b>              153:16  <b>applying</b> 51:10  <b>appreciate</b> 7:25              20:8 43:22 53:9              58:16 92:13              152:13  <b>appreciated</b> 58:21              103:3 106:7              135:22 142:22  <b>approach</b> 25:1              27:18 91:17</p>	<p>157:3  <b>approaches</b> 17:11  <b>appropriate</b>              7:12,20 59:8              106:22 107:3              115:8,13 122:12  <b>approval</b> 56:3              63:2 75:10,21              152:18  <b>approved</b> 56:13              59:22 65:24 66:3  <b>approving</b> 60:13  <b>approximately</b>              27:24,25  <b>April</b> 1:22 161:8  <b>area</b> 26:17 34:12              54:1 56:18 67:25              73:23 113:6              117:4,22,24              118:14 124:3  <b>areas</b> 19:17 44:12              54:15 73:14              116:19 128:8              130:10 131:23              137:21  <b>aren't</b> 94:23 110:9  <b>argue</b> 12:3 140:3  <b>Arizona</b> 22:10              110:15  <b>army</b> 122:6  <b>Art</b> 29:10              151:14,17  <b>article</b> 146:16  <b>aside</b> 148:5,15  <b>aspect</b> 83:5 110:18  <b>aspects</b> 99:6  <b>aspirational</b> 83:11  <b>assess</b> 4:24  <b>assessment</b> 83:10  <b>assessments</b>              121:19</p>
---	---	---	--

<p><b>asset</b> 45:10 54:18</p> <p><b>assets</b> 40:21 53:24 55:2 66:17 98:1</p> <p><b>assist</b> 49:21 115:13</p> <p><b>assistance</b> 73:20 108:5</p> <p><b>associated</b> 100:5 112:7 137:10 157:14</p> <p><b>Association</b> 2:6,14,15 16:21,22 21:18 29:12 43:25 46:8 88:3 92:15,19 138:12 142:19 151:20</p> <p><b>associations</b> 69:6</p> <p><b>assumptions</b> 62:16</p> <p><b>assurance</b> 55:6</p> <p><b>asthma</b> 69:6 152:7</p> <p><b>ASTM</b> 64:12,15</p> <p><b>at-home</b> 146:25</p> <p><b>atmosphere</b> 26:2 28:15</p> <p><b>attach</b> 10:16</p> <p><b>attack</b> 99:12 100:11,13,14,20, 21 101:2,25 122:2</p> <p><b>attacker</b> 100:15</p> <p><b>attacks</b> 100:15</p> <p><b>attempting</b> 69:13</p> <p><b>attention</b> 4:18 109:25</p> <p><b>attest</b> 18:24 127:14</p> <p><b>attract</b> 17:25</p> <p><b>attractive</b> 102:12</p> <p><b>attractiveness</b> 17:22</p> <p><b>audience</b> 58:17</p>	<p><b>authorize</b> 60:23</p> <p><b>auto</b> 46:21</p> <p><b>automate</b> 98:1 113:14 121:21</p> <p><b>automation</b> 100:8 101:13 128:20</p> <p><b>automotive</b> 46:22</p> <p><b>availability</b> 62:21 63:5 68:21 80:10 98:12 148:21</p> <p><b>available</b> 6:25 58:18 60:14,15 82:22 110:25 113:1 119:20 152:19</p> <p><b>average</b> 18:18,21,23 74:14 104:1 138:25</p> <p><b>Aviv</b> 122:3</p> <p><b>avoid</b> 62:18 147:24</p> <p><b>avoided</b> 147:4 153:2,3</p> <p><b>avoiding</b> 56:2 74:11</p> <p><b>aware</b> 39:19 107:22 124:17</p> <p><b>away</b> 23:2 31:21 37:12 55:5 60:21 90:18</p> <hr/> <p style="text-align: center;"><b>B</b></p> <hr/> <p><b>B100</b> 64:21</p> <p><b>B20</b> 64:15,20</p> <p><b>back-fit</b> 134:18</p> <p><b>background</b> 14:14</p> <p><b>backing</b> 119:21</p> <p><b>backs</b> 86:6</p> <p><b>backwards</b> 60:20 68:18</p> <p><b>backyard</b> 44:7</p>	<p><b>balance</b> 109:25 112:5,9</p> <p><b>balanced</b> 56:8</p> <p><b>ball</b> 131:17</p> <p><b>balls</b> 116:6</p> <p><b>Bam</b> 94:5</p> <p><b>BANANA</b> 69:25 71:11</p> <p><b>bar</b> 144:22</p> <p><b>barbecue</b> 44:8</p> <p><b>barrels</b> 54:25 55:14,20 56:17,20,22 57:5,6,17 58:10</p> <p><b>barrier</b> 75:9,12 95:23</p> <p><b>barriers</b> 66:20 67:12 69:22 70:19 71:8</p> <p><b>base</b> 88:17</p> <p><b>baseball</b> 10:1,3</p> <p><b>based</b> 3:24 10:6 25:8 62:15 68:21 132:12 144:11 146:1 157:10</p> <p><b>baseline</b> 83:18</p> <p><b>base-load</b> 41:12</p> <p><b>basic</b> 93:20 110:7</p> <p><b>basically</b> 54:9 73:24 145:24</p> <p><b>basis</b> 35:19 36:6,8 42:10 110:16</p> <p><b>bat</b> 94:4</p> <p><b>Bath</b> 55:13,15</p> <p><b>batteries</b> 121:2</p> <p><b>battery</b> 121:1</p> <p><b>bay</b> 139:1,3</p> <p><b>BCF</b> 36:20,24 54:18,19,20</p> <p><b>bearers</b> 78:11</p>	<p><b>beast</b> 148:19</p> <p><b>beat</b> 67:4</p> <p><b>became</b> 48:4</p> <p><b>become</b> 5:18 17:23 28:4 47:20 50:18 77:4 86:18 128:18</p> <p><b>becomes</b> 17:25 72:15 102:11 125:21</p> <p><b>becoming</b> 8:18 46:22 94:22 110:12 152:4</p> <p><b>begin</b> 3:4 16:10 49:10 60:3</p> <p><b>behalf</b> 4:17 92:19 107:24</p> <p><b>behaviors</b> 114:5</p> <p><b>behind</b> 77:21 78:16 79:24 91:3 98:24</p> <p><b>believe</b> 53:7 64:5,14 86:15 92:7 111:14 117:8 124:7 131:25</p> <p><b>below-average</b> 120:11</p> <p><b>beltway</b> 44:15</p> <p><b>beneficial</b> 69:5</p> <p><b>benefit</b> 18:3 19:13 108:22 141:10</p> <p><b>benefits</b> 43:18 85:6,22 105:13,17 112:19 153:1,6</p> <p><b>best</b> 58:1 70:25 111:15 142:2</p> <p><b>bet</b> 145:14</p> <p><b>better</b> 6:10 25:2 27:13 31:21 50:20 80:15 85:1 86:3 95:12 96:14</p>
--	---	--	---

97:25 109:22 111:8 122:17 123:5 126:18 138:21 158:7,12,18 <b>betting</b> 91:21 <b>beyond</b> 13:25 44:10 143:8 <b>bigger</b> 26:4 43:5 64:9 99:24 <b>biggest</b> 48:15 <b>bill</b> 16:20 18:25 65:20 81:6 88:1,2 92:13 96:23 108:15 118:5 125:16 127:1 132:3 <b>billion</b> 69:1 85:22 154:20 155:7 <b>billions</b> 93:7 96:25 <b>bills</b> 6:5 93:14,15 105:10,12,14 123:12,13 <b>biodiesel</b> 50:2,23 51:2,15,16 63:23,24 64:16,23 72:9,14,18 73:9 <b>biofuels</b> 64:13 146:16,17 151:2 <b>biography</b> 14:11 <b>birthplace</b> 26:8 <b>BISHOPP</b> 1:14 <b>bit</b> 10:18 37:2 38:7 45:19 58:22 88:13 94:7 108:19 109:24 110:9 116:4 120:8 126:1,21,24 127:8,25 136:4 <b>black</b> 57:3 <b>blend</b> 72:14,20 101:22	<b>blended</b> 51:9 64:16 <b>blending</b> 63:24 64:20 72:18 <b>blends</b> 51:2 <b>blocked</b> 71:3 <b>blocking</b> 148:17 149:14 <b>blue</b> 57:2 <b>board</b> 29:3 31:23 89:24 94:14 124:15 <b>bogged</b> 68:3 70:12 <b>book</b> 155:11 <b>books</b> 78:12 <b>borders</b> 104:24 <b>borne</b> 78:11 86:6 95:4 <b>Boston</b> 44:15 139:13,15 <b>bottom</b> 57:1 95:2 <b>box</b> 136:19 <b>BPM</b> 63:19 <b>BPP</b> 119:15 <b>brainstorming</b> 116:5 <b>brand-new</b> 94:3 <b>brave</b> 131:24 <b>Brayton</b> 138:22 <b>Brazil</b> 145:23 <b>breaches</b> 125:23 <b>break</b> 100:12 <b>breaks</b> 81:9 <b>bridge</b> 28:9 30:6,19,21 31:13 77:6 148:2 <b>Bridgeport</b> 40:25 41:3 <b>Bridget</b> 157:21 <b>bridging</b> 52:23	<b>brief</b> 54:7 <b>Briefly</b> 53:23 <b>bring</b> 11:10,20 17:23 32:9 45:12 47:18 48:7 52:9 53:24 55:23 58:1 73:10,15,20 80:15,19 93:12 96:22 98:20 123:4 129:24 143:20 151:23 152:25 <b>bringing</b> 107:15 116:19 123:21 130:3 <b>broad</b> 14:4 155:4 <b>broader</b> 102:17 114:2 <b>broadly</b> 29:5 <b>broken</b> 126:2 <b>Brookhaven</b> 64:19 <b>brought</b> 6:23 44:20 45:23 62:18 96:4 125:7 <b>Brownfield</b> 41:3 <b>Brunswick</b> 52:11 <b>BTUs</b> 35:14 138:25 <b>budget</b> 18:24 <b>build</b> 57:18 62:14,22 70:1,8,15,16 117:8 122:5 141:24 149:5 150:24 <b>Builders</b> 2:15 16:22 92:15,19,20 <b>building</b> 92:21 93:4 96:16 112:24 113:7 117:7 127:5 128:19 131:20 <b>buildings</b> 20:12	93:5 120:6,11 139:15 158:1 <b>built</b> 97:5,7 141:6,19 149:12 <b>bulb</b> 113:25 <b>bunch</b> 23:23 <b>burn</b> 19:8 <b>burned</b> 68:22 <b>burning</b> 80:13 146:18 <b>burns</b> 147:10 <b>buses</b> 80:13 <b>business</b> 13:13 17:25 39:8 46:21 54:3 70:7 88:13 90:7,8 93:14 95:8 105:25 118:24 119:10 126:6 127:10 129:5,20 131:22,25 133:16 134:11 <b>businesses</b> 35:10 55:1 69:1 71:15 72:2 94:22 108:21 109:16 119:4 128:25 <b>butane</b> 56:21 <b>Buxton</b> 2:4 33:23 34:14,18 59:16 67:17 68:14 71:6 75:23 76:14 141:7 <b>buy</b> 96:4,9 <b>buzzer</b> 81:24 <hr/> <p style="text-align: center;">C</p> <hr/> <b>caboose</b> 32:19 <b>cafe</b> 84:14 122:2 <b>calculated</b> 69:2 <b>Caldwell</b> 2:15 16:21 92:14,17,20
--	--	--	--

<p>110:3 119:14                  127:3 133:4                  159:1  <b>California</b> 112:17  <b>Canada</b> 52:11                  85:16  <b>Canadian</b> 29:22                  52:8  <b>capabilities</b> 113:7  <b>capability</b> 56:2  <b>capacity</b> 5:14,22                  6:3,8 20:9,10                  22:20 35:21                  36:12,18,21                  42:19 49:25                  54:19,20,21,24                  57:3 60:25 65:14                  70:21                  143:14,16,21  <b>capital</b> 26:14                  66:10,16 67:8                  71:17 102:22                  115:24 117:7,21                  119:20  <b>capitalize</b> 7:9  <b>capture</b> 28:6 32:3  <b>car</b> 96:4  <b>carbon</b> 28:5,6                  32:3,5,13 51:8                  72:21 78:2 83:24                  98:13 121:3                  146:17 147:15                  149:13 152:21  <b>carbon-</b>  <b>constrained</b> 9:8  <b>career</b> 108:25  <b>carefully</b> 146:20  <b>Carolina</b> 40:10  <b>carried</b> 77:1  <b>cars</b> 96:5  <b>case</b> 57:14 60:10                  133:10 138:21  <b>cases</b> 99:9 108:4</p>	<p>153:4  <b>cash</b> 54:14  <b>catalyze</b> 102:25  <b>catalyzing</b> 97:16                  113:6  <b>catastrophic</b>                  147:4,24  <b>catch</b> 10:3 138:3  <b>catches</b> 67:7  <b>categorized</b> 54:9  <b>category</b> 99:2  <b>caucus</b> 16:4 29:21  <b>caught</b> 127:11  <b>cause</b> 53:2  <b>caused</b> 52:16  <b>cell</b> 40:24 41:4,8                  156:8,25  <b>center</b> 1:20 40:25                  118:2 150:10  <b>centers</b> 101:5                  142:2  <b>central</b> 16:3,23                  138:14  <b>cents</b> 35:16 47:16  <b>century</b> 12:19                  154:5  <b>CEO</b> 2:8,16 48:25                  97:10 138:11  <b>Ceres</b> 32:21  <b>certain</b> 51:4 62:15                  152:18  <b>certainly</b> 13:9                  14:19 26:23                  30:18 75:11                  115:10 118:15                  141:11  <b>Certified</b> 161:5,13  <b>certify</b> 161:5  <b>cetera</b> 22:21,22                  31:18 66:11                  144:3 149:3</p>	<p><b>Chafee</b> 1:17                  4:9,10,13 10:13                  16:2 23:11 26:7                  103:10  <b>Chafee's</b> 29:21  <b>chain</b> 31:1 88:14  <b>chair</b> 2:17 94:14                  103:5 106:8  <b>chairman</b> 156:8  <b>chairperson</b> 16:18                  104:19  <b>challenge</b> 32:13,14                  34:9 35:5 36:13                  60:4 81:21 84:1                  92:22 98:11                  124:16  <b>challenges</b> 5:9                  11:7,9 15:22                  44:21 86:2 108:8                  118:19 119:3                  131:14 150:16  <b>challenging</b> 57:21                  142:21 154:12  <b>chance</b> 20:17 92:8                  123:20 124:6                  138:4  <b>change</b> 24:6 27:19                  29:7 37:8 52:4                  63:15 69:4 80:9                  114:4 131:2,5                  147:25 148:17                  149:16 152:5  <b>changer</b> 130:5  <b>changes</b> 98:17                  105:5 115:18                  116:24  <b>change-type</b> 111:4  <b>changing</b> 117:14                  118:8 132:14  <b>channel</b> 93:25  <b>channeling</b> 108:10  <b>charge</b> 47:18  <b>charges</b> 43:3</p>	<p><b>charging</b> 150:14  <b>Charles</b> 139:10,13  <b>Charlie</b> 156:6  <b>chart</b> 56:14 87:9                  89:20  <b>chatting</b> 107:8  <b>cheap</b> 17:18                  119:19 121:6                  148:21  <b>cheaper</b> 42:10                  131:24                  148:23,25  <b>cheapest</b> 95:24  <b>check</b> 130:4                  136:19  <b>chemicals</b> 152:10  <b>children</b> 111:8  <b>China</b> 131:18                  134:7  <b>Chinette</b> 36:2  <b>choice</b> 60:22 61:5  <b>choices</b> 49:16                  152:4,18,19  <b>choose</b> 72:13  <b>choosing</b> 149:6  <b>Chris</b> 144:23  <b>Christopher</b> 159:8  <b>circuit</b> 128:17  <b>circumstances</b>                  46:9  <b>cited</b> 138:14  <b>cities</b> 21:25 83:1                  139:6 150:8,18                  157:22  <b>citizen</b> 146:25  <b>citizens</b> 35:9                  126:20  <b>city</b> 41:1 44:11                  140:2  <b>Clark</b> 102:8</p>
--	--	---	--

<p><b>classification</b> 100:20</p> <p><b>clean</b> 5:1 7:12 26:11 30:25 32:17,22,23 33:6 49:14 50:10 63:25 80:10 82:25 85:15,21 111:9 117:24 119:25 148:24 149:23 150:8,18 153:18 155:8 156:13</p> <p><b>cleaner</b> 26:25 51:5 72:15 80:13 147:10</p> <p><b>cleaning</b> 155:7</p> <p><b>clear</b> 71:1</p> <p><b>clearly</b> 22:17 23:2 137:18</p> <p><b>clients</b> 35:24</p> <p><b>climate</b> 11:9 14:24 24:6,8,14 27:18 29:6 37:8 111:4 131:2,5,6 137:17 147:10,25 148:17 149:15 152:5 153:7</p> <p><b>clock</b> 42:20 137:6</p> <p><b>close</b> 37:5 120:14</p> <p><b>closed</b> 35:24 61:13</p> <p><b>closed-loop</b> 43:10</p> <p><b>closely</b> 93:16 102:15,21 104:15 107:23 131:10</p> <p><b>cloud-type</b> 125:22</p> <p><b>CO2</b> 11:4 28:4,10 69:2</p> <p><b>coal</b> 9:5 28:2 32:8 68:22 76:24 91:8 131:20 147:11,22 152:22</p>	<p><b>coal-fired</b> 6:11 70:6</p> <p><b>Coalition</b> 156:7</p> <p><b>coalitions</b> 150:20</p> <p><b>coast</b> 43:13 50:4 52:10 64:10 119:15</p> <p><b>coherent</b> 11:22</p> <p><b>cold</b> 62:10 104:4</p> <p><b>colder</b> 45:4</p> <p><b>Colin</b> 1:14 140:15</p> <p><b>collaborate</b> 78:14</p> <p><b>collaboration</b> 7:19 30:1 39:18 40:1 42:21 78:19 102:13 135:7,13 158:19 159:4</p> <p><b>collaborative</b> 133:8,15</p> <p><b>colleague</b> 82:24</p> <p><b>colleagues</b> 16:4,11 142:20 143:4</p> <p><b>collect</b> 144:10</p> <p><b>colleges</b> 87:2</p> <p><b>Colombia</b> 145:23</p> <p><b>Colorado</b> 124:14,25 129:15</p> <p><b>combination</b> 25:18 46:19 76:20 105:3 159:25</p> <p><b>combined</b> 21:20 89:23 140:5</p> <p><b>combining</b> 88:24 140:1</p> <p><b>combustion</b> 32:4 154:18</p> <p><b>comes</b> 3:7 15:18 19:12,14 24:8 27:25 44:18 48:8 72:1 74:6 89:23 92:4,10 101:10</p>	<p>112:1 116:1 143:17 154:23</p> <p><b>comfort</b> 135:15</p> <p><b>coming</b> 10:9 19:3 34:1 35:14 43:7 56:18 69:17 104:15 110:5 114:8 116:21 127:24,25</p> <p><b>command</b> 100:17</p> <p><b>commend</b> 36:23</p> <p><b>comment</b> 39:17 66:12,19 128:8 132:6 133:3 136:1,9 137:12 138:4,5 156:2 159:10 160:10</p> <p><b>commenters</b> 136:5</p> <p><b>comments</b> 33:12 53:10 61:14 92:13 115:11 135:6 136:10,12 142:11,13 151:6 157:11 158:15 160:6,8</p> <p><b>commercial</b> 6:7 53:17 89:15,16,22 104:14 128:17</p> <p><b>commercialization</b> 113:19</p> <p><b>commission</b> 2:17 16:19 75:15 103:6,15 104:19,20 105:2 121:12 122:24 123:4 137:24</p> <p><b>commissioner</b> 2:12 16:16 81:18 82:10 105:19 135:6 137:22 138:3 158:14</p> <p><b>Commission's</b> 103:19</p> <p><b>commitment</b></p>	<p>15:13</p> <p><b>committed</b> 7:14 27:17</p> <p><b>Committee</b> 3:16</p> <p><b>communicate</b> 121:21</p> <p><b>communicates</b> 101:23</p> <p><b>communication</b> 98:14</p> <p><b>communications</b> 99:24 100:6 112:16 121:6</p> <p><b>communities</b> 22:1 47:9 128:25 158:11,12</p> <p><b>community</b> 16:14 70:9 102:22 118:24 119:10 131:23 132:1 158:23</p> <p><b>compact</b> 113:25</p> <p><b>companies</b> 6:1 17:23 47:3 94:24,25 97:25</p> <p><b>company</b> 17:5 39:6,7 40:13,15 41:8 54:7,9 70:7,20 92:20 97:24 113:13 118:11 129:21</p> <p><b>comparable</b> 94:3</p> <p><b>compensate</b> 59:24</p> <p><b>compete</b> 88:17</p> <p><b>competition</b> 60:16,21</p> <p><b>competitive</b> 86:21 109:8,17 129:21</p> <p><b>competitiveness</b> 23:3 87:7 92:3</p> <p><b>complete</b> 101:5</p> <p><b>completed</b> 5:2 57:22</p>
---	---	--	---

<p><b>completely</b> 153:3  <b>complex</b> 98:23  <b>complexity</b> 101:22  <b>complicated</b> 108:2                  131:24  <b>comply</b> 6:2 139:11  <b>component</b>                  100:14,15                  105:19 156:17  <b>components</b> 99:3                  105:14,16  <b>comprehensive</b>                  4:25 82:20  <b>computer</b> 17:6,11  <b>concept</b> 129:7  <b>concern</b> 47:10                  75:17 78:3                  103:18  <b>concerned</b> 78:1                  91:17,19 92:2,5                  146:25  <b>concerns</b> 82:5                  117:12  <b>conclude</b> 87:8  <b>concluded</b> 160:15  <b>conclusion</b> 53:9                  58:2 86:23 91:11                  117:23 155:18  <b>condemn</b> 132:11  <b>conditions</b> 144:6  <b>conductive</b> 44:11  <b>conduct</b> 9:24  <b>conducted</b> 85:2  <b>confident</b> 119:22  <b>confirmed</b> 84:17  <b>conflict</b> 134:6,7  <b>congestion</b> 143:10  <b>conglomerates</b>                  94:24  <b>Congress</b> 11:23</p>	<p><b>congressional</b> 8:2                  152:18  <b>connect</b> 55:21  <b>connected</b> 41:5                  55:22 57:19 74:1                  99:22 101:17                  104:2 134:3                  142:4  <b>Connecticut</b> 22:10                  40:23,25 41:1,17                  42:16 43:15                  63:11,17 74:5                  78:7 102:6                  110:15 142:3  <b>connection</b> 12:3  <b>connective</b> 134:19  <b>cons</b> 132:18  <b>consecutive</b> 35:25  <b>consensus</b> 4:3 68:4                  69:10  <b>conservation</b>                  110:8  <b>consider</b> 53:5 97:8  <b>considerable</b>                  143:25  <b>consistent</b> 49:24                  137:20  <b>consistently</b> 102:2                  115:22  <b>consists</b> 99:15  <b>constant</b> 66:7  <b>constituent</b> 152:10  <b>constraints</b> 1:8                  3:13,20 5:15 6:8                  39:20 59:10                  106:24 116:22                  122:14 124:10  <b>constructing</b> 25:13  <b>construction</b> 60:2                  95:21 120:8                  140:22  <b>consulting</b> 85:3</p>	<p><b>consume</b> 93:5  <b>consumed</b> 138:20  <b>consumer</b> 2:4                  34:15,22 50:20                  53:25 64:23                  65:11,19,20                  74:10,14 91:12                  95:4 110:23                  121:24 142:23                  143:16  <b>consumers</b> 48:19                  60:4 79:2 80:19                  86:19,20 95:22                  101:20 110:24                  114:4 128:15  <b>consumes</b> 90:8  <b>consumption</b>                  62:15 73:5 90:20                  92:10 99:17                  154:22  <b>contact</b> 83:3  <b>contemplates</b>                  112:2  <b>content</b> 24:22                  50:14  <b>context</b> 31:13  <b>continually</b> 105:9  <b>continue</b> 7:23 25:7                  29:4 48:18 51:19                  64:7 72:14 86:13                  90:2 104:17                  113:21 119:19                  123:11 124:5                  142:1 145:13                  149:13  <b>continued</b> 26:23                  73:13 108:4                  114:6  <b>continues</b> 124:19  <b>continuing</b> 5:13                  6:20 11:13 29:6                  85:13 86:24                  106:2 145:22  <b>contract</b> 60:1</p>	<p><b>contracts</b> 60:1                  144:12  <b>contrast</b> 101:18  <b>contribute</b> 76:7                  96:19  <b>contributing</b>                  29:17 31:16  <b>contribution</b> 27:5  <b>contributions</b>                  28:18  <b>contributor</b> 155:1  <b>control</b> 98:25 99:4                  100:17,19,24                  101:5,13 103:16                  128:21 152:8  <b>controlled</b> 99:7  <b>convenient</b> 107:14  <b>CONVENTION</b>                  1:20  <b>conversation</b>                  53:16 58:23                  61:21 95:25  <b>converting</b> 46:19  <b>conveyance</b> 29:16  <b>cook</b> 44:7  <b>cooling</b> 43:7,10                  139:2  <b>Co-op</b> 140:2  <b>cooperate</b> 152:15  <b>cooperation</b> 30:1                  135:7,13 158:19  <b>Coordinated</b>                  72:16  <b>coordination</b>                  100:2  <b>coordinator</b>                  140:12 150:9  <b>Coppola</b> 161:4,12  <b>copy</b> 36:20  <b>core</b> 120:6  <b>corn</b> 44:25 62:9</p>
---	---	--	--

