

STATE OF VERMONT  
PUBLIC SERVICE BOARD

DOCKET NUMBER 7970

PETITION OF VERMONT GAS SYSTEMS, INC. FOR  
A CERTIFICATE OF PUBLIC GOOD, PURSUANT TO  
30 V.S.A. SECTION 248, AUTHORIZING THE  
CONSTRUCTION OF THE "ADDISON NATURAL GAS  
PROJECT" CONSISTING OF APPROXIMATELY 43  
MILES OF NEW NATURAL GAS TRANSMISSION  
PIPELINE IN CHITTENDEN AND ADDISON  
COUNTIES, APPROXIMATELY 5 MILES OF NEW  
DISTRIBUTION MAINLINES IN ADDISON COUNTY,  
TOGETHER WITH THREE NEW GATE STATIONS IN  
WILLISTON, NEW HAVEN AND MIDDLEBURY,  
VERMONT, IN RE: SECOND REMAND --

June 22, 2015  
9:30 a.m.

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112 State Street  
Montpelier, Vermont

Technical Hearing held before the Vermont  
Public Service Board, at the Third Floor Hearing Room,  
People's United Bank Building, 112 State Street,  
Montpelier, Vermont, on June 22, 2015, beginning at 9:30  
a.m.

P R E S E N T

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1 CHAIRMAN VOLZ: Good morning. We are  
2 here this morning in Docket Number 7970, which is the  
3 petition of Vermont Gas Systems, Incorporated for a  
4 Certificate of Public Good pursuant to 30 V.S.A.  
5 Section 248 authorizing the construction of the  
6 Addison Natural Gas Project, consisting of  
7 approximately 43 miles of new natural gas  
8 transmission pipeline in Chittenden and Addison  
9 counties, approximately five miles of new  
10 distribution mainlines in Addison County, together  
11 with three new gate stations in Williston, New Haven,  
12 and Middlebury Vermont.

13 I'd like to start by taking notices of  
14 appearance.

15 MS. PORTER: Louise Porter and Timothy  
16 Duggan for the Department of Public Service. And  
17 with us today is Dr. Asa Hopkins the department's  
18 Director of Energy Planning and Energy Resources.

19 MR. SAUDEK: Richard Saudek for the  
20 Vermont Fuel Dealers Association. And with me is  
21 Matt Cota. The Executive Director.

22 MS. LEVINE: Sandra Levine,  
23 Conservation Law Foundation.

24 MR. GRAYCK: David Grayck for Mr. and  
25 Mrs. Palmer, who are with me today.

1 MR. DUMONT: James Dumont for AARP and  
2 Kristin Lyons. With me is Philene Taormina from AARP  
3 and my law clerk, Mr. Kinney.

4 MR. LOUGEE: Adam Lougee from the  
5 Addison County Regional Planning Commission.

6 MS. HILL: Cindy Hill, Town of New  
7 Haven.

8 MS. HAYDEN: Kimberly Hayden, John  
9 Marshall, Downs, Rachlin and Martin on behalf of  
10 Petitioner. With us are witnesses who are expected  
11 to be testifying today. Mr. Donald Rendall, Ralph  
12 Roam, Joel Bluestein, Richard Heaps, Jim Sinclair,  
13 James St. Hilaire, Eileen Simollardes, and also from  
14 Vermont Gas is Elizebeth Parent and also from our  
15 firm is Josh Leckey. And on behalf of the Petitioner  
16 Mr. Peter Zamore is also present.

17 CHAIRMAN VOLZ: Thank you. Does that  
18 include all the parties? Yes?

19 MR. HAND: Geoff Hand here on behalf of  
20 Argi-Mark/Cabot Creamery.

21 CHAIRMAN VOLZ: Any other parties to  
22 the proceeding? All right. Are there any  
23 preliminary matters? Yes.

24 MS. LEVINE: Excuse me. I notice there  
25 is a number of folks who are interested in watching

1 this proceeding.

2 CHAIRMAN VOLZ: Right.

3 MS. LEVINE: And there are not adequate  
4 chairs in here. Is it possible to move the table to  
5 provide another row of chairs?

6 CHAIRMAN VOLZ: Well unfortunately we  
7 need to be able to move around up front here.

8 MR. TOUSLEY: There is also fire  
9 marshal concerns.

10 CHAIRMAN VOLZ: There is fire marshal  
11 concerns in terms of the number of people that we can  
12 have in this room.

13 MR TOUSLEY: Effectively the number of  
14 seats is the number of people.

15 CHAIRMAN VOLZ: Right. We provided the  
16 same number of seats as the fire department allows  
17 for number of people in the room. We are already  
18 over that. I don't think we can do that. Sorry.

19 Any other preliminary matters?

20 MEMBER OF THE PUBLIC: Yes.

21 CHAIRMAN VOLZ: No, by the parties.

22 MEMBER OF THE PUBLIC: Okay.

23 CHAIRMAN VOLZ: This is not a public  
24 hearing. It's open to the public, but it's for the  
25 purpose of the parties to conduct a technical

1 hearing.

2 MS. HAYDEN: I believe the Board in its

3 --

4 CHAIRMAN VOLZ: People are having  
5 trouble hearing. Okay.

6 MS. HAYDEN: The Board's hearing  
7 memorandum suggested that the parties confer  
8 regarding stipulation of testimony and exhibits. And  
9 to my knowledge there are no objections to the  
10 admission of the testimony and exhibits of Vermont  
11 Gas and therefore we would recommend offering them at  
12 the beginning of the hearing today.

13 CHAIRMAN VOLZ: Okay. Why don't you go  
14 ahead and do that.

15 MS. HAYDEN: We have provided the Board  
16 with a list of the testimony and exhibits. I can  
17 read through that if that's -- I think that might be  
18 the most efficient way to do it.

19 CHAIRMAN VOLZ: Yes. Why don't you  
20 read through the list of witnesses and exhibits.

21 MS. HAYDEN: Our first witness is  
22 Donald Rendall. His testimony is dated March 27,  
23 2015 consisting of nine pages.

24 The next witness is Ralph Roam, he has  
25 Prefiled Testimony dated January 15 consisting of

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eight pages. His second set of testimony is dated March 27, 2015, entitled Supplemental Prefiled Testimony of Ralph Roam consisting of 22 pages. And I would note that on page 16 line two of Mr. Roam's March 27 testimony we have made a correction which we have already informed the Hearing Officer about. On line two the word simulations should be changed to iterations. And the copy that we have provided with the clerk -- or with the court reporter already has that correction. So on page 16 line 2, the word simulations should be iterations. Mr. Roam has also submitted Prefiled Testimony dated May 27, 2015, Rebuttal Testimony of Ralph Roam consisting of 8 pages.

Mr. Roam has three exhibits. Exhibit RR-1 is his resume. Exhibit RR-2 is the corrected January 21, 2015 Phase One Cost Estimate. And Exhibit RR-1 is the April 17, 2015 Quarterly Cost Update filing letter on behalf of Vermont Gas to the Public Service Board.

The next witness is Joel Bluestein who provided testimony on May 27, 2015. Rebuttal testimony of Joel Bluestein consisting of nine pages. There are nine rebuttal exhibits with Mr. Bluestein's testimony which are listed on the first page of his

1 Rebuttal Testimony. I can read through them, or we  
2 can note that they are listed on page one of his  
3 Rebuttal Testimony.

4 CHAIRMAN VOLZ: I think that's  
5 adequate. Thanks.

6 MS. HAYDEN: Thank you. Mr. Heaps  
7 provided testimony dated January 15, 2015, and then  
8 Rebuttal Testimony dated May 27, 2015. His January  
9 testimony consists of seven pages and his Rebuttal  
10 Testimony consists of 11 pages. In total there are  
11 seven exhibits submitted by Mr. Heaps, and they are  
12 listed on the first page, table of contents, of his  
13 Direct Testimony and his Rebuttal Testimony.

14 CHAIRMAN VOLZ: Okay.

15 MS. HAYDEN: Would you like me to read  
16 through them, or just note that they are listed in  
17 the table of contents?

18 CHAIRMAN VOLZ: That's fine. Handle  
19 all the witnesses the same way.

20 MS. HAYDEN: Thank you. Mr. Sinclair  
21 prefiled testimony dated January 15, 2015 consisting  
22 of five pages. There is one exhibit -- I'm sorry,  
23 also on May 27 or March 27, 2015, Mr. Sinclair  
24 submitted Supplemental Testimony consisting of five  
25 pages. Mr. Sinclair has two exhibits. They are

1 listed in his Direct Testimony, and then again in his  
2 March testimony.

3 John St. Hilaire is the next witness.  
4 He submitted testimony dated May 27, 2015 consisting  
5 of six pages. And with his testimony are two  
6 exhibits, and they are listed in the table of  
7 contents.

8 Eileen Simollardes submitted three sets  
9 of testimony January 15, 2015 consisting of 11 pages,  
10 March 27, 2015 consisting of six pages, and May 27,  
11 2015 consisting of 17 pages. Ms. Simollardes has  
12 four exhibits, and they are listed in the table of  
13 contents with her testimony. And that's all that we  
14 have for the Petitioner.

15 CHAIRMAN VOLZ: All right. So you're  
16 moving all of that testimony and all of the exhibits?

17 MS. HAYDEN: I am.

18 CHAIRMAN VOLZ: Any objection?

19 (No response.)

20 CHAIRMAN VOLZ: All right. Then they  
21 are all admitted. Thank you.

22 (Exhibits marked RR-1, RR-2, Reb. RR-1,  
23 Reb. JB-1 through 9, RWH-1 through 3, Reb. RWH-1 through  
24 7, JS-1, JS-13, Reb. JSH-1 and 2, EMS-2, Reb. EMS-1  
25 through 3 were admitted into the record.)

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(The Prefiled Testimony of Donald J.  
Rendall, Ralph Roam, Joel Bluestein, Richard Heaps, James  
Sinclair, John St. Hilaire, Eileen Simollardes was  
admitted into the record.)

1 MS. HAYDEN: Thank you. The first  
2 witness is Mr. Rendall, and he's available for cross  
3 examination.

4 MEMBER OF THE PUBLIC: Excuse me. We  
5 can't hear. We can hear you, but we can't hear. Can  
6 you turn it up?

7 CHAIRMAN VOLZ: We will try to make  
8 sure that people use the microphones and that they  
9 are loud enough.

10 MEMBER OF THE PUBLIC: Thank you.

11 MS. CHENEY: Good morning, Mr. Rendall.

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1 DONALD J. RENDALL

2 Having been duly sworn, testified  
3 as follows:

4 THE WITNESS: Good morning. I do.

5 MR. MARSHALL: The testimony having  
6 been admitted as Ms. Hayden indicated, Mr. Rendall is  
7 available for examination.

8 CHAIRMAN VOLZ: Thank you. Mr. Dumont,  
9 can you be sure and pull your microphone up close?  
10 You're going to go first; right?

11 MR. DUMONT: Yes.

12 CHAIRMAN VOLZ: You really need to have  
13 your mouth right next to the microphone, so for  
14 example, Mr. Marshall, we couldn't hear you. You  
15 didn't come through the system. You have to have it  
16 really close.

17 MR. DUMONT: I have to move the table  
18 because it's stuck between the tables here. There we  
19 go. Thank you.

20 CHAIRMAN VOLZ: Thank you.

21 MR. MARSHALL: I can repeat. Mr.  
22 Rendall is available for examination.

23 CHAIRMAN VOLZ: Is yours on?

24 MR. MARSHALL: It's green.

25 CHAIRMAN VOLZ: I think we have heard

1           you.

2                           MR. DUMONT: Can you hear me? Can you  
3           hear me now?

4                           CHAIRMAN VOLZ: Not when you turn  
5           around. Only when you speak directly in.

6                           CROSS EXAMINATION

7 BY MR. DUMONT:

8           Q.           Good morning, Mr. Rendall.

9           A.           Good morning, Mr. Dumont.

10          Q.           You and I have known each other for about 35  
11       years; isn't that right?

12          A.           That sounds about right.

13          Q.           We have been on the opposite sides of a few  
14       cases over that time period?

15          A.           Yes, we have.

16          Q.           I know you would not be here today if you did  
17       not believe that the position that your company is taking  
18       is the right position; correct?

19          A.           That's right, Mr. Dumont.

20          Q.           If you could turn to page six line 11 of your  
21       prefiled testimony. You write: This analysis should not  
22       be interpreted as a proposal for an immediate 15 percent  
23       rate increase. We will propose a plan for phasing in the  
24       project's costs that avoids disruptive rate impacts as  
25       part of our continuing efforts to manage costs and deliver

1 services at affordable and competitive rates.

2 Did I read that correctly?

3 A. Yes, you did.

4 Q. So I know you believe in your company's  
5 position. My job today is to make sure you and you have  
6 -- you have the facts straight in your head, and that your  
7 assumptions have been made explicit for the Board. So  
8 let's get to the facts first.

9 Are you aware that Dr. Dismukes sifted through  
10 your company's discovery answers and stated in his  
11 prefiled testimony that the company predicts a 19.8  
12 percent rate increase on a 25-year levelized basis.  
13 That's Dr. Dismukes' prefiled testimony at page 31.

14 A. I don't know what Dr. Dismukes did or didn't  
15 do with respect to his analysis. What I can tell you, Mr.  
16 Dumont, is that we have a -- we have a variety of  
17 opportunities in front of us as we move forward. Let's  
18 start with the proposition that -- and it's an important  
19 one -- that this is not a rate proceeding. We will deal  
20 with what the appropriate just and reasonable rates are  
21 for our customers in a future period.

22 There are many opportunities that we will have  
23 to manage our prices for our customers, to maintain them  
24 as affordable and competitive. And I have complete  
25 confidence that we will be able to succeed in doing that.

1 And that they will not -- we will not be asking for 19  
2 percent rate increases.

3 Q. You're forcing me to change my estimate of how  
4 much time I'm going to need to ask you questions. That  
5 was pretty much a yes or no question. Can you answer that  
6 question yes or no?

7 A. I'm not aware of what Mr. Dismukes did or  
8 didn't do to undertake his analysis.

9 Q. Are you aware that your Vice President, who is  
10 seated next to me, responded to Dr. Dismukes' testimony  
11 about a 19.8 percent rate increase in her May 27 prefiled  
12 testimony at page 8?

13 A. I would have to see the testimony.

14 Q. Why don't you look at it. Can you show him a  
15 copy?

16 MR. MARSHALL: What date?

17 MR. DUMONT: May 27, page 8.

18 MS. HAYDEN: May I hand this to the  
19 witness?

20 CHAIRMAN VOLZ: Sure.

21 THE WITNESS: Thank you, Kim. May 27,  
22 page 8. Is there a line?

23 MR. DUMONT: In general she responds to  
24 Dr. Dismukes' prefiled testimony.

25 THE WITNESS: I've reviewed her answer.

1 BY MR. DUMONT:

2 Q. Okay. And you agree that your company had  
3 three weeks and all of the company's resources to respond  
4 to Dr. Dismukes' testimony, and Vice President Simollardes  
5 did not point out any mathematical or factual error in Dr.  
6 Dismukes' testimony; correct?

7 A. What she pointed out is that we have a variety  
8 of tools available to us as we move forward to manage our  
9 prices for our customers, to maintain affordability and  
10 competitiveness. And that is exactly where we sit today  
11 Mr. Dumont.

12 Q. In fact, her reply was Vermont Gas is  
13 confident that there are numerous rate mitigation  
14 strategies that can be deployed that will continue to  
15 allow us to offer rates that are competitive and  
16 affordable. Correct?

17 A. Correct.

18 Q. So as you sit here today, without use of those  
19 mitigation strategies, the impact on ratepayers will be a  
20 19.8 percent rate increase on a 25-year levelized basis;  
21 correct?

22 A. I don't believe that's correct.

23 Q. What's wrong with it?

24 A. Our analysis demonstrates that the overall  
25 rate increase for customers attributable to this project

1 without taking into account any other factors, would be  
2 less than that. And as we have consistently said, and as  
3 we will do, we will provide a rate path for our customers  
4 that is competitive and affordable. And that takes into  
5 account a variety of things that we have in our toolbox  
6 for managing rates which you, Mr. Dumont, are very well  
7 aware of, as an expert in this field. So --

8 Q. Object to that answer.

9 A. As you know, we have a variety of tools. I  
10 would say that nothing is off the table. And that we have  
11 many ways that we can manage our costs to maintain  
12 competitiveness as we have done historically, as this  
13 company has done historically, all in the context of rates  
14 that will ultimately be determined by -- with an approval  
15 by the Public Service Board as being just and reasonable.

16 Q. We will spend some time talking about those  
17 rate mitigation strategies in a minute. I take it from  
18 your answer you're not aware of any analysis conducted by  
19 the company that disputes the prediction of 19.8 percent  
20 rate increase levelized over a 25-year period without  
21 resorting to the strategies which we are about to talk  
22 about; correct?

23 A. I would have to leave to Ms. Simollardes  
24 whatever analyses we may have done to look at what Mr.  
25 Dismukes proffered.

1 Q. As president of the corporation you're not  
2 aware of any as you sit here today?

3 A. I'm not aware of any as I sit here, Mr.  
4 Dumont.

5 CHAIRMAN VOLZ: Mr. Dumont, can you  
6 speak into the microphone a bit more?

7 MR. DUMONT: I'm sorry.

8 CHAIRMAN VOLZ: Thank you.

9 BY MR. DUMONT:

10 Q. Now I do want to talk about the company's  
11 plans for mitigating rate impact. You have Ms.  
12 Simollardes's testimony in front of you; correct?

13 A. I do.

14 Q. This is her January 15, 2015 testimony.

15 A. I have the May testimony in front me.

16 Q. If you can refer to her January 2015 testimony  
17 for Exhibit Number 2.

18 A. I have it in front of me.

19 Q. Okay. I assume you've read Exhibit 2 before?

20 A. Yes, I have.

21 Q. First question is question number one, states:  
22 In testimony in Docket 7712 concerning the expansion fund,  
23 Mr. Gilbert and Ms. Simollardes stated that VGS did not  
24 expect that the new Vergennes and Middlebury markets would  
25 be large enough to pay for the expansion project. Is this

1 still correct?

2 And there is a long answer. If you could  
3 refer to the bottom last paragraph of the 9/12/13 answer.  
4 Does it state: Vermont Gas intends to request that the  
5 System Expansion and Reliability Fund be used to recover  
6 the shortfall. Did I read that correctly?

7 A. Yes.

8 Q. And that was the company's plan, that was the  
9 company's, quote unquote, mitigation strategy as of  
10 September of 2013?

11 A. I believe so.

12 Q. And then there is the updated answer on  
13 9/12/14, it's the same answer?

14 A. The conclusion is unchanged. The statement  
15 that the new Vergennes and Middlebury markets would not be  
16 large enough to pay for the expansion project is still  
17 correct. And the additional upgrades associated with a  
18 potential expansion to IP in Ticonderoga have not altered  
19 Vermont Gas's conclusion.

20 Q. Turn to page two, there is an updated response  
21 from 12/19/14. And it states: The conclusion is  
22 unchanged. Vermont Gas intends to request that the System  
23 Expansion and Reliability Fund be used to recover the  
24 shortfall.

25 A. Yes.

1 Q. How much is in that fund right now?

2 A. I don't have the number at the front of my  
3 cortex, Mr. Dumont. I want to say -- I don't have the  
4 number.

5 Q. It's about 20 million dollars?

6 A. That sounds about right.

7 Q. That's money -- who paid that money?

8 A. That money was collected from our customers.

9 Q. From ratepayers?

10 A. Yes.

11 Q. And it's being held in escrow by the company  
12 right now?

13 A. Essentially. Yes.

14 Q. Question two in Exhibit 2. VGS suggested in  
15 Docket 7712 that after 10 years the incremental revenues  
16 were expected to be substantially less than the carrying  
17 costs of the expansion project.

18 A. I'm sorry. I've lost my place.

19 Q. Top of page three of Exhibit 2. It's question  
20 two.

21 A. Yes. We are looking at the September 12, 2013  
22 response?

23 Q. Yes.

24 A. Which was provided to -- to provide context  
25 for the updated response of September 12, 2014.

1 Q. And the question was -- let me finish reading  
2 the question. VGS suggested in Docket 7712 that after 10  
3 years the incremental revenues were expected to be  
4 substantially less than the carrying costs of the  
5 expansion project that would be paid by ratepayers  
6 considering all costs that would not be paid by IP. Is  
7 this still accurate? Response to 9/12/13. Yes. Reading  
8 in the middle of the paragraph: The shortfall is intended  
9 to be covered by the System Expansion and Reliability  
10 Fund; correct?

11 A. Correct.

12 Q. And then the updated answer on 9/12/14 was the  
13 same; correct?

14 A. Essentially, yes.

15 Q. And the updated answer on 12/19/14 was the  
16 same; correct?

17 A. Essentially, yes.

18 Q. Turning to the last page question four:  
19 Assuming that the additional revenues do not pay for the  
20 expansion project, has VGS estimated the rate effect for  
21 existing customers from the expansion project. For  
22 instance, would the rates for existing customers be higher  
23 with the expansion than without. By how much. And for  
24 how long. Is there a time at which the expected  
25 incremental revenues provided in that contribution.

1                   And the answer from 9/12/13 is: Should  
2 service to IP not materialize, and again assuming the fund  
3 is utilized, it is estimated that an initial rate increase  
4 of 4.5 percent would be required.

5                   Did I read that correctly?

6           A.       I believe you did.

7           Q.       And then the updated response from September  
8 of 2014 is in the middle of paragraph: Should service to  
9 IP not materialize, and again assuming the fund is  
10 utilized, it is estimated that an initial rate increase of  
11 10.2 percent would be required in 2015. Did I read that  
12 correctly?

13          A.       You read it correctly.

14          Q.       Is that still true?

15          A.       It is true in the context of a specific  
16 methodology which is consistent with the methodology that  
17 the Vermont Gas has used to evaluate the rate impacts of  
18 the project, of the project. Not the rates that we charge  
19 our customers. The incremental rate pressure, if you  
20 will, from this component of our cost of service to our  
21 customers.

22                   It is not correct and it is misleading to  
23 suggest that that is a rate increase that we will actually  
24 ask for from our customers all in.

25          Q.       The updated response for budget update of

1 12/19/14 states: Assuming the fund is used toward the  
2 expansion project, it is estimated that an initial rate  
3 increase of 15.1 percent would be required.

4 Did I read that correctly?

5 A. You read it correctly. And the same -- my  
6 same response is true for that proposition as well. That  
7 is, that is a methodological -- consistent methodological  
8 approach to what the impact on our cost of service from  
9 this project alone would be, all else equal, in a manner  
10 that is consistent with the way that we have presented it  
11 to the Public Service Board in all prior iterations of  
12 this.

13 It is not -- it is not intended to be and it  
14 is not, in fact, a suggestion that we will ask for or that  
15 we would receive a 15 percent rate increase when this  
16 project is complete.

17 Q. Let me change the wording of the answer I just  
18 read on the bottom of page four. Instead of assuming that  
19 the fund is used, assuming the fund is not used. It is  
20 estimated that an initial rate increase of how much would  
21 be required? Can you answer that question?

22 A. I can't.

23 Q. You're sitting here on behalf of the company  
24 as the president of the company, and you don't know the  
25 answer to that question?

1           A.       I don't know the answer to that question, Mr.  
2 Dumont, with -- the fund was established to promote system  
3 expansion. This is an important system expansion for  
4 Vermont, for new families and businesses in Addison  
5 County, and we are confident that the fund will be  
6 appropriately used to manage the cost of that expansion as  
7 we move forward.

8           Q.       You've read the Board's order establishing the  
9 fund, I assume?

10          A.       I have.

11          Q.       And one member dissented; correct?

12          A.       I understand that.

13          Q.       Well you read it.

14          A.       Yes.

15          Q.       He dissented and said this is an inappropriate  
16 use of ratepayer money; correct?

17          A.       I would have to look at his dissent to  
18 characterize what he said. But I do recall his dissent,  
19 and he disagreed with the establishment of the fund, yes.

20          Q.       And two members of the Board who voted in  
21 favor of it said we are not committing to the use of this  
22 money in any way, shape, or form. All of this money could  
23 be returned to ratepayers; correct?

24          A.       I believe that the Board did say that they  
25 were making no commitments about how the fund would or

1 would not be used in the future. And that was completely  
2 appropriate as it is appropriate today, which is when we  
3 -- we will make -- we will make the presentation, and we  
4 will ask the Board to make a decision about how to use the  
5 fund when it's time to do that, which is not now, but in  
6 the future.

7 Q. Knowing that the Board made clear there was no  
8 commitment to use the SERF fund for the project, all of  
9 the money may be returned to ratepayers. Has the company  
10 prepared any analysis of the rate impact, or to use your  
11 term, rate pressure if the fund is returned to ratepayers?

12 A. I'm not aware of a separate analysis that  
13 disregards the fund. What we have done is looked at what  
14 we can do through our -- through a creative and thoughtful  
15 way to manage our costs going forward and we have -- and  
16 as I have said in my testimony, and as I say today, we are  
17 confident that we will have the opportunity in working  
18 through the rate making process in the future, we will be  
19 able to accomplish our goal which is affordable and  
20 competitive rates, and no rate shock for our customers  
21 that can be attributed to the completion of this project.

22 Q. When the SERF fund was approved, the cost of  
23 the project as submitted by your company was in the middle  
24 60s, 60 million dollars, 64 million dollars; correct?

25 A. Okay. I wasn't there. I'll accept that.

1 Q. What was the price of oil at that time?

2 A. I don't remember.

3 Q. Was it about double what it is now?

4 A. I just don't remember, Mr. Dumont.

5 Q. Well as an experienced utility lawyer and  
6 executive, tell us based on general knowledge.

7 A. Mr. Dumont, as an experienced utility person,  
8 what I can tell you is that when I want to understand  
9 where oil prices were at a particular point in time, I get  
10 out the sheets and look. Because oil has been so volatile  
11 over so many years, that it's very hard for me to remember  
12 where it was at any particular point in time. That's one  
13 of the reasons why this project is so important for  
14 families and businesses in Addison County.

15 Q. Other than use of the SERF fund, what other  
16 strategies do you have in mind?

17 A. Well there are a variety of strategies that we  
18 could employ. Some of them are alluded to in Dr. Hopkins'  
19 testimony. For example, we have the opportunity to look  
20 at adjusting the capitalization for this project. Vermont  
21 Gas has historically worked at about a 55 percent equity  
22 to debt ratio. We would have an opportunity to adjust  
23 that downward.

24 We have to be mindful of the various limits  
25 that we have on what an appropriate debt to equity

1 capitalization is, but we have flexibility there. We have  
2 flexibility as we move forward, as you're aware, Mr.  
3 Dumont, with the return on equity. The return on equity  
4 in all of these analyses is that the company's current  
5 return on equity, which is approximately 10.2 percent, and  
6 I expect that the return on equity will be readjusted in  
7 the -- at a future period when we complete our current  
8 alternative regulation plan, and we look at where we are  
9 going from here, if you will.

10 So an adjustment in the return on equity  
11 would be a tool. We have, of course, we have the SERF  
12 fund that you and I have already discussed. We have rate  
13 design, we have the opportunity to consider whether we  
14 should be differentiating our rates between customer  
15 classes in a different way to reflect appropriate rate  
16 design as we move forward and in light of this project.  
17 We have phasing. A longstanding way. One of the first  
18 things I learned when I opened up the tome by Professor  
19 Bonbright, to manage costs in a way that is appropriate  
20 for customers. We have a variety of ways to achieve a  
21 good outcome for our customers. And I'm confident that we  
22 will.

23 Q. Don't bring Professor Bonbright into this.  
24 Have you had the opportunity to read Mr. Neme's prefiled  
25 testimony and rebuttal testimony?

1           A.       I'm sure I looked at it. I don't have it in  
2 mind.

3           Q.       His May 27 testimony concludes that using  
4 current oil prices the average cost per MMBTU of gas is  
5 about nine percent more than the cost of a cold-climate  
6 heat pump. So per BTU is more expensive than heating with  
7 a cold-climate heat pump. Do you recall him saying that?

8           A.       I don't recall it as I'm sitting here.

9           Q.       It's page four of his May 27 prefiled. When  
10 you in your testimony say that you will use these various  
11 strategies such as the SERF fund to keep your costs  
12 competitive, I understand from what you're saying that you  
13 will use the 20 million dollars that ratepayers have  
14 already paid in a way that will make gas more attractive  
15 than heat pumps. Am I missing something?

