```
STATE OF RHODE ISLAND AND PROVIDENCE PLANTATIONS
 1
                                 PUBLIC UTILITIES COMMISSION
                  HEARING IN RE:
                   REGULATIONS TO IMPLEMENT A RENEWABLE ENERGY STANDARD PURSUANT TO R.I.G.L. 39-26-1, ET SEQ.
                  DOCKET NO. 3659
10
11
                                                       OCTOBER 12, 2005
12
13
                                                       89 JEFFERSON BOULEVARD
WARWICK, RHODE ISLAND
14
15
16
                   BEFORE:
17
                         ROBERT B. HOLBROOK, COMMISSIONER, PRESIDING MARY BRAY, COMMISSIONER CYNTHIA WILSON-FRIAS, LEGAL COUNSEL ALAN NAULT, RATE ANALYST
18
19
20
21
22
23
24
```

3 (COMMENCED AT 9: 30 A.M.) COMMISSIONER HOLBROOK: Good morning, 2 3 everyone. Thank you for coming. This morning's 4 meeting is in regard to Docket No. 3659 5 concerning regulations to implement a renewable energy standard pursuant to Rhode Island General 6 7 Law 39-26-1. I'll read the notice. 8 Notice of rule making and public 9 hearing. Pursuant to the provisions of Rhode 10 Island General Laws 39-1, 42-35 and 42-46-6 of the Rhode Island General Laws, as amended, the 11 Public Utilities Commission hereby gives notice 12 13 that it will conduct a hearing on Wednesday, October 12th, 2005, at 9:30 a.m. in the first 14 15 floor hearing room of the Public Utilities Commission at 89 Jefferson Boulevard, Warwick, 16 Rhode Island for the purpose of adopting 17 18 regulations to implement a renewable standard in 19 compliance with Rhode Island General Laws 20 39-26-1, et seq. 21 39-26-1, et seq, as amended, provides 22 that on or before December 31, 2005 regulations 23 be adopted to facilitate the development of a 24 renewable energy standard. The renewable energy

| 1 | I -N-D-E-X | 2 |
|----|---|----------------|
| 2 | | PAGE NO. |
| 3 | PUBLIC COMMENT | |
| 4 | James M. Grasso Sakis Asteriadis | 7 59/167 |
| 5 | Chris Wilhite Nubia Perez | 67 73 |
| 6 | Matt Auten Fred Unger | 73 77 81 |
| 7 | William P. Short, III Erich Stephens | 94 100 |
| 8 | Thomas Bessette Deborah Donovan | 116 125 |
| 9 | Dennis Duffy John Farley | 132 141 |
| 10 | Chris Burnett Robert Grace | 149 155 |
| 11 | | |
| 12 | | |
| 13 | | |
| 14 | | |
| 15 | | |
| 16 | | |
| 17 | | |
| 18 | | |
| 19 | | |
| 20 | | |
| 21 | | |
| 22 | | |
| 23 | | |
| 24 | | |

electric energy supply to customers in Rhode 2 3 Island generated using renewable resources as 4 defined in the statute. The goals are stabilizing long-term energy prices, enhancing 5 environmental quality and creating jobs in Rhode 7 Island in the renewable energy sector. The 8 regulations will apply to any person or entity 9 that sells electrical energy to end user 10 customers in Rhode Island, including, but not limited to, Narragansett Electric Company, 11 12 nonregulated power producers and electric utility distribution companies as defined by Rhode Island 13 General Laws 39-1-2 and obligated entities as 14 15 defined by Rhode Island General Laws 39-26-1. The proposed regulations are on file in 16 17 the Clerk's office at 89 Jefferson Boulevard, 18 Warwick, Rhode Island. A copy of the proposed 19 regulations may be obtained in person at the Commission, by mail, by calling 941-4500, 20 Extension 107, or may be accessed at 21 www.ripuc.org/eventsactions/docket/3659page.html. 22 23 Interested persons wishing to offer 24 data, views or argument on the proposed

standard requires annually increasing levels of

- regulations may do so either orally on the day of
- 2 the hearing or in writing by submitting their
- comments to the Commission Clerk, Public 3
- Utilities Commission, 89 Jefferson Boulevard, 4
- Warwick, Rhode Island, 02888. 5
- In addition, written comments will be 6
- 7 accepted at the above address until 4:00 p.m. on
- October 24th, 2005. An original and nine copies 8
- of written comments must be filed with the Clerk.
- 10 Reference is also made to Chapters
- 11 42-35 and 39-1 of the Rhode Island General Laws,
- 12 specifically, Sections 42-35-1, 42-35-2, 42-35-3,
- 13 42-35-4, 42-35-5, 39-1-1, 39-1-3, 39-1-11,
- 39-1-18, 39-1-38 and 39-26-1, et seq. Signed 14
- 15 Luly E. Massaro, Commission Clerk, dated
- 16 September 23rd, 2005. Are there any appearances
- 17 this morning?
- 18 MR. ROBINSON: Thomas Robinson for
- 19 Narragansett Electric.
- 20 MR. LUEKER: William Lueker, Special
- 21 Assistant Attorney General for the Division of
- Public Utilities and Carriers, and with me is Mr. 22
- 23 David Stearns, rate analyst with the Division.
- MR. DUFFY: Dennis Duffy with Energy 24
 - 6

- Management, Inc.
- 2 MR. EATON: Craig Eaton with Florida
- 3 Power & Light.
- 4 MR. SHORT: Bill Short with Ridgewood
- Power Management. 5
- MR. BURNETT: Craig Burnett with 6
- 7 Spi nbl ade Energy.
- 8 COMMISSIONER HOLBROOK: Thank you.
- 9 my right is Alan Nault, financial analyst with
- 10 the Commission. On my left is Cynthia
- 11 Wilson-Frias, Senior Legal Counsel to the
- 12 Commission; and also to my left is Commissioner
- 13 Mary Bray. I'm Robert Holbrook, a Commissioner
- 14 with the Commission. Ms. Wilson, do you have any
- administrative matters? 15
- 16 MS. WILSON-FRIAS: Yes, Commissioner.
- 17 First, as you indicated in the notice, we are in
- 18 the formal rule making stage of this docket under
- 19 the Administrative Procedures Act, so all members
- 20 of the public, including those who had formally
- 21 intervened earlier, have the same standing to
- provide comments. The Commission will consider 22
- all comments as given today and as filed. As 23
- indicated, the deadline for filing written

- comments is October 24th at four o'clock. We've
- already received two sets of written comments,
- one from National Grid and one from the Union Of
- Concerned Scientists which have been placed into
- 5 the docket.
- COMMISSIONER HOLBROOK: We have a 6
- 7 sign-up sheet for those interested in speaking on
- 8 the issue. There are eight parties that are
- signed up so far. If you do wish to speak and
- 10 have not signed up, I believe there is a sign-up
- sheet. Ms. Massaro has it in the back of the 11
- 12 room.

- When you do come to the podium to
- speak, it's your option either, I guess, to stand
- 15 at the microphone in the back of the room or if
- 16 you feel that you'd be more comfortable sitting
- down, you can proceed to the podium here and have 17
- 18 a seat. The first party who would like to speak
- is Mr. James Grasso with Silent Sherpa. Mr. 19
- 20 Grasso.
- 21 JAMES GRASSO (Sworn)
- 22 MR. GRASSO: Full name is James Grasso,
- 23 business address is 63 Birchwood Drive in
- 24 Cranston, Rhode Island, 02920. Good morning,

 - everybody. Thank you, Commissioner. Thank you
- 2 for the opportunity to be here this morning. I
- 3 have several comments that I'd like to make
- relative to both the rule making proceedings and
- also the suggested or proposed rules for the
- Commission on implementation of the renewable
- 7 energy standard.
- 8 The three items that I'd like to
- 9 address with you this morning pertain to first
- 10 and foremost my concern and feelings on a
- potential conflict of interest, or shall I say an 11
- 12 apparent conflict of interest between the hired
- 13 mediator/facilitator and his role representing
- the members of the rule making committee in terms 14
- 15 of the documentation and the proposals that were
- 16 made.
- 17 No. 2 is a concern over the
- 18 Commission's lack of response relative to a
- 19 memorandum that I had filed in conjunction with
- 20 John Farley of Tech-RI regarding the Commission's
- 21 place or perhaps lack thereof, and oversight of
- 22 the renewable energy development fund; and
- lastly, is some comments on cautioning the 23
- Commission relative to proceeding with long-term 24

contracts as proposed relative to Narragansett

2 Electric's requirements in fulfilling the

renewable energy standard obligations on behalf 3

4 of their ratepayers.

19

20

21

22

23

24

13

15

5 To start off with the first item, at the beginning of the rule making proceeding the 6 7 group wanted to hire, had a desire to hire a professional mediator/facilitate, a doctor by the 8 9 name of Dr. Jonathan Raab who does this for a 10 living, and when we had gone around for a vote I apparently was the only party in the group to 11 12 dissent and was not in favor of hiring anyone to 13 facilitate the matter; and secondly, the individual that was eventually hired, regardless 15 of the position that I had taken, was actively 16 and perhaps still is actively serving at least 17 one member of that group being the Rhode Island 18 Renewable Energy Fund as administered by the

Now, in my profession as a consultant, typically when you're in a matter between parties and you represent, i.e., on the payroll of one of those parties, you typically take a side or you recuse yourself of the opportunity. In this

Grid.

5

6

8

22

10

14

16

17

In the renewable energy standard there is really no reference suggesting that there should be long-term contracts, at least as best I could find, so the discussion that was brought up in the rule making committee about long-term contracts was really something that was brought up out of the interest of particular groups or lack of interest perhaps from a particular group

10 being Narragansett Electric. We had spent quite a bit of time discussing it. There was quite a 11

12 bit of discussion on their position on that, in

particular the renewable energy fund, obviously, 13 in favor of long-term contracts, Narragansett 14

15 Electric, as best I can tell not in favor of

16 long-term contracts at least past the point of

the standard offer service period in 2009. 17

18 I for one was not granted as much time 19 on the committee for my positions and certainly 20 was not granted the amount of air time in 21 discussing the concerns I had over certain matters, so when you put two and two together in

23 terms of where the dollars flow behind the

24 individual mediating and facilitating in essence

10

- particular circumstance, Mr. Raab's firm was
- hired, No. 1. No. 2, it was hired with state 2
- 3 money which is ratepayer money through the
- 4 renewable energy development fund or the

Rhode Island State Energy Office.

- renewable energy fund, I'm sorry, and lastly, you 5
- had a member on the rule making committee who
- 7 represented that office. In addition, National
- 8 Grid, which was a participant to the rule making
- 9 committee, is a sponsor of one of Mr. Raab's
- 10 forums, they call it the roundtable restructuring
- 11 forum. So I found that obviously a little
- 12 disappointing and very concerning, because how
- can somebody be a "neutral truly unbiased third
- 14 party" as they are suggesting in this matter when
- they have a couple participants on the committee
- that are directly affiliated with the revenue to 16
- 17 his firm. So I find that very troubling.
- 18 Following up on that is really some
- 19 treatment that I thought was unusual in terms of
- 20 the proceeding, and I will point out in
- particular, or reference in particular 21
- 22 discussions on long-term renewable energy
- contracts both from the position of the renewable 23
 - energy fund and also the position of National

- driving the forum discussions for this group as
- he was hired to do, and two, a couple of those
- 3 members be the payors of those fees and in
- essence getting an amount of time and some
- treatment throughout the proceeding that was not 5
- equally afforded to other participants questions
- at least in my mind the validity of the
- documentation and the recommendations that were
- 9 issued by this individual and his firm.

So I'm going to suggest to the

Commission that the Commission disqualify the 11

final report issued by the rule making committee 12

as it was a document drafted by Dr. Raab who is 13

apparently in a conflict of interest in this

si tuati on. 15

> Furthermore, I also want to state that I had issued an e-mail I believe it was on

18 August 8th, to the Commission's representative,

- 19 Mr. Hartley, suggesting that prior to the
- proposed rules or the recommendations of the rule 20
- 21 making committee making it to the Commission that
- 22 we withdraw them and basically start from scratch
- with a different individual or without the 23
- individual to remove that conflict of interest 24

16

- from potentially hindering the process. There
- was no follow-up to that suggestion meaning there 2
- was no activity coming out of that other than 3
- 4 wait until I had the opportunity today to speak
- 5 before the Commission to voice my concern.
- I'm doing so. And it's a matter that I think is 6
- 7 very warranted because of the nature of what
- 8 happened, and particularly the documentation that
- 9 you received is in essence drafted by this
- 10 i ndi vi dual . So I hope that you take that under
- 11 consideration and advisement in terms of the
- information that was proposed to you and the 12
- 13 source that it was proposed from.
- 14 Secondly, I had issued a memorandum to
- 15 the rule making committee back on June 13th which
- 16 was subsequently added to the documentation
- 17 included in the -- I guess the proposed
- 18 recommendations from the rule making committee to
- 19 the Commission and that memorandum stated a
- 20 strong concern and belief that the Commission
- 21 should have oversight of the renewable energy
- 22 development fund. In particular because it is
- 23 the holding place of ratepayer money and
- substantially a lot of ratepayer money in years 24

- rapidly growing and valuable fund. You're
- talking about millions of dollars potentially 2
- over the timeframe of the life cycle of that
- fund. Because of that, I firmly believe there
- 5 should be some public oversight, some proposal
- wherein the public can have the ability to impact 6
- 7 how that fund is administered.
 - To the best of my knowledge, the folks
- g that are charged with overseeing that fund, which
- 10 is referred to as the fund's board of trustees
- 11 include a representative from the EDC, DOA,
- Department of Administration, and eventually two 12
- 13 Gubernatorial appointments. Without knowing who
- 14 the Gubernatorial appointments will be, nobody on
- 15 that committee has any experience with renewable
- 16 energy credits or contracting or for that matter
- any contracting for renewable energy as best that 17
- 18 So I'm concerned that the folks that L can tell.
- 19 are charged with the oversight don't have the
- 20 expertise to do what they're charged with.
- 21 No. 2, the Economic Development
- 22 Corporation, although it stated that they would
- 23 open up to a public forum the transactions and
- the methodology behind those transactions for 24

14

- to come in the form of alternative compliance
- payments. I am a believer, having been involved 2
- 3 in the marketplace, particularly the competitive
- energy marketplace since it opened up in Rhode
- Island in '97, '98 that renewable energy will 5
- require an increasing premium over time based on
- 7 the limitations and the capacity that this region
- 8 currently has and is likely to continue having.
- 9 There's a lot of proposed capacity, but proposed
- capacity and available capacity are two very 10
- 11 different things, so I'm operating under the
- 12 assumption in the future once we get into the
- 13 effective timeframe of the RES, renewable energy
- standard, in '07 and beyond that these renewable 14
- 15 energy credits, the renewable energy itself is
- going to require increasing premiums, potentially 16
- 17 it will.

19

- 18 Under this assumption there may be a
- payments which various parties in lieu of their 20

variety and an increase of alternative compliance

- ability to actually secure credits or power to 21
- 22 basically comply with the renewable energy
- 23 standard. If this were to happen, the renewable
- energy development fund will become a very, very

using that alternative compliance in the form of

- 2 renewable energy development for long-term
- 3 renewable resources, there is no direct method
- for the public to alter those positions. So
- telling people what you're doing with money and 5
- the public's ability to comment on that are two
- distinct things. I don't think comments alone
- will dissuade the Economic Development
- 9 Corporation from what they want to do with the
- 10 funds.

11

So there's a couple of issues here in

- 12 terms of, No. 1, a fund that will potentially
- 13 house a great deal of ratepayer funds, a great
- 14 deal of ratepayer funds, and No. 2, oversights
- 15 that are limited at best and lacks a great deal
- of expertise in terms of how to administer those 16
- 17 funds because they've never had to do something
- 18 like this before. Out of fairness to the board
- 19 of trustees, this is a learning curve and I for
- one would not be comfortable with $\ensuremath{\mathsf{my}}$ own personal 20
- 21 ratepayer money being under the discretion of
- somebody who doesn't know how to do it on my dime 22 23 and I will say that to Narragansett Electric.
- COMMISSIONER HOLBROOK: Do you have any 24

- 1 specific thoughts, Mr. Grasso, with respect to
- 2 how you would modify what's been put into the
- 3 draft on both of these issues?
- 4 MR. GRASSO: I do. The recommendation
- 5 that I would suggest is for the Public Utilities
- 6 Commission to have at least a public hearing
- 7 process wherein the public has the ability to
- 8 listen, understand what is being proposed with
- 9 the funds and the allocation of the funds and
- 10 also, and more importantly, the ability to
- 11 intervene to some degree to alter perhaps if
- 12 deemed necessary. If it's done adequately, then
- 13 there won't be a need to alter things. But I'm a
- 14 firm believer that the public should have
- 15 transparency to the matter and to act on it.
- 16 Exactly how that makes that into the regulations,
- 17 I don't know that yet. If the Commission is open
- 18 to that suggestion, I'll be more than happy to
- 19 furnish the Commission with some suggestions as
- 20 to how to roll that out, but I'm a firm believer
- 21 that you can't risk millions of dollars of
- 22 ratepayer funds through a board of trustees that
- 23 has no experience in administering it.
- 24 Okay. Secondly, I think there is a

- 1 alternative compliance that go back but that
- 2 money is ratepayer money. It's -- for lack of a
- 3 better word, it's laundered ratepayer money.
- 4 It's gone through several different parties to go
- 5 back to the Economic Development Corporation red
- 6 fund. So I think it's very critical for the
- 7 Commission to consider that because you could be
- 8 looking at millions and millions of dollars that
- 9 could be misspent, or at least not allocated in
 - the best sense.

10

11

12

- That leads me to my third comment which
- is how that money is spent, and seemingly the
- 13 theme of the day here at least through the term
- 14 of the rule making committee was long-term
- 15 contracts, buy long-term contracts -- it will be
- 16 more cost effective to buy long term than wait.
- 17 Having been in the energy industry for the past
- 18 decade, particularly involved with electricity on
- 19 a retail basis for the past I would say now nine
- 20 years, eight years since the Restructuring Act
- 21 was implemented in Rhode Island there are various
- 22 risks associated with buying these contracts,
- 23 whether it's renewable energy, renewable energy
- 24 credits, whatever you want to call them, or even

18

- precedent in terms of the Commission's ability to
- 2 oversee or to regulate such funds, and I would
- 3 point to the conservation fund collected by
- 4 Narragansett Electric. Now, Narragansett
- 5 Electric, being an investor-owned utility
- 6 obviously falls under the jurisdiction of the
- 7 Commission, it's very cut and dry, whereas the
- 8 Economic Development Corporation does not.
- 9 However, it is ratepayer funds. They're
- 10 overseeing money and it's not really the Economic
- 11 Development Corp., it is this board of trustees
- 12 that are overseeing the money. So I would
- 13 suggest that it would not be unprecedented for
- 14 the Commission to take jurisdiction over
- 15 ratepayer funds regardless of where they are
- 16 because that's what you do for a living and that
- 17 is you oversee ratepayer funds and how they're
- 18 spent through the public utilities. In this case
- 19 it's a little different because we've never dealt
- $20\,$ $\,$ with renewable energy before and the General $\,$
- 21 Assembly saw fit to put money through this
- 22 fashion. Regardless, it is ratepayer funds, call
- 23 it whatever you want, but it is ratepayer money
- 24 that goes to energy suppliers that turn to

- 1 flat old fossil fuel power. The trade-off is
- 2 that, No. 1, any time you look at a long-term
- 3 contract there is a risk of market time flat out.
- 4 If you're going to buy a position for the next
- 5 three years today or five years or the next
- 6 20 years, you are running or assuming a risk that
- 7 you are buying in an economic market today for
- 8 that future period and the economics of that
- 9 decision are determined at the end of the period
- 10 because you don't know what the prevailing market
- 11 is until the end of the period. So there's an
- 12 inherent risk with buying forward, as we say in
- 13 the business, and that risk is market timing.
- 14 don't believe it is right for ratepayer funds to
- 4 don't berreve it is right for ratepayer runds t
- 15 be buying at risk.

- Narragansett Electric's procurement of
- 17 last resort service, they go forward -- because
- 18 it truly isn't a market based rate, if it is
- 19 truly a market based rate, and the only true
- 20 marketplace is the hour markets, wholesale hourly
- 21 markets which are transparent, publicly open
- 22 available markets. When you get into forward
- 23 markets, that is an over-the-counter party. It
- 24 is private party. It is getting a price from

benchmark on.

2

5

6

10

11

12

13

15

23

24

24

24

somebody via e-mail. There is no transparent 2 marketplace for a consumer to go point to and say -- on any given day and say this is a fair 3 4 price, it is an over-the-counter market. So 5 there is very little transparency in back of the price that is being offered or the validity of 6 7 that price relative to a price point basis how competitive it is in the marketplace. So you're 8 getting into an area of the marketplace which is 10 what we refer to as a gray market. It's not cut and dry. It's whose offering what. And that is 11 very dangerous in terms of, you know, not having 12 13 oversight because now it is up to the discretion of the board of trustees to make a decision who 15 has the best over-the-counter offer and there are 16 a lot of details outside of price when you're buying, particularly renewable energy because of 17 18 the various forms of renewable energy and how those forms of renewable energy satisfy the 19 20 renewable energy standard.

So it's not a pure commodity process.

It's not an apple to apples process where you can

compare things very easy. And lastly, you're

looking at a gray marketplace with very little

21

22

23

16 competition.

17 The only people that are willing to
18 leave a standard offer in effect are people
19 willing to go long, to get away and take a chance
20 on market timing that their price will be more
21 economic over time. In a rising market
22 condition, as we've had over the past two to

fairly on a true market based rate basis

So I don't think it's in the

out market competition for extended periods of

Commission's interest, I don't think it's in the

interest of the renewable energy standard to lock

time, okay, because then the public does not have

the ability of the competitive marketplace doing

what it's supposed to be doing and you see it to

Standard offer is based on a below

some extent right now with the standard offer.

market legislative rate with adjustments that

have ironically been below the comparative market

at any point in time. So in a sense the standard

offer supplier service has effectively locked out

22

transparency for the public to take a look at in 2 back of the transaction. 3 Secondly, long-term contracts have a habit of offering the awarded supplier or 4 5 suppliers market power, and I'll give you an example of this. If a supplier or several 7 suppliers, a handful of suppliers satisfy the 8 entire marketplace's demand on a long-term basis, 9 that in fact locks out additional parties from 10 coming in during the term of that long-term 11 contract and competing for the business. The 12 contract, the positions are already awarded, 13 nobody else can get the business, and that is a 14 very dangerous situation because it doesn't keep 15 parties in check. That's a bit of a true market based rate. Market based rates are based on open 16 17 markets, transparent markets. It's very easy to 18 check and substantiate the validity and 19 competitiveness of an offer and the quality of an offer for that fact because if somebody bids in a 20 21 number that's below the market, that's obviously 22 something to worry about and you can take a look 23 at, just as it is if somebody is far above it.

Well, there is no market for people to base that

market on any product will be more economic because the market continues up; you're locking in now into the future. The fact of the matter

three years, it's very easy to think and believe

and substantiate that forward positions in the

3 in now into the future. The fact of the matte 4 is markets go up and down.

We're in an unprecedented period right now of increase because of the fuels associated with the generation of power in natural gas and oil. So there is no guarantee that locking into 9 a rate today will be the best rate for that 10 10-year period, 15-year period, 20-year period, 5-year period, whatever it is. There is a risk 11 12 and the longer term that forward contract is 13 purchased for, the greater the risks. You have one chance in X amount of days across that period 14 15 to be right in essence. So there's a lot of undue risk, No. 1. No. 2, I'm concerned that it 16 17 will lock out the competitive marketplace for the 18 term of this long-term contract and both of those 19 basically come back again to what is a market based rate, and I believe it's in the 20 21 Commission's interest and the RES's best to have 22 a market based rate because of the reasons of 23 transparency I alluded to earlier. A market

based rate is a rate based on an open market.

- 1 Over-the-counter products have a separate
- 2 marketplace. There's no way for a consumer,
- 3 whether I as a residential ratepayer or as a
- 4 business owner as a ratepayer, for me to see a
- 5 contract be put into place by any party and be
- 6 able to verify that that is a fair number. There
- 7 is no way of doing it unless I held my own bid
- 8 with the same requirements on the same day and
- 9 went to all the same parties which is not
- 10 realistic for the public to do. So in the name
- 11 of offering additional transparency behind the
- 12 RES, it should be basing the rate structures on a
- 13 true open marketplace such as the New York
- 14 Mercantile futures, whether that's electricity,
- 15 natural gas, fuel oil, whatever it is, it is an
- 16 open marketplace and it's fully transparent, and
- 17 it is not run by two or three parties making an
- 18 over-the-counter offer. Again, if you're in an
- 19 over-the-counter market, people who drive that
- 17 Over-the-counter market, people who drive that
- 20 market are the two, three, four, five, seven
- 21 parties that are participating in the open market
- 22 or that over-the-counter market rather.
- When you look at open mark, you have parties all over the place and that's what keeps

- 1 if and that if is ultimately a guess because
- there is no way to guarantee the future outcome
- 3 of the position whether that be renewable energy
- 4 or if it's traditional energy.

The last item I want to reference is

apparently a memorandum that was issued from theCommission's counsel on September 21st regarding

8 our memo on the position that we have concerning

out memo on the position that we have concerning

9 oversight, the Commission's oversight of the red

10 fund. And there are a couple of items here that

11 I need to clarify because I don't believe they're

12 accurate. Apparently, counsel recommended or I

13 shouldn't say recommended, advised the Commission

14 that the concern that we had on oversight of the

15 fund related to the General Assembly "scooping

16 up" the fund to plug budget holes as they did

17 with renewable energy. I'm assuming she's

18 referring to the renewable energy fund

19 administered by the State of Rhode Island

20 Economic Development Corporation.

21 MS. WILSON-FRIAS: If I could

22 interrupt. That was not related to Tech-RI and

23 Silent Sherpa. That was an issue that I raised

24 at the tech session which the Commission held so

26

- the price in a true sense. There is no collusive
- 2 action, there's no way of working around the
- 3 marketplace or altering the market in that sense,
- 4 and I'm not suggesting that that is what will
- 5 happen, but it is a possibility on an
- 6 over-the-counter marketplace.
- 7 Just as you see now with competitive
- 8 supplier pricing, in the State of Rhode Island
- 9 you have actively offered power prices at any
- 10 given time I'll tell you two, three, maybe four
- 11 suppliers for competitive generation service.
- 12 Those suppliers dictate the price point to a
- 13 certain degree, the market based rates, but
- 14 there's profit, the terms and cost of service
- 15 that are added on, there's not much competition.
- 16 You have to have competition to have a truly
- 17 competitive marketplace. So those are my
- 18 concerns relative to the long-term contracting.
- 19 Although it sounds nice in theory and could
- 20 potentially be more economic, as has been
- 21 legitimately shown for the last two or three
- 22 years, if you lock in at the right time, if you
- 23 time the market right, you can't come up with a
- 24 more economic product over time, but it's a big

I would just like to clarify that for the record.

2 MR. GRASSO: Thank you. It's in the

3 same paragraph with Tech-RI and Silent Sherpa, so

4 I assumed there was a relationship there, but

- 5 that's my mistake. Regardless of whether that
- 6 had nothing to do with our concern, the
- 7 memorandum and the request that we had was never
- 8 addressed by the Commission in the recommended
- 9 rules. Okay? I found that interesting. And I
- 10 don't know why that was not addressed at all
- 11 because it obviously pertains to ratepayer funds
- 12 and it pertains to potentially a lot of ratepayer
- 13 funds and the position again that we have is not
- 14 with oversight or your oversight as a Commission
- 15 of the Economic Development Corporation, that's
- 16 clear you do not have that ability, that
- 17 jurisdiction, however, it is absolutely not clear
- 18 in the renewable energy standard if you do or
- 19 don't have jurisdiction over the fund associated
- $\,$ 20 $\,$ with this process in the form of the renewable $\,$
- 21 energy development fund. The renewable energy
- 22 standard is very ambiguous, and basically implies
- 23 or states that you have oversight and you
- 24 implement rules around the use of funds for

- 1 renewable energy resources. While use of
- 2 alternative compliance payments obviously going
- 3 through renewable energy resources should and
- 4 certainly would allow you the ability to want
- 5 some jurisdiction on that. I just want it to be
- 6 clear that what we are seeking in this particular
- 7 concern is not to do with the Economic
- 8 Development Corporation as an entity, it has to
- 9 do with the fund that's sitting within that
- 10 Economic Development Corporation and this
- 11 particular memo made no reference to that and I
- 12 was of the impression, and I apologize if I was
- 13 wrong on that impression, that this particular
- 14 memorandum led or was directly related to the
- 15 Commission's not responding to the memo that was
- 16 issued and included in the documentation
- 17 furnished to you out of the rule making
- 18 committee.
- 19 So those are my three concerns and
- 20 obviously the Commission's consideration of those
- 21 concerns and hopefully some action on those
- 22 concerns would be greatly appreciated.
- 23 COMMISSIONER HOLBROOK: Mr. Grasso, you
- 24 pointed out the pitfalls of long-term contracts.

- 1 probability goes down that you're locking in at
- 2 the right time. I don't think it's the
- 3 responsibility of either a utility, investor
- 4 owned utility to spend money or any public body
- 5 to spend ratepayer money guessing because that in
- 6 essence is what it is.
- Some people can suggest there's
- 8 sciences behind it, there's some probability and
- 9 statistics you can use, but at the end of the day
- 10 unless you can accurately identify the outcome of
- 11 events with human behavior because human behavior
- 12 drives the marketplace, you have no fool proof
- 13 method that the position you're taking is the
- 14 best position economically, or No. 2, in the best
- 15 interest of ratepayers who are funding this.
- 16 There's just a strong disconnect right
- 17 now between the people financing the effort and
- 18 the people spending the money. There is no
- 19 connection and there is no oversight in place and
- 20 I really pushed strongly in the rule making
- 21 committee to get this. The problem is the rule
- 22 making committee was overwhelmingly participated
- 23 by people with interests in the renewable energy
- 24 market, whether they were buyers or sellers of

- Would I understand that you -- you're not
- 2 suggesting that they be -- or you are suggesting
- 3 that they be avoided, that they not be optional
- 4 or that they be required or what is your specific
- 5 position on it?
- 6 MR. GRASSO: I think long-term
- 7 contracts should be the option pending the money
- 8 on the long-term contract. It's a valid tool,
- 9 it's a valid position in the marketplace and
- 10 people take them all the time just as they do to
- 11 not taking them and staying short in the
- 12 marketplace and cost averaging across the market
- 13 to assure against market timing just as you do
- 14 with finances, for instance. I just don't think
- 15 it is appropriate for aggregate ratepayer funds
- 16 $\,$ to be discretionally allocated on what is a very,
- 17 and I will tell you the most risky position in
- 18 the market. Statistically locking into a forward
- 19 position is the most risky position you could
- 20 take because if you lock in on a one-year deal,
- 21 you have a 1 in 365 chance that that is the most
- 22 economic deal. If you're doing two years, three
- 23 years, you just multiply it by the number of
- 24 days, the denominator gets bigger, the

- that renewable energy. So myself, I believe
- 2 Tech-RI and the Division were the only two
- 3 parties to the best of my knowledge interested in
- 4 ratepayers and my position, I represent
- 5 commercial, industrial ratepayers. And that was
- 6 just not accepted. The rule making committee
- 7 didn't want to hear it, wanted to take the focus
- 8 away from the Commission's oversight of a fund of
- 9 money and turn it into the Commission's oversight
- 10 of a body that you had no right overseeing which
- io or a soup that you had no right overcooring in t
- 11 is correct, but it's a mismanagement of focus.
- 12 Again, the distinction I'm drawing here is the
- 13 ratepayer funds being held in a particular
- 14 account that's overseen by this board of
- 15 trustees. It's ratepayer money and to the best
- 16 of my knowledge that's the position of both the
- 17 utility and the Division. The Division has
- absolutely sat down on this matter which I findincredibly outstanding. I can't imagine that the
- incredibly outstanding. I can't imagine that theCommission even -- I mean, the Division even
- 21 after I brought this to the forefront did not
- 22 step in and weigh in some judgment on this.
- 23 We're talking about millions of dollars
- 24 potentially that could be put into this pot.

- Okay? So that's a separate issue.
- 2 I can certainly bring it up and I know
- it was also communicated via some e-mail 3
- communications that were added to the 4
- documentation that you were furnished. I as a 5
- ratepayer, I as a consultant or advisor to 6
- 7 ratepayers who pay some of the most money in
- terms of budgets for energy and contributions for 8
- 9 the purchase of energy supply in the state, ${\sf I}$
- 10 find that ridiculous, and I can't understand how
- 11 the Division could see that and not want to take
- a position on it. So that's a separate matter 12
- 13 perhaps. Perhaps it's not -- perhaps it should
- be taken under consideration in this proceeding.
- 15 Either way, there's that disconnect and
- 16 the higher risk you run on these forward
- 17 contracts without, without the public being able
- 18 to come in and say that 10-year deal, that
- 19 15-year deal that you want to do with Party X or
- 20 Party Y is not in our best interest. Right now
- 21 that avenue does not exist. The Economic Develop
- 22 Corp. could hold a meeting and tell everybody
- 23 they're going with a 15-year deal, everybody
- could stand up and say this is wrong, but at the

- expertise to identify the differences, the
- 2 risk/rewards identified with either or and how,
- quite frankly, to purchase them because there are
- methodologies to appropriately purchase both
- 5 renewable energy and the corresponding
- certificates that accompany them or don't because 6
- it's an option whenever you buy it.
 - So I would suggest again that the
- long-term contract is the highest risk. Sticking
- 10 to the market doesn't guarantee you an outcome,
- obviously, just like going forward doesn't 11
- 12 guarantee you the economic outcome, however, when
- 13 you stick to the market and shorter positions
- you're sticking to the market and it's a 14
- 15 transparent market so that is a huge, huge
- 16 benefit for the public.
- 17 COMMISSIONER HOLBROOK: Is it basically
- 18 a trade-off between stability offered by
- long-term contract versus the volatility you find 19
- 20 in the short-term market?
- 21 MR. GRASSO: There is -- the stability
- 22 of pricing is obviously a benefit of forward
- 23 contracting. There's no way around that. It is
- a benefit. As a professional, I would tell 24

34

- end of day there's nothing legally to make them
- change that position other than their interest, 2
- 3 and being a Rhode Islander for the last 33 years
- of my life, this doesn't happen. Okay? It just
- doesn't happen. So be realistic about what will 5
- come, despite what folks are going to tell you, 7
- and I just want to make clear, you know, with 8 respect to the memorandum that alluded to our
- 9 position as No. 1, not being justified by the
- 10 Commission because you don't have oversight of
- 11 another body. Again, the issue is not oversight
- 12 of the Economic Development Corp., the issue is
- oversight of ratepayer funds that are flowing to 13
- 14 energy suppliers that are then flowing back into
- 15 the state coffers for use for renewable energy
- 16 resources and there is a big difference between
- 17 applying those funds on renewable energy
- 18 certificates, renewable energy itself. Again,
- 19 renewable energy certificates are not renewable
- energy, they're endorsements of renewable energy 20
- 21 at the end of day. Renewable energy is renewable
- 22 energy. You buy wind, biomass, whatever it is
- you're buying, and again, I don't believe that 23
- this board has the understanding, has the

- people of both, the risks and rewards involved in
- going long or staying short in the market,
- 3 staying on a variable rate, so to speak.
- The problem is going forward is just 4
- not a transparent marketplace, it's an 5
- over-the-counter marketplace because it's
- illiquid; there's not enough players on a
- day-to-day basis to go out there and cut
- 9 transactions to justify an open market like you
- 10 have with the futures market where there are bid
- on situations every second of every day of every 11
- 12 year. Certainly it's incorporated into a
- portfolio. 13
- 14 If I were advising somebody on how to
- 15 manage a portfolio, fixed positions would be part
- of that, they would not be all of that unless the 16
- 17 consumer spending those funds is 100 percent
- 18 aware of the risks that they're taking, just as
- 19 they should be aware of the volatility of the
- market if they stay short and they do take that 20
- 21 position.
- 22 Ratepayers are not under the current
- 23 scenario, one, given the option to tell people
- 24 this is where we want our money, and two, even if

1 they are given the option, that feedback cannot

- 2 necessarily be required to change the direction
- 3 of the outcome of events. To me, you can't allow
- 4 that. That's not appropriate for use of public
- 5 funds.

6

- So it is absolutely unclear because I
- 7 don't think we've had a situation relative to
- 8 this marketplace where you've had to reserve
- 9 funds for renewable energy certificates or
- 10 renewable energy and to satisfy the renewable
- 11 energy standard. This is the first renewable
- 12 energy standard the state has ever had and for
- 13 that matter it's one of few renewable energy
- 14 standards in the U. S. You have to be conscious
- 15 of the fact that you don't want people to learn
- 16 on millions of dollars of ratepayer funds, it's
- 17 just not the place to learn, and that's why I
- 18 bring the point up and recommend your
- 19 consideration on the risks inherent in the
- 20 long-term contracts.
- 21 There's several reasons. One of which,
- 22 again, the risk, two, market power, people that
- 23 lock up long-term contracts, they're in the
- 24 market, they've got a place to put their

38

- requirements, they're guaranteed a home. The
- 2 other guy that wants to come into the marketplace
- 3 can't come in because somebody has already
- 4 satisfied the demand of the marketplace. That's
- 5 unconscionable. I don't see how that can be
- 6 allowed in a "competitive" environment. There
- 7 needs to be some discretion, obviously, relative
- 8 to the competitive marketplace as it stands today
- 9 and a melding into those requirements, renewable
- 10 energy, which at the end of the day is energy.
- 11 So I see no reason why it should not be subject
- 12 to the same approach as traditional fossil fuel
- 13 power plants that deliver energy and that energy
- 14 is sold into the marketplace. It's just another
- 15 component of energy at the end of day with some
- 16 different requirements.
- 17 COMMISSIONER HOLBROOK: Maybe on a
- 18 different matter but yet related to it, in your
- 19 judgment are there adequate safeguards to ensure
- 20 that the value of the renewable energy
- 21 certificate that eventually winds itself into the
- 22 cost of electricity, are there adequate
- 23 safeguards there to protect ratepayers against
- 24 any activity of speculators or people who would

- 1 game or manipulate the market?
- 2 MR. GRASSO: That's the alternative
- 3 compliance payment.
- 4 COMMISSIONER HOLBROOK: Pay the \$50?
- 5 MR. GRASSO: That's the benchmark, so
- 6 to speak, and you already see it in other states.
- 7 If a supplier cannot go out and secure the
- 8 requirements for the state's standard, they'll
- 9 pay the alternative compliance payment. A lot of
- 10 times people pay the alternative compliance
- 11 payment because it's cheaper. The purpose of
- 12 that compliance payment is two-fold; one, to give
- 13 people an alternative for the solution, and
- 14 second, to keep the market in check, in essence,
- 15 assuming that ACP is reasonable. What is
- 16 reasonable? So therein lies the problem that I'm
- 17 suggesting.

- You're not dealing with an open market
- 19 that you can log onto the internet and see what
- 20 it's trading at today. This is over-the-counter
- 21 stuff. So there's a strong consideration that
- 22 needs to be given to the fact that people are
- 23 using discretion. Ultimately, you can't support
- 24 the requirements that the renewable energy
- 40
- development fund has without having out "some
- 2 discretion". So you have human judgment and in
- 3 back of human judgment comes, one, expertise in
- 4 transacting. They have none, and I highly doubt
- 5 that the Governor is going to be able to find
- 6 two. He doesn't have any expertise, that was
- 7 clearly indicated a few weeks ago when he came in
- 8 here and begged for forgiveness for rate relief
- 9 which he had no right to do and had no
- 10 substantiation for it. There is no expertise at
- 11 the state level in these matters. I know that
- 12 first hand. The state hasn't participated in its
- 13 own Restructuring Act for its own state's
- 14 requirements for power procurement. It was the
- 15 first state to pass the Restructuring Act and
- 16 they still have not purchased a kwh of
- 17 competitive power while energy costs have gone
- 18 through the roof. The state does not have the
- 19 expertise. Be aware of that fact and be aware
- 20 that this is very much going to be a state run
- 21 budget in essence. And the state already runs a
- 22 lot of money. This is money I would suggest
- 23 should not be run by the state at least without
- 4 oversight by the public, oversight of the public

- 1 itself who have some expertise in the matter and
- 2 can come in and suggest better methods, if
- 3 necessary.
- 4 If the red fund were administered 100
- 5 percent properly and efficiently, that's great.
- 6 I'm not going to be the guy to come in nor do I
- 7 suppose anyone else would come in and try to
- 8 alter that. If it isn't, you should have that
- 9 ability for the public or some professionals to
- 10 come in on the public's behalf and suggest some
- 11 better ways of doing that and enforce that
- 12 because that avenue is not there.
- 13 The question on the ACP, that is in
- 14 essence the true up. In an open marketplace you
- 15 can't -- again, do you want to regulate? If it's
- 16 regulated, it's not a competitive market so you
- 17 can't have it both ways. The ACP is some sort of
- 18 regulation on the unregulated portion of the
- 19 market, but this ACP could change as any law
- 20 could change. It could be manipulated in the
- 21 future which is a concern. If people decide that
- 22 they can sell renewable energy at a couple bucks
- 23 per megawatt hour than the existing ACP, perhaps
- 24 the General Assembly gets lobbied and moves that
 - 42
 - ACP up just enough to get people to move in
- 2 underneath it. So there are a lot of things that
- 3 can happen to alter the existing structure, but
- 4 at the end of the day that's the only way if it's
- 5 very, very untransparent. There no transparency
- 6 to doing it.
- 7 I don't know what other safeguards you
- 8 want to put in to control the market, otherwise,
- 9 it would be regulated. That's why I'm suggesting
- 10 to have oversight of the process. Don't dictate
- 11 the market, let the market do what the market
- 12 will do to respond, to garner investment, to
- 13 build renewable generation and so forth, but at
- 14 least have a safeguard that if this market is not
- 15 flowing the way it's intended, you have the
- 16 $\,$ ability or the public has the ability to come in
- 17 and alter that. I think that's 100 percent
- 18 critical. It is absolutely 100 percent critical
- 19 and that concern stems back starting with the
- 20 $\,$ rule making committee's structure, the rule
- 21 $\,$ making committee's makeup of the parties in
- 22 interest. There was very, very low percentage
- 23 wise, very low percentage wise ratepayer interest
- 24 involved in that rule making committee, very,

- 1 very low. Overwhelming supply side, seller
- 2 interest was in that committee and they're doing
- 3 their job. I don't have a problem with sellers
- 4 taking a position and pushing that position. I
- 5 have a problem when the facilitator doesn't offer
- 6 equilibrium to the different parties because he's
- 7 getting paid by one of them and sponsorship money
- 8 from another. The rule making committee doesn't
- 9 want to hear it because it's not in their
- 10 interest. I think that's wrong and you're
- 11 getting filtered information from that
- 12 documentation that shows weighted interest of the
- 13 selling community not by the ratepayers. It's
- 14 very, very weighted in that fashion.
- 15 COMMISSIONER HOLBROOK: Did you
- 16 recommend earlier that the Commission not accept
- 17 the draft report because of your concerns?
- 18 MR. GRASSO: I recommended in my
- 19 e-mail, I believe it was on August 8th,
- 20 August 8th, 2005 to Mr. Hartley that -- and this
- 21 was a recommendation to Mr. Hartley -- that Mr.
- 22 Raab be removed from his role and that the
- 23 proposed regulations and rules in essence that we
- 24 were proposing as a committee be pulled back.

- 1 missed the target date for furnishing those to
- 2 the Commission because there was a bigger issue
- 3 at stake. There was an obvious, obvious conflict
- 4 of interest here, factual conflict of interest of
- 5 running this committee.
- 6 COMMISSIONER HOLBROOK: So your
- 7 suggestion would be to have the Commission not
- 8 accept the report, to replace the facilitator and
- 9 then reconvene the committee to continue its work
- 10 and complete it?

- MR. GRASSO: I'm suggesting that the
- 12 Commission disqualify the report that was
- 13 furnished to you. Past that point I haven't made
- 14 any suggestions, whether it's hire somebody else
- 15 to be a facilitator. Personally, I don't think a
- 16 facilitator is necessary. I don't think a
- 17 facilitator is necessary on a 14, 15-member
- 18 committee. I just don't see it being necessary
- 19 with the type of intelligence that's on the
- 20 committee.
- 21 So whether you hire somebody to
- 22 administer the process again or just have the
- 23 committee reconvene and come up with rules again,
- 24 I'd rather go that route and push this process

```
back a couple of months, okay, than to accept a
```

- conflict of interest party and his approach or 2
- his recommendations based on a very biased 3
- 4 committee. Because more people from the seller
- 5 side participated on the committee than consumer
- interests doesn't give them a right to have more 6
- 7 of a weight in terms of the voice that they're
- communicating than the consumer. I think that's 8
- 9 clearly the responsibility of the Commission to
- 10 consider this. The Division's -- that's the
- Division's responsibility. They sat quiet. So I 11
- guess I'm looking to the Commission to pick up 12
- the slack on where the Division was not adequate 13
- in stepping up for the ratepayer.
- 15 MS. WILSON-FRIAS: Mr. Grasso, don't
- 16 you represent a certain level of ratepayers?
- 17 MR. GRASSO: I do.
- 18 MS. WILSON-FRIAS: And how many
- 19 meetings did you attend?
- 20 MR. GRASSO: Two or three probably.
- 21 MS. WILSON-FRIAS: And --
- 22 MR. GRASSO: What does the attendance
- 23 at the meetings have to do with my position?
- 24 MS. WILSON-FRIAS: I'm just curious if

46

- you said there weren't enough ratepayers being
- represented at the table why you chose not to go
- 3 to the meetings.
- MR. GRASSO: Because I am paid by 4
- ratepayers to get a return on their investment 5
- and when I'm not getting a return on their
- 7 investments and what they're paying me for on the
- 8 committee, I manage energy contracts for them
- 9 which you may or may not realize that that is a
- 10 very time-consuming job at this point given the
- volatility in the market, so it's clearly what 11
- 12 I'm paid for by my clients.
- 13 MS. WILSON-FRIAS: With regard to the
- 14 rules as proposed by the Commission which are not
- 15 word for word what was in the report by the
- 16 group, what are your -- your two concerns with
- 17 those rules as proposed are the oversight of the
- 18 development fund and long-term contracts?
- 19 MR. GRASSO: Those are the two issues
- 20 within the renewable energy standard itself and
- 21 then there's the procedural issue.
- 22 MS. WILSON-FRIAS: I'm asking you about
- 23 the rules that were proposed, just the rules that
- Those are your two concerns? were proposed.