<p><b>Cornell</b> 147:18  <b>corporate</b> 100:3  <b>correlation</b> 90:9  <b>corresponds</b> 33:3  <b>cost</b> 18:5 19:2              20:20 22:25 23:2              31:5,6,8 35:19              36:5,9 37:23              64:23 78:10              88:19,21,24              91:24 92:3 95:24              98:21 110:12,16              111:1 120:17,24              122:5 123:7,9,22              128:23 129:6              146:5,7,11  <b>cost-effective</b>              82:14 84:24              88:14  <b>costly</b> 52:23 101:7  <b>costs</b> 5:12 6:19              18:13 69:7              86:5,8 95:6              96:7,8 100:5              104:1 109:15              149:1,2 151:23              152:25  <b>cost-saving</b> 87:16  <b>council</b> 9:21 131:5  <b>counsel</b> 2:4 34:15  <b>count</b> 123:6 146:5  <b>counterparts</b> 7:2  <b>countries</b> 23:9              45:13 102:1  <b>country</b> 8:25              10:22 11:6 15:8              17:17,24 18:18              19:13,22 39:11              45:11 46:17              61:24 72:10              74:12 79:19,22              80:4 82:18 91:13              93:6 104:12              107:14 114:15              142:2</p>	<p><b>couple</b> 12:2 46:12              58:19 91:5 100:8              106:13 121:14  <b>course</b> 5:5 6:1 7:23              13:11 14:23              16:12 22:17              30:19,22 110:4              118:12 148:9              153:18 154:25  <b>cover</b> 105:11  <b>Cranston</b> 137:11              151:18  <b>create</b> 95:20              100:25 110:21              113:14 114:3              120:15 123:8              141:9  <b>creates</b> 96:19  <b>creating</b> 69:9 77:5              104:23 105:8              132:15 158:11  <b>creation</b> 17:22              87:1 158:9  <b>creative</b> 119:2  <b>creativity</b> 123:3  <b>credit</b> 13:17 51:15              60:5 71:25  <b>credits</b> 71:20              126:7  <b>creditworthy</b>              59:25  <b>Crestwood</b> 2:9              53:18  <b>criminal</b> 99:12  <b>crisis</b> 62:18 86:14              137:17,18              144:13 147:10  <b>crisis-driven</b>              135:12  <b>critical</b> 17:2 19:20              32:12 37:4 38:20              39:25 41:14              42:3,14 43:18              48:15 61:14,21</p>	<p>62:2 86:17              101:13 102:3              121:12  <b>critically</b> 7:6 20:7              125:11  <b>critique</b> 43:6  <b>crop</b> 44:24,25 62:9  <b>crude</b> 50:4 52:2,9              54:25 55:1 64:10  <b>cubic</b> 60:24  <b>culture</b> 145:17  <b>Curran</b> 2:17 16:18              103:4,8 115:9              122:23 130:9              135:5  <b>current</b> 51:18 84:8              85:7 110:6              115:14 135:6  <b>currently</b> 36:21              99:15 104:8              105:3  <b>Curry</b> 159:8,9  <b>curve</b> 48:17 116:5  <b>Custom</b> 92:20  <b>customer</b> 46:6              55:4 95:13  <b>customers</b> 40:9,16              42:11 46:3 47:19              53:1 55:3,5              128:18  <b>cut</b> 20:13 26:1,6              96:17 136:13,15              153:21 154:15  <b>cutting</b> 155:20  <b>cut-to-the-chase</b>              106:19  <b>cyber</b> 12:19 98:4,8              99:10 100:10,12              101:10 102:16              112:24 115:4              125:7,9,20 134:1  <b>cycle</b> 9:7 96:20</p>	<p><b>cycles</b> 77:18  <hr/> <b>D</b>  <hr/> <b>Dailey</b> 146:13  <b>daily</b> 54:19,24              55:17  <b>Dakota</b> 143:11  <b>damage</b> 100:23  <b>damaged</b> 146:8  <b>damaging</b> 154:3  <b>dangerous</b> 79:9  <b>Darlene</b> 161:4,12  <b>data</b> 10:6 62:14,21              63:1 83:18 98:25              99:3 100:22,24              101:4 122:15              125:21              144:7,10,11,14  <b>database</b> 107:13  <b>databased</b> 83:10  <b>Dave</b> 16:21 81:7              97:3 110:2 127:2              133:3 159:1  <b>David</b> 2:15 92:14              113:2 119:13  <b>day</b> 35:15 36:20              37:10,11 53:3              54:25 55:14              56:20,22 57:5,7              87:23 114:24              132:14 137:14              154:20,23  <b>days</b> 58:19 68:22  <b>day-to-day</b> 39:5  <b>DBC</b> 75:15  <b>deal</b> 18:2 108:3              111:2  <b>dealers</b> 50:23  <b>dealer's</b> 96:5  <b>dealing</b> 50:22 64:8  <b>DEC</b> 75:15  <b>decades</b> 137:13</p>
---	---	--	---

<p>149:14  <b>decatherm</b> 114:25  <b>December</b> 6:6                  45:18  <b>decide</b> 72:5  <b>decides</b> 159:16  <b>deciding</b> 68:6 69:9                  79:8  <b>decision</b> 12:10  <b>decisions</b> 49:17                  67:25 68:1,2                  80:18 101:7  <b>deck</b> 54:5 55:4  <b>decks</b> 87:22  <b>decline</b> 84:16,22  <b>deconstruct</b> 70:8  <b>decrease</b> 73:4,7  <b>decreasing</b> 100:5  <b>dedicated</b> 44:3  <b>deep</b> 91:23 112:22  <b>deeply</b> 7:14  <b>deficiencies</b> 100:9  <b>deficit</b> 59:18  <b>degree</b> 154:1                  156:24  <b>delegation</b> 8:2  <b>deliberately</b> 76:19  <b>deliberations</b>                  76:12  <b>deliver</b> 52:3 98:3,6                  128:13  <b>deliveries</b> 52:1  <b>delivering</b> 5:4 50:9  <b>delivery</b> 66:9                  104:22 123:24                  158:3  <b>demand</b> 5:23                  20:11 25:4 27:5                  43:9 44:24                  45:1,20 46:1</p>	<p>56:7,9 57:14                  58:8 74:24 84:18                  99:17 123:24                  130:13 158:3  <b>demand/response</b>                  112:20  <b>demands</b> 52:16                  53:2 156:22                  157:17  <b>demand-side</b> 27:1  <b>Democrat</b> 16:9  <b>Democratic</b> 6:23  <b>demographic</b>                  117:14  <b>demographics</b>                  118:9  <b>demonstrated</b>                  130:11  <b>denial</b> 101:3  <b>Denmark</b> 139:4  <b>departing</b> 134:2  <b>department</b> 1:2                  3:9 4:4,16,20                  8:1,10 11:16                  14:16 53:21 76:4                  82:1,23 92:18,21                  93:18 106:2                  107:3 115:12                  135:24 136:10                  145:12 152:14                  160:7  <b>departmental</b>                  158:19  <b>depasquale</b> 97:12                  111:22 120:19                  128:7 133:19  <b>DePasquale</b> 2:16                  17:3 97:10  <b>depend</b> 159:12  <b>dependence</b> 84:3                  91:9  <b>dependency</b>                  157:16</p>	<p><b>dependent</b> 84:5                  145:8  <b>depletable</b> 153:17  <b>depleted</b> 62:9  <b>deploying</b> 121:20  <b>deployment</b> 25:15                  31:2 151:4,5  <b>deputy</b> 9:16  <b>describe</b> 31:3                  154:11  <b>described</b> 11:25                  16:11 77:6  <b>deserves</b> 13:17  <b>designed</b>                  101:15,17 160:1  <b>Despite</b> 89:7  <b>destroying</b> 145:17  <b>destroys</b> 24:21  <b>destruction</b> 149:3  <b>detail</b> 46:25  <b>detailed</b> 117:3  <b>determine</b> 7:1  <b>develop</b> 4:25 53:24                  59:21 83:11                  116:18 137:25  <b>developed</b> 50:12                  126:19                  159:11,25  <b>developing</b> 31:22                  55:19 124:8                  129:5 133:16  <b>development</b> 9:12                  30:24 31:2 53:17                  89:4 94:14 98:18                  101:8 113:18                  123:22                  124:2,8,23                  125:17                  126:1,7,15                  128:24 129:12                  130:10 153:15  <b>Development/</b></p>	<p><b>National</b> 2:9  <b>developments</b>                  31:16  <b>devices</b> 99:23                  100:7 112:17                  120:25 121:6,22                  134:3  <b>DHS</b> 121:11 122:7                  134:21  <b>diesel</b> 49:24 50:18                  51:3,7  <b>difference</b> 96:7  <b>different</b> 11:5,7,15                  23:15 43:3 49:11                  83:15 89:25                  116:2 132:15                  133:12 136:4                  144:11 154:6                  155:20  <b>differential</b> 19:23                  35:20  <b>differentials</b> 17:23  <b>difficult</b> 18:1 29:5                  122:23  <b>difficulty</b> 123:12  <b>digital</b> 99:19                  113:13  <b>dioxide</b> 72:22                  147:15  <b>direct</b> 103:16  <b>direction</b> 37:3                  72:25 79:20                  128:2 155:20  <b>directly</b> 25:11 49:9                  88:19 159:21  <b>director</b> 2:5,14                  8:19 9:1,19                  38:9,21 82:25                  88:2  <b>disadvantage</b>                  86:22  <b>disappointed</b>                  137:13</p>
---	---	--	--

<p><b>disciplinary</b> 9:4  <b>discovered</b> 74:21  <b>discoveries</b>                  126:9,17  <b>discovery</b> 55:9  <b>discretely</b> 120:21  <b>discuss</b> 4:22                  105:25  <b>discussed</b> 64:4                  104:7 156:18  <b>discussing</b> 87:3  <b>discussion</b> 14:9,15                  16:13 52:6 88:10                  94:20 103:11                  111:19 130:17                  132:17 134:23                  135:22 140:24  <b>discussions</b> 105:7                  122:19 157:24  <b>dislocations</b> 55:11  <b>disparity</b> 22:7  <b>dispelling</b> 90:6  <b>dispute</b> 26:19  <b>disruption</b> 86:19  <b>distinction</b> 77:13  <b>distinguished</b>                  38:18 49:4  <b>distributed</b> 74:7                  98:17 101:9                  102:17 110:10                  157:3  <b>distribution</b> 12:12                  25:3 28:20 40:15                  41:6 50:8 63:16                  98:1 99:7,16,20                  128:17 141:24  <b>distributive</b> 88:24  <b>district</b> 21:17,21                  23:4 138:11                  140:1,4  <b>diverse</b> 82:15                  105:24 120:20</p>	<p><b>diversity</b> 7:11                  39:18,25 41:21                  42:14 78:19 85:4  <b>DNA</b> 15:24  <b>documents</b> 153:24  <b>DOE</b> 44:3 61:19                  82:4 83:3 94:1                  108:7 115:5                  122:8,18                  124:15,18                  125:10 133:7,14                  134:21  <b>DOE-EPSCA</b>                  1:13,14  <b>DOE's</b> 127:5  <b>dollar</b> 47:16 120:4  <b>dollars</b> 32:25 73:1                  86:3 87:14 95:6                  96:18,25 110:19                  113:17 114:9                  120:12,25                  134:14 148:16  <b>domain</b> 126:11  <b>domestic</b> 13:22  <b>Dominion</b> 2:6                  38:10,22,24                  39:11 40:7,17  <b>done</b> 36:24 60:23                  61:7 68:4                  69:8,12,13 97:22                  103:20                  109:11,16                  114:11 117:23                  119:4 122:8                  131:10 139:22  <b>door</b> 100:18  <b>double</b> 19:6  <b>doubled</b> 96:12  <b>double-whammy</b>                  26:3  <b>downstream</b> 50:8  <b>downtime</b> 98:16                  101:7</p>	<p><b>downtown</b> 41:2                  139:12,15  <b>downward</b> 87:6  <b>dramatic</b> 53:2                  139:17  <b>dramatically</b>                  50:15  <b>drastically</b> 148:3  <b>draw</b> 77:13 90:9  <b>drift</b> 67:7  <b>drill</b> 106:10  <b>drilling</b> 24:11  <b>drills</b> 54:13  <b>drive</b> 13:24 94:11                  100:9 104:17                  114:21 115:14                  139:23  <b>driven</b> 5:14 6:8  <b>driver</b> 28:10,13                  94:21,22 98:24  <b>drivers</b> 11:19  <b>driving</b> 31:6 91:3                  115:17  <b>drop</b> 121:22  <b>drops</b> 5:24  <b>drove</b> 62:19  <b>dry</b> 44:25  <b>dual</b> 42:2  <b>during</b> 12:9 13:15                  16:12 43:20                  104:4,11 140:19</p> <hr/> <p style="text-align: center;">E</p> <hr/> <p><b>earlier</b> 4:23 52:12                  87:21 107:9                  108:17 124:16                  126:5 148:2                  157:12  <b>early</b> 44:23 45:8                  65:6  <b>Earth</b> 137:14</p>	<p><b>easier</b> 31:9 156:14  <b>easily</b> 68:5  <b>East</b> 50:4 52:10  <b>Eastern</b> 29:22  <b>easy</b> 7:25 67:19                  105:1 108:16  <b>eats</b> 45:3 90:14  <b>echo</b> 135:5 157:11  <b>ecologically</b> 65:23  <b>economic</b> 7:1 11:8                  13:1 16:24 20:4                  24:1 26:24 27:4                  28:21 29:4                  42:8,23 87:1,7                  94:14 104:5                  113:1 120:5                  130:11 140:19                  141:10 158:9  <b>economically</b>                  23:10 32:15                  111:16  <b>economics</b> 47:14  <b>economist</b> 18:7  <b>economy</b> 5:5 6:19                  11:14 16:23                  24:2,15 26:16,20                  28:7 32:5,14,16                  71:23 85:5,23                  87:15 95:22                  96:19 97:19                  110:20 111:16                  114:9 120:8  <b>edge</b> 63:4  <b>educate</b> 137:20  <b>education</b>                  137:15,20  <b>educational</b>                  137:24,25  <b>educator</b> 137:10  <b>effect</b> 19:11 65:21                  149:14  <b>effective</b> 88:24                  110:12,15 123:9</p>
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Capital Reporting Company  
 Quadrennial Energy Review 04-21-2014  
 Page 12

<p><b>effectively</b> 23:10 117:24</p> <p><b>efficiencies</b> 64:21 113:14 114:3,21 157:14</p> <p><b>efficiency</b> 7:5 27:2,12 31:15,23 32:7 59:18 84:12,19 85:13 86:25 87:10 88:23 89:5,19,23 91:14,20 95:14 102:18 104:24 105:15 110:8 113:23,24 129:17 130:13 135:1 138:15 139:16 153:3 155:3,7 156:23 157:24 158:20,21,24 159:3</p> <p><b>efficiency-type</b> 94:8</p> <p><b>efficient</b> 26:5 49:14 50:3,10 65:11 73:11 90:3 94:3 98:19 109:19 128:14 132:16 139:21 153:18</p> <p><b>efficiently</b> 17:12 23:10 73:12</p> <p><b>effort</b> 7:18 8:12 10:8 29:25 114:6</p> <p><b>efforts</b> 16:17 87:14 116:21</p> <p><b>EIA</b> 62:12,21,25 144:7,16</p> <p><b>eight</b> 54:23</p> <p><b>either</b> 66:14 81:15 116:15,20 160:2</p> <p><b>elected</b> 70:10</p> <p><b>electric</b> 7:22 86:19 93:14 99:6 105:10 129:24</p>	<p>131:11 150:13 151:3 156:8,19,25</p> <p><b>electrical</b> 52:17</p> <p><b>electricity</b> 5:21 6:5,16 12:13,22 18:20 19:9 20:13 35:11 36:5 83:15 84:11,18,21 89:10 94:11,19</p> <p><b>elements</b> 99:4 102:6 113:3</p> <p><b>eligible</b> 50:5 52:3</p> <p><b>eliminate</b> 53:1 60:16</p> <p><b>else</b> 10:12 18:18 33:13 91:16 134:8 136:10 146:4 155:17 156:1 160:9</p> <p><b>elsewhere</b> 159:22</p> <p><b>e-mail</b> 33:15 136:10,11 142:11 160:7</p> <p><b>e-mails</b> 44:4</p> <p><b>embarrassed</b> 151:12</p> <p><b>embrace</b> 119:1 132:13</p> <p><b>embracing</b> 126:3,17</p> <p><b>Emerald</b> 157:22</p> <p><b>emission</b> 156:19</p> <p><b>emissions</b> 11:4 28:4,12,14 31:20 72:20,22 73:12 85:7 109:13 139:18 154:16 155:2,8,21</p> <p><b>emit</b> 83:24</p> <p><b>emotional</b> 147:5</p> <p><b>emphasis</b> 109:1 159:3</p>	<p><b>emphasize</b> 133:4 157:23</p> <p><b>emphasizes</b> 14:2</p> <p><b>emphasizing</b> 87:9</p> <p><b>empowering</b> 7:19</p> <p><b>enable</b> 32:4</p> <p><b>encompasses</b> 131:14</p> <p><b>encourage</b> 17:10 63:2 123:2,15</p> <p><b>encouraged</b> 77:3</p> <p><b>encouraging</b> 109:4 130:9</p> <p><b>end-of-the-line</b> 10:21</p> <p><b>end-of-the-pipe</b> 10:21</p> <p><b>endpoint</b> 30:7,8</p> <p><b>end-use</b> 94:10</p> <p><b>energies</b> 25:12</p> <p><b>energy</b> 1:2,6,7 2:12 3:9,12,20 4:16,20,22,24 5:1,4,10,12 6:19 7:3,4,5,11,12,24 8:1,9,10,16,18,1 9,23,24 9:1,11,14,20,24 10:2,6,17 11:8,11,16,22 12:8,11,12,24 14:2,7,17 15:7 16:23 17:12,18,19 18:3,5,9,13 20:11,17,20,21 21:17,21 22:9 24:5 25:2,5,16 26:14,25 27:1,12 32:13,17,22,23 33:6 34:10,15,22 36:4 38:17 39:5,6 40:1,13 41:4 44:22 47:8 49:12,17,22 51:1</p>	<p>52:19,20 53:10,21 54:10 56:16 59:9,25 64:22 65:5,14 73:23 77:13,14,17,18 78:1 79:2,8,14,16,21 80:3,10 81:18 82:2,10,11,14,15 ,18,19,23 83:5,9,10,12,14, 18,19,22,23 84:8,11,15,25 85:11,13,14,15,2 1 86:4,6,11,17,20, 24,25 87:10 88:11,16,19,20 89:1,5,10,18,23 90:3 91:5,8,9,13,20 92:1,10,16,18,21 93:6,19,21 95:6,14 97:20 102:18 103:12,20,25 104:2,24 105:14,20,25 106:3,20 107:8,11,13 109:3 111:9,19 113:23,24 115:12,20 117:8 123:23 124:15 125:2,12 130:13,20 131:1,7 135:10,24 136:11 138:12,19 140:5,14 141:11 144:15 145:12,22 148:6,16,23 149:6,17,18,23 150:15,22 152:3,11,14,22 153:2,18 156:23 157:8,9,24,25</p>
---	--	---	--

<p>158:1,4,20,21,24                  159:3 160:7</p> <p><b>Energy's</b> 76:4</p> <p><b>energy-saving</b>                  87:15</p> <p><b>engage</b> 37:15                  61:16</p> <p><b>engaged</b> 116:10</p> <p><b>engine</b> 154:19</p> <p><b>engineered</b> 76:19</p> <p><b>engineering</b> 57:24                  75:19 100:21</p> <p><b>engines</b> 154:25</p> <p><b>England</b> 1:7                  2:6,7,8 3:12                  5:8,11,19 6:24                  7:2,15 10:20                  11:6 13:10,16                  16:5,9 17:19                  19:9 23:14,17                  34:10 35:10,18                  38:10,23,25                  39:16 40:20,22                  42:12 43:12                  44:10,22                  45:11,25                  46:2,5,16 47:21                  48:10,16,19,25                  49:7,8,21 52:4                  54:22                  59:19,21,24                  60:18 61:17,24                  62:17 64:11                  65:8,15 69:1                  70:1 74:8,15                  75:8 76:18                  84:14,19 86:14                  87:5                  90:12,17,22,24,2                  5 91:4 103:12,23                  104:23 105:5,7                  107:22                  115:15,18,19,20                  118:16 135:12                  143:1,21,22                  145:18</p>	<p><b>England's</b> 3:19                  84:18 116:11</p> <p><b>enhancing</b> 50:1</p> <p><b>enjoy</b> 15:1</p> <p><b>enjoying</b> 88:6</p> <p><b>enormous</b> 9:10                  27:5 28:21 73:23                  120:5</p> <p><b>ensure</b> 7:11 18:3</p> <p><b>ensuring</b> 4:15</p> <p><b>enter</b> 60:24</p> <p><b>entering</b> 6:12</p> <p><b>entire</b> 4:24 14:15                  94:9 141:10</p> <p><b>entirely</b> 86:6 143:2</p> <p><b>entities</b> 61:16                  116:21</p> <p><b>entity</b> 39:2</p> <p><b>environment</b> 5:6                  9:8 11:15 13:13                  27:4 32:15 71:22                  97:5,7 101:16                  108:23 109:2                  111:7,15</p> <p><b>environmental</b>                  13:1 28:22 42:23                  43:17 76:21 78:3                  109:9 131:18                  132:21 137:11                  149:3,11</p> <p><b>environmentally</b>                  7:1 25:17 51:5                  111:17 131:20</p> <p><b>environments</b>                  22:21</p> <p><b>envisioned</b> 134:8</p> <p><b>EPA</b> 19:7 43:7                  51:17 61:20</p> <p><b>EPI</b> 152:21</p> <p><b>epic</b> 111:13</p> <p><b>equally</b> 7:8 56:21</p> <p><b>equals</b> 74:24</p>	<p><b>equation</b> 92:16</p> <p><b>equations</b> 152:2</p> <p><b>equilibrium</b> 56:8</p> <p><b>equipment</b> 97:24                  100:23 101:20</p> <p><b>equipped</b> 94:23</p> <p><b>equities</b> 11:18,21</p> <p><b>equity</b> 158:10</p> <p><b>equivalency</b> 29:2</p> <p><b>equivalent</b> 35:16                  139:18</p> <p><b>erected</b> 41:3</p> <p><b>Ernest</b> 1:17 8:15                  10:10</p> <p><b>Ernie</b> 15:15</p> <p><b>especially</b> 44:11                  118:16 158:10                  159:20</p> <p><b>essence</b> 57:13                  109:20</p> <p><b>essential</b> 102:14</p> <p><b>essentially</b> 11:17                  39:7 41:5 42:19                  100:18 127:18</p> <p><b>established</b> 4:23                  77:8</p> <p><b>estimated</b> 32:22</p> <p><b>estimates</b> 84:20</p> <p><b>et</b> 22:21,22 31:17                  66:11 144:3                  149:3</p> <p><b>ethane</b> 56:20</p> <p><b>Europe</b> 143:19,20</p> <p><b>event</b> 33:19 34:7</p> <p><b>events</b> 12:9 102:5                  131:3</p> <p><b>eventually</b> 28:3                  50:21</p> <p><b>everybody</b> 3:8                  33:11 38:11                  56:11 67:7 91:16</p>	<p>93:15 96:2,23                  146:4</p> <p><b>everybody's</b> 66:2                  88:6</p> <p><b>everyone</b> 10:12                  34:19 36:16,17                  38:15 59:18 64:5                  88:5 153:9</p> <p><b>everyone's</b> 39:19                  69:23</p> <p><b>everything</b> 112:6                  128:19</p> <p><b>everywhere</b> 18:10</p> <p><b>evidence</b> 104:7</p> <p><b>evolution</b> 46:21                  65:5 99:19</p> <p><b>evolutions</b> 111:5</p> <p><b>exactly</b> 96:7</p> <p><b>exaggerated</b> 33:3</p> <p><b>example</b> 13:15                  18:15 25:13                  28:23 35:12                  52:15 55:4 56:4                  68:16 70:4 71:19                  78:5 102:5                  121:21 126:8</p> <p><b>examples</b> 12:7                  48:3 68:10</p> <p><b>exceeds</b> 56:9</p> <p><b>excellent</b> 119:17                  130:17 138:2                  142:7</p> <p><b>except</b> 136:25</p> <p><b>excess</b> 19:14</p> <p><b>exchange</b> 3:21                  89:8</p> <p><b>excited</b> 41:9,11</p> <p><b>exciting</b> 10:8                  110:9 124:22                  128:10</p> <p><b>exclude</b> 149:1</p> <p><b>excluded</b> 118:12</p>
---	--	--	--