16          A.       In a way that will make gas affordable and  
17 competitive, we will work in the world where there are a  
18 variety of choices that our customers can take, can make,  
19 Mr. Dumont.

20                   And one of the wonderful things about this  
21 project is that it introduces another choice for our  
22 customers. And whether our customers choose a heat pump  
23 together with natural gas, whether they choose a heat pump  
24 and continue to heat with oil or propane will ultimately  
25 be up to the customers based on their own energy needs,

1 their own energy expectations, their own energy desires.

2 Q. Am I correct that the company plans to use the  
3 SERF fund to make the cost of gas competitive with other  
4 sources of heat in Addison County?

5 A. We will use the tools at our disposal to  
6 continue to make our prices affordable and competitive and  
7 to avoid any sticker shock, if you will, that arises from  
8 the -- from this or any other cost change that we have.  
9 That is our commitment. We will continue to look for  
10 every opportunity to maintain stable prices for our  
11 customers.

12 Q. You used the term sticker shock. In reality  
13 that sticker shock reflects the actual costs of the  
14 project; correct?

15 A. I don't expect our customers to see sticker  
16 shock, Mr. Dumont, that's what I'm saying.

17 Q. Because you intend to use the SERF fund to  
18 avoid the sticker shock?

19 A. The SERF fund and other tools in our rate  
20 making tool kit which we and the -- and the regulators,  
21 the Department and the Board, will be reviewing as we  
22 consider what are appropriate rates for customers at any  
23 given point in time.

24 Q. In your judgment as a long-time utility lawyer  
25 and executive, is it good public policy to use ratepayer

1 money to keep gas rates, quote, competitive, unquote so  
2 that potential customers choose to install gas furnaces  
3 rather than to install cold-climate heat pumps powered by  
4 the electric grid?

5 A. I reject the premise of your question, Mr.  
6 Dumont. I don't think that we are in a place where  
7 customers will be making that choice simply based on cost.  
8 There are a whole variety of, as in my experience, there  
9 are a whole variety of decision points for customers as to  
10 whether they choose to use heat pumps to supplement their  
11 heating and their cooling. Whether they choose to use oil  
12 as their backup, whether they choose to use propane as  
13 their backup, whether they choose to use natural gas as  
14 their backup, or whether they choose to use the heat pump  
15 as their backup, and it is not an either or proposition.

16 Q. I assume you've read H40 that was signed into  
17 law by the Governor last week?

18 A. I have.

19 Q. Is there an express public policy just  
20 affirmed by the Governor in signing the law that has  
21 anything to do with heat pumps?

22 A. I am -- my interpretation of H40 is that the  
23 legislature and the Governor have -- are advancing a plan  
24 that will help us all achieve a clean energy future.

25 Q. Can you read back the question?

1 (The record was read as requested)

2 THE WITNESS: Yes, of course. As I  
3 said, a clean energy future which means an energy  
4 future in which customers have a variety of choices  
5 available to them to achieve their heating and  
6 cooling needs in the most cost effective and the most  
7 environmentally sensitive way. And the -- and in  
8 particular, to advance the cause of reducing  
9 greenhouse gases.

10 And heat pumps is certainly one way to  
11 accomplish that, and putting a policy in place that  
12 will help families in Vermont have access to heat  
13 pumps is a good policy to achieve that goal.

14 BY MR. DUMONT:

15 Q. In your opinion is the electric grid more  
16 likely or less likely than the gas pipeline to include  
17 substantial contributions from renewable sources over the  
18 next 20 years?

19 A. I think the -- that we will have a combination  
20 of ingredients to renewability. And they will include  
21 renewability on the electric grid, they will include a  
22 measure of renewability in the natural gas system. As you  
23 know, we are working very hard right now to achieve a  
24 renewable natural gas solution for the Middlebury area  
25 that will help serve Middlebury College.

1           And we are -- our team is looking at various  
2 options for bringing more renewable natural gas into our  
3 system. So I believe that we will have renewability --  
4 advances in renewability in the natural gas. I believe  
5 that natural gas will be an important -- an important  
6 piece of the electric grid achieving more renewability by  
7 providing the kind of local distributed and central  
8 generation that will enhance the ability to use renewable  
9 sources such as sun, such as solar and wind.

10           Q.       In fact, isn't the electric grid much more  
11 likely to include substantial contributions for renewables  
12 over the next 20 years than your company's proposed  
13 pipeline?

14           A.       If you think about it, Mr. Dumont of course,  
15 if you think about it in the context of what the fuels are  
16 for electricity. We have the -- our fuel is natural gas,  
17 and part of that fuel I'm confident will be renewable  
18 natural gas. How much renewable natural gas becomes part  
19 of that system, I can't tell you as we sit here. And in  
20 the electric grid you have a variety of renewable sources  
21 that are already there and that are on track to add more.  
22 So yes.

23           Q.       Let me ask you just another question too about  
24 rates. This is not a rate case. To use your term, the  
25 construction of this pipeline would put rate pressure --

1 would create rate pressure, I guess that's your testimony;  
2 correct?

3 A. Rate pressure that we will have the  
4 opportunity to alleviate.

5 Q. How many years have you been practicing  
6 utility law?

7 A. Oh gosh.

8 MR. MARSHALL: You had to ask.

9 MR. DUMONT: Then I ask Mr. Marshall

10 next.

11 THE WITNESS: Almost 20.

12 BY MR. DUMONT:

13 Q. You agree that if this were a FERC  
14 jurisdictional pipeline one hundred percent of the costs  
15 of the pipeline expansion would have to be paid for by the  
16 new customers; correct?

17 A. I don't accept that proposition.

18 Q. That has been FERC's policy for decades, has  
19 it not?

20 A. Well FERC has as variety of policies that they  
21 use to achieve the infrastructural goals that they have.  
22 And those policies evolve over time with the -- with the  
23 imperatives of extending infrastructure. And as you know,  
24 Mr. Dumont, that is especially evident in the electric  
25 business where FERC has made many adjustments to many of

1 its policies to encourage the kind of infrastructure that  
2 we are talking about here, albeit in the electric context.

3 Q. The electric context. And you're aware -- I  
4 know you're aware that Vermont has not followed that  
5 paradigm, and your own company has been allowed to expand  
6 into Jericho and Hinesburg using -- and not allocating all  
7 the costs of that to the new ratepayers; correct?

8 A. We have used the approach of the investment  
9 that we make to expand our system, becomes part of our  
10 overall cost, and it is essentially socialized over all of  
11 our customers. Yes. And the -- that's a great example  
12 because in a context of expanding to all of those  
13 communities, we have done so in a context in which rates  
14 have actually decreased almost 15 percent over the last  
15 few years.

16 Q. And those communities such as Hinesburg or  
17 Jericho, the new ratepayers have generated sufficient  
18 revenue that they start -- the breakeven point has been no  
19 longer than 10 years into the future. They start making a  
20 net contribution to the system within 10 years; correct?

21 A. In -- overall in most cases, but that's a  
22 basket. So some customers, yes. Some customers, no. But  
23 overall on average, yeah, about 10 years.

24 Q. And in this case according to Ms. Simollardes'  
25 prefiled testimony, that breakeven point will occur at

1 year 34 or 35; correct?

2 A. That's right.

3 Q. So at one end of the spectrum we have the  
4 Federal Energy Regulatory Commission and their policy, and  
5 at the far distant end of the spectrum is what you're  
6 proposing in this case; correct?

7 A. Well what we are saying is that for this  
8 transmission project which has a useful life of many more  
9 than 35 years, that the crossover point would be about 34  
10 or 35 years. And our historical time frame for  
11 distribution projects has been, as you described it,  
12 important to put that in the context of states and  
13 jurisdictions all over the country that are working  
14 incredibly hard to advance the construction and  
15 penetration of natural gas infrastructure for the very  
16 reasons that we are. Because it will help our customers  
17 -- it will give our customers an additional choice, it  
18 will help families and businesses save money, and it will  
19 reduce greenhouse gases.

20 And so you have many jurisdictions that are  
21 moving toward a much longer -- looking at much longer  
22 periods over which to look at the economics for the reason  
23 that we are all -- that they are trying to find ways to  
24 increase the penetration of natural gas infrastructure for  
25 all of those good reasons.

1 Q. And FERC shares all those good reasons; does  
2 it not?

3 A. Well I don't know what FERC is doing as we are  
4 sitting here, Mr. Dumont. We are not a FERC  
5 jurisdictional company, and we don't play in that field on  
6 any consistent basis. What I can tell you is that as an  
7 example, in Connecticut -- the Connecticut energy policy  
8 has been to extend that distribution period out to 25  
9 years for the purpose of creating an environment where  
10 more natural gas infrastructure, distribution  
11 infrastructure can be constructed to bring the choice of  
12 natural gas to more families and businesses in  
13 Connecticut. That's just one example.

14 Q. Thank you. That's all I have.

15 CHAIRMAN VOLZ: Thank you. I think the  
16 next person who wanted to cross-examine was Mr.  
17 Grayck.

18 MR. GRAYCK: Thank you.

19 CROSS EXAMINATION

20 BY MR. GRAYCK:

21 Q. Good morning, Mr. Rendall.

22 A. Good morning.

23 Q. Mr. Rendall, do you know where Mr. and Mrs.  
24 Palmer live?

25 A. If I look at a map, I've seen their parcel on

1 a map. I have never visited their home.

2 Q. Okay. I know that company personnel have  
3 certainly visited, but you personally have not; am I  
4 right?

5 A. That's correct.

6 Q. Okay. And it's my understanding that the  
7 pipeline will traverse approximately 120 to 150 feet from  
8 their back deck; is that correct?

9 MR. MARSHALL: Objection. I don't  
10 think the scope of this proceeding relates to routing  
11 of the pipeline.

12 MR. GRAYCK: The question isn't  
13 relating to routing. It's related to the foundation  
14 of knowledge that the witness has, and in addition,  
15 under Vermont Rule of Evidence 611(b) the scope of my  
16 cross examination is acceptable to relate to anything  
17 that's material to what's before the Board. And so  
18 my questions will relate to what is material under  
19 Rule 60(b) (3 of the Vermont Rules of Civil Procedure.

20 MR. MARSHALL: I'll withdraw my  
21 question, but I'm waiting. I don't think the counsel  
22 has laid a foundation yet, but I'll wait.

23 CHAIRMAN VOLZ: Okay. Thank you.

24 MR. GRAYCK: That's what I was  
25 attempting to do. Thank you.

1 THE WITNESS: Mr. Grayck, I just don't  
2 know what the details are on the Palmer property. We  
3 have folks here who do.

4 BY MR. GRAYCK:

5 Q. But you can well understand that they are  
6 legitimately concerned about this project, yes?

7 A. I understand that they are concerned.

8 Q. And you can understand that not only as a  
9 highly experienced utility lawyer and as the president of  
10 the company, but also as a homeowner, yes?

11 A. I appreciate the depth of their concern.

12 Q. Thank you. And you understand that throughout  
13 the course of these proceedings they have relied upon what  
14 VGS has represented as the truth; correct?

15 A. I can't speak to what they have relied upon or  
16 they haven't relied upon, Mr. Grayck. I'm not trying to  
17 be cute with you, but I just don't know.

18 Q. I understand. Do you think it's reasonable to  
19 believe that their position has been to rely on the  
20 truthfulness of VGS's representations?

21 A. My experience with the Palmers, which is  
22 limited, is that they have -- I would be delighted and  
23 surprised if the Palmers were relying on what we are  
24 telling them in any respect.

25 Q. Okay. So would the Palmers have been mistaken

1 in December of 2012 to believe that the project cost was  
2 estimated at 84 million dollars?

3 A. Sure. If the time period is right and that is  
4 the number that we were presenting -- the company was  
5 presenting at the time, then I assume that that is what  
6 they had -- they had to review for their own purposes,  
7 whatever they may have been.

8 Q. And that it was reasonable -- excuse me, and  
9 that it was reasonable for them to believe at that time  
10 that VGS was representing truthfully the cost of the  
11 project, yes?

12 A. Was representing truthfully an estimate of the  
13 cost of the project.

14 Q. Fair enough. An estimate of the project, yes?

15 A. Yes.

16 Q. Okay. And when the cost estimate went up to  
17 86.6 million, were they reasonable to believe that VGS was  
18 speaking truthfully on that issue?

19 A. Yes. The people at Vermont Gas that were  
20 making those representations did so truthfully.

21 Q. And the same could be said for when the  
22 project cost went to 121 million, yes?

23 A. Yes.

24 Q. And when it went to 153.6 million, yes?

25 A. Yes.

1 Q. Okay. You well understand that as  
2 participants in this proceeding Mr. and Mrs. Palmer had to  
3 make choices regarding the scope of their request for  
4 intervention, yes?

5 A. I just am not familiar with what their  
6 intervention history has been, Mr. Grayck.

7 Q. Understood. But you as an experienced lawyer,  
8 as a lawyer who has appeared in front of this Board as the  
9 president of VGS, can well understand that Mr. and Mrs.  
10 Palmer had to rely upon the information provided by VGS  
11 and analyze that information and therefore, then make  
12 choices regarding the scope of their intervention, yes?

13 A. I would be very surprised if the cost of the  
14 project was an important part of the -- of Mr. and Mrs.  
15 Palmers' decision making about how to proceed in this case  
16 and how to -- and what the scope of intervention would be.  
17 Whatever it was, that would surprise me if the estimate of  
18 the cost of the project was a significant component of  
19 their decision making.

20 Q. And it would surprise you because you think  
21 they are not competent to pursue the cost issue?

22 A. No. It would surprise me because of the  
23 issues that Mr. and Mrs. Palmer have raised over the  
24 course of this proceeding and the -- and the nature of  
25 those -- of their concerns.

1 Q. And is it possible that they had to relinquish  
2 consideration of the cost issue because they had to decide  
3 upon issues based upon a limited set of resources, is that  
4 possible?

5 A. In the -- in the context that anything is  
6 possible, sure. But I don't -- I don't accept the  
7 proposition that cost of the project was a driving  
8 ingredient in their -- in Mr. and Mrs. Palmers'  
9 intervention calculus.

10 Q. Okay. If there is ultimately evidence  
11 admitted that they made a comparison of issues relevant to  
12 their property, as well as consideration of the cost of  
13 the project, isn't it possible that the litigation  
14 choices, the strategic choices they made were directly  
15 influenced by the project cost representations made by  
16 VGS?

17 MR. MARSHALL: I'm going to note my  
18 objection. This seems to be trying to establish  
19 choices that the Palmers made in previous litigation  
20 in this Docket. I don't see how that's relevant to  
21 the estimated cost increase that is the subject of  
22 this Docket.

23 CHAIRMAN VOLZ: Mr. Grayck.

24 MR. GRAYCK: Yes. It's the Palmers'  
25 position that they in fact made strategic litigation

1 choices based upon the information provided by VGS.  
2 That they were entirely reasonable in relying upon  
3 that information. And as a result, by not granting  
4 their Rule 63(b) motion, VGS seeks to benefit from  
5 the information that has turned out to be incorrect.  
6 That my clients are entitled to a full and fair  
7 opportunity to litigate the issues, and that an issue  
8 which they could have litigated but did not because  
9 of the VGS cost estimates was the necessity of the  
10 project under the 248 criteria.

11 And that is an issue which is before  
12 you based on the motion and falls well within the  
13 scope of cross examination as allowed by Vermont Rule  
14 of Evidence 611(b).

15 CHAIRMAN VOLZ: We agree with Mr.  
16 Grayck. We think this is an appropriate area of  
17 inquiry. So the objection is overruled.

18 MR. GRAYCK: And I apologize, I've  
19 forgotten the question. Is it possible for it to be  
20 read back?

21 (The record was read as requested)

22 MR. GRAYCK: Let me withdraw the  
23 question and start over.

24 THE WITNESS: Thank you.

25 BY MR. GRAYCK:

1 Q. Mr. Rendall, as an experienced attorney, as  
2 president of VGS, you can well understand that Mr. and  
3 Mrs. Palmer had to make strategic litigation decisions,  
4 yes?

5 A. I'm sure they did.

6 Q. Okay. And it's fair to say that in their  
7 analysis their decision making would have been influenced  
8 by the project cost estimates, yes?

9 A. That I can't answer.

10 Q. Okay. Assuming that it was influenced, isn't  
11 it fair to say that at this point they were reasonable to  
12 believe in the estimates -- project cost estimates which  
13 VGS provided?

14 A. They were reasonable to believe in the  
15 testimony that -- and submissions that the company made at  
16 each stage of the case. Yes.

17 Q. And there was -- you're not suggesting that  
18 they should have known that ultimately the projection of  
19 84 million would eventually become 153.6 million; correct?

20 A. Of course not.

21 Q. Okay.

22 MR. GRAYCK: Thank you.

23 CHAIRMAN VOLZ: Thank you. Ms. Levine,  
24 do you have questions for this witness?

25 MS. LEVINE: Yes, I do.

## CROSS EXAMINATION

1  
2 BY MS. LEVINE:

3 Q. Good morning, Mr. Rendall.

4 A. Good morning, Ms. Levine.

5 Q. Do you have your testimony from March 27 in  
6 front of you?

7 A. I do.

8 CHAIRMAN VOLZ: Is your microphone on?

9 If you want to get it closer, that would be helpful.

10 MS. LEVINE: Sorry.

11 BY MS. LEVINE:

12 Q. You have your testimony from March 20 -- do  
13 you have your testimony -- I know you like to silence me  
14 Jim.

15 Do you have your testimony from March 27 in  
16 front of you?

17 A. I do.

18 Q. And your testimony at page three lines 13  
19 through 21 addresses -- addresses whether the proposed  
20 project continues to be in the best interest of Vermont;  
21 is that correct?

22 A. Yes.

23 Q. And your testimony provides seven bullet  
24 points to address that; is that right?

25 A. Yes.

1 Q. And each of those bullet points is based on  
2 testimony and information provided by other witnesses;  
3 correct?

4 A. Correct.

5 Q. And you did not conduct any separate or  
6 independent substantive analysis of these matters; is that  
7 correct?

8 A. That's correct. I relied on our team.

9 Q. And your testimony on page four lines four  
10 through six, provides an example of cost savings; is that  
11 correct?

12 A. Yes.

13 Q. Your testimony does not suggest that this will  
14 be expected future savings; is that right?

15 A. That is over the last 12 months. That's  
16 right. What the savings will be in future periods will  
17 depend on the relative cost of oil, gas and propane both  
18 in absolute terms and relative to each other. Yes.

19 Q. And you've provided no commitment to providing  
20 these savings to Vermont Gas customers; is that correct?

21 A. The -- we have committed to provide a  
22 competitive choice to Vermonters. We have not made a  
23 specific commitment as to what savings could be in any  
24 period. We do, when we talk to customers, to be fair, we  
25 do give customers estimates of what we think their savings

1 could be based on their individual circumstances, when we  
2 talk to prospective customers.

3 Q. And those estimates are not actual commitments  
4 of what the savings would be?

5 A. Correct.

6 Q. And your testimony in response to question  
7 six, I believe it's page four lines 13 through 15. You  
8 address the greenhouse gas emissions?

9 A. Yes.

10 Q. Carbon emissions analysis.

11 A. Yes.

12 Q. And do you agree that the greenhouse gas  
13 emissions analysis that was performed by Vermont Gas for  
14 this case only compared emissions relative to oil or  
15 propane?

16 A. I'm not sure I can answer that, Ms. Levine, as  
17 I'm sitting here. I would have to confer with our team to  
18 remind myself of what the particular analytics were for  
19 our work.

20 Q. Do you have in front of you Conservation Law  
21 Foundation's cross examination exhibits?

22 MR. MARSHALL: Here you are.

23 THE WITNESS: Yes. Thank you.

24 BY MS. LEVINE:

25 Q. Could you please look at Conservation Law

1 Foundation Cross Exhibit 1?

2 CHAIRMAN VOLZ: Do we have those up  
3 here?

4 MS. HOFMANN: We do.

5 THE WITNESS: I have it.

6 BY MS. LEVINE:

7 Q. And do you --

8 CHAIRMAN VOLZ: Go ahead.

9 BY MS. LEVINE:

10 Q. Based on your review of this, would you modify  
11 your response?

12 A. This tells us that the greenhouse gas savings  
13 compared emissions relative to oil and propane.

14 Q. So you agree that the greenhouse gas emissions  
15 performed by Vermont Gas Systems for this case only  
16 compared emissions relative to oil and propane?

17 A. Yes.

18 Q. You also agree that customers in Vermont Gas  
19 systems territory have options for energy that include  
20 electricity and compressed natural gas in addition to oil  
21 and propane?

22 A. Yes.

23 Q. And regarding your testimony on page five line  
24 17 through 19, you address potential rate impacts of the  
25 system expansion. I believe Mr. Dumont asked you a number

1 of questions about this as well?

2 A. Yes. He did.

3 Q. And you refer to the expansion of the Vermont  
4 Gas systems and how you will meet the quote, imperative of  
5 promoting the public good, do you see that?

6 A. Yes.

7 Q. And you would agree that there is no  
8 imperative to provide natural gas to all communities in  
9 Vermont; is that correct?

10 A. The imperative is to provide energy choices to  
11 Vermonters that help deal with energy costs and that help  
12 reduce greenhouse gases. And our goals are to extend  
13 natural gas service wherever we can do that in a cost  
14 effective way to provide a choice for customers that will  
15 allow them to reduce their greenhouse gases and to save  
16 money at the same time, both for families and for  
17 businesses.

18 MS. LEVINE: I would ask that that  
19 response was non-responsive to the question, and I  
20 ask that it be stricken.

21 MR. MARSHALL: Can I hear the question  
22 again?

23 (The record was read as requested)

24 MR. MARSHALL: I don't think there is  
25 any reason to strike the answer, it was responsive.

1 If Ms. Levine wants to follow up, she may.

2 CHAIRMAN VOLZ: Why don't you just  
3 follow up. Is that all right? I mean it was  
4 arguably within the scope, but it may not have  
5 precisely have gotten what you were looking for.

6 BY MS. LEVINE:

7 Q. Mr. Rendall, do you agree that Vermont Gas  
8 Systems does not have an imperative to provide natural gas  
9 service to all communities in Vermont?

10 A. We do not have a current plan that will allow  
11 us to get to all communities in Vermont.

12 Q. Nor do you have an imperative to do so.

13 A. We don't have a -- we don't have an obligation  
14 to do so.

15 Q. Thank you.

16 A. My use of the term imperative was in the  
17 context of goal.

18 Q. And you agree that the evaluation of public  
19 good of the scope of this imperative that you have spoken  
20 about includes the overall cost of providing service and  
21 how that compares to other options?

22 A. Yes.

23 Q. And your statement regarding this imperative  
24 is a general statement from you and is not based on any  
25 specific facts or documents that support this general

1 observation; is that correct?

2 A. Correct.

3 Q. And regarding your testimony at the bottom of  
4 page five, and the top of page six, you discuss future  
5 rates or the rate pressures, do you see that?

6 A. Yes.

7 Q. And you state that Vermont Gas will seek  
8 Public Service Board approval of rates and levels that  
9 continue to be competitive and affordable; is that  
10 correct?

11 A. That's correct.

12 Q. And again this statement is not based on any  
13 specific facts or documents; is that correct?

14 A. That's correct. It's not based on any  
15 specific facts or documents.

16 Q. Vermont Gas Systems expects to recover its  
17 costs from customers; is that correct?

18 A. Yes.

19 Q. Thank you. That's all I have.

20 CHAIRMAN VOLZ: Thank you. I believe  
21 we are up to our questions.

22 Mr. Rendall, I have a few questions for  
23 you. Today is Monday June 22, 2015. Project was  
24 approved on December 23, 2013. How much work has  
25 been done so far on the project?

1 THE WITNESS: So we have done an  
2 enormous amount of engineering, planning, permitting,  
3 as you know. If we are talking about construction  
4 work, we have completed approximately between five  
5 and six miles of mainline pipe construction, and we  
6 have completed most of the work on several gate  
7 stations.

8 And we are -- as we are sitting here  
9 today, we are continuing to do horizontal direct  
10 drilling along the route. We have got a few drills  
11 going underway now, in addition to the five miles.

12 CHAIRMAN VOLZ: What percentage of the  
13 project would you say was completed at this point?

14 THE WITNESS: Percentage of the  
15 project?

16 CHAIRMAN VOLZ: Approximately.

17 THE WITNESS: Well in the -- I have to  
18 do the math in my head. If we are talking about  
19 miles completed.

20 CHAIRMAN VOLZ: Yeah.

21 THE WITNESS: It would be about between  
22 10 and 15 percent.

23 CHAIRMAN VOLZ: Okay. How much of the  
24 current 154 million dollar budget estimate has been  
25 expended?

1 THE WITNESS: Approximately in the 60  
2 million dollar range. More than 60. I believe less  
3 than 70.

4 MS. LEVINE: Excuse me. Could you put  
5 the microphone --

6 CHAIRMAN VOLZ: You don't have to face  
7 me necessarily.

8 THE WITNESS: Over 60 million dollars.

9 CHAIRMAN VOLZ: Okay. The status of  
10 the 154 million cost estimate was most recently  
11 updated on April 17 and indicated that the project  
12 was within the cost estimate. Now that construction  
13 season is in full swing are there any indicators that  
14 the 154 million cost estimate is no longer accurate?

15 THE WITNESS: No. As I'm sitting here  
16 today, we just completed a regular review of the cost  
17 estimate and the forecast as part of our project  
18 management, and in fact, I just received that over  
19 the weekend. And the project remains on track inside  
20 of the 154 million dollar budget.

21 CHAIRMAN VOLZ: Okay. Given the  
22 increased cost of the project and the subsequent  
23 projected rate increase, how does VGS validate its  
24 assessment of the market need in the absence of  
25 updated market survey data?

1 THE WITNESS: I'm not sure I understand  
2 the question. Let me just think it through. Could  
3 you repeat the question please?

4 CHAIRMAN VOLZ: Given the increased  
5 cost of the project and the subsequent projected rate  
6 increase, how do you -- how does VGS justify its  
7 assessment of the market need in the absence of  
8 updated market survey data?

9 THE WITNESS: Well we still have a  
10 significant competitive advantage that is the  
11 baseline for our market survey review of how much  
12 penetration we will achieve.

13 That competitive advantage has declined  
14 with the changes-- the current changes in oil and  
15 propane prices, so it's smaller than it was in 2013.  
16 It's still significant. It's about -- it's about 25  
17 percent, a little higher than that for oil, and just  
18 under 50 percent for propane based on the Department  
19 of Public Service's monthly analysis. We do not  
20 expect our rates to be significantly higher based on  
21 this project, and the penetration, the survey work  
22 that we do looks at what -- of course looks at what  
23 the projections are for oil, propane and natural gas  
24 going forward.

25 And we remain confident that our market

1 review is still a good planning -- still a good  
2 planning assumption. I'm sure Ms. Simollardes can  
3 give you more detail on this. We use fairly  
4 conservative market penetration rates in the analysis  
5 that we did. So I'm confident that we are still good  
6 on the -- on providing a choice to families and  
7 businesses that will make it attractive for them.

8 CHAIRMAN VOLZ: And if you don't get  
9 the penetration that you're expecting, then the cost  
10 of this project will have to be spread over fewer  
11 cubic feet of gas sales; is that correct?

12 THE WITNESS: On the margin that would  
13 be correct. That it would be -- it would be spread  
14 over somewhat fewer -- somewhat less volume.

15 CHAIRMAN VOLZ: And but you would seek  
16 recovery for all of those costs regardless of that  
17 outcome.

18 THE WITNESS: We would seek recovery  
19 for all of our prudent costs, yes, we would. And I  
20 mean we have -- we have as a company, we have a high  
21 degree of confidence that we will have great  
22 opportunities to actually -- to exceed the  
23 penetration levels that we have used in our analyses.  
24 And we have some customers, including some oil  
25 customers in Addison County that are really looking

1 forward to having the opportunity to take their  
2 volumes from us through a pipeline.

3 CHAIRMAN VOLZ: Okay. Thanks. Do you  
4 have a question?

5 MS. CHENEY: Two new developments since  
6 the September 2013 technical hearings. Two new  
7 developments since September 2013 are the existence  
8 of the Middlebury gas island and the growth in  
9 availability of compressed natural gas. So for  
10 customers who will already be using compressed  
11 natural gas when the pipeline is finished, what  
12 savings will they see, if any, when they transition  
13 or if they transition from CNG pipeline gas?