- MR. GRASSO: Those are the two topics
- and concerns, correct.
- MS. WILSON-FRIAS: Okay. And could you
- just explain to me, I think you started to, but
- what is Silent Sherpa? 5

- MR. GRASSO: Silent Sherpa Energy
- 7 Consulting Services is my consulting services
- group. I'm the President. We inform consumers, 8
- commercial and industrial. By and large we do
- 10 not do residential and we advise commercial and
- 11 industrial consumers in Southern New England,
- very heavily in Rhode Island and we advise them 12
- on management of their energy supply and this 13
- involves advice on markets, retail competitive 14
- 15 markets, wholesale energy markets, two,
- procurement of power to satisfy their 16
- requirements in those contract options, are those 17
- 18 economic means to fulfill their objectives on a
- budget basis, and lastly, to audit the 19
- 20 performance of those contracts relative to what's
- 21 been promised in the contract. So those are the
- 22 three focusses that we have.
- 23 MS. WILSON-FRIAS: Okay. And it's your
- position that these -- and I just want to make 24
- sure I'm not misstating what I heard you say,
- that the standard offer pricing has been below
- market.
- 4 MR. GRASSO: The standard offer pricing
 - has, in fact, been below prevailing market at the
- time it's been in effect, that is correct.
- MS. WILSON-FRIAS: Right now it's still
- 8 below market?
- MR. GRASSO: Far below prevailing
- market. 10
- MS. WILSON-FRIAS: How far below? 11
- 12 MR. GRASSO: Right now the recent
- 13 standard was passed at 8.2 cents. Prevailing
- 14 market, and again, depending upon the term of the
- 15 forward market you have a different price.
- Typically on the retail contract you can go out 16
- 17 as far as five years and as short as a month.
- 18 The shorter you go, for instance, if you were
- 19 looking at a forward year, the one-year price
- right now for average commercial what I would 20
- note as an average commercial is a G-2 rate 21
- 22 class, you'd probably be looking at something in
- 23 the vicinity of 11 to 12 cents per kwh, the
- generation component of your bill. 24 So to answer

```
your question, you're anywhere from three to four
2
   cents. Obviously, that changes everyday. The
   future is changing. That's how far below the
3
4
   prevailing market it is as we sit here today.
5
            MS. WILSON-FRIAS: I know that you said
   you don't do residential, but do you keep track
6
7
   of the residential market? Is it similar or do
```

8 you not know. 9 MR. GRASSO: I keep track of it in the 10 way that I pay my bill every month. The 11 residential is the same as commercial except for the service fees. The residential load as the 12 same profile just like a G-2 with National Grid. 13 The problem is that it's a much smaller amount of 15 kwh billed, so the bottom line dollars are not there, and therefore, the service piece per kwh 16 has to increase to substantiate the cost of 17 18 service from a marketer or nonregulated power 19 producer as they're called here in Rhode Island. 20 So the actual power component is relatively

similar, however, the service fee that's placed

on top of that is much higher and you see this up

in Massachusetts, for instance. And that fee for

your average commercial/industrial adder on a

21

22

23

18

19

20

21

22

23

unchartered waters, there's no model that typifies or represents other people in our position having gone through the process and setting up rules that appear to work or that can 5 be critiqued and improved on or is this all so new that we kind of do the best we can because we 6 have no reference point? 8 MR. GRASSO: I asked the same question I think it was the first or the second meeting I 10 was at in the renewable energy -- the rule making committee and the answer because, again, my 11 expertise is in retail procurement, so I'm an 12 13 expert insofar as exploring the purchasing 14 options on behalf of clients that are seeking 15 renewable energy. There are green consultants, 16 renewable energy consultants, so I had posed the 17 question to many folks on the committee that had 18 a greater degree of knowledge in those particular 19 marketplaces relative to the U.S., and the 20 answer was there really isn't. Massachusetts has 21 a standard that's the closest and I think that's

50 retail contract is anywhere from two to three mils per kwh that is what you will find. 3 Typically very, very large industrial loads will command a smaller premium. Smaller commercial 4 accounts may require a higher premium. When you 5 get at residential if you're looking at cent plus 7 in terms of fees that need to be garnered per kwh 8 to justify the payment and that's obviously a 9 problem. There are things that can be 10 implemented to overcome that, obviously, associated with aggregation. There's a law in 11 12 the State of Rhode Island that allows cities and 13 town to aggregate. On a household-by-household basis your market price is the same, the service 14 15 fees are much, much different and that's the 16 primary difference. 17 MS. WILSON-FRIAS: Thanks. I know I

went a little off the topic, but about I was curious to get another position. COMMISSIONER HOLBROOK: Mr. Grasso, I have only one more question and that is with respect to what we're doing now dealing with the rules for renewable energy is all of this on a national basis is really forging? Are we in the consideration to keep these things on a level

what a lot of folks were using as kind of a

recommendations as a committee also out of

benchmark in terms of how we go forward and make

playing field.

22

23

24

22

3 So we're -- we don't have a totally different structure in Rhode Island as they do in

Massachusetts which I don't think is a valid 5 reason because I think different states and

different jurisdictions should do what's best for

the ratepayers in that jurisdiction. I don't

9 believe there's a wealth of experience any other

10 state has, No. 1. No. 2, renewable energy is a

regional capacity issue. What California does 11

12 for wind generation really has no consequences on

13 what happens in Rhode Island. You can't

14 transport power from California to Rhode Island.

15 So your interested really in the region's

capability of producing renewable energy. 16

17 And renewable energy resources are 18 steel in the ground, plants that will generate 19 power from mother nature. So -- offering

20 by-products of man, but by and large it's from

mother nature. So buying renewable credits, 21

renewable credits only go as far as the steel in

23 the ground. You can't have a REC with a kw

behind it, you're not supposed to, all right, so 24

- 1 buying RECs only gets more dangerous if there's
- 2 very limited capacity behind it. There's
- 3 increasing supply -- I mean increasing demands on
- 4 limited supply so that's why I think the focus
- 5 needs to be on the renewable resource itself, the
- 6 steel that's in the ground that's producing
- 7 renewable energy. There is nothing that happens
- 8 anywhere else in the country that will dictate or
- 9 change that realization here in Rhode Island or
- 10 New England or in the Northeast for that fact.
- 11 COMMISSIONER HOLBROOK: Does that have
- 12 an impact on financing of projects on a regional
- 13 basis where the opportunity for funding may be
- 14 better in one region than in another because of
- 15 the resources?
- 16 MR. GRASSO: I think resource
- 17 capability has a lot to do with it. For
- 18 instance, in New England you hear a lot about
- 19 solar. On a day like today, which will account
- 20 for a fair amount of days in New England, you're
- 21 not getting much sun today. Solar panels don't
- 22 work as well in these environments as opposed to
- 23 the sun shining all day like they do in the
- 24 desert. The reality of implementing renewable
 - 54
 - 1 solutions, economic solutions is very limited in
- 2 New England. The problem is if the nation
- 3 doesn't come to terms with that sooner than
- 4 later, they're committed to a law that requires X
- 5 amount of investment every year and there will
- 6 still be this limited amount of valid performing
- 7 renewable generation facilities, which does what?
- 8 Only adds to the premium. That's why the
- 9 suppliers are so heavily in favor of these laws.
- 10 If you can be a supplier to get this wind farm,
- 11 you're in a good position long term because there
- 12 aren't many people to put the wind farm in in an
- 13 area where there isn't very much wind. There are
- 14 very few pockets that you can produce wind that
- 15 can produce efficiencies on the turbines. So the
- 16 overwhelming problem is a regional problem.
- 17 The Location of the world, what assets
- 18 we have or don't have to generate from, and in
- 19 this region, like it or not, it isn't the best
- 20 place in the world. It's not northern Europe.
- 21 It's not California in the desert. It never will
- 22 be. So spending more money on solar isn't going
- $\,$ 23 $\,$ to return Rhode Island or any place in Southern
 - 4 New England into the desert of the California.

- COMMISSIONER HOLBROOK: I guess the
- opportunity is that resources presumably have to
- B be more in the extreme than average. I mean, you
- 4 have to be in a typically sunny spot or a windy
- 5 spot or a spot served by white water and whatnot
- 6 to benefit.

7

- MR. GRASSO: Very limited in New
- 8 England relative to the amount of demand for the
- 9 product. Right now it's a boutique industry.
- 10 This law is not going to keep a boutique
- 11 industry. 16 percent of the power in the State
- 12 of Rhode Island that's big business, that's big
- 13 business and it's big money and it's big money
- 14 that gets exponentially larger if the resources
- 15 are constrained. So there are issues, obviously,
- 16 physical issues, locational issues that
- 17 regardless of what other standards happen or
- 18 haven't happened in other parts of the world or
- 19 other parts of the country there are issues that
- 20 you have to deal with regionally to deal with
- 21 these. That's the balance that everybody I think
- 22 is looking to strike. Don't put the money into
- 23 something that is never going to give you the
- 24 return that you're required by law. It's adding
- 1 additional premium to the few assets in capacity
 - 2 that are in place.

 - 4 that we've had with fossil generation. You have
 - 5 power plants all over the place, but no power to
 - 6 deliver to people. We'd be looking at the
 - 7 opposite here with renewable energy potentially.
 - 8 Potentially. It's a matter of investment and
 - 9 investment follows money. Prices keep going up,
 - 10 more people are going to want to come in, but
 - 11 what happens if the prices keep going up and
 - 12 nobody else can come in because there isn't any
 - 13 more renewable energy to produce. There is a
 - 14 limited capacity to speak of eventually that
 - 15 you're going to hit.

them very much.

16

20

- COMMISSIONER HOLBROOK: If that
- 17 concludes your comments, Mr. Grasso, I certainly
- 18 appreciate you are coming and I think your
- 19 comments will be very well taken. We appreciate
- 21 MR. GRASSO: You're welcome.
 - MS. WILSON-FRIAS: Commissioner, while
- 23 he's getting up, if I could just clarify
- 24 something for the record. When the Commission

- 1 proposes rules, it does so for comments like this
- 2 and then when the Commission issues a final
- 3 ruling, that's when the Commission writes up a
- 4 report responding to all comments so I just
- 5 wanted to make that clear for the record.
- 6 COMMISSIONER HOLBROOK: The next
- 7 speaker is Mr. Sakis Asteriadis. I apologize for
- 8 the pronunciation. Asteriadis.
- 9 MR. LUEKER: Mr. Commissioner, before
- 10 he begins his comments, could I offer a couple of
- 11 corrections for the record?
- 12 COMMISSIONER HOLBROOK: Sure.
- MR. LUEKER: With respect to the prior
- 14 witness' testimony on the legal position taken by
- 15 Silent Sherpa and Tech-RI, those issues were
- 16 discussed in some detail in the committee meeting
- 17 in mid-August which Mr. Grasso was unable to
- 18 attend. The Division did take a position on it
- 19 and our position was we disagreed with their
- 20 interpretation of the law. We believe that the
- 21 renewable energy standards statute set up a
- 22 mechanism very similar to that set up for
- 23 renewable energy fund, that is, this Commission
- 24 act as a gatekeeper to decide how much money and

- 1 our experience suggests that the statutes and
- 2 rules aren't working, well, then, obviously,
- 3 under like or similar circumstances we have to go
- 4 back and seek some appropriate legislative
- 5 relief.
- 6 COMMISSIONER HOLBROOK: That's right.
- 7 Thank you.
- 8 MR. LUEKER: Thank you.
- 9 SAKIS ASTERIADIS (Sworn)
- 10 MR. ASTERIADIS: Sakis Asteriadis,
- 11 address is 444 East 82nd, Street, New York, New
- 12 York, 10028.
- 13 MS. WILSON-FRIAS: Spell your last
- 14 name, please.
- 15 MR. ASTERIADIS: A-S-T-E-R-I-A-D-I-S.
- 16 Well, thank you for the opportunity of coming
- 17 here. I am the program manager for APX. APX is
- 18 the administrator of the NEPOOL's GIS system.
- 19 And also we are the system provider for the PJM
- 20 GATS renewable tracking system. We are
- 21 responsible for NEPOOL's GIS. We're responsible
- 22 for the day-to-day operations of pretty much the
- 23 whole tracking system. We have four staff, both
- 24 ecology and administrative portions of the

- 1 under what circumstances money is collected and
- 2 flows to organizations, in the one case it's the
- 3 State Energy Office who then manages the funds,
- 4 $\,$ in the other case it would EDC who deals with the
- 6 Commission under the way statutes are set up has

alternative compliance payments, but the

- 7 no authority to exercise control over those two
- 8 separate agencies once the money reaches them.
- 9 We've taken that position, we took that position
- 10 in the committee meetings at least and I believe
- 11 in some of the correspondence that Mr. Grasso
- 12 related to.

5

13

- COMMISSIONER HOLBROOK: Did the
- 14 committee have a conversation with respect to
- 15 checking the status quo so that the Commission
- 16 would have some interaction with the agency?
- 17 MR. LUEKER: I believe there may have
- 18 been some limited discussion on that, but
- 19 generally speaking, the committee has been of the
- 20 position that the law is what it is, whether we
- 21 agree with every particular in it or not, our
- 22 charter was to try to come up with rules in a
- 23 limited period of time to address the existing
- 24 statutes and once we have those rules in place if

V's program

- 1 program. And as I mentioned, I am APX's program
- 2 manager for GIS. We interact with pretty much
- 3 all of the stakeholders of the GIS, states,
- 4 LSE's, generators, marketers. And of course, we
- 5 $\,$ are excited any time they say -- we are excited
- 6 any time there's an RPS program that is going to
- 7 be part of the NEPOOL GIS, and of course, that
- 8 stands for the Rhode Island RPS program.
- 9 APX is policy control. Our job is not
- 10 to make policy but just to make sure that the
- 11 market rules of the tracking system of the
- 12 tracking -- of the trading programs are applied,
- 13 and basically, what I'm here for today is to
- 14 offer some comments on Section 6.8 related to the
- 15 customer sited and off grid generators. I
- 16 believe there was some differences as to how such
- 17 generators are going to be handled by the -- by
- 18 the Rhode Island RPS program, and since that has
- 19 been an issue that for the last year or so, we
- 20 have been discussing it in NEPOOL GIS. I hope I
- 21 can give you both the history and perhaps some of
- $\,$ 22 $\,$ my views as to what is the best way to handle
- 23 this matter.
- 24 Maybe the best way is to start with the

- 1 history. About a year ago some of the
- 2 participants wanted to make sure that off the
- 3 grid and what we call behind the meter
- 4 generators, in other words, the generators that
- 5 are not handled by the ISO New England settlement
- 6 system, that they have the right -- the
- 7 appropriate verification process in place so that
- 8 the output that our GIS system tracks is
- 9 realistic. The way the GIS handles such
- 10 generators even today is pretty much it is
- 11 relying on a self reporting mechanism. We
- 12 provide electronic interface so that the owners
- 13 of these assets, of these generating assets, they
- 14 report monthly their production. And of course,
- 15 there's been some ideas that there's a better way
- 16 to do that both from the verification point of
- 17 view and also from the way the production is
- 18 input into the GIS system.
- 19 So one or more of our participants came
- $20\,$ $\,$ up with some proposals which were discussed in
- 21 the NEPOOL markets committee, and there were
- 22 basically two options, two proposals there. One
- 23 was introducing verifying entities, i.e.,
- 4 independent entities to both NEPOOL and the GIS

- one option that still we're talking about
- verifying entities, but somehow it was asking for
- 3 an automatic type of interface into the NEPOOL
- 4 GIS system and then there was an Option B which
- 5 essentially was to have distribution companies
- 6 who are part of the ISO New England metering
- 7 group essentially be responsible for providing
- 8 this function.
 - So I'd like to offer my -- as one of
- 10 the people who is involved with the day-to-day
- 11 functions of GIS, I'd like to offer our view and
- 12 opinion. We believe Option B is something that
- 13 APX would prefer to see as the system
- 14 administrator. The reasons for our preference of
- 15 Option B as opposed to Option A is it does not
- 16 require any market rule changes into the NEPOOL
- 17 GIS which, of course, is okay with us, like I
- 18 said, we're not the people who are making the
- 19 rules, we are the people who make sure that the
- 20 rules are applied. Another reason is that Option
- 21 B does not require what we call a cardinal change
- 22 in the GIS system, and a cardinal change is more
- 23 of a contractual term in NEPOOL GIS, but what it
- 24 means is that APX has to make a change, but it

- 1 administrator whose job would be to read the
- 2 meters and then manually enter it into the GIS
- 3 system. There was a second view that essentially
- 4 was an automated interface so that a metered
- 5 value gets input into the generation information
- 6 system. None of these two options were pretty
- 7 much liked or adopted by the markets committee
- 8 and there was really no clear decision by the
- 9 markets committee on this matter.
- 10 Instead the markets committee has
- 11 directed the participants to go back and talk to
- 12 the ISO New England metering group so that they
- 13 find a way to have the metering people within ISO
- 14 New England essentially provide the data into the
- 15 GIS. To my knowledge there is not any true
- 16 follow-up in this direction to date. And the way
- 17 things work in our GIS is pretty much the way it
- 18 worked before. We still have a self reporting
- 19 functionality.
- 20 So I saw that this issue was brought up
- 21 again as part of the Rhode Island RPS hearings
- 22 and I saw that essentially there were two options
- $\,$ 23 $\,$ which were probably verified options of what was
- 4 discussed in the markets committee. There was

- 1 will be at a cost to the GIS program.
- 2 So to summarize, Option B, assuming
- 3 that the distribution companies provide the data
- 4 to ISO New England and then ISO New England sends
- 5 it back to the GIS, Option B is not going to be a
- 6 cardinal change for the GIS.
 - The third point I'd like to make
- 8 regarding the two options is the possibility of a
- 9 verifying entity. I think it's a pretty valid
- 10 and reasonable concept when it comes to a
- 11 geographically diverse and fragmented system such
- 12 as the system that the western region of the
- 13 United States is trying to come up with a
- 14 tracking system, for those familiar with this
- 15 program, so in such regions you have multiple
- 16 control areas, there are multiple even ISO's or
- 17 RES's, there's cases that some of the generators
- 18 do not fall within a clear jurisdiction, so in
- 19 that case it makes I think absolute sense to have
- 20 this type of a verified entity in a case like New
- 21 England and PJM is also falling into the same
- 22 category. I think we have the luxury of having a
- 23 very well-defined control area that all
- 24 generators, no matter if they're off grid, behind

- the meter or not all generators belong in this
 control area, and of course, we than interface
 with this control area, that's where we get our
- 4 data, and we think that with Option B we can 5 continue to get the data even for that small
- 6 portion of gonorators that fall in that category
- 6 portion of generators that fall in that category.
- 7 And also another reason is although the
- 8 NEPOOL markets committee did not make a clear
- 9 decision on this matter, I think the direction
- 10 they gave to the GIS participants and the GIS
- 11 working group, I think the direction that they
- 12 $\,$ asked them to take was clearly what I see in
- 13 Option B. So these are the points I would like
- 14 to make, and Commissioner, I'd be glad to answer
- 15 any questions.
- 16 COMMISSIONER HOLBROOK: I know you've
- 17 done it, but could I ask you, please, to just
- 18 define Option A again and why you prefer B
- 19 instead of A? I know why you prefer B, but why
- 20 do you have less interest in Option A?
- $\,$ MR. ASTERIADIS: The same reason that I
- $\,$ 22 $\,$ -- first of all, let me define Option A, what are
- 23 the more fundamental differences compared to
- 24 Option B before I move into the second part.
- 66
- 1 Option A introduces new verifying entities which
- 2 do not exist today. Essentially, the only
- 3 verifying entity we have today is ISO New
- 4 England. They're the ones that are sending us
- 5 data for the vast majority of generators. So
- 6 that is one of the more fundamental differences.
- 7 Option A introduces new verifying
- 8 entities which essentially would be either
- 9 electronically or physically reading the meters,
- 10 verifying the output of the generators and then
- 11 reporting back to GIS and really is the more
- 12 fundamental difference. Option B instead calls
- 13 for distribution companies who already have some
- 14 contractual arrangement with these entities, and
- 15 therefore, because there's a contract it means
- 16 that there has to be a settlement on the meter
- 17 which is read by the distribution companies and
- 18 this is the measurement that can be through the
- 19 ISO New England can be reported back to us and we
- 20 think that this is a very reliable mechanism to
- 21 do that. And also it is the one that requires no
- $\,$ 22 $\,$ changes essentially of the market rules side and $\,$
- $23\,$ the infrastructure side of the GIS. By no means
- 24 am I saying that if any participants tell me to

- 1 change the rules, then so be it, our job is to
- 2 modify the system, modify the process and make
- 3 sure that the --
- 4 COMMISSIONER HOLBROOK: Are there any
- 5 other comments? If that concludes your
- 6 testimony, I thank you for coming. Your points
- 7 are well taken and will certainly be noted.
- 8 Thank you very much.
 - MR. ASTERIADIS: Thank you.
- 10 COMMISSIONER HOLBROOK: Chris Wilhite
- 11 is the third speaker.
- 12 CHRIS WILHITE (Sworn)
- 13 MR. WILHITE: Chris Wilhite,
- 14 W-I-L-H-I-T-E, work address is 741 Westminster
- 15 Street, Providence, Rhode Island. Thank you,
- 16 Commissioners, for giving the public the
- 17 opportunity to offer its comments regarding the
- 18 renewable energy standards.
- 19 My name, of course, is Chris Wilhite,
- 20 and I am representing Clean Water Action and the
- 21 Environment Council of Rhode Island. Clean Water
- 22 Action is a grass roots environmental
- 23 organization with 10,000 members in the state.
- 24 After Listening to Mr. Grasso's comments I feel I
- 1 have to address some of my concerns with those
 - 2 comments.
 - 3 First of all, after listening to those
 - 4 comments you would think that the only expert in
 - 5 Rhode Island is Mr. Grasso, but I look out there
 - 6 and I see actually a few experts that I know
 - 7 personally and I think that there are plenty of
 - 8 experts on the Public Utilities Commission, so
 - 9 because of that, I'm here to commend the Public
 - 10 Utilities Commission for bringing forth these
 - 11 rules to go ahead and enforce the Renewable
 - 12 Energy Standards Act.
 - 13 Another point that there isn't a whole
 - 14 lot of experience that Mr. Grasso seemed to imply
 - 15 among other states with RPS or RES are simply not
 - 16 true. Almost half of the United States of
 - 17 America have some kind of RPS. Eighteen states
 - 18 in this country have some sort of RPS. Here in
 - 19 New England four of those besides Rhode Island
 - 20 are Vermont, Connecticut, Massachusetts and
 - 21 Maine. So I'd just like to clarify those points
 - 22 right then and there.

- A year-and-a-half ago Clean Water
- 24 Action gave testimony supporting the passage of

72

- the Renewable Energy Standards Act. So again,
- 2 I'm pleased to be here today to commend the
- Public Utilities Commission of Rhode Island for 3
- 4 drafting the rules to enforce the RES Act.
- 5 simply by making the shift to clean renewable
- energy, Rhode Island is joining the leadership of 6
- 7 those 18 states that have a hopeful vision for
- the future of our environment. Clean renewable 8
- energy is a vision in which the threat of global
- 10 warming can be stopped, in which our clean air
- 11 and water can be protected from pollution, and in
- which our wild heritage can be protected from 12
- 13 drilling and mining.
- 14 Before I worked on -- before I worked
- 15 for Clean Water Action I worked on a campaign to
- 16 stop oil and gas drilling on our national parks,
- 17 refuges and forests and always the solution was
- 18 for America to shift over to clean renewable
- 19 energy. So once again, I'm happy to be sitting
- 20 here supporting that solution.
- 21 Frankly, America's dependance on fossil
- 22 fuels not only affects the beautiful legacy of
- 23 wild lands that we have, it also hurts our air
- 24 and water quality. Everyone is familiar with the

- the renewable energy standards.
- 2 There are three points, though, that
- the Environment Council of Rhode Island and Clean 3
- Water Action would like to bring up and to see
- 5 resolved in the final rules. First and foremost,
- Clean Water Action supports National Grid's 6
- 7 opposition on the itemization of compliance costs
- 8 on consumer bills which is Section 8.4. By
- itemizing compliance with the RES Act we're
- 10 sending the wrong message to consumers that clean
- 11 renewable energy costs money without
- 12 acknowledging the costs associated with not
- 13 switching over to clean renewable energy. Asthma
- 14 and other respiratory diseases, those things cost
- 15 money and lives. Destruction of open spaces to
- 16 drill and mine, that costs money in the
- long term, and of course, global warming will 17
- 18 cost us money. So accordingly, Clean Water
- 19 Action and the Environment Council of Rhode
- 20 Island requests a change to Section 8.4 so that
- 21 compliance costs on consumer bills are not
- 22 requi red.
- 23 Second, Clean Water Action is also
- 24 concerned about the requirement for the entry of

70

- oil and gas spills along our waterways and
- everyone has heard stories about the pollution
- 3 that's caused by mountain top mining for coal and
- indeed the removal of mountains, and everyone
- every day is confronted with our air quality 5
- issues when fossil fuels are burned to create
- 7 energy. Asthma becomes a more and more common
- 8 health threat. We're reaching tens and tens of
- 9 thousands of people suffering from asthma,
- 10 especially those folks who live near areas where
- 11 the burning of fossil for energy is high. burning fossil fuel for energy is the leading
- cause of global climate change. Here in Rhode 13
- 14 Island our very way of life is threatened by

12

- 15 climate change. Rising sea levels threaten our
- beaches and the tourism they bring to the region, 16
- 17 hotter days mean more ground Level ozone which
- 18 causes bad air quality for people who suffer from
- 19 asthma, and also climate change damages our
- 20 nature forests and key agricultural crops of New
- England like cranberries, maple syrup, corn, 21
- 22 those sorts of things. So again, I'm pleased to
- be here to commend the Public Utilities 23
- Commission for setting forth its rules regarding

- generation information systems, GIS systems
- certificates to be verified by an independent
- 3 third party after they've been entered into the
- GIS system. This is a decent approach, however,
- a better scenario would be for that independent
- third party to actually enter the GIS data entry
- themselves. While we understand that the system
- infrastructure is not quite there yet, Clean
- Water Action and the Environment Council of Rhode
- Island would like to see the system improved so 10
- things can be resolved. We simply see possible 11
- 12 conflicts of interest or not a very tight system
- where that is. 13
- 14 MS. WILSON-FRIAS: Could I just
- 15 interrupt you one second while we're on the
- topic? So you just heard the other gentleman's 16
- 17 testimony. Did you have a chance to look at
- 18 Option A and Option B in the original --
 - MR. WILHITE: Yes.
 - MS. WILSON-FRIAS: -- report? And so
- are you in favor of Option A or is it something 21
- 22 di fferent?

19

20

- MR. WILHITE: Option A would require --
- just to clarify, Option A would require the 24

- independent verifier to enter the data
- 2 themselves, right? Yes. Option A is what we
- 3 would -- we are pushing for.
- 4 MS. WILSON-FRIAS: Thank you.
- 5 MR. WILHITE: Finally, Clean Water
- Action and the Environment Council of Rhode 6
- 7 Island is concerned that really there's been
- little attention in the RES rules given to 8
- 9 reducing greenhouse gasses from the electric
- 10 sector. Our organization has been following the
- regional greenhouse gas initiative and its model 11
- 12 rule making process pretty closely. And just for
- 13 the record, the PUC can expect Clean Water Action
- to continue to push toward real quantifiable
- 15 reductions in greenhouse gasses from power plants
- either through the ERS -- the RES or through 16
- 17 RGGI, the Regional Greenhouse Gas Initiative.
- 18 Aside from these concerns, the Clean
- 19 Water Action and Environment Council of Rhode
- 20 Island is proud to come before the Public
- 21 Utilities Commission for drafting these rules to
- 22 put our state's energy renewable standards into
- 23 effect. So thank you for your time.
- COMMISSIONER HOLBROOK: Thank you, Mr. 24
 - 74

15

17

- Wilhite. The fourth speaker will be or
- commentator will be Nubia Perez from the 2
- 3 Conservation Services Group.
- NUBIA PEREZ (Sworn) 4

12

- 5 MS. PEREZ: Nubia Perez, Conservation
- 6 Services Group, 40 Washington Street,
- 7 Westborough, Mass., 01581. I first also want to
- 8 thank the Commissioners for letting us speak here
- 9 today. I am with a company called Conservation
- 10 Services Group, CSG, and aside from other things
- 11 that our company does, we have been a renewable
- energy generator since 1997. We have built 120
- 13 behind the meter solar energy sites amounting to
- 14 about two megawatts in ten different states, most
- 15 of which are here in the Northeast, including
- Rhode Island and Massachusetts and New York. CSG 16
- 17 independently owns and operates about
- 18 300 kilowatts of the ten megawatts.
- 19 I'm here to speak about -- it seems to
- 20 be a popular topic today -- Section 6.8, the
- 21 customer sited and off grid generation. I'm here
- 22 to speak in favor of Option A. In order for the
- REC markets to function effectively, it is
- critical to provide a third party verification,

- third party production data tracking system. It
- is essential that this verification data entry
- process be efficient and trusted and we feel that
- the most economic way to do this is to allow
- independent third parties to directly input the 5
- data into the NEPOOL GIS.
- I'd like to clarify one point that one
- of the previous speakers spoke about, the 8
- difference between Option A and Option B. The
- 10 difference isn't necessarily having to verify
- 11 themselves, it's the input of the data, and
- Option A, the third party verifier would go into 12
- the GIS system and input the data themselves. 13
- This -- by doing this the Rhode Island ratepayers
- 15 will benefit from the increased use of cost
- effective behind the meter generation. 16
 - We, along with seven other
- 18 organizations and Rhode Island companies are
- 19 asking the Commission to write a letter to
- 20 NEPOOL's markets committee requesting that the
- 21 committee approve the necessary changes within
- 22 the GIS. Knowing the Commission, how busy they
- 23 are, we have submitted a draft model of what this
- letter would look like. I'd like to point out 24

- one of most important facts is that the GIS
- system was built and its main purpose is to
- 3 ensure that regulators such as yourselves have an
- effective means of achieving their goals and the
- 5 goals should be and are that the RES system
- remain full of integrity and that all the
- 7 generators are treated equally. As a small
- generator, as CSG, which, as I mentioned before,
- 9 we do own behind the meter generation, we
- 10 understand that this could increase the cost to
- the generators, but we feel that this quality 11
- 12 control is important in order to have consumer --
- in order for the consumers to have confidence in 13
- 14 our product.
 - I also want to make it clear that CSG
- is agnostic as to who does input the data. It 16
 - could be the distribution companies, it could be
- 18 a private company, we really don't care who
- 19 inputs the data as long as the system is put in
- place that allows that process to happen. And 20
- 21 I'd like to submit a letter which shows our
- 22 support with, as I mentioned before, six other
- companies and non-profits that are in favor of 23
- Option A and attached to that, as I mentioned 24

80

1 before, is a draft model of the letter that the

2 Commission can send to the markets committee.

3 COMMISSIONER HOLBROOK: Are there any

4 questions? If not, thank you, Ms. Perez.

5 MS. PEREZ: Thank you. The next

6 speaker is Matt Auten, A-U-T-E-N.

7 MATT AUTEN (Sworn)

8 MR. AUTEN: Matt Auten, business

9 address is 11 South Angel Street, No. 337,

10 Providence, Rhode Island. Thank you to the

11 Commissioners for allowing me to speak. My name

is Matt Auten. I'm an advocate with the Rhode

13 Island Public Research Group. We're a non-profit

14 and non-partisan public industry organization

15 representing citizen members throughout the State

of Rhode Island.

12

16

7

9

13

20

17 First I just want to express our strong

18 support for the proposed regulations and

19 establishing this renewable energy standard and

20 thank the staff and the people that participated

21 in the community to develop these regulations,

22 and also for the record I just wanted to thank

23 the original bill sponsors, Representative Paul

Moura of Providence and Senator David Bates of

sufficient for consumers to educate themselves.

2 As I said before, we do not detail all of the

3 costs both on public health and the environment

4 of the energy. We make it indeed the long-term

5 and short-term contract in terms of what energy

6 is purchased. We don't necessarily include an

7 analysis of that and the benefits or the costs

8 associated with that. On consumer ratepayer

9 bills there is access to that information, but we

10 think having it on each individual bill would be

11 the wrong place for that to be.

I also wanted to echo earlier comments

13 about climate change and global warming. As you

14 may know, in 2001 the New England Governors did

15 enter into an agreement to reduce emissions to

16 ten percent below 1990 levels by 2020. Clearly,

17 the energy sector is a significant portion of

18 those emissions, and according to an analysis

19 done by the Tellus Institute for the Rhode Island

20 greenhouse gas stakeholders group this standard

21 will reduce about a half million tons of carbon

22 monoxide which is the leading global warming gas

23 by 2020, so we think that is an important step

24 towards meeting those target goals, and in

78

Barrington for the hard work they did getting us

2 to this point as well and the leadership in the

3 General Assembly, the Governor for ultimately

4 signing this bill.

5 Overall, we believe that increased

6 renewable energy in Rhode Island is both good for

the environment, good for job creation in the

8 state and also good or consumers in our energy

market overall. This Act when it was passed had

10 the support of 93 local and statewide

11 organizations throughout the state, including

12 groups as diverse as the Ocean State Fishermen's

Association, the American Lung Association of

14 Rhode Island, the AFL-CIO, a broad base of public

15 support, and indeed, passed unanimously through

16 both Houses of the Legislature.

17 The one issue I wanted to echo concerns

18 about raised by Chris Wilhite on the mix being

19 labeled. While we're obviously very in favor of

consumer knowledge and the ability of consumers

21 to determine their energy mix, we believe that

22 the requirements in the bill which do require

23 that your -- on your utility rate bill you can

4 see where your energy is coming from is

addition, as has been mentioned, the nine

2 Northeastern states are currently working to

3 develop a program to regulate greenhouse gas

4 emissions from the power sector in those states

5 and indeed shifting to more cleaner renewable

6 energy will be an important component of that

7 program clearly as we seek to reduce the overall

8 rate of emissions throughout the entire energy

9 sector across the region.

10

23

I also just wanted to touch quickly on

11 the -- on rates themselves. We believe that

12 helping to diversify our energy supply has

13 benefits for consumers and that it will help us

14 to avoid some of the -- ultimately some of the

15 rate headaches and some of the price spikes we've

16 seen in the natural gas market. As we know,

17 renewable energy, once the systems are built and

18 in place, don't have fuel costs, there isn't a

19 fuel to buy to turn the turbine. We believe that

20 diversifying energy supply would be wise for

20 di versi i yi ng energy suppi y wourd be wrse roi

21 investors in the stock market and will help to

22 mitigate the price spikes that we've certainly

been seeing the past couple months as hurricanes

24 have battled the Gulf Coast and a lot of gas

supply for the region and indeed the country at 2 ri sk 3 Finally, I just wanted to touch quickly 4

on some of the comments made earlier on the solar market and some of the possibilities and sort of 5 put some anecdotal evidence out there. Currently 6 7 the two countries in the world that are leading in solar production are Germany and Japan which 8

9 are not necessarily two countries you would

10 associate with being the sunniest places or most

11 optimal places for solar, and as the technology

12 evolves and grows with the economies of scale, 13 the costs will continue to come down, but as of

right now, those are the two places where the 14

15 industry is really being led by, so it's not

16 necessarily a direct correlation to either

17 temperature or amount of sun. Clearly, those

18 places are better places and have greater

19 opportunity, but there's certainly opportunity

here in Rhode Island as well. 20

21 COMMISSIONER HOLBROOK: Good. Are 22

there any questions? Thank you very much, Mr.

23 Auten.

24

MR. AUTEN: Thank you.

work we're doing on their behalf.

2 I guess I'm here to make some comments 3 that I believe will help your Board to greatly

improve the efficiency, transparency and trust of

the REC markets and make them much more like 5

other stocks and commodity markets in the way 6

they perform. And in particular I'm here to

discuss the data entry into the New England GIS, 8

the Option A versus Option B that's been

10 discussed, and I want to clarify that my

11 understanding at least is Option B that has been

12 approved to go forward does not involve the

13 distribution utilities or anybody else entering

data. I believe it preserves the status quo 14

15 which is the self reporting of data by the

16 generators and Option A allows for a third party

17 verifying entity to enter the data.

18 My understanding is both options 19 require some sort of verification of the data and

20 I'm here to tell you that by providing

21 verification on top of data entry by the

22 generator or aggregator what you're doing is

23 hugely driving up the cost of compliance with the

24 RPS and the cost of fully participating and

82

11

COMMISSIONER HOLBROOK: The next 1

speaker is Fred Unger. 2

3 FRED UNGER (Sworn)

MR. UNGER: My name is Fred Unger. I 4

live at 165 Evergreen Street in Providence. 5

business is based in San Jose, California. I

7 work with a company called Fat Spaniel

8 Technologies, and was recently merged with a

9 Massachusetts-based company called Value Added

10 Energy Information System. I have some prepared

11 testimony that includes some visuals. I don't

know if that's appropriate to give to the 12

13 Commi ssi on.

14 I guess first I want to echo everybody

15 else's thanks for the excellent job the

Commission has done with the regulations. My 16

17 company -- contrary to the suggestion of the

18 gentleman from APX, my company is an independent

19 verifier of renewable energy generation. The

20 last page of this document I gave you is actually

21 a summary of a finding by the Connecticut

Department of Public Utility Control which has 22

certified us as verifiers of REC trades in 23

response to a request by Pratt & Whitney for some

benefitting in REC markets and on that last page

I handed to you the DPUC of Connecticut decision,

3 Step 5, there's a whole bunch of very expensive

paper chasing that's required precisely because

GIS does not currently enable direct data entry 5

by a verifier. And if that small change were

made to the system, we would greatly reduce the

cost of compliance with a very trustable REC

9 market on behalf of the generators.

10 The other thing I just want to mention,

and I'm not certain about this, but I was at a 12 conference in New Jersey about two weeks ago in

13 which the PJM GATS market, which is the

14 equivalent of the NEPOOL GIS, was being discussed

15 and my understanding from the gentleman that

administers that on behalf of PJM was that APX 16

17 indeed did enable automated data entry for

18 generators in that market. So I know it's

19 technologically very easy. We are currently able

to enter data in the New Jersey solar REC market 20

21 which is being administered by a different

22 company, Clean Power Markets, we're able to

automatically enter that data on behalf of 23

24 generators and that enables the system to work

quickly, much more efficiently at a lower cost.

2 So I think the important thing to

remember is that the purpose that the

3

16

20

22

10

- legislation -- the RPS legislation had and the 4
- 5 purpose in general is to increase renewable
- energy production both to reduce our 6
- 7 environmental footprint and to increase the
- stability and reliability of our energy supply. 8
- So in order to do that, the enabling mechanism is
- 10 the REC markets and I think your primary goal
- here should be to increase the trust and the 11
- 12 viability of the REC markets themselves.

The secondary need is -- should be to 13

14 reduce the cost of participating in the trusted

15 REC transaction because if the costs are too high

to participate, that essentially eliminates all

17 the small generators, and by their nature, a lot

18 of renewable energy resources include small

19 distributed generation.

We're currently monitoring over 300

21 sites, mostly solar, but also wind and fuel cell

projects. We're doing it as large as the new 23

Wal-Mart green stores out in Texas and Colorado,

the Whole Foods here in Providence and as small

Connecticut DPUC has particularly reviewed our

processes in great detail and certified that our

company is doing this at a level that's trustable

in a way that major stock market data is trusted.

I also want to add that the letter that

Ms. Perez from CSG mentioned, we're co-signators 6

7 on it. There's also two other independent

monitoring companies that would easily be

verifiers, so we believe this should be a

10 competitive service, not a service provided by

the utilities or anybody else, but a service that 11

the generators and aggregators can choose among 12

13 folks that you approve as qualified verifiers.

It should be a competitive service based on the 14

15 most efficient delivery and the most benefit

16 perceived by the client and the generator

themsel ves. 17

18 So the fundamental thing, if we go 19 quickly through this presentation, I've got for

20 you, for a market to succeed between the

21 underlying asset, the generation asset and the

22 buyers and sellers of those renewable energy

23 credits, there has to be trust, there has to be

good contracts and mechanisms for the 24

86

as residential applications. In all those cases

in New England we're providing -- currently

3 providing REC reporting for the generators.

can see an example of that on Page 9 of what I

just turned in. The challenge -- we put this 5

together in the exact same format that the GIS

7 reporting is but rather than being able to enter

8 this data on behalf of our generators and

9 aggregator clients all we can do currently is

send it to them and they have to enter it

11 themselves so it adds to the cost unnecessarily.

12 The third thing I'd like you to

consider in this decision is how to encourage 13 solutions that really provide additional critical

14

15 benefits that enable renewable generators to

succeed, and I want to assure you that I'm not 16

17 here to increase my business because our clients

18 are buying our services because they need all

19 sorts of other benefits from monitoring other 20

than REC reporting. We are collecting all that

21 data anyway. And we're collecting -- my partner

22 was a CPA that used to audit publicly traded

firms for the New York stock exchange, NASDAQ and 23 other public markets, so we collect -- and the

transactions to take place and there has to be

market forces at play as in any other market. So

3 the REC markets as established in the 18 states

that have been discussed generally have many of

the attributes of a stock market or commodity 5

market. The difference between the stable,

strong markets that we all are familiar with and

the REC markets that are emerging today is the

9 question of trust. And the thing that

10 fundamentally undermines the trust in the market

from the investor perspective is self reporting

12 by the generators themselves.

11

13

14

15

16

17

The current way that generation is

primarily reported today is an owner of a

generation facility goes to their own meter at

their own site, reads it themselves and calls in

the data. That's inherently untrustable. That's

18 similar to a publicly traded company making up

19 their financial data on the, you know, reporting

whatever the heck they want to without any kind 20

of audit or any kind of verification by an audit 21

22 or a CPA, so with this self reporting that's

currently in place and that's provided by Option 23

B, the REC markets are inherently untrustable. 24

1 So you're undermining the basic tool that this

- 2 legislation provides for which is the REC market.
- 3 So we want to commend very much the fact that you
- 4 call for a verifying, a third party verifying
- 5 entity, but you have to keep in mind, especially
- 6 on behalf of the small generators, if they self
- 7 report and there has to be an audit process
- 8 outside of the reporting, it's going to increase
- 9 the cost to your Commission, it's going to
- 10 greatly increase the cost to the generators and
- 11 it will, in fact, increase the cost to GIS. So
- 12 the most efficient way for this verification
- 13 process to be enabled is to enable the verifiers
- 14 to directly enter data into the GIS as they can
- 15 in the new GATS system down in the PJM territory
- 16 and to do so in a way that does not give us
- 17 access to all the other account information of
- 18 the generator/aggregator. As a verifier we
- 19 shouldn't be able to go in and initiate trades on
- 20 behalf of these other parties. We charge a flat
- 21 fee, we don't charge based on any of the benefits
- 22 or the REC trading or anything like that. So
- 23 it's important that we have a system in place
- 24 that is liquid, that's trusted, that allows for

90

- real price discovery and that comes in at a
- 2 minimal cost.
- 3 The REC markets today, as Page 6 shows,
- 4 with self reporting is expensive, it's not timely
- 5 and it has a low level of trust. Under Option A
- 6 we can have a low cost transparent market, it's
- 7 automatic, timely, we can have the data entered
- 8 the day the period closes and it's highly
- 9 trusted. Most important we can provide a whole
- 10 bunch of other benefits through monitoring
- 11 besides this REC trading that's critical to the
- 12 success of renewable energy products.
- 13 I can tell you anecdotally that we've
- 14 had projects come on line that in the case of
- 15 solar projects, one project here in Rhode Island,
- 16 when we first went on line we had a four inverter
- 17 systems, two of the inverters were not working
- 18 and nobody knew it, so through monitoring we can
- 19 pinpoint and improve the actual production of
- 20 energy.
- 21 We had another case here in Rhode
- 22 Island that because one of the components wasn't
- 23 working properly, the stand-by losses on the
- 4 system were equaling 38 percent of the daytime

- energy production. So there's a whole lot of
- 2 ancillary benefits that you can enable by
- encouraging the actual use of monitoring services
- 4 that include the REC reporting.
- 5 I guess the other thing I can tell you
- 6 is that we found in REC contracts that were --
- 7 that we've been called to help address,
- 8 especially on larger commercial projects, there's
- requirements in the contracts between buyers and
- 10 sellers outlined on Page 10 here with clauses
- 11 like the seller will provide access to an on line
- 12 reporting and monitoring system that reports
- 13 generation from its operation and the seller will
- 14 notify the buyer of any material outages,
- 15 breakdowns or inoperability of the system.
- 16 That's something that many of our clients are
- 17 buying our services because of this stuff anyway.
- 18 We've got the data and it's an extremely small
- 19 cost. We currently charge \$30 a year to do all
- 20 the REC reporting and that could be automated as
- 21 well as at the same low cost.
- 22 So in summary, we encourage you as
- 23 would our competitors that are providing this
- 24 service to consider that the REC markets need the

92

same level of trust that other markets need and

that also providing these -- this verification at

- 3 low cost is absolutely critical, especially for
- 4 small generators.

20

23

- 5 The final comment I have is in response
- 6 to the gentleman from APX is that the job of the
- NEPOOL GIS is to respond to the needs and
- 8 requirements of regulators like yourself. It's
- 9 not your responsibility to respond to the
- 10 convenience of the GIS, and as these markets
- 11 emerge, and one of my partners was involved back
- 12 in '97 creating the first REC market in the
- 13 country, a retail voluntary market, but as these
- 14 markets emerge and mature we're learning from
- 15 them. Recently we've seen serious challenges in
- 16 the Connecticut market where a year ago we were
- 17 seeing REC prices up at \$8; today they're down at
- 18 \$6 because of some less than ideal details in the

believe that you have an incredible opportunity

New England and we encourage you to request, as

- 19 implementation of the regulations. And we
- 19 Tilipi elleritati ori ori the regurations. And we
- 21 right here today to greatly strengthen not only
- 21 Tright hore today to greatry strongthen het om
- 22 the REC markets for Rhode Island but for all of
- 24 Ms. Perez suggested in the letter that we

- 1 so-signed, we encourage you to request that the
- 2 markets committee make what, in fact, is a very
- 3 small change and what I know APX already has the
- 4 technical capability to do that allows data entry
- 5 in a very standardized format from verifiers.
- 6 COMMISSIONER HOLBROOK: Mr. Unger, is
- 7 there a large quality market of companies or
- 8 people who do this independent work that you
- 9 described?
- 10 MR. UNGER: It's an emerging field,
- 11 quite honestly. One of the first companies that
- 12 did the monitoring was actually Ms. Perez's
- 13 company. CSG has a subsidiary that monitored
- 14 their own projects, did an excellent job of that.
- 15 They're realizing the need to have that service
- 16 be somewhat more independent because of this
- 17 whole issue of trust in the REC markets. As she
- 18 mentioned, they've got well over 100 sites that
- 19 they're managing themselves. There's several
- 20 other companies that do it. There's a very
- 21 strong competitor in Europe. As I mentioned, our
- 22 own company, Draker Labs and Heliotronics are all
- 23 co-signators to this letter.
- 24 I think the more interesting thing I

- 1 Your comments are very appropriate and thank you
- 2 very much. We've had six speakers thus far or
- 3 six people in public comment. We have eight
- 4 left. What I'd like to do is take about a
- 5 ten-minute break and come back at 11:45 and see
- 6 how fast it goes and maybe it will conclude
- 7 before lunch or maybe we'll have to come back.
- 8 (RECESS)
 - COMMISSIONER HOLBROOK: Could we begin
- 10 again please? The next speaker would be Bill
- 11 Short.

9

13

- 12 WILLIAM P. SHORT, III (Sworn)
 - MR. SHORT: My name is William P.
- 14 Short, III. My business address is Ridgewood
- 15 Power Management, 947 Linwood Avenue,
- 16 L-I-N-W-O-O-D, Ridgewood, New Jersey, 07450. I
- 17 thank you for the opportunity to speak here. I
- 18 just basically want to go over just really a few
- 19 subject matters addressing things that I think
- 20 two of the items we haven't heard and a third
- 21 item essentially we've heard a lot on already
- 22 today.
- 23 With respect to Section 3.22,
- 24 Subparagraph 5 and Subparagraph 6, we believe

94

- can report is as the REC markets themselves
- 2 strengthen and become a place where real dollars
- 3 are changing hands, you're going to see more
- 4 players enter the field. There's any number of

players in very similar related service areas and

- 6 there's, you know, the REC markets are just
- 7 getting to the point to actually encourage this
- 8 at a large scale, but I can tell you that the
- 9 monitoring services that this REC reporting
- 10 system is a very small part of is rapidly growing
- 11 and most of renewable generators, solar, wind and
- 12 fuel cell generators are rapidly getting involved
- 13 with it and many of them are realizing the
- 14 benefit to this third party independence not only
- 15 for REC trading, for selling and billing
- 16 electricity to host facilities and also for third
- 17 party warrantee services and warrantee
- 18 veri fi cati on.