<p><b>Excuse</b> 148:7</p> <p><b>executive</b> 2:14                      8:11 59:12 61:10                      82:25 88:2                      106:25 131:5                      138:13</p> <p><b>exemplary</b> 121:15</p> <p><b>exhausted</b> 26:2</p> <p><b>exist</b> 77:24 101:11</p> <p><b>existing</b> 70:21                      99:19 104:2                      116:16,24                      122:25 149:5                      158:1</p> <p><b>exists</b> 44:14</p> <p><b>expand</b> 52:13                      126:24 131:23                      149:5</p> <p><b>expanding</b> 44:12</p> <p><b>expansion</b> 20:10                      52:25 64:4 65:12                      147:21</p> <p><b>expansions</b> 60:2</p> <p><b>expect</b> 6:9,18                      148:4</p> <p><b>expected</b> 6:13 43:7</p> <p><b>expedite</b> 38:6</p> <p><b>expenses</b> 112:7</p> <p><b>expensive</b> 17:20                      44:17 64:24                      112:11</p> <p><b>experience</b> 3:24</p> <p><b>experiencing</b>                      154:2</p> <p><b>expert</b> 25:20</p> <p><b>expertise</b> 54:1</p> <p><b>experts</b> 76:7 102:9</p> <p><b>expired</b> 51:15</p> <p><b>explain</b> 39:4</p> <p><b>explained</b> 66:21</p> <p><b>exploration</b> 54:12</p>	<p><b>explore</b> 51:13</p> <p><b>explored</b> 92:2</p> <p><b>exploring</b> 10:22</p> <p><b>export</b> 109:17                      114:24</p> <p><b>exported</b> 57:9                      65:18 143:18</p> <p><b>exporting</b> 111:11</p> <p><b>exports</b> 62:13</p> <p><b>exposed</b> 100:1                      114:18,19</p> <p><b>expressed</b> 123:3</p> <p><b>extension</b> 71:25</p> <p><b>extensive</b> 52:24</p> <p><b>extent</b> 115:12                      121:3 125:13</p> <p><b>external</b> 152:25</p> <p><b>externalized</b> 149:1</p> <p><b>extra</b> 18:25 78:10                      96:18 104:1</p> <p><b>extraction</b> 147:12</p> <p><b>extraordinarily</b>                      119:19</p> <p><b>extraordinary</b>                      19:4,22</p> <p><b>extreme</b>                      12:2,15,18 22:18                      62:10</p> <p><b>extremely</b> 23:9                      57:23 147:14                      154:11</p> <p><b>eye</b> 43:5</p> <p><b>eyes</b> 32:18 131:16</p> <hr/> <p style="text-align: center;">F</p> <hr/> <p><b>face</b> 20:3 36:11                      86:2 98:11                      115:20 131:2,14</p> <p><b>facet</b> 39:8</p> <p><b>facetious</b> 67:23</p> <p><b>facilitate</b> 122:18</p>	<p><b>facilitator</b> 3:5</p> <p><b>facilities</b> 47:24                      52:9 55:15,17                      66:11 67:9</p> <p><b>facility</b> 40:24                      41:2,17,24,25                      55:12,13,15                      57:16,18 58:11                      70:5 74:3,6,7                      75:14 94:16                      125:4</p> <p><b>facing</b> 5:9</p> <p><b>fact</b> 12:1,5 13:8,15                      25:11 31:12 47:1                      52:21 73:2,21                      76:18 85:3 86:7                      91:12,21                      107:10,11,21                      118:20 135:8                      138:19 148:21</p> <p><b>factoid</b> 22:6</p> <p><b>factor</b> 42:14,19                      101:21 149:15</p> <p><b>factors</b> 12:24</p> <p><b>facts</b> 3:25 35:4</p> <p><b>faculty</b> 9:18</p> <p><b>failed</b> 87:19                      132:13</p> <p><b>failing</b> 101:5</p> <p><b>failures</b> 61:2</p> <p><b>fairly</b> 34:4 78:9                      120:20</p> <p><b>fall</b> 15:18 101:12</p> <p><b>falling</b> 18:10</p> <p><b>false</b> 147:9</p> <p><b>familiar</b> 119:15</p> <p><b>families</b> 36:9                      158:13</p> <p><b>family</b> 39:3 80:6                      141:5</p> <p><b>famine</b> 37:16</p> <p><b>fantastic</b> 140:24</p>	<p><b>fantasy</b> 35:17</p> <p><b>farm</b> 145:14                      150:23</p> <p><b>farmers</b> 44:24</p> <p><b>fascinated</b> 124:13</p> <p><b>fast</b> 54:6 86:13</p> <p><b>father</b> 49:12</p> <p><b>favorable</b> 57:23</p> <p><b>fearful</b> 103:14</p> <p><b>federal</b> 2:5 3:16                      9:23 10:5 11:16                      38:9,22 40:2                      59:8 61:10,16                      62:2 68:12,15                      69:16 73:19                      75:9,11 84:14                      106:22 107:3,18                      108:4,12 112:4                      113:5,17,21                      114:12                      115:8,14,16                      116:10,21 124:3                      134:21</p> <p><b>federalism</b> 61:3</p> <p><b>feeding</b> 148:19</p> <p><b>feel</b> 30:10</p> <p><b>feeling</b> 86:11</p> <p><b>feet</b> 60:24</p> <p><b>FERC</b> 59:22                      60:1,8,12 61:19                      107:19                      115:17,18</p> <p><b>fiber</b> 36:4</p> <p><b>field</b> 100:7,15,23                      121:22</p> <p><b>fields</b> 40:12 139:19</p> <p><b>fight</b> 29:6 60:8</p> <p><b>fighter</b> 122:5</p> <p><b>figure</b> 19:19 56:24                      58:4 64:10                      103:20 120:4,14                      146:4</p>
--	--	--	---

<p><b>figured</b> 134:16</p> <p><b>figures</b> 14:15</p> <p><b>filed</b> 59:22</p> <p><b>fill</b> 25:21 48:16,17</p> <p><b>final</b> 25:19 76:11              77:9,10 78:18,22              79:12 80:2              130:19,22,23              133:3,18 135:3</p> <p><b>Finally</b> 13:4,25              150:4</p> <p><b>finance</b> 117:22              118:15</p> <p><b>financed</b> 112:22</p> <p><b>financial</b> 66:15              67:13 73:20 74:9              122:16</p> <p><b>financing</b> 70:14              92:5 110:25              117:4</p> <p><b>fine</b> 38:13</p> <p><b>finer</b> 133:11</p> <p><b>fine-tune</b> 144:7,9</p> <p><b>finger</b> 17:14 73:19</p> <p><b>fingers</b> 39:7</p> <p><b>finish</b> 76:16 77:5              81:23 132:8,9              155:15</p> <p><b>finishing</b> 76:22</p> <p><b>firm</b> 144:12</p> <p><b>first</b> 5:2 10:15              11:1 14:12 15:6              18:25 21:8 22:15              23:25 33:20,21              34:14 42:5,9,18              46:14 59:6 60:16              61:15 62:2 67:16              73:18 81:15              83:9,17              106:11,17,18              124:11 137:14              138:14 150:5,11              154:5</p>	<p><b>firsthand</b> 111:14</p> <p><b>fitter</b> 31:21</p> <p><b>five</b> 34:11 45:2              47:25 55:20 56:3              72:4 81:23              98:3,5,7 132:20              134:2,6</p> <p><b>fix</b> 19:16 52:24              120:9</p> <p><b>fixed</b> 53:8</p> <p><b>flagged</b> 52:2</p> <p><b>fleet</b> 139:21</p> <p><b>flooding</b> 152:1</p> <p><b>floor</b> 44:1 49:2</p> <p><b>Florida</b> 143:22</p> <p><b>flourish</b> 151:2</p> <p><b>flow</b> 52:6 55:5              57:13</p> <p><b>flows</b> 70:18 101:4</p> <p><b>fluent</b> 147:8</p> <p><b>fluorescent</b> 113:25</p> <p><b>flying</b> 144:6</p> <p><b>focus</b> 3:10,13 4:18              9:10 10:18 11:24              12:10,14,17 13:3              14:6 16:10 22:16              23:6 43:19 46:12              61:6 78:15,16,20              81:13 144:17</p> <p><b>focused</b> 40:19              108:20 116:18              129:13 153:16</p> <p><b>focuses</b> 5:3</p> <p><b>focusing</b> 131:6              155:2</p> <p><b>folks</b> 38:24 70:24              77:21 78:4,6</p> <p><b>food</b> 37:17,18</p> <p><b>football</b> 139:18</p> <p><b>footprint</b> 51:8              76:23 98:13</p>	<p>121:3 147:19</p> <p><b>force</b> 38:17 46:8              106:3 140:21</p> <p><b>forced</b> 36:5 129:18</p> <p><b>forces</b> 71:10 91:3</p> <p><b>forecast</b> 84:18</p> <p><b>forecasting</b>              62:15,22</p> <p><b>forefront</b> 20:23</p> <p><b>foregoing</b> 161:6</p> <p><b>foreign</b> 99:13              143:19,20              159:15</p> <p><b>forest</b> 145:16              146:1</p> <p><b>forever</b> 133:1</p> <p><b>forget</b> 12:16 28:17</p> <p><b>forgotten</b> 31:25</p> <p><b>form</b> 44:22 156:2</p> <p><b>formed</b> 46:8</p> <p><b>former</b> 41:3</p> <p><b>forming</b> 32:17</p> <p><b>forms</b> 26:6</p> <p><b>for-profit</b> 148:3</p> <p><b>forth</b> 109:13              125:24 152:11</p> <p><b>fortunate</b> 15:14              127:4</p> <p><b>fortune</b> 124:12</p> <p><b>forum</b> 3:21</p> <p><b>forward</b> 7:1 28:6              38:2 53:11 70:13              72:4 73:15 97:2              103:14 105:3              106:2 111:10              114:16 115:14              116:3 119:17              127:24 133:16              142:8</p> <p><b>fossil</b> 24:16 32:4</p> <p><b>foster</b> 102:22</p>	<p><b>founding</b> 156:9</p> <p><b>four-year</b> 77:18</p> <p><b>fracked</b> 147:20</p> <p><b>fracking</b> 24:21              132:17,18              145:7,8,9,14</p> <p><b>frame</b> 32:2              147:16,17,22</p> <p><b>framework</b> 34:8</p> <p><b>frankly</b> 14:1 31:9              61:3 114:8</p> <p><b>free</b> 79:7 127:18</p> <p><b>frequently</b> 5:25</p> <p><b>Friday</b> 35:9              111:25 134:17</p> <p><b>friend</b> 14:21</p> <p><b>friends</b> 14:3 39:3</p> <p><b>Froman</b> 18:6</p> <p><b>front</b> 10:24 32:18              36:19</p> <p><b>frontier</b> 131:24</p> <p><b>fruit</b> 139:20</p> <p><b>fuel</b> 2:8 9:7              13:18,21 19:3              32:4 39:18,25              40:24 41:4,8,21              42:1,2,6,9,14              44:19 46:20,22              48:25 49:7,25              50:8,18,22,23              51:4,11,17              63:13,21 64:1,24              66:8 71:20              72:15,18 75:4              78:19 84:5 85:4              89:25 104:22              138:17 148:2              156:8,25 157:17</p> <p><b>fueling</b> 90:21</p> <p><b>fuels</b> 9:7 12:13,21              24:16 31:17              53:11 68:21              71:22 73:10</p>
--	--	--	--

<p>79:19 80:13 83:2                  150:17,25                  155:5,9</p> <p><b>full</b> 121:10                  146:5,11</p> <p><b>fully</b> 7:18 50:9                  77:7</p> <p><b>functions</b> 54:10                  101:14</p> <p><b>fund</b> 120:1,16</p> <p><b>fundamental</b>                  152:6</p> <p><b>fundamentally</b>                  153:8</p> <p><b>funded</b> 112:15                  150:14</p> <p><b>funding</b> 51:5                  108:5 119:24</p> <p><b>funds</b> 52:14 57:19                  117:6 120:1</p> <p><b>future</b> 7:13 9:5,6                  20:19,22 23:5                  26:10 33:6,8                  49:22 51:18                  53:12 64:2,3                  82:14 83:13                  84:6,8,25 87:13                  102:25 107:13                  111:17 123:13                  142:8 149:6</p> <p><b>future-of</b> 9:3</p> <p><b>futures</b> 155:11</p> <hr/> <p style="text-align: center;"><b>G</b></p> <hr/> <p><b>gain</b> 89:8</p> <p><b>gains</b> 51:7                  139:16,17                  156:23</p> <p><b>gallon</b> 35:17 47:16                  155:16</p> <p><b>gallons</b> 45:22,24                  73:6 154:23,24</p> <p><b>game</b> 130:5</p>	<p><b>gap</b> 52:23 120:15</p> <p><b>gaps</b> 25:21 123:23</p> <p><b>garbage</b> 80:12</p> <p><b>Garrett</b> 23:21                  24:13,20                  153:12,13,14                  155:14,16,23</p> <p><b>Gary</b> 151:11</p> <p><b>gas</b> 2:6 5:20                  6:3,4,13,16 7:21                  9:6 11:3 13:9,20                  18:16,19                  19:8,9,18,21                  24:7,10,17                  28:1,4,14,20                  30:5 31:13 32:8                  35:11,14,18                  36:12,18,21                  37:23 40:14,16                  41:22,23 42:10                  43:25                  44:9,12,16,19                  46:8,21 51:6                  52:14 53:6                  54:1,11,18,21,23                  55:14 56:18,19                  59:17 60:7 65:13                  67:25 68:23                  69:14 70:8 73:22                  76:19,24 77:3,4                  84:4 85:6                  90:14,17,21                  93:14 96:12                  104:11 105:10                  114:24                  118:17,22                  131:11 141:12                  142:19                  147:2,9,15,19,20                  148:2,4,18,22                  151:3 156:21</p> <p><b>gases</b> 27:23 28:19                  90:19</p> <p><b>gas-fired</b> 90:10</p> <p><b>gasoline</b> 146:18</p> <p><b>gather</b> 54:10,12</p>	<p>99:3</p> <p><b>gathered</b> 59:19</p> <p><b>gathering</b>                  54:16,20,25 88:9</p> <p><b>GDP</b> 146:6,7,9,10</p> <p><b>geared</b> 26:23</p> <p><b>GED</b> 89:9</p> <p><b>general</b> 2:4 34:15                  101:16 102:19                  139:14</p> <p><b>generated</b> 73:8</p> <p><b>generating</b> 70:6                  139:20</p> <p><b>generation</b> 5:21                  6:16 7:22 22:18                  28:2 40:17 50:10                  88:24 90:10,11                  99:7,16 102:18                  104:23 110:10                  128:9,22 131:21                  157:10 158:3</p> <p><b>generators</b> 6:12                  52:17,20 60:17                  76:20</p> <p><b>genocide</b>                  145:16,25</p> <p><b>gentlemen</b> 97:13</p> <p><b>geothermal</b> 31:25</p> <p><b>GEP</b> 33:4</p> <p><b>Germany</b> 139:4</p> <p><b>Gerritt</b> 144:25                  145:1,3</p> <p><b>G-E-R-R-I-T-T</b>                  145:4</p> <p><b>getting</b> 47:2 61:6                  65:9,10 67:6                  76:24 93:15                  123:5,14 127:13                  130:3 142:23</p> <p><b>gifted</b> 19:15</p> <p><b>gigawatts</b> 40:18</p> <p><b>given</b> 24:3 63:16</p>	<p>84:8 92:7 135:8</p> <p><b>gives</b> 45:19 111:16                  135:15</p> <p><b>giving</b> 31:20 53:22                  56:22 97:14</p> <p><b>glad</b> 58:13</p> <p><b>Glen</b> 55:21 57:17                  65:22 66:22</p> <p><b>global</b> 12:4 32:16                  88:17 93:6 94:12                  108:21 109:1                  114:18 147:4                  148:20                  154:1,3,15                  155:1,21</p> <p><b>globally</b> 32:25</p> <p><b>globe</b> 109:18</p> <p><b>goal</b> 27:22 42:25                  78:15 83:12</p> <p><b>goals</b> 27:4 43:19                  61:23,25 86:9</p> <p><b>Gold</b> 2:12 16:15                  81:17,21 82:9                  87:20 105:19                  106:16 107:5                  117:2 118:1,11                  124:13,25 125:3                  130:23 137:23                  138:3</p> <p><b>Golden</b>                  124:14,18,21,22,                  24,25</p> <p><b>Gold's</b> 135:6                  158:14</p> <p><b>Google</b> 93:23</p> <p><b>Gorham</b> 36:7</p> <p><b>gorilla</b> 138:16</p> <p><b>gotten</b> 44:3</p> <p><b>government</b>                  9:23,24 10:5                  11:16,17 47:4                  62:3 68:15                  71:9,14 73:14                  79:8 91:21</p>
--	--	--	--

<p>102:21 108:12                  112:4,22 113:5                  114:12 116:9                  118:25                  119:8,18,21                  121:11,17,18                  124:3 126:9                  130:2,3 146:3                  158:23 159:15</p> <p><b>governmental</b>                  60:5</p> <p><b>governments</b>                  99:13</p> <p><b>government's</b>                  70:25 92:8                  108:18</p> <p><b>Governor</b> 1:17                  4:9,10,13 8:6                  10:13,20 13:8                  16:1,2 17:14                  21:13 23:11 26:7                  29:21 103:10</p> <p><b>governors</b> 6:24                  36:23 37:1 59:18                  86:15 105:7</p> <p><b>Governor's</b> 131:5</p> <p><b>grand</b> 30:10</p> <p><b>Granite</b> 44:11</p> <p><b>granted</b> 129:7</p> <p><b>graph</b> 45:19</p> <p><b>grapple</b> 124:19</p> <p><b>grasp</b> 93:16                  121:10</p> <p><b>grateful</b> 15:10</p> <p><b>gray</b> 121:9</p> <p><b>great</b> 4:7 14:21                  18:2 48:23 50:25                  68:19 82:3 88:23                  96:2 109:5,12                  117:3 118:3                  127:12,19                  131:10 135:16                  145:19 155:19                  158:8</p>	<p><b>greater</b> 12:19                  18:17 64:21                  155:2 157:15                  158:9 159:3</p> <p><b>greatly</b> 15:1                  100:10</p> <p><b>green</b> 26:14 84:4                  89:14 139:24                  149:17</p> <p><b>greenfield</b> 60:2</p> <p><b>greenhouse</b> 27:23                  28:14,19 29:1                  85:6 147:14,19</p> <p><b>Greg</b> 26:7 144:25                  145:3 148:25</p> <p><b>Gregg</b> 23:21</p> <p><b>grew</b> 138:22</p> <p><b>grid</b> 17:7 21:24                  42:12 85:19                  98:4,8,19,24                  99:5,15,18,23                  100:13                  101:6,9,14,18                  102:3,6,9,11,18                  112:12,25 122:2                  125:5,8 128:19                  129:11 134:4                  156:13,14,17,20                  157:8,16</p> <p><b>Grids</b> 98:20                  159:11,24</p> <p><b>ground</b> 17:10                  24:7,21 44:18                  120:24</p> <p><b>group</b> 2:4 4:3                  32:22 34:16,22                  53:21 72:17                  78:15 88:9                  122:10 149:12                  153:16 156:9</p> <p><b>groups</b> 28:22 43:2                  76:21,22                  107:14,15</p> <p><b>grow</b> 6:19 17:25                  19:25 25:8,10</p>	<p>32:14 73:25                  97:19 145:13                  146:6 148:3</p> <p><b>growing</b> 23:1                  40:22 41:19                  46:17,18 58:2                  117:15 145:11                  146:7</p> <p><b>growth</b> 16:24,25                  20:4 24:1                  25:11,15 26:24                  28:21 29:4                  146:13 148:22</p> <p><b>guarantee</b> 119:21</p> <p><b>gubernatorial</b>                  16:4 29:21</p> <p><b>guess</b> 17:24 19:12                  29:15 62:24 79:1                  91:11 106:10                  117:16,22 132:9                  160:12</p> <p><b>guests</b> 38:19 49:4</p> <p><b>Gulf</b> 64:10 74:20</p> <p><b>Gustafson</b>                  140:8,10</p> <p><b>G-U-S-T-A-F-S-                  O-N</b> 140:11</p> <p><b>guys</b> 30:7 141:23                  152:24</p> <hr/> <p style="text-align: center;">H</p> <hr/> <p><b>H2</b> 156:9</p> <p><b>hacked</b> 101:25</p> <p><b>hacker</b> 159:16</p> <p><b>hackers</b> 99:12,25                  100:23 102:12</p> <p><b>hacking</b> 159:14</p> <p><b>hacks</b> 125:23</p> <p><b>half</b> 8:22 27:25                  33:4 90:14 96:17                  154:5</p> <p><b>halfway</b> 27:25</p> <p><b>Hampshire</b> 36:8</p>	<p>43:14 44:13                  45:16 74:5</p> <p><b>hand-in-hand</b>                  64:19</p> <p><b>handle</b> 54:18                  55:13</p> <p><b>Handy</b> 29:10                  151:14,15,17</p> <p><b>happen</b> 56:15                  69:10 126:11                  127:5 154:5,11</p> <p><b>happened</b> 42:4</p> <p><b>happens</b> 46:16                  93:1,13 154:4</p> <p><b>happy</b> 31:3 43:20                  46:5 95:11                  105:24 116:6                  148:10</p> <p><b>harbor</b> 45:14 70:6</p> <p><b>hard</b> 5:7 40:5 44:5                  47:9,23 68:5                  71:21 120:11                  133:24 140:4                  142:4</p> <p><b>harden</b> 131:11</p> <p><b>hardening</b> 112:6</p> <p><b>hard-hitting</b> 59:5</p> <p><b>hardware</b> 99:2</p> <p><b>harm</b> 104:5</p> <p><b>harness</b> 98:16</p> <p><b>Hartford</b> 3:12                  61:17 67:1,19</p> <p><b>harvesting</b> 21:24</p> <p><b>hat</b> 29:13</p> <p><b>hate</b> 95:7</p> <p><b>Hats</b> 142:4</p> <p><b>haven't</b> 134:8</p> <p><b>having</b> 32:8,14                  37:25 46:3 47:2                  61:16,19,20                  62:22 66:14 95:9                  97:1 105:7 130:2</p>
---	---	---	--