14 THE WITNESS: Oh the savings will be  
15 significant. I don't have the numbers firmly in hand  
16 as I sit here. My rule of thumb as I look at this is  
17 that if the price of delivered pipeline gas to an  
18 industrial customer, which is the customer who can  
19 take compressed natural gas, let's rewind just for a  
20 minute and remember that compressed natural gas is  
21 only available to interruptible customers which are  
22 large business customers. Not available to customers  
23 who don't have an alternate heating source that they  
24 can switch on and off when compressed natural gas is  
25 not available.

1                   So for those customers who have  
2                   compressed natural gas or can use compressed natural  
3                   gas, the -- roughly the price per MMBTU is -- say  
4                   it's 8 for a pipeline and 14 for compressed natural  
5                   gas. So it's significant, almost 75 percent higher  
6                   cost for compressed natural gas than for gas  
7                   delivered by pipeline.

8                   MS. CHENEY: When you say 8 and 14 what  
9                   unit are you using?

10                  THE WITNESS: Per MMBTU or MCF which  
11                  are close, but I often get them mixed up. Ms.  
12                  Simollardes can probably walk you through that.

13                  MS. CHENEY: What is in general the  
14                  incentive for those customers to switch to pipeline  
15                  gas?

16                  THE WITNESS: Well the principal  
17                  incentive would be economics. And also important  
18                  incentive would be reliability. The compressed  
19                  natural gas is delivered by truck and is itself an  
20                  interruptible commodity that the compressed natural  
21                  gas provider cannot provide at all times. So you  
22                  have kind of two levels of potential interruption for  
23                  a customer. One is the availability of gas to the  
24                  provider. And the other is the logistics of actually  
25                  transporting the gas by truck which can be

1 interrupted for a variety of reasons, say a storm.  
2 So you have both cost and reliability.

3 MS. CHENEY: Switching more generally,  
4 during the first remand hearing in September 2014 the  
5 Board relied on Vermont Gas's representation as to  
6 the updated then 121 million dollar project cost  
7 estimate and the resultant project benefits. Three  
8 months later the project cost estimate increased to  
9 154 million dollars.

10 Why should the Board rely on Vermont  
11 Gas's representations in this proceeding given our  
12 arguably misplaced reliance last fall?

13 THE WITNESS: Fair question. We have--  
14 as the company communicated during the first remand  
15 hearing the company was in the process of engaging  
16 and undergoing a -- what I call a bottoms up full  
17 review of the cost estimate for the project. And the  
18 -- and that is the work that the company accomplished  
19 and completed in December. That work was  
20 accomplished and led by a private management team  
21 different from the private management team that was  
22 in place earlier for the project. The project  
23 management team led by Mr. Roam's firm that has a  
24 demonstrated track record in Vermont for delivering  
25 projects -- for delivering project budgets that are

1 reliable and delivering project outcomes that are on  
2 time and on budget.

3 And I point to the Northwest  
4 Reliability Project, I point to the Southern Loop, I  
5 point to the Kingdom Wind project. Mr. Roam's firm  
6 was an integral part of the updated work for the NRP.  
7 Those who were around will recall that the Northwest  
8 Reliability Project began with a small number and  
9 finished with a big number. The big number was the  
10 review that Mr. Roam's team completed and then helped  
11 VELCO to deliver on.

12 Likewise, that team has a demonstrated  
13 track record of understanding the jurisdiction and of  
14 understanding all of the variables that go into a  
15 complicated and linear project.

16 The second point here is that the -- is  
17 that we know a lot more today than the company knew  
18 in July. In July I wasn't around. And I'm not sure  
19 as I sit here whether the company had actually begun  
20 mainline construction or whether they were just  
21 getting ready to do so. But we have -- we now have a  
22 construction season behind us, and that certainly  
23 influenced the work that the project team did in  
24 estimating the project.

25 In addition, we have now much more of

1 the engineering, the permitting, and the right of way  
2 work completed than was completed at the time. It's  
3 -- we are at what, more than 90 percent of our right  
4 of way has now been procured. We have a few parcels  
5 left to go, but we have got a good handle on what the  
6 cost -- what the costs for right of way will be  
7 having completed much more of the work today than was  
8 completed at the time.

9 We are very close to completing our  
10 contract with the new mainline contractor to complete  
11 the project. And while we still have to conclude  
12 those negotiations, suffice to say that we are very  
13 confident that the contract pricing will come in  
14 consistent with our estimate. So that's a  
15 long-winded way of saying we are much further along,  
16 and we have the project well scoped, and we are --  
17 and we are accomplishing the execution that we are  
18 doing in a way that's consistent with the estimate  
19 that we have.

20 To be fair, that's not to say that  
21 there won't be bumps along the road. We do have a  
22 contingency, and we will have no doubt some things  
23 that happen that we don't expect. We are very  
24 focused on managing this project as well as a project  
25 can be managed. And I am confident as I sit here

1 that we couldn't have a stronger team doing the work,  
2 and doing it in a professional way.

3 MS. CHENEY: On page seven of your  
4 testimony, your March 27 testimony, you did allude to  
5 reasons why you believe the new estimate is more  
6 reliable. You gave three reasons. You added another  
7 one right now which is the how far along the pipeline  
8 construction is.

9 THE WITNESS: Yes.

10 MS. CHENEY: But your first reason was  
11 that the latest estimate was conducted in accordance  
12 with industry methodology that has been tried and  
13 tested. And you just said that number two, which was  
14 alluding to the project team led by Mr. Roam is  
15 different. Is the industry methodology that you  
16 tried and tested, is that different from the industry  
17 methodology that was used in earlier estimates?

18 THE WITNESS: Yes. Yes. When the  
19 company did its first estimates the company did not  
20 go through the industry standard methodology that Mr.  
21 Roam and his team used to re-baseline the project in  
22 December. So we have what we call the ACE industry  
23 methodology which is a methodology that the Board is  
24 familiar with from the electric projects that we  
25 described a few minutes ago.

1           But that is a -- this company upped its  
2 game by bringing this team in to perform a reestimate  
3 of the project using the best industry standards for  
4 estimating a project of this nature.

5           MS. CHENEY: Turning to other costs on  
6 page four of your testimony, March 27 testimony, you  
7 state that: Average residential natural gas  
8 customers have incurred material savings compared to  
9 those served by fuel oil and propane.

10           Other witnesses in this proceeding have  
11 suggested that the savings are much less and would be  
12 much less if the project is completed. And I'm  
13 thinking specifically of Wilson testimony. What's  
14 the basis for your figures?

15           THE WITNESS: Well our figures are past  
16 12 months which are actual figures. So when we look  
17 at how much did our customers save compared to the  
18 alternative over the last 12 months which is the way  
19 that I described it in my testimony, those are  
20 reliable numbers. If you look at what the savings  
21 would be based on today's oil and propane prices, so  
22 if you just assumed that next winter customers are  
23 going to pay what they can -- what they can pay --  
24 what they can buy oil or propane for today, then the  
25 price advantage would be less. It would still be

1 significant, it would be less.

2 MS. LEVINE: It's still difficult to  
3 hear in the back.

4 THE WITNESS: I'm sorry. I'll try to  
5 talk right into this. I'm sorry, the price we have  
6 oil and propane priced where they are today, but I  
7 would expect that all else equal, that savings would  
8 be less, they would still be significant, but that  
9 they would be less.

10 MS. CHENEY: Have you seen Ms. Wilson's  
11 analysis.

12 THE WITNESS: I have looked at it. I  
13 don't have it in mind as I'm sitting here. I would  
14 have to have it in front of me to go through it, but  
15 yes, I have.

16 MS. CHENEY: Okay. Thank you. Thank  
17 you.

18 MS. HOFMANN: Is that working? Light's  
19 on. Is that working? I'll be very loud.

20 Mr. Rendall, I'm going to build on some  
21 questions asked by Board Member Cheney and the Chair.  
22 The first one is are there any big ticket items left  
23 in terms of contracting for the pipeline?

24 THE WITNESS: Well as I said, we still  
25 have to complete a big ticket item of a mainline

1 contractor. We have procured almost all of the pipe  
2 for the project. I can't think of a big ticket item  
3 that we don't have pretty well nailed down at this  
4 point from a contractual basis or from an estimated  
5 basis.

6 MS. HOFMANN: And what would be the  
7 significance of the -- I think you called it the  
8 mainline pipe contractor?

9 THE WITNESS: When I say mainline, I  
10 mean the contractor who is actually going to install  
11 the pipeline along the route.

12 MS. HOFMANN: Thank you. Can you tell  
13 me -- another question based on theirs. You were  
14 talking about the price of oil and propane as it's  
15 priced today, because there has been concerns  
16 expressed in other testimony about the competitive  
17 advantage of natural gas. I think you gave an answer  
18 to Chair Volz about the differential in price between  
19 oil and propane and natural gas today; is that  
20 correct? If not, if you could answer that question.

21 THE WITNESS: Well between oil and  
22 natural gas and propane today, I believe that the  
23 most recent Department of Public Service sheet on the  
24 price advantage is that natural gas has about a 25  
25 percent -- approximately a 25 percent price advantage

1 over oil, and about a 48 percent price advantage over  
2 propane.

3 MS. HOFMANN: And would you know for  
4 CNG for interruptible customers the price  
5 differentiation?

6 THE WITNESS: The price  
7 differentiation, as I said before, I can't remember  
8 whether it's MCF or MMBTU, but approximately -- Mr.  
9 St. Hilaire can probably give you a more precise  
10 answer, but approximately think of it as the price  
11 differential is about 75 percent.

12 MS. HOFMANN: Thank you. You also had  
13 questions from Mr. Dumont about -- many questions  
14 about the rate impacts and things like that. A lot  
15 of this proceeding is based on Section 248 and the  
16 Rules of Evidence, Rule 61.

17 Are there -- would you agree with me  
18 that the Board has other tools as well in terms of  
19 how we can continue to regulate Vermont Gas through  
20 rate cases and rate design?

21 THE WITNESS: Oh, yes. I agree. And  
22 it's important for us to understand that this is --  
23 we will bear some of the risk there because we well  
24 understand the regulatory environment around rate  
25 making that ensures that customers' rates are just

1 and reasonable.

2 MS. HOFMANN: Thank you. You indicate  
3 on page eight of your testimony that VGS still plans  
4 to expand into several towns along the route. Have  
5 the changes in the prices of oil affected the  
6 reasonableness of such expansions?

7 THE WITNESS: No. We are -- we remain  
8 confident and in some cases committed because we  
9 committed by MOU to provide service to some of the  
10 towns. We do expect to achieve our penetrations  
11 within a reasonable period.

12 MS. HOFMANN: And you plan to honor the  
13 MOUs?

14 THE WITNESS: Oh absolutely.

15 MS. HOFMANN: And finally on page eight  
16 you indicate that VGS stands by its commitment to  
17 develop a new energy efficiency program. It's now  
18 been 18 months since the Board required such  
19 programs. When do you expect to file them?

20 THE WITNESS: So we are in the process,  
21 of course, of working with the Board and other  
22 parties in the development of the Energy Efficiency  
23 Utility. And we had planned to develop our programs  
24 and present our programs in the context of the Energy  
25 Efficiency Utility creation and the proceeding around

1 the creation of that Energy Efficiency Utility.

2 When we -- as we move forward we  
3 continue to -- we continue to develop new energy  
4 efficiency programs every day. We introduced a new  
5 program in Burlington, for example, last week to  
6 increase incentives to incent multi-family  
7 residential building owners to retrofit their  
8 properties at a much higher incentive rate. So we  
9 have a variety of programs.

10 We are constantly looking at those  
11 programs and finding ways to improve them. We will  
12 present to the Board a plan for Addison County in  
13 particular if that's what you're asking about, after  
14 we have the opportunity to know that we are going to  
15 complete the project. As you know, we are on a hold  
16 on doing any of the energy efficiency in Addison  
17 County now pending the outcome of this proceeding.

18 MS. HOFMANN: Thank you. Just one  
19 minute while we see if anyone else has questions.

20 MS. MARREN: Morning, Mr. Rendall. My  
21 name's Jake Marren, and I'm a staff member at the  
22 Board. When responding to the Chairman's first  
23 question you stated that you just received an update  
24 about the project status, and that it's still within  
25 its 154 million dollar budget. Does that budget

1 include a contingency?

2 THE WITNESS: Oh, yes.

3 MS. MARREN: In your latest status  
4 update was any of that contingency used?

5 THE WITNESS: I would have to look at  
6 the sheet. There were no changes from the most  
7 recent period. I'm trying to remember whether we  
8 have used any of the contingency. If we have, it's  
9 been a relatively small amount so we have not been--  
10 we are not using up the contingency, if that's the  
11 point of your question, to try to stay on budget. We  
12 are working really hard to save that contingency so  
13 that at the end of the day we hope that we don't have  
14 to spend it at all.

15 MS. MARREN: Thank you. I have no  
16 other.

17 MR. YOUNG: Morning, Mr. Rendall. I  
18 just have a couple quick questions. You testified  
19 earlier about your expectation that you would  
20 mitigate some of the rate impacts; correct? But for  
21 purposes of evaluating both the -- for purposes of  
22 evaluating both the need for the project and the  
23 economic benefits, doesn't the Board still need to  
24 basically look at the 15 percent potential impact  
25 because that's a reflection of the total cost of the

1 project? I mean isn't that a measure of the overall  
2 economic impact of the project?

3 THE WITNESS: Yes. It is. And it is  
4 reflected in the analysis that both -- that Vermont  
5 Gas and that the Department did for determining  
6 whether there is an overall economic benefit from the  
7 project which there is.

8 MR. YOUNG: I had one other curiosity  
9 question which is when you were relating -- I believe  
10 in answers to Ms. Hofmann the competitive advantage  
11 that you still have, you were pointing out that for  
12 CNG it's basically a 75 percent pricing advantage.  
13 Do I take it the customers who have gone to NG  
14 Advantage are basically paying more for CNG than they  
15 were for fuel oil?

16 THE WITNESS: First of all, the 25  
17 percent and 48 percent I should have been clear.  
18 Those are residential -- those are residential and  
19 retail competitive advantages. The customers are  
20 able to -- our industrial customers have volume  
21 pricing, as the Board is aware, through our  
22 interruptible tariff, and those customers also have  
23 available to them other fuel oil and propane at  
24 prices that are much less than the retail prices that  
25 are reflected in the numbers that I was giving you

1 before.

2 I can't tell you as I sit here because  
3 I just don't know necessarily what an industrial  
4 customer could acquire propane for or could acquire  
5 fuel oil for. What I can tell you is that the  
6 customers that are using CNG in Middlebury are using  
7 it for the purpose of getting their equipment up and  
8 running and having the opportunity to use gas hoping  
9 and expecting we will be able to deliver pipeline  
10 service to them.

11 MR. DUMONT: Excuse me. That's pure  
12 hearsay. I ask that it be stricken.

13 THE WITNESS: That's my understanding.

14 MR. VOLZ: Will you read back the  
15 answer?

16 MR. MARSHALL: I think it's reasonable  
17 to expect the CEO would know what important customers  
18 in Middlebury area would have by way of expectations  
19 for service from a company.

20 CHAIRMAN VOLZ: Mr. Dumont, it's Mr.  
21 Rendall's understanding. He's not saying that he's  
22 quoting anybody. So I don't think it is hearsay. So  
23 your objection is overruled.

24 MR. YOUNG: And one final quick  
25 question. Some of the other parties have raised

1 questions about natural -- CNG islands. Who is the  
2 best person for the company to respond to those  
3 questions?

4 THE WITNESS: Well I can respond to  
5 some of them. And if you ask me a question I can't  
6 answer, I'll designate someone. But I expect it  
7 would be -- let's see. Who do we have here?  
8 Perhaps Mr. St. Hilaire would be the best one.

9 MR. YOUNG: I think the nature of the  
10 questions we were thinking of were sort of detailed  
11 tariff questions and whether you've looked at those  
12 issues. Are you the best person?

13 THE WITNESS: Well the tariff questions  
14 I'll ask Ms. Simollardes to answer those.

15 MR. YOUNG: Okay. I'll save it for  
16 her. Thank you.

17 MS. CHENEY: I have a follow-up  
18 question. And that is, do you know what, if any, the  
19 conversion cost has been or will be for those  
20 customers, these industrial-sized customers who are  
21 currently using oil or non gas fuel to convert to  
22 either compressed natural gas, or also including that  
23 question as a next step, to convert from CNG to  
24 pipeline gas?

25 THE WITNESS: I don't. I don't know

1 what that specific costs are for those customers.

2 MS. CHENEY: I've just been reminded  
3 that I could make that a record request and get the  
4 answer. Because I would like the answer to that  
5 question. Thank you.

6 THE WITNESS: Sure. Perhaps Mr. St.  
7 Hilaire can shed some light on that as well.

8 CHAIRMAN VOLZ: Great. I think we are  
9 going to take a break right now. And but we are not  
10 done with Mr. Rendall yet, so we wanted him to be  
11 back on the stand. We will take about 15 minutes.  
12 Thank you. Then we are probably going to take a  
13 lunch break around 12:30 or so.

14 (Recess was taken.)

15 CHAIRMAN VOLZ: All right. We are back  
16 from lunch. I would like to get started.

17 MEMBER OF THE PUBLIC: We are not from  
18 lunch.

19 CHAIRMAN VOLZ: I'm sorry. We are  
20 back from our break. I have lunch on my mind.

21 MS. CHENEY: You didn't eat?

22 CHAIRMAN VOLZ: We are going to  
23 continue with Mr. Rendall, and we still have more  
24 questions for him.

25 MS. CHENEY: Yeah. So I would like to

1 follow up on earlier question we were talking about  
2 how the methodology was changed to arrive at this  
3 most recent estimate. And page seven of your  
4 testimony you went into some more detail about why  
5 this one is more reliable.

6 So in general, I would like to know why  
7 you didn't use this industrial standard for the  
8 earlier cost estimates, and particularly for the  
9 second one. Why wait until the third cost estimate  
10 to use this more reliable methodology?

11 THE WITNESS: If I may, I'll start with  
12 the second part of your question first. Of course, I  
13 wasn't here when -- in reviewing the testimony  
14 presented to the Board in July, I believe that Mr.  
15 Gilbert did communicate to the Board the company's  
16 intention to go through this so-called ACE  
17 methodology to --

18 MEMBER OF THE PUBLIC: Louder please.

19 THE WITNESS: That Mr. Gilbert  
20 communicated to the Board the company's intention to  
21 proceed and do the more detailed bottoms-up review  
22 using the -- I don't know if he used the term ACE  
23 methodology but using the -- an industry standard  
24 methodology for reestimating the project.

25 I believe he did communicate that to

1 the Board in his testimony in the first remand  
2 hearing. Why the company didn't use it at the time,  
3 I wasn't here, and I wasn't privy to all of those  
4 discussions. This is what I can tell you. I believe  
5 that the company was looking at this project as an  
6 extension of a series of relatively small  
7 transmission looping projects that they had used over  
8 time. They hired a company that helped them -- with  
9 a professional background to help them with the  
10 estimating, and that company didn't utilize the --  
11 this kind of a discipline standard. They used a  
12 standard that was consistent with what the company  
13 had used for other projects in the past, albeit much  
14 smaller, much less high profile, much less risky  
15 projects, and that is a -- and they just didn't.

16 MS. CHENEY: And given that you were  
17 not there at the time would this be a better question  
18 to ask of Ms. Simollardes?

19 THE WITNESS: It would be an  
20 appropriate question to ask Ms. Simollardes, yes.

21 MS. CHENEY: Thank you.

22 CHAIRMAN VOLZ: Okay. We finished  
23 asking our questions. Are there any questions that  
24 the folks have to follow up on the questions we just  
25 had. Mr. Dumont?

## CROSS EXAMINATION

1  
2 BY MR. DUMONT:

3 Q. Yes. Mr. Rendall --

4 MS. HOFMANN: Can you use your  
5 microphone?

6 MR. DUMONT: Sorry.

7 CHAIRMAN VOLZ: The microphone itself.

8 MR. DUMONT: Working?

9 MS. HOFMANN: Yes.

10 BY MR. DUMONT:

11 Q. If you could give Mr. Rendall our exhibits 6  
12 and 13.

13 MS. HOFMANN: Your cross exhibits?

14 MR. DUMONT: Yes.

15 THE WITNESS: I have a big notebook.

16 CHAIRMAN VOLZ: These ones, Mr. Dumont?

17 MR. DUMONT: Yes.

18 THE WITNESS: Of 6 and 13.

19 BY MR. DUMONT:

20 Q. This is in reference to your answers to Mr.  
21 Young's questions. Tell me when you're ready.

22 You told Mr. Young that the company in fact  
23 had included rate impacts such as the 15 percent figure he  
24 used in the company's economic analyses. If I heard you  
25 correctly, he asked you; don't we need to look at the 15

1 percent under various criteria; general good, economic  
2 benefit, and you said, yes, we have done that. We took  
3 the 15 percent into account.

4 A. No, that's not what I said, Mr. Dumont. What  
5 I said was we took account the cost of the project in  
6 evaluating the economic benefits. And I apologize if what  
7 I said was not clear to you. But the point is that in  
8 doing the analysis and the department's analysis and in  
9 our most updated analysis, we took account of the  
10 project's carrying costs as part of the cost and benefit,  
11 the capital costs as part of the costs and benefits of the  
12 project. We did not -- I'm not an economist, I can't  
13 think of a reason why you would -- why rates would matter  
14 specifically in the economic benefit if we are accounting  
15 for the costs of the project in that -- in the overall  
16 cost/benefit analysis. They are two different exercises.

17 Q. So the record's clear, Mr. Young was asking  
18 you if the 15 percent potential rate increase was  
19 indicative or at least relevant to several of the  
20 criteria. And you answered, as I understood it, we took  
21 that into account. His question was not project cost. It  
22 was rate pressure. Do you understand what I'm saying?

23 A. I understand what you said.

24 Q. Let me finish please. Your answer was, oh, I  
25 was just thinking about project costs. Is that how you

1 wish to correct your answer?

2 A. I'm not correcting my answer. I'm explaining  
3 my answer. And what I'm telling you, Mr. Dumont, is that  
4 we considered the project's costs in evaluating the  
5 project's benefit. And the project's costs are the costs  
6 that will ultimately be part of the rate making exercise  
7 when that -- when that exercise is undertaken in a later  
8 period in a separate proceeding determining what just and  
9 reasonable rates are for our customers.

10 Q. So if you turn to Cross Exhibit 13. The  
11 Department asked were estimates of the costs associated  
12 with the project that might be recovered in rates included  
13 in the REDYNE, R-E-D-Y-N-E economic simulation of the  
14 project. If yes, please provide. If not, why not. And  
15 your answer was no?

16 A. I see that answer. We should rely on this  
17 answer.

18 Q. And to follow up on your answer a minute ago  
19 you said you don't understand why rate impacts would be  
20 relevant to economic analysis, is that what you were  
21 saying?

22 A. No, no. What I'm saying is they are separate  
23 exercises.

24 Q. So when consumers pay increased rates they  
25 lose -- when customers pay rate increases they have

1 decreased disposable income that they could or would  
2 otherwise spend, do you understand that?

3 A. I understand what the impacts are on customers  
4 of changes in their rates both up and down.

5 Q. And so while we are on this subject you  
6 understand that in the 2013 proceedings Vermont Gas hired  
7 an economist who did consider the lost disposable income  
8 attributable to increased rates. You understand that?

9 A. I don't know.

10 Q. Have you read Mr. Carr's testimony?

11 A. I have seen Mr. Carr's testimony. It's been  
12 many weeks since I looked at the testimony.

13 Q. Thank you.

14 CHAIRMAN VOLZ: I would just like to  
15 follow up on one question you were asking. Just in a  
16 very general sense, when you looked at -- when you  
17 were evaluating this project, I assume that you took  
18 into account -- you evaluated the potential rate  
19 impacts of the project or not?

20 THE WITNESS: On an overall basis we  
21 have been acutely focused on the potential rate  
22 impacts of the project and cost recovery of the  
23 project, and how best to accomplish both of those in  
24 a way that is good for our customers.

25 CHAIRMAN VOLZ: Okay. Thanks. Yes,

1 Mr. Grayck.

2 MR. GRAYCK: Thank you.

3 CROSS EXAMINATION

4 BY MR. GRAYCK:

5 Q. Mr. Rendall, you previously testified that --  
6 I believe you said there was a change in methodology  
7 between the project's either initial or an earlier  
8 presentation and what is presently being offered by VGS  
9 today. Did I understand that correctly?

10 A. Yes. In our December filing of the 153.6  
11 million dollar budget was a result of a disciplined  
12 quantitative risk assessment using a set of standards --  
13 industry standards for estimating our infrastructure  
14 projects. We call it ACE, and I can't tell you as I sit  
15 here because I'll get it wrong, what the acronym stands  
16 for.

17 That is the methodology that the team used to  
18 construct the 153.6 million dollar estimate.

19 Q. And I understood you to say that this was the  
20 use of a new methodology. And I just want to make sure I  
21 heard you correctly.

22 A. New to the project. Not new to the industry.

23 Q. Yes. That's what I wanted to clarify. And is  
24 it a complex methodology?

25 A. To my simple mind, yes.

1 Q. And perhaps even to the very sophisticated  
2 people who apply it in the practice of their profession?

3 A. It is detailed, and it is disciplined, and  
4 yes, there are complexities in it, of course.

5 Q. And it sounds complicated, would you agree?

6 A. Well it's detailed and it's disciplined. I'm  
7 not going to accept your -- your labeling of it as  
8 complicated.

9 Q. Okay. Fair enough. Is it VGS's position that  
10 the opportunity to test the veracity of this methodology  
11 is in the course of this proceeding?

12 A. The veracity -- this is an estimate, Mr.  
13 Blake.

14 Q. Grayck.

15 A. Grayck. I'm sorry.

16 Q. In honor of my grandparents. Who made up the  
17 last name you can imagine.

18 A. I apologize.

19 Q. That's okay.

20 A. This is an estimate that is based on the most  
21 reliable inputs, the most reliable analysis, the most  
22 reliable in form of work that we could bring to this  
23 project.

24 Q. Yes. I understand that. But I guess my  
25 question is to clearly understand VGS's position, is it

1 the parties' opportunity to test the truthfulness, the  
2 accuracy, the veracity of that methodology, is it in the  
3 course of this proceeding that we are undertaking today  
4 and tomorrow, is that VGS's position?

5 A. Our position is that the -- that this is a  
6 review of the project costs as we have presented them to  
7 the Public Service Board to determine whether or not the  
8 CPG should be reopened, which is the -- which is the  
9 framework under which the presentations have been made.

10 Q. Thank you. Nothing further.

11 CHAIRMAN VOLZ: Any other parties have  
12 any follow up to our questions?

13 MS. LEVINE: I do.

14 CHAIRMAN VOLZ: Okay.

15 CROSS EXAMINATION

16 BY MS. LEVINE:

17 Q. Mr. Rendall, I'm wondering if based on your  
18 confidence in Mr. Roam's firm and the new methodology  
19 being used, is it fair to say that that firm should have  
20 been responsible for budget estimates earlier?

21 A. I don't believe so.

22 Q. But you do not have the same level of  
23 confidence in the earlier estimates; is that correct?

24 A. In the earlier estimates for this project?

25 Q. Yes.

1           A.       Well of course I don't.  Those estimates  
2 proved not to be reliable.

3           Q.       But based on that, you do not think that Mr.  
4 Roam's firm should have been responsible for earlier  
5 estimates?

6           A.       Well Mr. Roam's firm was engaged to do this  
7 analysis.  And this is the one that they did.

8           Q.       Thank you.

9                   CHAIRMAN VOLZ:  Any redirect?

10           MR. MARSHALL:  No questions on  
11 redirect.

12           CHAIRMAN VOLZ:  Thank you.  You're  
13 excused, Mr. Rendall.

14           THE WITNESS:  Thank you.

15           CHAIRMAN VOLZ:  We are ready for the  
16 next witness.

17           MR. MARSHALL:  Call Ralph Roam.

18           MS. CHENEY:  Good morning, Mr. Roam.

19           MR. ROAM:  Good morning.  
20  
21  
22  
23  
24  
25

1 RALPH ROAM

2 Having been duly sworn, testified  
3 as follows:

4 THE WITNESS: I do.

5 MEMBER OF THE PUBLIC: Louder please.

6 MS. CHENEY: I was swearing him in.

7 THE WITNESS: I do.

8 MR. MARSHALL: The Board has previously  
9 admitted Mr. Roam's three sets of prefiled testimony.

10 MEMBER OF THE PUBLIC: Louder.

11 MR. MARSHALL: The Board has previously  
12 admitted Mr. Roam's three sets of prefiled testimony  
13 and exhibits. And the witness is available for cross  
14 examination.