- 19 COMMISSIONER HOLBROOK: Does that
- 20 conclude your commentary?
- 21 MR. UNGER: Unless you have anything
- 22 further.
- 23 COMMISSIONER HOLBROOK: Are there any
- 24 other questions? Thank you very much, Mr. Unger.

- still that there should be some additional
- 2 language added into the regulations which
- 3 essentially should clarify the intent of the
- 4 statute on this matter.
- 5 If you -- referring back to the actual
- 6 language itself, there's a requirement that you
- 7 have to demonstrate ten percent increase in
- 8 generation in capacity in order to get that
- 9 generation to qualify as new renewable
- 10 generation. When we drafted, you have the
- 11 language, we split that in the regulations trying
- 12 to address two issues. No. 1, a base Load
- 13 generation such as the Johnston Landfill, which
- 14 we operate, as well as also trying to handle the
- 15 issue of hydroelectric facilities. And the
- 16 talking points that I distributed to you we've
- 17 actually addressed these two issues.
- 18 We believe that, and I'll go first to
- 19 the hydroelectric side. In the current
- 20 regulations, proposed regulations, it states that
- 21 you get a renewable new percentage to the extent
- 22 you've made capital improvements. We have
- 23 hydroelectric facilities that we believe we will
- 24 be able to show through efficiency improvements

1 that they are 100 percent new for purposes of

2 this section. The way this section currently

3 reads, if that is true, then 100 percent of an

4 existing facility an efficiency improvement will

5 be completely new renewables. We don't think

6 that is the intent of the statute here. Okay?

 $7\,$ And therefore, the phrase that we suggest needs

8 to be added in there will catch that point.

9 We also -- let's go back to the base

10 load capacity such as the Johnston Landfill,

11 which we currently own. We believe on that

12 facility by 2007 we'll be able to demonstrate

13 through capital improvements, efficiency

14 improvements that 80 percent of the total

15 generation up there essentially is post 1997

16 improvements. Okay? Again, so that facility

17 will be -- well in excess of this historical

18 baseline will be considered new almost. Of the

19 $\,$ 200,000 megawatt hours we anticipate will be

20 produced there, 160,000 would be deemed new.

21 Now, we think that again we began to focus on

22 this hole here in the regulations. We think that

we should add this language.

23

24

Going back again to the statute, it's a

1 only person that should be in this field until

2 such time in the future as you can clearly say

3 that there's been a mistake keeping it in the

4 electric distribution company should be such

5 entities. In NEPOOL they are clearly qualified

6 as meter readers; there's clearly a procedure. I

7 look over, I see Narragansett. I know

8 Narragansett is not going to be an entity that's

9 going to be swayed by essentially a business.

10 Narragansett is not going to basically move away

11 from its primary purpose to essentially

12 incentivize people like me who go into solar or

13 other distributed generation to essentially curb

14 the meter is the term in the trade, curb the

15 meter, the wrong way. I think Narragansett does

16 a very good job of reading meters. They are

17 capable of doing this. They charge reasonable

18 rates and there's no reason to move away from

19 them toward essentially entities that might be

20 swayed otherwise. The integrity of this market

21 is at stake. We cannot tolerate essentially any

22 fraud taking place here.

23 Last but not least, we have submitted

24 another marked up version. There's lots of

98

ten percent increase in essentially the

2 generation. Okay? So our landfill we think it

3 just should be evident that we should be able to

4 demonstrate a ten percent minimum increase in our

5 $\,$ production above our historic baseline before we $\,$

6 get any generation, but to the extent we go above 7 our historical baseline. Let's say, using that as

7 our historical baseline, let's say, using that as 8 100, to the extent we go above 100 but we exceed

9 110 initially, everything above 100, that is the

10 intent. We cannot see how the regulations are

11 written now anything above 100 provided I have an

12 efficiency or capital improvement goes into

13 essentially as new renewables. That's the intent

14 of these comments here. We'll make these as

15 written comments.

16

17

With respect to -- changing to the next subject, Section 6.8, we endorse Option B.

18 Option B we think is the right way to go. It

19 needs one sole change. The verifier should be an

20 electric distribution company. We have been in

21 this business long enough. Ridgewood has been in

22 renewables since the mid 1980s. We have dealt

23 with electric distribution companies. We have

4 dealt with small projects. We believe that the

typographical, clerical errors. They have them

2 at the back. We would like to suggest that it

3 might make sense that a group of people from the

4 working group, at least three, sit down and work

5 with the Commission staff to make sure that the

6 errors are taken out. These are grammatical

7 errors. There are no spelling errors, thank God,

8 but essentially, we should try to clean them up.

9 We've marked them up for you. Again, we're not

10 trying to say that people can't correctly edit

11 the work, but it's good that we essentially found

12 them. We need to get them removed from the

13 document as soon as possible. With that, that

14 concludes my comments. I'll be glad to take

15 questions and we obviously support it. We will

16 be filing written comments on the 24th.

17 COMMISSIONER HOLBROOK: Are there any

18 comments? I think your points are well taken,

19 Mr. Short, and the information you've given us is

20 comprehensive. So I don't have any questions

21 myself. If not, I thank you for your commentary.

22 MR. SHORT: You're welcome.

COMMISSIONER HOLBROOK: The next

24 speaker is Erich Stephens.

1 ERICH STEPHENS (Sworn)

3

2 MR. STEPHENS: Erich Stephens. I'm the

Executive Director of People's Power & Light

- 4 which is at 17 Gordon Avenue in Providence.
- 5 Thank you for the opportunity to speak here.
- 6 People's Power & Light, I just want to make
- 7 clear, is an environmental group. In one sense
- 8 we did represent the Environment Council of Rhode
- 9 Island in the rule making committee process but
- 10 we are also at the end of the day a consumer
- 11 organization. Our lifeblood is consumers, small
- 12 consumers, and we are as concerned with rate
- 13 increases and so on as anyone else. And so I
- 14 just mention that in the context of some of the
- 15 earlier comments that were made that consumers
- 16 weren't represented in the rule making process.
- 17 I'd like to think that we did an
- 18 excellent job doing that and certainly there was
- 19 opportunity for others if they had chosen. So we
- 20 thank the Commission and appreciate the
- 21 opportunity for commenting on these rules and we
- 22 -- the Commission did a great job in coming out
- 23 with the proposed regulations in a timely manner.
- 24 And as background I want to point out

102

10

23

- again that the renewable energy standard coupled
- 2 with energy efficiency is the long-term energy
- 3 affordable policy we have available to us. I
- 4 haven't heard of any other plan aside from
- 5 increased use of renewables and increased
- 6 efficiency that in the long term is going to get
- 7 us out of the crunch we're in now of our reliance
- 8 on fossil fuels and the ever-increasing prices.
- 9 Certainly assistance programs for low income
- 10 consumers are important in the near term as are
- 11 short-term ways of procuring our energy, having a
- 12 portfolio going long, going short and so on, but
- 13 in the years ahead no amount of taxpayer subsidy
- 14 or other efforts are going to get us out of our
- 15 overdependance on fossil fuel. The only
- 16 solutions are increased use of renewables and
- 17 energy efficiency and I think the Commission
- 18 recognizes that, and so again, I commend you for
- 19 coming out with these regulations.
- 20 We do have two areas of concern. And
- 21 the first, I hate to say it, is regarding Option
- 22 A and Option B. I know you've heard a lot about
- 23 it already. And we are in favor of Option A and
 - 4 the question that came out at an earlier meeting

- was exactly how much are we talking about here in
- terms of, you know, kilowatt hours and so on, and
- 3 the answer is right now, frankly, not a lot, but
- 4 the important thing to keep in mind is that
- 5 there's enormous potential out there. You heard
- 6 a lot of people talking about how we could move
- 7 to more distributed generation arrangements and
- 8 the benefits of that. So we want to make sure
- 9 that the rules that we put in place right now are
- 10 ready so that if we do go to a world where more
- 11 distributed -- lots of smaller generators that
- 12 have big central plants that the rules are in
- 13 place to make that happen. So that's really what
- 14 we're talking about now. And it's not very often
- 15 that you have an industry that asks to be
- 16 regulated. Most businesses, most industries are,
- 17 you know, they fight regulations at any
- 18 opportunity.
- 19 And as I see it, there's really two
- 20 reasons why, in fact, the REC market as we've
- 21 been hearing here today, the players are asking
- 22 basically what amounts to increased regulation.
- 23 There's two reasons why they do that. One is to
- 24 level the playing field among the different

104

- competitors to ensure competition, and so that
- 2 everybody has a fair shot, and of course, at the
- 3 end of the day competition is good for consumers.
- 4 The other reason would be to maintain the public
- 5 trust and confidence in the industry itself. And
- 6 so long as the regulations are, in fact, good,
- 7 solid ones and not just window dressing, then
- 8 that's also good for consumers. And so that's
- 9 exactly what you have here today.

You have this letter that was handed to

- 11 you earlier of which we are a signer, if you look
- 12 at it, you'll see that it's people from up and
- 13 down the supply chain starting with the
- 14 generators to the people that will be handling
- 15 the data, to the people that install it, these
- 16 systems. Up and down the supply chain these
- 17 industry participants want to see this change
- 18 made, and the reason for that is, again, because
- 19 they want to see their industry work, they want
- 20 it to be -- have the confidence of the general
- 21 public and industry at large and for that reason
- 21 public and madely at range and for that reason
- 22 they're asking for Option A.
 - And again, to be explicitly clear, the
- 24 only difference between Option A and Option B, it

- has nothing to do with Narragansett being a meter
- reader. If Narragansett wants to compete and 2
- offer that service, great, but the only 3
- 4 difference between Option A and Option B is that
- 5 with Option A the people reading the meter, the
- verifiers are actually entering the data into the 6
- 7 GIS. With Option B, it still goes through the
- people that would financially benefit from the 8
- meter reading so there's always going to be that
- 10 open question. As we heard about curbing the
- 11 meter or whatever the term is that you could
- easily envision a similar situation where, you 12
- 13 know, somebody mistypes that's entering the data.
- If it's done by a third party, there's no
- 15 question and there's no nefarious purpose behind
- it or something like that. 16

17

- So with that in mind we're asking you
- 18 to do two things. One is to submit this model
- letter that we've provided, or something like it, 19
- 20 to the markets committee. Again, the gentleman
- 21 from APX himself said that they're not agnostic
- 22 about exactly how this works, they're more
- 23 interested in serving their clients which is the
- 24 GIS. The GIS system is there to help regulators

- both be impractical, it would be inaccurate and
- it would be unfair. It would be impractical in
- that there's general agreement the most cost
- effective way to get RECs, to obtain a REC is to
- 5 enter into long-term contracts for a bundle of
- energy and RECs -- and paying one price for both 6
- the RECs and the energy. And as Narragansett or
- anybody else might be moved to doing that, the
- question is then how do you know what's the REC
- 10 cost and what's the energy cost. The answer is
- 11 you can't. It's one price for both. Even if you
- were to come up with some formula for it, it's 12
- 13 just some formula, it's making something up and
- 14 who's going to want to take the headache of
- 15 actually trying to tangle out what's the REC
- 16 price and what's the energy price. It's not
- something that I'd want to ask National Grid, 17
- 18 Narragansett to do if only because it would add
- 19 administrative complexity to their job and at the
- 20 end of the day that's going to come back as a
- 21 cost to ratepayers. It would also be
- 22 inaccurate -- this requirement would also be
- 23 inaccurate because it doesn't portray the savings
- that accrue to ratepayers that would aggregate to 24

106

- such as yourselves to do your job. We don't want
- a markets committee, some markets committee, who
- 3 knows who's on them, dictating to Rhode Islanders
- the rules for implementing this Rhode Island RES.
- It should be the other way around where the GIS 5
- system is getting feedback from the regulators
- 7 and hearing what the regulators believe needs to
- 8 be the proper way to get this data into the GIS
- 9 and then the GIS and APX in turn responding
- 10 appropriately. We ask that you write this letter
- 11 and then we also ask that you simply tweak the
- 12 wording in Section 6.8 to say that instead of
- 13 re-examining the question if changes are made
- 14 that you would make more explicit, that if these
- 15 changes are made at the GIS that the Commission
- 16 would, in fact, require Option A and put that in
- 17 pretty much as a matter of course once those 18 changes are made at GIS.
- 19 The other area of concern to us is the
- 20 requirement that the so-called incremental cost of compliance be itemized on the bill. And we 21
- 22 agree with National Grid that this requirement is
- 23 not a good idea. And the reason for that is we
- respectfully suggest that requiring this would

- them over time and across society even if one
 - particular consumer might not be getting a
 - 3 savings, you know, the whole idea of the
 - renewable energy standard is that collectively we
 - benefit from having a broader, more diverse
 - source of energy sources. That savings isn't
 - reflected there. Basically, you're only getting
 - part of the picture by reporting one number on a
 - bill. It's missing a lot of different benefits,
 - both savings and costs, that aren't reflected in 10
 - that one number. And as was pointed out earlier, 11
 - 12 it, of course, totally ignores the health costs
 - 13 and other societal costs that come from using
 - fossil fuels, and finally, it's unfair, too, 14
 - 15 because it's -- it hinders an apples to apples
 - comparison of the different products that are 16
 - available out there. If we're truly serious 18 about a competitive market, we want to be able to
 - 19 make it so that somebody can open up their bill,
 - 20 see their standard offer charge and pick up the
 - phone to some other company and get a price and 21
 - be able to easily compare it and if we're forcing 22
 - the one -- the standard offer as the only place 23
 - where you sort of have to break out this cost, 24

- 1 it's unfair to marketers that want to try to
- 2 compete against that standard offer and then --
- 3 so you might say well, let's make everybody break
- 4 out that cost. Well, that's akin to telling a
- 5 manufacturer that, you know, when you give a
- 6 price to, say, a car manufacturer, when you give
- 7 the consumer the price, you have to tell them
- The consumer the price, you have to terr them
- 8 what your cost of goods are, you have to tell
- 9 them what the costs of steel are and that's
- 10 obviously not a place we want to go and that's
- 11 not good in a free society that we have.
- 12 Finally, if you're going to show the
- 13 REC compliance cost, why not show all the other
- 4 costs that go into the standard offer, the fuel
- 15 price index and administrative cost and
- 16 everything else, and it's just a slippery slope
- 17 and it would increase costs to Narragansett and
- 18 ultimately to consumers and would have very
- 19 little value to consumers because, again, they're
- 20 only getting part of the picture if you were to
- 21 put that one number on their bill. So we agree
- 22 with National Grid that the compliance cost
- 23 should simply be rolled into the standard offer
- 24 price and left at that. And so I guess that's --
 - 110
- that concludes my comments.
- 2 Again, I just want to say that as was
- 3 mentioned earlier there are lots of experts in
- 4 this state. Mr. Grasso is perhaps one, but there
- 5 are many others and I would just remind the
- 6 Commission of that. As you're considering this
- 7 issue of long-term contracts, for example, ${\rm Mr.}$
- 8 Grasso himself said you want to have a diverse
- 9 portfolio. Right now we do not have a diverse
- 10 portfolio. We're essentially only taking
- 11 short-term positions and a big part of what the
- 12 REC is about is diversifying, in aggregate
- 13 diversifying our portfolio of energy services and
- 14 so long-term contracts can be an important way of
- 15 doing that as well, particularly if we're with a
- 16 renewable generator where you can realistically
- 17 expect them to deliver a fixed price 10, 15,
- 18 20 years into the future which I simply can't do
- 19 with a fossil fuel generator. Even if you enter
- 20 into a long-term contract, they're going to put a
- 21 fuel index into it.
- 22 MS. WILSON-FRIAS: Mr. Stephens, I just
- 23 had one question, and I'm only going to pick on
- 24 you because you come before the Commission a lot.

- 1 Did you follow the last standard offer process at
- 2 all?
 - MR. STEPHENS: I attempted to.
- MS. WILSON-FRIAS: I think at the tech
- 5 session, and maybe it wasn't at the tech session,
- 6 but that folks agreed that during the remainder
- 7 of the standard offer period the REC requirement
- 8 is going to end up adding to the standard offer
- 9 charge. Would you agree with that at least
- 10 through 2009? Because Narragansett is not
- 11 currently required -- their suppliers aren't
- 12 currently required to provide RECs.
 - MR. STEPHENS: In that short time
 - period, right, there probably would be some
- 15 increase, but to point to the short-term market
- 16 that's out there right now, I think that's
- 17 i naccurate.

13

- 18 MS. WILSON-FRIAS: Why?
- 19 MR. STEPHENS: Because, first of all,
- 20 even just going on a relatively short contract
- 21 like a year even or certainly two or three years
- 22 you can get better prices that are out there in
- 23 the short-term spot market right now for RECs, so
- 24 to lock up what a broker is quoting for a one off
- 1 spot market sort of price and assume that you
- 2 multiply that by your obligation for three years
- 3 is not indicative of the kinds of prices you'd
- 4 have to pay if you were to go out and have an RFP
- 5 for a three-year supply. It's not quite
- 6 accurate.
- 7 MS. WILSON-FRIAS: Maybe I'm
- 8 misunderstanding something, but Narragansett
- 9 currently gets standard offer for its standard
- 10 offer customers. Okay. And right now the
- 11 suppliers aren't required to provide renewable
- 12 energy certificates bundled with that.
 - MR. STEPHENS: The standard offer
- 14 suppliers you mean?
 - MS. WILSON-FRIAS: Right.
- 16 MR. STEPHENS: Yes.
 - MS. WILSON-FRIAS: I assume that
- 18 Narragansett is not going to get these RECs for
- 19 free.

13

15

17

20

- MR. STEPHENS: No.
- 21 MS. WILSON-FRIAS: So even if the RECs
- 22 are really cheap, it's still going to add
- $\,$ 23 $\,$ something to the standard offer price.
 - MR. STEPHENS: Right. I'm agreeing

with that. What I'm saying is pointing to the spot market is not the right way to assess what 2 3 that cost would be. 4 MS. WILSON-FRIAS: Well, I'm not 5 talking about what that cost will be. I'm just saying that there will be an added cost. 6 7 MR. STEPHENS: In that short time 8 frame. 9 MS. WILSON-FRIAS: Through 2009. 10 MR. STEPHENS: (Nodded affirmatively). 11 MS. WILSON-FRIAS: So part of what the 12 Commission is going to be looking at through the end of 2009 is this incremental cost which 13 14 ratepayers are going to see on their bill 15 regardless of the benefits that they may be 16 receiving in their health and reduced fossil fuel 17 emissions, et cetera, correct? 18 MR. STEPHENS: Say that again. Can you 19 ask that again? 20 MS. WILSON-FRIAS: The standard offer 21 charge is going to have another component to it. 22 MR. STEPHENS: Right. 23 MS. WILSON-FRIAS: So when the General

Assembly comes in and tells us that we shouldn't

long-term contracts because -- for the reasons 2 that they've stated. And we would encourage them to do so. We understand why they're saying they 3 shouldn't or couldn't, but really in my opinion at the end of the day in the long term the best 5 solution is legislative. We need to either -- we 6 7 need to acknowledge right now where these poor 8 small consumers are. Competition is not working and it hasn't worked, so maybe it's time to 10 revisit it and see if we shouldn't look at some 11 sort of arrangement where consumers can benefit more directly from things like renewable energy 12 13 standards and from long-term planning and everything else that would go into thinking 14 15 intelligently for the next 5, 10, 20 years about 16 what's best for small ratepayers, and I guess one 17 -- one example I would point to, and I was told 18 that Pascoag's standard offer is significantly 19 less than National Grid's, and you would probably know better than me if that's true, I haven't had 20 21 a chance to see it, but if that's the case, I 22 think it's a great example of how a supplier to

small customers by entering into intelligent

contracts and thinking beyond just the end of the

23

24

23

24

114 raise rates like they did in the last case and when the Governor comes in, what would you 2 3 suggest the Commission respond if the increase 4 has something to do with this? 5 MR. STEPHENS: I honestly think that 6 the National Grid and ratepayers in Rhode Island 7 are in a rock and a hard place where in some ways 8 they have the worst of both worlds. They can 9 take long-term contracts, they can't get the 10 price stabilization, the price hedging benefits 11 of entering into long-term contracts through 12 renewable generators, they're sort of handed the 13 short-term price and so without -- and that's a 14 result of the original deregulation legislation. So I would be in favor of revisiting the original 15 16 deregulation legislation. If you're asking me 17 what I would tell a legislator, that's what it would be. We have a broken system. We're not 18 19 really -- deregulation was supposed to see competition where consumers, residential 20 21 consumers could be choosing between different 22 companies competing for their business, we're not seeing that, and meanwhile, National Grid isn't 23 really in a place where they can go out for

116 next year, the next two or three years can deliver benefits to ratepayers and the RES is one 3 component of that. MS. WILSON-FRIAS: Pascoag is in a 4 unique situation being a non-investor owned 5 utility. They have some advantages that 7 investor-owned utilities don't have. 8 MR. STEPHENS: Maybe all Rhode 9 Islanders should get those benefits, too. 10 MS. WILSON-FRIAS: One last question. Through the end of 2009, and I'm not talking 11 12 about beyond 2009, we will be able to see what 13 those incremental costs are? 14 MR. STEPHENS: The REC costs? 15 MS. WILSON-FRIAS: Right. Through 2009. 16 17 MR. STEPHENS: Right. 18 MS. WILSON-FRIAS: Okay. Thank you. 19 COMMISSIONER HOLBROOK: Are there any 20 other questions? If not, thank you, Mr. 21

Stephens. 22 MR. STEPHENS: Thank you.

COMMISSIONER HOLBROOK: The next

speaker is Tom Bessette.

- 1 THOMAS BESSETTE (Sworn)
- 2 MR. BESSETTE: My name is Tom Bessette.
- 3 I'm Director of Regulatory and Government Affairs
- 4 for Constellation New Energy and my business
- 5 address is 800 Boylston Street in Boston,
- 6 Massachusetts, 28th Floor, 02199. Good morning,
- 7 Commissioners. Good morning, staff. It's a
- 8 pleasure to be here. Thank you for the
- 9 opportunity.
- 10 My company's Constellation New Energy.
- 11 I want to give a little bit of who we are. We
- 12 are a non-regulated power producer in the State
- 13 of Rhode Island. We're also a licensed retail
- 14 supplier in 17 states and two Canadian provinces.
- 15 We currently provide over 15,000 megawatts of
- 16 electricity supply directly to businesses
- 17 throughout the country for their own use,
- 18 including many customers here in Rhode Island. I
- 19 believe we have about 100 megawatts of load in
- 20 Rhode Island presently.
- 21 We are a subsidiary of a larger group
- 22 called Constellation Energy Group. That's a
- 23 Fortune 200 company headquartered in Baltimore,
- 24 Maryland. The subsidiaries of Constellation
 - 118
 - Energy Group include Constellation Energy
- 2 Commodities Group, that's a wholesale supplier of
- 3 electric power to many of New England's
- 4 businesses for their standard offer or their
- 5 basic load for traditional standard offer, or
- 6 whatever they're calling it in the state at the
- 7 time. We also have a utility company called
- 8 Baltimore Gas & Electric, and we have a
- 9 generation group that owns a fleet of generation
- 10 plants mostly in the PJM region, Maryland region.
- 11 As an initial matter I would just like
- 12 to say that Constellation generally is supportive
- 13 of renewable energy portfolio standards across
- 14 the country. We do have considerable activity in
- 15 both Maine and Massachusetts in New England.
- They both have RPS requirements and we functionseamlessly in those markets.
- 18 Further, I would just say initially
- 19 that my quick review of the regulations are that
- 20 they are similar to what I've seen in other
- 21 states and that they are generally reasonable.
- 22 However, we do have one more area of concern and
- 23 that's the sole reason why I'm here today. It's
- 24 related to Section 8 entitled contracting

- standards and procurement plans.
- 2 In particular, we take issue with the
- 3 language that allows or actually, in fact,
- 4 requires utility companies to enter into
- 5 long-term contracts for RECs and energy and to
- 6 recover those rates from ratepayers. You'll find
- 7 that language in Sections 8.3 through 8.7. The
- 8 concern we have is basically two-fold.
 - First, it seems to me that allowing
- 10 utilities to enter into, or again, requiring
- 11 utilities to enter into long-term contracts for
- 12 RECs and energy once again raises the ugly
- 13 specter of another round of stranded costs. When
- 14 Rhode Island restructured its electricity market
- 15 I think about some nine years ago, the first in
- 16 the New England region to do so, utilities
- 17 divested their generation plants, they divested
- 18 their purchased power contracts and for that they
- 19 were allowed to recover their stranded costs that
- 20 were associated with those generating plants and
- 21 those out of money purchase power contracts. And
- 22 it seems to me one of the precepts of the
- 23 restructuring law was to remove or unbundle
- 24 generation from transmission distribution. And
- 1 one basic reason for that was to once and for all
 - 2 remove the risk of a future round of stranded
 - 3 costs away from the ratepayer and put it on the
 - 4 backs of companies like people who supply power,
 - 5 retail suppliers and wholesale suppliers and our
 - 6 shareholders. So requiring utilities to enter
 - 7 into long-term contracts with renewable
 - 8 developers would once again place that risk of a
 - 9 bad or uneconomic decision on the backs of Rhode
 - 10 Island ratepayers.

- Secondly, and I think perhaps more
- 12 important from the perspective of the Commission,
- 13 it seems to me that the rationale for this
- 14 requirement would generally be that without such
- 15 a requirement for utilities to enter into
- 16 long-term contracts, perhaps the renewable energy
- 17 industry would not flourish in Rhode Island,
- 18 would not flourish in New England generally. In
- 19 other words, we need some government mandate,
- 20 some long-term contract mandate to get those
- 21 companies up and running. I'm here today to
- 22 state that it's my opinion, and I believe based
- 23 by the facts, that the marketplace will solve
- 24 that problem. Companies like Constellation New

- Energy will enter into long-term contracts with
- 2 renewable developers thereby providing the
- necessary financing for those plants as you go 3
- forward. 4

22

- 5 Now, that's not just a theoretical
- statement. We, in fact, have done that, we're 6
- 7 doing a lot more of it as time goes on. I'll
- 8 just mention three examples. Constellation New
- Energy has contracts with New Bedford
- 10 Commonweal th Energy, that's a 3.27-megawatt
- plant, it's a ten-year contract, it's in New 11
- 12 Bedford, Massachusetts. That project is up and
- 13 running and the output will produce 25,000 RECs
- per year approximately. We have two contracts
- 15 with Ammaresco in North Hampton, Massachusetts,
- 16 that's one megawatt; it's a ten-year contract
- 17 that will be up and running by the first quarter
- of 2006. That will produce approximately 7,800 19
- RECs per year. And the second one with Ammaresco
- 20 is a larger unit, seven megawatts, it's for ten
- 21 years, it's located in Delaware and that project
- will be up and running by January 2006 and it 23
- will produce some 55,000 PJM RECs per year in the
- PJM market. In addition, we have other contracts
 - 122
 - with renewable facilities. It's the business
- thrust of my company at this time to enter into 2
- 3 additional contracts for renewable energy and
- some of those are much larger than the ones I've
- 5 mentioned here today.
- 6 So it seems to me the argument that
- states renewable development will not occur 7
- 8 absent the government mandate that Narragansett,
- 9 National Grid, excuse me, enter into new
- 10 long-term contracts is simply -- the argument is
- 11 wrong, it's flawed.
- 12 So that I guess just to conclude, if
- 13 the requirement of forcing utilities to enter
- 14 into long-term contracts is unnecessary to meet
- 15 the requirements in the New England region, for
- 16 the reasons I stated and also I think in the past
- 17 in Massachusetts, for example, the Commissioner
- 18 of the Division of Energy Resources stated as
- 19 recently as of April 25th that he -- it was his
- understanding that there was sufficient 20
- 21 development of renewable developers to meet the
- 22 New England requirement including the new Rhode
- Island requirement, and secondly, if there's a 23
- real risk, and there is of new stranded costs by

- imposing that requirement, my question would be
- why impose the requirement. I will put this in
- written comments and file it by October 24th, and
- I thank you for the opportunity to speak this
- 5 morni ng.

6

16

- MS. WILSON-FRIAS: I just have a couple
- 7 questions. If National Grid were to enter into
- like a contract that was load following with 8
- RECs, how would they end up with stranded costs?
- 10 I mean, right now the standard offer contract,
- 11 for example, is set up so that it's load
- 12 following. If the load drops off, we don't pay
- 13 first, a minimum, same with last resort contract,
- and I'm curious how there would be stranded costs
- 15 in that situation.
 - MR. BESSETTE: Well, I think if you
- were to read Mass. Electric's comments that were 17
- 18 recently filed, I think their position was that
- there are two ways that you could incur stranded 19
- 20 costs, one through a migration of risk, which is
- 21 what you're talking about, the load following
- 22 risk, so if you're going to remove that, you
- 23 would still have the risk that when you purchase
- 24 today the price is higher than what it would be
- - out four, five or six or ten years from now and
 - that, in fact, is stranded costs, so there's two
 - ways to achieve stranded costs.
 - MS. WILSON-FRIAS: Then I asked Mr. 4
 - Grasso this question. Do you agree with him that
 - standard offer, which is a long-term contract,
 - has been below market, or do you not know?
 - 8 MR. BESSETTE: In Rhode Island?
 - MS. WILSON-FRIAS: Yes, in Rhode
 - 10 Island.
 - MR. BESSETTE: Well, you have standard 11
 - 12 offer and then you have the fuel adjustments that
 - Narragansett is allowed and I would -- without 13
 - 14 actually going through each year since its
 - inception, I would think that almost all the time 15
 - the standard offer cost alone was below the 16

 - 17 market price.
 - 18 MS. WILSON-FRIAS: Do you have any
 - 19 opinion as to the retail rate?
 - MR. BESSETTE: What about the retail 20
 - 21 rate?
 - 22 MS. WILSON-FRIAS: Whether or not that
 - 23 was still below market after the fuel adjustment
 - was added. Like, for example, it's 8.2 cents per 24

- kilowatt hour right now.
- 2 MR. BESSETTE: So when you say the
- retail rate, you mean the rate --3
- 4 MS WILSON-FRIAS: That customers are
- 5 seei ng.
- MR. BESSETTE: 8.27 cents today? 6
- 7 MS. WI LSON-FRI AS: Yes.
- MR. BESSETTE: Is that it with the fuel 8
- 9 adjustment?
- 10 MS. WILSON-FRIAS: Yes.
- 11 MR. BESSETTE: That's below market.
- 12 MS. WILSON-FRIAS: If the rate were 10
- 13 cents per kilowatt hour, would that still be
- below market, the rate that customers were seeing
- on their bill? 15
- 16 MR. BESSETTE: We're talking about
- 17 commercial/industrial, residential?
- 18 MS. WILSON-FRIAS: Everybody on
- 19 standard offer pays the same.
- 20 MR. BESSETTE: Well, I mean, if you're
- 21 talking about today 10 cents per kilowatt hour,
- 22 my company could not match, so it would be below
- 23 and I think that's true of all companies.
- would be below long-term contracts for energy
 - 126

- capacity that we have to pay for.
- 2 MS. WILSON-FRIAS: Okay. Thank you.
- 3 COMMISSIONER HOLBROOK: Any another
- 4 questions? Thank you, Mr. Bessette. The next
- 5 speaker is Debra Donovan.
- 6 DEBORAH DONOVAN (Sworn)
- 7 MS. DONOVAN: Deborah Donovan. My
- 8 business address is 2 Brattle Square, Cambridge,
- 9 Massachusetts. Good afternoon, and thank you for
- 10 the opportunity to provide comments today on the
- 11 proposed regulations for the Rhode Island
- 12 renewable standard.
- 13 I'm representing the Union of Concerned
- 14 Scientists. We're a national advocacy
- 15 organization, a non-profit, independent
- non-profit. We have staff in Cambridge, 16
- 17 Washington, DC, and also in Berkley, California.
- 18 UCS actively participates in the development of
- 19 renewable standards both at the national level
- 20 and in almost every state of the 18 or 20 states
- 21 that have adopted renewable standards around the
- 22 country, and I'm here to commend the Commission
- 23 and the members of the working group in their
- excellent work in arriving at a regulatory draft

- that has so many strong aspects to it.
- 2 We did provide written comments to the
- 3 regulation and today I just want to summarize
- briefly one of the points that has been raised by
- 5 other speakers and also that we address in our
- comments regarding long-term contracts. But I 6
- did want to say that in particular I found that
- 8 there's many, many aspects to this draft
- regulation that are so exemplary that we hope to
- 10 see many of them put into place going forward in
- 11 other states or in states that are considering
- changes to their existing renewable standards. 12
- So we are very supportive of the overall program 13
- design and many of the aspects of it. 14
- 15 Experience has shown around the country
- 16 and in other parts of New England that there are
- some significant disadvantages and risks 17
- 18 associated with procuring renewable energy
- certificates for RPS compliance solely on the 19
- 20 spot markets. We've experienced that in
- 21 Massachusetts where basically consumers are right
- 22 now paying the maximum possible price for RES
- 23 compliance when significantly less expensive
- options are proven to be available both through 24
 - 128
- the competitive market and through regulatory
- programs such as the Massachusetts Renewable
- 3 Energy Trust and deals that municipal utilities
- are also entering into that are showing that both
- contracts of a combination of energy and RECs or 5
- long-term REC contracts are coming in at the two
- 7 to three cent -- or maybe slightly more now, but
- 8 two to three cent range as opposed to the
- 9 alternative compliance payment which in
- 10 Massachusetts costs consumers \$14 million for the
- 2004 compliance year. That money will be 11
- 12 invested in long-term contracts for RECs,
- fortunately, but it is something that should be 13
- 14 done directly rather than taking this extra step.
 - The reason why long-term contracts for
- RECs or for RECs and energy are so advantageous 16
- 17
 - is they can stabilize the long-term energy prices
- 18 or even reduce them and they enhance the
- 19 environment quality of the other economic and
- 20 energy system reliability benefits that we get
- 21 from the construction of renewable energy in the
- 22 region and it has become a best practice
- 23 elsewhere and our written testimony describes
- some of the ways that other states have put that 24

- 1 into place and also gives some examples of how
- 2 long-term RECs and energy prices have actually
- 3 saved consumers money and could come in at prices
- 4 that are lower than standard offer. So that is
- 5 something that I would hope that the Commission
- 6 would consider and continuing to retain that
- 7 requirement for the procurement process to
- 8 include long-term contracts here.
- 9 We also believe that these long-term
- 10 contracts can be procured by utilities in a
- 11 prudent manner and that the regulations contain
- 12 some significant and very sufficient disclosure
- 13 and reporting requirements and as well as
- 14 competitive procurement procedures that would
- 15 keep this a transparent, open process, and so on
- 16 that point I do disagree very strongly with some
- 17 of the points that were made by the first witness
- 18 today. So it's especially important that
- 19 long-term contracts be part of procurement for
- 20 consumers that stay with the utility because
- 21 they're going to be, like, you know, small
- 22 industrial or commercial operations or
- 23 residential consumers that we don't expect to see
- 24 a competitive marketplace open up for them in any
 - 130
 - significant way and they should also be -- the
- 2 benefits of long-term contracts for renewables or
- 3 RECs and renewables should be available to them
- 4 and the only way to do that is to have the
- 5 utility that's providing them their service do
- 6 that. The renewable facilities themselves can
- 7 provide these price and supply stability benefits
- $8\,$ when they're under long-term contracts. They've
- 9 demonstrated the ability to do so. And it is in
- 10 fact true that long-term contracts are needed to
- 11 secure financing and there is a portion of the
- 12 market that will be getting that through their
- 13 competitive supplier, but there's such a vast
- 14 majority of consumers that don't have competitive
- 15 supply options and long-term contracts for the
- 16 renewables obligation for those consumers should
- 17 be considered. Our comments -- not considered
- 18 but retained in the regulations.
- 19 Our comments document several examples,
- 20 as I mentioned before, and some evidence from
- 21 $\,$ national Iab studies that demonstrate both the
- 22 need for and the benefits of long-term contracts,
- 23 so I'll just -- instead of going into the
- 24 details, I'll leave it to the Commission to

- review our submitted comments.
- 2 One of the benefits of the -- in
- 3 particular of long-term contracts is they do
- 4 offer a lower risk than going into the short-term
- 5 market for renewable energy or to any kind of
- 6 procurement for fossil energy because they don't
- 7 require a premium going out into the future to
- 8 secure a fixed price in the 10 to 15-year time
- 9 frame. They are in the best interest of
- 10 consumers because they help ensure renewable
- 11 energy does get built and we need that for fuel
- 12 diversity and other important economic and
- 13 environmental reasons. They bring significant
- 14 cost advantages and they don't in my opinion
- 15 provide or pose a stranded cost risk for several
- 16 reasons. One is that the RECs themselves are
- 17 fungible and will be in demand regardless of
- 18 whether the customers stay or go that there will
- 19 be somebody who is going to need those RECs to --
- 20 somebody is going to need those RECs to comply
- 21 with their -- comply with their RES obligation,
- 22 and so, you know, the original buyer of those
- 23 could just turn around and sell them. If they'd
- 24 been purchased under a long-term contract, that's
- 3
- 1 the lowest possible price that you can get for
 - 2 them and so the risk is extremely low that the
 - 3 sale price would be anything below what they were
 - 4 bought for if they were bought at the long term
 - 5 and with the prudent costs being recoverable,
 - 6 we're also talking about a pretty small fraction
 - 7 of the costs of supplying the total loads of the
 - 8 utility. The percentage that the RPS targets and
 - 9 also we're just talking about potentially a small
 - 10 premium if not a savings. That would be -- that
 - 11 would be the expenditure on the long-term
 - 12 contracts. And with the expectation,
 - 13 unfortunately, that there's not going to be a
 - 14 significant competitive market to get the small
 - 15 customers off of the utility that we feel that
 - 16 this is a very important feature of the program.
 - 17 That concludes my comments.
 - 18 COMMISSIONER HOLBROOK: Any comments?
 - 19 I have no questions. Thank you very much. The
 - 20 next speaker is Dennis Duffy.
 - 21 DENNIS DUFFY (Sworn)
 - 22 MR. DUFFY: Denni's Duffy with Energy
 - 23 Management, Inc., 75 Arlington Street, Boston.
 - 24 Energy Management, Inc., EMI, has been in the

- 1 energy business for roughly 25 years developing
- 2 and taking through project financing seven prior
- 3 energy projects. Most of those were in the
- 4 non-renewable fossil industry sector. We've
- 5 since sold all those plants and are now focussing
- 6 just on renewable energy development, largely in
- Tust on renewable energy development, rangery in
- 7 response to the RPS programs which have been
- 8 developed at the state level within the New
- 9 England states. We been actively involved
- 10 throughout this settlement -- this proceeding,
- 11 including the settlement sections, and would like
- 12 to commend generally the Commission and the staff
- 13 in the way the entire matter was handled from
- 4 start to finish.
- 15 I wanted to just say a few things about
- 16 that procedure in response to some of the
- 17 comments which were raised earlier which, taken
- 18 out of context, could be seen to put a
- 19 negative -- cast in a negative light the work
- 20 that's been done and the report that was filed
- 21 and actually the regulations which have been
- 22 proposed.
- 23 I would note that this working group
 - met for eight full sessions, including one

- 1 procedurally I think that's just not the
- 2 appropriate way to go.

8

- 3 In any event, on the merits we're
- 4 pleased with the way the regulations were issued.
- 5 My comments will be directed to the comments that
- 6 were raised today and we'll supplement our
- 7 comments within the stated time frame.
- On the first point that was raised by
- 9 Mr. Grasso as to whether it would be appropriate
- 10 for this Commission to exercise some oversight
- 11 role in how funds might be expended by the
- 12 renewable energy development fund, he raised a
- 13 legitimate point, but I would point the
- 14 Commission to Exhibit D1 to the report which was
- 15 filed by the working group which was a legal
- 16 memorandum of law addressing the very issues that
- 17 he raised. And essentially, what that memorandum
- 18 concludes, and what I think the majority
- 19 conclusion of the group was, was that the
- 20 question of who should have discretion over
- 21 funding or investment decisions of the energy
- 22 fund was specifically dealt with by the
- 23 legislature, and although he may -- certain
- 24 parties may not agree with how the legislature

134

- technical session with the Commission, and out of
- 2 those I believe everyone who had an interest or
- 3 point of view had every opportunity to make their
- 4 voices known. Mr. Grasso in particular I believe
- 5 testified today that he only attended two to
- 6 three of those nine sessions. So I think he as
- 7 well as anyone else had every opportunity to make
- 8 their views known, but I also think the
- 9 proceedings were handled in a very fair way.
- 10 Anyone who had a dissenting view was free to
- 11 include a dissenting provision within the report,
- 12 and I know in several places people did that. I
- 13 also think it was -- it's inappropriate at this
- 14 point in the proceeding to request basically that
- 15 a report worked on over many months be
- 16 disallowed. If any party had reason to believe
- 17 that a facilitator should have been disqualified,
- 18 the time to bring that up in a motion to
- 19 disqualify was many months ago, not at the close
- 20 of the proceeding which in effect would allow a
- 21 party that has a problem to wait and see what the
- 22 results of the proceeding are and only then after
- 23 the fact if they don't get the results they want
- 24 they could raise the issue. I just --

decided to do that, that question has been

- 2 settled in the law and a regulatory forum to
- 3 adopt rules to implement the law weren't seen as
- 4 a majority of the group to be the appropriate
- 5 time to question the decision of the legislature,
- 6 and I think that's why the issue ended up where
- 7 it was. It's not that people necessarily didn't
- 8 agree with him or wouldn't give him floor time, I
- 9 think the majority position, and the correct
- 10 position, is the law is clear on that point and
- 11 not in his favor.

12

Turning next to the question of

13 long-term contracts. Again, I think this is one

14 of the important issues of the entire proceeding.

- 15 | Think -- | believe | said it at the technical
- 16 session. Without long-term contracts there's
- 17 going to be such a practical difficulty in
- 18 getting new projects financed that we would be
- 19 unlikely to meet the goals set out by the
- 20 legislature. Now, again, I'd like to point back
- 21 to what the legislature actually said the
- 22 objective was in this case. And when I look at
- 23 the statute at 29-26-6, we have been charged with
- 24 developing standards for contracts and

- procurement plans for renewable energy resources
- 2 to achieve the purposes of this chapter, and
- those purposes are stated at Section 3 of the law 3
- to include stabilizing long-term energy prices 4
- and creating jobs in Rhode Island in the 5
- renewable sector. 6
- 7 Now, one of the things that was talked
- about this morning, and I think was recognized by 8
- 9 the different speakers, is that there's always an
- 10 inherent tension between stability and
- volatility. Short-term pricing is the most 11
- 12 volatile. It reflects the immediate spot market
- 13 price, but it also gives you the greatest
- volatility and the least amount of stability, and
- 15 I think in all prudent rate planning and
- 16 regulation there's always a balance between
- 17 reflecting the immediate spot pricing and giving
- 18 consumers the type of stability that's
- 19 appropriate from a public policy perspective.
- 20 And I think one thing that's been overlooked in
- 21 the comments to date, though, in this particular
- 22 instance where we're talking about a relatively
- 23 small portion of the overall supply portfolio,
- the specific objective of the legislature was to

that's going to get us to meet the goals that the legislature had in mind.

3 And finally, on stranded costs, I agree largely with Ms. Donovan's comments that stranded

5 costs really are a red herring issue here. To

say that any long-term purchase, even a small 6

portion of supply purchase going long term

creates stranded costs is really another way of

saying we should serve the public entirely on a

10 spot market with spot market pricing. The same

logic would apply to any decision to hedge at all 11

through any kind of portfolio plan, mid-range, 12

13 short-range planning. If anything other than

short-term purchasing with maximum volatility is 14

15 unacceptable because it could result in stranded

16 costs under some hypothetical scenario, we'd have

to revisit the way we do a lot of our regulatory 17

18 planning in Rhode Island.

For example, we've got a deregulated

20 natural gas market quite a few years ahead of us.

21 You could ask the question under that logic do we

22 want our gas companies supplying the public only

23 at spot market prices with short-term supply

contracts and interruptible or short-term 24

138

19

3

9

11

12

13

- stabilize long-term energy prices. So it's not
- to come up with the short -- the price that 2
- 3 reflects the spot market today. The objective of
- this exercise is to stabilize prices in the 4
- long term. And we believe and I think with most 5
- of the participants in the proceeding the best
- way to do that, get long-term stability, is
- 8 through long-term pricing which you only get
- 9 under long-term contracts.

7

10

Just a couple of other points. Mr.

11 Bessette for Constellation mentioned a study by

12 the DOER that showed there could be a surplus of

utilities -- of renewable energy in the future. 13

14 I would just point out that that study made no

15 analysis as to how many of those plants would

16 actually get financed and that's the huge

17 assumption. Proposals, even proposals which get

permitted are one thing. Proposals that then get 18

19 financed and constructed are an entirely

different matter and I do recognize, as he said, 20

Constellation has negotiated several contracts, 21

22 but my tally from the comments were two megawatts

of new production in New England. Now, that's 23

good, but it's certainly no where near the volume

140

pipeline contract? I don't think that's where we

want to go as a matter public policy.

In closing, I would say to put in the

right perspective we're talking about relatively

small percentages of supply starting at only two 5

percent of the overall electrical supply and in

light of the express statement of the legislative

purpose to stabilize costs on a long-term basis,

I believe long-term contracts just for this piece

10 of the supply or portion of this piece of the

supply is the best way to go.

And let me just add one final point to

put the whole thing into context. I will include

14 in our comments a report recently issued by ISO

15 New England identifying their heightened concern

with the reliability situation for the electric 16

17 grid in New England over the upcoming winter.

18 There is increasing concern at the ISO level that

19 the overdependance on natural gas as our primary

generating fuel is posing very serious 20

reliability questions for the winter going 21

forward. And when we look out several winters in 22

23 advance, one of the things we're going to have to

find is additional generation sources that don't 24

- put further stress on the natural gas supply 2 system and renewables really from what's proposed That's the only credible option on the 3 today. table. Thank you. 4 COMMISSIONER HOLBROOK: Mr. Duffy, is 5 6
- there any way that long-term contracts can be 7 altered so that the alterations mitigate the risk that has been identified with them, so you still 8 really have the characteristics of a long-term 10 contract, but it takes -- some of the alterations would take some of the sting out of it?
- 11 12 MR. DUFFY: Absolutely, Mr. 13 Commissioner. I think when we talk about long-term contracts, there's a whole range of 15 pricing structures that can be used in a 16 long-term contract, for example, we've done 17 long-term contracts on prior projects which had 18 certain elements of the pricing structure subject
- to periodic adjustment based on where different 19 20 market features were. Some of them were
- 21 referencing posted energy prices for gas, for oil, there are a lot of different ways you can do 22
- 23 it that can provide the stability and assurance
- that's needed to obtain project financing but in

- a way that mitigates the risk upon the purchaser 2 down the road.
- 3 COMMISSIONER HOLBROOK: Thank you. Are
- there any other comments? Thank you, Mr. Duffy. 4
- 5 If that concludes your remarks, the next speaker
- is John Farley.