<p>133:8 143:19  <b>head</b> 32:19  <b>health</b> 69:5 152:1                  153:5  <b>healthcare</b> 149:2  <b>healthy</b> 111:15  <b>hear</b> 5:16 29:24                  38:8,24 48:24                  97:9 150:6  <b>heard</b> 65:10 68:10                  69:23,24 86:7,15                  87:11 115:22,24                  141:7  <b>hearing</b> 18:9 46:2                  123:25 160:12  <b>hears</b> 4:16  <b>heartening</b> 135:14  <b>heat</b> 5:25 13:12                  18:23 21:20,24                  33:22 88:24,25                  138:18,20                  139:5,6,7,10,21                  140:5  <b>heated</b> 6:2 46:20  <b>heating</b> 5:20 6:17                  15:23 18:16,22                  23:4 35:16                  49:6,11,18,25                  50:10,14,17,24                  51:3 52:17,21,22                  59:10 63:25                  64:7,16,17 68:25                  72:13 73:5                  139:13,14 140:1  <b>heavily</b> 32:20                  40:19 140:14  <b>hedging</b> 55:8  <b>Helmets</b> 142:4  <b>help</b> 17:6 22:3                  30:10 46:25 47:5                  52:9 71:1 73:15                  78:17 113:10                  114:20 117:21                  119:10 126:20</p>	<p>127:16                  128:20,22                  129:22 133:13  <b>helped</b> 42:11,12                  73:10  <b>helpful</b> 3:22 36:25  <b>helping</b> 106:23                  116:1  <b>helps</b> 74:10  <b>Hennessy</b> 2:5                  33:24 38:9,14,21                  61:12 69:22                  77:10  <b>hereby</b> 161:5  <b>Here's</b> 48:3  <b>Herman</b> 146:13  <b>he's</b> 4:11 10:2                  34:14 53:16                  92:14 151:12  <b>Hi</b> 29:10 146:24                  150:6 153:13                  157:21  <b>high</b> 18:5 56:10                  86:8,11 90:16                  91:7 144:22                  152:7  <b>higher</b> 22:11 37:2                  45:22 47:16                  72:14  <b>highest</b> 5:11 28:16  <b>highlight</b> 42:21                  43:4  <b>highlighted</b> 35:4,5  <b>highlights</b> 10:16  <b>highly</b> 9:9 125:13                  153:18  <b>high-quality</b>                  108:24  <b>highway</b> 41:23  <b>historically</b> 133:9  <b>history</b> 37:16  <b>hit</b> 19:21</p>	<p><b>hits</b> 19:15  <b>hitting</b> 77:15  <b>hold</b> 38:5 48:22                  57:8  <b>holding</b> 4:21 66:23  <b>holistic</b> 82:20  <b>home</b> 5:20 6:17                  8:10 18:15,23                  49:5,10,18,25                  50:24 64:22                  73:6,7 92:22                  93:12 94:4 96:22                  109:22 124:25                  134:10 140:16  <b>homeowner</b> 94:6  <b>homes</b> 46:20 49:8                  50:11 64:6 68:25                  73:11 112:18  <b>homework</b>                  76:17,22                  132:9,10  <b>hone</b> 59:4  <b>honor</b> 82:3  <b>hope</b> 88:6 128:1                  139:1 159:24  <b>hopefully</b> 11:22                  59:22 127:24                  141:2  <b>hoping</b> 59:9 63:16                  112:25  <b>Hopkinton</b> 142:3  <b>horizon</b> 135:15  <b>Hospital</b> 139:14  <b>host</b> 20:14  <b>hosted</b> 150:9  <b>hour</b> 31:3 42:17  <b>house</b> 8:11                  93:4,13,20,21,25                  94:2,5                  95:7,9,13,16  <b>household</b> 73:5  <b>houses</b> 6:2 96:15</p>	<p><b>housing</b> 117:17                  159:1,2  <b>HU.DOE.gov</b>                  136:12 142:12                  160:8  <b>hubs</b> 55:9  <b>huge</b> 16:11 33:7                  45:1 47:17 62:9                  68:18 94:24                  120:4 143:5,7,13                  158:2,16  <b>human</b> 36:11                  37:5,16,25  <b>humans</b> 37:18  <b>hundred</b> 96:18  <b>Hurricane</b> 12:6  <b>hurt</b> 140:21  <b>hydro</b> 13:8 31:25                  110:11  <b>hydrocarbon</b> 11:2  <b>hydrocarbons</b>                  25:9  <b>Hydrofluorocarbo                  ns</b> 28:24  <b>hydrogen</b> 151:3                  153:14 155:9                  156:7,25                  157:2,6,10  <b>hydropower</b> 7:10                  26:10,11  <b>HydroQuebec</b>                  145:15,19  <b>hyperbole</b> 34:25                  37:14</p> <hr/> <p style="text-align: center;">I</p> <hr/> <p><b>ICEs</b> 155:7  <b>id</b> 43:13  <b>I'd</b> 3:2,7 33:11,19                  38:11 44:2 54:4                  58:13 59:6 66:12                  103:13 111:9                  127:21 128:7</p>
--	---	---	--

<p>133:4 140:23                  157:11  <b>idea</b> 96:2 116:7                  120:1 148:3                  151:22 154:21  <b>ideas</b> 66:18 75:25                  76:8 107:2                  123:15 124:6                  135:16  <b>identical</b> 96:6  <b>identified</b> 102:9  <b>identify</b> 37:20                  137:5  <b>IEA</b> 149:8,11                  153:23 154:21  <b>ignore</b> 155:2,3  <b>I'll</b> 28:11 32:11                  37:5 39:14 48:1                  69:11 117:2                  120:20 126:4                  130:23 145:5                  147:8 148:11                  153:21  <b>illustration</b> 45:20  <b>I'm</b> 3:5 15:10 17:6                  18:24 21:16                  22:14 23:21                  25:20 29:10                  30:2,7 36:15                  38:21 39:4,13                  43:20 46:5 57:10                  58:24 60:19                  81:25 82:6 83:7                  87:18 88:12                  105:24 106:8,16                  116:6 119:15,22                  123:20 132:5                  133:7,13,19,23                  136:14,21 137:1                  138:11 142:7,18                  144:24 145:2                  146:24 147:5                  148:7,10                  149:9,25 150:7                  153:13,14,20                  156:6</p>	<p><b>immediate</b> 69:19  <b>immigrant</b> 117:15  <b>impact</b> 28:21                  45:6,7 71:14                  91:24 120:5                  134:9 152:1                  154:2 155:20                  156:21  <b>impacted</b> 88:19  <b>impactful</b> 112:12  <b>impacting</b> 78:4  <b>impacts</b> 31:14                  32:9 46:13 95:2                  153:7 158:9  <b>impact's</b> 152:6  <b>implement</b> 68:1  <b>implementation</b>                  49:23  <b>implications</b> 12:16                  71:17  <b>implicit</b> 119:21  <b>import</b> 45:12,23                  47:12 74:12  <b>importance</b> 10:16                  157:23  <b>important</b> 5:5                  7:6,8 10:23                  11:18 15:18 20:7                  23:3,16 28:17                  32:16 41:20                  49:12 50:19 64:2                  71:12 87:9 88:10                  91:14 102:15,20                  103:11 105:8,19                  107:15,24                  108:2,11 114:14                  124:7 125:11                  129:2 131:13,16                  134:15 135:21                  153:8,24  <b>importantly</b> 27:1  <b>importation</b> 85:15  <b>imported</b> 58:9</p>	<p>74:11  <b>imports</b> 13:22                  79:20  <b>imposed</b> 109:16  <b>improve</b> 7:11  <b>improvements</b>                  98:21  <b>inadequate</b> 25:24  <b>inaudible</b> 101:3                  139:19 149:11  <b>Inc</b> 2:6,16  <b>incentive</b> 74:9  <b>incentives</b>                  66:15,24 67:13  <b>incentivize</b> 72:9  <b>incentivizing</b> 50:2  <b>inch</b> 48:8  <b>include</b> 49:23                  53:11 122:18                  158:24  <b>includes</b> 51:13,23  <b>including</b> 52:19                  59:11 102:3                  123:12 155:9  <b>incomes</b> 120:11  <b>inconsistency</b> 68:8  <b>incorporate</b> 84:19  <b>incorrect</b> 101:6  <b>increase</b> 6:13                  18:16,17 24:18                  51:13 70:21 85:4                  89:7 154:1  <b>increased</b> 50:20                  62:12,20,25                  65:13 72:9 89:17                  98:25 100:10                  155:6  <b>increases</b> 5:13,14                  6:7 19:4                  104:13,17                  105:12,16  <b>increasing</b> 24:10</p>	<p>51:2 89:9 97:20                  98:12 104:22                  109:12  <b>increasingly</b> 5:19                  49:13 86:18  <b>incredible</b> 69:4  <b>incredibly</b> 107:15                  108:2  <b>indeed</b> 104:19                  105:18 123:8  <b>independent</b> 49:18                  79:14 150:22  <b>indicated</b> 149:1  <b>indicates</b> 132:8  <b>individual</b> 3:18,25  <b>individuals</b> 4:5                  76:7  <b>induced</b> 131:2  <b>industrial</b> 2:4 26:9                  34:15,21                  90:19,20 104:14                  128:17 129:1  <b>industries</b> 151:1  <b>industry</b> 24:4                  44:21 47:3                  49:6,18 50:7,25                  51:9 52:17,22                  54:2 62:8,11                  63:24 64:14                  68:20 71:12                  72:23,25 73:8,14                  89:6,16 102:21                  116:8 120:21                  142:21 145:22                  148:4,14,16,18  <b>inefficiency</b>                  138:14  <b>infinite</b> 81:8  <b>inflicting</b> 104:4  <b>influential</b> 9:9  <b>information</b>                  3:21,24,25 98:14                  99:23 108:9</p>
---	--	--	---

<p>122:11 125:22                  141:17</p> <p><b>informative</b> 142:7</p> <p><b>informed</b> 13:5</p> <p><b>informing</b> 11:23</p> <p><b>infrastructure</b> 1:8                  3:13,20 4:25 5:3                  6:25 7:3,7,16                  12:8,14 13:10,21                  14:7 16:7 21:19                  24:4,17 32:23                  33:22 34:10                  39:20 41:15                  48:14,18 50:1,21                  51:22 53:6 57:8                  59:10 61:22                  63:18 70:11                  74:17 75:4 82:7                  87:6 92:25 94:10                  97:6,7,20                  99:14,20 102:3                  103:11,17                  104:2,3,8                  105:6,8 106:23                  112:2,5 115:17                  116:22                  117:4,8,13                  118:16 119:24                  120:23 121:13                  123:23 124:10                  140:4 141:11,24                  143:3,7,24                  149:5,6                  150:13,17,24                  151:5 152:3                  157:13,14</p> <p><b>infrastructures</b>                  86:17</p> <p><b>inhibit</b> 80:18</p> <p><b>inhibits</b> 17:21,22</p> <p><b>initial</b> 61:6 120:17</p> <p><b>initiative</b> 7:4                  8:3,20,23,24                  9:2,20</p> <p><b>initiatives</b> 39:15                  50:7 140:14</p>	<p><b>innovate</b> 32:9</p> <p><b>innovation</b> 17:9                  31:1,2,6 32:12                  89:3 97:17                  102:22 119:5                  128:10</p> <p><b>innovations</b> 124:9</p> <p><b>innovative</b> 17:4</p> <p><b>inordinate</b> 126:8</p> <p><b>input</b> 3:18,19                  81:10</p> <p><b>insecurity</b> 14:3</p> <p><b>inside</b> 44:15                  134:10</p> <p><b>insight</b> 121:16</p> <p><b>installation</b> 41:8</p> <p><b>instance</b> 158:25</p> <p><b>instances</b> 67:24                  90:2</p> <p><b>instead</b> 73:14                  139:2,6,13</p> <p><b>Institute</b> 2:8                  49:1,7</p> <p><b>institutional</b> 22:21</p> <p><b>institutions</b> 8:25                  22:1</p> <p><b>instrument</b> 144:6</p> <p><b>instruments</b> 144:6</p> <p><b>insular</b> 115:2</p> <p><b>integrate</b> 12:25                  14:8 137:23</p> <p><b>integration</b> 12:17                  99:22 125:5</p> <p><b>intelligent</b> 89:1                  99:22 120:25</p> <p><b>intelligently</b>                  128:20</p> <p><b>intend</b> 96:22</p> <p><b>intensive</b> 28:5</p> <p><b>intensively</b> 99:8</p>	<p><b>intention</b> 113:21</p> <p><b>interact</b> 129:10</p> <p><b>interaction</b> 122:17</p> <p><b>interagency</b> 8:12</p> <p><b>interconnection</b>                  41:6</p> <p><b>interdependency</b>                  12:20</p> <p><b>interest</b> 43:2                  114:15</p> <p><b>interested</b> 123:25</p> <p><b>interesting</b> 23:6                  90:23</p> <p><b>interestingly</b> 84:17</p> <p><b>interests</b> 13:2                  40:2,3,4 131:22</p> <p><b>interface</b> 99:10</p> <p><b>interfacing</b> 157:16</p> <p><b>interim</b> 39:24</p> <p><b>interior</b> 158:18</p> <p><b>intermittently</b>                  41:12</p> <p><b>internal</b> 154:18</p> <p><b>internally</b> 39:13</p> <p><b>international</b>                  13:5,25 21:17                  113:3 114:15                  131:17 138:11                  140:13</p> <p><b>internationally</b>                  32:18</p> <p><b>Internet</b> 99:11,25                  100:4 101:17                  134:4</p> <p><b>interpretation</b>                  126:21</p> <p><b>interruptions</b>                  101:7</p> <p><b>intervention</b> 91:18</p> <p><b>introduce</b> 4:8 8:15                  10:10 14:10</p>	<p><b>introduction</b> 54:7</p> <p><b>intuitively</b> 96:13</p> <p><b>inventories</b> 62:13                  144:8</p> <p><b>inventory</b> 62:10</p> <p><b>invest</b> 86:24 98:5                  113:2 134:24                  148:18</p> <p><b>invested</b> 40:24                  41:25 73:2 139:1</p> <p><b>investing</b> 32:20                  85:14 87:15                  134:25</p> <p><b>investment</b> 21:19                  32:22 52:23                  66:10,16 67:8,10                  71:8,18 72:8                  73:13 86:16                  115:24 118:21                  128:8 134:13</p> <p><b>investments</b>                  7:6,12,15 33:5                  49:16 72:5                  85:10,12,17,25                  87:5 97:16,21                  102:16,17                  112:5,8 113:11                  115:3 117:19                  128:12</p> <p><b>investor</b> 139:11</p> <p><b>invited</b> 34:23</p> <p><b>inviting</b> 38:17                  92:18</p> <p><b>involved</b> 61:17,20                  82:16 118:25                  130:2 137:14                  140:14</p> <p><b>involvement</b>                  103:16 119:1                  125:11</p> <p><b>involves</b> 66:10                  100:21 101:3                  119:24</p> <p><b>involving</b> 116:20</p>
---	--	--	--

<p><b>IP</b> 122:13  <b>IPCC</b> 153:23  <b>ironic</b> 10:25  <b>ironies</b> 17:16  <b>irony</b> 17:16 143:18  <b>irreversible</b>            149:15  <b>island</b> 1:20,21            2:13,14,15,18            4:16,17 5:7,9,12            7:18 14:12            15:11,17            16:3,21,22 24:15            25:6,14 29:11            47:22 63:11            81:19 82:4,11,13            84:23 85:3,11,23            86:23 88:3            92:15,19 103:5            110:5 114:17            115:19            117:12,24 120:7            123:11 125:6,14            129:1 131:11            137:11 150:2,9            151:18 152:7            159:9  <b>islanded</b> 129:8  <b>Islanders</b> 105:13  <b>Island's</b> 23:25            83:10  <b>isn't</b> 7:25 95:24            134:16  <b>ISO</b> 13:16 42:11            59:20,21 60:13            84:18  <b>isolated</b> 100:3  <b>ISO-New</b> 105:5  <b>issue</b> 4:19 13:10            14:4 16:23 19:17            24:7 25:1,20            38:20 47:1 64:11            66:9,10 69:25            74:19 75:17            82:16 98:23</p>	<p>125:12,24            143:5,10,12            144:4  <b>issues</b> 11:14 13:4            14:8 16:3 20:3            29:17 35:3 43:20            47:11 48:11,14            64:9 72:7 82:19            107:25 108:1            114:18 122:16            125:6,8            143:7,8,13            158:3,4,10  <b>issues's</b> 39:22  <b>IT-based</b> 101:12  <b>it's</b> 10:7,25 12:5            13:19,21,22            15:17,24            18:20,22            20:10,11,14 21:9            22:4 23:15 24:1            25:3,4,18,24            26:3,10,24 28:6            30:6 31:1 33:3            34:25 37:22            38:20 39:23 40:4            41:5,8,11,13            42:3 43:18            44:11,14,16,19            46:11 48:7            49:12,13,14            50:25 51:8            57:17,19,22,25            58:6,8 61:14            64:17            65:6,8,9,10,15,1            6,18,22,23,24            66:8,9 67:19            68:6 69:8 70:1            73:20            74:4,7,17,18,19,            20,21 77:1,17            78:2,7,12 79:4            80:12,14,22 82:3            86:5 90:6            94:1,19,21            95:4,22,23            96:15,16,17</p>	<p>102:4,14            105:1,6,11,19            107:15 108:2            109:3 116:23            117:16            119:17,20            122:23 123:14            125:3 126:2,23            127:19,25            131:15,23,24            132:25            133:16,25            134:21,22 136:4            137:12,18            140:10 143:11            144:3 145:25            147:15,16,23            152:12 153:1            156:20 157:25  <b>I've</b> 12:15 18:8            44:3 54:2,3            58:24 65:10            68:10 106:13            111:14            127:16,17            128:11            137:13,14            140:25  <hr/> <p style="text-align: center;"><b>J</b></p> <hr/> <p><b>January</b> 5:3 19:20  <b>Jason</b> 18:6,7  <b>Jeffrey</b> 142:15,18  <b>jeopardizing</b> 86:8  <b>Jerald</b> 137:2,8  <b>J-E-R-A-L-D</b>            137:9  <b>Jersey</b> 23:17 55:16            63:17  <b>jet</b> 122:5  <b>job</b> 17:22 39:5            56:24 77:5 87:1            93:4 126:18            127:20 158:9  <b>jobs</b> 16:24 17:1            20:1 26:20 49:9</p> </p>	<p>95:20,21 96:19            108:24,25            110:21 111:11            140:20            141:4,5,9,22            158:11,13  <b>Joe</b> 33:24 43:24            44:1 48:21 58:10            62:5 63:7 71:7            75:6 78:22 79:11            143:9 144:4  <b>Johnson</b> 92:20  <b>join</b> 15:11  <b>joined</b> 59:19  <b>joint</b> 129:24  <b>joking</b> 137:1  <b>Jones</b> 50:5 51:25            64:8  <b>Joseph</b> 2:6  <b>juices</b> 109:8  <b>July</b> 50:15,16            63:13  <b>June</b> 64:14  <b>jurisdictions</b>            68:13  <hr/> <p style="text-align: center;"><b>K</b></p> <hr/> <p><b>Katch</b> 137:2,4,8            138:5  <b>K-A-T-C-H</b> 137:9  <b>Kendall</b> 139:9  <b>Kenderdine</b> 1:18            8:6,8  <b>Kennebac</b> 141:19  <b>Kevin</b> 2:5 33:23            38:8,21 43:22            61:9 62:4 69:21            78:21 79:23  <b>Kevin's</b> 76:23  <b>key</b> 30:18,23 31:5            79:2 91:5  <b>kick</b> 34:17</p> </p>
--	---	---	--

<b>kids</b> 138:1	<b>larger</b> 39:2	<b>least</b> 72:21 123:13 135:15	<b>lifeblood</b> 88:11
<b>killing</b> 145:16	<b>Large-scale</b> 52:19	<b>leave</b> 14:9 24:20 111:8 134:1	<b>light</b> 13:12 25:5 47:7 113:25 136:16 139:24
<b>Kinder</b> 141:1	<b>largest</b> 41:1,8 155:1	<b>leaves</b> 147:11	<b>likely</b> 149:15
<b>kinds</b> 12:9 30:2 66:15,16 116:12 125:4 144:11 152:2	<b>last</b> 6:6 8:17 12:2 18:14 28:11 30:15 32:11 40:23 41:18 45:2 47:13 53:15 58:9 64:12 74:11 79:6 93:17 103:4 105:21 111:3 131:15 132:6 138:13 139:1 153:23	<b>leaving</b> 56:20 95:7,8	<b>limit</b> 144:21
<b>kinetic</b> 122:16 134:9	<b>Lastly</b> 64:8	<b>led</b> 8:11 27:7	<b>limitations</b> 16:7 152:17
<b>Kingstown</b> 94:15	<b>late</b> 9:22 45:1	<b>legislation</b> 7:17	<b>limited</b> 37:10 152:8
<b>knew</b> 47:25 96:9 132:12	<b>late-night</b> 44:4	<b>legislative</b> 59:12 61:10 106:25	<b>limits</b> 52:2
<b>knowledge</b> 25:22	<b>later</b> 3:11 72:1	<b>legislature</b> 110:6	<b>LINCOLN</b> 1:17
<b>known</b> 99:1	<b>latitude</b> 37:12	<b>less</b> 64:23 73:12 79:2 93:6 96:10,17 98:7 112:11,12 122:4 146:17	<b>line</b> 57:1,2,3 89:13,14 93:2,3 95:2,5 106:14 156:2 158:17
<b>Korea</b> 134:7	<b>Lauder</b> 82:24	<b>let's</b> 22:20,24 28:8 31:15 43:8,9 66:25 68:16 75:23 99:14 101:21 126:24 146:15	<b>lines</b> 101:20
<b>kudos</b> 77:21	<b>laundry</b> 116:13	<b>level</b> 43:2 83:6 89:11 112:3 113:9 115:25 116:1 125:11 131:3 134:19,21,22 135:6,12	<b>linked</b> 125:13
<hr/> <b>L</b> <hr/>	<b>layer</b> 101:21	<b>letter</b> 16:7,10 59:20	<b>liquidity</b> 55:9
<b>L&amp;G</b> 90:21 114:25	<b>lead</b> 4:11 82:11,13 101:6 117:2 140:16	<b>level</b> 43:2 83:6 89:11 112:3 113:9 115:25 116:1 125:11 131:3 134:19,21,22 135:6,12	<b>liquids</b> 54:12 55:14 56:18
<b>lab</b> 64:19 124:20 125:2	<b>leadership</b> 15:7,16 16:2 17:1 21:2 39:13 97:16 133:15	<b>levels</b> 48:13 51:5,18 72:15 85:5,7 113:21 116:10	<b>Lisa</b> 146:23,24 149:9
<b>label</b> 93:22	<b>leading</b> 98:18 153:25	<b>leverage</b> 86:3 117:6,20	<b>list</b> 116:13 136:21 140:8 145:5 155:25
<b>labor</b> 28:23 89:8	<b>leads</b> 22:18	<b>leveraged</b> 126:10	<b>listen</b> 82:4 136:7
<b>laborers</b> 140:13 141:21	<b>leakage</b> 25:25	<b>LEVI</b> 1:13	<b>listening</b> 67:15 130:21
<b>Labrador</b> 26:12	<b>leaks</b> 53:7 147:12	<b>liable</b> 42:12	<b>literally</b> 120:13
<b>labs</b> 108:7 129:14,15	<b>learned</b> 114:13 121:17	<b>lieu</b> 62:22	<b>litigation</b> 70:12
<b>lack</b> 104:8 126:6 144:1,14	<b>learning</b> 97:22 114:16	<b>life</b> 5:6	<b>little</b> 8:17 22:6 35:7 38:7 45:19 58:22 88:12 94:7 108:19 109:24 110:9 116:4 119:15 120:8 126:1,21,24 127:8,25 130:20 136:4 137:15 147:5
<b>ladies</b> 97:13			<b>live</b> 80:7
<b>Lakes</b> 73:19			
<b>land</b> 145:20			
<b>landing</b> 30:20			
<b>lapses</b> 72:1			
<b>large</b> 8:11 32:3 45:13 121:9,16 124:4			
<b>largely</b> 84:5 104:10 135:11 155:2,3			