15 CHAIRMAN VOLZ: Thank you. I think Mr.  
16 Grayck, you're the only one who has cross for this  
17 witness; is that correct?

18 CROSS EXAMINATION

19 BY MR. GRAYCK:

20 Q. Mr. Roam, good morning.

21 A. Morning.

22 Q. I believe you were here to hear my questions  
23 of Mr. Rendall, yes?

24 A. Correct.

25 Q. And I asked him about a new methodology. Are

1 you the person who applied the new methodology?

2 A. Yes.

3 Q. Okay. And I asked him whether it was a  
4 complicated methodology, and he chose to -- well his  
5 answer was his answer. So I'll ask you, is the  
6 methodology complicated?

7 A. I would say if you're not familiar with doing  
8 it every day it may be complicated. For those who are  
9 familiar, not so much.

10 Q. And so for you it's not complicated, yes?

11 A. Correct.

12 Q. And you have special expertise, yes?

13 A. Correct.

14 Q. And it's valuable expertise, yes?

15 A. In certain instances; correct.

16 Q. You're able to make a living in the  
17 application of your expertise, yes?

18 A. Unfortunately not solely on this particular  
19 expertise, but yes. This is part of what I do.

20 Q. All right. And when were you first called  
21 upon to apply the new methodology?

22 A. In October of 2014.

23 Q. For us who don't understand the methodology  
24 like you do, could you just provide as simple as possible  
25 an explanation as to what the methodology is and its

1 basis?

2           A.       Sure. The methodology follows standards  
3 issued by -- Mr. Rendall alluded to ACE -- which is the  
4 Association for the Advancement of Cost Engineering. From  
5 a process perspective ACE lies out a number of steps that  
6 you use to arrive at a cost estimate. There's a number of  
7 different guidances that walk you through that process.  
8 But ultimately as noted in my testimony, there is really  
9 four main steps to that we applied in this case consistent  
10 with that methodology to develop the estimate.

11                   They are, develop a base estimate which is  
12 basically looking at the scope of the project, ensuring  
13 you've captured all of the tasks associated with it. And  
14 assigning costs to those -- cost without contingency.  
15 That serves as your basis to measure the project costs off  
16 of.

17                   The second step is to determine the maturity  
18 of the project at the point in time when the estimate is  
19 being developed. And there are standards that are  
20 established for doing so, and we have applied those  
21 standards here.

22                   The third step is then to determine what  
23 should your contingency be based upon maturity of the  
24 project at that point in time, scope definition,  
25 deliverables, information available. And that's the

1 process where to understand what your contingencies should  
2 be you apply QRA, quantitative risk analysis.

3 Finally the fourth step in the process is to  
4 understand are the outputs of that process to establish  
5 contingencies reasonable, and in doing so you do a  
6 comparison of what the output of the analysis looks like  
7 compared to what industry standards might suggest it  
8 should be.

9 Q. So is it fair to say that the methodology at  
10 least in part depends upon a series of inputs or  
11 assumptions, yes?

12 A. Correct.

13 Q. And is it fair to say that people within your  
14 profession may differ as to the appropriate input or  
15 assumptions to make when analyzing a particular project?

16 A. Correct. But again, there are -- there is  
17 guidance for what the classification of those inputs  
18 should look like at various points in time as a project  
19 evolves.

20 Q. Yes. Of course. There is guidance, but there  
21 is still the exercise of professional judgment, yes?

22 A. Correct.

23 Q. And is it fair to say that people within your  
24 profession can disagree over appropriate inputs relative  
25 to a particular project?

1 A. Sure.

2 Q. And is it fair to say that professionals  
3 within your field and the application of the inputs could  
4 reach different conclusions and yet be reasonable in their  
5 differences, yes?

6 A. Sure. Which is why it's important that it's a  
7 collaborative process, that you have many opinions, you  
8 have many experts involved in the course of the evolution  
9 of the estimate so that those differences of opinions can  
10 be vetted out and there is consensus that conclusion is  
11 the best one to be made at that point in time.

12 Q. And yet another opportunity to vet the  
13 conclusions and test the assumptions is through this --  
14 through a hearing process such as this, yes?

15 A. Correct.

16 Q. Thank you. Nothing further.

17 CHAIRMAN VOLZ: I think the Board has  
18 some questions.

19 MR. YOUNG: Good morning, Mr. Roam.

20 THE WITNESS: Good morning.

21 MR. YOUNG: I have a few questions for  
22 you based upon your written testimony plus your  
23 testimony this morning.

24 First, you stated earlier today that  
25 your new methodology you started employing in -- or

1 the methodology you've employed, the ACE, you started  
2 employing in October of 2014; is that correct?

3 THE WITNESS: Correct. Our work on the  
4 new estimate started in October.

5 MR. YOUNG: Your testimony, I believe,  
6 indicates that your team started working for VGS in  
7 February of 2014 and was providing active input; is  
8 that correct?

9 THE WITNESS: Correct.

10 MR. YOUNG: And can I assume that you  
11 had input into the previous 121 million dollar cost  
12 estimate that was prepared in July?

13 THE WITNESS: Not in its development,  
14 no.

15 MR. YOUNG: So you were working for VGS  
16 but you didn't participate in that cost estimate.

17 THE WITNESS: Correct.

18 MR. YOUNG: Is there any particular  
19 reason that it wasn't until October that you started  
20 using the new methodology?

21 THE WITNESS: No. I believe as Mr.  
22 Rendall's testified, the company was in a monitoring  
23 and control existing estimate at that point in time  
24 going into the commencement of mainline construction.  
25 And those monitoring and controls revealed some

1 performance trends that were of concern. And it was  
2 at that point that the company requested us to look  
3 at the estimate using Mr. Rendall's term, in a  
4 ground-up fashion.

5 MR. YOUNG: So prior to that time you  
6 had not actually been actively participating in any  
7 of the cost estimates or using any of the methodology  
8 even though you had been there for nine months.

9 THE WITNESS: No. We were initially  
10 engaged to take the existing estimate as developed,  
11 and develop a structure to monitor and control the  
12 performance of that existing estimate but not  
13 reestimate it.

14 MR. YOUNG: Let me come back to this.  
15 But let me get on to some of the details from, you  
16 know, your testimony.

17 Let me turn you to your March  
18 testimony, please.

19 THE WITNESS: Sure.

20 MR. YOUNG: And this is filed March 27.  
21 On page five of the testimony, you have a table.

22 THE WITNESS: Yes.

23 MR. YOUNG: Do you see that?

24 THE WITNESS: I do.

25 MR. YOUNG: I was curious about the

1 table because it seems to show construction occurring  
2 October 2015 through March of 2016. I had understood  
3 construction was ongoing now.

4 Is there any particular reason it's  
5 employed this way as opposed to encompassing what's  
6 actually occurring?

7 THE WITNESS: Sure. At the time the  
8 new estimate was developed it was the October time  
9 frame, so construction on the mainline pipeline was  
10 ramping down for winter. And the purpose of this to  
11 show was that the new estimate moving forward which  
12 would include the backward looking costs for mainline  
13 construction through the current construction period,  
14 that construction would commence again come spring.

15 MR. YOUNG: Well you just said come  
16 spring. Unless I'm reading this wrong it says  
17 October.

18 THE WITNESS: October. Correct.

19 MR. YOUNG: So you basically assumed a  
20 hiatus in the construction with the major  
21 construction starting up again in October.

22 THE WITNESS: Correct.

23 MR. YOUNG: And your methodology is  
24 based upon that assumption.

25 THE WITNESS: Correct.

1 MR. YOUNG: Page eight of your  
2 testimony, and this is actually stated in multiple  
3 places. I just happened to notice page eight you say  
4 there is a class three estimate, and that estimate  
5 was made in December of 2014; is that correct?

6 THE WITNESS: Correct.

7 MR. YOUNG: In your view is this still  
8 at the class three stage? We are now six months down  
9 the road from there.

10 THE WITNESS: The testimony refers to  
11 the estimate as a class three, and then later refers  
12 to it as a mature class three. The way estimates are  
13 classified using this methodology is any one  
14 deliverable in class progression is not completed  
15 beyond that. It remains with that class.

16 So in this case, there were four  
17 elements that left it at a class three estimate back  
18 in December when it was completed. Two of those  
19 items are now complete. Those would be related to  
20 the right-of-way acquisition plans. And then two  
21 remain open.

22 So I would say as we sit here today,  
23 it's even a more mature class three than it was, but  
24 by the way the discipline goes into establishing  
25 which class it actually is, it would still remain a

1 class three.

2 MR. YOUNG: Okay. Turning to page 10  
3 of your testimony. Again the same testimony. You  
4 state that some portions -- and this is starting at  
5 line six. Some portions of the project scope  
6 continue to be defined.

7 Are there particular aspects you're  
8 thinking of here?

9 THE WITNESS: Yes. So particularly as  
10 it relates to construction, some of the sequencing  
11 around construction, when certain construction tasks  
12 would take place, and who would actually do certain  
13 portions of those construction tasks.

14 MR. YOUNG: And do you consider these  
15 major unknowns that are likely to have material  
16 impacts on the overall cost of the project?

17 THE WITNESS: These unknowns are  
18 specific to construction, are mostly unknowns that we  
19 modeled in our risk because they are ones likely to  
20 occur in projects like this. In terms of developing  
21 the contingency, we have accounted for these.

22 MR. YOUNG: The bottom of the page you  
23 discuss the accuracy range for class three estimates.  
24 And am I correct that the ranges you're presenting  
25 here are percentages, so basically -- so that the

1 range means each component could vary from 20 percent  
2 below to 30 percent above, is that how I should read  
3 that?

4 THE WITNESS: That's what the accuracy  
5 change suggests that's how to read it. Correct. But  
6 that's not how it was applied in this case.

7 MR. YOUNG: I'll give you the chance to  
8 explain that.

9 THE WITNESS: Okay. Sure. So the  
10 industry in general, again the guidance that suggests  
11 here is just that guidance, but what ACE and other  
12 bodies involved in estimating in infrastructure  
13 projects suggest that you rely on these -- this  
14 guidance, these ranges, absent a further level of  
15 analysis that can be done at that point in time.

16 In this case we are looking at the  
17 range which involves what is your end number for --  
18 your end number for the estimate. In this case 154  
19 million. The QRA was used in lieu of just relying  
20 solely upon a range to perform that analysis in this  
21 case. So absent these types -- absent the presence  
22 of a QRA analysis, absent that work, you would rely  
23 on a range like this, but the purpose of it being  
24 included in this particular discussion in my  
25 testimony was to show that the ranges actually allow

1 for overlap between estimate classes, which goes back  
2 to the point we were just discussing around the fact  
3 that this is really close to a level two. But they  
4 are still say -- they are keeping it at level three.

5 MR. YOUNG: Okay. So let me just to  
6 make sure -- I'm a little slower on the uptake than  
7 some, but what you're talking about is this is the  
8 typical methodology applying these ranges, but the  
9 way you have applied this because you did the risk  
10 analysis, basically the Monte Carlo simulation, those  
11 ranges don't necessarily apply to this?

12 THE WITNESS: We didn't rely on ranges  
13 for the purposes of our analysis.

14 MR. YOUNG: Okay. Now if I -- so that  
15 would explain my next question, I think that then  
16 explains -- turn to page 17 of your testimony. You  
17 have distribution of the results of your Monte Carlo  
18 simulation; correct?

19 THE WITNESS: Correct.

20 MR. YOUNG: And what you just explained  
21 would -- I think tells me why I wouldn't expect it to  
22 vary by plus or minus the 20 to 30 percent that you  
23 had presented for a class three estimate; is that  
24 correct?

25 THE WITNESS: Correct.

1 MR. YOUNG: The one curiosity I had  
2 when looking at this, is the simulation you've  
3 presented here actually presents a pretty narrow  
4 range of likely outcomes, is that typical? I mean  
5 it's essentially almost all of your simulation runs  
6 vary from 146 million to 156 million.

7 THE WITNESS: Correct. I'll explain  
8 why, if that's okay. In this case we are not dealing  
9 with, you know, an estimate that we are projecting  
10 three years out to be built. You have actual costs  
11 incurred on a project, you've started construction on  
12 a project. A lot of your materials are already  
13 procured, and so a lot of those risks that would make  
14 this curve broader have sort of been taken off of the  
15 table just by virtue of where the project is from a  
16 maturity perspective.

17 So in this case these results do not  
18 surprise me. But are they atypical, probably not for  
19 a project that's this far along in its life cycle.

20 MR. YOUNG: Turning back to page 14 of  
21 your testimony, you have a table that runs here from  
22 most of page 14 on to the top of page 15, which is  
23 what you describe as a sample of risk -- sampling of  
24 risk discussions.

25 Can you explain to me how these factors

1 that you have here flow through to your analysis? I  
2 mean I was just trying to, you know, I look here,  
3 there is a risk rating of 25 for encountering rock,  
4 but it doesn't really tell me what that means.

5 THE WITNESS: Sure. The way these are  
6 applied is you take the risk impacted rating and then  
7 you apply that against essentially high, medium, low  
8 cost impacts on the project. And taken in context  
9 essentially that would give you what are the highest  
10 risks from a cost perspective to the project.

11 And the value of this exercise in terms  
12 of informing your contingency as well as -- informing  
13 where you focus your management efforts moving  
14 forward, is that it helps you understand where your  
15 biggest risks to the estimate actually being achieved  
16 at its current number lie. So you're able to focus  
17 your management efforts as well as, you know,  
18 establish contingency based on risks that you  
19 understand that are historically likely to the  
20 project at the time you perform the analysis.

21 MR. YOUNG: Do these then get factored  
22 into the Monte Carlo analysis?

23 THE WITNESS: Yes.

24 MR. YOUNG: Okay. And that's some of  
25 the variation you see in the data runs in that

1 analysis are reflection of these probabilities.

2 THE WITNESS: Correct.

3 MS. HOFMANN: Can I ask a follow up to  
4 that question? Do these also then factor into the  
5 size of the contingency, or does that all go through  
6 the Monte Carlo?

7 THE WITNESS: They factor in the size  
8 of the contingency.

9 MR. YOUNG: I want to turn next to your  
10 May 27 testimony. And I'll direct you to page two,  
11 and I'll give you a second to get there. On page two  
12 of your testimony part of this is responding to  
13 testimony presented by Ms. Peyser. And on lines 11  
14 and 12, you state that she incorrectly uses updates  
15 to the project forecast.

16 Can you please explain what you mean by  
17 that?

18 THE WITNESS: Sure. So the estimate  
19 that was presented in that quarterly estimate update  
20 was -- consisted of a couple things. First it was  
21 the original 154 presented as estimated. And then it  
22 was a report of the forecasted costs to complete the  
23 project against that estimate of 154 million dollars.  
24 So over the course of a project it's a very common  
25 thing to have line item level variation in your

1 actual spend. And the forecast captures your actual  
2 spend to date plus your anticipated cost to complete  
3 the project.

4 So while the estimate remains static,  
5 the forecast is updated over the life of the project.  
6 So to say that a line item level variance on the  
7 forecast compared to the estimate is a reason to  
8 question the estimate, isn't really a valid argument.  
9 It's very common on projects like these.

10 MR. YOUNG: Okay. Similarly at line 17  
11 through 18, you refer to her as mischaracterizing  
12 certain forecast adjustments. Is this basically the  
13 same point that you were just responding to?

14 THE WITNESS: I'm sorry. Which line  
15 were you --

16 MR. YOUNG: Line 17 through 18.

17 THE WITNESS: Yes.

18 MR. YOUNG: Okay. So that's the same  
19 point.

20 THE WITNESS: Yes.

21 MR. YOUNG: I'm going to cycle back to  
22 the first question, or the first area we talked about  
23 which is you employed the new methodology in October,  
24 2014. When you -- prior to that time when you were  
25 working with the estimates, was it your view that the

1 methodology that had been used was inherently flawed?  
2 Or I mean were you comfortable working with what the  
3 methodology was, you know, prior to employing what  
4 you refer to as industry standard?

5 THE WITNESS: I'll start by answering  
6 that by saying that the purpose of my work was not to  
7 cast judgment on the prior estimates and whether or  
8 not they were, you know, reasonable or not. Having  
9 said that, there is a number of ways to go about  
10 estimating a project. The structure that VGS used in  
11 the past, it's not uncommon to project -- I've seen  
12 in different parts of this business, in fact Mr.  
13 Rendall said they are sort of similar to what you see  
14 for companies that are embarking upon projects that  
15 are bigger, more complex to what they're  
16 traditionally used to doing.

17 So while I would say I didn't cast a  
18 judgment as to whether or not it was a reasonable  
19 approach or not, I would say that what was done isn't  
20 uncommon from what I've seen in the industry in  
21 similar circumstances.

22 MS. TIERNEY: Mr. Roam, June Tierney  
23 here. Just a quick question to clarify because I  
24 really don't know this area at all. Why would one  
25 method be referred to as the industry standard if the

1 other method that was used is not uncommon?

2 THE WITNESS: Because there are formal  
3 standards associated with one method versus the other  
4 just common practices. Things that you see; they are  
5 not consistently applied, they are applied ad hoc,  
6 they are applied based on, you know, circumstances,  
7 there are a already defined and documented set of  
8 standards for the process that we used for this  
9 particular estimate.

10 MS. TIERNEY: So the way I understand  
11 that answer is if I go to the area of financial  
12 accounting, which I'm a little more familiar with, if  
13 I were trying to produce a binding corporate  
14 statement of earnings, for instance, I would use  
15 certain standard accounting practices to do that.  
16 And that in turn would allow me to represent to  
17 shareholders that this is a binding statement of  
18 corporate earnings.

19 Should I understand from your answer  
20 that if you want to give a statement of methodology  
21 that similarly has the imprimatur of being official,  
22 that you would use these industry standards to come  
23 up with that estimate, but that the other method that  
24 was used here prior to the adoption of the method  
25 you're using is one that is certainly used commonly,

1 and that features practices that people are familiar  
2 with, although they may not necessarily rise to the  
3 level of those formal standards they are used in the  
4 standard methodology; is that correct?

5 THE WITNESS: There was a lot there.  
6 So let me make sure --

7 MS. TIERNEY: Yeah. There was.

8 THE WITNESS: -- I got at all. Boiling  
9 it down and please tell me if boiling it down -- the  
10 question is when you look -- looking at a  
11 fundamentally different context around in your case  
12 earnings, which clearly not talking about that here,  
13 but --

14 MS. TIERNEY: Yes.

15 THE WITNESS: But the complexities  
16 around the particular situation, a particular  
17 project, and what you would scale to, you know,  
18 handle those circumstances, whether or not these type  
19 of standards would be more applicable. Is that kind  
20 of --

21 MS. TIERNEY: Yes.

22 THE WITNESS: Yeah. The answer is yes.

23 MS. TIERNEY: Okay. Thank you.

24 CHAIRMAN VOLZ: If I could just follow  
25 up. So just to -- kind of do this better -- I take

1 it the estimate that was used that's before us today  
2 154 million you feel was appropriately developed and  
3 was appropriately used for the purpose we are using  
4 it for.

5 THE WITNESS: Correct.

6 CHAIRMAN VOLZ: What purposes would the  
7 earlier estimate -- what are the appropriate purposes  
8 or uses of the earlier estimates that were developed,  
9 especially the second one?

10 THE WITNESS: Again I don't -- I don't  
11 sit here with speculation as to the appropriate  
12 purpose for the prior estimate.

13 CHAIRMAN VOLZ: Well in other words,  
14 that type of methodology that was used, what is the  
15 appropriate use for that type of methodology?

16 THE WITNESS: I think, you know, as it  
17 was initially used is, you know, a reasonable way to  
18 use it. It was used to develop the project over the  
19 course of an engineering development, it was used as  
20 a project was screened, it was used as the project  
21 figured out its route, which based on again what I've  
22 seen is common.

23 At a point in time where you're looking  
24 to control an estimate, put it into something that  
25 can be scaled moving forward, where you have more

1 definition, applying this as a basis to understand  
2 again what are the estimated costs, but also more  
3 importantly, what are the risks to not achieving  
4 those costs, moving forward with transitioning to  
5 this type of approach was a better practice.

6 MS. CHENEY: So earlier -- much earlier  
7 in your testimony you basically referred to what you  
8 just said control -- you said monitoring and control  
9 in that when you came in February '14 that you had  
10 been asked to monitor and control the existing 121  
11 million dollar estimate, but not to reestimate.

12 And I'm wondering if you could explain  
13 the difference between monitoring and controlling and  
14 reestimating and also whether as part of that process  
15 between February and October was there something that  
16 led you to conclude that the methodology should be  
17 changed?

18 THE WITNESS: Okay. I'll start, and  
19 tell me if I hit on every point. As it relates to  
20 what was done in the February to March time frame,  
21 that and this is again --

22 MS. CHENEY: Sorry. I was referring to  
23 the difference between February when you started  
24 working with the company in -- and October when the  
25 latest estimate was arrived at.

1 THE WITNESS: Okay. I'll try, and you  
2 tell me if I'm not answering the question. In  
3 February the purpose of the work was to establish a  
4 framework using the existing estimate, not  
5 reestimating the project. Using the existing  
6 estimate to map its current estimated cost at that  
7 time, to a structure that would provide discrete and  
8 unique tasks that you would assign costs to for each  
9 of the scope's elements.

10 That process then took at the time the  
11 121.6, as the company went into mainline  
12 construction, and provided a framework off which  
13 performance could be managed. That process played  
14 out through the start of construction over, you know,  
15 the June through roughly September time frame and was  
16 ultimately used to make the determination, as Mr.  
17 Rendall said earlier, Mr. Sinclair can probably add  
18 further detail to, to actually look at the estimate  
19 from a bottoms-up perspective.

20 The process that was, you know,  
21 undertaken in October was to literally reestimate the  
22 entire project. Far different than what we are  
23 talking about back in March. And an important  
24 element of that as it relates to establishing the new  
25 estimate was you also had to do a backwards look at

1 all costs incurred to date on the project, all costs  
2 committed to date on the project, and what work was  
3 completed against, you know, those costs and those  
4 scope items so that they were accurately carried  
5 forward into the new estimate.

6 MS. CHENEY: And was there a point  
7 during that process that you came to the conclusion  
8 that different methodology should be used?

9 THE WITNESS: I would answer that by  
10 saying once we observed the performance on the  
11 project, and were approached by Vermont Gas on how to  
12 go about reestimating the project, our recommendation  
13 was to use this approach.

14 MS. TIERNEY: Why?

15 THE WITNESS: Sorry, based on my  
16 experience in the industry, based on my team's  
17 experience in the industry, based on the risks  
18 associated with the project, and more so  
19 understanding that we literally had to reconstruct an  
20 estimate for a project that had been in earnest two  
21 years in the makings and had progressed. It offered  
22 an opportunity, you know, the basis -- you know, the  
23 four steps I mentioned earlier that basis of estimate  
24 really provides a process to understand a scope,  
25 every cost element, what its cost is, what has been

1 incurred to date in this case against those cost  
2 elements, and what needs to be looked at, you know,  
3 in terms of evaluating adjustments in the new  
4 estimate.

5 So out of the process at the end of the  
6 day, again I think the value is you don't just get a  
7 new number. You get a new number that understands  
8 how that number aligns with the project's current  
9 scope definition, progress against the current scope,  
10 as well as understanding in detail what the risks are  
11 that could impact the project at completion, so that  
12 moving forward you have a bit of a road map to manage  
13 those things which are most critical to your cost  
14 outcomes.

15 MS. TIERNEY: Is it also fair to say  
16 that at that point your company was going to be  
17 owning that analysis, and therefore you wanted to  
18 understand all the inputs that had gone into that  
19 analysis as you would have made them?

20 THE WITNESS: We would have done that  
21 regardless of whether we owned it. I mean that's  
22 part of the process.

23 MS. TIERNEY: Excellent.

24 THE WITNESS: That's appropriate to do.  
25 And again it wasn't a process that only our folks

1 were involved in. There was collaboration along the  
2 way.

3 MS. TIERNEY: The last question I have  
4 for you, I understood from Mr. Rendall's testimony  
5 earlier that you folks have had some experience with  
6 three other major construction projects in Vermont.

7 Do you remember that testimony?

8 THE WITNESS: I do.

9 MS. TIERNEY: In your experience how --  
10 how does an increase from 86 million to 154 million  
11 strike you as an order of magnitude? Is that  
12 something that's -- should the Board understand that  
13 that is uncommon to occur? Is that something that  
14 the Board should understand often happens in big  
15 construction projects? Can you give me a sense of  
16 that?

17 THE WITNESS: Sure. My experience both  
18 in Vermont and outside of Vermont, and I'll start  
19 here, Mr. Rendall spoke about the NRP and the cost  
20 increases that occurred on the NRP. Processes  
21 similar to the one we are talking about here today  
22 were put in place following the NRP to, in the case  
23 of VELCO, make sure they had solid estimates on  
24 projects following the NRP.

25 And I think if you look back you'll see

1 the final cost estimate that was done for the NRP  
2 using these methods, the project came in within those  
3 numbers.

4 When I look outside of the state, again  
5 I think earlier I talked about what you see in terms  
6 of companies going through major bill cycles,  
7 atypical to what you're used to doing, atypical to  
8 what you're instructed to manage out of the gate.  
9 This is not uncommon. We see cost increases that  
10 range from 25 percent to more than doubling. And  
11 again, it's not uncommon to projects I've seen here.  
12 It's not uncommon to projects that I've seen outside  
13 of the state.

14 But what I will tell you is a lot of  
15 the measures being taken here in my experience are  
16 the things that we did, asked to do to help control  
17 those costs moving forward.

18 MS. TIERNEY: Thank you.

19 CHAIRMAN VOLZ: Any follow-up questions  
20 based on our questioning? Mr. Saudek?

21 CROSS EXAMINATION

22 BY MR. SAUDEK:

23 Q. You indicated that you realized somewhere  
24 between February and October that the costs were going to  
25 be quite a bit more, right?

1 A. Correct. I said -- right.

2 Q. And about when was that?

3 A. It was in the roughly September time frame.

4 Q. And how did you have that kind of a-ha moment  
5 that it might be 30 million, 35 million more?

6 A. As mentioned, the work that was done back in  
7 March was to establish this monitoring and controls. So  
8 as the project is progressing, and if you index back to  
9 that time frame, construction in earnest on the mainline  
10 pipeline had begun. So you're looking at costs coming in  
11 against what your estimate is for that, and you're  
12 measuring is this where we expect to be or is this not  
13 where we expect to be.

14 And I would say it would be Mr. Sinclair -- he  
15 can speak to who had the a-ha moment, who actually  
16 ultimately used that information to make the decision to  
17 look at the cost estimate.

18 Q. So you did realize from February to September  
19 you didn't basically have a clue that it was going to be  
20 quite bit more; is that fair to say?

21 A. No.

22 Q. It's not.

23 A. No.

24 Q. Well about when did you realize it was going  
25 to be quite a bit more?

1 A. September.

2 Q. And did you at that point report it to Mr.  
3 Gilbert or somebody else at the company?

4 A. Mr. Sinclair was the person that was notified  
5 of those reports.

6 Q. And what did he say, bearing in mind that this  
7 is a family-oriented hearing.

8 A. Mr. Sinclair is a calm gentleman, so the  
9 response was not one of -- it was more about what needs to  
10 be done moving forward. And his response to us was the  
11 work that needed to be done to do a bottoms-up estimate  
12 and look at the estimate from bottom to top needed to  
13 start and needed to start immediately.

14 Q. Was there any discussion on how to package  
15 this for regulatory purposes?

16 A. Package?

17 Q. This discovery.

18 A. I'm sorry.

19 Q. How was it going to be presented to the  
20 regulators who had been already -- already seen increases  
21 in the past, and now would be seeing another one, was  
22 there discussion of that?

23 A. The discussion on how to present it was done  
24 more so once the analysis was complete, and again those  
25 discussions would be discussions that Mr. Sinclair and

1 others should respond to. I don't make decisions for how  
2 VGS communicates these items.