13

14

15

16

17

18

19

- JOHN FARLEY (Sworn) 7
- 8 MR. FARLEY: My name is John Farley,
- 9 F-A-R-L-E-Y. My business address is One Richmond
- 10 Square, Suite 340D, Providence, Rhode Island,
- 11 02906, and I'm the Executive Director of the
- 12
- Energy Council of Rhode Island. Good afternoon, Commissioners. Thank you for the opportunity to provide comments in this proceeding. I also do want to commend the Commission for its setting up the process that they did. While I share a lot of the concerns of some of the speakers that talked about the perspective of the consumer, I don't share the
- 20 concern that the process was flawed other than
- 21 the fact that by the nature of things people who
- 22 have more of an interest in an outcome are going
- 23 to tend to spend more time on it. I don't know
 - how you overcome that. I do think that there are

- still issues on the table that need to be thought
- out from the point of view of the ratepayer and
- that's why I'm here today.
- 4 I represent the large users of
- 5 electricity and natural gas in Rhode Island,
- manufacturers, hospitals, universities, other 6
- 7 large entities. We employ about 70,000 Rhode
- Islanders and our objective is to hold the line 8
- on energy costs, and in particular in this
- 10 proceeding to make sure that any monies that are
- 11 collected from ratepayers actually provide those
- 12 long-term benefits that are stipulated in the
- 13 law. And because of that we, during the
- proceedings, the informal working group, we 14
- 15 really focussed on about three areas that have
- 16 been discussed today; the oversight of ratepayer
- money, contracts and procurement plans, and also 17
- 18 making sure that the Commission's adequacy
- 19 reviews had some specificity to them in order --
- 20 so that both the ratepayer and the development
- 21 community could have some expectation of how they
- 22 might be decided. And a lot of that has already
- 23 been provided in the record both at the technical
- 24 session as well as the document and the positions

23

that we took.

2 I do want to continue to emphasize to

3 the Commission the importance of every possible

means of overseeing the funds. I understand the

- legislature has spoken with respect to the 5
- structure of the renewable energy development
- fund itself, but I also recognize from the law
- 8 that there are opportunities for the Commission
- 9 and its oversight of what the utility does in
- 10 particular to make sure that when the money is
- passed off it's done in such a way that it's 11
- 12 clear what the intentions are, and I do think
- 13 that the intention is to make sure that that
- money collected from ratepayers, particularly in 14
- 15 the alternative compliance mechanism is spent on
- 16 new supply in some manner or fashion and whatever
- 17 kind of steps consistent with the Commission's
- 18 interpretation of the law can be made to increase
- 19 the probability that that happens I think is a
- step in the right direction. 20
- 21 With respect to the long-term
- 22 contracts, since that is quite an issue, I think that we in the document were in favor of at least
- 24 allowing that option to be considered in the

```
1 procurement process. I think that's the right
```

- 2 place and I think that -- I don't think you want
- 3 to tie the hands of whoever the procuring agency
- 4 is on behalf of ratepayers that they must only do
- 5 long-term contracts or that they absolutely have
- 6 to, because I think you want some flexibility in
- 7 order to get the best arrangements for customers
- 8 given the best information that can be provided
- 9 during that procurement process. And so that's a
- 10 nuance of language that I think has to be worked
- 11 out. I'm not sure to be perfectly honest what
- 12 that section now says so I think that to say that
- 13 long-term contracts should not be part of the
- 14 procurement is going too far in one direction; to
- 15 absolutely say that the procurement has to be
- 16 done with long-term contracts is going too far in
- 17 the other, but I think that they should be
- 18 allowed and that their merits be examined as part
- 19 of the procurement I think is on target.
- 20 I think other than that, the -- let's
- 21 see. Option A and Option B I refuse to comment
- 22 on. Other than that, I think that's pretty much
- 23 the only areas that we continue to have a concern
- 24 in. Oh, one more, actually, if I might be
- 146
- 1 allowed. With respect to recovery as a separate
- 2 line item, I think that customers should know. I
- 3 mean, this is an area similar to energy
- 4 efficiency and other places where the legislature
- 5 for a public policy purposes is asking ratepayers
- 6 to pay extra money and I think it's reasonable
- 7 that the ratepayers should know what they're
- 8 paying for what purposes. I haven't thought
- 9 through all the technical issues of being able to
- 10 identify what those actual costs are, and if
- 11 those are overwhelming, then so be it, but I do
- 12 think that the ratepayers have a right to know,
- 13 particularly with a legislative intervention,
- 14 what this cost is.
- 15 COMMISSIONER HOLBROOK: Do you think
- 16 some kind of a periodic maybe semi-annual or
- 17 annual two or three or four paragraph communiqué
- 18 from whoever would be an alternative to the
- 19 requirement to put the separate cents per
- 20 kilowatt on a billing that probably most people
- 21 would find confusing or not understand?
- 22 MR. FARLEY: Yeah. I think -- if
- 23 you're talking about a communication to
- 24 customers.

- 1 COMMISSIONER HOLBROOK: Yes.
- 2 MR. FARLEY: And where it's balanced,
- where it does identify some of the benefits that
- 4 were mentioned this morning, this is why we're
- 5 doing it, this is what we spent and this is what
- 6 it went to. Something very simple like that I
- 7 think would be appropriate, yeah. And the other
- 7 think would be appropriate, year. And the oth
- 8 thing, as an aside, I think this is more
- 9 appropriate for the actual rate making
- 10 proceeding. I do want to emphasize that since we
- 11 do have a competitive market that those costs
- 12 that are incurred on behalf of standard offer
- 13 customers or its successor services are always
- 14 charged only to the standard offer customers or
- 15 customers of the successor service because
- 16 otherwise you could have a situation where people
- 17 that are buying their supply from competitors are
- 18 not only paying for their own compliance in the
- 19 competitive supply but are also paying for the
- 20 compliance for other customers and I think we
- 21 want to make sure to separate those two streams.
- 22 COMMISSIONER HOLBROOK: Any questions
- 23 from the Commission? Thank you.
- 24 MS. WILSON-FRIAS: I just had one
- 1 question, actually.
 - 2 COMMISSIONER HOLBROOK: Sure. Go
 - 3 ahead.
 - 4 MS. WILSON-FRIAS: Mr. Farley, you
 - 5 indicated that with long-term contracts, to say
 - 6 no long-term contracts would be too far one way
 - 7 and to say only long-term contracts would be too
 - 8 far the other way. If I told that you the
 - 9 language said that long-term contract shall be
 - 10 made part of the electric utility distribution
 - 11 company's portfolio for procuring its target
 - 12 percentage, et cetera, et cetera, is that
 - 13 somewhere in the middle for you because it's part
 - 14 of a portfolio as opposed to one side or the
 - 15 other?

- MR. FARLEY: I think it is, but I think
- 17 that that language is going to be difficult to
- 18 interpret. In other words, if I have a long-term
- 19 contract for a kilowatt hour, have I fulfilled
- 20 the mandate, and I think that -- someone could
- 21 come before -- a utility in the future could come
- 22 before this Commission in a particular year and
- 23 have a great argument as to why they should not
- 24 sign any long-term contracts and I think that

ought to be considered.

2 So now as a practice, you're asking my professional opinion, yeah, I think a mix is the 3 4 way to go. If you look at, particularly in a 5 rising market, who's doing well and who's not, when you have a $\min x$ of instruments both short 6 7 term and long term, I think that is a much more 8 wise approach to procurement. So as a matter of 9 practice I think that will work, I just don't 10 know about how it will be interpreted and implemented. 11

12 MS. WILSON-FRIAS: Thank you. 13 COMMISSIONER HOLBROOK: Thank you, Mr. Farley. The next speaker is Chris Burnett. 14

15

16

17

18

19

20

21

22

23

5

7

9

their time.

CHRISTOPHER BURNETT (Sworn) MR. BURNETT: My name is Chris Burnett. My business address is 415 Sea Meadow Drive in Portsmouth, Rhode Island, and the company I work for is Spinblade Energy. First of all, since I participated in a majority of the meetings that occurred to develop these rates, I do want to state that I thought the meetings were run well and effectively and that Mr. Raab did a balanced job of trying to get the regulations put into

place as a second home that has reduced its cost

2 of electricity because of its long-term contracts for nuclear power.

4 Third, I think stability of pricing has 5 a great deal of merit for customers. Customers budget. Basically, they live on relatively fixed 6 7 incomes, maybe they accelerate by a small amount per year, but to live at the spot market rate 8 where you have extreme volatility in pricing has 10 a cost for consumers and does not make sense.

Fourth, if you are in the renewable 11 12 energy development business, you would know that renewable energy has a characteristic of being 13 heavy in capacity cost and light in ongoing 14 15 costs, particularly if you're talking about such 16 things as wind, water or solar energy which are the sort of pure renewable energies. And in 17 18 those cases you have to finance the capital 19 costs. In order to finance the capital costs you 20 typically would go in for some sort of a mix of 21 equity and debt and for the equity or for the 22 debt part of that or for the bank I oan you need 23 to have a very good debt to cover ratio in order to get banks to be interested. If you're going

150

24

place to reflect what the statute desired and I do not believe that the regulations would have 3 come into place on time and would have been effective without the means and the assistance of 4 somebody to coordinate the effort. There was an awful lot of work that was done by him to pull all the pieces together when you have a disparate 8 group of people that have many requirements on

10 Second, I do want to state that a mix 11 of long and short-term contracts have been proven 12 in numerous studies to assist in maintaining the 13 type of stability you want for pricing which is 14 good for the consumers which is the bulk of all 15 electric consumption in the State of Rhode Island and throughout most electric utility areas and 16 17 that in most businesses a long and short-term mix 18 is an appropriate way to reduce the overall risk 19 of troubles. If you don't believe that, take a look at the airline industry or those folks who 20 21 did not take long-term contracts in their fuel 22 and all the trouble those folks are having that 23 didn't do this and take a look at power in many

areas in New England where actually I live in a

to get the bankers interested, you must have

somebody cover that risk. Well, the guy, the

3 company that controls most of the money flow from

the customers is the utility in the State of

Rhode Island and without having this utility with 5

a very high credit rating backed with a long-term

contract the developers in the State of Rhode

8 Island will have a great deal of difficulty

9 meeting the standards required under the RPS or

10 renewable energy standard as it's called in the

state

11

24

12 Worldwide you'll find that government intervention was key to getting high levels and 13 14 accelerating levels of renewable energy 15 developed. If you look at the Danish market, which has very similar wind to Rhode Island as a 16 17 case in point, government intervention was key to 18 getting to the point where they're now delivering 19 about 25 percent of all of their electricity with wind energy which is probably one of the 20 principal sources of renewable energy you can get 21 in Rhode Island. Solar is much more difficult 22 and not cost effective in the state. The 23

geography precludes a whole lot of hydro,

16

- 1 additional hydro, so that puts you back to
- 2 biomass and a few other areas which there will
- 3 probably be some renewable energy coming from
- 4 that, but you need to have government
- 5 intervention to assist in providing a rate
- 6 structure over a long period of time so that you
- 7 can match the time that's required to finance the
- 8 capital development.
- 9 There is a perception or a statement or
- 10 there are written documentation, there's
- 11 certainly an argument that there's all sorts of
- 12 money waiting on the sidelines equity wise to go
- 13 out and develop these projects. I don't believe
- 14 that is a correct assessment of the true
- 15 situation out there, and the other problem that
- 16 Rhode Island has is scale. If you do have equity
- 17 money and in light of, say, a Shell Oil or
- 18 Florida Power & Light and you're trying to
- 19 convince them to put this equity money in the
- 20 State of Rhode Island, because it's the smallest
- 21 state in the union and because of the scale of
- 22 the state you'll find that they're going to
- 23 larger projects typically out West or in Canada
- 4 or in other parts of world where they can better

- 1 part of the grid and that will have very minimal
- 2 effect on the job market in this state. So my
- 3 bottom line is is that you should leave the
- 4 long-term contracting requirements in the wording
- 5 as stated. I understand the objections.
 - I do believe that the competition or
- 7 the competitive act that was passed in 2000 or
- 8 1996 is essentially broken for the consumers and
- 9 at some point in time probably within the next
- 10 two years we're going to have to address that
- 11 fact as well. But in the meantime let's put into
- 12 place a renewable energy standard which has a
- 13 chance of getting a foothold in the state and
- 14 meeting what is actually a small incremental
- 15 addition in need. That's all.
 - COMMISSIONER HOLBROOK: Thank you, Mr.
- 17 Burnett. Are there any questions from the
- 18 Commission? Thank you very much. We have two
- 19 speakers left. Bob Grace would be the first one.
- 20 ROBERT GRACE (Sworn)
- 21 MR. GRACE: My name is Robert Grace.
- 22 My firm is Sustainable Energy Advantage, 4 Lodge
- 23 Lane in Natick, Massachusetts. I'm here
- 24 representing as a consultant the State Energy

154

- justify the whole financing process and the whole
- 2 justification process. Typically most wind farms
- 3 are justified on a case basis of around 50
- 4 megawatts or \$50 million. And they had great
- 5 success with this in states like Texas where RPS
- 6 has been a key driver behind that, in states like
- 7 California where it's been a key driver.
- 8 So obviously from these statements you
- 9 can see that I come down very strongly on the
- 10 part of the long-term contracting. I believe the
- 11 wording that was put in will help the case but
- 12 unless the utility itself is willing to step
- 13 forward and fully embrace the concept of
- 14 long-term contracting there are ways that it
- 15 could still be avoided and the whole process and
- 16 the solicitation and everything else, and if that
- 17 happens, it's unlikely that you will achieve the
- 18 other objective that's stated in the law which is
- 19 beyond stabilization of prices it's to create
- 20 jobs in the State of Rhode Island. You will
- 21 probably meet the renewable energy requirements
- 22 from other states from perhaps wind farm
- 23 development in other areas or biomass plants
- 24 being built in Maine or in other states that are

156

- Office. I'll try to be brief given that I'm sure
- a lot of lives are all getting tired and hungry.
- 3 I'd like to start off by commending the
- 4 Commission in two ways. First of all, for
- 5 initiating a unique and I think uniquely
- 6 successful process for developing the draft
- 7 regulations. I think it was one in which the
- 8 input was far more balanced than led to be
- 9 believed and represented by one party earlier
- 10 today. The draft regulations really do reflect a
- 11 consensus on nearly all points, not a majority
- 12 vote, and where there was not consensus, the
- 13 draft regs that were presented respectfully
- 14 reflected each party's positions to the
- 15 Commission, so I do not see any hint of bias
- 16 there. And in general I'd like to also commend
- 17 the Commission for showing respect to that
- 18 process by adopting nearly all of the negotiating
- 19 committee's recommendations.

20

- The State Energy Office has the unique
- 21 role here as the SPC administrator in charge of
 - the Rhode Island renewable energy fund and that
- 23 fund's goal here with respect to the renewable
- 24 energy standard is to balance a couple of

- different objectives to meet the RPS targets
- while balancing ratepayer -- maximizing the 2
- benefits to ratepayers and minimizing the cost to 3
- 4 ratepayers and some of that is targeted at
- 5 lowering the cost of renewables and a lot of that
- perspective is behind our participation in the 6
- 7 few comments that I have today. And in
- particular the statute requires the State Energy 8
- Office to collaborate with the PUC and Economic
- 10 Development Corporation in maximizing the
- combined impact and efficiency of the SPC and 11
- 12 renewable energy standard, so we think this has
- 13 come to a good position and we're very pleased in
- general with the rules as they currently stand
- 15 and really want to comment in three areas.
- 16 of them are changes that were made by the
- 17 Commission between the negotiating committee's
- 18 draft and the current draft that's before us and
- 19 one relates to a possible oversight, something
- 20 that was really left out of the regulations, and
- 21 while probably not controversial, needs to be
- 22 addressed.
- 23 The first point is on the requirement
 - to itemize compliance on customer bills.
 - 158
 - think that's not advisable for several reasons.
- First of all, the bills are already pretty busy 2
- 3 and we think this is something that's going to be
- too complex and too confusing to customers. 4
- Importantly, though, it's not comparable, it's 5
- not a level playing field. This is a generation
- 7 service cost, not a T&D cost. Non-regulated
- 8 power producers won't be showing their RES
- 9 compliance cost as a line item, so they'll be
- 10 bundled in with their generation service prices
- 11 as they appear on the bill. So customers will
- 12 see it one way for competitive suppliers, another
- 13 way for the standard offer supplier and I believe
- at that point it creates confusion and really 14
- 15 doesn't create a level playing field.
- 16 Perhaps the most important reason,
- 17 though, is it's misleading. It shows only the
- 18 direct monetary cost without the benefits, and
- 19 I'm not going to talk here about the
- environmental benefits and those things that are 20
- rather hard to quantify. It is well accepted and 21
- 22 documented that when you increase the supply of
- 23 renewable energy in a market of fixed size, that
- you're going to lower both the electricity and

- gas prices, what's called the price impression
- effect for all of the electricity consumed, for
- all of the natural gas consumed in the region.
- This is a benefit that will be felt by all
- 5 customers but to show only the cost without those
- benefits is surely misleading. Many studies 6
- suggest that this price suppression effect cannot
- affect much if not all of the cost. In other 8
- words, cost of the RECs, the certificates and
- 10 especially given the high natural gas prices that
- we're experiencing today, the prospect that those 11
- 12 savings could actually exceed the gross cost of
- 13 the renewable energy credits is very real, so I'm
- 14 sure this isn't what was intended but it seems
- 15 the only possible result of showing the gross
- 16 cost to customers rather than the net cost is to
- 17 neglect presenting information based on
- 18 misleading information. Perhaps a report maybe
- 19 on the lines that Ms. Wilson suggested that took
- 20 into account the direct costs and indirect costs
- 21 might be an appropriate way to communicate what
- 22 is still a reasonable objective to communicate.
- 23 What is this RES costing us and what are the
- benefits and certainly customers who are paying 24

- for it deserve that information. Unfortunately,
- it's really not feasible to show the true at the
- 3 time costs that involves really us being able to
- understand what would have been in the absence of
- the RES. But nonetheless, there are quite a few 5
- studies that have come about to the general
- conclusions and one can analytically get a very
- good estimate then that's something that's
- 9 probably worth doing.

- The other primary area I wanted to
- comment on was the long-term contract issue. The 11
- 12 Commission's modest changes to Section 8 suggest
- 13 a requirement for long-term contracts as part of
- 14 the portfolio. I as well as I guess some of the
- 15 other commenters here are not entirely sure what
- that means but stepping back from that we believe 16
- 17 a good process has been drafted through the
- 18 negotiation whereby information will be solicited 19
- by National Grid and available to the grid and to
- the Commission both short and long-term costs 20
- that allow everybody to make wise procurement 21
- 22 decisions on behalf of customers. It's only with
- that actual bid data that we can know the 23
- trade-offs and the potential savings, foregone or 24

- secured. We talked a lot about the theoretical,
- 2 but this process will allow us to have the real
- 3 data and be able to evaluate does a long-term
- 4 contract make sense, does short-term procurement
- 5 make sense. Of course, when you're doing this
- analysis future REC prices are uncertain, 6
- 7 particularly in this RES market environment,
- 8 though, in which demand is constantly increased
- each year through 2019. New renewables simply
- 10 won't be built unless REC prices are going to be
- sufficient to get renewable generators sufficient 11
- 12 revenue to attract capital and get financed so
- 13 while REC markets clearly will fluctuate from
- time to time, year to year based on short-term
- 15 movement supply and demand and it's absolutely
- 16 true that they may drop quite low if supply ever
- 17 exceeds demand, there's no reason to expect
- 18 sustained REC prices at or near zero becoming
- 19 provisions in the standard will cause surplus
- 20 RECs to be valued towards future compliance
- 21 providing prices that will be well below zero.
- 22 One can be confident that there is a long-term
- 23 REC price whereby supply wouldn't keep up with
- 24 demand that wouldn't be sustainable and that a
 - 162
 - conservative estimate that long-term, sustainable
- long-term price. It would be proper to consider 2
- 3 that in evaluating what we believe is the right
- metric, the net value cost to customers at short 4
- term and long-term contracting alternatives, so I 5
- guess the question is should long-term contracts
- 7 be required. Well, it's up to the Commission to
- 8 decide whether commitments are compatible with
- 9 the market structure. To balance National Grid's
- 10 arguments on this topic it seems wise to consider
- 11 long-term contracts and to make wise or prudent
- 12 decisions based upon the available data and
- 13 conservative assumptions. The process that's
- 14 been agreed to by National Grid provides such
- 15 information so that's a good foundation to work
- 16 from. Even thought there may be prices at which
- 17 long-term contracts do and at which they don't
- 18 make sense, for instance, long-term contracts at
- 19 or near alternative compliance payments would not
- 20 make any sense. Therefore, the State Energy
- 21 Office would not oppose a requirement that
- 22 long-term contracts be considered in procurement
- plans but would certainly not insist that 23
- long-term contracts be required. We believe the

- Commission should require as part of the
- 2 procurement plan the choices among various firms
- reflect the economic present value analysis over
- a comparable time horizon and comparable quantify
- 5 of certificates being procured considering at a
- minimum a realistic long-term price for the RECs
- in the future won't be zero, they'll cost
- 8 somethi na.
 - And in our written comments we'd be
- 10 happy to provide some hypothetical examples of
- 11 such calculations and how we think that might
- 12 work. And also in those comments we will respond
- to some I'll call them mischaracterizations in 13
- National Grid's written comments. You probably
- 15 haven't had to time to review them yet and in
- 16 particular a reference to an analysis that I
- presented that I think has been mischaracterized, 17
- 18 but I will not burden you with a point by point
- 19 on that right now.

- 20 Finally, we'd like to know there is
 - undoubtedly some risk associated with entering
- 22 into long-term contracts. The State Energy
- 23 Office is currently in its role as renewable
 - energy fund administrator considering a program
 - 164
 - that would create complimentary incentives,
- necessarily modest due to the small size of the
- 3 fund, but incentives nonetheless to partially
- offset that risk for parties that would enter
- into long-term contracts and we hope in this
- process that the National Grid has agreed so that
- there'd be an opportunity to introduce those
- complimentary programs and incentivize parties to
- 9 come in and make long-term contracts happen.
 - Lastly, on the omission that I
- 10 mentioned earlier, some stakeholders and
- 12 Commission staff have identified a possible
- 13 oversight with respect to certification language
- 14 of Section 6. It was brought up after the
- 15 negotiating committee process closed that that
- language seemed to only apply to new renewable 16
- 17 certification and didn't address the
- 18 certification of existing renewables. In taking
- 19 a look back at that section as one of the
- drafters of that section I believe very modest 20
- changes of a few words can make the regulations 21
- 22 more suitably applicable to both new and
- 23 existing. It will require the Commission to
- develop different forums for new and existing 24

168

```
systems. I circulated around this morning by
    e-mail to the service list and to staff some
2
    draft language or draft markups. I welcome any
3
    comments if I've gotten it wrong, but just help
4
5
    to plug that gap.
             Finally, I wasn't going to comment on
6
7
    this, but given that it's everybody's favorite
    topic, Section 6.8, I just wanted to emphasize
8
9
    that some of the comments really seem to have
10
    been off target, that the only material
11
    difference between Options A and B were that
12
    under Option B you continue the current practice
    of unverified data by commercial or interested
13
    parties being entered and under Option A you have
15
    an independent party that will verify that
16
    information before entering it. There is no
17
    difference in systems or who reads the meters.
18
    It's a very similar question. Option A provides
    a great deal more veracity and credibility to the
19
20
    market because the information will not be
21
    suspect to being biased. Either Option A or
22
    Option B would probably work better with
23
    automated data entry, but that's not -- does not
24
    seem to be the issue on the table. With that I
                                                 166
    will conclude my comments. I'm willing to answer
```

```
MR. GRACE: I'm not sure we have an
    easy answer to that. It may be a matter of
 2
    simplifying the forms for new and simply not
    having certain items that you would look to for
    new, and frankly, maybe a much less detailed and
 5
    contentious process. You may be able to shorten
 6
    up the process of certifying existing renewables.
 8
    I'm not sure there are going to be the number of
    issues or complexities and any level of
10
    controversy that might be associated with
11
    certifying new renewables. You might be able to
    come much closer to an instantaneous turn-around
12
13
    rather than the 90-day process. So I'm happy to
14
    help and be a sounding board on drafting those.
15
             MS. WILSON-FRIAS: Thanks.
16
             COMMISSIONER HOLBROOK: Thank you very
    much, Mr. Grace, for your comments. We have one
17
18
    other speaker who will be here the second time.
    Mr. Asteriadis?
19
20
    KADIS ASTERIADIS (Resumed)
21
             MR. ASTERIADIS: I will really be very
22
    brief. I just wanted to provide perhaps a bigger
23
    picture on a comment that -- comment that was
24
    made on the certification issue regarding how PJM
```

```
2
    any questions that you have. Thank you.
3
             COMMISSIONER HOLBROOK: Are there any
4
    questions?
5
             MS. WILSON-FRIAS: I have one really
6
    quick. Mr. Grace, does Massachusetts have
7
    certification for existing renewables?
8
             MR. GRACE: Massachusetts does not.
9
    Massachusetts RPS is only a standard for new
10
    renewables, despite some recent rulings that may
11
    have undermined that intent, but there is not a
12
    separate standard for existing renewables as we
    have in Rhode Island.
13
14
             MS. WILSON-FRIAS: Does any New England
15
    state have a standard for existing renewables
    like Rhode Island?
16
```

MR. GRACE: The other states either --

Maine does not -- really none of the other states

MS. WILSON-FRIAS: Here's what I'm

getting at. When making the certification forms

in New England have a temporal distinction --

have distinguished between new and existing.

They distinguish between various types.

what state do I go to plagiarize?

17

18

19

20

21

22

23

```
does in the verified gas system. First of all,
 3
    let me say that APX's role in PJM is -- we have
5
 8
 9
10
11
12
13
14
15
16
17
18
19
20
21
22
    which is pretty similar to what Option B has.
23
24
    the question as to what the other New England
```

built a customized system for PJM gas which is probably not longer than a month ago and we were very involved with PJM in the overall market design, however, we are not the day-to-day market administrator as we are in the NEPOOL GIS. What PJM does regarding certification, currently what they do is essentially what is in Option B. In other words, it's self reporting from behind the meter generators. However, they have provided the option via some technology that we at APX built for them to have a verifying entity such as what is listed under Option A provide electronically some data for the GATS system, however, I wanted to clarify that's the way things are today and to our knowledge all the generators that have reported and created certificates that are not handled by the PJM settlement system, they have all self reported

And just one final statement regarding

which -- Option A or Option B which is what PJM

```
169
    states do regarding classification. The closest
    that I've seen was in the statute that the State
2
 3
    of Connecticut has issued I believe about a
    year-and-a-half ago. And I apologize, I don't
 4
 5
    have the exact docket or statute numbers, I can
    give you that, but pretty much it was directing
 6
 7
    the solution that was utilizing an entity such as
    ISO New England which I think is what also the
8
9
    ISO New England rather the NEPOOL markets
10
    committee has directed via GIS. Work through
11
    that solution and I'll come with that
12
    accommodation.
13
             COMMISSIONER HOLBROOK: Thank you very
14
    much. Are there any other speakers? Anyone else
15
    have any final comment? If not, I thank you all
    for coming and the meeting is adjourned.
16
17
                          (ADJOURNED AT 1: 26 P.M.)
18
19
20
21
                 CERTIFICATE
22
23
             I hereby certify that the foregoing is
24
    a true and accurate transcript of the hearing
```

taken before the Rhode Island Public Utilities Commission, on October 12, 2005, at 9:30 a.m. JO ANNE M. SUTCLIFFE, RPR/CSR Notary Public, State of Rhode Island

| | 200 - 117:23 | 6.8 - 60:14, 74:20, | accompany - 35:6 | 141:19 |
|---------------------------------------|---|-------------------------------|----------------------------|-----------------------|
| \$ | 200,000 - 97:19 | 98:17, 106:12, | according - 79:18 | adjustments - |
| Ψ | 2000 - 155:7 | 165:8 | accordingly - 71:18 | 23:11, 124:12 |
| \$14 - 128:10 | 2001 - 79:14 | 63 - 7:23 | account - 32:14, | administer - 16:16, |
| \$30 - 91:19 | 2004 - 128:11 | 67 - 2:5 | 53:19, 89:17, | 44:22 |
| \$50 - 39:4, 154:4 | 2005 - 1:12, 3:14, | | 159:20 | administered - 9:18, |
| | 3:22, 5:8, 5:16, | 7 | accounts - 50:5 | 15:7, 27:19, 41:4, |
| • | 43:20, 170:2 | | accrue - 107:24 | 84:21 |
| | 2006 - 121:18, | 7 - 2:4 | accurate - 27:12, | administering - |
| '07 - 14:14 | 121:22 | 7,800 - 121:18 | 112:6, 169:24 | 17:23 |
| '97 - 14:5, 92:12 | 2007 - 97:12 | 70,000 - 143:7 | accurately - 31:10 | administers - 84:16 |
| '98 - 14:5 | 2009 - 11:17, 111:10, | 73 - 2:5 | achieve - 124:3, | Administration - |
| | 113:9, 113:13, | 741 - 67:14 | 137:2, 154:17 | 15:12 |
| 0 | 116:11, 116:12, | 75 - 132:23 | achieving - 76:4 | administrative - |
| U | 116:16 | 77 - 2:6 | acknowledge - | 6:15, 59:24, |
| 01581 - 74:7 | 2019 - 161:9 | | 115:7 | 107:19, 109:15 |
| 02199 - 117:6 | 2020 - 79:16, 79:23 | 0 | acknowledging - | Administrative - |
| 02888 - 5:5 | 21st - 27:7 | 8 | 71:12 | 6:19 |
| 02906 - 142:11 | 23rd - 5:16 | 8 - 92:17, 118:24, | Acp - 39:15, 41:13, | administrator - |
| 02920 - 7:24 | 24th - 5:8, 7:1, | 160:12 | 41:17, 41:19, | 59:18, 62:1, 63:14, |
| 07450 - 95:16 | 100:16, 123:3 | 8.2 - 48:13, 124:24 | 41:23, 42:1 | 156:21, 163:24, |
| 01.00 | 25 - 133:1, 152:19 | 8.27 - 125:6 | Act - 6:19, 19:20, | 168:8 |
| 4 | 25,000 - 121:13 | 8.3 - 119:7 | 40:13, 40:15, | adopt - 136:3 |
| 1 | 25th - 122:19 | 8.4 - 71:8, 71:20 | 68:12, 69:1, 69:4, | adopted - 3:23, |
| 1 - 10:2, 16:12, 20:2, | 28th - 117:6 | 8.7 - 119:7 | 71:9, 78:9 | 62:7, 126:21 |
| 24:16, 30:21, 34:9, | 29-26-6 - 136:23 | 80 - 97:14 | act - 17:15, 57:24, | adopting - 3:17, |
| 52:10, 96:12 | | 800 - 117:5 | 155:7 | 156:18 |
| 10 - 91:10, 110:17, | 2 | 81 - 2:6 | action - 26:2, 29:21 | advance - 140:23 |
| 115:15, 125:12, | 3 | 82nd - 59:11 | Action - 67:20, | Advantage - 155:22 |
| 125:21, 131:8 | 3 - 137:3 | 89 - 1:13, 3:16, 4:17, | 67:22, 68:24, | advantageous - |
| 10,000 - 67:23 | 3.22 - 95:23 | 5:4 | 69:15, 71:4, 71:6, | 128:16 |
| 10-year - 24:10, | 3.27-megawatt - | 8th - 12:18, 43:19, | 71:19, 71:23, 72:9, | advantages - 116:6, |
| 33:18 | 121:10 | 43:20 | 73:6, 73:13, 73:19 | 131:14 |
| 100 - 2:7, 36:17, | 300 - 74:18, 85:20 | 40.20 | actively - 9:15, 9:16, | advice - 47:14 |
| 41:4, 42:17, 42:18, | 31 - 3:22 | | 26:9, 126:18, 133:9 | advisable - 158:1 |
| 93:18, 97:1, 97:3, | 33 - 34:3 | 9 | activity - 13:3, | advise - 47:10, |
| 98:8, 98:9, 98:11, | 33 - 34.3 337 - 77:9 | 9 - 86:4 | 38:24, 118:14 | 47:12 |
| 117:19 | 340d - 142:10 | 90-day - 167:13 | actual - 49:20, | advised - 27:13 |
| 10028 - 59:12 | 365 - 30:21 | 93 - 78:10 | 90:19, 91:3, 96:5, | advisement - 13:11 |
| 107 - 4:21 | 3659 - 1:8, 3:4 | 94 - 2:7 | 146:10, 147:9, | advising - 36:14 |
| 11 - 48:23, 77:9 | 38 - 90:24 | 941-4500 - 4:20 | 160:23 | advisor - 33:6 |
| 110 - 98:9 | 39-1 - 3:10, 5:11 | 947 - 95:15 | add - 87:5, 97:23, | advocacy - 126:14 |
| 116 - 98.9 116 - 2:8 | 39-1-1 - 5:13 | 9:30 - 1:12, 3:1, | 107:18, 112:22, | advocate - 77:12 |
| 11:45 - 95:5 | 39-1-11 - 5:13 | 3:14, 170:2 | 140:12 | Affairs - 117:3 |
| 12 - 1:12, 48:23, | 39-1-18 - 5:14 | 3.14, 170.2 | added - 13:16, | affect - 159:8 |
| 170:2 | 39-1-16 - 5.14 39-1-2 - 4:14 | • | 26:15, 33:4, 96:2, | affects - 69:22 |
| 120 - 74:12 | 39-1-3 - 5:13 | Α Α | 97:8, 113:6, 124:24 | affiliated - 10:16 |
| 125 - 2:8 | 39-1-38 - 5:14 | ability - 14:21, 15:6, | Added - 82:9 | affirmatively - |
| 125 - 2.0 12th - 3:14 | 39-26-1 - 1:7, 3:7, | 16:6, 17:7, 17:10, | adder - 49:24 | 113:10 |
| 132 - 2:9 | 3:20, 3:21, 4:15, | 18:1, 23:7, 28:16, | adding - 55:24, | affordable - 102:3 |
| 13th - 13:15 | 5:14 | 29:4, 41:9, 42:16, | 111:8 | afforded - 12:6 |
| 14 - 44:17 | 5.14 | 78:20, 130:9 | addition - 5:6, 10:7, | Afl - 78:14 |
| 14 - 44.17 141 - 2:9 | 4 | able - 25:6, 33:17, | 80:1, 121:24, | Afl-cio - 78:14 |
| 141 - 2.9 149 - 2:10 | 4 | 40:5, 84:19, 84:22, | 155:15 | afternoon - 126:9, |
| 15 - 110:17 | 4 - 155:22 | 86:7, 89:19, 96:24, | additional - 22:9. | 142:13 |
| 15,000 - 117:15 | 40 - 74:6 | 97:12, 98:3, | 25:11, 56:1, 86:14, | agencies - 58:8 |
| 15-member - 44:17 | 415 - 149:17 | 108:18, 108:22, | 96:1, 122:3, | agency - 58:16, |
| 15-year - 24:10, | 42-35 - 3:10, 5:11 | 116:12, 146:9, | 140:24, 153:1 | 145:3 |
| 33:19, 33:23, 131:8 | 42-35-1 - 5:12 | 160:3, 161:3, | address - 5:7, 7:23, | aggregate - 30:15, |
| 155 - 2:10 | 42-35-2 - 5:12 | 167:6, 167:11 | 8:9, 58:23, 59:11, | 50:13, 107:24, |
| 16 - 55:11 | 42-35-3 - 5:12 | absence - 160:4 | 67:14, 68:1, 77:9, | 110:12 |
| 160,000 - 97:20 | 42-35-4 - 5:13 | absent - 122:8 | 91:7, 95:14, 96:12, | aggregation - 50:11 |
| 165 - 82:5 | 42-35-5 - 5:13 | absolute - 64:19 | 117:5, 126:8, | aggregator - 83:22, |
| 17 - 101:4, 117:14 | 42-46-6 - 3:10 | Absolutely - 141:12 | 127:5, 142:9, | 86:9 |
| 18 - 69:7, 88:3, | 444 - 59:11 | absolutely - 28:17, | 149:17, 155:10, | aggregators - 87:12 |
| 126:20 | 4:00 - 5:7 | 32:18, 37:6, 42:18, | 164:17 | agnostic - 76:16, |
| 1980s - 98:22 | | 92:3, 145:5, | addressed - 28:8, | 105:21 |
| 1990 - 79:16 | 5 | 145:15, 161:15 | 28:10, 96:17, | ago - 40:7, 61:1, |
| 1996 - 155:8 | <u>J</u> | accelerate - 151:7 | 157:22 | 68:23, 84:12, |
| 1997 - 74:12, 97:15 | 5 - 84:3, 95:24, | accelerating - | addressing - 95:19, | 92:16, 119:15, |
| 1:26 - 169:17 | 115:15 | 152:14 | 135:16 | 134:19, 168:5, |
| ' | 5-year - 24:11 | accept - 43:16, 44:8, | adds - 54:8, 86:11 | 169:4 |
| 2 | 50 - 154:3 | 45:1 | adequacy - 143:18 | agree - 58:21, |
| | 55,000 - 121:23 | accepted - 5:7, 32:6, | adequate - 38:19, | 106:22, 109:21, |
| 2 - 8:17, 10:2, 15:21, | 59/167 - 2:4 | 158:21 | 38:22, 45:13 | 111:9, 124:5, |
| 16:14, 24:16, | | access - 79:9, 89:17, | adequately - 17:12 | 135:24, 136:8, |
| 31:14, 52:10, 126:8 | 6 | 91:11 | adjourned - 169:16 | 139:3 |
| 20 - 20:6, 110:18, | 6 | accessed - 4:21 | Adjourned - 169:17 | agreed - 111:6, |
| 115:15, 126:20 | 6 - 90:3, 92:18, | accommodation - | adjustment - | 162:14, 164:6 |
| 20-year - 24:10 | 95:24, 164:14 | 169:12 | 124:23, 125:9, | agreeing - 112:24 |
| | | | | |

| agreement - 79:15, | 167:2 |
|--|---|
| 107:3 agricultural - 70:20 | anticipate - 97:19 anyway - 86:21, |
| ahead - 68:11, | 91:17 |
| 102:13, 139:20, | apologize - 29:12, |
| 148:3 | 57:7, 169:4 |
| air - 11:20, 69:10, 69:23, 70:5, 70:18 | apparent - 8:12 appear - 51:4, |
| airline - 150:20 | 158:11 |
| akin - 109:4 | appearances - 5:16 |
| Alan - 1:19, 6:9 allocated - 19:9, | apple - 21:22 apples - 21:22, |
| 30:16 | 108:15 |
| allocation - 17:9 allow - 29:4, 37:3, | applicable - 164:22 applications - 86:1 |
| 75:4, 134:20, | applied - 60:12, |
| 160:21, 161:2 | 63:20 |
| allowed - 38:6, 119:19, 124:13, | apply - 4:8, 139:11, 164:16 |
| 145:18, 146:1 | applying - 34:17 |
| allowing - 77:11, | appointments - |
| 119:9, 144:24 allows - 50:12. | 15:13, 15:14 appreciate - 56:18, |
| 76:20, 83:16, | 56:19, 101:20 |
| 89:24, 93:4, 119:3 | appreciated - 29:22 |
| alluded - 24:23, 34:8 almost - 97:18, | approach - 38:12, 45:2, 72:4, 149:8 |
| 124:15, 126:20 | appropriate - 30:15, |
| Almost - 68:16 | 37:4, 59:4, 61:7, |
| alone - 16:7, 124:16 alter - 16:4, 17:11, | 82:12, 95:1, 135:2, 135:9, 136:4, |
| 17:13, 41:8, 42:3, | 137:19, 147:7, |
| 42:17 | 147:9, 150:18, |
| alterations - 141:7, 141:10 | 159:21 appropriately - 35:4, |
| altered - 141:7 | 106:10 |
| altering - 26:3 | approve - 75:21, |
| alternative - 14:1, 14:19, 16:1, 19:1, | 87:13 approved - 83:12 |
| 29:2, 39:2, 39:9, | April - 122:19 |
| 39:10, 39:13, 58:5, 128:9, 144:15, | Apx - 59:17, 60:9, 63:13, 63:24, |
| 146:18, 162:19 | 82:18, 84:16, 92:6, |
| alternatives - 162:5 | 93:3, 105:21, |
| ambiguous - 28:22 amended - 3:11, | 106:9, 168:14 Apx's - 60:1, 168:3 |
| 3:21 | area - 21:9, 54:13, |
| America - 68:17, | 64:23, 65:2, 65:3, |
| 69:18 America's - 69:21 | 106:19, 118:22, 146:3, 160:10 |
| American - 78:13 | areas - 64:16, 70:10, |
| Ammaresco - | 94:5, 102:20, |
| 121:15, 121:19 amount - 11:20, | 143:15, 145:23, 150:16, 150:24, |
| 12:4, 24:14, 49:14, | 153:2, 154:23, |
| 53:20, 54:5, 54:6, | 157:15 |
| 55:8, 81:17, 102:13, 137:14, | argument - 4:24, 122:6, 122:10, |
| 151:7 | 148:23, 153:11 |
| amounting - 74:13 | arguments - 162:10 |
| amounts - 103:22 analysis - 79:7, | Arlington - 132:23 arrangement - |
| 79:18, 138:15, | 66:14, 115:11 |
| 161:6, 163:3, 163:16 | arrangements - |
| Analyst - 1:19 | 103:7, 145:7 arriving - 126:24 |
| analyst - 5:23, 6:9 | Aside - 73:18 |
| analytically - 160:7 ancillary - 91:2 | aside - 74:10, 102:4, 147:8 |
| anecdotal - 81:6 | aspects - 127:1, |
| anecdotally - 90:13 | 127:8, 127:14 |
| Angel - 77:9 Anne - 170:5 | Assembly - 18:21, 27:15, 41:24, 78:3, |
| annual - 146:16, | 113:24 |
| 146:17 | assess - 113:2 |
| annually - 4:1 answer - 48:24, | assessment - 153:14 |
| 51:11, 51:20, | asset - 87:21 |
| 65:14, 103:3, 107:10, 166:1, | assets - 54:17, 56:1, 61:13 |
| | |

assist - 150:12, 153:5 assistance - 102:9, 150:4 Assistant - 5:21 associate - 81:10 associated - 19:22. 24:6, 28:19, 50:11, 71:12, 79:8, 119:20, 127:18 163:21, 167:10 Association - 78:13 assume - 112:1, 112:17 **assumed** - 28:4 assuming - 20:6 27:17, 39:15, 64:2 **assumption** - 14:12, 14:18, 138:17 assumptions -162:13 assurance - 141:23 assure - 30:13, 86:16 Asteriadis - 2:4, 57:7, 57:8, 59:9, 59:10, 59:15, 65:21, 67:9, 167:19, 167:20, 167:21 Asthma - 70:7, 71:13 asthma - 70:9, 70:19 attached - 76:24 attempted - 111:3 attend - 45:19, 57:18 attendance - 45:22 attended - 134:5 attention - 73:8 Attorney - 5:21 attract - 161:12 attributes - 88:5 audit - 47:19, 86:22, 88:21, 89:7 August - 12:18, 43:19, 43:20 august - 57:17 Auten - 2:6, 77:6, 77:7, 77:8, 77:12, 81:23, 81:24 authority - 58:7 automated - 62:4, 84:17, 91:20, 165:23 automatic - 63:3, automatically -84:23 available - 14:10. 20:22, 102:3, 108:17, 127:24, 130:3, 160:19, 162:12 avenue - 33:21, 41:12 Avenue - 95:15. 101:4 average - 48:20, 48:21, 49:24, 55:3 averaging - 30:12 avoid - 80:14 avoided - 30:3, 154.15 awarded - 22:4, 22:12 aware - 36:18, 36:19, 40:19 awful - 150:6

В

backed - 152:6 background -101:24 backs - 120:4, 120:9 bad - 70:18, 120:9 balance - 55:21, 137:16, 156:24, 162.9 balanced - 147:2, 149:23, 156:8 balancing - 157:2 Baltimore - 117:23, 118:8 bank - 151:22 bankers - 152:1 banks - 151:24 Barrington - 78:1 **base** - 22:24, 78:14, 96:12, 97:9 **based** - 14:6, 20:18, 20:19, 22:16, 23:10, 23:15, 24:20, 24:22, 24:24, 26:13, 45:3, 82:6, 82:9, 87:14, 89:21, 120:22, 141:19, 159:17, 161:14, 162:12 baseline - 97:18, 98:5, 98:7 basic - 89:1, 118:5, 120:1 **basing** - 25:12 **basis** - 19:19, 21:7, 22:8, 23:15, 36:8, 47:19, 50:14, 50:24, 53:13, 140:8, 154:3 Bates - 77:24 battled - 80:24 beaches - 70:16 beautiful - 69:22 become - 14:24, 94:2. 128:22 becomes - 70:7 **becoming** - 161:18 Bedford - 121:9, 121:12 began - 97:21 begged - 40:8 begin - 95:9 beginning - 9:6 begins - 57:10 behalf - 9:3, 41:10, 51:14, 83:1, 84:9, 84:16, 84:23, 86:8, 89:6, 89:20, 145:4, 147:12, 160:22 behavior - 31:11 behind - 11:23, 15:24, 25:11, 31:8, 52:24, 53:2, 61:3, 64:24, 74:13, 75:16, 76:9, 105:15, 154:6, 157:6, 168:12 belief - 13:20 believer - 14:2, 17:14, 17:20 belong - 65:1 below - 22:21, 23:10, 23:12, 48:2, 48:5, 48:8, 48:9, 48:11, 49:3, 79:16, 124:7, 124:16, 124:23, 125:11, 125:14, 125:22, 125:24, 132:3, 161:21 benchmark - 23:1

39:5, 51:23 benefit - 35:16, 35:22, 35:24, 55:6, 75:15, 87:15, 94:14, 105:8, 108:5, 115:11, 159.4 benefits - 79:7, 80:13, 86:15, 86:19, 89:21, 90:10, 91:2, 103:8, 108:9, 113:15, 114:10, 116:2, 116:9, 128:20, 130:2, 130:7, 130:22, 131:2, 143:12, 147:3, 157:3, 158:18, 158:20, 159:6, 159:24 benefitting - 84:1 Berkley - 126:17 Bessette - 2:8, 116:24, 117:1, 117:2, 123:16, 124:8, 124:11, 124:20, 125:2, 125:6, 125:8, 125:11, 125:16, 125:20, 126:4, 138:11 best - 11:4, 11:15, 15:8, 15:17, 16:15, 19:10, 21:15, 24:9, 24:21, 31:14, 32:3, 32:15, 33:20, 51:6, 52:7, 54:19, 60:22, 60:24, 115:5 115:16, 128:22, 131:9, 138:6, 140:11, 145:7, 145:8 better - 19:3, 41:2, 41:11, 53:14, 61:15, 72:5, 81:18, 111:22, 115:20, 153:24, 165:22 between - 8:12. 9:21, 31:17, 34:16, 35:18, 75:9, 87:20, 88:6, 91:9, 104:24, 105:4, 114:21 137:10, 137:16, 157:17, 165:11, 166:20, 166:21 bevond - 14:14. 115:24, 116:12, 154:19 bias - 156:15 biased - 45:3, 165:21 bid - 25:7, 36:10, 160:23 bids - 22:20 big - 26:24, 34:16, 55:12, 55:13, 103:12, 110:11 bigger - 30:24, 44:2, 167:22 Bill - 6:4, 95:10 bill - 48:24, 49:10, 77:23, 78:4, 78:22, 78:23, 79:10, 106:21, 108:9, 108:19, 109:21, 113:14, 125:15, 158:11 billed - 49:15 **billing** - 94:15, 146:20

bills - 71:8, 71:21, 79:9, 157:24, 158:2 biomass - 34:22, 153:2, 154:23 Birchwood - 7:23 **bit** - 11:11, 11:12, 22:15, 117:11 board - 15:10. 16:18, 17:22, 18:11, 21:14, 32:14, 34:24, 167:14 Board - 83:3 **Bob** - 155:19 **body** - 31:4, 32:10, 34:11 Boston - 117:5, 132:23 bottom - 49:15, 155:3 bought - 132:4 **Boulevard** - 1:13, 3:16, 4:17, 5:4 boutique - 55:9, 55:10 Boylston - 117:5 **Bráttle** - 126:8 Bray - 1:18, 6:13 break - 95:5, 108:24, 109:3 breakdowns - 91:15 brief - 156:1, 167:22 **briefly** - 127:4 bring - 33:2, 37:18, 70:16, 71:4, 131:13, 134:18 **bringing** - 68:10 broad - 78:14 broader - 108:5 broken - 114:18, 155:8 broker - 111:24 brought - 11:5, 11:7, 32:21, 62:20, 164:14 **bucks** - 41:22 budget - 27:16, 40:21, 47:19, 151:6 budgets - 33:8 **build** - 42:13 built - 74:12, 76:2, 80:17, 131:11, 154:24, 161:10, 168:4, 168:14 **bulk** - 150:14 bunch - 84:3, 90:10 bundle - 107:5 bundled - 112:12, 158:10 burden - 163:18 **burned** - 70:6 Burnett - 2:10, 6:6, 149:14, 149:15, 149:16, 155:17 **burning** - 70:11, 70:12 business - 7:23, 20:13, 22:11, 22:13, 25:4, 55:12, 55:13, 77:8, 82:6, 86:17, 95:14, 98:21, 99:9, 114:22, 117:4, 122:1, 126:8, 133:1, 142:9, 149:17, 151:12 businesses -103:16, 117:16, 118:4, 150:17

busy - 75:22, 158:2

buy - 19:15, 19:16, 20:4, 34:22, 35:7, 80:19 buyer - 91:14, 131:22 buyers - 31:24, 87:22, 91:9 buying - 19:22, 20:7, 20:12, 20:15, 21:17, 34:23, 52:21, 53:1, 86:18, 91:17, 147:17 by-products - 52:20

138:24, 153:11, 159:24, 162:23

certificate - 38:21

72:2, 112:12, 127:19, 159:9,

163:5, 168:20

164:13, 164:17,

166:23, 167:24,

164:18, 166:7,

certification -

certificates - 34:18,

34:19, 35:6, 37:9,

168:9 certified - 82:23. 87:2 C **certify** - 169:23 calculations certifying - 167:7, 167:11 California - 52:11, cetera - 113:17, 52:14, 54:21, 54:24, 82:6, 148:12 chain - 104:13, 104:16 126:17, 154:7 Cambridge - 126:8, challenge - 86:5 126:16 challenges - 92:15 chance - 23:19, 24:14, 30:21, 72:17, 115:21, 155:13 campaign - 69:15 Canada - 153:23 Canadian - 117:14 cannot - 37:1, 39:7, **change** - 34:2, 37:2, 41:19, 41:20, 53:9, 98:10, 99:21, 159:7 capability - 52:16, 53:17, 93:4 63:21, 63:22, capable - 99:17 63:24, 64:6, 67:1, capacity - 14:7, 70:13, 70:15, 14:9, 14:10, 52:11, 53:2, 56:1, 56:14, 70:19, 71:20, 79:13, 84:6, 93:3, 96:8, 97:10, 126:1, 98:19, 104:17 151.14 changes - 49:2, capital - 96:22. 63:16, 66:22, 75:21, 106:13, 106:15, 106:15, 106:18, 127:12, 157:16, 160:12, 164:21 97:13, 98:12, 151:18, 151:19, 153:8, 161:12 car - 109:6 carbon - 79:21 cardinal - 63:21, **changing** - 49:3, 94:3, 98:16 63:22, 64:6 **chapter** - 137:2 care - 76:18 Chapters - 5:10 Carriers - 5:22 characteristic case - 18:18, 58:2 151:13 58:4, 64:19, 64:20, characteristics -90:14, 90:21, 141:9 charge - 89:20, 114:1, 115:21 89:21, 91:19, 99:17, 108:20, 111:9, 113:21, 136:22, 152:17, 154:3, 154:11 cases - 64:17, 86:1, 151:18 156:21 cast - 133:19 **charged** - 15:9, 15:19, 15:20, 136:23, 147:14 catch - 97:8 category - 64:22, **charter** - 58:22 65:6 caused - 70:3 chasing - 84:4 causes - 70:18 cheap - 112:22 cautioning - 8:23 cell - 85:21, 94:12 cheaper - 39:11 check - 22:15, cent - 50:6, 128:7, 22:18, 39:14 128:8 checking - 58:15 **choices** - 163:2 **choose** - 87:12 central - 103:12 cents - 48:13, 48:23, 49:2, 124:24, choosing - 114:21 125:6, 125:13 chose - 46:2 125:21, 146:19 chosen - 101:19 certain - 11:21, Chris - 2:5, 2:10, 26:13, 45:16, 84:11, 135:23, 67:10, 67:12, 67:13, 67:19, 78:18, 149:14, 141:18, 167:4 Certainly - 36:12, 149:16 Christopher - 149:15 102:9 certainly - 11:19, cio - 78:14

29:4, 33:2, 56:17, 67:7, 80:22, 81:19,

101:18, 111:21

circulated - 165:1

circumstances -

circumstance - 10:1

58:1, 59:3 cities - 50:12 citizen - 77:15 clarify - 27:11, 28:1, 56:23, 68:21, 72:24, 75:7, 83:10, 96:3, 168:17 class - 48:22 classification -169:1 clauses - 91:10 Clean - 67:20, 67:21, 68:23, 69:8, 69:15, 71:3, 71:6, 71:18, 71:23, 72:8, 73:5, 73:13, 73:18, 84:22 clean - 69:5, 69:10, 69:18, 71:10, 71:13, 100:8 cleaner - 80:5 clear - 28:16, 28:17, 29:6, 34:7, 57:5, 62:8, 64:18, 65:8, 76:15, 101:7 104:23, 136:10, 144:12 **clearly** - 40:7, 45:9, 46:11, 65:12, 80:7, 99:2, 99:5, 99:6, 161:13 Clearly - 79:16, 81:17 clerical - 100:1 Clerk - 5:3, 5:9, 5:15 Clerk's - 4:17 client - 87:16 clients - 46:12 51:14, 86:9, 86:17, 91:16, 105:23 climate - 70:13, 70:15, 70:19, 79:13 close - 134:19 closed - 164:15 closely - 73:12 closer - 167:12 **closes** - 90:8 closest - 51:21, 169:1 **closing** - 140:3 co - 87:6, 93:23 co-signators - 87:6, 93:23 coal - 70:3 Coast - 80:24 coffers - 34:15 collaborate - 157:9 collect - 86:24 collected - 18:3. 58:1, 143:11, 144:14 collecting - 86:20, 86:21 collectively - 108:4 collusive - 26:1 Colorado - 85:23 combination - 128:5 combined - 157:11 comfortable - 7:16, 16:20 **coming** - 3:3, 13:3, 22:10, 56:18, 59:16, 67:6, 78:24, 101:22, 102:19, 128:6, 153:3, 169:16

command - 50:4

Commenced - 3:1

commend - 68:9.