<p><b>lived</b> 35:12 111:14  <b>lives</b> 80:21  <b>living</b> 117:17              120:10  <b>load</b> 17:6 96:17  <b>local</b> 2:5 7:5 21:22              38:9,22 40:4,14              41:7 55:10 68:13              85:12,14 86:25              87:15 89:4 95:21              109:16 116:9,20              140:4  <b>localities</b> 108:11  <b>localized</b> 144:9  <b>located</b> 54:22              55:13 74:4 75:14              94:15  <b>locations</b> 99:4  <b>locked</b> 70:13  <b>locks</b> 87:12  <b>logistics</b> 55:1  <b>long</b> 31:11 71:17              94:16 107:9              121:13 136:24              145:5 153:8  <b>longer</b> 74:19              153:21  <b>longer-term</b> 71:13  <b>longstanding</b>              124:16  <b>long-term</b> 31:22              71:16 103:22              112:1,19 120:18  <b>losers</b> 92:9 109:7              151:22  <b>losing</b> 120:2  <b>loss</b> 98:16 100:25  <b>losses</b> 118:18  <b>lost</b> 121:22 149:2  <b>lot</b> 11:12 13:17              19:8,10 20:13              22:25 25:25</p>	<p>26:1,25 29:16          30:9 47:8 57:11          60:19 69:12          72:12 86:10 90:5          93:10          95:6,19,20,25          96:5 97:21          109:11,22          110:17 112:11          115:1 119:5,23          120:2,9,10          121:8,9 127:17          128:12 129:12          131:19 133:20          137:18,20 139:9          140:14,17          141:13,14,15,18          142:4 151:23          152:9 153:7          154:12 157:5  <b>lots</b> 44:3,12              48:10,11 75:25              76:1  <b>low</b> 7:9 28:6              32:4,12 56:7              78:10 104:11              129:5  <b>low-carbon</b> 31:7  <b>low-cost</b> 31:22  <b>lower</b> 19:13 20:20              31:8,16 63:13,22              94:11  <b>lowering</b> 11:4  <b>lower-sulfur</b> 73:10  <b>lowest</b> 37:23 80:20              95:24  <b>lowest-cost</b> 87:12  <b>lowest-risk</b> 87:12  <b>low-hanging</b>              139:20  <b>low-sulfur</b> 51:3              72:18  <b>LP</b> 2:9  <b>Luck</b> 150:4,6,7</p>	<p><b>lucky</b> 15:24 34:11  <b>lung</b> 29:12 69:6              151:19  <hr/> <p style="text-align: center;">M</p> <hr/> <b>mail</b> 149:22  <b>main</b> 40:8 66:20  <b>Maine</b> 44:13 52:8              60:23 74:5 85:16              114:17              141:6,19,25  <b>mains</b> 44:12  <b>maintain</b> 50:13              129:10  <b>maintaining</b> 88:21  <b>maintenance</b>              64:22  <b>major</b> 11:19 13:3              14:15,20,25              28:25 32:9 54:15              55:8 102:9 141:2              155:20  <b>majority</b> 64:6  <b>makers</b> 53:5  <b>malls</b> 22:21  <b>manage</b> 17:6              55:10 98:1              128:21 129:4  <b>management</b> 27:1              72:17  <b>managing</b> 8:12  <b>Manchester</b> 39:1              40:20 41:21  <b>manner</b> 65:11  <b>manufacturers</b>              16:21 88:3 89:4  <b>Manufacturer's</b>              2:14  <b>manufacturing</b>              17:21 88:12              89:11,14  <b>Marcellus</b> 35:15</p>	<p>37:24 40:11          55:23 56:15 58:3          73:21  <b>March</b> 45:21  <b>Margaret</b> 2:17              16:18 81:7              103:4,5,7 106:6              115:7 122:21              130:7 135:3  <b>margins</b> 138:3  <b>marine</b> 52:8  <b>Marion</b> 2:12              16:15,17              81:6,17,20 82:9              87:18 106:15              108:14 109:3              110:4 117:1              124:11 125:15              130:22 132:4  <b>Marion's</b> 127:23              133:8  <b>market</b> 32:25              45:25 53:4 56:25              57:22 66:15              67:13 70:23              71:2,10 88:17              104:11 105:6              154:14,25              155:3,4,18  <b>marketplace</b>              108:21 119:23  <b>markets</b> 32:17              56:5,7,9 79:7  <b>mass</b> 100:6 111:24              112:17 139:14              142:3  <b>Massachusetts</b>              43:14 63:12 70:5              141:3 156:7,8  <b>massacre</b> 145:19  <b>materials</b> 88:16  <b>matter</b> 12:5 68:6              69:8 72:19 102:4              147:1,3</p>
---	---	--	---

<p><b>matters</b> 82:12</p> <p><b>maximize</b> 49:25</p> <p><b>may</b> 8:17,24 33:2              47:22 51:25 59:2              69:2,3 99:12              102:12              114:21,22,24              123:8 126:1              135:11 141:22</p> <p><b>maybe</b> 66:19 72:8              73:2,13 116:17              125:18 152:19              153:3</p> <p><b>MB5</b> 64:17</p> <p><b>mccourt</b> 88:5              108:16 118:7,14              125:18 132:4</p> <p><b>McCourt</b> 2:14              16:20 88:1              151:21</p> <p><b>MCF</b> 54:24</p> <p><b>mean</b> 24:24 45:21              68:12 77:17              132:25 137:24</p> <p><b>means</b> 22:13 43:6              44:10 80:6,7              90:22 108:4              126:12,13 134:6</p> <p><b>measures</b> 78:16</p> <p><b>mechanical</b> 75:18</p> <p><b>mechanisms</b> 67:24              123:21</p> <p><b>meet</b> 60:25 86:8              143:16 149:17</p> <p><b>meeting</b> 1:9 3:8,18              4:5 27:4              32:12,13 142:7</p> <p><b>meetings</b> 4:21              34:23 140:25              141:15,18</p> <p><b>meets</b> 133:20</p> <p><b>megawatts</b> 40:18              43:16</p>	<p><b>Melanie</b> 1:18 8:8              10:11 15:6 34:20</p> <p><b>member</b> 156:9</p> <p><b>members</b> 49:7              53:3 123:3</p> <p><b>mentality</b> 70:3</p> <p><b>mention</b> 14:22              27:20 77:11              143:23</p> <p><b>mentioned</b> 13:8              28:12 47:12              52:12 61:20              62:17 64:12 72:8              77:23 79:3 87:21              101:8 124:15              126:5 143:4,9              144:5 150:12</p> <p><b>merchant</b> 40:19</p> <p><b>mercury</b> 72:20</p> <p><b>Merit</b> 161:4,12</p> <p><b>mesh</b> 40:5</p> <p><b>mess</b> 159:15</p> <p><b>message</b> 12:1              98:3,7 148:12</p> <p><b>messages</b> 132:7</p> <p><b>Meter</b> 101:23,24</p> <p><b>Meters</b> 101:22</p> <p><b>methane</b> 24:22              25:25 26:1              28:12,19              147:12,14</p> <p><b>Meyers</b> 156:6</p> <p><b>mic</b> 53:19 81:20              88:4 103:7 150:5</p> <p><b>Michael</b> 2:8 33:24              48:24 49:2 53:14              63:8 64:25 72:6              73:16 75:1              79:3,12 80:1</p> <p><b>micro-CHP</b> 22:24</p> <p><b>microgids</b> 22:15</p> <p><b>microgrid</b> 41:5</p>	<p><b>microgrids</b> 21:23              128:24 129:8,9</p> <p><b>microphone</b> 136:1</p> <p><b>middle</b> 21:7 57:3              65:4 128:12</p> <p><b>midwest</b> 19:11              40:10 44:24 46:3              143:2 152:11</p> <p><b>mike</b> 21:7</p> <p><b>mile</b> 141:20</p> <p><b>mileage</b> 96:12</p> <p><b>miles</b> 37:24 40:14              54:20 155:16</p> <p><b>militaries</b> 99:13</p> <p><b>military</b> 129:1</p> <p><b>mill</b> 36:7</p> <p><b>million</b> 35:10,14              40:9,16 45:22,24              49:8 50:16,17              55:20 57:17,18              58:10 60:24              63:14 64:6 73:3              139:2,6</p> <p><b>Millionaire</b> 107:6</p> <p><b>millions</b> 50:11              93:7 148:16</p> <p><b>mills</b> 35:24 141:8</p> <p><b>Millstone</b> 39:1              40:20 42:15              43:15</p> <p><b>mind</b> 79:18 132:23</p> <p><b>mine</b> 9:11</p> <p><b>minimize</b> 98:15</p> <p><b>mining</b> 22:19</p> <p><b>minority</b> 117:15</p> <p><b>minute</b> 46:25              136:17</p> <p><b>minutes</b> 47:25              81:24 98:3,7              136:6,14 137:1,7              145:6 148:9              151:15 156:5</p>	<p><b>misinformation</b>              141:14</p> <p><b>misleading</b> 100:24              147:11</p> <p><b>miss</b> 67:4</p> <p><b>mission</b> 82:13</p> <p><b>mistake</b> 19:2 28:8</p> <p><b>MIT</b> 8:19,21,23              9:18,19,20 15:16              139:9</p> <p><b>mitigation</b> 11:9              131:6</p> <p><b>mix</b> 7:24 49:13              77:15 90:11,15</p> <p><b>MMBTU</b> 19:21,22              42:10</p> <p><b>mobility</b> 13:12</p> <p><b>mode</b> 47:21</p> <p><b>model</b> 62:15 70:7              83:17 117:11              119:17</p> <p><b>modeled</b> 84:7</p> <p><b>modeling</b> 85:2</p> <p><b>models</b> 62:22              117:25 118:1</p> <p><b>modern</b> 26:5</p> <p><b>modernization</b>              12:18</p> <p><b>modular</b> 32:2</p> <p><b>mom</b> 146:25</p> <p><b>money</b> 47:4,19              50:12 83:23              95:20,21,22              96:10,12,16              110:23 120:3,9              122:4 133:5              145:10 157:12</p> <p><b>monitor</b> 94:21</p> <p><b>Moniz</b> 1:17 4:14              8:15,19              9:2,13,20              10:10,11</p>
---	---	---	---

<p>15:11,15,20 22:4                  24:19 26:22                  30:16 38:16 39:9                  67:2 87:11 97:15                  103:9 107:22  <b>month</b> 43:7 94:6                  96:18  <b>months</b> 35:25 36:1                  51:11 72:1 76:6  <b>Morgan</b> 141:1  <b>morning</b> 21:12                  34:19 35:2 38:15                  45:5 49:3                  86:7,15 88:5,7                  92:17 97:13                  103:8 111:23,25                  134:17 138:9                  142:18 143:4  <b>morning's</b> 16:13  <b>Mostly</b> 54:1  <b>mothballs</b> 47:13  <b>Mother</b> 48:5  <b>motivation</b> 11:13  <b>Mount</b> 139:1  <b>move</b> 63:18,21                  64:15 70:13                  75:24                  79:17,19,24                  90:18 106:8                  111:10 116:2                  121:7 135:25                  142:14 143:21                  155:19  <b>moved</b> 12:21                  72:24 114:16                  119:14  <b>movement</b> 52:13                  53:25  <b>moves</b> 156:15  <b>moving</b> 37:1                  63:12,17 87:25                  105:3 119:17                  122:13 128:1                  133:16 135:23</p>	<p>144:2,24  <b>multi</b> 9:3  <b>multi-faceted</b> 25:1  <b>multi-phased</b> 76:5  <b>multiple</b> 12:24                  13:14 50:22                  134:4  <b>multi-year</b> 9:4  <b>mundane</b> 20:12  <b>myself</b> 27:16  <b>myths</b> 90:7  <hr style="width: 20%; margin: 10px auto;"/> <p style="text-align: center;">N</p> <hr style="width: 20%; margin: 10px auto;"/> <b>name's</b> 38:21  <b>narrowly</b> 108:19  <b>nation</b> 4:22 5:12                  15:14 107:12  <b>national</b> 7:21 14:3                  17:7 18:9,21                  46:7 50:2 53:18                  64:19 83:6 94:24                  102:10 107:11                  108:6 125:1,2,24                  127:6 129:15,18                  134:14 142:19  <b>nationally</b> 130:25                  131:12 135:8  <b>nations</b> 98:11                  109:18  <b>nation's</b> 4:24                  46:14 88:18                  103:25 131:1  <b>nationwide</b> 150:21  <b>natural</b> 5:20                  6:3,4,13,16 7:21                  9:6 18:16,19                  19:8,9,18,20                  28:1,4 30:5                  31:13 35:11,14                  36:12,18,21                  37:23 40:14                  41:23 42:10                  44:9,12,16,19                  46:7 51:5 52:14</p>	<p>53:6,25                  54:11,18,21,23                  55:14 56:19                  59:17 60:7 65:13                  67:25 69:14                  73:22 76:19,24                  84:4 88:11 90:17                  104:11 109:8                  114:24 118:21                  141:12 147:2,9                  148:1,4,18,22                  151:2 156:21  <b>Nature</b> 48:5  <b>Navy</b> 14:19  <b>nearby</b> 86:20  <b>nearly</b> 109:18  <b>necessarily</b> 30:10                  53:8 68:20 116:6  <b>necessary</b> 115:17  <b>needy</b> 158:11  <b>nefarious</b> 99:25                  100:14,22 102:1  <b>negative</b> 69:7  <b>nervous</b> 148:7  <b>NESCAUM</b> 72:17  <b>Nesco</b> 59:20 61:17  <b>net</b> 55:6 85:6                  95:16  <b>network</b> 50:8                  100:7,19 122:14  <b>networked</b> 99:9                  112:18  <b>networking</b> 121:5  <b>networks</b> 100:3                  101:11  <b>newest</b> 50:9  <b>news</b> 85:9 86:10  <b>nexus</b> 98:3  <b>NGL</b> 54:3 55:1,20  <b>nice</b> 93:21  <b>night</b> 140:25</p>	<p><b>NIMBY</b> 74:18                  143:7  <b>NIMBYism</b> 69:23                  71:12  <b>nitrogen</b> 72:19  <b>nobody</b> 47:18                  94:18  <b>no-carbon</b> 7:9  <b>non-CO2</b> 28:12,18  <b>none</b> 50:13 151:1                  160:12  <b>nonstop</b> 42:20  <b>nor</b> 44:12  <b>normal</b> 45:4,22                  46:1  <b>north</b> 7:10 13:7,25                  26:14 40:9                  41:9,13 70:5                  74:7 77:24 94:15                  140:13 143:11  <b>north/south</b> 7:21  <b>Northeast</b>                  29:13,18 46:13                  65:20 72:16                  74:22 75:5,7                  80:9,20 99:21                  110:13 151:20                  153:15 156:20  <b>northern</b> 85:16                  141:3  <b>Northwest</b> 117:10  <b>note</b> 136:7  <b>notes</b> 115:18 161:7  <b>noteworthy</b> 83:21  <b>nothing</b> 70:2                  109:17  <b>November</b> 45:18  <b>nowhere</b> 153:25  <b>NSTM</b> 51:7  <b>nuclear</b> 6:12 9:6,7                  14:18,19 32:1                  39:1 42:15 43:12</p>
--	--	---	--

<p>91:8 122:9</p> <hr/> <p style="text-align: center;">O</p> <hr/> <p><b>Obama</b> 4:18,24 8:2</p> <p><b>object</b> 4:2</p> <p><b>objective</b> 31:6</p> <p><b>obsolete</b> 53:6</p> <p><b>obtain</b> 4:2</p> <p><b>obvious</b> 121:18 152:6</p> <p><b>obviously</b> 19:17 37:8 39:19 60:6 61:7 71:11 125:8 152:17</p> <p><b>Ocean</b> 82:25 150:8</p> <p><b>ocean-going</b> 51:24</p> <p><b>October</b> 45:21</p> <p><b>offer</b> 34:12 55:8 73:17 124:6 133:3 135:3 136:6 138:4 160:9</p> <p><b>offers</b> 87:2</p> <p><b>office</b> 2:12 8:9,10 9:16 81:18 82:2,10 83:9 88:22 92:22 127:5,23 133:8 150:14</p> <p><b>offices</b> 82:18</p> <p><b>official</b> 3:15</p> <p><b>officials</b> 1:16 3:3 70:10</p> <p><b>off-loading</b> 143:15</p> <p><b>offset</b> 156:24</p> <p><b>offshore</b> 25:15 65:18</p> <p><b>of-the-above</b> 27:18</p> <p><b>Ohio</b> 40:10,15</p> <p><b>oil</b> 11:3 15:23 18:22 24:7,10,21</p>	<p>35:16 42:1,6,9 46:20 49:6,11,25 50:4,11,14,17 51:3 52:8,9,10,21,22 54:25 63:25 64:7,10,16,17,24 68:23,25 72:13 73:5 77:14 148:14,16 154:18,22,25 155:11,17</p> <p><b>okay</b> 66:25 78:14 138:5 147:7 148:8</p> <p><b>old</b> 25:8,9,17,24 28:20 99:21</p> <p><b>older</b> 118:10 132:12</p> <p><b>one-dollar-per-gallon</b> 51:15</p> <p><b>one-off</b> 78:16</p> <p><b>ones</b> 116:18,24,25 122:25 123:1 154:19</p> <p><b>one-third</b> 42:9 88:18</p> <p><b>one-year</b> 71:24</p> <p><b>on-line</b> 92:4 93:23</p> <p><b>onto</b> 156:13</p> <p><b>open</b> 93:14 100:18 122:1 126:21 132:23 136:1</p> <p><b>opened</b> 41:16</p> <p><b>opening</b> 58:20 155:4,8</p> <p><b>operable</b> 50:9</p> <p><b>operate</b> 42:13 54:15 55:1,17 65:24 160:2</p> <p><b>operational</b> 114:3</p> <p><b>operationally</b> 128:14</p>	<p><b>operations</b> 88:21 90:1</p> <p><b>opinion</b> 111:18 120:7</p> <p><b>opportunities</b> 28:18 29:1 34:9 49:20 67:10,11 76:6 87:1 107:23 114:2 116:17 152:20 158:8,16</p> <p><b>opportunity</b> 21:9 26:13 33:12 49:5 53:22 59:4 76:11 77:12 80:11,12 82:6 84:2 97:14 99:25 106:21 107:4 116:24 117:3 118:3 126:23 128:5,18 130:19 136:19 141:9 142:22 148:11 155:19 158:2</p> <p><b>oppose</b> 60:6,7 76:22 91:23</p> <p><b>opposed</b> 159:21</p> <p><b>opposing</b> 77:3</p> <p><b>Opti</b> 140:16</p> <p><b>optimal</b> 55:6</p> <p><b>option</b> 60:14</p> <p><b>options</b> 13:23 60:15 157:5</p> <p><b>order</b> 42:22 43:7 83:11 88:16 90:1 99:4 136:22 139:11 143:16</p> <p><b>ordered</b> 45:17</p> <p><b>organization</b> 46:7</p> <p><b>organization's</b> 3:19</p> <p><b>organize</b> 116:1</p> <p><b>organizers</b> 34:20</p> <p><b>organizing</b> 82:2</p>	<p>140:12</p> <p><b>original</b> 11:12</p> <p><b>originating</b> 73:24 94:1</p> <p><b>others</b> 66:22 97:23 117:19 122:8</p> <p><b>otherwise</b> 46:1 65:17 67:14</p> <p><b>ourselves</b> 144:5</p> <p><b>outage</b> 111:24</p> <p><b>outcomes</b> 57:23</p> <p><b>outline</b> 119:8</p> <p><b>outlined</b> 63:10</p> <p><b>outlining</b> 35:3</p> <p><b>outpace</b> 89:21</p> <p><b>output</b> 89:10</p> <p><b>Outreach</b> 150:10</p> <p><b>outside</b> 48:8 89:5 138:3</p> <p><b>overall</b> 11:1 123:6 147:19</p> <p><b>overarching</b> 11:19</p> <p><b>overcome</b> 38:1</p> <p><b>overhaul</b> 71:15</p> <p><b>overseas</b> 62:18 111:12</p> <p><b>overview</b> 40:7</p> <p><b>owners</b> 139:1</p> <p><b>oxide</b> 72:19</p> <p><b>ozone</b> 29:17 152:9</p> <hr/> <p style="text-align: center;">P</p> <hr/> <p><b>p.m</b> 134:16 160:15</p> <p><b>pace</b> 5:23</p> <p><b>Pacific</b> 117:10</p> <p><b>Pad</b> 74:22</p> <p><b>pads</b> 74:23</p> <p><b>page</b> 138:14</p> <p><b>paid</b> 36:10 72:25</p>
--	--	---	--

<p><b>panel</b> 1:16 2:3,11                  3:3,7 4:12                  33:10,20,21                  36:14 38:6 68:11                  76:9 81:2,3,12                  92:24 105:24                  106:8,25 120:20                  123:3 131:4                  143:5</p> <p><b>panelist</b> 132:8</p> <p><b>panelists</b> 38:12,18                  46:10 76:3 80:25                  110:14 126:5                  135:19</p> <p><b>panels</b> 95:15                  115:22 123:19</p> <p><b>paper</b> 36:2,7 141:8</p> <p><b>paradigm</b> 94:9                  133:12</p> <p><b>paradigms</b> 68:9</p> <p><b>paradox</b> 37:22</p> <p><b>parallel</b> 16:8                  102:17 113:3</p> <p><b>paramount</b> 125:9</p> <p><b>parents</b> 76:16</p> <p><b>parks</b> 129:1</p> <p><b>parody</b> 51:17</p> <p><b>participate</b> 7:18                  38:18</p> <p><b>participation</b>                  10:15</p> <p><b>particular</b> 14:24                  59:9 104:20                  117:13 122:25                  143:2,10</p> <p><b>particularly</b> 15:10                  16:15 21:1 54:11                  67:24 115:4                  125:25 135:8</p> <p><b>particulate</b> 72:19</p> <p><b>partner</b> 14:21 41:4                  92:21</p> <p><b>partnering</b> 17:8</p>	<p><b>partners</b> 50:24                  121:10 131:9                  142:23</p> <p><b>partnership</b>                  102:24 113:20                  117:5 118:6</p> <p><b>partnerships</b>                  116:8,12,16,23                  122:22 123:8                  158:15</p> <p><b>Pascoag</b> 159:9</p> <p><b>pass</b> 87:20 95:3</p> <p><b>passion</b> 14:19</p> <p><b>passive</b> 122:13</p> <p><b>past</b> 44:20 45:2                  73:2 100:1 104:7</p> <p><b>path</b> 7:1,25 71:2                  77:22</p> <p><b>pathways</b> 108:25</p> <p><b>Pause</b> 34:3 81:5                  135:20 136:2                  160:11</p> <p><b>paved</b> 9:10</p> <p><b>Pawtucket</b> 120:2</p> <p><b>pay</b> 47:3 86:20                  109:24</p> <p><b>payback</b> 113:16</p> <p><b>pay-back</b> 22:8</p> <p><b>paying</b> 18:18                  103:25 123:12                  158:13</p> <p><b>payroll</b> 132:5</p> <p><b>pays</b> 65:20 121:25</p> <p><b>PCAST</b> 9:22                  10:1,5</p> <p><b>peak</b> 104:1</p> <p><b>pending</b> 60:10</p> <p><b>penetrated</b> 102:7</p> <p><b>penetration</b> 23:1</p> <p><b>Pennsylvania</b>                  35:13 40:11</p>	<p><b>people</b> 17:17 26:20                  35:25 37:18                  60:6,19 61:7                  65:4 67:14                  68:2,25 69:24                  71:20 72:13 77:2                  96:1,3,24                  108:22,24                  110:21 117:17                  119:16 120:10                  123:11,15                  124:17 127:14                  129:6 130:4,12                  132:14 133:6,23                  136:8,15,23                  137:19                  145:8,17,20                  146:1 158:12</p> <p><b>people's</b> 73:11</p> <p><b>per</b> 19:21,22 36:20                  50:16,17 54:25                  63:14 69:2                  73:6,7 138:25                  154:23,24                  155:16</p> <p><b>perceived</b> 148:24</p> <p><b>percent</b> 6:6,7                  18:13,17,19,21                  19:8 27:22 33:4                  36:3 41:13                  42:6,19 45:25                  46:14,15,18                  51:9,10 64:16                  72:20,21 73:7                  85:7,8 89:21                  90:10,14 93:5                  94:3 96:11,16                  117:16 121:23                  138:15,19                  147:10 154:17                  157:25</p> <p><b>perennial</b> 108:8</p> <p><b>perfect</b> 52:15 62:9</p> <p><b>perfectly</b> 144:21</p> <p><b>perform</b> 95:11                  104:4</p> <p><b>performance</b></p>	<p>98:22</p> <p><b>performing</b> 54:10</p> <p><b>perhaps</b> 69:23                  87:3 115:16                  118:24 120:1                  126:20 132:10</p> <p><b>period</b> 13:16 22:9                  33:4</p> <p><b>periods</b> 56:12</p> <p><b>permit</b> 47:23</p> <p><b>permits</b> 47:2,5</p> <p><b>permitted</b> 65:22</p> <p><b>permitting</b> 55:19                  63:3 75:13</p> <p><b>persistent</b> 28:15</p> <p><b>person</b> 142:15</p> <p><b>personal</b> 3:24                  15:13</p> <p><b>personally</b> 27:17                  45:6 111:9</p> <p><b>perspective</b> 13:6                  14:5 82:8,20                  88:13 106:4                  132:21,22</p> <p><b>perspectives</b> 11:21                  34:12</p> <p><b>Peru</b> 145:23</p> <p><b>Petrash</b>                  142:15,17,18</p> <p><b>P-E-T-R-A-S-H</b>                  142:19</p> <p><b>petroleum</b> 51:21                  150:23</p> <p><b>Petry</b> 146:23,24                  147:8 148:10                  149:10,20,23                  150:1</p> <p><b>phase</b> 5:2 33:18                  136:1 147:13</p> <p><b>phenomenal</b> 42:7</p> <p><b>phone</b> 44:4</p> <p><b>phonetic</b> 55:25</p>
--	---	---	---