3 Q. And this was not, I take it, discussed then,  
4 the effect on this case?

5 A. Again that's outside the scope of my testimony  
6 and the purpose of my work with VGS.

7 Q. And it wasn't discussed?

8 A. No.

9 Q. I have nothing else.

10 MR. DUMONT: If I may.

11 CHAIRMAN VOLZ: Mr. Dumont?

12 CROSS EXAMINATION

13 BY MR. DUMONT:

14 Q. Was your a-ha moment before September 26 of  
15 2014?

16 A. Honestly, Mr. Dumont, I don't have a specific  
17 date when in September. I just recall it being it was in  
18 September.

19 Q. And you know what happened on September 26?

20 A. I'm aware there were hearings.

21 Q. There was a hearing. So does that jog your  
22 recollection? Did the a-ha moment occur before the  
23 hearing?

24 A. No.

25 Q. The Board issued an order in October based on

1 what they had heard at the hearing. You're clear the a-ha  
2 moment occurred before the Board issued its order in  
3 October; correct?

4 A. Again it was September.

5 Q. Is there a document that would establish the  
6 date the a-ha moment occurred?

7 A. Not that I'm aware of sitting here that I can  
8 recall.

9 Q. Thank you.

10 CHAIRMAN VOLZ: Any other follow up to  
11 our questions? Any redirect?

12 MR. MARSHALL: Could I have a moment?

13 CHAIRMAN VOLZ: Sure.

14 (Pause).

15 REDIRECT EXAMINATION

16 BY MR. MARSHALL:

17 Q. You've now, Mr. Roam, been asked several  
18 questions about the a-ha moment. Whatever that means.  
19 And I'm sorry, but I don't think this mic is working, and  
20 it's showing green. That's why I'm trying to speak  
21 loudly.

22 You were just asked by Mr. Dumont and other  
23 questioners about when the a-ha moment occurred, whatever  
24 that means. My question to you is that in September or  
25 early October did you know that there was going to be a

1 significant increase in the cost estimate for phase one of  
2 the project?

3 A. No.

4 Q. When did you know that there would be a  
5 significant increase in the cost estimate for the project?

6 A. In December.

7 Q. Why did it take so long from September to  
8 early December to conclude that the costs of the project  
9 would significantly increase?

10 A. Because the work on establishing the new  
11 estimate started in October. Continued through December.  
12 The final step in that process as described in my  
13 testimony is the QRA, and the final number is not  
14 established until the QRA is done, contingency is  
15 established, and you understand what the final cost  
16 estimate is.

17 MR. MARSHALL: No further questions.

18 CHAIRMAN VOLZ: Thank you, Mr. Roam.

19 You're excused. And I think we will take our lunch  
20 break now. We will be back at 1:30.

21 (Recess was taken.)

22 CHAIRMAN VOLZ: Okay. This time we are  
23 really back from lunch and would like to get started  
24 if we could.

25 So I think we are up to Mr. Bluestein

1 as a witness; is that correct?

2 MS. HAYDEN: That's correct.

3 CHAIRMAN VOLZ: All right. And  
4 everything has already been admitted, and he's ready  
5 for cross examination; is that correct?

6 MS. HAYDEN: That's correct. I don't  
7 believe he needs to be re-sworn in.

8 CHAIRMAN VOLZ: Right.

9 MS. CHENEY: Then I'll just remind you  
10 that you remain under oath.

11 THE WITNESS: Okay.

12 MS. CHENEY: Thank you.

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1 JOEL BLUESTEIN

2 Having previously been duly sworn,  
3 testified as follows:

4 CHAIRMAN VOLZ: Who has cross for Mr.  
5 Bluestein? Anybody?

6 MR. SAUDEK: I will.

7 CHAIRMAN VOLZ: All right. Go ahead.

8 CROSS EXAMINATION

9 BY MR. SAUDEK:

10 Q. Hi, Mr. Bluestein. I'm Richard Saudek.

11 MS. HOFMANN: Would you pass a mic or

12 --

13 CHAIRMAN VOLZ: Can we have quiet in  
14 the back of the room please?

15 MR. SAUDEK: Sorry. I always talk too  
16 softly.

17 BY MR. SAUDEK:

18 Q. I'm Richard Saudek. We met across the room  
19 before.

20 You conclude that oil heat blended with 20  
21 percent biodiesel would create about the same GHG  
22 emissions as natural gas based on the 100-year basis; is  
23 that correct?

24 A. Yeah. I didn't do a full analysis. I just  
25 did kind of a back-of-the-envelope, because my

1 understanding is it's not actually available today. So  
2 it's kind of a hypothetical question.

3 Q. As an expert though, you deal in  
4 hypotheticals?

5 A. I was more like looking at the fuels that are  
6 actually available today in Vermont.

7 Q. Okay. So let me ask you a hypothetical. I  
8 take it there would be no environmental advantage created  
9 by the conversion of a homeowner from B20 blend to natural  
10 gas; is that correct? Is that what you're saying?

11 A. There would be no difference on greenhouse gas  
12 emissions, I didn't look at other emissions. And of  
13 course, if you're looking at hypothetical blends, you  
14 could also consider a 20 percent biogas blend, so there  
15 are a lot of possibilities.

16 Q. Thank you. That isn't available, we know that  
17 at this point, right? Despite Mr. Rendall's hopes  
18 that --

19 A. I understand neither of them are available.

20 Q. Okay. Thank you. That's it.

21 CHAIRMAN VOLZ: Mr. Grayck, did you  
22 have any questions?

23 MR. GRAYCK: No, I don't have any  
24 questions. Thank you.

25 CHAIRMAN VOLZ: Okay. I think we do.

1 MS. CHENEY: Yes. Thank you. So thank  
2 you. I would like to understand more of what went  
3 into your life-cycle analysis for the greenhouse gas  
4 impact of natural gas. And first --

5 MR. TOUSLEY: Thank you.

6 MS. CHENEY: In case you didn't hear  
7 me, I'm interested first in getting to your life-  
8 cycle analysis for the greenhouse gas impact of  
9 natural gas.

10 First were you applying a generic life-  
11 cycle analysis or one specific to this project?

12 THE WITNESS: Specific to this project.

13 MS. CHENEY: And then what gas sources  
14 were assumed; the American, Canadian, fracked,  
15 conventional?

16 THE WITNESS: 85 percent western  
17 Canadian, and 15 percent eastern U.S.

18 MS. CHENEY: And what about method of  
19 extraction?

20 THE WITNESS: Fundamentally all of it  
21 hydraulically fractured shale gas, although that's --  
22 not all of the Alberta gas is actually shale gas, but  
23 we made a lot of conservative assumptions, so that  
24 was one of them.

25 MS. CHENEY: On page two of your

1 testimony from May 27. Line nine on. You say your  
2 life-cycle analysis includes quote: The upstream  
3 emissions associated with the extraction, processing  
4 and transportation of the fuels as well as the direct  
5 combustion emissions.

6 What other activities were factored  
7 into that, for example, leakage at the wellhead,  
8 liquids unloading, that kind of factor.

9 THE WITNESS: Yeah. Those were all  
10 included. The primary source was life-cycle study  
11 done by the Department of Energy, National Energy  
12 Technology Lab, that went through all the phases of  
13 production, distribution, transmission, and accounted  
14 for all of those different factors.

15 MS. CHENEY: And was there any I didn't  
16 mention?

17 THE WITNESS: Oh, yeah. There are  
18 lots.

19 MS. CHENEY: Okay. On page five of  
20 that testimony, lines nine and 10, you state that the  
21 life-cycle analysis for gas is quote: 17 percent  
22 lower than oil, and total emissions 22 percent lower,  
23 including boiler efficiency.

24 Were you comparing apples to apples?  
25 That is were you applying a life-cycle analysis for

1 oil as well as gas?

2 THE WITNESS: Yes.

3 MS. CHENEY: And what about the  
4 greenhouse gas emissions resulting from, for example,  
5 truck delivery?

6 THE WITNESS: Yes. Now I will say, of  
7 course, this was based on work that was done over two  
8 years ago, and our main reference for the oil side  
9 was a report that we had previously done for the New  
10 England Fuel Oil Dealers which was done a few years  
11 before that. So it doesn't include more recent  
12 development in the oil markets like oil from the  
13 Canadian oil sands which has a higher greenhouse gas  
14 footprint according to the Department of State, 17  
15 percent higher. So that's not included.

16 And also oil from the Bakken shale  
17 which also has a higher greenhouse gas footprint. So  
18 if we were to redo it today, the oil would be higher.

19 MS. CHENEY: In your exhibit JB-5, you  
20 have some material that you didn't produce. But it's  
21 industry material. I'm trying to remember what was  
22 the source for that? JB-5 was -- it was ACS  
23 publications, the American Chemical Society.

24 THE WITNESS: JB-5 from this is the  
25 direct measurements, Lamb, et al., direct measurement

1 from natural gas distribution systems. Right.  
2 That's a study that was done by the University of  
3 Washington funded by Environmental Defense Fund.

4 MS. CHENEY: Okay. And in that exhibit  
5 they say -- I'm just going to read what this  
6 statement, because the global warming potential of  
7 methane is 28 to 34 times greater than carbon dioxide  
8 on a hundred-year time frame, I'm skipping some,  
9 near-term reductions in methane emissions are vital  
10 for slowing the rate of climate change. Therefore an  
11 accurate estimate of the leak rate of methane and  
12 natural gas infrastructure is needed to understand  
13 the climate impacts of natural gas used and to  
14 identify opportunities for overall reductions in  
15 methane emissions.

16 So was that consideration as a whole  
17 factored into your conclusions?

18 THE WITNESS: Which part, the need to  
19 reduce methane emissions?

20 MS. CHENEY: Requiring the need for an  
21 accurate estimate of the leak rate of methane from  
22 the infrastructure.

23 THE WITNESS: Yes.

24 MS. CHENEY: Okay. Thank you. Those  
25 are my general questions. Thank you.

1 MR. MARREN: I have a few questions.  
2 My name's Jake Marren. The first set of questions  
3 I'm going to be referring to the prefiled testimony  
4 of George Gross. I'm looking at a corrected version  
5 that was filed on May 8. I think I can just relate  
6 the general gist of this; I don't know if you need to  
7 have it in front of you.

8 The first topic I would like to talk  
9 about is a point Mr. Gross made about the capacity of  
10 the project. Mr. Gross's testimony states that the  
11 capacity of the pipeline is twice as much as the  
12 amount of gas that was considered in your greenhouse  
13 gas analysis. And I was just wondering what was your  
14 response to that testimony?

15 THE WITNESS: I didn't actually look at  
16 the capacity. The only capacity numbers I looked at  
17 were in the testimony from phase one which was based  
18 on the throughput from Ms. Simollardes' testimony.  
19 But my analysis was basically on a per cubic foot  
20 basis.

21 MR. MARREN: Okay. So assuming that  
22 that per cubic foot amount that was included in your  
23 analysis doesn't reflect the entire capacity that  
24 could possibly go through this pipeline, is it still  
25 an accurate measure of the greenhouse gas impact of

1 the project if it could potentially deliver more gas?

2 THE WITNESS: Yeah. I think so. I  
3 mean the emissions are not typically related to  
4 throughput especially at the distribution level.  
5 Basically you're looking at leaks in the pipe. So if  
6 the pipe is pressurized, and there is a leak, you get  
7 a certain amount of flow from the leak. But it's not  
8 really strongly correlated to how much is going  
9 through the pipe. So that's not really a strong  
10 factor in the distribution system emissions.

11 Then the upstream emissions, you know,  
12 are also per unit. So I don't think it has a big  
13 factor except to the extent that since my analysis  
14 shows that you are reducing greenhouse gas emissions,  
15 by using natural gas, if you use twice as much, you  
16 reduce twice as much. So that would have an  
17 implication.

18 CHAIRMAN VOLZ: That's assuming that  
19 it's replacing something that was dirtier.

20 THE WITNESS: That's right.

21 CHAIRMAN VOLZ: But if it's actually  
22 creating new demand --

23 THE WITNESS: Well yes, but then what  
24 would have that -- what demand? Would have been --  
25 how would that demand have been met otherwise. Which

1 we don't know.

2 CHAIRMAN VOLZ: Yeah. Thanks.

3 MR. MARREN: That was the next question  
4 I had. Anyways, thank you, Mr. Chairman.

5 The next point Mr. Gross makes is that  
6 Mr. Gross has a criticism about the company's GHG  
7 analysis that it presented as part of Docket 8010  
8 which is the phase-two pipeline. His criticism is  
9 that the analysis did not use the latest AGWP or  
10 absolute global warming potential that has been  
11 published by the International Panel on Climate  
12 Change.

13 If he had directed this criticism at  
14 the analysis presented for this phase, would that  
15 criticism hold true?

16 THE WITNESS: No. We updated it to the  
17 latest numbers.

18 MR. MARREN: And so is that what  
19 explains the different value of greenhouse gas  
20 reductions presented in Ms. Simollardes' testimony?  
21 Originally her testimony stated that there would be  
22 21.7 million dollars in savings, and now it's 20.8.  
23 Is that the --

24 THE WITNESS: Based on the economic  
25 value of carbon?

1 MR. MARREN: A-hum.

2 THE WITNESS: I don't know if there is  
3 another factor related to that economic analysis.  
4 Because I didn't do that. But we did change -- there  
5 were several changes between phase one and phase two.  
6 Sorry, and now, one of the other criticisms in phase  
7 one was that we didn't have enough Canada-specific  
8 information for the Canadian component. So we  
9 updated that in phase two, and then in this most  
10 recent one we updated to the latest AGWP.

11 MR. MARREN: Were there any assumptions  
12 that were changed between the initial analysis and  
13 what's being presented now?

14 THE WITNESS: No, I think that's it.

15 MR. MARREN: So it appears that a point  
16 of contention between your testimony and the  
17 testimony presented by AARP's witness, Dr. Dismukes  
18 and by the Palmer witnesses is that the correct  
19 framework for analyzing greenhouse gas impacts is  
20 looking at the 20-year global warming potential. I  
21 guess first sort of clarifying question, is absolute  
22 global warming potential the same as global warming  
23 potential or are these different terms?

24 THE WITNESS: I'm not familiar with  
25 absolute. But global warming potential I think is

1 the one that I use.

2 MR. MARREN: All right. It would be  
3 helpful for us to better understand what the  
4 difference is between the 20-year measure and the  
5 100-year --

6 THE WITNESS: Sure.

7 MR. MARREN: -- measure. Are these --  
8 are these instantaneous measurements, or do they  
9 capture sort of the cumulative impact over those time  
10 frames?

11 THE WITNESS: Right. So they in fact  
12 they are averaging, it's all about the averaging  
13 time. So CO2 is the baseline, CO2 has a life in the  
14 atmosphere of hundreds or many hundreds of years.  
15 But other greenhouse gases, and there are many of  
16 them, can be stronger than CO2, and they're climate  
17 forcing but have a shorter life.

18 Methane, for example, has a stronger  
19 effect, but it only stays in the atmosphere for about  
20 12 and-a-half years. So you know, on the global  
21 warming time scale it's here and gone quite quickly.

22 So -- and the other -- some of the  
23 other greenhouse gases have more potentials of  
24 10,000. Much stronger but with different lifetimes.  
25 So the question is how do you compare these in some

1 useful way. So what they do is they -- and this is  
2 the International Protocol for Climate Change, the UN  
3 organization, so they have selected three  
4 historically time periods for averaging; hundred  
5 year, 20 year and historically 500 year. And so it's  
6 a little more complicated, because it's not exactly  
7 gone in 12 years. It's more of a half life kind of  
8 thing, but they average over those time periods.

9 So for a shorter lived gas like  
10 methane, if you averaged it over 20 years and it only  
11 lasts for 12 and-a-half, you're getting all of it  
12 compressed into 20 years. If you average over 100  
13 years, it's spread out over time when it's actually  
14 not even really there. And then, of course, if you  
15 use 500 year it's even lower.

16 So that's why the global warming  
17 potential for methane is higher on a 20-year basis  
18 than it is on a hundred-year basis. So then the  
19 question is well which one should we use. Because  
20 even those are arbitrary. You could say how much is  
21 it on the first day that is emitted or after a week  
22 or a month. So these are just convenient averaging  
23 periods that have been defined.

24 But what you find is that by and large,  
25 people have chosen to use the hundred-year value. So

1 the EPA's National Inventory of Greenhouse Gases uses  
2 the hundred-year GWP. The EPA's Greenhouse Gas  
3 Reporting Rule which is a mandatory reporting rule  
4 where large emitters have to report their emissions  
5 is a hundred years. And the EPA's decision to use  
6 that for the reporting rule, they cite the UNFCCC and  
7 the IPCC as defining those as the best ones to use  
8 for those purposes. And actually requiring those for  
9 the international reporting of greenhouse gas  
10 emissions.

11 And it's a little hard to tell from the  
12 Web site, but I think Vermont uses the protocols of  
13 the EPA in reporting. So I think that Vermont uses a  
14 hundred years for the Vermont inventory. So all of  
15 those kinds of authoritative sources used the  
16 hundred-year inventory, I'm sorry, the hundred-year  
17 GWP.

18 We did discuss this in phase one. And  
19 the CLF witness agreed that given the long term of  
20 climate change and the long life of the asset, that a  
21 hundred years was a reasonable time to use.

22 MS. HOFMANN: Can I ask a follow up?  
23 Can you tell me why is it hard to tell what Vermont  
24 uses?

25 THE WITNESS: It's just not clear from

1 the Web site. I was looking at the Web site, and  
2 there wasn't a specific reference.

3 MR. MARREN: I've heard you testify a  
4 lot of regulatory agencies use the hundred-year GWP.  
5 What I haven't heard is exactly why, or what's the  
6 rationale? You say it's because it's over the life  
7 of the asset, but aren't we concerned about global  
8 warming in the near term as well as the long term?

9 THE WITNESS: Sure. And you know, the  
10 value that we use doesn't necessarily reflect how  
11 concerned we are. But it is a long-term process. So  
12 it's a long climactic process, and again, it's a  
13 long-lived asset. I think in terms of, you know,  
14 concern, there is a lot going on to reduce methane  
15 emissions regardless of how you depict it. And I  
16 think if you look at even between two years ago when  
17 I did my testimony, we have seen some of the exhibits  
18 that I presented that show recent measurements, that  
19 show that due to turnover, voluntary actions,  
20 regulation, methane emissions are actually going  
21 down.

22 So -- and I think that's independent of  
23 how we depict it through the global warming  
24 potential.

25 MR. MARREN: And so it appears that in

1 between when the first analysis was conducted two  
2 years ago for this project, and now, that the  
3 International Panel on Climate Change has come out  
4 with new numbers. Would you consider the current set  
5 of GWPs to be something that's reliable, and that  
6 this is a mature area of science, or is you know, the  
7 scientific community's understanding of GWP going to  
8 continue to evolve?

9 THE WITNESS: I think science is always  
10 evolving. So I wouldn't venture to guess what the  
11 analysis will show in the future. This is the fifth  
12 annual assessment report that came out last year. So  
13 there have been many years of analysis, and actually  
14 there are some new factors, so the factor went up for  
15 methane, but then there was a new twist. They said  
16 well yeah, but when the methane goes away it turns  
17 into CO2. So we really should consider that. So  
18 there is an -- actually several sets of numbers that  
19 came out.

20 There is the raw methane, and there is  
21 what they call the feedback including the CO2 that's  
22 formed. So you know, it continues to evolve, and in  
23 this case it's gone up, and we use the -- actually  
24 the highest of the multiple values that they put out  
25 in the revised analysis.

1 MR. MARREN: I have no other.

2 CHAIRMAN VOLZ: I had a follow-up  
3 question to the discussion about a hundred years  
4 versus 20 years, and maybe I don't completely  
5 understand what -- how global warming potential is  
6 defined.

7 Is either of those the 20-year or 100  
8 year similar to like a rolling average? Do you keep  
9 track of CO2 that's entering one year, and then its  
10 useful life ends in 12 and-a-half years or 25 years  
11 and then you drop it out of the average? Or --

12 THE WITNESS: So --

13 CHAIRMAN VOLZ: Do you do something  
14 else?

15 THE WITNESS: It's actually -- first of  
16 all, I should say in case there are any climate  
17 scientists in the room, it's more complicated than  
18 this. So if this is -- because I'm a mechanical  
19 engineer not a climate scientist, but it's more  
20 complicated than I've depicted it because of the  
21 climate atmospheric interactions.

22 So let me just say that. But it  
23 depicts a pulse in essence. If something is emitted  
24 in one year it decays. It's not emitting a stream of  
25 emissions.

1 CHAIRMAN VOLZ: Okay. So it picks up  
2 how much is added whenever it is added.

3 THE WITNESS: Right.

4 CHAIRMAN VOLZ: And then it drops out  
5 at the end of its life.

6 THE WITNESS: Right.

7 CHAIRMAN VOLZ: Any follow-up  
8 questions? Yes, Ms. Levine.

9 CROSS EXAMINATION

10 BY MS. LEVINE:

11 Q. Hello Mr. Bluestein. A couple of follow-up  
12 questions. You referred just now to changes in the IPCC  
13 numbers, I think, regarding both the raw methane and the  
14 feedback. Do you recall those questions and your  
15 response?

16 A. Yes.

17 Q. Now did your analysis include that feedback?

18 A. Yes.

19 Q. And I'm looking at your Exhibit 9 in regards  
20 to a question from Mr. Marren about using Canadian-  
21 specific information for phase two.

22 A. Yes.

23 Q. I see on your Exhibit 9 a reference to the  
24 change in the global warming potential from AR-5, but I  
25 don't see how figures have changed from the Canadian-

1 specific data.

2 A. You don't see it in the spreadsheet.

3 Q. Yes.

4 A. It's not shown explicitly there. There's a  
5 whole series of spreadsheets behind this where we build up  
6 the life-cycle emissions, and you might remember from  
7 phase two that we had a lot of discussion about the  
8 different sources of those emissions. So it's not shown  
9 in that. It's not shown explicitly in that spreadsheet.

10 Q. So if -- in which figure on this spreadsheet  
11 is it reflected?

12 A. In the gas number. In the upstream gas  
13 emissions.

14 Q. The gas life cycle CO2 E figure?

15 A. Right.

16 Q. And that's all I have for follow up. Thank  
17 you.

18 THE WITNESS: Okay. Thank you.

19 CHAIRMAN VOLZ: Any other questions?

20 Mr. Saudek?

21 CROSS EXAMINATION

22 BY MR. SAUDEK:

23 Q. I take it this hundred year number is a kind  
24 of a negotiated number; isn't it? Isn't it -- isn't it a  
25 number that is arrived at among many nations who have

1 various agendas and so on in this business?

2 A. I don't know how they came up with it  
3 originally. It's been used in all of the five assessment  
4 reports in the UN process. And I don't know how they came  
5 up with a hundred years, although I would guess, you know,  
6 scientists tend to just use round numbers, so somebody  
7 said let's do a hundred, and someone said let's do 20, and  
8 someone said let's do 500. I don't know. I don't know  
9 that there was a political agenda behind this.

10 Q. Supposing there were a great deal of urgency  
11 to this problem, global warming, wouldn't it be more  
12 logical to analyze things on a 20-year basis than on a  
13 hundred-year basis?

14 A. Well I think there is a lot of urgency, but  
15 again as I said, how we do the analysis of a long-term  
16 climatological phenomenon does not necessarily determine  
17 how we react to it. So again, I'm not involved in those  
18 scientific discussions about how they set the time lines.

19 Q. But wouldn't you agree with me that if we saw  
20 real urgency we would be putting it on a 20-year track  
21 rather than one hundred?

22 A. Again I think we need to put it on an  
23 immediate track. I don't think 20 years.

24 Q. I'll take immediate.

25 A. All right. I think we need to -- again, I

1 think that's one reason if you look at U.S. greenhouse gas  
2 emissions, they are dropping in large part because we are  
3 using more natural gas to replace coal. That's happened  
4 in the last few years because of low gas prices. So you  
5 know, and the White House has put in place an initiative  
6 to reduce methane emissions from the oil and gas sector.

7           There were new regulations in 2012 to reduce  
8 emissions from some of these upstream sources. We are  
9 waiting for a new round of regulations that are going to  
10 be with us this summer on reducing methane emissions. So  
11 you know, again I think there are a lot of -- lot more  
12 significant things that regulate how quickly we move that  
13 are more political in nature than how the global warming  
14 potential is calculated.

15           Q.       But it's still the case, is it not, that on a  
16 20-year basis, methane is going to be -- have a more  
17 severe effect on global warming than say CO2?

18           A.       Yes.

19           Q.       Thank you.

20                   CHAIRMAN VOLZ: Any other questions for  
21 this witness?

22                   (No response.)

23                   CHAIRMAN VOLZ: Okay, thank you, Mr.  
24 Bluestein. We are ready for the next witness.

25                   MS. CHENEY: Good afternoon.

MR. HEAPS: Good afternoon.

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1 RICHARD HEAPS

2 Having been duly sworn, testified  
3 as follows:

4 THE WITNESS: I do.

5 MS. CHENEY: Thank you.

6 CHAIRMAN VOLZ: So this witness is  
7 ready for cross examination; correct?

8 MS. HAYDEN: Correct.

9 CHAIRMAN VOLZ: Okay. Mr. Dumont, do  
10 you have questions?

11 MR. DUMONT: I do.

12 CROSS EXAMINATION

13 BY MR. DUMONT:

14 Q. How are you today, Mr. Heaps?

15 A. Good morning. Good afternoon actually.

16 Q. Do you have the list of the collection of  
17 cross examination exhibits?

18 MEMBER OF THE PUBLIC: Can't hear.

19 BY MR. DUMONT:

20 Q. I asked him if he has the cross examination  
21 exhibits.

22 A. I have my exhibits, but I don't have the  
23 latest.

24 CHAIRMAN VOLZ: Are you talking about  
25 the blue binder?

1 MR. DUMONT: Yes.

2 CHAIRMAN VOLZ: They are getting one  
3 for him.

4 MR. DUMONT: Now it's on.

5 THE WITNESS: Now I have it.

6 BY MR. DUMONT:

7 Q. All right. When you started work for Vermont  
8 Gas Systems in preparing your testimony dated January 15,  
9 did you read the economic analysis that Vermont Gas  
10 Systems had submitted in support of the CPG it had  
11 obtained on December 23, 2013?

12 A. I'm sorry. I couldn't hear your whole  
13 question.

14 Q. When you started to work for Vermont Gas?

15 A. Yes. Are we talking phase one?

16 Q. In preparing your testimony dated January 15.

17 A. Okay.

18 Q. Of 2015, did you read the economic analysis  
19 that Vermont Gas had submitted in support of the CPG it  
20 had obtained on December 23, 2013?

21 A. No. I had read that as part of phase two.  
22 Something I had done before. But I did not read it at  
23 that time for the work that I began in January.

24 Q. So you had already read Mr. Carr's economic  
25 analysis?

1 A. Yes.

2 Q. And that's reproduced at least in part on  
3 Exhibit 39, Cross Exhibit 39. If you turn to that?

4 A. Yes, I have it.

5 CHAIRMAN VOLZ: Mr. Heaps, is your mic  
6 on?

7 THE WITNESS: There is a light on.

8 CHAIRMAN VOLZ: It's a green light.  
9 Push it in the center.

10 THE WITNESS: I think it just went off.  
11 I'm here again.

12 CHAIRMAN VOLZ: You need to make sure  
13 you talk into it. You can lift it up so you can  
14 position it so you're talking right into it.

15 BY MR. DUMONT:

16 Q. Exhibit 39 a copy of Mr. Carr's prefiled  
17 testimony dated December 20, 2012 and then corrected May  
18 30, 2012. Followed by his exhibit JC Table One revised.  
19 And then a short piece explaining some of his corrections.

20 A. Yes, I see that.

21 Q. Mr. Carr considered the disposable income lost  
22 by ratepayers, am I correct?

23 A. Do you have a particular page?

24 Q. Well if you need to look at it, do you  
25 remember whether or not he considered the disposable

1 income lost by ratepayers?

2 A. I haven't read his report for this hearing.

3 Q. Well I'll represent to you that he did. And  
4 if you look at his testimony in detail you'll see that. I  
5 was wondering why you didn't.

6 A. Well first of all, I think the most important  
7 question is what I was asked to do. I was asked to do two  
8 things here. Initially, I was asked to provide an  
9 estimate of the economic impacts from the construction of  
10 the project given the new cost estimate. And that's in my  
11 earlier testimony.

12 And then in the rebuttal testimony I was asked  
13 basically to take a look at Dr. Dismukes' testimony and  
14 make comments on that. So that was my task, my task was  
15 not to prepare my own independent economic impact  
16 analysis.