102:18, 126:22

69:2, 70:23, 89:3,

133:12, 142:15, 156:16 commending -156:3 Comment - 2:3 **comment** - 16:6, 19:11, 92:5, 95:3, 145:21, 157:15, 160:11, 165:6, 167:23, 169:15 commentary -94:20, 100:21 commentator - 74:2 commenters -160:15 commenting -101:21 comments - 5:3, 5:6, 5:9, 6:22, 6:23, 7:1, 7:2, 8:3, 8:23, 16:7, 56:17, 56:19, 57:1, 57:4, 57:10, 60:14, 67:5, 67:17, 67:24, 68:2, 68:4, 79:12, 81:4, 83:2 95:1, 98:14, 98:15, 95:1, 96:14, 96: 100:14, 100:16, 100:18, 101:15, 110:1, 123:3, 123:17, 126:10, 127:2, 127:6, 130:17, 130:19, 131:1, 132:17, 122:18, 132:17, 132:18, 133:17, 135:5, 135:7, 137:21, 138:22, 139:4, 140:14, 142:4, 142:14, 157:7, 163:9, 163:12, 163:14, 165:4, 165:9, 166:1, 167:17 commercial - 32:5 47:9, 47:10, 48:20, 48:21, 49:11, 50:4, 91:8, 129:22, 165:13 commercial/ industrial - 49:24, 125:17 Commission - 1:2, 3:12, 3:16, 4:20, 5:3, 5:4, 5:15, 6:10, 6:12, 6:14, 6:22, 8:6, 8:24, 12:11, 12:21, 13:5, 13:19, 13:20, 17:6, 17:17, 17:19, 18:7, 18:14, 19:7, 27:13, 27:24, 28:8, 28:14, 32:20, 34:10, 43:16, 44:2, 44:7, 44:12, 45:9, 45:12, 46:14, 56:24, 57:2, 57:3, 57:23, 58:6, 58:15, 68:8, 68:10, 69:3. 70:24, 73:21 75:19, 75:22, 77:2, 82:13, 82:16, 89:9, 82:13, 82:16, 89 100:5, 101:20, 101:22, 102:17, 106:15, 110:6, 110:24, 113:12, 114:3, 120:12, 126:22, 129:5, 130:24, 133:12, 134:1, 135:10, 135:14, 142:16, 144:3, 144:8, 147:23, 148:22,

| 155:18, 156:4, | communications - | 147:18, 147:20, | consideration - | 152:7, 160:11, |
|---|---|--|--|--|
| 156:15, 156:17, | 33:4 | 157:24, 158:9, | 13:11, 29:20, | 161:4 |
| 157:17, 160:20, | communiqué - | 161:20, 162:19 | 33:14, 37:19, | contracting - 15:16, |
| 162:7, 163:1, | 146:17 | complimentary - | 39:21, 52:1 | 15:17, 26:18, |
| 164:12, 164:23, 170:2 | community - 43:13, 77:21, 143:21 | 164:1, 164:8 comply - 14:22, | considered - 97:18, 130:17, 144:24, | 35:23, 118:24, 154:10, 154:14, |
| Commission's - | Companies - 120:24 | 131:20, 131:21 | 149:1, 162:22 | 155:4, 162:5 |
| 8:18, 8:20, 12:18, | companies - 4:13, | component - 38:15, | considering - 110:6, | contracts - 9:1, |
| 18:1, 23:3, 24:21, | 63:5, 64:3, 66:13, | 48:24, 49:20, 80:6, | 127:11, 163:5, | 10:23, 11:4, 11:7, |
| 27:7, 27:9, 29:15, | 66:17, 75:18, | 113:21, 116:3 | 163:24 | 11:14, 11:16, |
| 29:20, 32:8, 32:9, | 76:17, 76:23, 87:8, | components - 90:22 | consistent - 144:17 | 19:15, 19:22, 22:3, |
| 143:18, 144:17, | 93:7, 93:11, 93:20, | comprehensive - | constantly - 161:8 | 29:24, 30:7, 33:17, |
| 160:12 Commissioner - | 98:23, 114:22, 119:4, 120:4, | 100:20 | Constellation - 117:4, 117:10, | 37:20, 37:23, 46:8, 46:18, 47:20, |
| 1:18, 3:2, 6:8, 6:12, | 120:21, 125:23, | concept - 64:10, 154:13 | 117:22, 117:24, | 87:24, 91:6, 91:9, |
| 6:13, 6:16, 7:6, 8:1, | 139:22 | concern - 8:10, | 118:1, 118:12, | 107:5, 110:7, |
| 16:24, 29:23, | company - 74:9, | 8:17, 13:5, 13:20, | 120:24, 121:8, | 110:14, 114:9, |
| 35:17, 38:17, 39:4, | 74:11, 76:18, 82:7, | 27:14, 28:6, 29:7, | 138:11, 138:21 | 114:11, 115:1, |
| 43:15, 44:6, 50:20, | 82:9, 82:17, 82:18, | 41:21, 42:19, | constrained - 55:15 | 115:24, 119:5, |
| 53:11, 55:1, 56:16, | 84:22, 87:3, 88:18, | 102:20, 106:19, | constructed - | 119:11, 119:18, |
| 56:22, 57:6, 57:9, 57:12, 58:13, 59:6, | 93:13, 93:22, | 118:22, 119:8, 140:15, 140:18, | 138:19 construction - | 119:21, 120:7, 120:16, 121:1, |
| 65:14, 65:16, 67:4, | 98:20, 99:4, 108:21, 117:23, | 140:13, 140:18, | 128:21 | 121:9, 121:14, |
| 67:10, 73:24, 77:3, | 118:7, 122:2, | Concerned - 7:4, | consultant - 9:20, | 121:24, 122:3, |
| 81:21, 82:1, 93:6, | 125:22, 149:18, | 126:13 | 33:6, 155:24 | 122:10, 122:14, |
| 94:19, 94:23, 95:9, | 152:3 | concerned - 15:18, | consultants - 51:15, | 125:24, 127:6, |
| 100:17, 100:23, | Company - 4:11 | 24:16, 71:24, 73:7, | 51:16 | 128:5, 128:6, |
| 116:19, 116:23, | company's - 117:10, | 101:12 | Consulting - 47:7 | 128:12, 128:15, |
| 122:17, 126:3, 132:18, 141:5, | 148:11 comparable - 158:5, | concerning - 3:5, 10:12, 27:8 | consulting - 47:7 consumed - 159:2, | 129:8, 129:10, 129:19, 130:2, |
| 132.16, 141.5, 141:13, 142:3, | 163:4 | concerns - 11:21, | 159:3 | 130:8, 130:10, |
| 146:15, 147:1, | comparative - 23:12 | 26:18, 29:19, | consumer - 21:2, | 130:15, 130:22, |
| 147:22, 148:2, | compare - 21:23, | 29:21, 29:22, | 25:2, 36:17, 45:5, | 131:3, 132:12, |
| 149:13, 155:16, | 108:22 | 43:17, 46:16, | 45:8, 71:8, 71:21, | 136:13, 136:16, |
| 166:3, 167:16, | compared - 65:23 | 46:24, 47:2, 68:1, | 76:12, 78:20, 79:8, | 136:24, 138:9, |
| 169:13 | comparison - | 73:18, 78:17, | 101:10, 108:2, | 138:21, 139:24, |
| Commissioners - 67:16, 74:8, 77:11, | 108:16 compatible - 162:8 | 142:17 conclude - 94:20, | 109:7, 142:19 consumers - 47:8, | 140:9, 141:6, 141:14, 141:17, |
| 117:7, 142:13 | compete - 105:2, | 95:6, 122:12, 166:1 | 47:11, 71:10, | 143:17, 144:22, |
| commitments - | 109:2 | concludes - 56:17, | 76:13, 78:8, 78:20, | 145:5, 145:13, |
| 162:8 | competing - 22:11, | 67:5, 100:14, | 79:1, 80:13, | 145:16, 148:5, |
| committed - 54:4 | 114:22 | 110:1, 132:17, | 101:11, 101:12, | 148:6, 148:7, |
| committee - 8:14, | Competition - 115:8 | 135:18, 142:5 | 101:15, 102:10, | 148:24, 150:11, |
| 10:6, 10:9, 10:15, | competition - 23:5, | conclusion - 135:19 | 104:3, 104:8, | 150:21, 151:2, |
| 11:6, 11:19, 12:12, 12:21, 13:15, | 23:16, 26:15, 26:16, 104:1, | conclusions - 160:7 condition - 23:22 | 109:18, 109:19, 114:20, 114:21, | 160:13, 162:6, 162:11, 162:17, |
| 13:18, 15:15, | 104:3, 114:20, | conduct - 3:13 | 115:8, 115:11, | 162:11, 102:17, |
| 19:14, 29:18, | 155:6 | conference - 84:12 | 127:21, 128:10, | 162:24, 163:22, |
| 31:21, 31:22, 32:6, | competitive - 14:3, | confidence - 76:13, | 129:3, 129:20, | 164:5, 164:9 |
| 42:24, 43:2, 43:8, | 21:8, 23:7, 24:17, | 104:5, 104:20 | 129:23, 130:14, | contractual - 63:23, |
| 43:24, 44:5, 44:9, | 26:7, 26:11, 26:17, | confident - 161:22 | 130:16, 131:10, | 66:14 |
| 44:18, 44:20, | 38:6, 38:8, 40:17, | conflict - 8:11, 8:12, | 137:18, 150:14, | contrary - 82:17 |
| 44:23, 45:4, 45:5, 46:8, 51:11, 51:17, | 41:16, 47:14, 87:10, 87:14, | 12:14, 12:24, 44:3, 44:4, 45:2 | 151:10, 155:8 consuming - 46:10 | contributions - 33:8 control - 42:8, 58:7, |
| 51:24, 57:16, | 108:18, 128:1, | conflicts - 72:12 | consumption - | 60:9, 64:16, 64:23, |
| 58:10, 58:14, | 129:14, 129:24, | confronted - 70:5 | 150:15 | 65:2, 65:3, 76:12 |
| 58:19, 61:21, 62:7, | 130:13, 130:14, | confusing - 146:21, | contain - 129:11 | Control - 82:22 |
| 62:9, 62:10, 62:24, | 132:14, 147:11, | 158:4 | contentious - 167:6 | controls - 152:3 |
| 65:8, 75:20, 75:21, | 147:19, 155:7, | confusion - 158:14 | context - 101:14, | controversial - |
| 77:2, 93:2, 101:9, | 158:12 | conjunction - 8:19 | 133:18, 140:13 | 157:21 |
| 105:20, 106:2, 164:15, 169:10 | competitiveness - 22:19 | Connecticut - 68:20, 82:21, 84:2, 87:1, | continue - 14:8, 44:9, 65:5, 73:14, | controversy - 167:10 |
| committee's - 42:20, | competitor - 93:21 | 92:16, 169:3 | 81:13, 144:2, | convenience - 92:10 |
| 42:21, 156:19, | competitors - 91:23, | connection - 31:19 | 145:23, 165:12 | conversation - |
| 157:17 | 104:1, 147:17 | conscious - 37:14 | continues - 24:2 | 58:14 |
| Commodities - | complete - 44:10 | consensus - 156:11, | continuing - 129:6 | convince - 153:19 |
| 118:2 | completely - 97:5 | 156:12 | contract - 20:3, | coordinate - 150:5 |
| commodity - 21:21, | complex - 158:4 complexities - 167:9 | consequences - 52:12 | 22:11, 22:12, 24:12, 24:18, 25:5, | copies - 5:8 |
| 83:6, 88:5 common - 70:7 | complexity - 107:19 | conservation - 18:3 | 30:8, 35:9, 35:19, | copy - 4:18 corn - 70:21 |
| Commonwealth - | compliance - 3:19, | Conservation - 74:3, | 47:17, 47:21, | Corp - 18:11, 33:22, |
| 121:10 | 14:1, 14:19, 16:1, | 74:5, 74:9 | 48:16, 50:1, 66:15, | 34:12 |
| communicate - | 19:1, 29:2, 39:3, | conservative - | 79:5, 110:20, | Corporation - 15:22, |
| 159:21, 159:22 | 39:9, 39:10, 39:12, | 162:1, 162:13 | 111:20, 120:20, | 16:9, 18:8, 19:5, |
| communicated - | 58:5, 71:7, 71:9, | consider - 6:22, | 121:11, 121:16, | 27:20, 28:15, 29:8, |
| 33:3 | 71:21, 83:23, 84:8, | 19:7, 45:10, 86:13, | 123:8, 123:10, | 29:10, 157:10 |
| communicating - 45:8 | 106:21, 109:13, 109:22, 127:19, | 91:24, 129:6, 162:2, 162:10 | 123:13, 124:6, 131:24, 140:1, | correct - 32:11, 47:2, 48:6, 113:17, |
| communication - | 127:23, 128:9, | considerable - | 141:10, 141:16, | 136:9, 153:14 |
| 146:23 | 128:11, 144:15, | 118:14 | 148:9, 148:19, | corrections - 57:11 |
| | | <u> </u> | | |

| correctly - 100:10 |
|--|
| correlation - 81:16 correspondence - |
| 58:11 |
| 35:5 |
| cost - 19:16, 26:14, 30:12, 38:22. |
| 30:12, 38:22, 49:17, 64:1, 71:14, |
| 76:10, 83:23, |
| 83:24, 84:8, 85:1, 85:14, 86:11, 89:9, |
| 89:10. 89:11. 90:2. |
| 90:6, 91:19, 91:21, 92:3, 106:20, |
| I 107:3. 107:10. |
| 107:21, 108:24, 109:4, 109:8, |
| 109:13, 109:15, |
| 113:5, 113:6, |
| 113:13, 124:16, 131:14, 131:15, |
| 146:14, 151:1, |
| 113:5, 113:6, 113:13, 124:16, 131:14, 131:15, 146:14, 151:1, 151:10, 151:14, 152:23, 157:3, |
| 157:5, 158:7, 158:9, 158:18, 159:5, 159:8, 159:9, 159:12, |
| 159:5, 159:8, |
| 159:9, 159:12, 159:16, 162:4, |
| 163:7 |
| costing - 159:23 costs - 40:17, 71:7, |
| costs - 40:17, 71:7, 71:11, 71:12, 71:16, 71:21, 79:3, |
| 79:7, 80:18, 81:13, |
| 85:15, 108:10, 108:12, 108:13, |
| 109:9, 109:14, |
| 116:17, 116:13, 116:14, 119:13, 119:19, 120:3, 122:24, 123:9, 123:14, 123:20, |
| 119:19, 120:3, 122:24, 123:9, |
| 123:14, 123:20, 124:2, 124:3, |
| 128:10. 132:5. |
| 132:7, 139:3, 139:5, 139:8, |
| 139:16, 140:8, |
| 143:9, 146:10, 147:11, 151:15, 151:19, 159:20, |
| 151:19, 159:20, 160:3, 160:20 |
| Council - 67:21 |
| 71:3, 71:19, 72:9, 73:6, 73:19, 101:8, |
| 142:12 |
| Counsel - 1:19, 6:11 counsel - 27:7, |
| 27:12 counter - 20:23, |
| 21:4, 21:15, 25:1, |
| 25:18, 25:19, 25:22, 26:6, 36:6, |
| 39:20 countries - 81:7, |
| 81:9 |
| country - 53:8, 55:19, 68:18, 81:1, |
| I 92:13. 117:17. |
| 118:14, 126:22, 127:15 |
| couple - 10:15, 12:2, 16:11, 27:10, |
| 41:22, 45:1, 57:10, 80:23, 123:6, |
| 80:23, 123:6, |

138:10, 156:24

coupled - 102:1

course - 60:4, 60:7, 61:14, 63:17, 65:2, 67:19, 71:17, 104:2, 106:17, 108:12, 161:5 cover - 151:23, 152:2 Cpa - 86:22, 88:22 Craig - 6:2, 6:6 cranberries - 70:21 Cranston - 7:24 create - 70:6, 154:19, 158:15, 164:1 created - 168:19 creates - 139:8, 158:14 creating - 4:6, 92:12, 137:5 creation - 78:7 credibility - 165:19 credible - 141:3 credit - 152:6 credits - 14:15, 14:21, 15:16, 19:24, 52:21, 52:22, 87:23, 159:13 critical - 19:6, 42:18, 74:24, 86:14, 90:11, 92:3 critiqued - 51:5 crops - 70:20 crunch - 102:7 Csg - 74:10, 74:16, 76:8, 76:15, 87:6, 93:13 curb - 99:13, 99:14 curbing - 105:10 curious - 45:24, 50:19, 123:14 current - 36:22, 88:13, 96:19. 157:18, 165:12 **curve** - 16:19 customer - 60:15, 74:21, 157:24 Customers - 151:5 customers - 4:2, 4:10, 112:10, 115:23, 117:18, 125:4, 125:14, 131:18, 132:15, 145:7, 146:2, 146:24, 147:13, 147:14, 147:15, 147:20, 151:5, 152:4, 158:4, 158:11, 159:5, 150:24 159:16, 159:24, 160:22, 162:4 customized - 168:4 cut - 18:7, 21:10, 36:8 cycle - 15:3 **Cynthia** - 1:19, 6:10

D

D1 - 135:14 damages - 70:19 dangerous - 21:12, 22:14, 53:1 Danish - 152:15 data - 4:24, 62:14, 64:3, 65:4, 65:5, 66:5, 72:6, 73:1, 75:1, 75:2, 75:6, 75:11, 75:13, 76:16, 76:19, 83:8

82:22

dependance - 69:21

83:14, 83:15, 83:17, 83:19, 83:21, 84:5, 84:17, 84:20, 84:23, 86:8, 86:21, 87:4, 88:17, 88:19, 89:14, 90:7, 91:18, 93:4, 104:15, 105:6, 105:13, 106:8, 160:23, 161:3, 162:12, 165:13, 165:23, 168:16 date - 44:1, 62:16, 137:21 dated - 5:15 David - 5:23, 77:24 day-to-day - 36:8, 59:22, 63:10, 168:7 days - 24:14, 30:24, 53:20, 70:17 daytime - 90:24 Dc - 126:17 deadline - 6:24 deal - 16:13, 16:14, 16:15, 30:20, 30:22, 33:18, 33:19, 33:23, 55:20, 151:5, 152:8, 165:19 dealing - 39:18, 50:22 deals - 58:4, 128:3 dealt - 18:19, 98:22, 98:24, 135:22 Deborah - 2:8. 126:6, 126:7 **Debra** - 126:5 debt - 151:21, 151:22, 151:23 decade - 19:18 December - 3:22 decent - 72:4 **decide** - 41:21, 57:24, 162:8 decided - 136:1, 143:22 decision - 20:9, 21:14, 62:8, 65:9, 84:2, 86:13, 120:9, 136:5, 139:11 decisions - 135:21, 160:22, 162:12 deemed - 17:12, 97:20 define - 65:18, 65:22 defined - 4:4, 4:13, 4:15, 64:23 degree - 17:11, 26:13, 51:18 **Delaware - 121:21 deliver** - 38:13, 56:6, 110:17, 116:2 delivering - 152:18 delivery - 87:15 demand - 22:8, 38:4, 55:8, 131:17, 161:8, 161:15, 161:17, 161:24 demands - 53:3 demonstrate - 96:7, 97:12, 98:4, 130:21 demonstrated -130:9 Dennis - 2:9, 5:24, 132:20, 132:21, 132:22 denominator - 30:24 Department - 15:12.

deregulated -139:19 deregulation -114:14, 114:16, 114:19 described - 93:9 describes - 128:23 desert - 53:24, 54:21, 54:24 deserve - 160:1 design - 127:14, 168:7 desire - 9:7 desired - 150:1 despite - 34:6, 166:10 Destruction - 71:15 detail - 57:16, 79:2, 87:2 detailed - 167:5 details - 21:16, 92:18, 130:24 determine - 78:21 determined - 20:9 **develop** - 77:21, 80:3, 149:21, 153:13, 164:24 **Develop** - 33:21 developed - 133:8, 152:15 developers - 120:8, 121:2, 122:21, 152:7 **developing** - 133:1, 136:24, 156:6 development - 3:23, 8:22, 10:4, 13:22, 14:24, 16:2, 28:21, 40:1, 46:18, 122:7, 122:21, 126:18, 133:6, 135:12, 143:20, 144:6, 151:12, 153:8, 154:23 Development -15:21, 16:8, 18:8, 18:11, 19:5, 27:20, 28:15, 29:8, 29:10, 34:12, 157:10 dictate - 26:12, 42:10, 53:8 dictating - 106:3 difference - 34:16 50:16, 66:12, 75:9. 75:10, 88:6, 104:24, 105:4, 165:11, 165:17 differences - 35:1, 60:16, 65:23, 66:6 different - 12:23, 14:11, 18:19, 19:4, 38:16, 38:18, 43:6, 48:15, 50:15, 52:4, 52:6, 52:7, 72:22, 74:14, 84:21, 103:24, 108:9, 108:16, 114:21, 137:9, 138:20, 141:19, 141:22, 157:1, 164:24 difficult - 148:17, 152.22 difficulty - 136:17, 152:8 dime - 16:22 **direct** - 16:3, 81:16, 84:5, 158:18, 159:20 directed - 62:11,

135:5, 169:10

directing - 169:6 direction - 37:2, 62:16, 65:9, 65:11, 144:20, 145:14 **directly** - 10:16, 29:14, 75:5, 89:14, 115:12, 117:16, 128.14 **Director** - 101:3, 117:3, 142:11 disadvantages -127:17 disagree - 129:16 disagreed - 57:19 disallowed - 134:16 disappointing -10:12 disclosure - 129:12 disconnect - 31:16, 33:15 discovery - 90:1 discretion - 16:21, 21:13, 38:7, 39:23, 40:2, 135:20 discretionally -30:16 discuss - 83:8 discussed - 57:16, 61:20, 62:24, 83:10, 84:14, 88:4, 143:16 discussing - 11:11, 11:21, 60:20 discussion - 11:5. 11:12, 58:18 discussions - 10:22. 12.1 diseases - 71:14 disparate - 150:7 disqualified -134:17 disqualify - 12:11, 44:12, 134:19 dissent - 9:12 dissenting - 134:10, 134:11 dissuade - 16:8 distinct - 16:7 distinction - 32:12, 166:19 distinguish - 166:21 distinguished -166:20 distributed - 85:19, 96:16, 99:13, 103:7, 103:11 distribution - 4:13. 63:5, 64:3, 66:13, 66:17, 76:17, 83:13, 98:20, 98:23, 99:4, 119:24, 148:10 diverse - 64:11, 78:12, 108:5, 110:8, 110:9 diversify - 80:12 diversifying - 80:20, 110:12, 110:13 diversity - 131:12 divested - 119:17 Division - 5:21, 5:23, 32:2, 32:17, 32:20, 33:11, 45:13, 57:18, 122:18 Division's - 45:10, 45:11 Doa - 15:11 Docket - 1:8, 3:4 docket - 6:18, 7:5, 169:5

| doctor - 9:8 | economic - 20:7, |
|--|--|
| document - 12:13, | 23:21, 24:1, 26:20, |
| 82:20, 100:13, | 26:24, 30:22, |
| 130:19, 143:24, | 35:12, 47:18, 54:1, |
| 144:23 | 75:4, 128:19, |
| documentation - 8:15, 12:8, 13:8, | 131:12, 163:3 Economic - 15:21, |
| 13:16, 29:16, 33:5, | 16:8, 18:8, 18:10, |
| 43:12, 153:10 | 19:5, 27:20, 28:15, |
| documented - | 29:7, 29:10, 33:21, |
| 158:22 | 34:12, 157:9 |
| Doer - 138:12 | economically - |
| dollars - 11:23, 15:2, | 31:14 |
| 17:21, 19:8, 32:23, 37:16, 49:15, 94:2 | economics - 20:8 economies - 81:12 |
| done - 17:12, 65:17, | Edc - 15:11, 58:4 |
| 79:19, 82:16, | edit - 100:10 |
| 105:14, 121:6, | educate - 79:1 |
| 128:14, 133:20, | effect - 23:18, 48:6, |
| 141:16, 144:11, | 73:23, 134:20, |
| 145:16, 150:6 | 155:2, 159:2, 159:7 |
| Donovan - 2:8, 126:5, 126:6, 126:7 | effective - 14:13, 19:16, 75:16, 76:4, |
| Donovan's - 139:4 | 107:4, 150:4, |
| doubt - 40:4 | 152:23 |
| down - 7:17, 24:4, | effectively - 23:14, |
| 31:1, 32:18, 81:13, | 74:23, 149:23 |
| 89:15, 92:17, | efficiencies - 54:15 |
| 100:4, 104:13, | efficiency - 83:4, |
| 104:16, 142:2, 154:9 | 96:24, 97:4, 97:13, 98:12, 102:2, |
| Dpuc - 84:2, 87:1 | 102:6, 102:17, |
| Dr - 9:9, 12:13 | 146:4, 157:11 |
| draft - 17:3, 43:17, | efficient - 75:3, |
| 75:23, 77:1, | 87:15, 89:12 |
| 126:24, 127:8, | efficiently - 41:5, |
| 156:6, 156:10, 156:13, 157:18, | 85:1 effort - 31:17, 150:5 |
| 165:3 | efforts - 102:14 |
| drafted - 12:13, | eight - 7:8, 19:20, |
| 13:9, 96:10, 160:17 | 95:3, 133:24 |
| drafters - 164:20 | Eighteen - 68:17 |
| drafting - 69:4, 73:21, 167:14 | Either - 33:15, 165:21 |
| Draker - 93:22 | either - 5:1, 7:14, |
| drawing - 32:12 | 31:3, 35:2, 66:8, |
| dressing - 104:7 | 73:16, 81:16, |
| drill - 71:16 | 115:6, 166:17 |
| drilling - 69:13, 69:16 | electric - 4:2, 4:12, 73:9, 98:20, 98:23, |
| Drive - 7:23, 149:17 | 99:4, 118:3, |
| drive - 25:19 | 140:16, 148:10, |
| driver - 154:6, 154:7 | 140:16, 148:10, 150:15, 150:16 |
| drives - 31:12 | Electric - 4:11, 5:19, |
| driving - 12:1, 83:23 | 11:10, 11:15, |
| drop - 161:16 drops - 123:12 | 16:23, 18:4, 18:5, 118:8 |
| dry - 18:7, 21:11 | Electric's - 9:2, |
| due - 164:2 | 20:16, 123:17 |
| Duffy - 2:9, 5:24, | electrical - 4:9, |
| 132:20, 132:21, | 140:6 |
| 132:22, 141:5, | electricity - 19:18, |
| 141:12, 142:4 during - 22:10, | 25:14, 38:22, 94:16, 117:16, |
| 111:6, 143:13, | 119:14, 143:5, |
| 145:9 | 151:2, 152:19, |
| | 158:24, 159:2 |
| E | electronic - 61:12 |
| e-mail - 12:17, 21:1, | electronically - 66:9, 168:16 |
| 33:3, 43:19, 165:2 | elements - 141:18 |
| easily - 87:8, 105:12, | eliminates - 85:16 |
| 108:22 | elsewhere - 128:23 |
| East - 59:11 | embrace - 154:13 |
| easy - 21:23, 22:17, 23:23, 84:19, 167:2 | emerge - 92:11, |
| 43.43. 04.13. 107.4 | 92:14 emerging - 88:8. |

echo - 78:17, 79:12,

ecology - 59:24

emerging - 88:8,

emissions - 79:15

93:10

Emi - 132:24

Eaton - 6:2

82:14

```
79:18, 80:4, 80:8,
  113:17
emphasize - 144:2,
  147:10, 165:8
employ - 143:7
enable - 84:5, 84:17,
86:15, 89:13, 91:2
enabled - 89:13
enables - 84:24
enabling - 85:9
encourage - 86:13,
  91:22, 92:23, 93:1,
  94:7, 115:2
encouraging - 91:3
end - 4:9, 20:9,
  20:11, 31:9, 34:1,
  34:21, 38:10,
  38:15, 42:4,
  101:10, 104:3,
107:20, 111:8,
113:13, 115:5,
  115:24, 116:11,
  123:9
ended - 136:6
endorse - 98:17
endorsements -
  34:20
energies - 151:17
Energy - 1:6, 5:24, 6:7, 9:18, 9:19,
  47:6, 58:3, 68:12
  69:1, 82:10, 117:4,
  117:10, 117:22,
  118:1, 121:1,
121:9, 121:10,
  122:18, 128:3,
132:22, 132:24,
  142:12, 149:19,
  155:22, 155:24,
  156:20, 157:8,
  162:20, 163:22
energy - 3:6, 3:24,
4:2, 4:5, 4:7, 4:9,
8:7, 8:22, 9:3, 10:4,
10:5, 10:22, 10:24,
11:2, 11:13, 13:21,
  14:4, 14:5, 14:13,
  14:15, 14:22,
14:24, 15:16,
  15:17, 16:2, 18:20, 18:24, 19:17, 19:23, 21:17,
  21:18, 21:19,
21:20, 23:4, 27:3,
  27:4, 27:17, 27:18,
  28:18, 28:21, 29:1,
  29:3, 31:23, 32:1,
33:8, 33:9, 34:14,
  34:15, 34:17,
  34:18, 34:19,
  34:20, 34:21,
  34:22, 35:5, 37:9, 37:10, 37:11,
  37:12, 37:13,
38:10, 38:13,
  38:15, 38:20,
  39:24, 40:17
  41:22, 46:8, 46:20,
  47:13, 47:15,
  50:23, 51:10,
  51:15, 51:16,
  52:10, 52:16,
52:17, 53:7, 56:7,
  56:13, 57:21,
  57:23, 67:18, 69:6.
  69:9, 69:19, 70:7,
  70:11, 70:12, 71:1,
  71:11, 71:13,
73:22, 74:12,
```

74:13, 77:19, 78:6,

```
78:8, 78:21, 78:24, 79:4, 79:5, 79:17,
  80:6, 80:8, 80:12,
  80:17, 80:20,
  82:19, 85:6, 85:8,
 85:18, 87:22,
90:12, 90:20, 91:1,
  102:1, 102:2
  102:11, 102:17,
  107:6, 107:7,
  107:10, 107:16,
  108:4, 108:6.
 110:13, 112:12,
115:12, 118:13,
119:5, 119:12,
  120:16, 122:3,
  125:24, 127:18,
128:5, 128:16,
 128:17, 128:20,
128:21, 129:2,
131:5, 131:6,
  131:11, 133:1,
133:3, 133:6,
  135:12, 135:21,
  137:1, 137:4,
  138:1, 138:13,
  141:21, 143:9,
144:6, 146:3,
 151:12, 151:13,
  151:16, 152:10,
  152:14, 152:20,
152:21, 153:3,
 154:21, 155:12,
156:22, 156:24,
157:12, 158:23,
  159:13, 163:24
enforce - 41:11,
 68:11, 69:4
England - 47:11,
  53:10, 53:18,
  53:20, 54:2, 54:24,
  55:8. 61:5. 62:12.
 62:14, 63:6, 64:4,
 64:21, 66:4, 66:19,
  68:19, 70:21,
  79:14, 83:8, 86:2,
  92:23, 118:15,
  119:16, 120:18, 122:15, 122:22,
  127:16, 133:9,
 138:23, 140:15,
  140:17, 150:24, 166:14, 166:19, 168:24, 169:8,
  169:9
England's - 118:3
enhance - 128:18
enhancing - 4:5
enormous - 103:5
ensure - 38:19, 76:3,
 104:1, 131:10
enter - 62:2, 72:6,
  73:1, 79:15, 83:17,
 84:20, 84:23, 86:7,
86:10, 89:14, 94:4,
 107:5, 110:19, 119:4, 119:10,
  119:11, 120:6,
  120:15, 121:1,
  122:2, 122:9,
  122:13, 123:7,
  164.4
entered - 72:3, 90:7,
  165:14
entering - 83:13,
  105:6, 105:13,
114:11, 115:23,
  128:4, 163:21,
  165:16
```

entire - 22:8, 80:8

133:13, 136:14 entirely - 138:19, 139:9, 160:15 entities - 4:14, 61:23, 61:24, 63:2, 66:1, 66:8, 66:14, 99:5, 99:19, 143:7 entitled - 118:24 entity - 4:8, 29:8, 64:9, 64:20, 66:3, 83:17, 89:5, 99:8, 168:15, 169:7 entry - 71:24, 72:6, 75:2, 83:8, 83:21, 84:5, 84:17, 93:4, 165:23 environment - 38:6, 69:8, 78:7, 79:3, 128:19, 161:7 **Environment** -67:21, 71:3, 71:19, 72:9, 73:6, 73:19, 101:8 environmental - 4:6, 67:22, 85:7, 101:7, 131:13, 158:20 environments 53:22 envision - 105:12 equaling - 90:24 equally - 12:6, 76:7 equilibrium - 43:6 equity - 151:21. 153:12, 153:16, 153:19 equivalent - 84:14 Erich - 2:7, 100:24, 101:1, 101:2 errors - 100:1, 100:6, 100:7 Ers - 73:16 especially - 70:10, 89:5, 91:8, 92:3, 129:18, 159:10 essence - 11:24 12:4, 13:9, 24:15, 31:6, 39:14, 40:21, 41:14, 43:23 essential - 75:2 essentially - 62:3, 62:14, 62:22, 63:5, 63:7, 66:8, 66:22, 85:16, 95:21, 96:3, 97:15, 98:1, 98:13, 99:9, 99:11, 99:13, 99:19, 99:21, 100:8, 100:11, 110:10, 135:17, 155:8, 168:10 Essentially - 66:2 established - 88:3 establishing - 77:19 estimate - 160:8, 162:1 et - 3:20, 3:21, 5:14, 113:17, 148:12 Et - 1:7 Europe - 54:20, evaluate - 161:3 evaluating - 162:3 event - 135:3 events - 31:11, 37:3 eventually - 9:14, 15:12, 38:21, 56:14 ever-increasing 102:8 Evergreen - 82:5 everyday - 49:2 evidence - 81:6

130:20 evident - 98:3 evolves - 81:12 exact - 86:6, 169:5 exactly - 103:1, 104:9, 105:22 Exactly - 17:16 **examined** - 145:18 examining - 106:13 example 22:6. 86:4, 110:7, 115:17, 115:22, 122:17, 123:11, 124:24, 139:19, 141:16 **examples** - 121:8, 129:1, 130:19, 163:10 exceed - 98:8, 159:12 exceeds - 161:17 excellent - 82:15, 93:14, 101:18, 126:24 except - 49:11 excess - 97:17 exchange - 86:23 excited - 60:5 excuse - 122:9 Executive - 101:3, 142:11 exemplary - 127:9 exercise - 58:7, 135:10, 138:4 Exhibit - 135:14 exist - 33:21, 66:2 existing - 41:23, 42:3, 58:23, 97:4, 127:12, 164:18, 164:23, 164:24, 166:7, 166:12, 166:15, 166:20, 167:7 expect - 73:13. 110:17, 129:23, 161:17 expectation -132:12, 143:21 expended - 135:11 expenditure -132:11 expensive - 84:3, 90:4, 127:23 Experience - 127:15 **experience** - 15:15, 17:23, 52:9, 59:1, 68:14 experienced -127:20 experiencing -159:11 expert - 51:13, 68:4 expertise - 15:20, 16:16, 35:1, 40:3, 40:6, 40:10, 40:19, 41:1, 51:12 experts - 68:6, 68:8, 110:3 explain - 47:4 explicit - 106:14 explicitly - 104:23 exploring - 51:13 exponentially -55:14 express - 77:17, 140:7 extended - 23:5 Extension - 4:21 extent - 23:9, 96:21, 98:6, 98:8

extra - 128:14, 146:6 extreme - 55:3, 151:9 extremely - 91:18, 132:2

F facilitate - 3:23, 9:13 facilitating - 11:24 facilitator - 43:5, 44:8, 44:15, 44:16, 44:17, 134:17 facilities - 54:7, 94:16, 96:15, 96:23, 122:1, 130:6 facility - 88:15, 97:4, 97:12, 97:16 fact - 22:9, 22:20, 24:3, 37:15, 39:22, 40:19, 48:5, 53:10, 89:3, 89:11, 93:2, 103:20, 104:6, 106:16, 119:3, 121:6, 124:2, 130:10, 134:23, 142:21, 155:11 facts - 76:1, 120:23 factual - 44:4 fair - 21:3, 25:6, 53:20, 104:2, 134:9 fairly - 23:15 fairness - 16:18 fall - 64:18, 65:6 falling - 64:21 falls - 18:6 familiar - 64:14, 69:24, 88:7 far - 7:9, 22:23, 48:11, 48:17, 49:3, 52:22, 95:2, 145:14, 145:16, 148:6, 148:8, 156:8 Far- 48:9 Farley- 2:9, 8:20, 142:6, 142:7, 142:8, 142:9, 146:22, 147:2, 148:4, 148:16, 149:14 farm - 54:10, 54:12, 154:22 farms - 154:2 fashion - 18:22, 43:14, 144:16 fast - 95:6 Fat- 82:7 favor - 9:12, 11:14, 11:15, 54:9, 72:21, 74:22, 76:23, 78:19, 102:23 114:15, 136:11, 144:23 favorite - 165:7 feasible - 160:2 feature - 132:16 features - 141:20 fee - 49:21, 49:23, 89:21 feedback - 37:1, 106:6 feelings - 8:10 **fees** - 12:3, 49:12, 50:7, 50:15 felt - 159:4 few - 37:13, 40:7, 54:14, 56:1, 68:6,

95:18, 133:15,

139:20, 153:2,

157:7, 160:5,

164:21 field - 52:2, 93:10, 94:4, 99:1, 103:24, 158:6, 158:15 fight - 103:17 file - 4:16, 123:3 filed - 5:9, 6:23, 8:19, 123:18, 133:20, 135:15 filing - 6:24, 100:16 **filtered** - 43:11 final - 12:12, 57:2, 71:5, 92:5, 140:12, 168:23, 169:15 **Finally**- 73:5, 81:3, 109:12, 163:20, 165:6 finally - 108:14. 139:3 finance - 151:18, 151:19, 153:7 **financed** - 136:18, 138:16, 138:19, 161:12 finances - 30:14 financial - 6:9, 88:19 financially - 105:8 financing - 31:17, 53:12, 121:3, 130:11, 133:2, 141:24, 154:1 finish - 133:14 firm - 10:1, 10:17, 12:9, 17:14, 17:20, 155:22 firmly - 15:4 firms - 86:23, 163:2 First- 6:17, 68:3, 71:5, 77:17, 119:9, 149:19, 156:4, 158:2, 168:2 first - 3:14, 7:18, 8:9, 9:5, 37:11, 40:12, 40:15, 51:9, 65:22, 74:7, 82:14, 90:16, 92:12, 93:11, 96:18, 102:21 111:19, 119:15, 121:17, 123:13, 129:17, 135:8, 155:19, 157:23 Fishermen's - 78:12 fit - 18:21 five - 20:5, 25:20, 48:17, 124:1 fixed - 36:15, 110:17, 131:8, 151:6, 158:23 flat - 20:1, 20:3, 89:20 flawed - 122:11, 142:20 fleet - 118:9 flexibility - 145:6 Floor- 117:6 floor - 3:15, 136:8 Florida- 6:2, 153:18 flourish - 120:17, 120:18 flow - 11:23, 152:3 flowing - 34:13, 34:14, 42:15 flows - 58:2 fluctuate - 161:13 focus - 32:7, 32:11, 53:4, 97:21 focussed - 143:15 focusses - 47:22 focussing - 133:5 fold - 39:12, 119:8

folks - 15:8, 15:18, 34:6, 51:17, 51:22, 70:10, 87:13, 111:6, 150:20, 150:22 follow - 13:2, 62:16, 111.1 follow-up - 13:2, 62:16 Following-10:18 following - 73:10, 123:8, 123:12, 123:21 follows - 56:9 Foods- 85:24 **fool** - 31:12 foothold - 155:13 footprint - 85:7 forces - 88:2 forcing - 108:22, 122:13 forefront - 32:21 foregoing - 169:23 foregone - 160:24 foremost - 8:10, 71:5 forests - 69:17, 70:20 forging - 50:24 forgiveness - 40:8 form - 14:1, 16:1, 28:20 formal - 6:18 formally - 6:20 format - 86:6, 93:5 forms - 21:18, 21:19, 166:23, 167:3 formula - 107:12, 107:13 forth - 42:13, 68:10, 70:24 fortunately - 128:13 Fortune- 117:23 forum - 10:11, 12:1, 15:23, 136:2 forums - 10:10, 164:24 forward - 20:12, 20:17, 20:22, 23:24, 24:12, 30:18, 33:16, 35:11, 35:22, 36:4, 48:15, 48:19, 51:23, 83:12, 121:4, 127:10, 140:22, 154:13 **fossil** - 20:1, 38:12, 56:4, 69:21, 70:6, 70:11, 70:12, 102:8, 102:15, 108:14, 110:19, 113:16, 131:6, 133:4 foundation - 162:15 four - 7:1, 25:20, 26:10, 49:1, 59:23, 68:19, 90:16, 124:1, 146:17 fourth - 74:1 Fourth- 151:11 fraction - 132:6 fragmented - 64:11 frame - 113:8, 131:9, 135:7 frankly - 35:3, 103:3, 167:5 Frankly- 69:21 fraud - 99:22 Fred- 2:6, 82:2, 82:3, 82.4

free - 109:11, 112:19, 134:10 frias - 1:19, 6:11 6:16, 27:21, 45:15, 45:18, 45:21, 45:24, 46:13, 46:22, 47:3, 47:23, 48:7, 48:11, 49:5, 50:17, 56:22, 59:13, 72:14, 72:20, 73:4, 110:22, 111:4, 111:18, 112:7, 112:15, 112:17, 112:21, 113:4, 113:9, 113:11, 113:20, 113:23, 116:4, 116:10, 116:15, 116:18, 123:6, 124:4, 124:9, 124:18, 124:22, 125:4, 125:7, 125:10, 125:12, 125:18, 126:2, 147:24, 148:4, 149:12, 166:5, 166:14, 166:22, 167:15 **fuel** - 20:1, 25:15, 38:12, 70:12, 80:18, 80:19, 85:21, 94:12, 102:15, 109:14, 110:19, 110:21, 113:16, 124:12, 124:23, 125:8, 131:11, 140:20, 150:21 fuels - 24:6, 69:22, 70:6, 102:8, 108:14 **fulfill** - 47:18 fulfilled - 148:19 fulfilling - 9:2 full - 76:6, 133:24 Full- 7:22 fully - 25:16, 83:24, 154:13 function - 63:8, 74:23, 118:16 functionality - 62:19 functions - 63:11 Fund-9:18 fund - 8:22, 10:4, 10:5, 10:24, 11:13, 13:22, 14:24, 15:1, 15:4, 15:7, 15:9, 16:12, 18:3, 19:6, 27:10, 27:15, 27:16, 27:18, 28:19, 28:21, 29:9. 32:8, 40:1, 41:4, 46:18, 57:23, 135:12, 135:22, 144:7, 156:22, 163:24, 164:3 fund's - 15:10, 156:23 fundamental -65:23, 66:6, 66:12, 87:18 fundamentally -88.10 funding - 31:15, 53:13, 135:21 funds - 16:10, 16:13, 16:14, 16:17, 17:9, 17:22, 18:2, 18:9, 18:15, 18:17, 18:22, 20:14, 28:11, 28:13