<p>151:11  <b>physical</b> 12:20                  99:10  <b>picking</b> 92:9                  151:22  <b>picture</b> 43:5 101:5                  105:20  <b>pie</b> 90:13  <b>piece</b> 111:4,19                  122:16 153:21  <b>pieces</b> 152:2  <b>Pilgrim</b> 43:14  <b>pinch</b> 86:11  <b>pioneer</b> 116:11  <b>pipe</b> 29:23 44:18                  48:7,8 54:20                  139:5,12,17  <b>pipeline</b>                  5:14,17,22 6:8                  7:21 20:9,10                  25:23 35:21                  36:12,18,21                  40:14 50:5 51:24                  52:7,25 55:22,25                  57:4,20 59:17                  60:1,2 64:4                  65:12 67:25                  70:18,20 74:2,6                  77:4 141:2,20                  143:13,14 144:1                  145:10 147:21  <b>pipelines</b> 19:18                  26:1 52:5 66:11                  67:8 70:21,22                  118:22 143:25                  144:2  <b>pipes</b> 17:10  <b>pivotal</b> 147:24  <b>places</b> 94:23                  143:22 145:24  <b>plan</b> 18:24 24:2                  30:10,17 72:2                  76:25 81:8 83:14                  84:7 85:11 91:10</p>	<p>131:7 143:10                  149:20 157:25  <b>planet</b> 37:24  <b>planned</b> 90:25  <b>planning</b> 52:25                  71:16 112:2                  115:25 126:6  <b>plans</b> 105:2,3  <b>plant</b> 36:2 39:1                  41:5,12,22                  42:5,15 45:24                  70:6,8,15 76:23                  77:4 131:21                  138:22                  139:11,12  <b>plants</b> 6:11 21:25                  43:12 54:23 91:9                  138:15 139:25                  140:1 152:22  <b>Plastics</b> 94:23  <b>plates</b> 36:3  <b>play</b> 77:25 109:8                  113:5 157:8  <b>played</b> 89:4 97:15                  124:4  <b>player</b> 91:14                  118:18  <b>players</b> 105:22                  119:8  <b>playing</b> 14:25                  157:15 159:16  <b>please</b> 23:19 29:8                  33:25 97:4 136:8                  149:10,21  <b>pleased</b> 17:7 29:24                  82:6  <b>pleasure</b> 8:21 9:14  <b>plenty</b> 65:9 76:6  <b>plug-in</b> 156:24  <b>pocket</b> 96:18  <b>pocketbook</b>                  120:10</p>	<p><b>podium</b> 33:19                  38:13 81:16  <b>point</b> 3:2 11:20                  14:2,13 20:16                  25:14,19 30:20                  32:11,12 72:11                  74:24 83:21                  94:15,17 112:24                  113:2 122:24                  125:20 132:13                  133:5 138:22                  143:23 154:2  <b>pointed</b> 39:22 65:4                  66:8 159:13  <b>points</b> 24:25 41:7                  78:22  <b>poised</b> 79:14 84:23  <b>polar</b> 12:6 13:16                  45:5 110:10  <b>policies</b> 20:20                  26:23 84:9,12                  109:3,20 159:2  <b>policy</b> 8:9 9:11,17                  10:6 11:23 12:25                  39:10 49:16                  52:13 53:5                  77:13,18 78:20                  79:16,24 82:11                  101:2 107:11                  109:4 133:22                  138:1 154:8,9  <b>policymakers</b> 31:9  <b>political</b> 69:10                  78:16  <b>politically</b> 76:19  <b>politicians</b> 115:16  <b>politics</b>                  77:14,17,21,23,2                  5 78:4,20 79:24                  80:18  <b>pollutant</b> 26:2  <b>pollutants</b> 29:16  <b>pollution</b> 19:14                  26:6 109:21</p>	<p>111:13  <b>Pomfret</b> 142:3  <b>popular</b> 46:22  <b>population</b> 117:15                  120:4  <b>portion</b> 90:11                  154:4  <b>Portland</b> 52:8  <b>Portland/                  Montreal</b> 52:7  <b>port-to-port</b> 52:1  <b>pose</b> 58:24  <b>position</b> 4:3 7:4,17                  16:2 133:15  <b>positioned</b> 49:19                  55:10  <b>possibilities</b> 13:21                  59:11 104:25  <b>possible</b> 4:5 58:1                  66:3 81:10                  104:18,21  <b>possibly</b> 137:22  <b>potent</b>                  147:14,15,17  <b>potential</b> 30:5                  85:4,21 126:13                  128:22  <b>potentially</b> 30:5                  32:1 101:24  <b>power</b> 6:11 7:24                  21:20,25 22:19                  28:2 32:1 33:22                  39:1,2 40:8,18                  41:4,7,12 42:15                  43:12,16 52:19                  59:10 64:14                  70:15 76:23                  78:8,9 79:21                  85:18 86:18                  88:25 90:1                  98:1,12,15,17                  99:5,6,19                  100:2,13 101:20                  102:6,9 111:24</p>
---	---	--	---

<p>112:12 120:21                  121:22 129:6,24                  131:20 134:10                  138:15,17,22                  139:11,25                  140:1,5</p> <p><b>power's</b> 134:17</p> <p><b>practical</b> 112:6                  121:18</p> <p><b>practically</b> 121:4</p> <p><b>practice</b> 39:11                  135:17</p> <p><b>practitioners</b>                  34:11</p> <p><b>precisely</b> 102:13</p> <p><b>predecessors</b>                  152:9</p> <p><b>predicting</b> 84:22</p> <p><b>predicts</b> 154:22                  155:11</p> <p><b>predominant</b>                  47:20</p> <p><b>prefer</b> 38:12</p> <p><b>premiere</b> 8:24</p> <p><b>premise</b> 26:19</p> <p><b>premium</b> 35:20</p> <p><b>preparation</b> 15:16</p> <p><b>preparations</b>                  13:18</p> <p><b>prepared</b> 57:18                  61:14 152:5</p> <p><b>preparing</b> 131:1</p> <p><b>presence</b> 15:12                  17:2 20:7</p> <p><b>present</b> 118:11                  141:17</p> <p><b>presentation</b> 80:25                  88:6</p> <p><b>presented</b> 87:22                  115:15</p> <p><b>presently</b> 60:10</p>	<p><b>president</b> 2:6,8,16                  4:18,24 27:16                  43:24 48:25                  53:17 97:10                  153:14 156:7</p> <p><b>President's</b> 9:21</p> <p><b>pressure</b> 87:6                  107:5</p> <p><b>pretty</b> 47:13 63:10                  93:16 94:6 95:2                  111:3 119:22</p> <p><b>prevailed</b> 104:12</p> <p><b>previous</b> 103:23                  132:7</p> <p><b>price</b> 6:4,9,20 19:5                  53:2 55:9                  56:6,8,9 63:6                  74:13 78:2 81:4                  95:24 103:21                  144:9 147:2</p> <p><b>prices</b> 18:10                  19:13,20 22:10                  62:19 74:13 78:9                  86:12 87:6                  103:21,25 104:1                  115:20,23                  144:15</p> <p><b>pricing</b> 57:12</p> <p><b>primarily</b> 5:14 6:8                  153:24</p> <p><b>primary</b> 98:24                  143:6</p> <p><b>prime</b> 126:8</p> <p><b>Princeton</b> 140:2</p> <p><b>prior</b> 8:18 9:13,17                  104:6 115:11</p> <p><b>priorities</b> 101:19                  124:1,2,8                  125:17,19 130:8</p> <p><b>prioritize</b> 62:1</p> <p><b>priority</b> 28:16</p> <p><b>privacy</b> 122:15</p> <p><b>private</b> 57:19 86:3</p>	<p>92:6 102:14                  112:15 116:8                  117:7,20 123:7                  126:2,3,9,12,17,                  19 127:7 137:16</p> <p><b>prize</b> 32:24</p> <p><b>probably</b> 13:20                  20:2 24:1 28:25                  44:6 61:3 64:9                  78:6 103:13                  120:16 122:4                  127:12 135:13                  151:16</p> <p><b>problem</b> 6:21                  16:11 17:15                  37:17,20 39:22                  45:9 48:4 68:8                  69:19 107:22                  109:22 123:18                  143:3 147:12                  148:1</p> <p><b>problematic</b> 91:1</p> <p><b>problems</b> 5:18                  18:8 25:23 35:6                  37:6 44:23 105:4                  115:19 119:6                  121:2 131:18</p> <p><b>proceed</b> 106:14                  136:16</p> <p><b>Proceedings</b> 34:3                  81:5 135:20                  136:2 160:11,15</p> <p><b>process</b> 8:13 15:13                  54:11,13                  75:13,16 76:5,8                  114:13 122:1                  129:25 130:3                  136:3 142:25                  145:7 156:15</p> <p><b>processes</b> 9:8 60:5                  113:14</p> <p><b>processing</b>                  54:16,23,24                  94:25</p> <p><b>produce</b> 51:4                  73:23 149:15</p>	<p><b>produced</b> 56:18                  65:14 74:20,21                  153:23</p> <p><b>producer</b> 53:24                  54:13,14</p> <p><b>producers</b> 55:4</p> <p><b>produces</b> 72:21                  149:13</p> <p><b>producing</b> 58:7                  79:21 85:5</p> <p><b>product</b> 50:18                  52:3 55:6,23                  56:6,7 57:13                  63:5 65:9,11,18                  74:6,12,20 80:19                  96:1 113:18                  129:16,19</p> <p><b>production</b> 25:2                  48:12 50:3,24                  51:13,17,18                  55:24 57:2,7                  58:2 63:23 72:9                  78:8,9 152:11                  158:25 159:1</p> <p><b>productions</b> 73:22</p> <p><b>productivity</b> 89:7                  149:2</p> <p><b>products</b> 88:20                  109:17</p> <p><b>profile</b> 69:5</p> <p><b>profitable</b> 112:14</p> <p><b>program</b> 30:24                  83:1 85:13 91:20                  92:22 94:1 95:18                  112:19 150:18                  156:10</p> <p><b>programmatic</b>                  82:12</p> <p><b>programs</b> 7:5                  27:8,9 87:16                  91:20 95:19                  102:16                  105:12,15 110:5                  123:7 127:6                  140:17 142:5</p>
---	--	--	---

<p>158:22,23  <b>progress</b> 84:24                  148:17  <b>prohibitively</b>                  17:20  <b>project</b> 46:24                  55:18 65:21                  66:2,21 73:19                  75:18 92:4 93:17                  141:1,5,18,21                  150:21 153:2,4  <b>projections</b> 84:20  <b>projects</b> 47:4,9                  66:23 67:21 92:5                  119:16 153:1  <b>proliferation</b>                  14:18  <b>prominent</b> 98:22  <b>promote</b> 71:21  <b>promoting</b> 50:3  <b>prone</b> 53:7  <b>pronounced</b> 5:18                  6:23 15:20  <b>pronunciation</b>                  151:13  <b>propaganda</b>                  141:13  <b>propane</b> 2:6 43:25                  44:6,9,14,17,18,                  21,25                  45:1,7,13,17,23                  46:6,8,15,17,21                  47:3,15,18,21                  48:7,13 54:1                  56:20,22 57:7                  58:4,5,10                  62:11,18 69:14                  73:22,24 74:14                  142:19,21                  143:1,6,16,19,20                  ,21,24 144:10  <b>properly</b> 15:20                  77:7  <b>proposals</b> 70:20</p>	<p>107:18  <b>propose</b> 21:6                  154:8  <b>proposed</b> 57:16  <b>proposition</b> 96:14  <b>propylene</b> 144:10  <b>pros</b> 132:18  <b>prospectives</b> 106:1  <b>prosperity</b> 20:5                  145:3  <b>ProsperityforRI.c                  om</b> 23:22  <b>protect</b> 71:22                  101:11  <b>protected</b> 104:10  <b>protecting</b> 101:13  <b>protection</b> 101:19                  132:21  <b>protocol</b> 100:21  <b>protocols</b> 100:22  <b>proud</b> 39:13  <b>proven</b> 52:22                  153:16  <b>provide</b> 3:20,23                  55:4 58:3 62:6                  63:4 76:11                  103:21                  105:12,16                  106:2,21                  108:22,24,25                  117:11 130:19  <b>provided</b> 52:15                  59:2 104:7  <b>Providence</b> 1:21                  41:23 45:15                  61:18 157:22  <b>providers</b> 33:7  <b>provides</b> 50:19  <b>providing</b> 13:12                  148:23 153:16  <b>provinces</b> 23:17</p>	<p><b>public</b> 1:9 2:17 3:8                  4:21 16:19 33:12                  52:13,23 73:1                  86:3 102:13                  103:5,15 108:1,9                  117:6,20 126:12                  127:7 136:1,5                  137:16 138:4                  141:18 152:1                  153:5 160:9  <b>public/private</b>                  102:24 113:20                  116:7,12,16,23                  117:5 118:6                  120:15 122:22                  123:8 158:15  <b>publicity</b>                  127:13,21  <b>pump</b> 19:14  <b>pumping</b> 143:14  <b>pun</b> 96:22  <b>purpose</b> 3:17  <b>purposes</b> 50:22  <b>Pursuant</b> 3:16  <b>pursue</b> 39:10                  85:20  <b>pursuing</b> 42:24                  85:15  <b>push</b> 32:7  <b>Puts</b> 95:21  <b>putting</b> 76:24 87:6                  139:5 157:7  <hr/>                 Q  <hr/> <b>QER</b> 4:23 5:2 8:14                  10:1,4 22:2,17                  67:14 76:5                  136:11,12                  138:13 140:3                  142:11,25 160:8  <b>QERcomments@                  HQ.DOE.gov</b>                  33:16  <b>Quadrennial</b> 1:6</p>	<p>3:9 4:22 9:24                  10:17 11:11                  12:11,23 15:7                  38:17 106:3,20                  107:8 130:20  <b>qualify</b> 113:22  <b>quality</b> 5:6 50:20                  68:17 80:14,15                  158:9  <b>quantities</b> 45:14                  53:4  <b>quarter</b> 42:5,9,18  <b>Quebec</b> 13:8 26:11  <b>question</b> 22:4,14                  23:19                  24:12,13,19 25:8                  27:14 29:14                  30:15 37:4                  66:5,13,14 67:6                  75:3 83:1                  106:17,18,19                  116:4,14 118:6                  137:12 138:2  <b>questions</b> 8:4                  21:5,10 58:13,24                  97:2 103:17                  106:13  <b>quick</b> 40:7 54:5,17                  56:4 69:11                  132:11 155:18  <b>quicker</b> 63:19  <b>quickly</b> 57:10 58:1                  66:3 75:22,23                  76:11 104:18                  121:25  <b>quite</b> 37:9 39:14                  85:9 117:24                  127:10 142:25  <b>Quonset</b> 25:14                  94:15,17  <b>quoted</b> 70:22  <hr/>                 R  <hr/> <b>R&amp;D</b> 72:24 73:1                  129:25 130:7</p>
--	---	---	---

<p><b>radical</b> 149:11</p> <p><b>rail</b> 47:24 48:4 50:5 51:24 56:1,2 143:9</p> <p><b>railcars</b> 47:22 55:2</p> <p><b>rail's</b> 47:20</p> <p><b>raise</b> 21:9</p> <p><b>raised</b> 77:24</p> <p><b>ran</b> 9:2 42:6,18,20</p> <p><b>range</b> 155:4</p> <p><b>rate</b> 5:13 6:7 78:11</p> <p><b>ratepayer</b> 112:7 113:16</p> <p><b>ratepayers</b> 86:6 104:5,9,14,16 105:9,11,20 113:12 123:5,9 130:12 134:23 135:17</p> <p><b>rates</b> 105:1 152:7</p> <p><b>rather</b> 4:3 6:14 30:8 52:25 133:9 146:9</p> <p><b>rationalize</b> 113:11</p> <p><b>raw</b> 88:16</p> <p><b>RE</b> 1:5</p> <p><b>reach</b> 64:5 116:2</p> <p><b>reactors</b> 32:2</p> <p><b>ready</b> 57:25 58:8 106:15,16 148:5,21</p> <p><b>real</b> 24:14 36:9 47:1,8,10 57:10 62:13 108:22 133:25 134:9</p> <p><b>realistic</b> 86:5 148:13</p> <p><b>realize</b> 18:10 61:22</p> <p><b>realized</b> 129:16</p> <p><b>really</b> 16:10 17:14 20:16 26:13</p>	<p>29:24 32:6,15 50:25 63:3 69:8 79:14 80:25 81:9 82:3,18 85:9 86:13,21 87:9,14 93:9,10 94:18 96:24,25 107:19 108:2,6,11 113:10 114:11 115:3 121:10,15,16 124:17 125:3 127:12,14 130:24 131:13,16 137:12 138:15 139:25 142:25 144:16,17 146:19 148:7,10 152:12 155:4 159:14</p> <p><b>real-time</b> 62:21 99:3 101:4</p> <p><b>Realtime</b> 161:5,13</p> <p><b>reason</b> 42:3 47:11 136:13</p> <p><b>reasons</b> 11:24 121:18 129:18 154:12</p> <p><b>rebound</b> 155:12</p> <p><b>Rebuilding</b> 127:6</p> <p><b>recap</b> 48:12</p> <p><b>recapture</b> 95:9</p> <p><b>receipt</b> 56:1</p> <p><b>received</b> 120:17</p> <p><b>recent</b> 5:19 37:16 52:15 102:5</p> <p><b>recently</b> 51:14 56:12</p> <p><b>recession</b> 140:19</p> <p><b>recognize</b> 16:1,15 17:3 19:5,6 37:6 91:13 136:8</p> <p><b>recognized</b> 44:22</p>	<p>45:8</p> <p><b>recommend</b> 66:1 67:14 76:15 115:12 116:20 134:12</p> <p><b>recommendation</b> 10:4,5 61:13 71:4</p> <p><b>recommendations</b> 3:23 4:4 59:8 61:9 62:6 63:8 106:22 115:7 131:7</p> <p><b>recommending</b> 9:23 36:23</p> <p><b>recommissioned</b> 42:2</p> <p><b>record</b> 48:13 52:22 126:2 148:14</p> <p><b>recover</b> 6:19 19:25</p> <p><b>recovery</b> 88:25</p> <p><b>recycled</b> 36:4</p> <p><b>recycling</b> 89:1</p> <p><b>reduce</b> 6:14 31:20 50:15 53:1 64:22 69:6,7 103:20 121:3 158:4</p> <p><b>reduces</b> 72:19</p> <p><b>reducing</b> 24:5 85:6 98:13</p> <p><b>reduction</b> 20:11 22:25 25:4 27:22 31:5,7 72:21 85:8 130:13 139:18 146:18</p> <p><b>reductions</b> 28:10 31:16</p> <p><b>Reed</b> 4:15 10:14 14:10,11,14 15:1,4,21 22:7 24:24 28:12 29:15,19 54:6 103:10 107:21</p>	<p>110:3</p> <p><b>Reed's</b> 14:20 82:2 110:7</p> <p><b>referenced</b> 56:11</p> <p><b>referred</b> 68:17 130:12 151:25</p> <p><b>refers</b> 146:14</p> <p><b>refine</b> 59:4</p> <p><b>refineries</b> 50:4 52:10 64:11</p> <p><b>refinery</b> 49:25 52:10</p> <p><b>refining</b> 55:5</p> <p><b>reflected</b> 84:13</p> <p><b>Reflecting</b> 151:21</p> <p><b>refrigeration</b> 95:1</p> <p><b>refueling</b> 90:25</p> <p><b>regard</b> 22:19 52:5 71:4 111:10 143:5</p> <p><b>regarding</b> 3:19,25 59:8 90:7 106:22</p> <p><b>region</b> 18:5 23:12 26:21 38:24 43:11,17 46:16 48:7 49:9,13 50:11,15 51:20 52:12 56:23 58:4 63:15 70:15 74:1 78:6,12,17 80:7 84:4,21 86:21 103:21 104:13 135:7 141:10</p> <p><b>regional</b> 1:7 3:12,19 6:21,22 7:3,20 10:18,23 11:24 18:11,12 22:7 40:3 50:1,2,21 61:16 63:21 75:7 85:12 116:1,9,21,22 140:12</p> <p><b>regionally</b> 20:4 23:13,18 87:4</p>
--	--	---	---