17 Q. As an experienced economist, you've used the  
18 REDYNE model many times?

19 A. Yes.

20 Q. And the REMI model many times?

21 A. Not as many, but yes, I've used it.

22 Q. And those models allow an economist to include  
23 in the modeling the lost disposable income that results  
24 from increased rates?

25 A. You can add lost disposable income to the

1 models, yes.

2 Q. I'll represent to you that's what Mr. Carr  
3 did. Why didn't it make sense to you in submitting your  
4 testimony to this Board about the economic impacts of the  
5 project not to include that?

6 A. Again, to be polite, I did not submit to the  
7 Board my own estimate of what the economic impacts are. I  
8 again, just looked at construction impacts. That's all I  
9 was asked to do. And then I was asked to comment on Dr.  
10 Dismukes' testimony.

11 So I have no independent economic benefit  
12 calculation that I presented to the Board.

13 Q. Okay. Thank you. Similar question about the  
14 jobs lost and the payments lost from the loss of fuel  
15 dealer jobs, fuel dealer deliveries, fuel oil deliveries  
16 and propane deliveries is what I meant to say.

17 Mr. Carr considered the lost jobs and the lost  
18 payments that would result when the pipeline replaces fuel  
19 dealers and their employees, do you recall that?

20 A. Yes.

21 Q. You didn't include that either, did you?

22 A. Again, I didn't have anything to include. I  
23 didn't do an analysis of my own of net economic impacts.

24 Q. Do you recall the NPV conclusion that Mr. Carr  
25 reached?

1 A. No.

2 Q. I'll represent to you that it was 300 million  
3 dollars NPV, does that sound familiar?

4 A. I don't remember what he reached. No. I  
5 couldn't tell you.

6 Q. Do you recall what time period he used, 20,  
7 35, 55 years?

8 A. No, I don't remember.

9 Q. I'll represent to you it was 20 years. When  
10 he did his analysis, was the cost of the project 86  
11 million dollars?

12 A. You know, again you're asking me about  
13 something that I haven't read, reviewed for this analysis.  
14 So I don't know what it was that he used.

15 Q. When he did his analysis was the price of oil  
16 \$100 a barrel or over?

17 A. It was probably around there. Yes.

18 Q. What's the price of oil today? Per barrel?

19 A. I didn't look it up. 60 dollars a barrel,  
20 something like that.

21 Q. I would like to discuss that with you at some  
22 length. If you could turn to your testimony on page six  
23 of your January 15 report. Your report states on page six  
24 that oil is closer...

25 A. Hold on please.

1 Q. Sorry.

2 CHAIRMAN VOLZ: And the report is  
3 Exhibit 2 to his testimony?

4 MR. DUMONT: I believe so.

5 THE WITNESS: Okay. My January 15  
6 testimony.

7 BY MR. DUMONT:

8 Q. Yes.

9 A. Okay. And we are on page 6 line?

10 Q. You state oil is close to the bottom and will  
11 slowly climb back to a hundred dollars per barrel over the  
12 next three years.

13 A. Oh, yes. Line 18.

14 CHAIRMAN VOLZ: All right. So you're  
15 referring to his testimony. Not the attached report.

16 MR. DUMONT: I'm sorry. I misspoke.  
17 It's his testimony.

18 THE WITNESS: Yes, it basically -- I  
19 mean just read what it says again. For example, the  
20 current oil price from Moody's analytics expects that  
21 quote: Oil is close to a bottom and will slowly  
22 climb back to a hundred dollars per barrel over the  
23 next three years.

24 BY MR. DUMONT:

25 Q. Moody's doesn't say that any more, does it?

1 A. No. They changed their forecast like many  
2 people.

3 Q. If you could turn to our Exhibit 2. Cross  
4 Exhibit 2.

5 A. Yes, I'm there.

6 Q. This is -- do you know have you seen this  
7 document before?

8 A. No. It doesn't -- is this from 6/18, or is  
9 that just when you presented it?

10 Q. It's just when I presented it. It says  
11 global.

12 A. It's from February 11. No. But I read it  
13 this morning.

14 Q. Does this appear to be an accurate copy of a  
15 Moody's Global Credit Research Report from February of  
16 this year?

17 A. I would trust that that's what you produced.  
18 Yes.

19 Q. And on the second page we have put in bold  
20 face, does this state that Moody's global growth outlook  
21 is based on the assumption that oil prices will average 55  
22 dollars a barrel Brent in 2015 rising to 65 dollars on  
23 average in 2016?

24 A. Yes.

25 Q. And is it your testimony that you expect price

1 per barrel to jump from 65 dollars in 2016 to \$100 in  
2 2017?

3 A. No. It is not my testimony about what oil  
4 prices are going to do. What I gave was the forecast that  
5 was presented from Moody's analytics at the time I did my  
6 report. It was in my view representative of the types of  
7 forecast we would get, and I think it was also relevant to  
8 consider in that Moody's forecasts are the basis of the  
9 economic forecasts that the rest of the state uses for  
10 state revenue forecasts and whatever. So they think it's  
11 worthwhile to consider. It's not the only one out there.  
12 But it's one of the forecasts to consider.

13 Q. Do you consider yourself an expert on  
14 predicting future oil prices?

15 A. As much as anybody else. No, I cannot predict  
16 future oil prices.

17 Q. If you can turn to Cross Exhibit 31.

18 A. Yes.

19 Q. Have you seen -- this is an EIA document;  
20 correct?

21 A. Yes.

22 Q. Have you seen this one before?

23 A. Yes, I have.

24 Q. And does this predict that the price of oil  
25 per barrel will not reach a hundred dollars until 2030?

1           A.        If we look at the top of the Brent spot price  
2 that's what they have, yes.

3           Q.        Do you agree with that?

4           A.        I don't agree or disagree.  What I looked at,  
5 all the forecasts that one sees when they read all the  
6 economic press and the -- in my view, the basic forecast  
7 is one that shows that oil prices will rebound, not in the  
8 short term, but they will rebound over time, something I  
9 expressed as a period of up to about three years.  Where  
10 exactly they will rebound to is anybody's guess.  There  
11 are forecasts all over the place.

12          Q.        If you could turn to Exhibit 32.  This is a  
13 Reuters' report on Goldman Sachs' predictions.

14          A.        Yes.

15          Q.        Is Goldman Sachs one of those sources of  
16 information you would find reliable about oil price?

17          A.        It's one of the sources that I would read.  
18 It's not the best, but I would certainly read it and take  
19 it into consideration.

20          Q.        As of January of 2015 does Goldman Sachs  
21 predict prices in the high 30s in 2015 and in the 60s or  
22 70s in 2016?

23          A.        Okay, if I'm reading the same thing you are,  
24 for 2016 they are seeing Brent oil at 70 dollars.

25          Q.        Exhibit 32 the bank said on Monday it had cut

1 its 2015 forecast for Brent to 50.40 per barrel?

2 A. This is Exhibit 32.

3 Q. Yes. Goldman Sachs slices oil price forecast.

4 A. Yes, I'm on that one.

5 Q. Fifth paragraph.

6 A. It said they had cut its 2015 forecast to 50  
7 dollars and 40 cents from 83.75 and reduced its 2015  
8 separate price. So -- a different measure.

9 Q. The separate price is the West Texas  
10 Intermediate?

11 A. Yeah. It predicted that -- it predicted the  
12 Texas price to go to 47.15 from 73.75.

13 Q. And reading on they had a prediction for 2016.

14 A. In 2016, they see Brent at 70. West Texas at  
15 65 down from 90 and 80.

16 Q. If you could turn to Exhibit 35.

17 A. Yes.

18 Q. As part of your consulting work as an  
19 economist, do you ever look at crude oil futures?

20 A. Rarely.

21 Q. Do you know how to interpret the document  
22 that's in front of you?

23 A. Not as I sit here, I don't think there is  
24 enough information to know exactly what futures price they  
25 are talking about.

1 Q. Okay. Have you ever seen a document such as  
2 this before?

3 A. I haven't looked at this one. No.

4 Q. Have you ever looked at a document of this  
5 type setting forth crude oil futures settlements?

6 A. No. I haven't looked at crude oil futures.  
7 No.

8 Q. Okay. If you turn to Exhibit 36. World Bank  
9 price forecasts.

10 A. Yes. It looks to be that.

11 Q. Is the World Bank a reliable source of  
12 information about oil prices in the future?

13 A. It's one of the sources. Yes.

14 Q. Does the World Bank predict that oil per  
15 barrel will be 57 dollars in 2016?

16 MS. HAYDEN: I'm going to object. I'm  
17 not -- there isn't a foundation for this document.  
18 It appears to be an excerpt, and it's really hard to  
19 tell the source of this document.

20 BY MR. DUMONT:

21 Q. Mr. Heaps, does this appear to be a printout  
22 of the World Bank commodities price forecast from the Web  
23 site at WorldBank.org?

24 A. It certainly says on the top it's World Bank  
25 commodities price forecast, whether it's their mean

1 forecast, a high forecast, a low forecast, other forecast,  
2 I don't know. But it is a forecast.

3 Q. Have you ever in your career consulted with  
4 World Bank commodity price forecasts?

5 A. No, I haven't used the World Bank.

6 Q. Okay. Turn to Exhibit 38.

7 CHAIRMAN VOLZ: Mr. Dumont?

8 MR. DUMONT: Yes.

9 CHAIRMAN VOLZ: Okay. Ms. Hayden, what  
10 is it you're objecting to exactly? Because I don't  
11 think your witness has actually answered the question  
12 that Mr. Dumont has asked about that particular  
13 document.

14 MS. HAYDEN: He hasn't. And I think  
15 the same is true for Exhibit 35. Exhibit 36. He  
16 hasn't laid a foundation to even establish what this  
17 document is, and the witness clearly hasn't seen it  
18 before. Exhibit 37 looks to be the same type of a  
19 document. There is no foundation that's been laid to  
20 even explain what this is and how it's going to be  
21 used with this witness.

22 MR. DUMONT: Yes, and when the witness  
23 said he wasn't familiar with Exhibit 36, I stopped  
24 asking about it.

25 CHAIRMAN VOLZ: Right.

1 MR. DUMONT: So on -- I moved on to  
2 Exhibit 38.

3 CHAIRMAN VOLZ: Which one are you on  
4 now?

5 MR. DUMONT: 38.

6 BY MR. DUMONT:

7 Q. Are you familiar with IMF oil price forecasts?

8 A. No. I'm familiar with the IMF, but I don't  
9 consult IMF oil price forecasts on any regular fashion. I  
10 don't think I've ever looked at it.

11 Q. Then I won't ask you about that. So as you  
12 sit here today, do you feel it's within your competence to  
13 address future oil prices, or would you leave that to  
14 others?

15 A. I would be willing to say within my  
16 competence, that I believe the typical forecast, median  
17 forecast, if you want, of economists is that oil prices  
18 will rebound somewhere in the short term, likely not go  
19 back up to where they were before. But there is a great  
20 deal of variability in that. Some will have a modest  
21 rebound, and some will have a very high rebound. And  
22 there are outliers to that.

23 There are those who will say there is no  
24 rebound and others that say it's going to be very high.  
25 It's a very turbulent time in the oil market.

- 1 Q. I would like to turn to your May 27 prefiled  
2 testimony.
- 3 A. Yes, I have it.
- 4 Q. If you could turn to page 10.
- 5 A. Yes.
- 6 Q. You refer to this as NPV of economic benefit  
7 results for corrected DED-3. Correct?
- 8 A. Yes.
- 9 Q. And the first column is 20 years. And 4.99  
10 percent you predict seven million dollar negative.
- 11 A. That is correct.
- 12 Q. And 7.938 percent you project 10 million  
13 dollars negative; correct?
- 14 A. Correct.
- 15 Q. That's over the 20-year period, correct?
- 16 A. Yes.
- 17 Q. Now if you could turn to Cross Exhibit 1.  
18 Cross Exhibit 1 is excerpts from the Board's order on  
19 December 23, 2013. You've read this order, I assume? Am  
20 I correct?
- 21 A. Not for awhile.
- 22 Q. When is the last time you read the Board's  
23 order do you think?
- 24 A. This is from 2013. I don't remember. I don't  
25 remember when the last time I read this order.

1 Q. Well let me ask you, the first page I  
2 reproduced is just the cover page, the table of contents,  
3 and then the second page is the introduction. And I  
4 highlighted a paragraph on the left. I put a bar down the  
5 line, the margin.

6 A. Yes.

7 Q. You'll see if you read this the Board  
8 addressed the NPV over a 20-year period, do you see that?

9 A. About five lines down it says it will be  
10 realized over a 20-year period.

11 Q. Yes. Okay. And then the next page I  
12 reproduced is summarize the parties' opinions, and it's  
13 under Vermont Gas there is a paragraph with a line in the  
14 margin next to --

15 A. Yes, I see that.

16 Q. And this says the evidence in this proceeding  
17 demonstrates that the project will result in over 200  
18 million dollars in energy savings to Addison County  
19 residents and businesses over the next 20 years; correct?

20 A. Correct.

21 Q. No mention of any other time period; correct?

22 A. Not in that paragraph. No.

23 Q. Next page I reproduced is -- starts 52 on the  
24 left-hand side, so in the Board's original opinion that's  
25 printed by the Board this is page 52. Not the Westlaw

1 version of it. And I've put a line down the left-hand  
2 margin.

3           Once again do we see the Board is looking at  
4 the value of the project over a 20-year period?

5           A.       Yes. Again 20 years is mentioned there.

6           Q.       Next page I highlighted finding 247. Again  
7 the Board is making a finding about the NPV of the project  
8 over a 20-year period; correct?

9           A.       Correct.

10          Q.       Next page is a reprint, the same page, but has  
11 two more paragraphs with the line down the left-hand  
12 margin. Two paragraph -- finding 247 has a second  
13 paragraph number 5, that refers to the 20-year period  
14 ending 2031?

15          A.       Yes.

16          Q.       This is a summary of Mr. Carr's testimony;  
17 correct?

18          A.       Yes, it is.

19          Q.       And finding 249 the quote over the next 20  
20 years: The project is expected to result in an increase  
21 in economic output of between .6 and 21.9 million annually  
22 citing Mr. Carr's prefiled; correct?

23          A.       Yes.

24          Q.       Next page I reproduced is part of finding 307  
25 -- I'm sorry 308. Starting on slip opinion page 69. The

1 Board found in its petition Vermont Gas initially  
2 projected that the project would reduce greenhouse gas  
3 emissions in Vermont by approximately 296,000 tons over a  
4 20-year period and associated carbon reduction savings of  
5 17.1 million dollars. Citing Ms. Simollardes' prefiled;  
6 correct?

7 A. Correct.

8 Q. Next page I reproduced is part of finding 323.  
9 It's a summary of emissions impacts of the project. And  
10 the time period covered is the 20-year period; correct?

11 A. Two periods, but yes there is.

12 Q. 20 years and a hundred years?

13 A. Yes.

14 Q. Do you recall any mention in this December 23,  
15 2013 order of conducting NPV analysis during any time  
16 period longer than 20 years?

17 A. Again I have not read it, but as we went  
18 through things I didn't see anything other than 20 years.

19 Q. So if one purpose of this proceeding is to say  
20 to determine what if the Board knew then what it knows  
21 now, we need to stick with a 20-year metric, don't we?

22 A. No. I would not recommend the Board sticking  
23 with 20 years. I'm not sure why 20 years was even there.  
24 I think what you need to do is when any project -- if  
25 you're going to measure the benefits and the costs, you

1 have to look over the period of time in which the benefits  
2 are accrued and the costs are also paid. If we had a  
3 project here where the benefits fell over 10 years, and  
4 the costs were five years, we would have to look at the  
5 project over 10 years. If it was the reverse where the  
6 benefits were shorter than the costs, you look over the  
7 longer period so that you capture all the benefits and all  
8 the costs.

9 In this project it is a very long-lived  
10 project. And when I reviewed Dr. Dismukes' analysis, I  
11 recommended that we use a period long enough to capture  
12 all of the significant benefits and costs which occur.  
13 And in this case in the corrected analysis I gave the NPV  
14 over 55 years. There comes a point in time when you're  
15 discounting so much that it doesn't matter to go much  
16 further. But there was a difference between his 35-year  
17 number and the 55-year number. But the important thing is  
18 if the project has cost or benefits that last 27 years,  
19 then you have to analyze it over 27 years. As an  
20 economist. If it lasts 38 years, you have to go over 38  
21 years to capture all the costs and all the benefits. And  
22 then you discount it appropriately to the present.

23 Q. So what was the 35-year NPV of the project as  
24 found by the Board on December 23, 2013?

25 A. I don't know.

1 Q. Do you think Mr. Carr's report might help us  
2 answer that question?

3 A. I don't know. I guess I haven't read it since  
4 phase two. It's been a long time.

5 Q. Did Mr. Carr find there would be continuing  
6 job losses in the future?

7 A. I'm not sure. I think he may have, but I'm  
8 not positive.

9 Q. See if I can refresh your recollection. Did  
10 Mr. Carr find that the one-time spike in construction jobs  
11 would compensate for the continuing loss of jobs during  
12 the first 20 years he studied?

13 A. No. I just remember he talked about the one-  
14 time spike in the construction jobs. And he had that  
15 correct. Yes.

16 Q. I want to talk with you briefly about discount  
17 rates. You criticized Dr. Dismukes' use of a discount  
18 rate; correct?

19 A. Yes.

20 Q. When you began work in this case did you read  
21 the Department of Public Service's prefiled testimony that  
22 had been filed in the months leading up to the December  
23 23, 2013 CPG?

24 A. I did read that awhile ago. Yes.

25 Q. If you could turn to Cross Exhibit 40. Did

1 you read Mr. Kumar's testimony?

2 A. Yes, I did.

3 Q. Can you turn to page 16 of Mr. Kumar's  
4 testimony.

5 A. Yes.

6 MS. PORTER: Jim, excuse me. Which  
7 cross exhibit?

8 MR. DUMONT: Cross Exhibit 40.

9 MS. PORTER: Thank you. What page?

10 MR. DUMONT: Page 16.

11 BY MR. DUMONT:

12 Q. Is Mr. Kumar an expert in utility economics?

13 A. I don't know Mr. Kumar. I think he does say  
14 he is, but I don't know him.

15 Q. Do you consider yourself an expert in utility  
16 economics?

17 A. In utility economics, no. I'm an expert in  
18 economics.

19 Q. Let me read to you his answer on page 16 of  
20 Exhibit 40. As acknowledged by Mr. Carr in his response  
21 to PSD:VGS.2-12 his computed benefits relate to VGS  
22 customers. Therefore, it would not be unreasonable to use  
23 the customers' marginal costs of capital which is  
24 generally close to the credit card interest rate, rates,  
25 and which therefore could be as high as 25 percent. At

1 the very least the discount rate should not be below VGS's  
2 cost of capital.

3           Were you aware of that when you wrote your  
4 testimony, both your testimonies in this case?

5           A.       Yes.

6           Q.       Do you agree with that?

7           A.       No.   Not at all.

8           Q.       Exhibit 4 to your May 27 testimony the Office  
9 of Management and Budget circular A4; correct?

10          A.       Circular A4.  Yes, I'm there.

11          Q.       Dr. Dismukes referenced this in his first  
12 prefiled testimony; correct?

13          A.       Yes.

14          Q.       Before Dr. Dismukes -- until you read it --  
15 before you read about it in Dr. Dismukes' testimony have  
16 you ever read circular A4?

17          A.       No.

18          Q.       So you found out about it by reading Dr.  
19 Dismukes' prefiled testimony?

20          A.       Yes.

21          Q.       If you could turn to page 15 of your Exhibit  
22 4.

23          A.       Yes.  This is where it starts, general issues.

24          Q.       Yes.  And then there is a discussion of  
25 developing a baseline.  It states:  You need to measure

1 the benefits and costs of a rule against a baseline. This  
2 baseline should be the best assessment of the way the  
3 world would look absent the proposed action.

4 Did I read that correctly?

5 A. Yes, you did.

6 Q. Okay. So in this case if this pipeline is not  
7 constructed the way the world will look, there will be CNG  
8 facilities already in the Middlebury area; correct?

9 A. I don't know if there will be or not. I'm not  
10 an energy expert. I can't tell you that.

11 Q. Have the CNG facilities been constructed  
12 already?

13 A. Yes. I think there are -- businesses can  
14 receive compressed natural gas.

15 Q. And does your client, VGS, plan to include the  
16 costs of those CNG facilities in its rate base?

17 A. I don't know that.

18 Q. I will address that with Ms. Simollardes. So  
19 you don't know whether the world -- whether the baseline  
20 for this project should be with or without the CNG  
21 facilities?

22 A. Again, I did not conduct my own analysis of  
23 the net economic benefits of this project. And therefore,  
24 I didn't consider those questions.

25 Q. If you could turn to page 33 of your exhibit?

1 CHAIRMAN VOLZ: I just had a follow up  
2 to that last statement of yours, Mr. Heaps.

3 Could you distinguish what you just  
4 said from what you say on page three of your  
5 testimony? Page three of your testimony, where on  
6 line 16 you say: My testimony presents and  
7 summarizes our firm's study of the economic impact to  
8 Vermont from the construction of the Addison-Rutland  
9 natural gas project phase one in light of the second  
10 cost estimate updates submitted to the Board on  
11 December 19.

12 THE WITNESS: Yes.

13 CHAIRMAN VOLZ: What did you mean by  
14 that statement, and why doesn't that cover some of  
15 the questions that Mr. Dumont has been asking you but  
16 which you said you didn't study?

17 THE WITNESS: Okay. Of the net  
18 economic benefit which was calculated and presented  
19 by Ms. Simollardes, I did the calculation for the  
20 construction benefits and wages, I did the tax  
21 calculation during construction, and the rest of it  
22 she did. I took a look at what she did, but I did  
23 not do that analysis.

24 So I did -- of the -- I want to say the  
25 four major items, I did two of them. I didn't do all

1 of them.

2 CHAIRMAN VOLZ: Thank you. Sorry, Mr.  
3 Dumont.

4 BY MR. DUMONT:

5 Q. Page 33 is a page you referred to in your  
6 prefiled testimony; correct?

7 A. We are back to the OMB document.

8 Q. Yes.

9 A. Yes. Okay.

10 Q. You in your testimony referred to the bottom  
11 paragraph on page 33; correct?

12 A. Yes.

13 Q. If you could read the first two sentences of  
14 the second paragraph on page 33, please read them out  
15 loud?

16 A. As a default position OMB circular A94 states  
17 that a real discount rate of seven percent should be used  
18 as a base case regulatory analysis. The seven percent  
19 rate is an estimate of the average before tax rate of  
20 return to private capital in the U.S. economy.

21 Q. Do you agree with that?

22 A. Yes. I agree with that statement. But what's  
23 important to note is they are talking there that that is  
24 what should be used for the rate of return of private  
25 capital. If we are looking at the gains to Vermont

1 society, in this case the gains to Vermont residents as  
2 required under 248(b)(4), we are really looking at -- on  
3 that same page go down to the fourth paragraph, where it  
4 says the effects of regulation do not always fall  
5 exclusively or primarily on the allocation of capital.  
6 When regulation primarily and directly affects private  
7 consumption through higher consumer prices for goods and  
8 services, a lower discount rate is appropriate. The  
9 alternative most often is sometimes called the social rate  
10 of time preference. I think that's the key paragraph.

11 Q. So let's talk about that. Would you agree  
12 with me that if this were a rate setting case the Board's  
13 decision in that event would directly affect consumers?

14 A. I would say if this is a rate setting case  
15 where you're looking at the return to capital, then you  
16 would be talking about the higher rate of seven percent  
17 here.

18 Q. Okay.

19 A. Or something else.

20 Q. If you could turn to the second paragraph on  
21 page 33. Referring to the seven percent discount rate,  
22 does it state: It is the appropriate discount rate  
23 whenever the main effect of a regulation is...

24 A. Just a moment. Where are you?

25 Q. Middle of the paragraph.

1 A. Second paragraph.

2 Q. Yeah.

3 A. And how many lines down?

4 Q. Five. Middle of the sentence. It is the  
5 appropriate discount rate whenever the main effect of a  
6 regulation is to displace or alter the use of capital in  
7 the private sector.

8 A. Again the key there is capital in the private  
9 sector. Yes.

10 Q. Is Vermont Gas in the private sector?

11 A. Yes, Vermont Gas is.

12 Q. Is the main effect of the Board's decision in  
13 this case to displace or alter the use of capital in the  
14 private sector?

15 A. In terms of looking at the economic benefit  
16 analysis, again 248(b)(4), is this project an economic  
17 benefit to the state and its residents. We are looking at  
18 the benefit to its residents, not the benefit to Vermont  
19 Gas, not the benefit or the harm that might be caused to  
20 the fuel oil dealers. We are looking at the benefits or  
21 costs to Vermont residents.

22 In that case we are looking at their  
23 disposable income, or ultimately we are looking at their  
24 consumption. That's why you want to earn income so you  
25 can change consumption. Since we are focusing in

1 248(b)(4) on the residents and their consumption, that's  
2 why you want to use the societal discount rate. This  
3 isn't the return to the company. This isn't the return or  
4 the harm to some other company. It's the return to the  
5 society as a whole. Vermont residents. And that's the  
6 key.

7 Q. Well let's turn to the quote you relied on on  
8 the bottom of the page. Quote: When regulation primarily  
9 and directly affects private consumption, lower discount  
10 rate is appropriate.

11 You were present this morning when Mr. Rendall  
12 testified, were you not?

13 A. Yes, I was.

14 Q. And wasn't he making the argument that we are  
15 not deciding in this case how much consumers are going to  
16 pay. That's for another case?

17 A. That's right.

18 MR. DUMONT: Thank you. That's all I  
19 have.

20 CHAIRMAN VOLZ: Anybody else have  
21 questions for this witness? Mr. Saudek or Ms.  
22 Levine?

23 MR. DUMONT: I will want to move a  
24 number of exhibits into evidence before we are done  
25 with him.

1 CHAIRMAN VOLZ: Do you want to do that  
2 now while Mr. Saudek is trying to decide? Have you  
3 found your questions?

4 MR. DUMONT: I'll do it later when I'll  
5 look at my notes.

6 CHAIRMAN VOLZ: Mr. Grayck, do you have  
7 questions?

8 MR. GRAYCK: I don't. Thank you.

9 CHAIRMAN VOLZ: Mr. Saudek.

10 CROSS EXAMINATION

11 BY MR. SAUDEK:

12 Q. Mr. Heaps, on page eight of your rebuttal  
13 testimony --

14 MS. HOFMANN: Can somebody hand him a  
15 microphone please?

16 BY MR. SAUDEK:

17 Q. Lines 14 and on, you say that the loss of  
18 gallons purchased out of state will not adversely impact  
19 Vermont companies and cite Argi-Mark as an example?

20 A. Yes.

21 Q. In fact, you didn't break out how many of  
22 those gallons delivered from Quebec, New York and Berlin,  
23 Vermont were hauled by Vermont residents and taxpayers,  
24 did you?

25 A. No, I did not.

1 Q. You didn't try to assess what that economic  
2 impact would be?

3 A. No, I didn't.

4 Q. Do you know what that number is?

5 A. Not as I sit here. No.

6 Q. That's it. Thank you.

7 CHAIRMAN VOLZ: Thank you. I think we  
8 have some questions.

9 MR. YOUNG: Good afternoon, Mr. Heaps.

10 THE WITNESS: Good afternoon.

11 MR. YOUNG: Just a few areas that I  
12 wanted to inquire into.

13 First, your analysis indicates an  
14 increase in the number of jobs in Vermont. Am I  
15 correct that these are almost exclusively short-term  
16 construction related jobs?

17 THE WITNESS: Yes. Yeah. They are  
18 basically over in -- if things go as scheduled 2016.

19 MR. YOUNG: And your analysis doesn't  
20 include any long-lasting jobs in your study.

21 THE WITNESS: No. There really isn't  
22 much in the way of long-lasting impact after that.  
23 Maybe a little bit the next year. But not enough to  
24 spend time on.

25 MR. YOUNG: And so the economic value

1 you're producing is a short-term jobs plus the  
2 secondary impacts associated with that.

3 THE WITNESS: Yes. It is. And just to  
4 clarify two things. It is short term, so we have to  
5 realize it's over. But at the same time it doesn't  
6 diminish the significance. Our construction industry  
7 which is 12 percent of Vermont or seven percent of  
8 Vermont economy lives by the short-term projects year  
9 after year. So they are short term, but they are  
10 important.