28:24, 30:15, 32:13, 34:17, 36:17, 37:5, 37:9, 37:16, 58:3, 135:11, 144:4 fungible - 131:17 furnish - 17:19 furnished - 29:17, 33:5, 44:13 furnishing - 44:1 Furthermore - 12:16 future - 14:12, 20:8, 24:3, 27:2, 41:21, 49:3, 69:8, 99:2, 110:18, 120:2, 131:7, 138:13, 148:21, 161:6, 161:20, 163:7 futures - 25:14, 36:10

G **G-2** - 48:21, 49:13 game - 39:1 gap - 165:5 garner - 42:12 garnered - 50:7 **Gas** - 73:17, 118:8 **gas** - 24:7, 25:15, 69:16, 70:1, 73:11, 79:20, 79:22, 80:3, 80:16, 80:24, 139:20, 139:22, 140:19, 141:1, 141:21, 143:5, 159:1, 159:3, 159:10, 168:2, 168:4 gasses - 73:9, 73:15 gatekeeper - 57:24 Gats - 59:20, 84:13, 89:15, 168:16 General - 3:6, 3:10, 3:11, 3:19, 4:14, 4:15, 5:11, 5:21, 18:20, 27:15, 41:24, 78:3, 113:23 general - 85:5, 104:20, 107:3, 156:16, 157:14, 160:6 generally - 58:19, 88:4, 118:12, 118:21, 120:14, 120:18, 133:12 generate - 52:18. 54:18 generated - 4:3 generating - 61:13, 119:20, 140:20 generation - 24:7, 26:11, 42:13, 48:24, 52:12, 54:7, 56:4, 62:5, 72:1, 74:21, 75:16, 76:9, 82:19, 85:19, 87:21, 88:13, 88:15, 91:13, 96:8, 96:9, 96:10, 96:13, 97:15, 98:2, 98:6, 99:13, 103:7, 118:9, 119:17, 119:24, 140:24, 158:6, 158:10 generator - 74:12, 76:8, 83:22, 87:16, 110:16, 110:19 generator/

aggregator - 89:18

generators - 60:4, 60:15, 60:17, 61:4, 61:10, 64:17, 64:24, 65:1, 65:6, 66:5, 66:10, 76:7, 76:11, 83:16, 84:9, 84:18, 84:24, 85:17, 86:3, 86:8, 86:15, 87:12, 88:12, 89:6, 89:10, 92:4, 94:11, 94:12, 103:11, 104:14, 114:12, 161:11, 168:12, 168:19 gentleman - 82:18 84:15, 92:6, 105:20 gentleman's - 72:16 geographically geography - 152:24 **Germany** - 81:8 **Gis** - 59:18, 59:21, 60:2, 60:3, 60:7, 60:20, 61:8, 61:9, 61:18, 61:24, 62:2, 62:15, 62:17, 63:4, 63:11, 63:17, 63:22, 63:23, 64:1, 64:5, 64:6, 65:10, 66:11, 66:23, 72:1, 72:4, 72:6, 75:6, 75:13, 75:22, 76:1, 83:8, 84:5, 84:14, 86:6, 89:11, 89:14, 92:7, 92:10, 105:7, 105:24, 106:5, 106:8, 106:9, 106:15, 106:18, 168:8, 169:10 given - 6:23, 21:3, 26:10, 36:23, 37:1. 39:22, 46:10, 73:8, 100:19, 145:8, 156:1, 159:10, 165:7 glad - 65:14, 100:14 global - 69:9, 70:13, 71:17, 79:13, 79:22 goal - 85:10, 156:23 goals - 4:4, 76:4, 76:5, 79:24, 136:19, 139:1 God - 100:7 goods - 109:8 **Gordon** - 101:4 Government - 117:3 government -120:19, 122:8, 152:12, 152:17, 153:4 Governor - 40:5, 78:3, 114:2 Governors - 79:14 **Grace** - 2:10, 155:19, 155:20, 155:21, 166:6, 166:8, 166:17, 167:1, 167:17 grammatical - 100:6 granted - 11:18. 11:20 grass - 67:22 **Grasso** - 2:4, 7:19, 7:20, 7:21, 7:22, 17:1, 17:4, 28:2, 29:23, 30:6, 35:21, 39:2, 39:5, 43:18, 44:11, 45:15, 45:17, 45:20, 45:22, 46:4, 46:19,

47:1, 47:6, 48:4, 48:9, 48:12, 49:9, 50:20, 51:8, 53:16, 55:7, 56:17, 56:21, 57:17, 58:11, 68:5, 68:14, 110:4, 110:8, 124:5, 134:4, 135:9 Grasso's - 67:24 gray - 21:10, 21:24 great - 16:13, 16:15, 41:5, 87:2, 101:22, 105:3, 115:22, 148:23, 151:5, 152:8, 154:4, 165:19 greater - 24:13, 51:18, 81:18 greatest - 137:13 greatly - 29:22, 83:3, 84:7, 89:10, 92:21 green - 51:15, 85:23 greenhouse - 73:9, 73:11, 73:15, 79:20, 80:3 Greenhouse - 73:17 grid - 60:15, 61:3, 64:24, 74:21, 140:17, 155:1, 160:19 Grid - 7:3, 10:8, 11:1, 49:13, 106:22, 107:17, 109:22 114:6, 114:23, 122:9, 123:7, 160:19, 162:14, 164.6 Grid's - 71:6, 115:19, 162:9, 163:14 gross - 159:12, 159:15 ground - 52:18, 52:23, 53:6, 70:17 group - 9:7, 9:11, 9:17, 11:9, 12:1, 46:16, 47:8, 62:12, 63:7, 65:11, 79:20, 100:3, 100:4, 101:7, 117:21, 118:9, 126:23, 133:23, 135:15, 135:19, 136:4, 143:14, 150:8 **Group** - 74:3, 74:6, 74:10, 77:13, 117:22, 118:1, 118:2 groups - 11:8, 78:12 growing - 15:1, 94:10 grows - 81:12 guarantee - 24:8, 27:2, 35:10, 35:12 guaranteed - 38:1 Gubernatorial -15:13, 15:14 **guess** - 7:14, 13:17, 27:1, 45:12, 55:1, 82:14, 83:2, 91:5, 109:24, 115:16, 122:12, 160:14, 162.6 guessing - 31:5 **Gulf** - 80:24 guy - 38:2, 41:6, 152:2

Н

habit - 22:4

104:10, 114:12 handful - 22:7 handle - 60:22, 96:14 handled - 60:17, 61:5, 133:13, 134:9, 168:20 **handles** - 61:9 handling - 104:14 hands - 94:3, 145:3 happy - 17:18, 69:19, 163:10, 167:13 hard - 78:1, 114:7, 158:21 Hartley - 12:19, 43:20, 43:21 hate - 102:21 headache - 107:14 headaches - 80:15 headquartered -117:23 health - 70:8, 79:3, 108:12, 113:16 hear - 32:7, 43:9, 53:18 heard - 48:1, 70:2, 72:16, 95:20, 95:21, 102:4, 102:22, 103:5, 105:10 hearing - 3:9, 3:13, 3:15, 5:2, 17:6, 103:21, 106:7, 169:24 Hearing - 1:4 hearings - 62:21 heavily - 47:12, 54:9 heavy - 151:14 heck - 88:20 hedge - 139:11 hedging - 114:10 heightened - 140:15 held - 25:7, 27:24, 32:13 Heliotronics - 93:22 **help** - 80:13, 80:21, 83:3, 91:7, 105:24, 131:10, 154:11, 165:4, 167:14 helping - 80:12 hereby - 3:12, 169:23 heritage - 69:12 herring - 139:5 high - 70:11, 85:15, 152:6, 152:13, 159:10 higher - 33:16, 49:22, 50:5, 123:24 highest - 35:9 highly - 40:4, 90:8 himself - 105:21, 110:8 hindering - 13:1 hinders - 108:15 hint - 156:15 hire - 9:7, 44:14, 44:21 **hired** - 8:12, 9:14, 10:2, 12:2 hiring - 9:12 historic - 98:5 historical - 97:17, 98.7

half - 68:16, 68:23, 79:21, 169:4

Hampton - 121:15

hand - 40:12

handed - 84:2.

history - 60:21, 61:1 hit - 56:15 Holbrook - 1:18, 3:2, 6:8, 6:13, 7:6, 16:24, 29:23, 35:17, 38:17, 39:4, 43:15, 44:6, 50:20, 53:11, 55:1, 56:16, 57:6, 57:12, 58:13, 59:6, 65:16, 67:4, 67:10, 73:24, 77:3, 81:21, 82:1, 93:6, 94:19, 94:23, 95:9, 100:17, 100:23, 116:19, 116:23, 126:3, 132:18, 141:5, 142:3, 146:15, 147:1, 147:22, 148:2, 149:13, 155:16, 166:3, 167:16, 169:13 hold - 33:22, 143:8 holding - 13:23 hole - 97:22 holes - 27:16 home - 38:1, 151:1 honest - 145:11 honestly - 93:11, 114:5 **hope** - 13:10, 60:20, 127:9, 129:5, 164:5 hopeful - 69:7 hopefully - 29:21 horizon - 163:4 hospitals - 143:6 **host** - 94:16 hotter - 70:17 hour - 20:20, 41:23, 125:1, 125:13, 125:21, 148:19 hourly - 20:20 hours - 97:19, 103:2 house - 16:13 household - 50:13 household-byhousehold - 50:13 Houses - 78:16 huge - 35:15, 138:16 hugely - 83:23 human - 31:11, 40:2, 40:3 hungry - 156:2 hurricanes - 80:23 hurts - 69:23 hydro - 152:24. 153:1 hydroelectric -96:15, 96:19, 96:23 hypothetical -139:16, 163:10

idea - 106:23, 108:3 ideal - 92:18 ideas - 61:15 identified - 35:2, 141:8, 164:12 identify - 31:10, 35:1, 146:10, 147:3 identifying - 140:15 ignores - 108:12 lii - 2:7, 95:12, 95:14 illiquid - 36:7 imagine - 32:19 immediate - 137:12, 137:17 impact - 15:6, 53:12, 157:11

| implement - 3:5, 3:18, 28:24, 136:3 |
|---|
| Implement - 1:6 |
| implementation - 8:6, 92:19 |
| implemented - 19:21, 50:10, |
| 149:11 |
| implementing - 53:24, 106:4 |
| implies - 28:22 imply - 68:14 |
| importance - 144:3 important - 76:1, |
| 76:12, 79:23, 80:6, |
| 85:2, 89:23, 90:9, 102:10, 103:4, |
| 110:14, 120:12, 129:18, 131:12, 132:16, 136:14, |
| 132:16, 136:14, |
| 158:16 Importantly - 158:5 importantly - 17:10 |
| importantly - 17:10 impose - 123:2 |
| imposing - 123:1 impractical - 107:1, |
| 107:2 |
| impression - 29:12, 29:13, 159:1 |
| improve - 83:4, 90:19 |
| improved - 51:5, 72:10 |
| improvement - 97:4, |
| 98:12 improvements - |
| 96:22, 96:24, 97:13, 97:14, 97:16 |
| inaccurate - 107:1, |
| 107:22, 107:23, 111:17 |
| inappropriate - 134:13 |
| Inc - 6:1, 132:23, 132:24 |
| incentives - 164:1, 164:3 |
| incentivize - 99:12, |
| 164:8 inception - 124:15 |
| include - 15:11, 79:6, 85:18, 91:4, |
| 118:1, 129:8, 134:11, 137:4, |
| 140:13 |
| included - 13:17, 29:16 |
| includes - 82:11 |
| including - 4:10, 6:20, 74:15, 78:11, |
| 117:18, 122:22, 133:11, 133:24 income - 102:9 |
| income - 102:9 incomes - 151:7 |
| incorporated - |
| 36:12 increase - 14:19, |
| 24:6, 49:17, 76:10, 85:5, 85:7, 85:11, |
| 86:17, 89:8, 89:10, 89:11 96:7 98:1 |
| 98:4, 109:17, |
| 98:4, 109:17, 111:15, 114:3, 144:18, 158:22 |
| increased - 75:15, 78:5, 102:5, |
| 102:16, 103:22, |
| 161:8 increases - 101:13 |
| increasing - 4:1, |

14:6, 14:16, 53:3, 102:8, 140:18 incredible - 92:20 incredibly - 32:19 incremental -106:20, 113:13, 116:13, 155:14 incur - 123:19 incurred - 147:12 indeed - 70:4, 78:15, 79:4, 80:5, 81:1, 84:17 independence -94:14 independent -61:24, 72:2, 72:5, 73:1, 75:5, 82:18, 87:7, 93:8, 93:16, 126:15, 165:15 independently -74:17 Index - 2:1 index - 109:15, 110:21 indicated - 6:17, 6:24, 40:7, 148:5 indicative - 112:3 indirect - 159:20 individual - 9:14, 11:24, 12:9, 12:23, 12:24, 13:10, 79:10 industrial - 32:5, 47:9, 47:11, 50:3, 129:22 industries - 103:16 industry - 19:17, 55:9, 55:11, 77:14, 81:15, 103:15, 104:5, 104:17, 104:19, 104:21, 120:17, 133:4, 150:20 inform - 47:8 informal - 143:14 information - 13:12, 43:11, 62:5, 72:1, 79:9, 89:17, 100:19, 145:8, 159:17, 159:18, 160:1, 160:18, 162:15, 165:16, 165:20 Information - 82:10 infrastructure -66:23, 72:8 inherent - 20:12. 37:19, 137:10 inherently - 88:17, 88:24 initial - 118:11 **initiate - 89:19** initiating - 156:5 initiative - 73:11 Initiative - 73:17 inoperability - 91:15 input - 61:18, 62:5, 75:5, 75:11, 75:13, 76:16, 156:8 inputs - 76:19 insist - 162:23 insofar - 51:13 install - 104:15 instance - 30:14, 48:18, 49:23, 53:18, 137:22, 162:18 instantaneous -167:12 instead - 65:19,

66:12, 106:12

130:23 Instead - 62:10 **Institute** - 79:19 instruments - 149:6 integrity - 76:6, 99:20 intelligence - 44:19 intelligent - 115:23 intelligently -115:15 intended - 42:15, 159:14 intent - 96:3, 97:6, 98:10, 98:13, 166:11 intention - 144:13 intentions - 144:12 interact - 60:2 interaction - 58:16 interest - 8:11, 8:12, 11:8, 11:9, 12:14, 12:24, 23:3, 23:4, 24:21, 31:15, 33:20, 34:2, 42:22, 42:23, 43:2, 43:10, 43:12, 44:4, 45:2, 65:20, 72:12, 131:9, 134:2, 142.22 Interested - 4:23 interested - 7:7, 32:3, 52:15, 105:23, 151:24, 152:1, 165:13 interesting - 28:9, 93:24 interests - 31:23. 45:6 interface - 61:12, 62:4, 63:3, 65:2 **internet** - 39:19 interpret - 148:18 interpretation -57:20, 144:18 interpreted - 149:10 interrupt - 27:22, 72:15 interruptible -139:24 intervene - 17:11 intervened - 6:21 intervention -146:13, 152:13, 152:17, 153:5 introduce - 164:7 introduces - 66:1. 66:7 introducing - 61:23 inverter - 90:16 inverters - 90:17 invested - 128:12 investment - 42:12, 46:5, 54:5, 56:8, 56:9, 135:21 investments - 46:7 investor - 18:5, 31:3, 88:11, 116:5, 116:7 investor-owned -18:5, 116:7 investors - 80:21 involve - 83:12 involved - 14:2 19:18, 36:1, 42:24. 63:10, 92:11, 94:12, 133:9, 168:6 involves - 47:14, 160:3 ironically - 23:12 Island - 1:1, 1:14,

3:<u>6, 3:10, 3:11</u>

52:13, 52:14, 53:9, 54:23, 55:12, 60:8, 60:18, 62:21, 67:15, 67:21, 68:5, 68:19, 69:3, 69:6, 70:14, 71:3, 71:20, 72:10, 73:7, 73:20, 74:16, 75:14, 75:18, 77:10, 77:13, 77:16, 78:6, 78:14, 79:19, 81:20, 90:15, 90:22, 92:22, 101:9, 106:4, 114:6, 117:13, 117:18, 117:20 119:14, 120:10, 120:17, 122:23, 124:8, 124:10, 126:11, 137:5, 139:18, 142:10, 142:12, 143:5, 149:18, 150:15, 152:5, 152:8, 152:16, 152:22 153:16, 153:20, 154:20, 156:22, 166:13, 166:16, 170:1, 170:6 Islander - 34:3 **Islanders** - 106:3, 116:9, 143:8 Iso - 61:5, 62:12, 62:13, 63:6, 64:4, 66:3, 66:19, 140:14, 140:18, 169:8, 169:9 **Iso's** - 64:16 issue - 7:8, 27:23 33:1, 34:11, 34:12, 44:2, 46:21, 52:11, 60:19, 62:20, 78:17, 93:17, 96:15, 110:7 119:2, 134:24, 136:6, 139:5, 144:22, 160:11, 165:24, 167:24 issued - 12:9, 12:12, 12:17, 13:14, 27:6, 29:16, 135:4, 140:14, 169:3 issues - 16:11, 17:3, 46:19, 55:15, 55:16, 55:19, 57:2, 57:15, 70:6, 96:12, 96:17, 135:16, 136:14, 143:1, 146:9, 167:9 item - 9:5, 27:5 95:21, 146:2, 158:9 itemization - 71:7 itemize - 157:24 itemized - 106:21 itemizing - 71:9 items - 8:8, 27:10, 95:20, 167:4 itself - 14:15, 34:18, 38:21, 41:1, 46:20, 53:5, 96:6, 104:5, 144:7, 154:12

3:17, 3:19, 4:3, 4:7, 4:10, 4:13, 4:15,

4:18, 5:5, 5:11,

7:24, 9:17, 9:19,

14:5, 19:21, 26:8,

27:19, 47:12, 49:19, 50:12, 52:4,

J James - 2:4, 7:19, 7:21, 7:22 January- 121:22 Japan- 81:8 Jefferson- 1:13, 3:16, 4:17, 5:4 Jersey- 84:12, 84:20, 95:16 **Jo**- 170:5 job - 43:3, 46:10, 60:9, 62:1, 67:1, 78:7, 82:15, 92:6, 93:14, 99:16, 101:18, 101:22, 106:1, 107:19, 149:24, 155:2 iobs - 4:6, 137:5. 154:20 **John**- 2:9, 8:20, 142:6, 142:7, 142:8 Johnston- 96:13, 97:10 joining - 69:6 **Jonathan**- 9:9 Jose- 82:6 judgment - 32:22. 38:19, 40:2, 40:3 June- 13:15 jurisdiction - 18:6, 18:14, 28:17, 28:19, 29:5, 52:8, 64:18 iurisdictions - 52:7 justification - 154:2 justified - 34:9,

K

justify - 36:9, 50:8,

154:3

154:1

Kadis - 167:20 keep - 22:14, 39:14, 49:6, 49:9, 52:1, 55:10, 56:9, 56:11, 89:5, 103:4, 129:15, 161:23 keeping - 99:3 keeps - 25:24 key - 70:20, 152:13, 152:17, 154:6, 154:7 kilowatt - 103:2. 125:1, 125:13, 125:21, 146:20, 148.19 kilowatts - 74:18 kind - 51:6, 51:22, 68:17, 88:20, 88:21, 131:5, 139:12, 144:17, 146:16 kinds - 112:3 knowing - 15:13 Knowing - 75:22 knowledge - 15:8 32:3, 32:16, 51:18, 62:15, 78:20, 168.18 known - 134:4, 134:8 knows - 106:3 **kw** - 52:23 kwh - 40:16, 48:23, 49:15, 49:16, 50:2, 50:7

| L |
|--|
| lab - 130:21 |
| labeled - 78:19 Labs- 93:22 |
| lack - 8:18, 8:21, |
| 11:9, 19:2 lacks - 16:15 |
| Landfill - 96:13, 97:10 |
| landfill - 98:2 lands - 69:23 |
| Lane- 155:23 |
| language - 96:2, 96:6, 96:11, 97:23, |
| 119:3, 119:7, 145:10, 148:9, |
| 145:10, 148:9, 148:17, 164:13, 164:16, 165:3 |
| l large - 47:9, 50:3. |
| 52:20, 85:22, 93:7, 94:8, 104:21, |
| 143:4, 143:7 largely - 133:6, |
| 139:4 larger - 55:14, 91:8. |
| 117:21, 121:20, 122:4, 153:23 |
| last - 20:17, 26:21, 27:5, 34:3, 59:13, |
| 60:19, 82:20, 84:1, |
| 111:1, 114:1, 116:10, 123:13 |
| l ast- 99:23 |
| lastly - 8:23, 10:5, 21:23, 47:19 Lastly- 164:10 |
| laundered - 19:3 |
| Law - 3:7 law - 41:19, 50:11, |
| 54:4, 55:10, 55:24, 57:20, 58:20, |
| 119:23, 135:16, |
| 136:10, 137:3, 143:13, 144:7, |
| 144:18, 154:18 |
| laws - 54:9 Laws- 3:10, 3:11, |
| 3:19, 4:14, 4:15, 5:11 |
| leadership - 69:6, 78:2 |
| leading - 70:12, 79:22, 81:7 leads - 19:11 |
| leads - 19:11 learn - 37:15, 37:17 |
| learning - 16:19, |
| 92:14 least - 9:16, 11:4, |
| 11:16, 12:7, 17:6, 19:9, 19:13, 40:23, 42:14, 58:10, |
| 42:14, 58:10, |
| 83:11, 99:23, 100:4, 111:9, |
| 137:14, 144:23 leave - 23:18, |
| 130:24, 155:3 led - 29:14, 81:15, |
| 156:8 left - 6:10, 6:12, |
| 95:4, 109:24, 155:19, 157:20 |
| legacy - 69:22 |
| legacy - 69:22 legal - 57:14, 135:15 Legal- 1:19, 6:11 |
| legally - 34:1 |

legislation - 85:4,

89:2, 11<u>4:14,</u>

| 114:16 legislative - 23:11, |
|---|
| 59:4, 115:6, 140:7, |
| 146:13 legislator - 114:17 |
| legislature - 78:16, 135:23, 135:24 |
| 136:5, 136:20, 136:21, 137:24, 139:2, 144:5, 146:4 |
| 139:2, 144:5, 146:4 |
| legitimate - 135:13 legitimately - 26:21 less - 65:20, 92:18, |
| less - 65:20, 92:18, 115:19, 127:23, |
| 167:5 letter - 75:19, 75:24, |
| 76:21, 77:1, 87:5, 92:24, 93:23, |
| 104:10, 105:19, |
| 106:10 letting - 74:8 |
| |
| 52:1, 70:17, 87:3, 90:5, 92:1, 103:24, 126:19, 133:8, 140:18, 158:6, |
| 140:18, 158:6, |
| 158:15, 167:9 levels - 4:1, 70:15, 79:16, 152:13, |
| 79:16, 152:13, 152:14 |
| licensed - 117:13 |
| lies - 39:16 lieu - 14:20 life - 15:3, 34:4, |
| 70:14 |
| lifeblood - 101:11 Light- 6:3, 101:3, 101:6, 153:18 |
| 101:6, 153:18 light - 133:19, 140:7, |
| 151:14, 153:17 likely - 14:8 |
| limitations - 14:7 |
| limited - 4:11, 16:15, 53:2, 53:4, 54:1, |
| 53:2, 53:4, 54:1, 54:6, 55:7, 56:14, 58:18, 58:23 |
| line - 49:15, 90:14, 90:16, 91:11, |
| 143:8, 146:2, 155:3, 158:9 |
| lines - 159:19 |
| Linwood - 95:15, 95:16 |
| liquid - 89:24 list - 165:2 |
| listed - 168:15 listen - 17:8 |
| listening - 67:24, |
| 68:3 live - 70:10, 82:5, 150:24, 151:6, |
| 150:24, 151:6, 151:8 |
| 151:8 lives - 71:15, 156:2 living - 9:10, 18:16 load - 49:12, 96:12, 97:10, 117:19, 118:5, 123:8, 123:11, 123:12, |
| load - 49:12, 96:12, 97:10, 117:19 |
| 118:5, 123:8, |
| 123.21 |
| loads - 50:3, 132:7 loan - 151:22 |
| lobbied - 41:24 local - 78:10 |
| located - 121:21 location - 54:17 |
| location - 54:17 locational - 55:16 lock - 23:4, 24:17, |
| IOCK - 23:4, 24:17, 26:22, 30:20, |
| 26:22, 30:20, 37:23, 111:24 locked - 23:14 |

locked - 23:14

```
locking - 24:2, 24:8, 30:18, 31:1
locks - 22:9
Lodge- 155:22
log - 39:19
logic - 139:11,
  139:21
long-term - 4:5,
  8:24, 10:22, 11:4
  11:6, 11:14, 11:16, 16:2, 19:14, 19:15, 20:2, 22:3, 22:8,
  22:10, 24:18,
26:18, 29:24, 30:6,
  30:8, 35:9, 35:19,
  37:20, 37:23,
  46:18, 79:4, 102:2, 107:5, 110:7,
  110:14, 110:20,
  114:9, 114:11,
115:1, 115:13,
  119:5, 119:11, 120:7, 120:16,
  120:20, 121:1,
  122:10, 122:14,
  124:6, 125:24,
  127:6, 128:6,
128:12, 128:15,
  128:17, 129:2,
  129:8, 129:9,
  129:19, 130:2
  130:8, 130:10,
  130:15, 130:22,
  131:3, 131:24,
132:11, 136:13,
  136:16, 137:4,
138:1, 138:7,
  138:8, 138:9,
139:6, 140:8,
140:9, 141:6,
141:9, 141:14,
  141:16, 141:17,
  143:12, 144:21,
145:5, 145:13,
  145:16, 148:5,
  148:6, 148:7,
148:9, 148:18
  148:24, 150:21, 151:2, 152:6,
  154:10, 154:14,
  155:4, 160:11,
  160:13, 160:20,
  161:3, 161:22,
162:1, 162:2,
  162:5, 162:6,
162:11, 162:17,
  162:18, 162:22,
162:24, 163:6,
  163:22, 164:5,
  164:9
look - 20:2, 22:1,
  22:22, 25:23, 68:5,
72:17, 75:24, 99:7,
  104:11, 115:10, 136:22, 140:22,
  149:4, 150:20,
  150:23, 152:15,
  164:19, 167:4
looking - 19:8,
21:24, 45:12,
  48:19, 48:22, 50:6,
  55:22, 56:6, 113:12
losses - 90:23
low - 42:22, 42:23,
43:1, 90:5, 90:6,
  91:21, 92:3, 102:9,
  132:2, 161:16
lower - 85:1, 129:4,
131:4, 158:24
lowering - 157:5
```

lowest - 132:1 Lse's- 60:4 Lueker- 5:20, 57:9, 57:13, 58:17, 59:8 Luly- 5:15 lunch - 95:7 Lung- 78:13 luxury - 64:22

mail - 4:20, 12:17, 21:1, 33:3, 43:19, 165:2 main - 76:2 Maine - 68:21. 118:15, 154:24, 166:18 maintain - 104:4 maintaining -150:12 major - 87:4 majority - 66:5, 130:14, 135:18, 136:4, 136:9, 149:20, 156:11 makeup - 42:21 man - 52:20 manage - 36:15, 46:8 Management - 6:1, 6:5, 95:15, 132:23, 132:24 management -47:13 manager - 59:17, 60:2 manages - 58:3 managing - 93:19 mandate - 120:19, 120:20, 122:8, 148:20 manipulate - 39:1 manipulated - 41:20 manner - 101:23, 129:11, 144:16 manually - 62:2 manufacturer 109:5, 109:6 manufacturers -143.6 maple - 70:21 mark - 25:23 marked - 99:24, 100:9 market - 20:3, 20:7, 20:10, 20:13, 20:18, 20:19, 21:4, 21:10, 22:5, 22:15, 22:21, 22:24, 23:5, 23:11, 23:12 23:15, 23:20, 23:21, 24:1, 24:2, 24:19, 24:22, 24:23, 24:24, 25:19, 25:20 25:21, 25:22, 26:3, 26:13, 26:23, 30:12, 30:13, 30:18, 31:24, 35:10, 35:13, 35:14, 35:15, 35:20, 36:2, 36:9, 36:10, 36:20, 37:22, 37:24, 39:1, 39:14, 39:18, 41:16, 41:19, 42:8, 42:11, 42:14,

46:11, 48:3, 48:5,

48:8, 48:10, 48:14

48:15, 49:4, 49:7, 50:14, 60:11, 63:16, 66:22, 78:9, 80:16, 80:21, 81:5, 84:9, 84:13, 84:18, 84:20, 87:4, 87:20, 88:2, 88:5, 88:6, 88:10, 89:2, 90:6, 92:12, 92:13, 92:16, 93:7, 99:20, 103:20, 108:18, 111:15, 111:23, 112:1, 113:2, 119:14, 121:24, 124:7, 124:17, 124:23, 125:11, 125:14, 128:1, 130:12, 131:5, 132:14, 137:12, 138:3, 139:10, 139:20, 139:23, 141:20, 147:11, 149:5, 151:8, 152:15, 155:2, 158:23, 161:7, 162:9, 165:20, 168:6, 168:7 **Market** - 22:16 marketer - 49:18 marketers - 60:4, 109:1 marketplace - 14:3, 14:4, 20:20, 21:2, 21:8, 21:9, 21:24, 23:7, 24:17, 25:2, 25:13, 25:16, 26:3, 26:6, 26:17, 30:9, 30:12, 31:12, 36:5, 36:6, 37:8, 38:2, 38:4, 38:8, 38:14, 41:14, 120:23, 129:24 marketplace's - 22:8 marketplaces -51:19 Markets - 84:22 markets - 20:20, 20:21, 20:22, 20:23, 22:17, 24:4, 47:14, 47:15, 61:21, 62:7, 62:9, 62:10, 62:24, 65:8, 74:23, 75:20, 77:2, 83:5, 83:6, 84:1, 85:10, 85:12, 86:24, 88:3, 88:7, 88:8, 88:24, 90:3, 91:24, 92:1, 92:10, 92:14, 92:22, 93:2, 93:17, 94:1, 94:6, 105:20, 106:2, 118:17, 127:20, 161:13, 169:9 markups - 165:3 mart - 85:23 Mary - 1:18, 6:13 Maryland - 117:24, 118:10 Mass - 74:7, 123:17 Massachusetts -49:23, 51:20, 52:5, 68:20, 74:16, 82:9, 117:6, 118:15, 121:12, 121:15, 122:17, 126:9, 127:21, 128:2,

128:10, 155:23, 166:6, 166:8, 166:9

Massachusetts-

based - 82:9

| Massaro - 5:15, 7:11 | 76:8, 76:22, 76:24, | 141:7 | 152:1 | 63:16, 63:23, 65:8, |
|---|--|---|--|--|
| match - 125:22, | 80:1, 87:6, 93:18, | mitigates - 142:1 | | 75:6, 84:14, 92:7, |
| 153:7 material - 91:14, | 93:21, 110:3, 122:5, 130:20, | mix - 78:18, 78:21, 149:3, 149:6, | N | 99:5, 168:8, 169:9 Nepool's - 59:18, |
| 165:10 | 138:11, 147:4, | 150:10, 150:17, | name - 7:22, 9:9, | 59:21, 75:20 |
| Matt - 2:6, 77:6, | 164:11 | 151:20 | 25:10, 59:14, | net - 159:16, 162:4 |
| 77:7, 77:8, 77:12 | Mercantile - 25:14 | model - 51:1, 73:11, | 67:19, 77:11, 82:4, | neutral - 10:13 |
| matter - 9:13, 9:21, 10:14, 13:6, 15:16, | merged - 82:8 merit - 151:5 | 75:23, 77:1, 105:18 modest - 160:12, | 95:13, 117:2, 142:8, 149:16, | never - 16:17, 18:19, 28:7, 54:21, 55:23 |
| 17:15, 24:3, 32:18, | merits - 135:3, | 164:2, 164:20 | 155:21 | new - 51:6, 66:1, |
| 33:12, 37:13, | 145:18 | modify - 17:2, 67:2 | Narragansett - 4:11, | 66:7, 85:22, 89:15, |
| 38:18, 41:1, 56:8, | message - 71:10 | monetary - 158:18 | 5:19, 9:1, 11:10, | 96:9, 96:21, 97:1, |
| 60:23, 62:9, 64:24, 65:9, 96:4, 106:17, | met - 133:24 meter - 61:3, 65:1, | money - 10:3, 13:23, 13:24, 16:5, 16:21, | 11:14, 16:23, 18:4, 20:16, 99:7, 99:8, | 97:5, 97:18, 97:20, 98:13, 122:9, |
| 118:11, 133:13, | 66:16, 74:13, | 18:10, 18:12, | 99:10, 99:15, | 122:22, 122:24, |
| 138:20, 140:2, | 75:16, 76:9, 88:15, | 18:21, 18:23, 19:2, | 105:1, 105:2, | 136:18, 138:23, |
| 149:8, 167:2 | 99:6, 99:14, 99:15, | 19:3, 19:12, 30:7, | 107:7, 107:18, | 144:16, 164:16, |
| matters - 6:15, 11:22, 40:11, 95:19 | 105:1, 105:5, 105:9, 105:11, | 31:4, 31:5, 31:18, 32:9, 32:15, 33:7, | 109:17, 111:10, 112:8, 112:18, | 164:22, 164:24, 166:9, 166:20, |
| mature - 92:14 | 168:12 | 36:24, 40:22, 43:7, | 122:8, 124:13 | 167:3, 167:5, |
| maximizing - 157:2, | metered - 62:4 | 54:22, 55:13, | Nasdaq - 86:23 | 167:11 |
| 157:10 | metering - 62:12, | 55:22, 56:9, 57:24, | Natick - 155:23 | New - 25:13, 47:11, |
| maximum - 127:22, 139:14 | 62:13, 63:6 meters - 62:2, 66:9, | 58:1, 58:8, 71:11, 71:15, 71:16, | nation - 54:2 national - 50:24, | 53:10, 53:18, 53:20, 54:2, 54:24, |
| Meadow - 149:17 | 99:16, 165:17 | 71:18, 71:10, 71:18, 119:21, | 69:16, 126:14, | 55:7, 59:11, 61:5, |
| mean - 32:20, 53:3, | method - 16:3, | 128:11, 129:3, | 126:19, 130:21 | 62:12, 62:14, 63:6, |
| 55:3, 70:17, | 31:13 | 143:17, 144:10, | National - 7:3, 10:7, | 64:4, 64:20, 66:3, |
| 112:14, 123:10, 125:3, 125:20, | methodologies - 35:4 | 144:14, 146:6, 152:3, 153:12, | 10:24, 49:13, 71:6, 106:22, 107:17, | 66:19, 68:19, 70:20, 74:16, |
| 146:3 | methodology - | 153:17, 153:19 | 109:22, 114:6, | 79:14, 83:8, 84:12, |
| meaning - 13:2 | 15:24 | monies - 143:10 | 114:23, 115:19, | 84:20, 86:2, 86:23, |
| means - 47:18, | methods - 41:2 | monitored - 93:13 | 122:9, 123:7, | 92:23, 95:16, |
| 63:24, 66:15, 66:23, 76:4, 144:4, | metric - 162:4 microphone - 7:15 | monitoring - 85:20, 86:19, 87:8, 90:10, | 160:19, 162:9, 162:14, 163:14, | 117:4, 117:10, 118:3, 118:15, |
| 150:4, 160:16 | mid - 57:17, 98:22, | 90:18, 91:3, 91:12, | 164:6 | 119:16, 120:18, |
| meantime - 155:11 | 139:12 | 93:12, 94:9 | natural - 24:7, | 120:24, 121:8, |
| meanwhile - 114:23 | mid-august - 57:17 | monoxide - 79:22 | 25:15, 80:16, | 121:9, 121:11, |
| measurement - 66:18 | mid-range - 139:12 middle - 148:13 | month - 48:17, 49:10, 168:5 | 139:20, 140:19, 141:1, 143:5, | 122:15, 122:22, 127:16, 133:8, |
| mechanism - 57:22, | might - 99:19, 100:3, | monthly - 61:14 | 159:3, 159:10 | 138:23, 140:15, |
| 61:11, 66:20, 85:9, | 107:8, 108:2, | months - 45:1, | nature - 13:7, 52:19, | 140:17, 150:24, |
| 144:15 | 109:3, 135:11, | 80:23, 134:15, | 52:21, 70:20, | 161:9, 166:14, |
| mechanisms - 87:24 mediating - 11:24 | 143:22, 145:24, 159:21, 163:11, | 134:19 morning - 3:2, 5:17, | 85:17, 142:21 Nault - 1:19, 6:9 | 166:19, 168:24, 169:8, 169:9 |
| mediator/facilitate - | 167:10, 167:11 | 7:24, 8:2, 8:9, | near - 70:10, 102:10, | next - 20:4, 20:5, |
| 9:8 | migration - 123:20 | 117:6, 117:7, | 138:24, 161:18, | 57:6, 77:5, 82:1, |
| mediator/facilitator - 8:13 | million - 79:21, | 123:5, 137:8, | 162:19 | 95:10, 98:16, |
| meet - 122:14, | 128:10, 154:4 millions - 15:2, | 147:4, 165:1 morning's - 3:3 | nearly - 156:11, 156:18 | 100:23, 115:15, 116:1, 116:23, |
| 122:21, 136:19, | 17:21, 19:8, 32:23, | most - 30:17, 30:19, | necessarily - 37:2, | 126:4, 132:20, |
| 139:1, 154:21, | 37:16 | 30:21, 33:7, 74:14, | 75:10, 79:6, 81:9, | 136:12, 142:5, |
| 157:1 meeting - 3:4, 33:22, | mils - 50:2 mind - 12:7, 89:5, | 75:4, 76:1, 81:10, 87:15, 89:12, | 81:16, 136:7, 164:2 necessary - 17:12, | 149:14, 155:9 nice - 26:19 |
| 51:9, 57:16, 79:24, | 103:4, 105:17, | 94:11, 103:16, | 41:3, 44:16, 44:17, | nine - 5:8, 19:19, |
| 102:24, 152:9, | 139:2 | 107:3, 137:11, | 44:18, 75:21, 121:3 | 80:1, 119:15, 134:6 |
| 155:14, 169:16 | mine - 71:16 | 138:5, 146:20, | need - 17:13, 27:11, | nobody - 15:14, |
| meetings - 45:19, 45:23, 46:3, 58:10, | minimal - 90:2, 155:1 | 150:16, 150:17, 152:3, 154:2, | 50:7, 85:13, 86:18, 91:24, 92:1, 93:15, | 22:13, 56:12, 90:18 Non - 158:7 |
| 149:20, 149:22 | minimizing - 157:3 | 158:16 | 100:12, 115:6, | non - 76:23, 77:13, |
| megawatt - 41:23, | minimum - 98:4, | Most - 90:9, 103:16, | 115:7, 120:19, | 77:14, 116:5, |
| 97:19, 121:16 | 123:13, 163:6 | 133:3 | 130:22, 131:11, | 117:12, 126:15, |
| megawatts - 74:14, 74:18, 117:15, | mining - 69:13, 70:3 minute - 95:5 | mostly - 85:21, 118:10 | 131:19, 131:20, 143:1, 151:22, | 126:16, 133:4 non-investor - 116:5 |
| 117:19, 121:20, | mischaracterization | mother - 52:19, | 153:4, 155:15 | non-partisan - 77:14 |
| 138:22, 154:4 | s - 163:13 | 52:21 | needed - 130:10, | non-profit - 77:13, |
| melding - 38:9 member - 9:17, 10:6 | mischaracterized - | motion - 134:18 mountain - 70:3 | 141:24 needs - 38:7, 39:22, | 126:15, 126:16 non-profits - 76:23 |
| member - 9.17, 10.6 members - 6:19. | 163:17 misleading - 158:17, | mountains - 70.3 | 53:5, 92:7, 97:7, | non-regulated - |
| 8:14, 12:3, 67:23, | 159:6, 159:18 | Moura - 77:24 | 98:19, 106:7, | 117:12 |
| 77:15, 126:23 | mismanagement - | move - 42:1, 65:24, | 157:21 | Non-regulated - |
| memo - 27:8, 29:11, | 32:11 missed 44:1 | 99:10, 99:18, 103:6 | nefarious - 105:15 | 158:7 |
| 29:15 memorandum - | missed - 44:1 missing - 108:9 | moved - 107:8 movement - 161:15 | negative - 133:19 neglect - 159:17 | non-renewable - 133:4 |
| 8:19, 13:14, 13:19, | missing = 100.9 | moves - 41:24 | negotiated - 138:21 | none - 40:4, 166:18 |
| 27:6, 28:7, 29:14, | misstating - 48:1 | multiple - 64:15, | negotiating - | None - 62:6 |
| 34:8, 135:16, | mistake - 28:5, 99:3 | 64:16 | 156:18, 157:17, | nonetheless - |
| 135:17 mention - 84:10, | mistypes - 105:13 misunderstanding - | multiply - 30:23, 112:2 | 164:15 negotiation - 160:18 | 160:5, 164:3 nonregulated - 4:12, |
| 101:14, 121:8 | 112:8 | municipal - 128:3 | Nepool - 60:7, 60:20, | 49:18 |
| mentioned - 60:1, | mitigate - 80:22, | must - 5:9, 145:4, | 61:21, 61:24, 63:3, | North - 121:15 |

Northeast - 53:10, 74:15 Northeastern - 80:2 northern - 54:20 **Notary** - 170:6 note - 48:21, 133:23 noted - 67:7 nothing - 28:6, 34:1, 53:7, 105:1 notice - 3:7, 3:12, 6:17 Notice - 3:8 notify - 91:14 nuance - 145:10 Nubia - 2:5, 74:2, 74:4, 74:5 nuclear - 151:3 number - 22:21, 25:6, 30:23, 94:4, 108:8, 108:11, 109:21, 167:8 **numbers** - 169:5 numerous - 150:12

O o'clock - 7:1 objections - 155:5 **objective** - 136:22, 137:24, 138:3, 143:8, 154:18, 159:22 objectives - 47:18, 157:1 obligated - 4:14 obligation - 112:2. 130:16, 131:21 obligations - 9:3 obtain - 107:4, 141:24 obtained - 4:19 obvious - 44:3 Obviously - 49:2 obviously - 10:11, 11:13, 18:6, 22:21, 28:11, 29:2, 29:20, 35:11, 35:22, 38:7, 50:8, 50:10, 55:15, 59:2, 78:19, 100:15, 109:10, 154:8 occur - 122:7 occurred - 149:21 Ocean - 78:12 October - 1:12, 3:14, 5:8, 7:1, 123:3, 170:2 offer - 4:23, 11:17, 21:15, 22:19, 22:20, 23:9, 23:10, 23:14, 23:18, 25:18, 43:5, 48:2, 48:4, 57:10, 60:14, 63:9, 63:11, 67:17, 105:3, 108:20, 108:23, 109:2, 109:14, 109:23, 111:1, 111:7, 111:8, 112:9 112:10, 112:13, 112:13, 112:13, 112:23, 113:20, 115:18, 118:4, 118:5, 123:10, 124:6, 124:12 124:16, 125:19, 129:4, 131:4, 147:12, 147:14, 158:13 offered - 21:6, 26:9,

offering - 21:11, 22:4, 25:11, 52:19 office - 4:17, 10:7 Office - 9:19, 58:3, 156:1, 156:20, 157:9, 162:21, 163:23 offs - 160:24 offset - 164:4 often - 103:14 Oil - 153:17 oil - 24:8, 25:15, 69:16, 70:1, 141:22 old - 20:1 omission - 164:10 once - 14:12, 58:8, 58:24, 69:19, 80:17, 106:17, 119:12, 120:1, 120:8 One - 37:21, 61:22, 93:11, 103:23, 105:18, 116:10, 131:2, 131:16, 142:9, 161:22 one - 7:3, 9:17, 9:22, 10:9, 11:18, 16:20, 24:14, 30:20, 36:23, 37:13, 39:12, 40:3, 43:7, 48:19, 50:21, 53:14, 58:2, 61:19, 63:1, 63:9, 66:6, 66:21, 72:15, 75:7, 76:1, 78:17, 90:15, 90:22, 92:11, 98:19, 101:7, 107:6, 107:11, 108:1, 108:8, 108:11, 108:23, 109:21, 110:4, 110:23, 111:24, 115:16, 115:17, 116:2, 118:22, 119:22, 120:1, 121:16, 121:19, 123:20, 127:4, 133:24, 136:13, 137:7, 137:20, 138:18, 140:12, 140:23, 145:14, 145:24, 147:24, 148:6, 148:14, 152:20, 155:19, 156:7, 156:9, 157:19, 158:12, 160:7, 164:19, 166:5, 167:17, 168:23 one-year - 30:20, 48:19 ones - 66:4, 104:7, 122:4 ongoing - 151:14 open - 15:23, 17:17, 20:21, 22:16, 24:24, 25:13, 25:16, 25:21, 25:23, 36:9, 39:18, 41:14, 71:15, 105:10, 108:19, 129:15, 129:24 opened - 14:4 operate - 96:14 operates - 74:17 operating - 14:11 operation - 91:13 operations - 59:22, 129:22 opinion - 63:12,