<p>130:25 131:12  <b>regions</b> 10:21 11:5                  45:11 73:25  <b>region's</b> 64:3  <b>regions's</b> 6:11  <b>registered</b> 136:18                  161:4,12  <b>regular</b> 36:7  <b>regulate</b> 63:2  <b>regulated</b> 143:25  <b>regulation</b> 91:18                  92:9  <b>regulations</b> 23:15                  108:18 109:13                  126:22  <b>regulators</b> 102:15                  112:3 113:10                  134:22  <b>regulatory</b> 56:3                  57:21 59:12                  61:10 68:9                  106:25 113:22                  133:9,22  <b>reinforce</b> 22:6  <b>reinforces</b> 52:21  <b>reinventing</b> 50:24  <b>reiterate</b> 91:12  <b>rejected</b> 21:24  <b>rejuvenation</b>                  65:12  <b>related</b> 4:22 72:11  <b>relationship</b> 91:7  <b>relative</b> 27:24                  75:10 152:8  <b>released</b> 9:22  <b>reliability</b> 42:7,23                  78:2 81:13 82:7                  90:16 98:12,21                  101:19                  103:17,22 105:1                  106:24 111:22                  112:1 123:5</p>	<p>129:4,10                  134:9,16  <b>reliable</b> 5:1 26:11                  47:24 52:20                  85:18 88:13                  103:12 129:6  <b>reliance</b> 28:22                  98:25 126:2  <b>reliant</b> 128:19  <b>reluctance</b> 47:17  <b>rely</b> 43:16,17                  79:20 88:15                  89:25 91:16 92:6                  115:10  <b>relying</b> 148:1                  159:18,23  <b>remain</b> 42:12                  123:1  <b>remained</b> 89:11  <b>remains</b> 22:20                  28:12,15  <b>remark</b> 159:10  <b>remarkable</b> 85:9  <b>remarks</b> 33:17                  58:20 59:3 61:6                  98:10 136:6  <b>remember</b> 149:4                  156:4  <b>remind</b> 33:11                  38:11 58:17 76:2  <b>reminded</b> 142:10  <b>reminder</b> 160:5  <b>remiss</b> 77:11  <b>remote</b> 99:3                  100:16  <b>remotely</b> 100:15  <b>removing</b> 145:19  <b>renewable</b> 7:5                  20:11 36:4 49:15                  50:10 51:4,17                  85:14,15 86:25                  105:14 125:2</p>	<p>148:6,15,22                  153:2 155:5,8,9  <b>renewables</b> 13:22                  31:24,25 40:22                  153:19  <b>renewal</b> 51:14  <b>rental</b> 117:17                  120:4  <b>repeat</b> 26:25  <b>replace</b> 25:25                  120:24  <b>replaced</b> 53:8                  91:10  <b>replacing</b> 28:19  <b>report</b> 9:23 72:17                  154:10  <b>Reporter</b>                  161:4,5,12,13  <b>represent</b> 49:5  <b>representation</b>                  16:13  <b>representative</b>                  29:11 151:17  <b>represented</b> 34:22  <b>represents</b>                  99:18,24 155:19  <b>Republican</b> 6:24                  16:9  <b>require</b> 113:15  <b>required</b> 73:20  <b>requirement</b> 51:16                  68:20 75:20  <b>requirements</b> 19:7                  57:25  <b>requires</b> 6:21 58:5                  60:1 76:24 101:9                  111:19  <b>reregulate</b> 60:17  <b>research</b> 31:1 89:3                  105:18 108:7                  113:6,18 119:5                  123:22 124:8,17</p>	<p>125:4,14,16,25                  126:7,14                  127:8,17 130:10                  153:15 157:13  <b>researchers</b>                  147:18  <b>residential</b> 6:7                  22:24 89:16,22                  94:2 104:9,15  <b>resilience</b> 12:19  <b>resiliency</b> 21:22                  139:17,23  <b>resilient</b> 85:18                  98:19 131:2                  152:4  <b>resistance</b>                  145:11,13  <b>resource</b> 87:12                  127:19 128:22  <b>resources</b> 2:6,13                  6:25 7:10,16                  11:2 38:10 81:19                  82:10,21 83:6                  88:11 98:17                  108:3 113:1                  119:18 121:1                  130:5 146:2                  150:15,22,23                  151:4  <b>respect</b> 34:10 96:6  <b>respects</b> 116:11  <b>responding</b> 70:24  <b>responses</b> 59:1  <b>responsibilities</b>                  14:17 53:23  <b>rest</b> 47:15 53:21                  74:8 103:24                  115:1  <b>restrained</b> 32:15  <b>restraints</b> 31:10  <b>restricts</b> 51:25  <b>result</b> 100:9  <b>resulting</b> 101:4</p>
---	---	---	--

<p><b>rethink</b> 113:24  <b>rethinking</b> 80:5  <b>retirement</b> 6:12                  91:4  <b>retroactive</b> 51:14  <b>retrofits</b> 114:1  <b>return</b> 23:4 52:20                  54:14  <b>returning</b> 22:14                  142:5  <b>reverse</b> 100:21  <b>reversing</b> 52:6  <b>Review</b> 1:6 3:9                  4:22 9:24 10:17                  11:11 12:11,24                  15:8 38:17                  106:3,20 107:8                  130:20  <b>revising</b> 116:15  <b>revolution</b> 17:18                  18:4,9 20:17                  26:9 27:7 28:1                  31:14 65:5 80:3  <b>revolving</b> 120:1,16  <b>rhetoric</b> 141:14  <b>Rhode</b> 1:20,21                  2:13,14,15,18                  4:16,17 5:7,9,12                  7:18 14:12                  15:11,17                  16:3,20,22 23:25                  24:15 25:6,14                  29:11 47:22                  63:11 81:19                  82:4,11,13 83:10                  84:23 85:3,11,22                  86:23 88:2                  92:15,19 103:5                  105:13 110:5                  114:17 115:19                  117:12,24 120:7                  123:10 125:6,13                  131:11 137:11                  150:1,9 151:18                  152:7 159:9</p>	<p><b>RI.com</b> 145:4  <b>Rich</b> 3:5 4:10,20  <b>Richard</b> 1:13                  102:8  <b>rid</b> 70:2 76:24                  78:20 146:1  <b>rigorous</b> 9:11 10:6  <b>Rine</b> 144:23  <b>rip</b> 120:23  <b>rise</b> 131:3  <b>rising</b> 115:20,23                  154:22  <b>risk</b> 11:9 29:7                  57:23 105:9                  114:15  <b>River</b> 15:18                  139:11  <b>road</b> 30:13 79:18                  133:20 139:8  <b>roadmap</b> 83:12  <b>Rob</b> 21:11,17                  138:8,9  <b>Robbins</b> 46:24  <b>robust</b> 30:24 85:13  <b>robustly</b> 86:24  <b>role</b> 14:25 70:25                  87:10 89:5                  92:8,23 96:21                  97:16 108:12,18                  113:5 115:25                  124:4 133:8,14                  157:16  <b>roles</b> 59:8 82:17                  106:23 115:8  <b>Ronald</b> 2:9 33:24                  53:16,20 65:3                  73:18 75:11 80:3  <b>room</b> 21:7 40:2                  71:20 138:16                  140:9 144:23                  151:12  <b>Rose</b> 2:6 33:24</p>	<p>43:24 44:2 48:3                  62:7 71:11                  78:23,25 143:9                  144:4  <b>roughly</b> 18:19                  32:24 58:9  <b>round</b> 42:20                  135:19  <b>round-table</b> 53:16  <b>route</b> 101:25  <b>routinely</b> 100:13  <b>row</b> 59:1 76:10  <b>Rubber</b> 133:20  <b>rule</b> 76:15 105:4  <b>rules</b> 63:19 72:3                  107:4 115:14                  126:22 152:21  <b>run</b> 8:8 21:8 41:12                  42:13 73:12                  80:12 108:7                  137:6 141:3                  154:20  <b>run-down</b> 54:17  <b>running</b> 33:6                  75:10 96:13                  141:2  <b>runs</b> 41:13  <b>rural</b> 44:13  <b>Russia</b> 134:7  <b>Ryan</b> 157:21</p> <hr/> <p style="text-align: center;">S</p> <hr/> <p><b>Sabin</b> 1:21  <b>sad</b> 18:6  <b>safe</b> 48:19 65:24                  129:6  <b>safer</b> 132:16  <b>safety</b> 101:19                  132:21  <b>sake</b> 105:1  <b>Salem</b> 70:5</p>	<p><b>sales</b> 46:17                  144:11,12  <b>Sandy</b> 12:6,21                  139:24,25 146:9  <b>satellites</b> 159:22  <b>satisfied</b> 57:24                  75:20  <b>save</b> 69:1 94:5                  95:19 97:4 120:9  <b>saved</b> 74:14 95:13  <b>saving</b> 95:22  <b>savings</b> 50:20                  87:13  <b>saw</b> 6:6 67:17                  114:15 146:16  <b>SCADA</b> 99:1,2,7                  101:15  <b>scale</b> 22:23,24                  32:3,21 100:6                  111:24 112:17  <b>scarce</b> 119:18,19  <b>scenario</b> 43:8 85:2                  154:9  <b>Scheer</b> 1:13 3:2,5                  4:11 21:4,15                  23:19 24:12,23                  29:8 30:14 33:9                  34:4 38:4 43:22                  48:2,21 53:14                  58:15 61:8 62:4                  63:7 64:25 66:4                  67:4 68:12 69:20                  71:7 72:6 73:16                  74:25 75:22,25                  77:9 78:21,24                  79:11 80:1,23                  81:6 87:18,21                  92:12 97:3 103:2                  106:6,17 108:13                  110:1 115:6,21                  117:25 118:5,13                  119:12 122:20                  123:17 124:24                  125:2,15 127:1                  128:3 130:7,15</p>
--	--	---	--

<p>132:2 133:2,18                  135:2,18,21                  136:3 137:5                  138:2,7 140:7                  142:9 144:20                  145:2 146:22                  147:7 148:8                  149:9,19,21,24                  150:3 151:9                  153:11                  155:13,15,22,24                  157:19 159:6                  160:4,12</p> <p><b>school</b> 80:13</p> <p><b>schools</b> 137:16</p> <p><b>Science</b> 9:16,21</p> <p><b>scored</b> 93:25</p> <p><b>Scott</b> 2:16 17:3,4                  81:7 97:9,10                  98:6 103:2                  111:21 125:7                  128:4 133:18                  135:2 140:8,10</p> <p><b>Scott's</b> 124:21                  125:20 133:5</p> <p><b>script</b> 81:22,25                  83:7,8</p> <p><b>scripted</b> 98:10</p> <p><b>sea</b> 131:3</p> <p><b>Seabrook</b> 43:13</p> <p><b>Seafood</b> 94:25</p> <p><b>season</b> 62:8</p> <p><b>seasonality</b> 58:5</p> <p><b>seat</b> 38:12 81:16                  135:25</p> <p><b>second</b> 3:11 19:1                  29:13 60:22                  81:2,3,12 95:17                  100:20 155:1</p> <p><b>secondary</b> 143:6</p> <p><b>secretary</b> 1:17                  2:15 4:14                  8:11,16,18,19,22                  9:2,13,20,25</p>	<p>10:2,10,11                  15:5,10,12,20,25                  17:13 20:6                  21:1,12 22:4                  24:19 26:22                  29:24 30:16 37:9                  38:16 39:9 44:2                  49:4 53:20 60:9                  67:1,18 82:3                  87:11 88:8 92:15                  97:15 103:9                  107:21 138:22                  139:8</p> <p><b>Secretary's</b> 9:10                  53:9</p> <p><b>section</b> 90:24</p> <p><b>sector</b> 5:10                  83:15,25 85:4,18                  86:3 89:14,16                  92:6 102:14                  108:1 112:15                  121:14                  126:2,3,9,12,17                  127:7,8</p> <p><b>sectors</b>                  83:15,20,24                  84:10 89:15,22                  91:2</p> <p><b>secure</b> 7:12 82:14                  84:24 88:15</p> <p><b>security</b> 11:8,15                  13:1                  14:4,15,17,20                  32:13 98:4,8,22                  101:10,12,18                  102:8,10,16,25                  112:6,24 113:3                  121:11                  122:9,14,15                  125:7,9,21,24                  129:18,19                  134:14</p> <p><b>seeing</b> 14:1 17:20                  19:4 27:7 29:17                  31:14,17 95:1                  112:16 133:7                  134:19</p>	<p><b>seek</b> 53:23 66:2</p> <p><b>seeking</b> 4:4</p> <p><b>seems</b> 93:15                  126:23 128:11</p> <p><b>seen</b> 12:2,7                  18:13,15 28:2                  52:13 104:14                  111:13,14                  128:11 158:21</p> <p><b>segue</b> 33:18 34:4                  66:5 81:2</p> <p><b>self</b> 128:18</p> <p><b>Selkirk</b> 55:24</p> <p><b>sell</b> 46:14 88:20                  114:20                  129:16,18</p> <p><b>selling</b> 129:5</p> <p><b>senator</b> 4:15 10:14                  14:10,11,14,19,2                  2 15:1,3,4,21                  16:8 21:13 22:7                  24:24 27:8 28:11                  29:15,19 54:6                  82:2 103:10                  107:21 110:3,7</p> <p><b>send</b> 33:16 100:23                  124:20 130:4                  133:11 136:10                  142:10 160:6</p> <p><b>sense</b> 10:25 24:9                  113:4</p> <p><b>sensitive</b> 25:17</p> <p><b>sent</b> 59:20</p> <p><b>separate</b> 23:6                  144:10</p> <p><b>series</b> 4:21</p> <p><b>serious</b> 104:5                  147:12</p> <p><b>seriousness</b> 137:16</p> <p><b>serve</b> 21:8 49:7                  64:6 74:3,5                  157:7</p> <p><b>service</b> 86:19</p>	<p>101:1,3</p> <p><b>services</b> 13:23</p> <p><b>serving</b> 142:23</p> <p><b>session</b> 3:11 4:2                  106:11</p> <p><b>setting</b> 109:2,4</p> <p><b>several</b> 9:3 46:10                  65:4 68:10 71:20</p> <p><b>Seymour</b> 55:16</p> <p><b>Shale</b> 35:15 37:24                  56:15 58:2</p> <p><b>Shales</b> 40:11</p> <p><b>shape</b> 131:19</p> <p><b>share</b> 107:2                  121:18</p> <p><b>shelf-ready</b> 65:21</p> <p><b>Shell</b> 155:11,17</p> <p><b>She's</b> 81:18</p> <p><b>shift</b> 133:13                  156:12</p> <p><b>shift-by-shift</b> 36:6</p> <p><b>shifts</b> 53:2</p> <p><b>ship</b> 45:13 143:17</p> <p><b>ships</b> 52:4 143:20</p> <p><b>shock</b> 104:16</p> <p><b>shopping</b> 22:21</p> <p><b>Shore</b> 70:5 77:24</p> <p><b>short</b> 101:13</p> <p><b>shortage</b> 35:20                  36:11 37:17 65:8</p> <p><b>shorter</b> 22:9</p> <p><b>shortpicking</b>                  109:6</p> <p><b>short-term</b> 86:9</p> <p><b>showing</b> 36:20                  123:7</p> <p><b>shown</b> 130:11</p> <p><b>shows</b> 6:4 56:14                  83:19 85:3</p>
--	--	---	--

<p>105:18  <b>shrink</b> 24:15,16,17                  26:20  <b>shrinking</b> 24:2  <b>shut</b> 36:5,7  <b>Sifoski</b> 151:11  <b>sign</b> 33:14 59:25                  136:23  <b>signal</b> 105:5  <b>signals</b> 70:23  <b>significant</b> 5:9                  20:3 58:3                  85:16,24 89:5                  90:11 91:12                  94:22 95:2 111:3                  118:17,21                  124:4,7  <b>significantly</b> 155:6                  158:4  <b>silo</b> 158:22  <b>similar</b> 16:9                  129:25  <b>simply</b> 6:18 24:4                  148:4  <b>simultaneous</b>                  52:16  <b>simultaneously</b>                  7:9 11:8  <b>single</b> 149:14  <b>sir</b> 69:20 72:6                  128:3 133:2                  142:17  <b>sit</b> 34:2 38:12                  122:2  <b>site</b> 41:3 58:19                  70:9 157:9  <b>site-based</b> 157:2  <b>sitting</b> 119:7 135:9  <b>situation</b> 14:2 80:8                  143:1  <b>six</b> 8:22 23:14                  60:23 114:8</p>	<p><b>skipping</b> 153:20  <b>sky</b> 139:3  <b>skyrocketed</b> 78:10  <b>skyrocketing</b>                  105:10  <b>slide</b> 54:5,8                  83:19,21 87:22  <b>slides</b> 57:11 58:17                  87:19 93:19  <b>slightly</b> 95:11  <b>slowing</b> 148:22  <b>smack</b> 133:10  <b>small</b> 30:22 105:22                  125:13  <b>smaller</b> 22:23 32:2  <b>smart</b> 92:8 96:24                  98:4,18,20,24                  99:18                  101:9,18,22,24                  102:18 108:18                  112:25 125:8                  127:14                  159:11,24  <b>smarter</b> 102:11  <b>smoothly</b> 34:5  <b>so-called</b> 35:19  <b>society</b> 29:5  <b>software</b> 97:25                  99:2 122:9  <b>soil</b> 109:23  <b>solar</b> 7:24 22:9                  25:5 31:24 41:16                  94:5 95:15 121:1  <b>sold</b> 35:15 70:7  <b>solely</b> 35:19  <b>solution</b> 6:22 13:9                  27:3 36:13 38:2                  40:6 44:17 49:19                  69:17 94:12                  104:21 107:20                  138:21 147:9  <b>solutions</b> 31:7,8,22</p>	<p>37:6 39:23,25                  46:10,11 71:2,13                  101:11,12                  104:17 105:23                  106:1 119:2,11  <b>solve</b> 69:18,19                  121:2  <b>solved</b> 105:4 119:6  <b>solving</b> 119:2  <b>somebody</b> 107:6  <b>someone</b> 15:1,15                  107:9 124:20,21  <b>somewhere</b>                  122:3,6 134:7  <b>sophisticated</b> 17:5                  20:20  <b>sorry</b> 21:16 22:14                  87:18 145:2                  147:5 149:9,25  <b>sort</b> 17:14 18:2                  66:24 67:13                  99:11 120:15  <b>sound</b> 12:25 33:2                  65:23 126:1  <b>soup</b> 116:13  <b>source</b> 52:21 84:5                  92:1  <b>sources</b> 5:1 89:25                  91:5 152:23  <b>South</b> 52:8 55:16  <b>SOx</b> 72:19  <b>space</b> 30:22 52:17                  73:5 99:10                  102:23 121:9                  123:23 124:9                  128:12 134:1  <b>span</b> 30:21  <b>speak</b> 34:25 54:6                  77:12 82:7 97:14                  120:21 131:4                  136:20 148:11  <b>speaker</b> 53:15                  81:15 87:25</p>	<p>92:14 103:4  <b>speakers</b> 35:2                  58:18 103:14,23                  104:6 115:11                  136:5 151:25  <b>speaking</b> 46:24                  75:6  <b>speaks</b> 15:12  <b>spec</b> 63:22 64:17  <b>specializes</b> 97:24  <b>specific</b> 54:1                  59:7,17 61:9,12                  62:5 63:8 65:1                  99:4 100:15                  106:21 107:2                  115:7 116:14,19  <b>specifically</b> 27:21                  60:9 111:7  <b>specification</b>                  49:24 51:10  <b>specs</b> 63:18  <b>spectrum</b> 64:1                  94:13  <b>spell</b> 137:6  <b>spend</b> 11:12 31:3                  83:22 95:10                  157:12  <b>spending</b> 96:25  <b>spent</b> 9:17 35:10                  110:24                  114:9,10,11                  129:15 139:9                  148:16  <b>spikes</b> 6:4,20 53:2  <b>spirit</b> 12:23 135:23  <b>split</b> 56:21  <b>spoke</b> 103:14                  105:19  <b>spoken</b> 128:4  <b>spot</b> 19:20 144:12  <b>spots</b> 159:20,22  <b>spur</b> 86:16</p>
---	---	--	---

<p><b>squeeze</b> 28:3</p> <p><b>stability</b> 63:5 126:5,6,14</p> <p><b>staff</b> 34:21 135:24</p> <p><b>stages</b> 65:6</p> <p><b>stakeholders</b> 82:15 116:2</p> <p><b>stakes</b> 11:18</p> <p><b>standard</b> 51:17 80:15</p> <p><b>standards</b> 31:15 64:13 84:14</p> <p><b>standing</b> 21:7 66:20</p> <p><b>standpoint</b> 42:7,8,22,23,24 75:19 89:10 109:10 112:20 113:22 133:22</p> <p><b>stark</b> 101:18</p> <p><b>start</b> 24:2 34:6 39:21 59:15 117:1 120:25 129:7 156:11,12 159:16</p> <p><b>started</b> 3:14 26:9 58:25 145:18 146:11</p> <p><b>starting</b> 90:18 118:2 127:7,8 133:13 137:14</p> <p><b>startle</b> 22:12</p> <p><b>starving</b> 37:19</p> <p><b>state</b> 1:1 2:5,13,18 7:4,13,20 14:25 26:8 27:11 29:11 38:9,22 40:3 52:14 60:24 67:20,22 68:12 71:1 74:4 75:9,13 82:11,18,25 83:8 84:4,12 85:11 95:8 96:19 108:3</p>	<p>112:3 113:9,21 114:22 115:25 116:9,20 117:14 118:3 124:14 130:25 134:22 141:25 150:8 151:17 152:7 156:4</p> <p><b>stated</b> 68:24 157:25</p> <p><b>states</b> 7:15 23:14 60:23 61:17 63:12 78:13 84:13 86:20 87:5 108:11</p> <p><b>state's</b> 82:8</p> <p><b>States</b> 11:1 20:18,19 45:21 47:17 48:13 49:17 54:16 56:16 65:3,15,25 72:16 79:13 109:12,19 114:22 131:25 145:9 156:12</p> <p><b>stating</b> 155:14</p> <p><b>station</b> 39:2 41:22 139:9 150:14</p> <p><b>stations</b> 90:22,25 138:17</p> <p><b>statutory</b> 63:19</p> <p><b>stay</b> 64:7 74:23 81:16 96:18 133:19 146:24 147:8</p> <p><b>stayed</b> 144:21</p> <p><b>steal</b> 146:2</p> <p><b>stenographic</b> 161:7</p> <p><b>step</b> 37:2 60:20 62:2 65:7 68:18 87:14 103:24 148:5</p> <p><b>stepping</b> 61:22 148:15</p>	<p><b>steps</b> 39:21 60:12 61:15</p> <p><b>stick</b> 78:18,19 81:22 148:11</p> <p><b>stimulate</b> 66:16 71:22</p> <p><b>stock</b> 117:7</p> <p><b>stood</b> 139:25</p> <p><b>stop</b> 57:6 109:6 145:6,9 148:20</p> <p><b>stops</b> 101:4</p> <p><b>storage</b> 12:12 46:15,23 47:1,9 48:16 50:1,21 54:21 55:12,21 57:16 58:6 62:23 63:3 65:13 66:9,11 67:8 75:7 112:13 123:24 125:12 130:12 143:6 144:8 157:8,9</p> <p><b>store</b> 57:14 58:8 84:6</p> <p><b>storm</b> 62:9</p> <p><b>story</b> 41:20 51:1</p> <p><b>strange</b> 22:6</p> <p><b>strategic</b> 57:22 87:5</p> <p><b>strategies</b> 53:10 118:22 119:9</p> <p><b>strategy</b> 4:25 85:21 91:22</p> <p><b>Street</b> 1:21 39:2 40:20 41:21</p> <p><b>strengthen</b> 51:21 87:7</p> <p><b>strengthening</b> 21:24</p> <p><b>stress</b> 158:17</p> <p><b>stresses</b> 52:16 154:10</p>	<p><b>strides</b> 68:19</p> <p><b>stringent</b> 31:10</p> <p><b>strong</b> 10:18 11:24 12:14 16:6 22:16 102:24 133:15</p> <p><b>stronger</b> 137:25</p> <p><b>strongly</b> 77:3</p> <p><b>structure</b> 65:23</p> <p><b>student</b> 18:7</p> <p><b>studies</b> 9:3,4,9</p> <p><b>stuff</b> 35:23 44:7 96:25</p> <p><b>subdue</b> 148:19</p> <p><b>submit</b> 149:21 160:6</p> <p><b>subsidies</b> 112:14,22 113:15 114:1 129:22</p> <p><b>substantial</b> 8:13 120:7</p> <p><b>substitution</b> 13:21 28:1 32:8</p> <p><b>subsurface</b> 57:24 65:23 75:19</p> <p><b>subtracting</b> 146:10</p> <p><b>succeed</b> 42:22</p> <p><b>success</b> 51:1</p> <p><b>successful</b> 37:13</p> <p><b>suffered</b> 36:10</p> <p><b>suggest</b> 25:7 30:16 65:2 157:12</p> <p><b>suggested</b> 148:2</p> <p><b>suggestions</b> 59:14 61:9 66:14 76:1 116:15</p> <p><b>suite</b> 114:2</p> <p><b>sulfur</b> 49:24 50:14 63:13</p> <p><b>summary</b> 54:18</p>
---	--	---	---