11 MR. YOUNG: Okay. Now as I read Dr.  
12 Dismukes' testimony he estimated somewhere in the  
13 range of 724 job years for the project. Is that the  
14 same ball park that your figures are? Seemed like  
15 your figure was more like around 890.

16 THE WITNESS: We were very close.  
17 There is a little bit different time period in which  
18 he had the spending than I did. I believe in his  
19 model he threw all the spending in one year. And I  
20 had the spending spread over two and-a-half years.  
21 But again, I didn't raise the issue. Because again,  
22 they are all the short-term construction and whether  
23 a thousand happen in 2016 or 500 in 2015 and 500 in  
24 2016, it's still the same number of jobs, the same  
25 people building the pipeline to the same place.

1                   So ultimately, they would add up the  
2 same, and we were very close.

3                   MR. YOUNG: Okay. Next question that I  
4 wanted to get into is in your May testimony you  
5 comment on Dr. Dismukes' assumptions concerning job  
6 loss, do you recall that?

7                   THE WITNESS: Yes.

8                   MR. YOUNG: And it starts at the bottom  
9 of page three, again on page seven. I understand  
10 your criticism of his testimony. But isn't it fair  
11 to incorporate some adjustment to the economic  
12 cost/benefit analysis to reflect that fact that some  
13 jobs are likely to be lost at least for a period of  
14 time?

15                   THE WITNESS: I wouldn't disagree if  
16 you did it for a very short time. There will be some  
17 disruption. And people have to move from the jobs  
18 they would have had with fuel oil, propane dealers  
19 and find jobs elsewhere in the economy. But that's  
20 something that's likely to occur less than a year's  
21 time given that, thank God, we are out of the  
22 position we were five or six years ago. The economy  
23 is doing quite well. And so people will be able to  
24 move and find new jobs, and so the effect on the  
25 state and its residents will be very, very limited.

1 MR. YOUNG: Well I mean basically to  
2 some degree you're trading off a limited job plus  
3 effect which you just described as construction  
4 benefits over a year to short term, the same type of  
5 limited effect on job loss on the other side, is that  
6 fair?

7 THE WITNESS: Yeah, it is.

8 MR. YOUNG: You didn't attempt to model  
9 the amount of the economic impact associated with the  
10 job losses, did you?

11 THE WITNESS: No. No. I wouldn't have  
12 modeled it. And if I did, I would have had it -- and  
13 use some Department of Labor data in Vermont, and the  
14 transition would have been something that would have  
15 occurred in less than half a year.

16 MR. YOUNG: And do you have any idea as  
17 to the magnitude of that negative impact compared to  
18 the positive impact that you produced?

19 THE WITNESS: The magnitude is very  
20 small. I think you could take the direct impact from  
21 Dr. Dismukes in the first year and cut it in half and  
22 say that would be the impact that would occur. That  
23 would be a rough number, a small number.

24 MR. YOUNG: You were also discussing  
25 the discount rate just a few minutes ago, do you

1 recall that?

2 THE WITNESS: Yes, very important  
3 discussion.

4 MR. YOUNG: And I understand why you  
5 believe that the three percent or the -- three  
6 percent real, 4.9 percent nominal rate is  
7 appropriate. But as I was reading Dr. Dismukes'  
8 testimony one of the concerns that he's raising is  
9 that there is a lot of uncertainty associated with  
10 this project. And at least I inferred, perhaps  
11 incorrectly from that, that he was advocating a  
12 higher discount rate to taking into account the  
13 uncertainty about the future.

14 THE WITNESS: Yes.

15 MR. YOUNG: Do you agree with that?

16 THE WITNESS: Well I'll agree with part  
17 of it, but not his solution. Yeah. There is a great  
18 deal of uncertainty about the future. And that's why  
19 you discount. If we discount by the three percent  
20 real, five percent -- 4.99 percent it's called five  
21 percent nominal, we are really discounting that  
22 concern with the future. Five percent means in -- a  
23 dollar earned or a dollar cost in 14 years you only  
24 count it as 50 cents. A dollar cost in 28 years you  
25 count as 25 cents, you discount it by taking three

1           quarters of it away. And then if you go out 42 years  
2           you're only counting 12 cents of it. I mean that's  
3           the point of discounting.

4                         It's things in the future are more  
5           uncertain, so you discount it heavier. If you're out  
6           35 years, you discount it by 35 years. So you don't  
7           change the discount rate, but you use additional  
8           number of years to discount it heavier. And so if  
9           you were asking me the difference between if I had  
10          done an estimate for year 75, and Dr. Dismukes did  
11          one for 75, it doesn't make any difference. Out 75  
12          years we have discounted it to nothing because there  
13          is so much uncertainty that's involved.

14                        Changing the discount rate as you go  
15          out would not be an appropriate thing to do. You  
16          settled on what the appropriate discount rate is, you  
17          let the number of years make it bite harder and  
18          harder as you go in the future.

19                        MR. YOUNG: So you're saying -- I mean  
20          to use the numbers you just gave me, that if the  
21          value of a dollar today or the value of a dollar in  
22          14 years is 50 cents of what it is today, which is  
23          the number --

24                        THE WITNESS: Right, the 4.99 yeah.

25                        MR. YOUNG: The number you just used,

1 that that adequately captures all the uncertainty  
2 that is likely to occur in terms of fuel prices and  
3 climate change issues?

4 THE WITNESS: Well let me stick with  
5 the first part if I could interrupt you. Climate  
6 change makes it much more difficult. It gets down to  
7 the whole question of what is the appropriate  
8 discount rate to use. And we could discuss this for  
9 ages, and economists have discussed this forever.

10 The important thing is to look at what  
11 we are discounting and what the risk is involved.  
12 It's easier when you're discounting like business  
13 profits, we would haggle back and forth, but we would  
14 end up doing a cost of capital or something like that  
15 and we wouldn't have too much problem.

16 Now we are using a societal benefit.  
17 What is the value we should use for societal benefit.  
18 Here I have to rely on what others have done that  
19 have looked at this. And in this case Office of  
20 Management Budget is very clear that the societal  
21 benefit should be a lower rate than that cost of  
22 capital. And they suggest that historically the  
23 return to 30 year U.S. treasuries, the organization  
24 U.S. government would believe is supplying benefits  
25 to the public, they believe that 30-year rate which

1 average three percent real, should be what you would  
2 use.

3 There is also a -- just to note, is if  
4 we want to use the most current data, the real rate  
5 has been, you know, about 1.4 percent. We didn't use  
6 that from the standpoint of, you know, we would be  
7 arguing about what's the future of interest rates.  
8 And I will tell you I don't know what the future of  
9 interest rates are going to be. So the three percent  
10 rate is what is suggested by OMB for societal  
11 benefits, and I will go along with them on that.

12 MR. YOUNG: I was going to say I would  
13 love to be able to get a three percent real rate on a  
14 government bond right about now. But it's not  
15 happening.

16 Thank you. I have no further  
17 questions.

18 CHAIRMAN VOLZ: Anybody else? Any  
19 follow up to our questions?

20 MR. DUMONT: Just one.

21 CHAIRMAN VOLZ: Mr. Dumont.

22 CROSS EXAMINATION

23 BY MR. DUMONT:

24 Q. What was it about Dr. Dismukes --

25 A. Would you use the mic please.

1 Q. Yes. What was it about Dr. Dismukes' report  
2 that led you conclude he was treating job losses as  
3 permanent as opposed to -- I'm sorry. What was it that  
4 led you to conclude he was treating each unemployed person  
5 as permanently unemployed as opposed to looking at the  
6 loss of job opportunities?

7 A. If you take a look at his DED-3. Here I'm  
8 looking at his May 6 testimony. Okay, I'm looking at Dr.  
9 Dismukes' DED-3 testimony from May 6, 2015. And his DED-3  
10 that's titled Impact of Addison Natural Gas Project on  
11 Vermont Economic Employment. Here he's talking  
12 employment. And if we look under column M, the direct  
13 losses, these are the employment losses that he estimates  
14 to fuel dealers he has in 2020 minus 53. And in 2030  
15 minus 76. And then it grows to minus a hundred, minus  
16 123. He's got some job losses which he thinks present a  
17 negative economic impact to Vermont residents 20, 30 even  
18 40 years out into the future. And he has them growing.

19 So he believes there is some negative thing  
20 that's harming Vermont residents by up to on average 95  
21 jobs a year. In my view as an economist that's not going  
22 to happen. Think of what has happened in Chittenden  
23 County in the last, you know, five, six years. Vermont  
24 Gas has extended the pipeline to -- I believe they  
25 testified Underhill and Jericho already. So if we had

1 done that analysis back then, there are some job losses to  
2 fuel oil dealers out there right now.

3           And in fact, if we use that kind of analysis  
4 whenever some business is displaced by some other  
5 business, there is some job losses, and those job losses  
6 by his analysis continue. So looking at the Vermont  
7 economy, he's telling me there are job losses that are  
8 harming employment in Chittenden County from the fuel oil  
9 dealers, there is job losses in Chittenden County at the  
10 landline telephone business from the cell phone companies,  
11 there is job losses in Chittenden County from all the  
12 tellers who would work at the banks if the ATMs weren't  
13 brought forward. If I estimated those I would have  
14 estimated tens, hundreds, or tens or thousands of job  
15 losses in Chittenden County.

16           As an economist, I could calculate those  
17 things that he did. But is there a harm to Vermont  
18 residents from that? We are, after all those things  
19 occur, we are back to an unemployment rate of about 2.7 in  
20 Chittenden County. We are growing faster than the rest of  
21 the state. Our economy is doing well. No Vermont or no  
22 Chittenden County resident has been harmed by the  
23 expansion of the pipeline, the expansion of these other  
24 types of businesses. So you could calculate a  
25 hypothetical job loss, but it's not a real employment loss

1 to Vermont citizens, Vermont residents. They make the  
2 adjustment to these changes, these changes occur all the  
3 time. And if they make those adjustments, we will be back  
4 to a period of full employment, and we will be enjoying  
5 the aspect of lower gas prices to heat our homes.

6 So I would not subtract that because those are  
7 simply calculable job losses that are not real, they are  
8 hypothetical losses, and over time, a very short time,  
9 they go away. So that's why I would not count them.

10 Q. Apologize if my question wasn't clear. My  
11 question was, why are you assuming that Dr. Dismukes'  
12 report treats the losses as keeping that worker unemployed  
13 for the rest of his life as opposed to what you just said  
14 which is these are job losses per year in the economy?

15 A. Well his title is Employment. If you read  
16 that page he's telling us that this is measures of  
17 employment in the economy. And so his thing says  
18 employment is down by 100 some each year. There are jobs,  
19 and a job is a type of work you do at a place. Employment  
20 is a count of the number of people who are doing jobs.  
21 And he has his things down there.

22 Even if he thinks they are jobs, again I would  
23 question what are these jobs. They are not jobs that  
24 anybody is going to be filling any time soon. The people  
25 that used to do those are doing something else now. And

1 that's what we do all the time in the economy. We always  
2 move and adjust, and we don't count endlessly the losses  
3 from some shock to the economy.

4 Q. Page three of your prefiled lines 19 through  
5 21 you wrote it is not reasonable...

6 A. Just a moment. Just a moment please. Page  
7 three did you say?

8 Q. Yes.

9 A. January 15.

10 Q. May 27. Your May 27 --

11 A. May 27. I'm sorry. Yes, I'm there now.

12 Q. Last three lines: It is not reasonable,  
13 however, to assume that all displaced workers will remain  
14 unemployed for much more than a very short period let  
15 alone 35 years. We therefore eliminated this net loss  
16 from the net benefit analysis.

17 And I'm trying to understand why you read into  
18 Dr. Dismukes' report some implication that a job loss per  
19 year leads to a worker who is out of work for 35 years?

20 A. First of all, when I read his table his table  
21 clearly tells me that employment is down by 50, 75, a  
22 hundred. I go out 35 years and his table says employment  
23 is a hundred less. If that means employment is a hundred  
24 less, that means there are 100 Vermont residents that are  
25 fewer employed than there would be otherwise. And we go

1 out that period of time, we will not find -- we don't have  
2 to be close to that period of time, we will not find that  
3 residents remain unemployed.

4 When something happens, and something happens  
5 to your business and that business contract, people have  
6 to move and go to other places. There are temporary  
7 disruptions, but they move to other places. They get  
8 other jobs. And you count a few years down the line and  
9 what's happened to employment, it tends to get back to  
10 full employment over time.

11 So I don't believe there is unemployment lost  
12 as this table says.

13 Q. So you understand that the folks that Mr. Cota  
14 and Mr. Saudek are representing, they are not going to be  
15 in year one, two, three, four, five, six up to 35, they  
16 are going to be losing jobs; correct?

17 A. They are going to see a loss in jobs in the  
18 year the pipeline opens up. They are not going to be  
19 happy about it. And they are going to have to let people  
20 go. What's important is not what happens to his firm. We  
21 are looking at the economic benefit to the state and its  
22 residents, not the benefits to Vermont Gas, not the  
23 benefits to or harm to the fuel oil dealers, the benefits  
24 to Vermont residents in the state.

25 And so what happens to the people that have to

1 leave his place, they move quickly and find another job in  
2 the expanding economy, and a few years hence you would  
3 never know that that was a bigger business than it had  
4 been prior to that.

5 Q. But you might not, but isn't what Dr.  
6 Dismukes' doing very simple? He's saying in year zero  
7 there are X number of jobs people driving the trucks,  
8 accepting the fuel bills, whatever it is, in year zero  
9 you're going to have X number of jobs. In year one you're  
10 going to lose -- you'll have a fraction of those. In year  
11 two you're going to have a fraction of those. In year  
12 three you're going to have a fraction of those, all the  
13 way through year 35. Each year those jobs that Mr. Cota's  
14 clients, Mr. Saudek's clients don't have, those jobs  
15 aren't coming back. Each year the pipeline will have the  
16 same effect of displacing them. Do you understand that's  
17 what his testimony is?

18 A. Yes, it's true in his place each year there  
19 would not be those jobs that would have been there. But  
20 our economic benefit analysis says that Vermont residents,  
21 it says a number of jobs in the economy you're not  
22 counting them up. Well we know what happened to Vermont  
23 residents who were working for him in the first year and  
24 lost their job, they went somewhere else. It took awhile  
25 for the transition, but with the expanding economy, they

1 found a job somewhere else. And so we don't find somebody  
2 five years later, we say what are you doing. I'm  
3 unemployed. I used to be a fuel oil dealer, there is no  
4 jobs there. Well what they are doing, they are now  
5 delivering for Ben & Jerry's, they are delivering for  
6 somebody else, or they are working at Home Depot. They  
7 moved on to other jobs.

8 And that's what happens in the economy. So  
9 the benefits to Vermont residents don't involve if there  
10 is more jobs at Vermont Gas, if there is less jobs at the  
11 fuel oil dealers. The benefits in this case involves such  
12 things particularly as fuel savings and costs of the  
13 project. That's what matters.

14 Q. Thank you.

15 MR. YOUNG: Mr. Heaps, I just want to  
16 follow up on this point. And listening to your  
17 exchange with Mr. Dumont, is your problem with the  
18 presentation here in DED-3 page two basically the  
19 summing of the number of jobs?

20 THE WITNESS: No. My whole argument is  
21 continuing to calculate them. And I know you can, we  
22 all use these models. These models will let you  
23 calculate them and spit them out, you could calculate  
24 this job loss through the year 3075. It's just that  
25 it is not a loss to the residents of the state. They

1 make adjustments to this. This is the normal thing  
2 that goes on. And as a result, we will get back to a  
3 period where employment will be the same as if it  
4 would have been if we had done this or not.

5 But our disposable incomes will be  
6 higher because the cost of heating is lower. That's  
7 what you want to focus on. That's the economic  
8 benefit to residents.

9 MR. YOUNG: Right. I understand that.  
10 But I guess in terms of the -- some of the  
11 disagreement you were having with Dr. Dismukes, if I  
12 just look at the row 2049 on here, on this table. It  
13 looks like there is an incremental job loss in that  
14 particular year projected here -- well actually there  
15 are two ways to read this. It's either --  
16 cumulative. It looks like it's incremental of 153  
17 jobs.

18 THE WITNESS: I think it's the total  
19 each year. It's 39 in the second year, it goes up by  
20 5 to 44 the next year. So I think it's the  
21 cumulative sum.

22 MR. YOUNG: So you're viewing this as a  
23 cumulative as opposed to absolute numbers of jobs  
24 lost each year. That's exactly why I'm asking these  
25 questions.

1 THE WITNESS: Yeah. I think the  
2 appropriate way to read it is you -- all the way to  
3 bottom of this table by 2049 he thinks there will be  
4 153 less jobs with fuel oil dealers than there would  
5 have been otherwise.

6 MR. YOUNG: So you're interpreting it  
7 as a cumulative sum as opposed to he's thinking in  
8 that year 153 additional employees' jobs will be  
9 lost, that's what I'm trying to hone in on.

10 THE WITNESS: My answer is this. I  
11 never would have calculated this out and gone that  
12 far. Because in the first few years when the  
13 pipeline's built and people do their conversion,  
14 that's when the changes occur. And Vermont residents  
15 who were working for the fuel oil dealers now have to  
16 go somewhere else. If there were no other jobs for  
17 them, and that's it, they went home and collected  
18 unemployment insurance, we've got a job loss. And  
19 we've got an employment loss and a wage loss, I would  
20 count that. But that's not the situation we have.

21 They are going to leave there, and they  
22 are going to move on to the economy to other things,  
23 which is what always happens. There is always  
24 turmoil in the economy. And so as a result I  
25 wouldn't have calculated it even though my computer

1 would do it, I would just let the change occur in  
2 that initial year which people made the adjustment,  
3 and then that would be it. I would be done.

4 MR. YOUNG: I think I'll leave it  
5 there. Thank you.

6 MS. TIERNEY: One question real quick.  
7 Mr. Heaps, I think something I understood in that  
8 exchange was you're saying is the type of job loss,  
9 but there is no actual job loss.

10 THE WITNESS: There is a hypothetical  
11 job loss. Initially there are people that lose those  
12 jobs, and then they get employed somewhere else.

13 MS. TIERNEY: Right. So the type of  
14 job loss here would be fuel dealer, fuel delivery  
15 person.

16 THE WITNESS: Yes.

17 MS. TIERNEY: But there is no actual  
18 job loss because the fuel delivery person becomes  
19 unemployed in some other capacity; is that correct?

20 THE WITNESS: Well they do lose the job  
21 there. If they went to the door of the fuel oil  
22 dealer, there is no longer, you know, want to hire.

23 MS. TIERNEY: But they go on to get a  
24 job someplace else.

25 THE WITNESS: Someplace else.

1 MS. TIERNEY: That's why you say there  
2 has been no job loss.

3 THE WITNESS: No. There is a  
4 hypothetical job loss that would have continued on if  
5 the firm had continued on. But the people who lost  
6 jobs -- because remember our economic benefit is the  
7 Vermont residents. And I have to ask the question,  
8 in 20 -- pick some year down here, 2030 are there any  
9 Vermont residents who used to be delivery people for  
10 fuel oil dealers who are now harmed by this. And the  
11 answer is they have got other jobs. They are doing  
12 other things.

13 So you can't count those things on and  
14 on and on as if it's endless loss.

15 MS. TIERNEY: Okay. Thank you.

16 CHAIRMAN VOLZ: Any follow up to all of  
17 this? Any redirect?

18 MS. HAYDEN: No redirect.

19 CHAIRMAN VOLZ: We are going to take a  
20 15-minute break, and then when we come back we will  
21 talk to Mr. Sinclair.

22 (Recess was taken.)

23 CHAIRMAN VOLZ: Okay. Let's get  
24 started again. And I think I would like to talk  
25 about where we are and how late we will go.

1 We have got Mr. Sinclair up now, there  
2 is not too much for him as I see this. And then same  
3 thing with Mr. St. Hilaire. And then I would like to  
4 really try to be sure we try to start with Ms.  
5 Simollardes today, if possible. So we would stay on  
6 the schedule and finish tomorrow. Does anybody see a  
7 problem with that?

8 MS. HAYDEN: Just one concern that we  
9 have, we have not received cross examination exhibits  
10 for Ms. Simollardes from the Palmers.

11 CHAIRMAN VOLZ: Okay.

12 MS. HAYDEN: So we have had this  
13 conversation. We need to have those in advance of  
14 her cross by the --

15 CHAIRMAN VOLZ: Okay.

16 MS. HAYDEN: -- by Mr. Grayck. But  
17 there are others that are --

18 CHAIRMAN VOLZ: Mr. Dumont is ready to  
19 proceed, right?

20 MR. DUMONT: Yes.

21 CHAIRMAN VOLZ: So I don't expect we  
22 would finish her today.

23 MR. GRAYCK: Ms. Hayden has expressed  
24 her concern to me, and I indicated that we were  
25 preparing it. And it was also our expectation that

1 we would be having our opportunity tomorrow. And I  
2 understand that things need to be ready when it's our  
3 turn, and if not, we will be told.

4 CHAIRMAN VOLZ: Okay.

5 MS. PORTER: So Chairman Volz, what is  
6 your estimated stop time if you have one?

7 CHAIRMAN VOLZ: I'm willing to go past  
8 5. We will stop by 6 for sure I think.

9 MR. DUMONT: I don't think I'm going to  
10 take my allotted time for Ms. Simollardes.

11 CHAIRMAN VOLZ: All right. Then we may  
12 end early if Mr. Grayck isn't ready to do her. Then  
13 we will start tomorrow with him cross examining Ms.  
14 Simollardes. But let's see how far we get.

15 MR. DUMONT: I wanted to move some  
16 exhibits from Mr. Heaps' cross examination.

17 CHAIRMAN VOLZ: Okay.

18 MR. DUMONT: I wanted to move first of  
19 all exhibit 39. I don't know what the Board's  
20 position is about testimony in the same case that was  
21 already admitted whether I need to move it or not.  
22 It's the same Docket.

23 CHAIRMAN VOLZ: You don't need to move  
24 it. It's already in the record.

25 MR. DUMONT: So I won't move exhibit

1 39. Same with Exhibit 40. It's the testimony in the  
2 same case of Mr. Kumar.

3 Exhibit 2 was the Moody's exhibit from  
4 February of 2015. I would move Exhibit 2.

5 CHAIRMAN VOLZ: Any objection?

6 MS. HAYDEN: No objection.

7 MS. PORTER: No.

8 CHAIRMAN VOLZ: It's admitted.

9 (Exhibit AARP-Cross-2 was  
10 admitted into the record.)

11 MR. DUMONT: Exhibit 31 is the EIA  
12 report that goes out to 2030.

13 CHAIRMAN VOLZ: Any objection?

14 MS. HAYDEN: I don't believe you asked  
15 Mr. Heaps any questions about this.

16 MR. DUMONT: I thought I did.

17 CHAIRMAN VOLZ: You skipped a couple  
18 because he didn't recognize them and hadn't received  
19 them. I don't know if this is one of them.

20 MR. DUMONT: He was familiar with EIA.  
21 It was the other ones that I skipped over.

22 MS. HAYDEN: There were no questions  
23 based on my notes regarding Exhibit 31 which is table  
24 A12 Petroleum and Other Liquid Prices, so there is  
25 natural gas is not -- I just -- he was not asked any

1 questions on this.

2 MR. DUMONT: I asked him whether the  
3 EIA was predicting that prices would reach a hundred  
4 dollars a barrel around 2030, and he said yes.

5 MS. HAYDEN: Okay.

6 CHAIRMAN VOLZ: Any objection  
7 otherwise?

8 MS. HAYDEN: No objection otherwise.

9 CHAIRMAN VOLZ: Then it's admitted.  
10 (Exhibit AARP-Cross-31 was  
11 admitted into the record.)

12 MR. DUMONT: We went through Exhibit 32  
13 which was the Goldman Sachs' prediction. I'll move  
14 Exhibit 32.

15 CHAIRMAN VOLZ: Any objection?

16 MS. HAYDEN: No objection.

17 CHAIRMAN VOLZ: Admitted.

18 (Exhibit AARP-Cross-32 was  
19 admitted into the record.)

20 MR. DUMONT: That's it.

21 CHAIRMAN VOLZ: Okay. Thank you.  
22 Okay. So I think we are ready for cross for Mr.  
23 Sinclair.

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JAMES SINCLAIR

Having been duly sworn, testified  
as follows:

THE WITNESS: I do.

MS. HAYDEN: The witness is available  
for cross examination.

CHAIRMAN VOLZ: Mr. Dumont.

MR. DUMONT: No questions.

CHAIRMAN VOLZ: Oh, that's right. Mr.  
Grayck?

CROSS EXAMINATION

BY MR. GRAYCK:

Q. Good afternoon, Mr. Sinclair.

A. Afternoon, Mr. Grayck.

Q. Mr. Sinclair, my understanding is that prior  
to July 2, 2014, you would have reviewed and approved the  
current cost estimates; is that correct?

A. I'm going to help you a little bit and just  
give you a little time line.

Q. Please.

A. I joined Vermont Gas in March of 2014 as Vice  
President of sales and marketing. And in the July time  
frame of 2014 I was -- I joined what's called the  
Executive Steering Committee overseeing the project. So  
that time frame, and then I assumed what's called

1 executive sponsor role on behalf of Vermont Gas for the  
2 project in, I think it was middle third week of September  
3 of 2014. So just to help give you a frame of reference.

4 Q. Sure. My understanding is that there was an  
5 October 7, 2014 quarterly cost estimate.

6 A. Okay.

7 Q. Are you aware of that?

8 A. I should be familiar with it. I do not have  
9 that with me.

10 Q. Do you know who would have provided review and  
11 approval of the October 7, 2014 quarterly cost estimate?

12 A. If you could show me that, I could confirm  
13 that for you. I apologize.

14 Q. Let's see if I can do that.

15 MS. M. PEYSER: It's been admitted  
16 already in this Docket, hasn't it?

17 CHAIRMAN VOLZ: Which document is it?  
18 We could check to see if it's admitted.

19 MR. GRAYCK: My understanding is it was  
20 a document that VGS would have produced and provided,  
21 and that it's part of this proceeding.

22 MS. HAYDEN: If I can clarify, it's  
23 not. It's a quarterly cost update that was submitted  
24 on October 7, there was --

25 CHAIRMAN VOLZ: Submitted to who?

1 MS. HAYDEN: Submitted to the Public  
2 Service Board.

3 MS. PORTER: And the Department.

4 MS. HAYDEN: And the Department. The  
5 quarterly cost update for April 2015 was an exhibit  
6 to Mr. Roam's rebuttal testimony.

7 CHAIRMAN VOLZ: So they have been filed  
8 with the Board, but they are not in evidence. So you  
9 need -- do you want to have them in evidence? You  
10 need to move them into evidence. Okay. The January  
11 and the April, 2014 ones are in evidence if that's  
12 helpful.

13 MR. GRAYCK: Thank you.

14 CHAIRMAN VOLZ: '15, excuse me.  
15 January and April, '15.

16 BY MR. GRAYCK:

17 Q. So I don't have the exhibit, so I'll ask one  
18 or two more questions. So --

19 A. Sure.

20 Q. With respect to the October 7, 2014 quarterly  
21 estimate I believe your testimony -- you don't recollect  
22 it today?

23 A. I'm sorry, recollect that document?

24 Q. You don't?

25 A. I don't recollect -- without seeing that

1 document, I really do need to see that. There is many  
2 filings that we have made, and I'm sorry, but it would be  
3 helpful to have the document.

4 Q. Would VGS be able to provide a copy to the  
5 witness? Do you have it with you today?

6 MS. HAYDEN: I have a copy. I'm not--  
7 the scope of Mr. Sinclair's testimony relates to the  
8 current cost estimate. We have one copy with us. I  
9 don't have an extra copy.

10 CHAIRMAN VOLZ: Could the witness just  
11 look at it?

12 (Handing document)

13 MR. GRAYCK: I really just want him to  
14 look at it and refresh his memory. That's all I'm  
15 asking.

16 THE WITNESS: Bear with me for a  
17 moment.

18 BY MR. GRAYCK:

19 Q. Please, take your time.

20 A. Okay. I've reviewed it.

21 Q. All right. Do you know who would have  
22 reviewed and approved that quarterly estimate, the October  
23 7, 2014 quarterly estimate?

24 A. I would have been involved in the review and  
25 approval of this quarterly estimate.

1 Q. Okay. When you say involved, does that mean  
2 that you were the person with final authority to review  
3 and approve, or was it a number of individuals?