115:4, 120:22, 124:19, 131:14, 149:3 opportunities -144:8 opportunity - 8:2, 9:24, 13:4, 53:13, 55:2, 59:16, 67:17, 81:19, 92:20, 95:17, 101:5, 101:19, 101:21, 103:18, 117:9, 123:4, 126:10, 134:3, 134:7, 142:14, 164:7 oppose - 162:21 opposed - 53:22, 63:15, 128:8, 148:14 opposite - 56:3, 56:7 opposition - 71:7 optimal - 81:11 option - 7:14, 30:7, 35:7, 36:23, 37:1, 63:1, 141:3, 144:24, 168:13 Option - 63:4, 63:12, 63:15, 63:20, 64:2, 64:5, 65:4, 65:13, 65:18, 65:20, 65:22, 65:24, 66:1, 66:7, 66:12, 72:18, 72:21, 72:23, 72:24, 73:2, 74:22, 75:9, 75:12, 76:24, 83:9, 83:11, 83:16, 88:23, 90:5, 98:17, 98:18, 102:21, 102:22, 102:23, 104:22, 104:24, 105:4, 105:5, 105:7, 106:16, 145:21, 165:12, 165:14, 165:18, 165:21, 165:22, 168:1, 168:11, 168:15, 168:22 optional - 30:3 options - 47:17. 51:14, 61:22, 62:6, 62:22, 62:23, 64:8, 83:18, 127:24, 130:15 Options - 165:11 orally - 5:1 order - 74:22, 76:12, 76:13, 85:9, 96:8, 143:19, 145:7 151:19, 151:23 organization -67:23, 73:10, 77:14, 101:11, 126:15 organizations -58:2, 75:18, 78:11 original - 5:8, 72:18, 77:23, 114:14 114:15, 131:22 otherwise - 42:8, 99:20, 147:16 ought - 149:1

outages - 91:14

outcome - 27:2,

31:10, 35:10,

outlined - 91:10

121:13

35:12, 37:3, 142:22

output - 61:8, 66:10,

outside - 21:16, 89:8

outstanding - 32:19 over-the-counter -20:23, 21:4, 21:15, 25:18, 25:19, 25:22, 26:6, 36:6, 39:20 Over-the-counter -25:1 **Overall** - 78:5 overall - 78:9, 80:7, 127:13, 137:23, 140:6, 150:18. 168:6 overcome - 50:10. 142:24 overdependance -102:15, 140:19 overlooked - 137:20 oversee - 18:2, 18:17 overseeing - 15:9, 18:10, 18:12, 32:10, 144:4 overseen - 32:14 oversight - 8:21, 13:21, 15:5, 15:19, 21:13, 27:9, 27:14, 28:14, 28:23, 31:19, 32:8, 32:9, 34:10, 34:11, 34:13, 40:24, 42:10, 46:17, 135:10, 143:16, 144:9, 157:19, 164:13 oversights - 16:14 overwhelming 54:16, 146:11 Overwhelming -43:1 overwhelmingly -31:22 own - 16:20, 25:7, 40:13, 76:9, 88:15, 88:16, 93:14, 93:22, 97:11 117:17, 147:18 owned - 18:5, 31:4, 116:5, 116:7 owner - 25:4, 88:14 owners - 61:12 owns - 74:17, 118:9 ozone - 70:17 Р Page - 2:2, 86:4, 90:3, 91:10

page - 82:20, 84:1 paid - 43:7, 46:4, 46:12 panels - 53:21 paper - 84:4 paragraph - 28:3, 146:17 parks - 69:16 part - 36:15, 60:7 62:21, 63:6, 65:24, 94:10, 108:8, 109:20, 110:11, 113:11, 129:19, 145:13, 145:18, 148:10 151:22, 154:10, 155:1, 160:13, 163:1 partially - 164:3 participant - 10:8 participants - 10:15, <u>12:6, 61:2, 61:19</u>

62:11, 65:10, 66:24, 104:17, 138:6 participate - 85:16 participated - 31:22, 40:12, 45:5, 77:20, 149:20 participates -126:18 participating -25:21, 83:24, 85:14 participation - 157:6 particular - 10:1. 10:21, 11:8, 11:9. 11:13, 13:22, 29:6, 29:11, 29:13, 32:13, 51:18, 58:21, 83:7, 108:2, 119:2, 127:7, 131:3, 134:4, 137:21, 143:9, 144:10, 148:22, 157:8, 163:16 particularly - 13:8, 14:3, 19:18, 21:17, 87:1, 110:15, 144:14, 146:13, 149:4, 151:15, 161.7 parties - 7:8, 9:21, 9:23, 14:20, 19:4, 22:9, 22:15, 25:9, 25:17, 25:21, 25:24, 32:3, 42:21, 43:6, 75:5, 89:20, 135:24, 164:4, 164:8, 165:14 partisan - 77:14 partner - 86:21 partners - 92:11 parts - 55:18, 55:19, 127:16, 153:24 Party - 33:19, 33:20 party - 7:18, 9:11, 10:14, 20:23, 20:24, 25:5, 45:2, 72:3, 72:6, 74:24, 75:1, 75:12, 83:16, 89:4, 94:14, 94:17, 105:14, 134:16, 134:21, 156:9, 165:15 party's - 156:14 Pascoag - 116:4 Pascoag's - 115:18 pass - 40:15 passage - 68:24 passed - 48:13, 78:9, 78:15, 144:11, 155:7 Past - 44:13

past - 11:16, 19:17, 19:19, 23:22,

80:23, 122:16 **Paul** - 77:23

Pay - 39:4 pay - 33:7, 39:9,

39:10, 49:10,

112:4, 123:12, 126:1, 146:6

payment - 39:3, 39:9, 39:11, 39:12, 50:8, 128:9

payments - 14:2, 14:20, 29:2, 58:5,

159:24

162.19

paying - 46:7, 107:6, 127:22, 146:8, 147:18, 147:19,

| payors - 12:3 | 140:4, 142:19, | 18:3, 21:2, 21:7, | 103:5, 160:24 | 56:11, 92:17, |
|---|---|---|--------------------------------------|-----------------------------------|
| payroll - 9:22 | 157:6 | 23:13, 26:12, | potentially - 13:1, | 102:8, 111:22, |
| | | 37:18, 44:13, | 14:16, 15:2, 16:12, | 112:3, 128:17, |
| pays - 125:19 | pertain - 8:9 | | | |
| pending - 30:7 | pertains - 28:11, | 46:10, 51:7, 61:16, | 26:20, 28:12, | 129:2, 129:3, |
| people - 16:5, 22:24, | 28:12 | 64:7, 68:13, 75:7, | 32:24, 56:7, 132:9 | 137:4, 138:1, |
| 23:17, 23:18, | phone - 108:21 | 75:24, 78:2, 94:7, | Potentially - 56:8 | 138:4, 139:23, |
| 25:19, 30:10, 31:7, | phrase - 97:7 | 97:8, 101:24, | power - 4:12, 14:21, | 141:21, 154:19, |
| 31:17, 31:18, | physical - 55:16 | 111:15, 115:17, | 20:1, 22:5, 24:7, | 158:10, 159:1, |
| | | | | |
| 31:23, 36:1, 36:23, | physically - 66:9 | 129:16, 134:3, | 26:9, 37:22, 38:13, | 159:10, 161:6, |
| 37:15, 37:22, | pick - 45:12, 108:20, | 134:14, 135:8, | 40:14, 40:17, | 161:10, 161:18, |
| 38:24, 39:10, | 110:23 | 135:13, 136:10, | 47:16, 49:18, | 161:21, 162:16 |
| 39:13, 39:22, | picture - 108:8, | 136:20, 138:14, | 49:20, 52:14, | pricing - 26:8, |
| 41:21, 42:1, 45:4, | 109:20, 167:23 | 140:12, 143:2, | 52:19, 55:11, 56:5, | 35:22, 48:2, 48:4, |
| 51:2, 54:12, 56:6, | piece - 49:16, 140:9, | 152:17, 152:18, | 73:15, 80:4, | 137:11, 137:17, |
| | | | | |
| 56:10, 62:13, | 140:10 | 155:9, 157:23, | 117:12, 118:3, | 138:8, 139:10, |
| 63:10, 63:18, | pieces - 150:7 | 158:14, 163:18 | 119:18, 119:21, | 141:15, 141:18, |
| 63:19, 70:9, 70:18, | pinpoint - 90:19 | pointed - 29:24, | 120:4, 150:23, | 150:13, 151:4, |
| 77:20, 93:8, 95:3, | pipeline - 140:1 | 108:11 | 151:3, 158:8 | 151:9 |
| 99:12, 100:3, | pitfalls - 29:24 | pointing - 113:1 | Power - 6:3, 6:5, | primarily - 88:14 |
| 100:10, 103:6, | Pjm - 59:19, 64:21, | points - 65:13, 67:6, | 84:22, 95:15, | primary - 50:16, |
| 104:12, 104:14, | 84:13, 84:16, | 68:21, 71:2, 96:16, | 101:3, 101:6, | 85:10, 99:11, |
| | | | 1 | |
| 104:15, 105:5, | 89:15, 118:10, | 100:18, 127:4, | 153:18 | 140:19, 160:10 |
| 105:8, 120:4, | 121:23, 121:24, | 129:17, 138:10, | practical - 136:17 | principal - 152:21 |
| 134:12, 136:7, | 167:24, 168:1, | 156:11 | practice - 128:22, | private - 20:24, |
| 142:21, 146:20, | 168:3, 168:4, | policy - 60:9, 60:10, | 149:2, 149:9, | 76:18 |
| 147:16, 150:8 | 168:6, 168:9, | 102:3, 137:19, | 165:12 | probability - 31:1, |
| People's - 101:3, | 168:20 | 140:2, 146:5 | Pratt - 82:24 | 31:8, 144:19 |
| 101:6 | place - 8:21, 13:23, | pollution - 69:11, | precedent - 18:1 | problem - 31:21, |
| | | | | |
| per - 41:23, 48:23, | 25:5, 25:24, 31:19, | 70:2 | precepts - 119:22 | 36:4, 39:16, 43:3, |
| 49:16, 50:2, 50:7, | 37:17, 37:24, | poor - 115:7 | precisely - 84:4 | 43:5, 49:14, 50:9, |
| 121:14, 121:19, | 54:20, 54:23, 56:2, | popular - 74:20 | precludes - 152:24 | 54:2, 54:16, |
| 121:23, 124:24, | 56:5, 58:24, 61:7, | portfolio - 36:13, | prefer - 63:13, | 120:24, 134:21, |
| 125:13, 125:21, | 76:20, 79:11, | 36:15, 102:12, | 65:18, 65:19 | 153:15 |
| 146:19, 151:8 | 80:18, 88:1, 88:23, | 110:9, 110:10, | preference - 63:14 | procedural - 46:21 |
| | | 110:13, 118:13, | 1 | |
| perceived - 87:16 | 89:23, 94:2, 99:22, | | premium - 14:6, | procedurally - 135:1 |
| percent - 36:17, | 103:9, 103:13, | 137:23, 139:12, | 50:4, 50:5, 54:8, | procedure - 99:6, |
| 41:5, 42:17, 42:18, | 108:23, 109:10, | 148:11, 148:14, | 56:1, 131:7, 132:10 | _133:16 |
| 55:11, 79:16, | 114:7, 114:24, | 160:14 | premiums - 14:16 | Procedures - 6:19 |
| 90:24, 96:7, 97:1, | 120:8, 127:10, | portion - 41:18, | prepared - 82:10 | procedures - 129:14 |
| 97:3, 97:14, 98:1, | 129:1, 145:2, | 65:6, 79:17, | present - 163:3 | proceed - 7:17 |
| 98:4, 140:6, 152:19 | 150:1, 150:3, | 130:11, 137:23, | presentation - 87:19 | proceeding - 8:24, |
| percentage - 42:22, | 151:1, 155:12 | 139:7, 140:10 | presented - 156:13, | 9:6, 10:20, 12:5, |
| 42:23, 96:21, | placed - 7:4, 49:21 | portions - 59:24 | 163:17 | 33:14, 133:10, |
| | places - 81:10, | | | 134:14, 134:20, |
| 132:8, 148:12 | | portray - 107:23 | presenting - 159:17 | |
| percentages - 140:5 | 81:11, 81:14, | Portsmouth - | presently - 117:20 | 134:22, 136:14, |
| perception - 153:9 | 81:18, 134:12, | 149:18 | preserves - 83:14 | 138:6, 142:15, |
| Perez - 2:5, 74:2, | 146:4 | pose - 131:15 | President - 47:8 | 143:10, 147:10 |
| 74:4, 74:5, 77:4, | plagiarize - 166:24 | posed - 51:16 | Presiding - 1:18 | proceedings - 8:4, |
| 77:5, 87:6, 92:24 | plan - 102:4, 139:12, | posing - 140:20 | presumably - 55:2 | 134:9, 143:14 |
| Perez's - 93:12 | 163:2 | position - 9:15, | pretty - 59:22, 60:2, | process - 13:1, 17:7, |
| perfectly - 145:11 | planning - 115:13, | 10:23, 10:24, | 61:10, 62:6, 62:17, | 21:21, 21:22, |
| perform - 83:7 | 137:15, 139:13, | 11:12, 20:4, 27:3, | 64:9, 73:12, | 28:20, 42:10, |
| performance - 47:20 | 139:18 | 27:8, 28:13, 30:5, | 106:17, 132:6, | 44:22, 44:24, 51:3, |
| | plans - 119:1, 137:1, | | 145:22, 158:2, | 61:7, 67:2, 73:12, |
| performing - 54:6 | | 30:9, 30:17, 30:19, | | |
| perhaps - 8:21, | 143:17, 162:23 | 31:13, 31:14, 32:4, | 168:22, 169:6 | 75:3, 76:20, 89:7, |
| 9:16, 11:9, 17:11, | plant - 121:11 | 32:16, 33:12, 34:2, | Prevailing - 48:13 | 89:13, 101:9, |
| 33:13, 41:23, | Plantations - 1:1 | 34:9, 36:21, 43:4, | prevailing - 20:10, | 101:16, 111:1, |
| 60:21, 110:4, | plants - 38:13, | 45:23, 47:24, | 48:5, 48:9, 49:4 | 129:7, 129:15, |
| 120:11, 120:16, | 52:18, 56:5, 73:15, | 50:19, 51:3, 54:11, | previous - 75:8 | 142:16, 142:20, |
| 154:22, 167:22 | 103:12, 118:10, | 57:14, 57:18, | price - 20:24, 21:4, | 145:1, 145:9, |
| Perhaps - 33:13. | 119:17, 119:20, | 57:19, 58:9, 58:20, | 21:6, 21:7, 21:16, | 154:1, 154:2, |
| 158:16, 159:18 | 121:3, 133:5, | 123:18, 136:9, | 23:20, 26:1, 26:12, | 154:15, 156:6, |
| period - 11:17, 20:8, | | 136:10, 157:13 | 48:15, 48:19, | |
| | 138:15, 154:23 | | | 156:18, 160:17, |
| 20:9, 20:11, 24:5, | play - 88:2 | positions - 11:19, | 50:14, 80:15, | 161:2, 162:13, |
| 24:10, 24:11, | players - 36:7, 94:4, | 16:4, 22:12, 23:24, | 80:22, 90:1, 107:6, | 164:6, 164:15, |
| 24:14, 58:23, 90:8, | 94:5, 103:21 | 35:13, 36:15, | 107:11, 107:16, | 167:6, 167:7, |
| 111:7, 111:14, | playing - 52:2, | 110:11, 143:24, | 108:21, 109:6, | 167:13 |
| 153:6 | 103:24, 158:6, | 156:14 | 109:7, 109:15, | processes - 87:2 |
| periodic - 141:19, | 158:15 | possibilities - 81:5 | 109:24, 110:17, | procured - 129:10, |
| 146:16 | pleased - 69:2, | possibility - 26:5, | 112:1, 112:23, | 163:5 |
| periods - 23:5 | 70:22, 135:4, | 64:8 | 114:10, 114:13, | procurement - |
| permitted - 138:18 | 157:13 | possible - 72:11, | 123:24, 124:17, | 20:16, 40:14, |
| person - 4:8, 4:19, | pleasure - 117:8 | 100:13, 127:22, | 127:22, 130:7, | 47:16, 51:12, |
| 99:1 | plenty - 68:7 | 132:1, 144:3, | 131:8, 132:1, | 119:1, 129:7, |
| personal - 16:20 | plug - 27:16, 165:5 | 157:19, 159:15, | 132:3, 137:13, | 129:14, 129:19, |
| personally - 68:7 | plus - 50:6 | 164:12 | 138:2, 159:1, | 131:6, 137:1, |
| Personally - 44:15 | Pm - 5:7, 169:17 | post - 97:15 | 159:7, 161:23, | 143:17, 145:1, |
| | | | 162:2, 163:6 | 145:9, 145:14, |
| | nockets - 54:14 | | | |
| persons - 4:23 | pockets - 54:14 | posted - 141:21 | | |
| persons - 4.23 perspective - 88:11, 120:12, 137:19, | pockets - 54:14 podium - 7:13, 7:17 point - 10:20, 11:16, | posted - 141.21 pot - 32:24 potential - 8:11, | Prices - 56:9 prices - 4:5, 26:9, | 145:15, 145:19, 149:8, 160:21, |

| 161:4, 162:22, |
|--|
| 163:2 procuring - 102:11, |
| 127:18, 145:3, |
| 148:11 produce - 54:14, |
| 54:15, 56:13, |
| 121:13, 121:18, 121:23 |
| produced - 97:20 |
| producer - 49:19, 117:12 |
| producers - 4:12, |
| 158:8 producing - 52:16, |
| 53:6 product - 24:1, |
| 26:24, 55:9, 76:14 |
| production - 61:14, 61:17, 75:1, 81:8, |
| 85:6, 90:19, 91:1, |
| 98:5, 138:23 products - 25:1, |
| 52:20, 90:12, |
| 108:16 profession - 9:20 |
| professional - 9:8, |
| 35:24, 149:3 professionals - 41:9 |
| profile - 49:13 |
| profit - 26:14, 77:13, 126:15, 126:16 |
| profits - 76:23 |
| program - 59:17, 60:1, 60:6, 60:8, |
| 60:18, 64:1, 64:15, 80:3, 80:7, 127:13, |
| 80:3, 80:7, 127:13, 132:16, 163:24 |
| programs - 60:12, |
| 102:9, 128:2, 133:7, 164:8 |
| project - 90:15, 121:12, 121:21, |
| 133:2, 141:24 |
| projects - 53:12, |
| 85:22, 90:14, 90:15, 91:8, 93:14, |
| I 08·24 133·3 |
| 136:18, 141:17, 153:13, 153:23 |
| promised - 47:21 |
| pronunciation - 57:8 |
| proof - 31:12 |
| proper - 106:8, 162:2 |
| properly - 41:5, 90:23 |
| proposal - 15:5 |
| proposals - 8:15, 61:20, 61:22, |
| 138:17 |
| Proposals - 138:17, 138:18 |
| proposed - 4:16. |
| 4:18, 4:24, 8:5, 9:1, 12:20, 13:12, |
| 12:20, 13:12, 13:13, 13:17, 14:9, |
| 17:8, 43:23, 46:14, 46:17, 46:23, |
| 46:24, 77:18, 96:20, 101:23, |
| 96:20, 101:23, 126:11, 133:22, |
| 141:2 |
| proposes - 57:1 proposing - 43:24 |
| prospect - 159:11 |
| protect - 38:23 protected - 69:11, |
| 69:12 |

74:24, 86:14, 90:9, 91:11, 111:12, 112:11, 117:15, 126:10, 127:2, 130:7, 131:15, 141:23, 142:14, 143:11, 163:10, 167:22, 168:16 provided - 87:10, 88:23, 98:11, 105:19, 143:23, 145:8, 168:13 Providence - 1:1, 67:15, 77:10, 77:24, 82:5, 85:24. 101:4, 142:10 provider - 59:19 provides - 3:21, 89:2, 162:14, 165:18 providing - 63:7, 83:20, 86:2, 86:3, 91:23, 92:2, 121:2, 130:5, 153:5, 161:21 provinces - 117:14 provision - 134:11 provisions - 3:9, 161:19 prudent - 129:11. 132:5, 137:15, 162:11 Public - 1:2, 2:3, 3:12, 3:15, 5:3, 5:22, 17:5, 68:8, 68:9, 69:3, 70:23, 73:20, 77:13, 82:22, 170:1, 170:6 **public** - 3:8, 6:20, 15:5, 15:6, 15:23, 16:4, 17:6, 17:7, 17:14, 18:18, 22:1, 23:6, 25:10, 31:4, 33:17, 35:16, 37:4, 40:24, 41:9, 42:16, 67:16, 77:14, 78:14, 79:3, 86:24, 95:3, 104:4, 104:21, 137:19, 139:9, 139:22, 140:2, 146:5 public's - 16:6, 41:10 publicly - 20:21, 86:22, 88:18 Puc - 73:13, 157:9 pull - 150:6 pulled - 43:24 purchase - 33:9, 35:3, 35:4, 119:21, 123:23, 139:6, 139:7 purchased - 24:13, 40:16, 79:6, 119:18, 131:24 purchaser - 142:1 purchasing - 51:13, 139:14 pure - 21:21, 151:17 purpose - 3:17, 39:11, 76:2, 85:3, 85:5, 99:11, 105:15, 140:8 purposes - 97:1, 137:2, 137:3

proud - 73:20

provide - 6:22, 61:12, 62:14, 64:3,

150:11

proven - 127:24,

146:5, 146:8 Pursuant - 1:7, 3:9 pursuant - 3:6 push - 44:24, 73:14 **pushed** - 31:20 pushing - 43:4, 73:3 put - 11:22, 17:2, 18:21, 25:5, 32:24, 37:24, 42:8, 54:12, 55:22, 73:22, 76:19, 81:6, 86:5, 103:9, 106:16, 109:21, 110:20, 120:3, 123:2, 127:10, 128:24, 133:18, 140:3, 140:13, 141:1, 146:19, 149:24, 153:19, 154:11, 155:11 puts - 153:1

Q

qualified - 87:13, qualify - 96:9 quality - 4:6, 22:19, 69:24, 70:5, 70:18, 76:11, 93:7, 128:19 quantifiable - 73:14 quantify - 158:21, 163:4 quarter - 121:17 questions - 12:6, 65:15, 77:4, 81:22, 94:24, 100:15, 100:20, 116:20, 123:7, 126:4, 132:19, 140:21, 147:22, 155:17, 166:2, 166:4 quick - 118:19, 166:6 quickly - 80:10, 81:3, 85:1, 87:19 quiet - 45:11 quite - 11:10, 11:11, 35:3, 72:8, 93:11, 112:5, 139:20, 144:22, 160:5, 161:16 quo - 58:15, 83:14 quoting - 111:24

R

Raab- 9:9, 12:13, 43:22, 149:23 Raab's- 10:1, 10:9 raise - 114:1, 134:24 raised - 27:23, 78:18, 127:4, 133:17, 135:6, 135:8, 135:12, 135:17 raises - 119:12 range - 128:8, 139:12, 139:13, 141:14 rapidly - 15:1, 94:10, 94:12 rate - 5:23, 20:18, 20:19, 22:16, 23:11, 23:15, 24:9, 24:20, 24:22, 24:24, 25:12, 36:3, 40:8, 48:21, 78:23, 80:8, 80:15, 101:12, 124:19

124:21, 125:3, 125:12, 125:14, 137:15, 147:9, 151:8, 153:5 Rate- 1:19 ratepayer - 10:3, 13:23, 13:24, 16:13, 16:14, 16:21, 17:22, 18:9, 18:15, 18:17, 18:22, 18:23, 19:2, 19:3, 20:14, 25:3, 25:4, 28:11, 28:12, 30:15, 31:5, 32:13, 32:15, 33:6, 34:13, 37:16, 42:23, 45:14, 79:8, 120:3, 143:2, 143:16, 143:20, 157:2 ratepayers - 9:4, 31:15, 32:4, 32:5, 33:7, 38:23, 43:13, 45:16, 46:1, 46:5, 52:8, 75:14 107:21, 107:24, 113:14, 114:6, 115:16, 116:2, 119:6, 120:10, 143:11, 144:14, 145:4, 146:5, 146:7, 146:12, 157:3, 157:4 Ratepayers-36:22 rates - 22:16, 26:13, 80:11, 99:18, 114:1, 119:6, 149:21 rather - 25:22. 44:24, 86:7, 128:14, 158:21, 159:16, 167:13, 169:9 rating - 152:6 ratio - 151:23 rationale - 120:13 re - 106:13 Re- 1:4 re-examining -106:13 reaches - 58:8 reaching - 70:8 read - 3:7, 62:1, 66:17, 123:17 reader - 105:2 readers - 99:6 reading - 66:9, 99:16, 105:5, 105:9 reads - 88:16, 97:3, 165:17 ready - 103:10 real - 73:14, 90:1, 94:2, 122:24, 159:13, 161:2 realistic - 25:10, 34:5, 61:9, 163:6 realistically - 110:16 reality - 53:24 realization - 53:9 realize - 46:9 realizing - 93:15, 94:13 really - 10:18, 11:3, 11:7, 18:10, 31:20, 50:24, 51:20, 52:12, 52:15, 62:8, 66:11, 73:7, 76:18, 81:15, 86:14, 95:18, 103:13,

103:19, 112:22,

114:19, 114:24,

115:4, 139:5, 139:8, 141:2, 141:9, 143:15 156:10, 157:15, 157:20, 158:14, 160:2, 160:3, 165:9, 166:5, 166:18, 167:21 reason - 38:11, 52:6, 63:20, 65:7, 65:21, 99:18, 104:4, 104:18, 104:21, 106:23, 118:23, 120:1, 128:15, 134:16, 158:16, 161:17 reasonable - 39:15, 39:16, 64:10, 99:17, 118:21, 146:6, 159:22 reasons - 24:22. 37:21, 63:14, 103:20, 103:23, 115:1, 122:16, 131:13, 131:16, 158:1 Rec- 52:23, 74:23, 82:23, 83:5, 84:1, 84:8, 84:20, 85:10, 85:12, 85:15, 86:3, 86:20, 88:3, 88:8, 88:24, 89:2, 89:22, 90:3, 90:11, 91:4, 91:6, 91:20, 91:24, 92:12, 92:17, 92:22, 93:17, 94:1. 94:6, 94:9, 94:15, 103:20, 107:4, 107:9, 107:15, 109:13, 110:12, 111:7, 116:14, 128:6, 161:6, 161:10, 161:13, 161:18, 161:23 received - 7:2, 13:9 receiving - 113:16 recent - 48:12, 166:10 recently - 82:8, 122:19, 123:18, 140.14 Recently- 92:15 **Recess-** 95:8 recognize - 138:20, recognized - 137:8 recognizes - 102:18 recommend - 37:18. 43.16 recommendation -17:4, 43:21 recommendations -12:8, 12:20, 13:18, 45:3, 51:24, 156:19 recommended -27:12, 27:13, 28:8, 43:18 reconvene - 44:9, 44:23 record - 28:1, 56:24, 57:5, 57:11, 73:13, 77:22, 143:23 recover - 119:6. 119:19 recoverable - 132:5 recovery - 146:1 Recs- 53:1, 107:4, 107:6, 107:7, 111:12, 111:23, 112:18, 112:21,

| 119:5, 119:12, | 101:23, 102:19, | 74:11, 77:19, 78:6, | require - 14:6, | responsibility - |
|---|---|---|---|--|
| 121:13, 121:19, | 103:17, 104:6, | 80:5, 80:17, 82:19, | 14:16, 50:5, 63:16, | 31:3, 45:9, 45:11, |
| 121:23, 123:9, | 118:19, 126:11, | 85:5, 85:18, 86:15, | 63:21, 72:23, | 92:9 |
| 128:5, 128:12, | 129:11, 130:18, | 87:22, 90:12, | 72:24, 78:22, | responsible - 59:21, |
| 128:16, 129:2, | 133:21, 135:4, | 94:11, 96:9, 96:21, | 83:19, 106:16, | 63:7 |
| 130:3, 131:16, | 149:24, 150:2, | 102:1, 108:4, | 131:7, 163:1, | restructured - |
| 131:19, 131:20, | 156:7, 156:10, | 110:16, 112:11, | 164:23 | 119:14 |
| 159:9, 161:20, | 157:20, 164:21 | 114:12, 115:12, | required - 30:4, | restructuring - |
| 163:6 | regulators - 76:3, | 118:13, 120:7, | 37:2, 55:24, 71:22, | 10:10, 119:23 |
| recuse - 9:24 | 92:8, 105:24, 106:6, 106:7 | 120:16, 121:2, | 84:4, 111:11, | Restructuring- 19:20, 40:13, 40:15 |
| red - 19:5, 27:9, 41:4, 139:5 | Regulatory- 117:3 | 122:1, 122:3, 122:7, 122:21, | 111:12, 112:11, 152:9, 153:7, | result - 114:14, |
| reduce - 79:15. | regulatory - 126:24, | 126:12, 126:19, | 162:7, 162:24 | 139:15, 159:15 |
| 79:21, 80:7, 84:7, | 128:1, 136:2, | 126:21, 127:12, | requirement - 71:24, | results - 134:22, |
| 85:6, 85:14, | 139:17 | 127:18, 128:21, | 96:6, 106:20, | 134:23 |
| 128:18, 150:18 | related - 27:15, | 130:6, 131:5, | 106:22, 107:22, | Resumed- 167:20 |
| reduced - 113:16, | 27:22, 29:14, | 131:10, 133:4, | 111:7, 120:14, | retail - 19:19, 47:14, |
| 151:1 | 38:18, 58:12, | 133:6, 135:12, | 120:15, 122:13, | 48:16, 50:1, 51:12, |
| reducing - 73:9 | 60:14, 94:5, 118:24 | 137:1, 137:6, | 122:22, 122:23, | 92:13, 117:13, |
| reductions - 73:15 | relates - 157:19 | 138:13, 144:6, | 123:1, 123:2, | 120:5, 124:19, |
| refer - 21:10 | relationship - 28:4 | 151:11, 151:13, | 129:7, 146:19, | 124:20, 125:3 |
| reference - 10:21, | relative - 8:4, 8:18, | 151:17, 152:10, | 157:23, 160:13, | retain - 129:6 |
| 11:3, 27:5, 29:11, | 8:24, 9:1, 21:7, | 152:14, 152:21, | 162:21 | retained - 130:18 |
| 51:7, 163:16 | 26:18, 37:7, 38:7, | 153:3, 154:21, | requirements - 9:2, | return - 46:5, 46:6, |
| Reference- 5:10 | 47:20, 51:19, 55:8 | 155:12, 156:22, | 25:8, 38:1, 38:9, | 54:23, 55:24 |
| referencing - 141:21 referred - 15:10 | relatively - 49:20, | 156:23, 157:12, | 38:16, 39:8, 39:24, | revenue - 10:16, |
| referred - 15:10 referring - 27:18, | 111:20, 137:22, 140:4, 151:6 | 158:23, 159:13, 161:11, 163:23, | 40:14, 47:17, 78:22, 91:9, 92:8, | 161:12 review - 118:19 |
| 96:5 | reliability - 85:8, | 164:16 | 118:16, 122:15, | review - 118:19, 131:1, 163:15 |
| reflect - 150:1, | 128:20, 140:16, | Renewable- 1:6, | 129:13, 150:8, | reviewed - 87:1 |
| 156:10, 163:3 | 140:21 | 9:18, 34:21, 68:11, | 154:21, 155:4 | reviews - 143:19 |
| reflected - 108:7, | reliable - 66:20 | 69:1, 128:2 | reguires - 4:1, 54:4, | revisit - 115:10, |
| 108:10, 156:14 | reliance - 102:7 | renewables - 97:5, | 66:21, 119:4, 157:8 | 139:17 |
| reflecting - 137:17 | relief - 40:8, 59:5 | 98:13, 98:22, | requiring - 106:24, | revisiting - 114:15 |
| reflects - 137:12, | relying - 61:11 | 102:5, 102:16, | 119:10, 120:6 | rewards - 36:1 |
| 138:3 | remain - 76:6 | 130:2, 130:3, | Res- 14:13, 25:12, | Rfp- 112:4 |
| refuges - 69:17 | remainder - 111:6 | 130:16, 141:2, | 68:15, 69:4, 71:9, | Rggi- 73:17 |
| refuse - 145:21 | remarks - 142:5 | 157:5, 161:9, | 73:8, 73:16, 76:5, | Rhode- 1:1, 1:14, |
| regard - 3:4, 46:13 | remember - 85:3 | 164:18, 166:7, | 106:4, 116:2, | 3:6, 3:9, 3:11, 3:17, |
| regarding - 8:20, | remind - 110:5 | 166:10, 166:12, | 127:22, 131:21, | 3:19, 4:2, 4:6, 4:10, |
| 27:7, 64:8, 67:17, | removal - 70:4 | 166:15, 167:7, | 158:8, 159:23, | 4:13, 4:15, 4:18, |
| 70:24, 102:21, | remove - 12:24, | 167:11 | _160:5, 161:7 | 5:5, 5:11, 7:24, |
| 127:6, 167:24, | 119:23, 120:2, | replace - 44:8 | Res's- 24:21, 64:17 | 9:17, 9:19, 14:4, |
| 168:9, 168:23, | 123:22 | report - 12:12, | Research- 77:13 | 19:21, 26:8, 27:19, |
| 169:1 | removed - 43:22, | 43:17, 44:8, 44:12, | reserve - 37:8 | 34:3, 47:12, 49:19, 50:12, 52:4, 52:13, |
| regardless - 9:14, 18:15, 55:17, | 100:12 renewable - 3:5, | 46:15, 57:4, 61:14, 72:20, 89:7, 94:1, | residential - 25:3, 47:10, 49:6, 49:7, | 52:14, 53:9, 54:23, |
| 113:15, 131:17 | 3:18, 3:24, 4:3, 4:7, | 133:20, 134:11, | 49:11, 49:12, 50:6, | 55:12, 60:8, 60:18, |
| Regardless- 18:22, | 8:6, 8:22, 9:3, 10:4, | 134:15, 135:14, | 86:1, 114:20, | 62:21, 67:15, |
| 28:5 | 10:5, 10:22, 10:23, | 140:14, 159:18 | 125:17, 129:23 | 67:21, 68:5, 68:19, |
| region - 14:7, 53:14, | 11:2, 11:13, 13:21, | reported - 66:19, | resolved - 71:5, | 69:3, 69:6, 70:13, |
| 54:19, 64:12, | 14:5, 14:13, 14:14, | 88:14, 168:19, | 72:11 | 71:3, 71:19, 72:9, |
| 70:16, 80:9, 81:1, | 14:15, 14:22, | 168:21 | resort - 20:17, | 73:6, 73:19, 74:16, |
| 118:10, 119:16, | 14:23, 15:15, | reporting - 61:11, | 123:13 | 75:14, 75:18, |
| 122:15, 128:22, | 15:17, 16:2, 16:3, | 62:18, 66:11, | resource - 53:5, | 77:10, 77:12, |
| 159:3 | 18:20, 19:23, | 83:15, 86:3, 86:7, | 53:16 | 77:16, 78:6, 78:14, |
| region's - 52:15 | 21:17, 21:18, | 86:20, 88:11, | resources - 4:3, | 79:19, 81:20, |
| Regional 53:17 | 21:19, 21:20, 23:4, | 88:19, 88:22, 89:8, | 16:3, 29:1, 29:3, | 90:15, 90:21, |
| regional - 52:11, | 27:3, 27:17, 27:18, | 90:4, 91:4, 91:12, | 34:16, 52:17, 53:15, 55:2, 55:14 | 92:22, 101:8, 106:3, 106:4 |
| 53:12, 54:16, 73:11 regionally - 55:20 | 28:18, 28:20, 28:21, 29:1, 29:3, | 91:20, 94:9, 108:8, 129:13, 168:11 | 53:15, 55:2, 55:14, 85:18, 137:1 | 106:3, 106:4, 114:6, 116:8, |
| regions - 64:15 | 31:23, 32:1, 34:15, | reports - 91:12 | Resources- 122:18 | 117:13, 117:18, |
| regs - 156:13 | 34:17, 34:18, | represent - 9:22, | respect - 17:1, 34:8, | 117:13, 117:16, |
| regulate - 18:2, | 34:19, 34:20, | 32:4, 45:16, 101:8, | 50:22, 57:13, | 120:9, 120:17, |
| 41:15, 80:3 | 34:21, 35:5, 37:9, | 143:4 | 58:14, 95:23, | 122:22, 124:8, |
| regulated - 41:16, | 37:10, 37:11, | Representative- | 98:16, 144:5, | 124:9, 126:11, |
| 42:9, 103:16, | 37:13, 38:9, 38:20, | 77:23 | 144:21, 146:1, | 137:5, 139:18, |
| 117:12, 158:7 | 39:24, 41:22, | representative - | 156:17, 156:23, | 142:10, 142:12, |
| regulation - 41:18, | 42:13, 46:20, | 12:18, 15:11 | 164:13 | 143:5, 143:7, |
| 103:22, 127:3, | 50:23, 51:10, | represented - 10:7, | respectfully - | 149:18, 150:15, |
| 127:9, 137:16 | 51:15, 51:16, | 46:2, 101:16, 156:9 | 106:24, 156:13 | 152:5, 152:7, |
| Regulations- 1:6 | 52:10, 52:16, | representing - 8:13, | respiratory - 71:14 | 152:16, 152:22, |
| regulations - 3:5, | 52:17, 52:21, | 67:20, 77:15, | respond - 42:12, | 153:16, 153:20, |
| 3:18, 3:22, 4:8, 4:16, 4:19, 5:1 | 52:22, 53:5, 53:7, 53:24, 54:7, 56:7 | 126:13, 155:24 | 92:7, 92:9, 114:3, 163:12 | 154:20, 156:22, 166:13, 166:16 |
| 4:16, 4:19, 5:1, 17:16, 43:23 | 53:24, 54:7, 56:7, 56:13, 57:21, | represents - 51:2 | | 166:13, 166:16, 170:1, 170:6 |
| 17:16, 43:23, 77:18, 77:21, | 57:23, 59:20, | request - 28:7, 82:24, 92:23, 93:1, | responding - 29:15, 57:4, 106:9 | ri - 8:20, 27:22, 28:3, |
| 82:16, 92:19, 96:2, | 67:18, 69:5, 69:8, | 134:14 | response - 8:18, | 32:2, 57:15 |
| 96:11, 96:20, | 69:18, 71:1, 71:11, | requesting - 75:20 | 82:24, 92:5, 133:7, | Richmond- 142:9 |
| 97:22, 98:10, | 71:13, 73:22, | requests - 71:20 | 133:16 | Ridgewood- 6:4, |
| | | | | - |