<p>56:5 138:13  <b>summer</b> 48:17  <b>sun</b> 159:19,20,22  <b>super</b> 80:25  <b>superb</b> 35:3  <b>supervisory</b> 98:25  <b>supply</b> 13:23              24:22 37:23              45:3,7,24              48:14,16 50:1              51:20 55:10,12              56:7,9 66:8              73:24 80:10              88:14 123:24              158:3  <b>supplying</b> 77:3  <b>support</b> 7:23 8:1              29:6 49:9,23              50:7,12 51:14              63:21 64:18 66:2              70:9,10 74:10              102:16 103:12              105:2 107:17,18              113:18 115:16              134:24              141:4,10,11              150:19 158:13  <b>supported</b> 77:2  <b>supporting</b> 103:10              134:15 141:5  <b>supports</b> 85:11  <b>sure</b> 6:2 17:12              36:15 43:19              60:11,19 71:2              113:6 119:14              127:3 133:4              134:22 137:8              144:24  <b>surface</b> 100:10  <b>surplus</b> 45:20  <b>surprising</b> 144:14  <b>sustain</b> 29:5  <b>sustainable</b> 11:22              51:20 82:14</p>	<p>84:25 111:17  <b>sustained</b> 100:25  <b>swamp</b> 145:19  <b>Sweden</b> 139:4  <b>switch</b> 47:7 68:25  <b>switching</b> 13:18  <b>sworn</b> 8:16  <b>synopsis</b> 110:7  <b>system</b> 25:23 41:6              71:15 83:5,10,14              86:4,18 98:21              117:21 124:20              131:1,12 136:16              137:24,25              159:15,17  <b>systemic</b> 112:1  <b>systems</b> 8:9 28:20              43:10 54:16,25              64:22 69:14              73:12 88:25 89:1              99:1,8 100:2,24              101:15 128:20  <hr/> <p style="text-align:center">T</p> <hr/> <b>table</b> 59:7 105:23              119:8 135:25  <b>tags</b> 34:1  <b>tail</b> 29:23  <b>tailored</b> 73:21  <b>take-homes</b> 39:17  <b>taking</b> 15:7 24:9              39:21 94:2              107:12,13              126:18  <b>talented</b> 15:15  <b>talk</b> 15:19,22              20:14 21:14              36:14 39:15              43:20 48:23              61:19 66:18 72:7              88:12 123:20              130:24 132:19              134:25 141:7</p>	<p>143:11 151:2  <b>talked</b> 12:15 28:9              45:5 48:4 75:5              76:23 94:19              107:9 123:19              140:20  <b>talking</b> 18:7 29:15              37:23 39:9 55:18              93:7 94:4,9              110:10 118:8              124:19 129:7              147:20 151:24              159:1  <b>tandem</b> 113:8  <b>tap</b> 119:10  <b>tapping</b> 126:13  <b>tariff</b> 59:21 60:13  <b>task</b> 38:17 46:8              106:3  <b>taste</b> 105:22  <b>tax</b> 51:15              71:15,17,20,25              78:7,9  <b>taxpayer</b> 50:12              52:14  <b>teach</b> 76:16  <b>teaching</b> 107:10  <b>team</b> 44:3 124:21              130:21  <b>technical</b> 108:5  <b>technologies</b> 20:24              25:17 32:10              37:12 87:16              88:25 89:9 90:4              98:15 100:9              112:11,13,21              124:9 126:19              127:5 132:12              153:17  <b>technology</b>              9:17,21 17:11              20:23 25:9,16              26:5 27:6              30:24,25 41:11</p>	<p>82:22 97:17,18              98:18 99:24              113:7,13 114:20              115:4 123:23              124:1,23 129:3              132:20 133:21              134:25 155:6              159:12,14,19,23              160:1  <b>Technology's</b>              92:22  <b>Tel</b> 122:3  <b>telemetry</b> 100:16  <b>temperature</b> 5:24  <b>temperatures</b>              104:12 154:1  <b>temporary</b> 141:22  <b>ten</b> 72:1 73:3              136:25  <b>tend</b> 34:25 108:19  <b>tendency</b> 37:5,20              81:23  <b>ten-fold</b> 134:3  <b>Teppco</b> 55:22              57:4,19  <b>term</b> 29:1 31:11,21              71:17 153:8  <b>terminal</b> 52:9              55:16 143:15  <b>terminals</b> 45:12,24              47:12 74:13  <b>terms</b> 15:12 18:15              20:4 23:2 28:13              30:8 31:17 51:12              106:25 117:4              119:18 146:17              149:2 150:12  <b>terrific</b> 34:21              108:6 109:14              131:4 132:6  <b>terrorists</b> 99:12  <b>tertiary</b> 143:6  <b>test</b> 93:17</p>
---	--	--	--

<p><b>testimony</b> 63:10</p> <p><b>tests</b> 64:20</p> <p><b>Texas</b> 48:8 143:19,22</p> <p><b>thank</b> 4:10,13,14,15,18 8:5,6 10:9,11,13 15:4,6,8 16:17 20:25 21:1,3,4 23:11 24:23 30:14 33:9 34:18,20 38:3,4,14,16 43:22 44:2 48:20,21 49:3,5 53:13,14,20 58:12,15,20 59:16 61:8 62:4 63:7,9 64:25 66:4,25 67:2,5 69:20 72:6 73:16 74:25 75:25 76:14 78:21 79:11,25 80:1,23,24 81:1 82:1 87:17,18,24 88:8 92:11,12 97:1,3,12,14 103:1,2,8,9 106:5,6 108:13,14 110:1 115:6,9,21 118:4 119:12 120:19 122:20 123:17 125:15 127:1 128:3 130:6,15 132:2,4 133:2 135:2,18 138:6,7 140:6,7 142:6,9,13 144:19,20 146:21,22 149:19 150:3 151:8,9 153:10,11 155:22,24 157:18,19 159:5,6</p>	<p>160:3,4,14</p> <p><b>thanks</b> 92:17 97:15</p> <p><b>that's</b> 3:13 5:6 10:7 12:13 18:4,17,19 19:22 20:6 23:2,15 24:8 25:15,16 26:17 27:6 28:24 30:15 31:23 32:25 35:15 36:14 37:2,21 38:13 39:11 40:20 41:9,23 42:6,16 43:16 44:7 47:10 56:11 61:21 64:11 65:14 66:5 68:5,16 69:4,17,25 71:4,6 72:13,24 73:7 74:17 78:10 79:2 80:4 89:13 90:19 91:1,22 92:2 93:6 95:17 96:1,9,21 105:8 107:16 109:5,14 111:17 118:3 123:3 124:11,18 125:9,11 130:21,24 133:12 136:15 138:5 141:14 147:7,11 148:8,23 149:9 151:6 152:13 155:10,17,25 158:5</p> <p><b>theme</b> 66:7 133:20</p> <p><b>themselves</b> 129:1</p> <p><b>theory</b> 119:25</p> <p><b>therefore</b> 11:22 101:24 159:24</p> <p><b>there's</b> 21:6 30:9,10 43:6 46:19 47:17 56:6 57:14 60:10 63:1</p>	<p>65:17 69:7,12 70:21 73:1,19 74:9 77:24 78:3 86:10 93:10 110:17 112:7 114:2 116:12 117:3,9,17 119:23 126:8 127:13 128:11 129:12 130:10 131:4 133:14,20 136:16 137:15 141:13 152:17 154:19 157:5 158:2,8,16 159:18,20</p> <p><b>thermal</b> 83:16 85:17 110:11</p> <p><b>thermostat</b> 47:7</p> <p><b>they'll</b> 80:20</p> <p><b>they're</b> 19:13 29:17 44:4 51:8 70:13 93:15 95:1,11 96:5 102:4 120:3,12 125:4 127:11,12,19 131:20 139:3,14 141:4 144:12 157:15</p> <p><b>they've</b> 47:12 70:12 78:10 94:16 119:6 127:16</p> <p><b>third</b> 48:6 101:2 111:12</p> <p><b>Thornton</b> 21:12,16,17 138:8,9</p> <p><b>T-H-O-R-N-T-O-N</b> 138:10</p> <p><b>thorny</b> 123:18</p> <p><b>thou</b> 133:10</p> <p><b>thoughts</b> 71:8 118:6 124:1 125:16 130:17</p>	<p>137:23</p> <p><b>threat</b> 100:10 121:19 159:18</p> <p><b>threats</b> 12:19,20 125:21</p> <p><b>three-year</b> 113:15</p> <p><b>throughout</b> 4:21 36:1 61:24 74:8 75:5 84:13,21 141:25</p> <p><b>throughput</b> 26:4</p> <p><b>throw</b> 30:4 116:5</p> <p><b>throwing</b> 120:12</p> <p><b>Thursday</b> 111:24 134:17</p> <p><b>Thus</b> 50:17</p> <p><b>tied</b> 25:11</p> <p><b>TILLEMAN</b> 1:13</p> <p><b>timely</b> 32:10 142:25</p> <p><b>tissue</b> 134:19</p> <p><b>today</b> 3:6,11 8:7,15 10:9 14:2 18:4 34:7,22 36:15 38:18 39:18 49:6,13 53:22 54:4 61:15 80:8 81:21 82:7 83:5 88:12 91:15 92:18,23 96:21 97:1 98:11 100:5 101:11 102:4 132:19,25 134:15 140:24 143:25 146:16 150:12</p> <p><b>today's</b> 3:17 49:10</p> <p><b>tolerate</b> 19:24</p> <p><b>tons</b> 69:2</p> <p><b>Tony</b> 38:4 59:15 61:8 67:16 75:22 77:23</p> <p><b>tools</b> 113:23</p>
--	--	---	---

<p>128:14  <b>top</b> 57:2 89:13  <b>topic</b> 4:1 34:13              88:10 128:4  <b>Toray</b> 94:23  <b>toss</b> 10:1  <b>touch</b> 96:23  <b>touched</b> 42:16  <b>touches</b> 40:1  <b>tough</b> 114:9  <b>touting</b> 39:14  <b>toward</b> 159:21  <b>towards</b> 26:23              84:24 99:18              104:17  <b>towers</b> 139:2  <b>town</b> 94:14  <b>track</b> 16:8 52:22              72:23 84:15 85:7              148:14 153:25  <b>trade</b> 114:25  <b>trading</b> 69:14 89:8  <b>traditional</b> 64:24              99:14 101:10              122:13  <b>Traditionally</b>              100:2  <b>tragedy</b> 37:7  <b>train</b> 32:19 122:5              141:20  <b>training</b> 142:2  <b>transcript</b> 161:6  <b>transcription</b>              161:7  <b>transferring</b>              131:18  <b>transform</b> 86:4              117:7,21  <b>transition</b> 5:23              51:19 76:18</p>	<p>148:5 153:17  <b>transitioned</b> 5:20  <b>transmission</b> 6:3              7:22 12:12 19:10              54:19 99:16              104:22 144:15  <b>transmitting</b> 5:4  <b>transparency</b>              69:13 143:24              144:1,4  <b>transport</b> 66:9              147:13  <b>transportation</b>              47:21 48:10 50:4              51:21,23 52:7              83:16,25 84:15              85:17 89:17,22              118:2 150:18              156:13,14,16  <b>transporting</b> 5:4  <b>traumatic</b> 139:16  <b>tremendous</b> 22:20              44:20 45:7,10              63:4 65:5 68:19              71:14 80:9,11              82:21 83:5 94:25              103:18 104:10              117:18  <b>tremendously</b>              36:10 74:1  <b>trend</b> 84:9  <b>trick</b> 74:23  <b>tried</b> 76:16  <b>trillion</b> 32:24              138:25  <b>trillions</b> 93:8              120:24  <b>triple-decker</b>              15:23  <b>triple-deckers</b>              120:2,6  <b>Trooper</b> 67:20,22              71:1</p>	<p><b>Troopers</b> 71:6  <b>trouble</b> 47:2  <b>truck</b> 56:2 143:15  <b>trucks</b> 55:2 80:13  <b>true</b> 37:14,15 83:4              161:6  <b>truly</b> 49:17 63:25              64:2,20 79:14  <b>Trunzo</b> 2:8 33:24              48:25 49:3 63:9              72:7 75:2 79:13  <b>trust</b> 105:15  <b>truth</b> 141:17              150:16  <b>try</b> 11:7 37:12 46:9              47:23 54:6 62:1              70:13 71:21 81:9              106:10,11 119:9              120:17 126:25              145:5 147:8              148:11 153:21  <b>trying</b> 14:7 39:4              61:22 64:9 77:20              78:13 91:15              95:23 118:18              119:1,8 120:11              123:6 126:20              152:14,25  <b>turbines</b> 25:14  <b>turn</b> 5:25 47:6,7              101:6  <b>Twenty</b> 147:1  <b>twice</b> 19:15  <b>twist</b> 132:10  <b>two-acre</b> 41:2  <b>two-part</b> 66:13  <b>two-thirds</b> 138:16  <b>two-year</b> 78:8  <b>type</b> 31:10 79:8              95:17 101:2              104:3  <b>types</b> 100:12</p>	<p><b>typical</b> 100:12  <b>typically</b> 101:4  <hr/>             U  <b>U.S</b> 8:16 14:6 52:1              79:17 102:2              138:20              154:23,24  <b>U.S.A</b> 156:10  <b>Ukrainian</b> 14:1  <b>ultimately</b>              13:11,24 51:3              100:25 148:19  <b>unconventional</b>              11:3  <b>underground</b>              55:20  <b>under-secretary</b>              9:14  <b>understand</b> 72:3              74:18 93:9 96:23              111:1 112:4              122:13 145:13              154:17  <b>understanding</b>              24:14 133:24  <b>understands</b> 15:23  <b>Understood</b> 4:6  <b>undertook</b> 83:9  <b>uneconomic</b>              146:13  <b>unfortunately</b>              5:22 69:18              123:10 135:11  <b>union</b> 140:13,16  <b>unique</b> 82:17  <b>unit</b> 100:18  <b>United</b> 1:1 11:1              20:18,19 45:20              47:17 48:13              49:17 54:15              56:16 65:3,15,25              79:13 109:12,19</p>
---	---	---	---

<p>114:22 131:25                  145:9 156:11  <b>University</b> 107:10                  147:18 150:9  <b>unleash</b> 71:10  <b>unlikely</b> 154:11  <b>unnecessary</b> 58:11  <b>unplanned</b> 45:18  <b>unwillingness</b>                  37:18  <b>upcoming</b> 51:11  <b>upfront</b> 111:1                  120:17  <b>upgraded</b> 42:1  <b>upgrades</b> 99:19                  145:10  <b>upon</b> 24:25 42:16                  132:12  <b>upper</b> 56:14  <b>urban</b> 28:20 40:25                  52:10 120:6  <b>urge</b> 152:16 153:9  <b>usage</b> 89:24                  128:21  <b>useful</b> 139:7                  146:17  <b>user</b> 62:14 94:10                  110:19 127:9  <b>users</b> 52:19  <b>Usually</b> 96:3  <b>Utica</b> 55:23 56:15                  58:3 73:21  <b>Utilidata</b> 2:16                  17:4,7 97:11                  121:21  <b>utilities</b> 2:17 7:19                  16:19 53:1 76:20                  98:15 100:7                  102:15 103:6,15                  114:3 121:15                  122:10,12                  128:15 129:4</p>	<p>130:1 131:10  <b>utility</b> 6:1 39:6                  40:8 41:7 96:23                  97:25 100:19                  101:23 121:9,14                  123:12 129:17  <b>utilizing</b> 98:17</p> <hr/> <p style="text-align: center;">V</p> <hr/> <p><b>Valley</b> 141:19  <b>valuable</b> 82:17  <b>value</b> 53:24 55:7                  80:20 87:10                  96:14 120:18  <b>vantage</b> 122:24  <b>variation</b> 18:11  <b>variations</b> 10:23                  18:12  <b>various</b> 43:2                  118:22 121:11  <b>vehicle</b> 31:15                  151:5 156:9                  157:8  <b>vehicles</b> 151:3                  156:19,25                  157:1,7  <b>vendors</b> 114:20  <b>venerable</b> 155:12  <b>venture</b> 102:22                  120:16 129:24  <b>Vermont</b> 44:13                  63:11 74:5                  114:18  <b>vessel</b> 51:24  <b>vessels</b> 50:6 52:1,3  <b>veterans</b> 142:5  <b>via</b> 50:5 136:10  <b>viable</b> 126:23  <b>vice</b> 53:17  <b>view</b> 27:4  <b>viewpoint</b> 103:19</p>	<p><b>views</b> 76:3,4  <b>vignettes</b> 35:8  <b>Virginia</b>                  40:8,9,10,15  <b>Virginian</b> 40:8  <b>virtual</b> 68:4  <b>virtually</b> 36:16,17                  69:7  <b>visibility</b> 62:12,20                  63:1  <b>vital</b> 152:12  <b>volatility</b> 6:10                  103:21 104:11                  115:23  <b>Volume</b> 161:6  <b>volumes</b> 15:12                  144:2  <b>volumetric</b> 51:16  <b>vortex</b> 12:6 13:16                  45:5 48:5 110:10  <b>voucher</b> 124:20  <b>VP-Commercial</b>                  2:9  <b>vulnerabilities</b>                  12:8  <b>vulnerability</b>                  102:10  <b>vulnerable</b> 86:18                  99:11 102:12                  159:14</p> <hr/> <p style="text-align: center;">W</p> <hr/> <p><b>wage</b> 158:12  <b>wait</b> 19:1  <b>waiting</b> 75:21  <b>warehousing</b>                  88:22  <b>warm</b> 48:19  <b>warming</b> 12:4                  147:4 148:20                  154:3,16</p>	<p>155:1,21  <b>warned</b> 149:12  <b>wasn't</b> 19:2 94:21                  151:12  <b>waste</b> 37:11 88:25                  138:17  <b>wasted</b> 138:20  <b>wasting</b> 138:16,25                  139:2,3,6,10                  145:9  <b>watched</b> 128:9  <b>watching</b> 107:23  <b>water</b> 24:22 77:14                  89:1 91:23                  117:24 120:1  <b>Watkins</b> 55:21                  57:17 65:22                  66:22  <b>ways</b> 13:14                  25:9,10 27:10                  51:13 56:24 58:4                  110:17 122:12                  132:15,16                  152:14,24,25                  154:15  <b>wealth</b> 83:6  <b>wean</b> 150:23  <b>weapons</b> 14:18  <b>weather</b>                  12:3,16,18 45:4                  131:3  <b>weatherization</b>                  20:12 25:3 27:9                  110:9 140:15  <b>web</b> 58:19  <b>website</b> 87:23                  93:18  <b>We'd</b> 64:17 66:1  <b>week</b> 131:21 141:1  <b>weeks</b> 124:14  <b>weigh</b> 132:18  <b>welcome</b> 3:7 4:14</p>
--	---	---	--

<p>81:11  <b>we'll</b> 21:7 23:6                  50:21 56:17                  58:25 59:15 67:4                  106:13 112:18                  117:1 136:15,24                  142:13 156:2  <b>well-known</b> 32:21  <b>well-paying</b>                  108:24  <b>wells</b> 54:13  <b>well-trained</b>                  141:23  <b>Wendy</b> 82:24 83:2                  150:4,7  <b>Wendy's</b> 157:11  <b>we're</b> 15:24 17:19                  18:4,18 19:4                  21:14 24:10 25:5                  27:7 29:16 30:11                  34:25 37:22 38:8                  39:5,6,15,21                  41:9,11,14,19                  46:17 47:2 48:24                  55:10,18 57:18                  58:7,22 63:16                  69:9 70:16                  77:20,22 79:8,21                  84:22 86:11,24                  90:3,18 91:14,19                  92:2 93:7 94:9                  96:15 97:9,20,22                  103:25 106:11                  107:12 109:2,4                  112:16,24,25                  113:7 117:10                  118:1,8,18                  121:20 124:19                  125:12                  129:17,21,25                  131:9 132:24                  134:18 135:9,25                  138:16 142:3                  146:12 147:20                  148:5,18 149:6                  151:24 152:3                  153:15</p>	<p>154:14,15                  156:12,16 157:7  <b>West</b> 14:13                  40:10,15 119:15  <b>we've</b> 5:7 11:25                  12:15 18:12,15                  25:20 32:9 34:6                  40:2,3,24 42:1                  47:23 55:19                  56:2,12 57:21                  67:7 68:18,19                  73:2,4 75:15,17                  77:7 86:7 88:23                  89:18,21 106:19                  109:11,15,16,21                  111:13                  115:22,24                  116:19 117:23                  123:19 127:4                  128:8 132:20                  134:18 147:4                  154:7  <b>whammy</b> 19:7  <b>whatever</b> 60:11,25                  63:21 78:3  <b>whenever</b> 149:4  <b>wherever</b> 74:20  <b>whether</b> 12:5                  13:19 30:12 54:5                  105:4 119:20                  126:17 134:10                  144:11 147:3                  150:24 151:2                  153:1  <b>White</b> 8:11  <b>Whitehouse</b> 14:23  <b>whole</b> 11:20 12:23                  20:14,16 25:20                  47:3 94:12                  116:12 142:2  <b>wholesale</b> 6:3  <b>who's</b> 43:24  <b>whose</b> 70:7  <b>who've</b> 131:10</p>	<p><b>wide</b> 85:6  <b>widely</b> 156:18  <b>wider</b> 17:24  <b>widespread</b>                  100:25  <b>wife</b> 98:2  <b>William</b> 2:14                  153:12,13  <b>Wilmington</b> 45:15  <b>win</b> 120:7  <b>wind</b> 7:23 25:5,13                  31:24 91:23,25                  110:11 112:11                  121:1  <b>window</b> 120:3,13  <b>winners</b> 92:9                  109:6 151:22  <b>winter</b> 5:25 35:9                  42:4 44:20 45:2                  46:6 48:4 52:15                  58:9 68:22 74:11                  104:4,7 105:21                  142:21 143:18                  144:5,14  <b>wipe</b> 159:22  <b>wired</b> 160:1  <b>wireless</b> 100:6                  112:17                  159:12,13,19,23                  160:1  <b>wirelessly</b> 99:9                  101:23  <b>wisdom</b> 81:8                  130:20  <b>wisely</b> 37:9  <b>wish</b> 136:23  <b>wondering</b> 30:2,7                  137:22  <b>work</b> 8:3,14 15:8                  20:9 26:14 29:12                  39:5 43:18 61:4                  62:25 64:18                  69:12 79:7 99:18</p>	<p>102:15,21                  109:12 110:22                  113:9 117:9                  122:7 124:22                  127:4,6,14,22                  129:12 130:24                  131:10 136:4                  140:21 141:20                  142:22 151:19                  152:24 153:9  <b>worked</b> 71:21 73:9                  144:16  <b>workers</b> 141:23  <b>working</b> 5:7                  7:3,14 8:21 9:15                  10:8 11:23 15:2                  38:2 44:4 47:23                  53:11 82:15 87:4                  96:24 102:2                  112:2,3 120:11                  121:12 122:10                  131:9,12 132:24                  156:9  <b>works</b> 22:1 94:7  <b>world</b> 47:15 74:13                  79:4 111:12                  115:1 127:10                  128:1 134:8                  145:23 154:18  <b>world-renowned</b>                  26:17  <b>worlds</b> 79:5  <b>worldwide</b> 109:21  <b>worried</b> 125:23  <b>worry</b> 112:10                  114:8  <b>worse</b> 6:10 29:22                  123:14 131:19                  140:21                  147:16,21  <b>worsened</b> 109:21  <b>worst</b> 26:6 29:20  <b>worst-case</b> 43:8  <b>wrap</b> 48:1,6 57:10</p>
--	--	---	--

<p>76:9 130:18</p> <p><b>wrapped</b> 131:8</p> <p><b>write</b> 130:4</p> <p><b>writing</b> 160:6</p> <p><b>wrong</b> 69:3</p> <p><b>wrote</b> 16:6,9 78:25 79:6</p> <p><b>www.Energy.gov/ QER</b> 58:19</p> <hr/> <p><u>Y</u></p> <p><b>yesterday</b> 98:2</p> <p><b>yet</b> 11:5 68:21 70:12 71:24 75:21 77:15 113:19 123:21 127:11 134:8 143:21</p> <p><b>York</b> 23:18 35:12 40:11 46:25 48:9 55:13,21 57:17 63:17 65:22 74:3,4 75:10,14</p> <p><b>you'll</b> 40:1 119:22 128:5 138:2</p> <p><b>yours</b> 44:1 49:2 53:19 81:20 88:4 103:7</p> <p><b>yourself</b> 21:15 23:20 29:9 137:5</p> <p><b>you've</b> 43:13,14 70:24 111:12 128:4 145:23</p> <hr/> <p><u>Z</u></p> <p><b>zero</b> 95:16 156:19</p> <p><b>zone</b> 93:25</p>			
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