| 95:14, 95:16, 98:21 120:21, 121:13, 121:22 134:21, 145:21, 154:9, 156:15, 158:12 120:16, 24:11, 24:16, 33:16, 35:9, 37:22, 81:2, 120:2, 123:22, 123:22, 123:22, 123:22, 131:14, 123:22, 131:14, 123:23, 131:4, 131:15, 132:2, 141:7, 142:1, 151:15, 132:2, 141:7, 142:1, 151:15, 132:2, 163:21, 164:4, 37:10, 47:16 127:17 158/rewards - 35:2 158:10, 168:3, 168:3, 168:3, 168:13, 168:21, 168:22, 168:10, 168:1 | 93:23 Signed - 5:14 |
|---|---|
| ridiculous - 33:10 Rigl- 1:7 rising - 23:21, 149:5 S | Signed - 5:14 |
| Righ - 17 | , juligilieu J. 14 |
| Rising - 70:15 risk - 17:21, 20:3, 20:6, 20:12, 20:13, 20:6, 20:12, 20:13, 20:15, 24:11, 24:16, 33:16, 33:16, 35:9, 37:22, 81:2, 120:2, 120:22, 123:22, 120:22, 123:22, 123:23, 131:4, 123:20, 123:22, 131:15, 132:1, 131:15, 132:2, 132:15, 131:15, 132:1, 132:1, 1 | signed - 7:9, 7:10, |
| risk - 17:21, 20:3, 20:16, 20:12, 20:13, 20:16, 20:11, 20:15, 24:11, 20:15, 24:11, 20:15, 24:11, 24:16, 33:16, 35:9, 38:23, 42:7 38:29, 42:24, 59:9, 59:10 38.23, 131:4, 31:15, 132:2, 123:23, 131:4, 150:18, 152:2, satisfied - 38:4 satisfied - 38:4, 150:18, 152:2, satisfy - 21:19, 22:7, 163:21, 164:4 risk/rewards - 35:2 risks - 19:22, 24:13, 36:18, 37:19, 127:17 risky - 30:17, 30:19 road - 142:2 scale - 81:12, 94:8, 155:21 scharon - 51:8 roch - 114:7 role - 8:13, 43:22, 135:11, 156:21, 163:23, 168:3, 168:3 roch - 114:7 role - 8:13, 43:22, 135:11, 156:21, 163:23, 168:3 roch - 114:7 role - 8:13, 43:22, roled - 109:23 roof - 40:18 room - 3:15, 7:12, 7:15 roots - 67:22 roughly - 133:1 second - 36:11, 120:2 round-table - 10:10 second - 36:11, 120:2 roundtable - 10:10 second - 36:14, 51:9, 62:3, separate - 25:1, separa | 93:1 |
| 18k - 17, 2, 0.3, 20:6, 20:12, 20:13, 20:15, 24:11, 20:15, 24:11, 24:16, 33:16, 35:9, 38:23, 42:7 24:16, 33:16, 35:9, 38:23, 42:7 59:9, 59:10 59:114 133:2 133:2, 120:8, 122:24, 123:20, 123:22, 123:23, 131:4, 131:15, 132:2, 131:15, 132:2, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 150:18, 152:2, 163:21, 164:4 133:2 134:12, 138:21, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:7, 142:1, 141:9, 141:9, 141:1, 141:9, 141:1, 141:9, 141:1, 141:9, 141:1, 141:9, 141:1, 141:9, 141:1, 141:9, 141:1, 141:9, 141:1, 141:9, 141:1, 141:9, 141:1, 141:9, 141:1, 141:9, 141:1, 141:9, 141:1, 141:9, 141:1, 141:9, 141:1, 141:9, 141:1, | signer - 104:11 |
| 20:15, 24:11, 24:16, 33:16, 35:9, 38:23, 42:7 Seeking - 29:6, 51:14 seem - 165:9, 133:2 seem - 165:9, 165:24 seemingly - 19:12 seem - 165:9, 165:24 seemingly - 19:12 seemingl | significant - 79:17, |
| 24:16, 33:16, 35:9, 37:22, 81:2, 120:2, 120:24, 120:20, 123:22, 123:22, 123:23, 131:4, 131:15, 132:2, 141:7, 142:1, 141:7, 142:1, 150:18, 152:2, 163:21, 164:4 17 isk/rewards - 35:2 18 is - 19:22, 24:13, 36:1, 36:18, 37:19, 127:17 risky - 30:17, 30:19 road - 142:2 road - 108:3, 168:3 road - 36:23, 168:3 road - 36:24, 163:23, 168:3 road - 36:23, 17:20 rolled - 109:23 road - 36:11, 150:20 rolled - 109:23 road - 36:13, 155:20 road - 36:13, 155:20 road - 36:21, 163:21 road - 36:23, 168:3 road - 36:23, 168:3 road - 36:23, 168:3 road - 36:24, 126:14 road - 36:24, 126:14 road - 36:24, 126:14 road - 36:23, 168:3 road - 36:23, 168:3 road - 36:23, 168:3 road - 36:23, 168:3 road - 36:24, 126:14 road - 36:24, | 127:17, 129:12, |
| 37:22, 81:2, 120:2, 59:9, 59:10 59:9, 59:10 59:9, 59:10 165:9, 165:24 22:6, 37:21, 93:19, 123:23, 131:4, 131:15, 132:2, 132:3 184:1, 132:2, 141:7, 142:1, 141:7, 142:1, 140:12, 150:18, 152:2, 163:21, 164:4 150:18, 37:19, 127:17 17 17 17 17 17 17 17 | 130:1, 131:13, |
| 120:8, 122:24, | 132:14 |
| 123:20, 123:22, | significantly - 115:18, 127:23 |
| 123:23, 131:4, | signing - 78:4 |
| 131:15, 132:2, | Silent - 7:19, 27:23, |
| 141:7, 142:1, 150:18, 152:2, 163:21, 164:4 168:21, 168:21 168:18, 162:20 161:4, 161:1 | 28:3, 47:5, 47:6, |
| 150:18, 152:2, 163:21, 164:4 risk/rewards - 35:2 risks - 19:22, 24:13, 36:1, 36:18, 37:19, 127:17 risky - 30:17, 30:19 road - 142:2 Robert- 1:18, 2:10, 61:3, 155:20, 155:21 Robinson- 5:18 rock - 114:7 role - 8:13, 43:22, 135:11, 156:21, 163:23, 168:3 role - 17:20 rolled - 109:23 room - 3:15, 7:12, 7:15 roots - 67:22 roughly - 133:1 round - 119:13, 120:2 roundtable - 10:10 round at 19:13, 120:2 roundtable - 10:10 round at 19:10, 1 | 57:15 |
| 163:21, 164:4 risk/rewards - 35:2 saved - 129:3 seller - 43:1, 45:4, 36:18, 37:19, 108:3, 108:6, 127:17 108:10, 132:10, 159:12, 160:24 seller - 31:24, 43:3, seller - 43:1, 43:14, 33:3, seller - 31:24, 43:3, seller - 31:2 | similar - 49:7, 49:21, |
| risk/rewards - 35:2 saved - 129:3 sell - 41:22, 131:23 142:19 risks - 19:22, 24:13, 36:18, 37:19, 127:17 savings - 107:23, 108:3, 108:6, 127:17 seller - 43:1, 45:4, 91:11, 91:13 seller - 43:1, 45:4, 91:11, 91:13 shareholders - 120:6 risky - 30:17, 30:19 159:12, 160:24 87:22, 91:10 sheet - 7:7, 7:11 Shell - 153:17 road - 142:2 saw - 18:21, 62:20, 62:22 selling - 43:13, 94:15 sheet - 7:7, 7:11 Robert- 1:18, 2:10, 62:20 scale - 81:12, 94:8, 153:61 sells - 4:9 selling - 43:13, 94:15 shift - 69:5, 69:18 Robinson- 5:18 scenario - 36:23, 72:5, 139:16 semi - 146:16 shift - 69:5, 69:18 shifting - 80:5 shining - 53:23 short - 30:11, 35:20, 36:20, 48:17, 37:24 shifting - 80:5 shining - 53:23 short - 30:11, 35:20, 36:20, 48:17, 79:5, 102:11, 102:12, 110:11, 102: | 57:22, 59:3, 88:18, |
| 36:1, 36:18, 37:19, 108:3, 108:6, 108:10, 132:10, 159:12, 160:24 saw - 18:21, 62:20, 62:22 saw - 18:21, 94:8, 155:21 scenario - 36:23, 155:21 scenario - 36:23, 135:11, 156:21, 163:23, 168:3 rock - 117:20 rolled - 109:23 roof - 40:18 room - 3:15, 7:12, 7:15 roofs - 67:22 roughly - 133:1 round - 119:13, 120:2 roundtable - 10:10 39:14, 51:9, 62:3, rolled: 10:10 39:14, 51:9, 62:3, rolled: 10:10 39:14, 51:9, 62:3, rolled: 10:10 39:14, 51:9, 62:3, separate - 25:1, 10:10 separate - 25:1, 120:6 sheet - 7:7, 7:11 Shell - 13:1, 3 shift - 69:5, 69:18 shift - 69:5, | 94:5, 105:12, |
| 127:17 108:10, 132:10, sellers - 31:24, 43:3, sheet - 7:7, 7:11 risky - 30:17, 30:19 159:12, 160:24 87:22, 91:10 Shell - 153:17 road - 142:2 saw - 18:21, 62:20, 62:22 94:15 Sherpa - 7:19, 27:23 Robert - 1:18, 2:10, 62:22 94:15 Sherpa - 7:19, 27:23 61:3, 155:20, scale - 81:12, 94:8, sellis - 4:9 57:15 155:21 153:16, 153:21 semi - 146:16 shift - 69:5, 69:18 Robinson - 5:18 scenario - 36:23, 72:5, 139:16 semi-annual - 146:16 shifting - 80:5 role - 8:13, 43:22, sciences - 31:8 Senator - 77:24 short - 30:11, 35:20 135:11, 156:21, Scientists - 7:4, send - 77:2, 86:10 36:2, 36:20, 48:17, 163:23, 168:3 126:14 sending - 66:4, 79:5, 102:11, roll - 17:20 scooping - 27:15 sends - 64:4 111:13, 111:15, roof - 40:18 Sea - 149:17 sends - 64:4 111:20, 111:23, roofs - 67:22 seat - 7:18 sense - 19:10, 13:24, 138:2, roots - 67:22 seat - 7:18 | 118:20, 146:3, |
| risky - 30:17, 30:19 159:12, 160:24 87:22, 91:10 Shell - 153:17 road - 142:2 saw - 18:21, 62:20, 62:22 8elling - 43:13, 94:15 Sherpa - 7:19, 27:23 Robert - 1:18, 2:10, 6:13, 155:20, 155:21 scale - 81:12, 94:8, 153:16, 153:21 sells - 4:9 57:15 Robinson - 5:18 rock - 114:7 scenario - 36:23, 72:5, 139:16 semi - 146:16 shift - 69:5, 69:18 rock - 114:7 role - 8:13, 43:22, 135:11, 156:21, 163:23, 168:3 sciences - 31:8 Scientists - 7:4, Scientists - 7:4, 163:23, 168:3 Scientists - 7:4, scooping - 27:15 s | 152:16, 165:18, |
| road - 142:2 saw - 18:21, 62:20, 62:22 selling - 43:13, 94:15 Sherpa - 7:19, 27:23 28:3, 47:5, 47:6, 57:15 Robert- 1:18, 2:10, 61:3, 155:20, 155:21 scale - 81:12, 94:8, 153:21 sells - 4:9 57:15 Robinson- 5:18 scenario - 36:23, 72:5, 139:16 semi-annual - 146:16 shift - 69:5, 69:18 shift or - 69:5, 69:18 shift or - 80:5 shining - 53:23 short - 30:11, 35:20, 8end - 77:24 send - 77:2, 86:10 sending - 66:4, 79:5, 102:11, rolled - 109:23 scooping - 27:15 scratch - 12:22 sends - 64:4 sending - 66:4, 79:5, 102:11, 102:12, 110:11, 111:20, 111:23, roof - 40:18 sea - 70:15 seamlessly - 118:17 sea - 70:15, 7:15 round - 119:13, 120:2 second - 71:23, 150:10 second - 71:23, 150:10 second - 36:11, 150:10 second - 36:11, 150:10 second - 36:11, 162:18, 162:20 roundtable - 10:10 39:14, 51:9, 62:3, separate - 25:1, 161:4, 161:14, 161 | 168:22 |
| Robert- 1:18, 2:10, 6:13, 155:20, 62:22 scale - 81:12, 94:8, 153:16, 153:21 semi - 146:16 shift - 69:5, 69:18 shift - 69:5, 69:18 semi-annual - 146:16 shifting - 80:5 shifting - 80:5 shifting - 53:23 short - 30:11, 35:20, 135:11, 156:21, 163:23, 168:3 roll - 17:20 scentists - 7:4, 163:23, 168:3 roll - 17:20 scratch - 12:22 scatch - 12:22 scom - 3:15, 7:12, 7:15 roof - 40:18 room - 3:15, 7:12, 7:15 seamlessly - 118:17 round - 119:13, 120:2 roundtable - 10:10 94:15 sells - 4:9 sells - 4:9 shift - 69:5, 69:18 shift - 69:5, 69:18 shift - 69:5, 69:18 shift - 69:5, 69:18 shifting - 80:5 shifting - 80:5 shifting - 80:5 shifting - 53:23 short - 30:11, 35:20, 8emi - 77:24 send - 77:2, 86:10 secil - 77:2, 86:10 send - 77:2, 86:10 send - 77:2, 86:10 send - 77:2, 86:10 send - 66:4, 79:5, 102:11, 102:12, 110:11, 111:5, | simple - 147:6 |
| 6:13, 155:20, 155:21 | |
| 155:21 153:16, 153:21 semi - 146:16 shift - 69:5, 69:18 Robinson- 5:18 rock - 114:7 5cenario - 36:23, 72:5, 139:16 146:16 semi-annual - 146:16 shifting - 80:5 shining - 53:23 role - 8:13, 43:22, 135:11, 156:21, 163:23, 168:3 Sciences - 31:8 Senator - 77:24 send - 77:2, 86:10 36:2, 36:20, 48:17, 79:5, 102:11, 7 | simply - 68:15, 69:5, |
| Robinson - 5:18 scenario - 36:23, 72:5, 139:16 semi-annual - 146:16 shifting - 80:5 shining - 53:23 role - 8:13, 43:22, 135:11, 156:21, 163:23, 168:3 sciences - 31:8 Senator - 77:24 send - 77:2, 86:10 36:2, 36:20, 48:17, 79:5, 102:11 | 72:11, 106:11, |
| rock - 114:7 72:5, 139:16 146:16 shining - 53:23 role - 8:13, 43:22, 135:11, 156:21, 163:23, 168:3 Scientists - 7:4, 126:14 Send - 77:2, 86:10 36:2, 36:20, 48:17, 79:5, 102:11, 79:5, 102:11, 79:5, 102:11, 79:5, 102:11, 79:5, 102:11, 79:5, 102:11, 79:5, 102:11, 79:5, 102:11, 79:5, 102:11, 79:5, 102:11, 79:5, 102:11, 79:5, 102:11, 79:5, 102:11, 79:5, 102:11, 79:5, 102:11, 102:12, 110:11, 102:12, 110:11, 111:20, 111:23, 111:15, 111:20, 111:23, 111:20, | 109:23, 110:18, |
| role - 8:13, 43:22, 135:11, 156:21, 163:23, 168:3 sciences - 31:8 Scientists - 7:4, 126:14 Senator - 77:24 send - 77:2, 86:10 short - 30:11, 35:20, 36:2, 36:20, 48:17, 79:5, 102:11, 102:12, 110:11, 102:12, 110:11, 111:20, 111:23, 113:4, 138:2, 139:13, 139:14, 139:13, 139:14, 139:14, 161:5, 149:6, 150:11, 149:6, | 122:10, 161:9, |
| 135:11, 156:21, Scientists - 7:4, send - 77:2, 86:10 36:2, 36:20, 48:17, 163:23, 168:3 126:14 71:10 36:2, 36:20, 48:17, roll - 17:20 scooping - 27:15 71:10 102:12, 110:11, roll - 109:23 scratch - 12:22 sends - 64:4 111:13, 111:15, roof - 40:18 Sea - 149:17 sendor - 6:11 111:20, 111:23, room - 3:15, 7:12, sea - 70:15 sense - 19:10, 113:7, 114:13, 7:15 seamlessly - 118:17 23:13, 26:1, 26:3, 131:4, 138:2, roots - 67:22 seat - 7:18 64:19, 100:3, 139:13, 139:14, roughly - 133:1 Second - 71:23, 101:7, 151:10, 139:23, 139:24, round - 119:13, 150:10 161:4, 161:5, 149:6, 150:11, 120:2 second - 36:11, 162:18, 162:20 150:17, 160:20, roundtable - 10:10 39:14, 51:9, 62:3, separate - 25:1, 161:4, 161:14, | 167:3 sit - 49:4, 100:4 |
| 163:23, 168:3 126:14 sending - 66:4, 79:5, 102:11, roll - 17:20 scooping - 27:15 71:10 102:12, 110:11, rolled - 109:23 scratch - 12:22 sends - 64:4 111:13, 111:15, roof - 40:18 Sea - 149:17 sense - 6:11 111:20, 111:23, room - 3:15, 7:12, sea - 70:15 sense - 19:10, 113:7, 114:13, 7:15 seamlessly - 118:17 23:13, 26:1, 26:3, 131:4, 138:2, roots - 67:22 seat - 7:18 64:19, 100:3, 139:13, 139:14, roughly - 133:1 Second - 71:23, 101:7, 151:10, 139:23, 139:24, round - 119:13, 150:10 161:4, 161:5, 149:6, 150:11, 120:2 second - 36:11, 162:18, 162:20 150:17, 160:20, roundtable - 10:10 39:14, 51:9, 62:3, separate - 25:1, 161:4, 161:14, | site - 88:16 |
| roll - 17:20 scooping - 27:15 71:10 102:12, 110:11, 111, 111, 111.15, 111:15, 111:15, 111:15, 111:15, 111:15, 111:15, 111:15, 111:13, 111:15, 111:13, 111:15, 111:23, 111:23, 111:23, 111:23, 111:23, 111:23, 111:23, 111:23, 111:23, 111:23, 111:23, 111:23, 111:23, 111:23, 111:23, 111:23, 111:23, 111:23, 111:23, 113:24 | sited - 60:15, 74:21 |
| rolled - 109:23 scratch - 12:22 sends - 64:4 111:13, 111:15, 111:23, 111:15, 111:23, 111:23, 111:23, 111:15, 111:23, 111:23, 111:23, 111:23, 111:15, 111:23, | sites - 74:13, 85:21, |
| roof - 40:18 Sea - 149:17 Senior - 6:11 111:20, 111:23, 113:23, 113:7, 114:13, 114:14, 114:14, | 93:18 |
| room - 3:15, 7:12, sea - 70:15 seamlessly - 118:17 seamlessly - 118:17 seat - 7:18 sense - 19:10, 23:13, 26:1, 26:3, 64:19, 100:3, 139:14, 138:2, 64:19, 100:3, 139:14, 139:14, 150:10 161:4, 161:5, 120:2 roundtable - 10:10 113:7, 114:13, 131:4, 138:2, 131:4, 138:2, 139:14, 139:13, 139:14, 139:13, 139:14, 161:10, 161:4, 161:5, 149:6, 150:11, 161:4, 161:5, 149:6, 150:11, 162:18, 162:20 150:17, 160:20, 162:18, 162:20 161:4, 161:14, 161: | sitting - 7:16, 29:9, |
| 7:15 seamlessly - 118:17 23:13, 26:1, 26:3, 64:19, 100:3, 139:13, 139:14, 138:2, 64:19, 100:3, 139:13, 139:14, 150:10 131:4, 138:2, 64:19, 100:3, 139:13, 139:14, 139:23, 139:24, 101:7, 151:10, 150:11, 150 | 69:19 |
| roots - 67:22 seat - 7:18 64:19, 100:3, 139:13, 139:14, roughly - 133:1 Second - 71:23, 101:7, 151:10, 139:23, 139:24, round - 119:13, 150:10 161:4, 161:5, 149:6, 150:11, second - 36:11, 162:18, 162:20 150:17, 160:20, roundtable - 10:10 39:14, 51:9, 62:3, separate - 25:1, 161:4, 161:14, | situation - 12:15, |
| round - 119:13, 150:10 161:4, 161:5, 149:6, 150:11, 120:2 second - 36:11, 162:18, 162:20 150:17, 160:20, roundtable - 10:10 39:14, 51:9, 62:3, separate - 25:1, 161:4, 161:14, | 22:14, 37:7, |
| 120:2 second - 36:11, 162:18, 162:20 150:17, 160:20, roundtable - 10:10 39:14, 51:9, 62:3, separate - 25:1, 161:4, 161:14, | 105:12, 116:5, |
| roundtable - 10:10 39:14, 51:9, 62:3, separate - 25:1, 161:4, 161:14, | 123:15, 140:16, |
| | 147:16, 153:15 |
| | situations - 36:11 |
| route - 44:24 65:24, 72:15, 33:1, 33:12, 58:8, 162:4 | six - 76:22, 95:2, |
| Rpr/csr - 170:5 121:19, 151:1, 146:1, 146:19, Short - 2:7, 6:4, | 95:3, 124:1 |
| Rps - 60:6, 60:8, 167:18 147:21, 166:12 95:11, 95:12, | size - 158:23, 164:2 |
| 60:18, 62:21, secondary - 85:13 September - 5:16, 95:13, 95:14, | slack - 45:13 |
| 68:15, 68:17, secondly - 9:13, 27:7 100:19, 100:22, | slightly - 128:7 |
| 68:18, 83:24, 85:4, 122:23 Seq - 1:7 137:11 148:46 127:40 Separative 12:14 Se | slippery - 109:16 |
| 118:16, 127:19, | S slope - 109:16 small - 65:5, 76:7, |
| 152:9, 154:5, Section - 60:14, Serious - 92:15, 79:5, 102:11, | 84:6, 85:17, 85:18, |
| 152.9, 154.5, 154.5, 156.11, 157.1, 166.9 71.8, 71.20, 74.20, 108.17, 140.20 110.11, 111.15, | 85:24, 89:6, 91:18, |
| rule - 3:8, 6:18, 8:4, 95:23, 98:17, serve - 139:9 111:23, 114:13, | 92:4, 93:3, 94:10, |
| 8:14, 9:6, 10:6, 10:6, 10:612, 118:24, served - 55:5 131:4, 139:14, | 98:24, 101:11, |
| 10:8, 11:6, 12:12, 137:3, 160:12, service - 11:17, 139:23, 139:24, | 115:8, 115:16, |
| 12:20, 13:15, 164:14, 165:8 20:17, 23:14, 150:11, 150:17, | 115:23, 129:21, |
| 13:18, 19:14, section - 97:2, 26:11, 26:14, 161:4, 161:14 | 132:6, 132:9, |
| 29:17, 31:20, 145:12, 164:19, 49:12, 49:16, Short-term - 137:11 | 132:14, 137:23, |
| 31:21, 32:6, 42:20, 164:20 49:18, 49:21, shorten - 167:6 | 139:6, 140:5, |
| 42:24, 43:8, 51:10, Sections - 5:12, 50:14, 87:10, shorter - 35:13, | 151:7, 155:14, |
| 63:16, 73:12, 119:7 87:11, 87:14, 48:18 | 164:2 |
| 101:9, 101:16 sections - 133:11 91:24, 93:15, 94:5, shot - 104:2 | smaller - 49:14, |
| rules - 8:5, 12:20, sector - 4:7, 73:10, 105:3, 130:5, show - 96:24, | 50:4, 103:11 |
| 28:9, 28:24, 43:23, 79:17, 80:4, 80:9, 147:15, 158:7, 109:12, 109:13, 43:23, 43:23, 43:24, 43:25, 43 | Smaller - 50:4 |
| 44:23, 46:14, 133:4, 137:6 158:10, 165:2 159:5, 160:2 | smallest - 153:20 |
| 46:17, 46:23, secure - 14:21, 39:7, Services - 47:7, showed - 138:12 50:23, 51:4, 57:1, 130:11, 131:8 74:3, 74:6, 74:10 showing - 128:4. | so-called - 106:20 |
| 50:23, 51:4, 57:1, 130:11, 131:8 74:3, 74:6, 74:10 showing - 128:4, 58:22, 58:24, 59:2, secured - 161:1 services - 47:7, 156:17, 158:8, | so-signed - 93:1 societal - 108:13 |
| 60:11, 63:19, see - 23:8, 25:4, 86:18, 91:3, 91:17, 159:15 | society - 108:1, |
| 63:20, 66:22, 67:1, 26:7, 33:11, 38:5, 94:9, 94:17, shown - 26:21, | 109:11 |
| 68:11, 69:4, 70:24, 38:11, 39:6, 39:19, 110:13, 147:13 | solar - 53:19, 54:22, |
| 71:5, 73:8, 73:21, 44:18, 49:22, serving - 9:16, shows - 43:12, | 74:13, 81:4, 81:8, |
| 101:21, 103:9, 63:13, 65:12, 68:6, 105:23 76:21, 90:3, 158:17 | |
| 103:12, 106:4, 71:4, 72:10, 72:11, session - 27:24, side - 9:23, 43:1, | 85:21, 90:15, |
| 136:3, 157:14 78:24, 86:4, 94:3, 111:5, 134:1, 45:5, 66:22, 66:23, | 94:11, 99:12, |
| ruling - 57:3 95:5, 98:10, 99:7, 136:16, 143:24 96:19, 148:14 | 151:16 |
| rulings - 166:10 103:19, 104:12, sessions - 133:24, sidelines - 153:12 | Solar - 53:21, 152:22 |
| run - 25:17, 33:16, | |
| 40:20, 40:23, 108:20, 113:14, set - 57:21, 57:22, 148:24 | sold - 38:14, 133:5 |
| 149:22 114:19, 115:10, 58:6, 123:11, sign-up - 7:7, 7:10 | sold - 38:14, 133:5 sole - 98:19, 118:23 |
| <u>running - 20:6, 44:5, 115:21, 116:12, 136:19 signators - 87:6,</u> | sold - 38:14, 133:5 |

| solicited - 160:18 | Square - 126:8, | 67:23, 78:8, 78:11, | 63:1, 96:1, 105:7, | 122:20, 129:12, |
|---|---|---|---|---|
| solid - 104:7 | 142:10 | 110:4, 118:6, | 112:22, 123:23, | 161:11 |
| solution - 39:13, | stability - 35:18, | 120:22, 126:20, | 124:23, 125:13, | suggest - 12:10, |
| 69:17, 69:20, 115:6, 169:7, | 35:21, 85:8, 130:7, 137:10, 137:14, | 133:8, 149:22, 150:10, 152:11, | 141:8, 143:1, 154:15, 159:22 | 17:5, 18:13, 31:7, 35:8, 40:22, 41:2, |
| 169:11 | 137:10, 137:14, | 152:23, 153:21, | sting - 141:11 | 41:10, 97:7, 100:2, |
| solutions - 54:1, | 141:23, 150:13, | 153:22, 155:2, | stipulated - 143:12 | 106:24, 114:3, |
| 86:14, 102:16 | 151:4 | 155:13, 166:15, | stock - 80:21, 86:23, | 159:7, 160:12 |
| solve - 120:23 | stabilization - | 166:24 | 87:4, 88:5 | suggested - 8:5, |
| someone - 148:20 | 114:10, 154:19 | State - 1:1, 9:19, | stocks - 83:6 | 92:24, 159:19 |
| somewhat - 93:16 somewhere - 148:13 | stabilize - 128:17, | 26:8, 27:19, 50:12, | stop - 69:16 | suggesting - 10:14, |
| soon - 100:13 | 138:1, 138:4, 140:8 stabilizing - 4:5, | 55:11, 58:3, 77:15, 78:12, 117:12, | stopped - 69:10 stores - 85:23 | 11:3, 12:19, 26:4, 30:2, 39:17, 42:9, |
| sooner - 54:3 | 137:4 | 150:15, 152:4, | stories - 70:2 | 44:11 |
| sorry - 10:5 | stable - 88:6 | 152:7, 153:20, | stranded - 119:13, | suggestion - 13:2, |
| sort - 41:17, 68:18, | staff - 59:23, 77:20, | 154:20, 155:24, | 119:19, 120:2, | 17:18, 44:7, 82:17 |
| 81:5, 83:19, | 100:5, 117:7, | 156:20, 157:8, | 122:24, 123:9, | suggestions - |
| 108:24, 112:1, 114:12, 115:11, | 126:16, 133:12, 164:12, 165:2 | 162:20, 163:22, 169:2, 170:6 | 123:14, 123:19, 124:2, 124:3, | 17:19, 44:14 suggests - 59:1 |
| 151:17, 151:20 | stage - 6:18 | state's - 39:8, 40:13, | 131:15, 139:3, | suitably - 164:22 |
| sorts - 70:22, 86:19, | stake - 44:3, 99:21 | 73:22 | 139:4, 139:8, | Suite - 142:10 |
| 153:11 | stakeholders - 60:3, | statement - 121:6, | 139:15 | summarize - 64:2, |
| sounding - 167:14 | 79:20, 164:11 | 140:7, 153:9, | streams - 147:21 | 127:3 |
| sounds - 26:19 source - 13:13. | stand - 7:14, 33:24, 90:23, 157:14 | 168:23 | Street - 59:11, 67:15, 74:6, 77:9, 82:5, | summary - 82:21, 91:22 |
| 108:6 | stand-by - 90:23 | statements - 154:8 States - 64:13, 68:16 | 117:5, 132:23 | sun - 53:21, 53:23, |
| sources - 108:6, | standard - 3:6, 3:18, | states - 28:23, 39:6, | strengthen - 92:21, | 81:17 |
| 140:24, 152:21 [°] | 3:24, 4:1, 8:7, 9:3, | 52:6, 60:3, 68:15, | 94:2 | sunniest - 81:10 |
| South - 77:9 | 11:2, 11:17, 14:14, | 68:17, 69:7, 74:14, | stress - 141:1 | sunny - 55:4 |
| Southern - 47:11, | 14:23, 21:20, 23:4, | 80:2, 80:4, 88:3, | strike - 55:22 | supplement - 135:6 |
| 54:23 spaces - 71:15 | 23:9, 23:13, 23:18, 28:18, 28:22, | 96:20, 117:14, 118:21, 122:7, | strong - 13:20, 31:16, 39:21, | supplier - 22:4, 22:6, 23:14, 26:8, |
| Spaniel - 82:7 | 37:11, 37:12, 39:8, | 126:20, 127:11, | 77:17, 88:7, 93:21, | 39:7, 54:10, |
| Spc - 156:21, 157:11 | 46:20, 48:2, 48:4, | 128:24, 133:9, | 127:1 | 115:22, 117:14, |
| speaker - 57:7, | 48:13, 51:21, | 154:5, 154:6, | strongly - 31:20, | 118:2, 130:13, |
| 67:11, 74:1, 77:6, | 77:19, 79:20, | 154:22, 154:24, | 129:16, 154:9 | 158:13 |
| 82:2, 95:10, 100:24, 116:24, | 102:1, 108:4, 108:20, 108:23, | 166:17, 166:18, 169:1 | structure - 42:3, 42:20, 52:4, | suppliers - 18:24, 22:5, 22:7, 26:11, |
| 126:5, 132:20, | 109:2, 109:14, | statewide - 78:10 | 141:18, 144:6, | 26:12, 34:14, 54:9, |
| 142:5, 149:14, | 109:23, 111:1, | Statistically - 30:18 | 153:6, 162:9 | 111:11, 112:11, |
| 167:18 | 111:7, 111:8, | statistics - 31:9 | structures - 25:12, | 112:14, 120:5, |
| speakers - 75:8, | 112:9, 112:13, | status - 58:15, 83:14 | 141:15 | 158:12 |
| 95:2, 127:5, 137:9, 142:18, 155:19, | 112:23, 113:20, 115:18, 118:4, | statute - 4:4, 57:21, 96:4, 97:6, 97:24, | studies - 130:21, 150:12, 159:6, | supply - 4:2, 33:9, 43:1, 47:13, 53:3, |
| 169:14 | 118:5, 123:10, | 136:23, 150:1, | 160:6 | 53:4, 80:12, 80:20, |
| speaking - 7:7, | 124:6, 124:11, | 157:8, 169:2, 169:5 | study - 138:11, | 81:1, 85:8, 104:13, |
| 58:19 | 124:16, 125:19, | statutes - 58:6, | 138:14 | 104:16, 112:5, |
| Special - 5:20 | 126:12, 129:4, | 58:24, 59:1 | stuff - 39:21, 91:17 | 117:16, 120:4, |
| specific - 17:1, 30:4, | 147:12, 147:14, | stay - 36:20, 129:20, | subject - 38:11, | 130:7, 130:15, |
| 137:24 specifically - 5:12, | 152:10, 155:12, 156:24, 157:12, | 131:18 staying - 30:11, | 95:19, 98:17, 141:18 | 137:23, 139:7, 139:23, 140:5, |
| 135:22 | 158:13, 161:19, | 36:2, 36:3 | submit - 76:21, | 140:6, 140:10, |
| specificity - 143:19 | 166:9, 166:12, | Stearns - 5:23 | 105:18 | 140:11, 141:1, |
| specter - 119:13 | 166:15 | steel - 52:18, 52:22, | submitted - 75:23, | 144:16, 147:17, |
| speculators - 38:24 | Standard - 1:6, 23:10 | 53:6, 109:9 | 99:23, 131:1 | 147:19, 158:22, |
| Spell - 59:13 spelling - 100:7 | standardized - 93:5 | stems - 42:19 Step - 84:3 | submitting - 5:2 Subparagraph - | 161:15, 161:16, 161:23 |
| spend - 31:4, 31:5, | Standards - 68:12, | step - 32:22, 79:23, | 95:24 | supplying - 132:7, |
| 142:23 | 69:1 | 128:14, 144:20, | subsequently - | 139:22 |
| spending - 31:18, | standards - 37:14, | 154:12 | 13:16 | support - 39:23, |
| 36:17, 54:22 | 55:17, 57:21, | Stephens - 2:7, | subsidiaries - | 76:22, 77:18, |
| spent - 11:10, 18:18, 19:12, 144:15, | 67:18, 71:1, 73:22, 115:13, 118:13, | 100:24, 101:1, 101:2, 110:22, | 117:24 subsidiary - 93:13, | 78:10, 78:15, 100:15 |
| 147:5 | 119:1, 126:19, | 111:3, 111:13, | 117:21 | supporting - 68:24, |
| spikes - 80:15, | 126:21, 127:12, | 111:19, 112:13, | subsidy - 102:13 | 69:20 |
| 80:22 | 136:24, 152:9 | 112:16, 112:20, | substantially - 13:24 | supportive - 118:12, |
| spills - 70:1 | standing - 6:21 | 112:24, 113:7, | substantiate - | 127:13 |
| Spinblade - 6:7, 149:19 | stands - 38:8, 60:8 start - 9:5, 12:22, | 113:10, 113:18, 113:22, 114:5, | 22:18, 23:24, 49:17 substantiation - | supports - 71:6 suppose - 41:7 |
| split - 96:11 | 60:24, 133:14, | 116:8, 116:14, | 40:10 | supposed - 23:8, |
| spoken - 144:5 | 156:3 | 116:17, 116:21, | succeed - 86:16, | 52:24, 114:19 |
| sponsor - 10:9 | started - 47:4 | 116:22 | 87:20 | suppression - 159:7 |
| sponsors - 77:23 | starting - 42:19, | stepping - 45:14, | success - 90:12, | surely - 159:6 |
| sponsorship - 43:7 | 104:13, 140:5 | 160:16 steps - 144:17 | 154:5 | surplus - 138:12, |
| spot - 55:4, 55:5, 111:23, 112:1, | state - 10:2, 12:16, 33:9, 34:15, 37:12, | steps - 144:17 stick - 35:13 | successful - 156:6 successor - 147:13, | 161:19 suspect - 165:21 |
| 113:2, 127:20, | 40:11, 40:12, | Sticking - 35:9 | 147:15 | Sustainable - 155:22 |
| 137:12, 137:17, | 40:15, 40:18, | sticking - 35:14 | suffer - 70:18 | sustainable - |
| 138:3, 139:10, | 40:20, 40:21, | still - 9:16, 40:16, | suffering - 70:9 | 161:24, 162:1 |
| 139:23, 151:8 | 40:23, 52:10, | 48:7, 54:6, 62:18, | sufficient - 79:1, | sustained - 161:18 |

| Sutcliffe - 170:5 |
|--|
| swayed - 99:9, 99:20 |
| switching - 71:13 Sworn - 7:21, 59:9, 67:12, 74:4, 77:7, |
| Sworn - 7:21, 59:9, |
| 67:12, 74:4, 77:7, |
| 82:3, 95:12, 101:1, |
| 117:1, 126:6, 132:21, 142:7, |
| 149:15, 155:20 |
| syrup - 70:21 |
| System - 82:10 |
| system - 59:18, |
| 59:19, 59:20, |
| 59:23, 60:11, 61:6, |
| 61:8, 61:18, 62:3, |
| 62:6, 63:4, 63:13, |
| 63:22, 64:11, |
| 64:12, 64:14, 67:2, |
| 72:4, 72:7, 72:10, |
| 72:12, 75:1, 75:13, |
| 76:2, 76:5, 76:19, |
| 84:7, 84:24, 89:15, 89:23, 90:24, |
| 91:12, 91:15, |
| 94:10, 105:24, |
| 106:6, 114:18, |
| 128:20, 141:2, |
| 168:2, 168:4, |
| 168:17, 168:21 |
| systems - 72:1, |
| 80:17, 90:17, |
| 104:16, 165:1, |
| 165:17 |
| 7 |

Т

T&d- 158:7 table - 46:2, 141:4, 143:1, 165:24 tally - 138:22 tangle - 107:15 target - 44:1, 79:24, 145:19, 148:11, 165:10 targeted - 157:4 targets - 132:8, 157:1 taxpayer - 102:13 tech - 27:24, 111:4, 111:5 Tech- 8:20, 27:22, 28:3, 32:2, 57:15 Tech-ri- 8:20, 27:22, 28:3, 32:2, 57:15 technical - 93:4, 134:1, 136:15, 143:23, 146:9 technologically -84.19 Technologies - 82:8 technology - 81:11, 168:13 Tellus-79:19 temperature - 81:17 temporal - 166:19 ten - 74:14, 74:18, 79:16, 95:5, 96:7 98:1, 98:4, 121:11, 121:16, 121:20, 124:1 ten-minute - 95:5 ten-year - 121:11, 121:16 tend - 142:23 tens - 70:8 tension - 137:10 term - 4:5, 8:24, 10:22, 11:4, 11:6, 11:14, 11:16, 16:2,

19:13, 19:14,

19:15, 19:16, 20:2, 22:3, 22:8, 22:10, 24:12, 24:18, 26:18, 29:24, 30:6, 30:8, 35:9, 35:19, 35:20, 37:20, 37:23, 46:18, 48:14, 54:11, 63:23, 71:17, 79:4, 79:5, 99:14, 102:2, 102:6, 102:10, 102:11, 105:11, 107:5, 110:7, 110:11, 110:14, 110:20, 111:15, 111:23, 114:9, 114:11, 114:13, 115:1, 115:5, 115:13, 119:5, 119:11, 120:7, 120:16, 120:20, 121:1, 122:10, 122:14, 124:6, 125:24, 127:6, 128:6, 128:12 128:15, 128:17, 129:2, 129:8, 129:9, 129:19, 130:2, 130:8, 130:10, 130:15, 130:22, 131:3, 131:4, 131:24, 132:4, 132:11, 136:13, 136:16, 137:4, 137:11, 138:1, 138:5, 138:7, 138:8, 138:9, 139:6, 139:7, 139:14, 139:23, 139:24, 140:8, 140:9, 141:6, 141:9, 141:14, 141:16, 141:17, 143:12, 144:21, 145:5, 145:13, 145:16, 148:5, 148:6, 148:7, 148:9, 148:18, 148:24, 149:7, 150:11, 150:17, 150:21, 151:2, 152:6, 154:10, 154:14, 155:4, 160:11, 160:13, 160:20, 161:3, 161:4, 161:14, 161:22, 162:1, 162:2, 162:5, 162:6, 162:11, 162:17 162:18, 162:22, 162:24, 163:6, 163:22, 164:5, 164:9 terms - 8:14, 10:19, 11:23, 13:11, 16:12, 16:16, 18:1, 21:12, 26:14, 33:8, 45:7, 50:7, 51:23, 54:3, 79:5, 103:2 territory - 89:15 testified - 134:5 testimony - 57:14, 67:6, 68:24, 72:17, 82:11, 128:23 Texas - 85:23, 154:5 theme - 19:13 themselves - 72:7, 73:2, 75:11, 75:13, 79:1, 80<u>:11, 85:12</u>

86:11, 87:17, 88:12, 88:16, 93:19, 94:1, 130:6, 131:16 theoretical - 121:5. 161:1 theory - 26:19 there'd - 164:7 thereby - 121:2 Therefore - 162:20 therefore - 49:16, 66:15, 97:7 therein - 39:16 thereof - 8:21 They've- 130:8 **they've** - 16:17, 37:24, 72:3, 93:18, 115:2 thinking - 115:14, 115:24 third - 10:13, 19:11, 64:7, 67:11, 72:3, 72:6, 74:24, 75:1, 75:5, 75:12, 83:16, 86:12, 89:4, 94:14, 94:16, 95:20, 105:14 Third- 151:4 Thomas- 2:8, 5:18, 117:1 thoughts - 17:1 thousands - 70:9 threat - 69:9, 70:8 threaten - 70:15 threatened - 70:14 three - 8:8, 20:5, 23:23, 25:17, 25:20, 26:10, 26:21, 29:19, 30:22, 45:20, 47:22, 49:1, 50:1, 71:2, 100:4, 111:21, 112:2, 112:5, 116:1, 121:8, 128:7, 128:8, 134:6, 143:15, 146:17, 157:15 three-year - 112:5 throughout - 12:5. 77:15, 78:11, 80:8, 117:17, 133:10, 150:16 thrust - 122:2 tie - 145:3 tiaht - 72:12 time-consuming -46:10 timeframe - 14:13. 15:3 timely - 90:4, 90:7, 101:23 timing - 20:13, 23:20, 30:13 tired - 156:2 today - 6:23, 13:4, 20:5, 20:7, 24:9, 38:8, 39:20, 49:4, 53:19, 53:21, 60:13, 61:10, 66:2, 66:3, 69:2, 74:9, 74:20, 88:8, 88:14, 90:3, 92:17, 92:21, 95:22, 103:21, 104:9, 118:23 120:21, 122:5, 123:24, 125:6, 125:21, 126:10, 127:3, 129:18, 134:5, 135:6,

138:3, 141:3, 143:3, 143:16, 156:10, 157:7, 159:11, 168:18 together - 11:22, 86:6, 150:7 tolerate - 99:21 Tom- 116:24, 117:2 tons - 79:21 took - 58:9, 144:1, 159:19 tool - 30:8, 89:1 top - 49:22, 70:3, 83:21 **topic** - 50:18, 72:16, 74:20, 162:10, 165:8 topics - 47:1 total - 97:14, 132:7 totally - 52:3, 108:12 touch - 80:10, 81:3 tourism - 70:16 toward - 73:14, 99:19 towards - 79:24, 161:20 town - 50:13 track - 49:6, 49:9 tracking - 59:20, 59:23, 60:11, 60:12, 64:14, 75:1 tracks - 61:8 trade - 20:1, 35:18, 99:14, 160:24 trade-off - 20:1. 35:18 trade-offs - 160:24 traded - 86:22, 88:18 trades - 82:23, 89:19 trading - 39:20, 60:12, 89:22, 90:11, 94:15 traditional - 27:4, 38:12, 118:5 transacting - 40:4 transaction - 22:2, 85:15 transactions -15:23, 15:24, 36:9, 88:1 transcript - 169:24 transmission -119:24 transparency -17:15, 21:5, 22:1, 24:23, 25:11, 42:5, 83:4 transparent - 20:21, 21:1, 22:17, 25:16, 35:15, 36:5, 90:6, 129:15 transport - 52:14 treated - 76:7 treatment - 10:19, 12:5 trouble - 150:22 troubles - 150:19 troubling - 10:17 true - 20:19, 22:15 23:15, 25:13, 26:1, 41:14, 62:15, 68:16, 97:3, 115:20, 125:23,

130:10, 153:14, 160:2, 161:16,

truly - 10:13, 20:18,

20:19, 26:16,

169:24

108:17

Trust- 128:3

trust - 83:4, 85:11 87:23, 88:9, 88:10, 90:5, 92:1, 93:17, 104:5 trustable - 84:8. 87:3 **trusted** - 75:3, 85:14, 87:4, 89:24, 90.9 trustees - 15:10, 16:19, 17:22, 18:11, 21:14, 32:15 try - 41:7, 58:22, 100:8, 109:1, 156:1 **trying** - 64:13, 96:11, 96:14, 100:10, 107:15, 149:24, 153:18 turbine - 80:19 turbines - 54:15 turn - 18:24, 32:9, 80:19, 106:9, 131:23, 167:12 turn-around -167:12 turned - 86:5 Turning- 136:12 tweak - 106:11 **Two**- 45:20, 157:15 two - 7:2, 11:22, 12:2, 14:10, 15:12, 16:6, 23:22, 25:17, 25:20, 26:10, 26:21, 30:22, 32:2, 36:24, 37:22, 39:12, 40:6, 46:16, 46:19, 46:24, 47:1, 47:15, 50:1, 58:7, 61:22, 62:6, 62:22, 64:8, 74:14, 81:7, 81:9, 81:14, 84:12, 87:7, 90:17, 95:20, 96:12, 96:17, 102:20, 103:19, 103:23, 105:18, 111:21, 116:1, 117:14, 119:8, 121:14, 123:19, 124:2, 128:6, 128:8, 134:5, 138:22, 140:5, 146:17, 147:21, 155:10, 155:18, 156:4 two-fold - 39:12, 119:8 type - 44:19, 63:3. 64:20, 137:18, 150:13 types - 166:21 Typically- 48:16, 50:3, 154:2 typically - 9:21 9:23, 55:4, 151:20, 153:23 typifies - 51:2 typographical -100:1

U

Ucs - 126:18 ugly - 119:12 Ultimately - 39:23 ultimately - 27:1, 78:3, 80:14, 109:18 unable - 57:17 unacceptable -139:15 unanimously -

| 78:15 |
|---|
| unbiased - 10:13 |
| unbundle - 119:23 uncertain - 161:6 |
| unchartered - 51:1 |
| unclear - 37:6 |
| unconscionable - 38:5 |
| under - 6:18, 13:10. |
| 14:11, 16:21, 18:6, 33:14, 36:22, 58:1, |
| 33:14, 36:22, 58:1, 58:6, 59:3, 130:8, |
| 131:24. 138:9. |
| 131:24, 138:9, 139:16, 139:21, |
| 152:9, 165:12, |
| 165:14, 168:15 Under - 14:18, 90:5 |
| underlying - 87:21 |
| undermined - |
| 166:11 undermines - 88:10 |
| undermining - 89:1 |
| underneath - 42:2 |
| undoubtedly - 163:21 |
| undue - 24:16 |
| uneconomic - 120:9 |
| unfair - 107:2, 108:14, 109:1 |
| Unfortunately - |
| 160:1 |
| unfortunately - 132:13 |
| Unger - 2:6, 82:2, |
| 82:3, 82:4, 93:6, |
| 93:10, 94:21, 94:24 Union - 7:3, 126:13 |
| union - 153:21 |
| unique - 116:5, |
| 156:5, 156:20 |
| uniquely - 156:5 unit - 121:20 |
| United - 64:13, 68:16 |
| universities - 143:6 |
| Unless - 94:21 unless - 25:7, 31:10, |
| 36:16, 154:12, |
| 161:10 |
| unlikely - 136:19, 154:17 |
| unnecessarily - |
| 86:11 |
| unnecessary - 122:14 |
| unprecedented - |
| 18:13, 24:5 |
| unregulated - 41:18 untransparent - |
| 42:5 |
| untrustable - 88:17, |
| 88:24 unusual - 10:19 |
| unverified - 165:13 |
| Un - 104·16 |
| up - 7:7, 7:9, 7:10, |
| up - 7:7, 7:9, 7:10, 10:18, 11:5, 11:8, 13:2, 14:4, 15:23, |
| 21:13, 24:2, 24:4, |
| 26:23, 27:16, 33:2, |
| 33:24, 37:18, 37:23, 41:14, 42:1, |
| 44:23, 45:12, |
| 45:14, 49:22, 51:4, |
| 56:9, 56:11, 56:23, 57:3, 57:21, 57:22, |
| L 58:6, 58:22, 61:20. |
| 62:16, 62:20, |
| 64:13, 71:4, 83:23, 88:18, 92:17, |
| 97:15, 99:24. |

100:8, 100:9, 104:12, 107:12, 107:13, 108:19, 108:20, 111:8, 111:24, 120:21, 121:12, 121:17, 121:22, 123:9, 123:11, 129:24, 134:18, 136:6, 138:2, 142:16, 161:23, 162:7, 164:14, 167:7 upcoming - 140:17 user - 4:9 users - 143:4 Utilities - 1:2, 3:12, 3:15, 5:4, 5:22, 17:5, 68:8, 68:10, 69:3, 70:23, 73:21, 170:1 utilities - 18:18, 83:13, 87:11, 116:7, 119:10 119:11, 119:16, 120:6, 120:15, 120:0, 120:13, 122:13, 128:3, 129:10, 138:13 utility - 4:12, 18:5, 31:3, 31:4, 32:17, 78:23, 116:6, 118:7, 119:4, 129:20, 130:5, 132:8, 132:15, 144:9, 148:10, 148:21, 150:16, 152:4, 152:5, 154:12 Utility - 82:22 utilizing - 169:7

valid - 30:8, 30:9, 52:5, 54:6, 64:9 validity - 12:7, 21:6, 22:18 valuable - 15:1 Value - 82:9 value - 38:20, 62:5, 109:19, 162:4, 163:3 valued - 161:20 variable - 36:3 variety - 14:19 various - 14:20, 19:21, 21:18, 163:2, 166:21 vast - 66:5, 130:13 veracity - 165:19 verification - 61:7 61:16, 74:24, 75:2, 83:19, 83:21, 88:21, 89:12, 92:2, 94:18 verified - 62:23. 64:20, 72:2, 168:2 verifier - 73:1, 75:12, 82:19, 84:6, 89:18, 98:19 verifiers - 82:23, 87:9, 87:13, 89:13, 93:5, 105:6 verify - 25:6, 75:10, 165:15 verifying - 61:23, 63:2, 64:9, 66:1, 66:3, 66:7, 66:10, 83:17, 89:4, 168:14 Vermont - 68:20

version - 99:24

versus - 35:19, 83:9 via - 21:1, 33:3, 168:13, 169:10 viability - 85:12 vicinity - 48:23 view - 61:17, 62:3, 63:11, 134:3, 134:10, 143:2 views - 4:24, 60:22, 134:8 vision - 69:7, 69:9 visuals - 82:11 voice - 13:5, 45:7 voices - 134:4 volatile - 137:12 volatility - 35:19, 36:19, 46:11, 137:11, 137:14, 139:14, 151:9 volume - 138:24 voluntary - 92:13 vote - 9:10, 156:12

W wait - 13:4, 19:16,

134:21 waiting - 153:12

Wal - 85:23

Wal-mart - 85:23

wants - 38:2, 105:2 warming - 69:10, 71:17, 79:13, 79:22 warranted - 13:7 warrantee - 94:17 Warwick - 1:14, 3:16, 4:18, 5:5 Washington - 74:6, 126:17 Water - 67:20, 67:21, 68:23, 69:15, 71:4, 71:6, 71:18, 71:23, 72:9, 73:5, 73:13, 73:19 water - 55:5, 69:11, 69:24, 151:16 waters - 51:1 waterways - 70:1 ways - 41:11, 41:17, 102:11, 114:7, 123:19, 124:3 128:24, 141:22, 154:14, 156:4 wealth - 52:9 Wednesday - 3:13 weeks - 40:7, 84:12 weigh - 32:22 weight - 45:7 weighted - 43:12, 43:14 welcome - 56:21, 100:22, 165:3 well-defined - 64:23 West - 153:23 Westborough - 74:7 western - 64:12 Westminster - 67:14 whatnot - 55:5 whereas - 18:7 whereby - 160:18, 161:23 wherein - 15:6, 17:7 white - 55:5 Whitney - 82:24 whole - 59:23, 68:13, 84:3, 90:9 91:1, 93:17, 108:3, 140:13, 141:14, 152:24, 154:1, 154.15

47:15, 118:2, 120:5 wild - 69:12, 69:23 Wilhite - 2:5, 67:10. 67:12, 67:13, 67:14, 67:19, 72:19, 72:23, 73:5, 74:1, 78:18 William - 2:7, 5:20, 95:12, 95:13 willing - 23:17, 23:19, 154:12, 166:1 Wilson - 1:19, 6:11, 6:14, 6:16, 27:21, 45:15, 45:18, 45:21, 45:24, 46:13, 46:22, 47:3, 47:23, 48:7, 48:11, 49:5, 50:17, 56:22, 59:13, 72:14, 72:20, 73:4, 110:22, 111:4 111:18, 112:7 112:15, 112:17, 112:21, 113:4, 113:9, 113:11, 113:20, 113:23, 116:4, 116:10, 116:15, 116:18, 123:6, 124:4, 124:9, 124:18, 124:22, 125:4, 125:7, 125:10, 125:12, 125:18, 126:2, 147:24, 148:4, 149:12, 159:19, 166:5, 166:14, 166:22, 167:15 Wilson-frias - 1:19, 6:11, 6:16, 27:21, 45:15, 45:18, 45:21, 45:24 46:13, 46:22, 47:3, 47:23, 48:7, 48:11, 49:5, 50:17, 56:22, 59:13, 72:14, 72:20, 73:4, 110:22, 111:4, 111:18, 112:7, 112:15, 112:17, 112:21, 113:4, 113:9, 113:11, 113:20, 113:23, 116:4, 116:10,

Whole - 85:24

wholesale - 20:20,

116:15, 116:18, 123:6, 124:4, 124:9, 124:18, 124:22, 125:4, 125:7, 125:10, 125:12, 125:18, 126:2, 147:24, 148:4, 149:12, 166:5, 166:14, 166:22, 167:15 wind - 34:22, 52:12, 54:10, 54:12, 54:13, 54:14, 85:21, 94:11 151:16, 152:16, 152:20, 154:2, 154:22 window - 104:7 winds - 38:21 windy - 55:4

winter - 140:17.

winters - 140:22

140:21

wise - 42:23, 80:20, 149:8, 153:12, 160:21, 162:10, 162:11 wish - 7:9 wishing - 4:23 withdraw - 12:22 witness - 129:17 witness' - 57:14 word - 19:3, 46:15 wording - 106:12, 154:11, 155:4 words - 61:4. 120:19, 148:18, 159:9, 164:21, 168:11 works - 105:22 world - 54:17, 54:20, 55:18, 81:7, 103:10, 153:24 worlds - 114:8 Worldwide - 152:12 worry - 22:22 worst - 114:8 worth - 160:9 write - 75:19, 106:10 writes - 57:3 writing - 5:2 written - 5:6, 5:9, 6:24, 7:2, 98:11, 98:15, 100:16, 123:3, 127:2, 128:23, 153:10, 163:9, 163:14 www.ripuc.org/ eventsactions/ docket/3659page. html - 4:22

year - 30:20, 36:12, 48:19, 54:5, 60:19, 61:1. 68:23. 91:19. 92:16, 111:21, 112:5, 116:1, 121:11, 121:14, 121:16, 121:19, 121:23, 124:14, 128:11, 148:22, 151:8, 161:9, 161:14, 169:4 year-and-a-half -68:23, 169:4 **years** - 13:24, 19:20, 20:5, 20:6, 23:23, 26:22, 30:22, 30:23, 34:3, 48:17, 102:13, 110:18, 111:21, 112:2, 115:15, 116:1, 119:15, 121:21, 124:1, 133:1, 139:20, 155:10 **York** - 25:13, 59:11, 59:12, 74:16, 86:23 yourself - 9:24, 92:8 yourselves - 76:3, 106:1

Ζ

zero - 161:18, 161:21, 163:7