4 A. I'm just thinking back to the process we were  
5 using at that time. I apologize.

6 Q. Sure. No problem.

7 A. I would say at that point in time it did not  
8 get submitted without my approval.

9 Q. Thank you very much. I have no further  
10 questions.

11 CHAIRMAN VOLZ: Thank you. Ms. Levine,  
12 do you have questions?

13 MS. LEVINE: Yes.

14 CHAIRMAN VOLZ: Okay. If you can get  
15 hold of the mic.

16 THE WITNESS: You're getting good at  
17 it.

18 CROSS EXAMINATION

19 BY MS. LEVINE:

20 Q. Good afternoon, Mr. Sinclair.

21 A. Good afternoon.

22 Q. Do you have a copy of your testimony in front  
23 of you?

24 A. I do.

25 Q. Thank you. Regarding your testimony from

1 January, 2015 at page three, you provide a summary of the  
2 analysis offered in support of the December phase one cost  
3 estimate; is that correct?

4 A. Correct.

5 Q. And you did not yourself conduct any  
6 independent analysis regarding that cost estimate; is that  
7 correct?

8 A. That is correct.

9 Q. And regarding your -- again your January 15  
10 testimony, on page four, you discuss customer fuel  
11 choices. Do you see that?

12 A. Bear with me. Could you give me a line?

13 Q. I think it's lines 15 to 16.

14 A. Let me just read that, please. Okay.

15 Q. And you agree that your comparison is only  
16 between natural gas and oil or propane; is that correct?

17 A. I do agree.

18 Q. Okay. And prior to working at Vermont Gas  
19 Systems you were a communications manager for Entergy  
20 Corporation; is that correct?

21 A. That's correct.

22 Q. And was that position based in Vermont?

23 A. Actually it was based at my home believe it or  
24 not in Western Massachusetts. I was covering a very broad  
25 area for them including Massachusetts, Vermont and into

1 New York State.

2 Q. And in that position did you have any  
3 oversight or responsibilities for Entergy's cost estimates  
4 regarding the Vermont Yankee facility?

5 A. I did not.

6 Q. And Mr. Grayck just asked you some questions  
7 regarding the October 7, 2014 quarterly cost estimate?

8 A. Yes.

9 MS. LEVINE: I don't have that with me.  
10 I think it would be helpful for that to be included  
11 in the record. Could I bring a copy tomorrow and  
12 offer it as evidence? I just don't have it with me.  
13 But I think his testimony is kind of left hanging out  
14 there without that document.

15 CHAIRMAN VOLZ: Any objection to  
16 proceeding that way?

17 MS. HAYDEN: We don't have an objection  
18 to the document being included in the record.

19 CHAIRMAN VOLZ: Okay.

20 MS. HAYDEN: I guess I'm not clear  
21 whether there is going to be follow-up questions.  
22 Mr. Sinclair is expected to be done today.

23 CHAIRMAN VOLZ: Did you want him to be  
24 here tomorrow?

25 MS. LEVINE: No. I just wanted that

1 document to be admitted into evidence, and I don't  
2 have it with me, and I can't offer it.

3 CHAIRMAN VOLZ: Admit it tomorrow  
4 morning.

5 MS. HAYDEN: That's fine.

6 MS. LEVINE: Thank you. That's all I  
7 have.

8 THE WITNESS: Thank you.

9 MS. CHENEY: So you reminded us when  
10 you joined Vermont Gas Systems, and it coincides with  
11 the decision at some point relative to the third cost  
12 estimate to switch the methodology to those standards  
13 established by the Association for the Advancement of  
14 Cost Engineering or ACE?

15 THE WITNESS: Correct.

16 MS. CHENEY: Which of course resulted  
17 in the December 2014, the most recent cost estimate.  
18 Was that coincidental with your arrival, or were you  
19 instrumental in making that decision --

20 THE WITNESS: I would say --

21 MS. CHENEY: -- to change.

22 THE WITNESS: I would say as a member  
23 of the Steering Committee overseeing the project in  
24 the July, August time frame, and discussions that we  
25 had, it certainly was something we were looking at to

1 see if that was warranted and what additional value,  
2 if you will, that would add.

3 And then the decision was made by  
4 former CEO Gilbert with respect to actually going  
5 forward with that approach.

6 MS. CHENEY: And can you say why that  
7 switch was made?

8 THE WITNESS: I think my understanding  
9 at the time is it reflects if you read -- I was here  
10 for remand testimony, and his testimony was that any  
11 future reestimating we would do would employ that  
12 type of a methodology, meaning ACE. And I as the  
13 incoming person responsible for the project at the  
14 executive level, am familiar with that process in my  
15 prior life with Kinder Morgan, so I felt that that --  
16 having familiarity with that, that certainly  
17 resonated with me as an approach that has a lot of  
18 proven time, if you will, at least with Kinder Morgan  
19 as the methodology that they used.

20 MS. CHENEY: Thank you.

21 CHAIRMAN VOLZ: Any follow up? Okay.  
22 Thank you, Mr. Sinclair.

23 THE WITNESS: Thank you.

24 CHAIRMAN VOLZ: I think we are ready  
25 for the next witness.

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MS. CHENEY: Good afternoon.

MR. ST. HILAIRE: Good afternoon.

1 JOHN ST. HILAIRE

2 Having been duly sworn, testified  
3 as follows:

4 THE WITNESS: Yes.

5 MS. HAYDEN: The witness is free to be  
6 cross-examined.

7 CHAIRMAN VOLZ: Thanks. Mr. Grayck, do  
8 you have questions?

9 MR. GRAYCK: I apologize. I should  
10 have notified you earlier. Based upon what we have  
11 heard so far, we don't have any cross examination, so  
12 I regret on having had the witness make his way to  
13 the chair.

14 CHAIRMAN VOLZ: That's all right. Ms.  
15 Levine, you don't have any either?

16 MS. LEVINE: No.

17 CHAIRMAN VOLZ: We have some, so don't  
18 worry about it.

19 MR. TOUSLEY: Hi, Mr. St. Hilaire. I'm  
20 Mike Tousley.

21 THE WITNESS: Hi Mike.

22 MR. TOUSLEY: At page three of your  
23 testimony, in lines one through seven, you state  
24 that: To reduce the impact of the TransCanada  
25 pipeline tolls, in 2007 VGS initiated the shift in

1 supply purchasing away from the Empress receipt point  
2 in western Canada to the Dawn/Parkway markets in  
3 Ontario, and that this shift will reduce delivered  
4 cost of gas to Vermont.

5 Please explain why this shift will  
6 reduce the delivered cost of gas to Vermont, and the  
7 degree to which, if at all, the shift has reduced the  
8 delivered cost of gas to Vermont since the shift was  
9 initiated in 2007.

10 THE WITNESS: To start with, the  
11 TransCanada tolling is based on a mileage component.  
12 So the farther you're moving natural gas on the  
13 system, the higher the toll. So moving from the  
14 Empress which is out on eastern -- at the Alberta  
15 border to Vermont is going to be at a higher toll  
16 than going from the Dawn/Parkway which is around the  
17 Great Lakes or Toronto area.

18 So by moving from the -- from a shorter  
19 distance you're actually reducing your TransCanada  
20 toll. The actual impact is actually two components.  
21 One is a TransCanada toll, the other is the  
22 commodity. It's actually the combination of the two.  
23 And over the last several years the combination of  
24 the two provided the Parkway point actually has a  
25 lower toll, in total, than the Empress point. So

1 that's why we have been migrating that service over  
2 to short haul. The impact is actually reflected in a  
3 number of our PGA adjustments over the years. I  
4 don't have an exact number, but when you look at the  
5 PGAs over the last several years --

6 MR. TOUSLEY: PGAs purchases?

7 THE WITNESS: -- purchased gas  
8 adjustment, it's a regulatory mechanism to pass along  
9 gas cost, and we have had several rate decreases over  
10 the last several years, and that impact has been  
11 reflected in those.

12 MR. TOUSLEY: Okay. Can you monetize  
13 what those advantages have been?

14 THE WITNESS: I would have to go back  
15 to calculate that. Right at this moment I do not  
16 have those.

17 MR. TOUSLEY: Okay. If VGS is still  
18 buying Canadian gas wouldn't the price of the  
19 Dawn/Parkway reflect the seller's cost of getting the  
20 gas to that point?

21 THE WITNESS: That's correct.

22 MR. TOUSLEY: So would that include the  
23 TransCanada pipeline tolls?

24 THE WITNESS: Not necessarily. The  
25 Dawn/Parkway has been -- first off, it's the most

1 liquid point in the eastern Canadian market, and what  
2 we have seen over the last, I'll say five to 10  
3 years, is more supply coming in from the Rockies,  
4 from the Marcellus. It's not strictly a cost of  
5 Empress-based supply plus TransCanada tolls. It's a  
6 combination of many different supply bases coming  
7 together in one market.

8 MR. TOUSLEY: Further down on page  
9 three at lines 13 to 19 you respond to the concerns  
10 articulated in Ms. Peyser's testimony that changes in  
11 the TransCanada pipeline policy and tariffs threaten  
12 capacity in Vermont by stating that VGS has secured  
13 6,000 gigajoules per day of TransCanada capacity  
14 starting in 2016, and an additional 10,000 gigajoules  
15 per day starting in 2017, and that this will be  
16 adequate to serve firm and interruptible markets for  
17 several years after expansion of the VGS transmission  
18 pipeline system. Why are these amounts adequate?

19 THE WITNESS: When we contract on a  
20 TransCanada system we are looking at our firm market  
21 requirements and looking to serve existing and  
22 projected firm loads based on the coldest day that we  
23 think we are going to have to serve, which is what we  
24 consider our design day. So as we are looking out in  
25 the TransCanada open season to secure capacity we

1 want to look out and say what's the worst case  
2 scenario that's based on historical day, and we want  
3 to secure enough capacity to make sure that we can  
4 serve those customers. Any demand that's on -- above  
5 that, will be used to serve our -- any demand on  
6 Vermont Gas's system that's above that level would be  
7 attributed to an interruptible customer where we  
8 could actually curtail their load, and they would  
9 move to an alternate fuel.

10 MR. TOUSLEY: Okay. So what is the  
11 average -- the average gigajoule per day requirement  
12 on an average day, or on a peak day?

13 THE WITNESS: It's all weather  
14 dependent. Everything is -- most of our customers  
15 are residential, and when it gets cold out they use  
16 more natural gas. On a typical -- I'm just -- a  
17 design day is somewhere right now around 75,000 MCF.  
18 On an average winter day, again I'm just going on my  
19 recollection, is probably around 60 to 65,000.

20 MR. TOUSLEY: Okay. I think I'm going  
21 to ask you to come back with an answer on this in  
22 gigajoules because that's what your testimony is in.  
23 And to verify specifically the data request is for  
24 the current gigajoules per day requirements on an  
25 average day and on a peak day, currently. And then

1 what is projected as the gigajoules per day  
2 requirements after the completion should the project  
3 continue to Middlebury on an average day and on a  
4 weekday?

5 THE WITNESS: We can get that.

6 MR. TOUSLEY: Thank you. Do you -- Ms.  
7 Peyser also refers to the possibility of a general  
8 shortage of capacity on the TransCanada pipeline. To  
9 your knowledge are other companies concerned about  
10 available capacity?

11 THE WITNESS: I think that when you  
12 look at the -- any transportation market when you  
13 look out in the future you're always worried about  
14 having enough to meet your growth. I think the  
15 situation that Mrs. Peyser referred to was prior to  
16 the RH 2014 decision, where there was more  
17 uncertainty on the TransCanada market of whether  
18 TransCanada would actually install and award new  
19 capacity.

20 So I think there is naturally an  
21 uncertainty when you're looking at transportation  
22 capacity, but I think that the issue that Mrs. Peyser  
23 noted is no longer there.

24 MR. TOUSLEY: Well wasn't part of the  
25 concern the fact that TransCanada pipeline folks are

1 talking about converting part of the pipeline to  
2 shipping oil?

3 THE WITNESS: That's correct. That was  
4 the Energy East project. And the concern with that  
5 one was many companies would utilize interruptible  
6 service on TransCanada, and which means that you  
7 would go out on the day or the month when you needed  
8 the capacity, and you would contract for that.

9 TransCanada, when they are doing their  
10 toll setting, they are looking out over the next year  
11 or two, and looking at the firm contracts, and that's  
12 what they are constructing for. So when they were  
13 looking out and designing the Energy East project,  
14 they were looking at capacity that no one was  
15 contracted for out year two, three or four and saying  
16 if no one is contracting for it, why don't I use that  
17 in some other manner that would actually help  
18 existing shippers. So if you're using interruptible  
19 transportation on TransCanada, then that was at risk.  
20 Vermont Gas does not use that service. We use a  
21 hundred percent firm transportation on TransCanada.

22 MR. TOUSLEY: Thank you. Later on in  
23 your testimony you talk about Mr. Palmer's safety  
24 concerns related to frost heave that are discussed in  
25 the January 2015 Pipeline and Gas Journal.

1 Specifically Mr. Palmer refers to figure five of that  
2 article, which presents a chart of the rate of cold  
3 weather incidents normalized by mileage in which Mr.  
4 Palmer characterizes as off the charts at 25.8  
5 relative rate of occurrence normalized for mileage  
6 for Vermont. Is this familiar to you?

7 THE WITNESS: Yes, it is.

8 MR. TOUSLEY: Is it your testimony that  
9 the Vermont data that resulted in this off-the-charts  
10 graphic is derived from only two incidents; one in  
11 1989 and one in 2003?

12 THE WITNESS: That's correct.

13 MR. TOUSLEY: And that would be --  
14 other than determining that there were only these two  
15 incidents due to cold weather events in the last 45  
16 years, have you otherwise investigated to determine  
17 the source of that data? Did you do more looking  
18 than finding out there was just the two?

19 THE WITNESS: Yes. Actually -- I  
20 actually contacted the author of the article and  
21 discussed a little bit of methodology and how he came  
22 up with the output in this article and the chart.

23 MR. TOUSLEY: What did he tell you if  
24 you remember?

25 THE WITNESS: He actually said that if

1 -- one of the issues that we have is for a very small  
2 LDC. And he said that Hawaii had one incident. We  
3 would actually look much better than Hawaii.

4 MR. TOUSLEY: So it's because of the  
5 mileage issue.

6 THE WITNESS: Yes.

7 MR. TOUSLEY: So you are only aware of  
8 the two cold weather incidents that have occurred in  
9 Vermont?

10 THE WITNESS: That's correct. That's  
11 all we have. We went back to our records back to  
12 1970, and we only confirmed two. We only found two.

13 MR. TOUSLEY: One of the things that  
14 Mr. Palmer alluded to is the fact that soil  
15 conditions are different in Addison County materially  
16 from in Chittenden and Franklin counties.

17 Does your examination point to any  
18 conclusions in that regard? I know you looked at his  
19 -- you responded to his testimony. Did you respond  
20 to that issue?

21 THE WITNESS: No. I did not.

22 MR. TOUSLEY: Okay. Do you think that  
23 frost heave incidents are more of a safety issue or  
24 are they an environmental issue?

25 THE WITNESS: I'm not sure that I

1 understand the question.

2 MR. TOUSLEY: Okay. Thank you.

3 MS. CHENEY: I would like to follow up  
4 on that. I would understand the question in terms of  
5 the environmental have to be relating to leakage of  
6 methane or other things that can, you know, that  
7 contribute to global warming.

8 Could you answer the question that --  
9 with that in mind?

10 THE WITNESS: Yeah. In that regard,  
11 the -- what I'll say is that frost heaves are a  
12 concern for any below-ground installation, and as the  
13 author noted in here, if you have a strong connection  
14 between components and ductile material, it actually  
15 is able to withstand the stresses of frost, and the  
16 current code DOT recommends or dictates 36 inches of  
17 cover. So as long as the pipe is buried to code in  
18 our experience with our current system is that  
19 having, you know, a strong ductile system there is  
20 less of a risk of frost incidents.

21 MS. CHENEY: In your testimony May 27  
22 on page five line 10 you say that VGS will utilize  
23 high-density polyethylene and a fusing process to  
24 connect distribution components to ensure ductile and  
25 continuous system.

1                   And but then in the next sentence I'm  
2 wondering if you could explain this, you say that all  
3 steel pipe sections shall be welded. So is only some  
4 of it polyethylene and other parts steel, or is it at  
5 the intersections? I don't really understand why  
6 you're mentioning steel if we -- you also say that  
7 you'll be utilizing polyethylene.

8                   THE WITNESS: In the project the ERNGP  
9 distribution system will be a hundred percent  
10 polyethylene. The only areas where we will be using  
11 steel is there is large industrial customer meter  
12 sets we will have a steel riser, but essentially the  
13 proposed distribution system would be all high-  
14 density polyethylene.

15                   In our current system in many  
16 communities such as Burlington, St. Albans, Milton,  
17 we have systems that were put in the '70s and '80s  
18 that were steel. So on a current system we have  
19 steel, but in the new system it will be poly -- high  
20 density polyethylene.

21                   MS. CHENEY: Thank you.

22                   CHAIRMAN VOLZ: Anything else up here?  
23 Any follow up to our questions? Any redirect?

24                   MS. HAYDEN: Yes, I'm just thinking  
25 about the last -- I just want to make sure that the

1 record is accurate in terms of the steel -- portion  
2 of the project that is steel.

3 REDIRECT EXAMINATION

4 BY MS. HAYDEN:

5 Q. Is there any portion on the transmission  
6 system that is steel?

7 A. Yes. It's a good point. The transmission  
8 line it would be a hundred percent steel. What I was  
9 referencing was specifically the distribution, the  
10 transmission line is steel. No polyethylene -- high-  
11 density polyethylene.

12 Q. Okay. Does that change any portion of the  
13 question that Ms. Cheney asked you concerning the safety  
14 of the project or the project's compliance with code?

15 A. No. It does not.

16 MS. HAYDEN: I have nothing further.

17 MR. TOUSLEY: Just to make sure I  
18 understand what you just testified to. So what  
19 you're saying is that generally the transmission  
20 pipeline will be steel, but when you talked about  
21 polyethylene, high-density polyethylene on page five  
22 you were talking about elements of the distribution  
23 system that might be prone to potential for frost  
24 heave.

25 THE WITNESS: That's correct. The

1 article in reference to -- is dealing with  
2 distribution systems and not transmission systems.

3 MR. TOUSLEY: Thank you.

4 CHAIRMAN VOLZ: Any follow up? Okay.  
5 Thank you, Mr. St. Hilaire. I think we are ready for  
6 our next witness.

7 MS. CHENEY: I'm just reminding Ms.  
8 Simollardes that you remain under oath.

9 MS. SIMOLLARDES: Thank you.

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1 EILEEN SIMOLLARDES

2 Having been duly sworn, testified  
3 as follows:

4 CHAIRMAN VOLZ: Are you ready?

5 MS. HAYDEN: We are ready. The witness  
6 is available.

7 CHAIRMAN VOLZ: I think, Mr. Dumont,  
8 you have questions.

9 MR. DUMONT: I do.

10 CHAIRMAN VOLZ: Okay.

11 CROSS EXAMINATION

12 BY MR. DUMONT:

13 Q. Good afternoon.

14 A. Good afternoon.

15 Q. I would like to start with a question about  
16 your background. I understand you have a bachelor's  
17 degree in economics?

18 A. I do.

19 Q. No advanced degrees?

20 A. I have a Master's in business administration  
21 from St. Michael's College.

22 Q. Do you have any formal education in NPV  
23 analysis?

24 A. I've used NPV analysis throughout my  
25 professional career, and I'm sure it was covered in some

1 of my course work either in my undergrad or my Master's  
2 program.

3 Q. So you have been doing NPV analysis since  
4 when?

5 A. I have been doing regulated rate work since  
6 the -- rude question, since the -- probably late '80s.  
7 And most of that work would have entailed at some degree,  
8 some level of NPV analysis.

9 Q. Have you received any formal education in  
10 using the REMI or REDYNE model?

11 A. No. I have not used those models.

12 Q. So in your testimony in this matter you have  
13 not used -- personally used REMI or REDYNE?

14 A. No, I have not.

15 Q. So when you do NPV analysis is it basically  
16 spreadsheet analysis?

17 A. Correct.

18 Q. If you could turn to our book of exhibits,  
19 cross exhibits.

20 A. Which I failed to bring up with me. It's  
21 sitting right there. Thank you.

22 Q. Quite a few exhibits to go through with you.  
23 First if you could look at Exhibit 3 and Exhibit 6.

24 A. I have them.

25 Q. Okay. So in Exhibit 3 it's DPS VGS 1-1. You

1 were asked in question B, as in baby, what is the net  
2 present value 20 years of project costs that ratepayers  
3 could be responsible for under the new cost estimate. And  
4 did you answer: We have not calculated the NPV value of  
5 the range of potential rate impacts that ratepayers could  
6 be responsible for.

7 A. That's what that response says. Yes.

8 Q. And is that still true?

9 A. Correct. The operative word there was that  
10 ratepayers could be responsible for under the new  
11 estimate. And my response was we have not calculated the  
12 NPV value of the range of potential rate impacts that  
13 ratepayers could be responsible for.

14 Q. So you don't know the low end bracket, and we  
15 don't know the high end bracket; correct?

16 A. The low end bracket would be zero. And the  
17 high end bracket, no, I don't know.

18 Q. Exhibit 6. You were asked: Please provide in  
19 native format all workbooks used to calculate rate impact  
20 of the project. And you answered: See attachments, et  
21 cetera. And then you added: Please note that the rate  
22 impacts shown in these attachments are not included in the  
23 economic benefit analyses. Did I read that correctly?

24 A. Yes.

25 Q. So as of when you answered this on April 22,

1 2015 the company had conducted no economic analyses of the  
2 rate impacts; correct?

3 A. No, I don't think that that is actually  
4 correct. My exhibit to my January 15, 2015 prefiled  
5 testimony was a replication of an analysis that the Board  
6 had asked Vermont Gas to conduct both in the initial phase  
7 of this proceeding and in the first remand. And walking  
8 through that there are, in fact, expressions of potential  
9 rate impact, and they were in fact replicated at this  
10 level.

11 The point here was this is not a rate  
12 proposal. It was a replication of a prior analysis using  
13 the current cost estimates that we have before us in this  
14 proceeding.

15 Q. I'm sure my question was faulty, so let me  
16 start over. I'm asking about economic benefit analysis.  
17 As of April 22, the company had performed no economic  
18 benefit analysis that included rate impacts; correct?

19 A. I don't mean to be difficult in answering  
20 this.

21 Q. Yes, you do.

22 A. Only if you're meaning to be difficult in  
23 asking it. No. The analysis that I did in my March 27th  
24 testimony, deducted from the economic benefits of the  
25 project the total project cost, which has some degree of

1 rate impact in it because those are dollars that will  
2 ultimately be recovered from ratepayers.

3 So I know you're looking for a yes or no  
4 answer, and I just don't think I can give you one.

5 Q. You had testified on behalf of the company in  
6 the proceedings leading up to the December 23, 2013 order;  
7 correct?

8 A. I did.

9 Q. Would it be fair to say that you coordinated  
10 the witnesses?

11 A. I'm not sure I understand the question.

12 Q. Okay. I'll ask a different question. You  
13 were fully aware of what the other witnesses testified to;  
14 correct?

15 A. That's correct.

16 Q. And Mr. Carr did an economic benefit analysis  
17 that did include rate impacts; correct?

18 A. Yes, he did.

19 Q. So if we used the term economic benefit  
20 analysis as including REMI or REDYNE or IMPLAN or some  
21 other computer program that is designed to look at  
22 societal economic benefits, as of April 22 the company had  
23 not performed such an analysis that considered rate  
24 impact; correct? Of the new project?

25 A. At the 153.6 we did not do the same type of

1 analysis that had been done before, but I think it's very  
2 important to point out that there is not a how-to manual  
3 or a cookbook that the Public Service Board or the State  
4 of Vermont uses for economic benefit, which is why you  
5 have several people in this proceeding that have  
6 independently calculated economic benefits. They have  
7 come up with different numbers but have determined that  
8 there is an economic benefit of the project.

9 Mr. Carr was an independent witness. The  
10 company did not direct his testimony or his analysis about  
11 how to do the analysis. I did not do it this way this  
12 time.

13 Q. Was it your decision, Ms. Simollardes, not to  
14 include that analysis that addressed the cost increases?

15 A. I am the Vermont Gas witness speaking to  
16 economic benefits of this project with the support of Mr.  
17 Heaps on construction-related benefits, and Mr. Goldstein  
18 on the quantification of greenhouse gas emissions.

19 When we submitted a cost estimate on December  
20 19, we turned around very quickly on January 15 with  
21 testimony in this case. And I did the analysis that you  
22 see there. In the supplemental testimony that I did in  
23 March, I used the Board's remand order in this case as a  
24 guide for what the Board had considered the first time  
25 around, and I replicated that here.

1 Q. My question was who made the decision not to  
2 submit to the Board economic analysis using REMI, REDYNE  
3 or some other similar program that included rate impact  
4 analysis?

5 A. That implies there was a decision made not to  
6 do that, where in fact the decision was in the positive.  
7 We decided what to do. You're not going to find something  
8 where we said we are not going to do that. Instead I used  
9 the Board's order from the first remand as a model for  
10 what they were looking for at that time. And I replicated  
11 it here.

12 Q. Did you call Mr. Carr and see if he was  
13 available?

14 A. I did not. Because for two reasons. One, Mr.  
15 Heaps was our witness in phase two. And phase two was a  
16 going concern at that time. And I didn't want dueling  
17 economic witnesses. And frankly, I said it before, Mr.  
18 Carr was an independent witness and there were aspects of  
19 Mr. Carr's testimony I didn't agree with.

20 Q. Isn't that the point?

21 A. Not as my choice of who to hire next time.

22 Q. So you selected witnesses according to the  
23 results that you agreed with or you did not agree with?

24 A. No. Mr. Carr was not our witness in phase  
25 two. I did not want dueling economists, if you will. I

1 don't know that they would have come to different  
2 conclusions, but there were parts of Mr. Carr's testimony  
3 for mostly around conversion costs, it was just -- I  
4 didn't agree with his calculation.

5 Q. What expertise, education, training do you  
6 have to base your disagreement with Mr. Carr?

7 A. I work for the gas company. And we have  
8 experience in customer conversion costs.

9 Q. So you agreed with the methodology used by Mr.  
10 Heaps?

11 A. Mr. Heaps did a very narrow analysis for us.  
12 He did construction-related benefits.

13 Q. Did you agree with his methodology?

14 A. I didn't critique Mr. Heaps' methodology. I  
15 said a moment ago I'm not familiar with the REDYNE or REMI  
16 model. I really wouldn't have the ability to critique Mr.  
17 Heaps' model.

18 Q. Well you said you didn't agree with what Mr.  
19 Carr did.

20 A. I didn't agree with an input to the model.  
21 The conversion cost input to the model.

22 Q. You did not agree with the inputs he used, so  
23 you felt you had the expertise to evaluate the job that he  
24 did; correct?

25 A. No. I didn't say that either. I said I

1 disagreed with an input in his model.

2 Q. Because you disagreed with the way a  
3 professional economist inputted data into a model that you  
4 don't know how to use, you decided not to use him again in  
5 the next case. Is that what you're telling us?

6 A. No. What I'm saying is I had Mr. Heaps as my  
7 witness in phase two. And I wanted the same witness for  
8 concurrent proceedings.

9 Q. Have you had any training in how to use the  
10 REMI model?

11 A. None.

12 Q. Have you had any training on how to use the  
13 REDYNE model?

14 A. None.

15 Q. But you were sure he had made incorrect  
16 inputs?

17 A. It was an input on the total amount of  
18 conversion cost per customer. And I didn't say he was  
19 wrong. I said I disagreed with it.

20 Q. So you didn't call him when it came time to  
21 address the economic benefit or economic benefit analysis  
22 of the project at the new cost?

23 A. I did not.

24 Q. If you could turn to exhibit Cross Exhibit 4.  
25 This was a discovery answer to the Department question.

1 Does the Addison County energy savings estimated on page  
2 three of Ms. Simollardes' testimony include costs  
3 associated with conversion to natural gas that was borne  
4 by customers. The answer was no, those are direct energy  
5 savings and do not include conversion costs.

6 Did I read that correctly?

7 A. You did.

8 Q. So the prefiled testimony on page three of  
9 energy savings did not take into account conversion costs?

10 A. It did not.

11 Q. If you turn to Exhibit 7, Cross 7. Again this  
12 is an answer to a Department discovery request.

13 A. I'm there.

14 Q. The question was: Please explain how VGS  
15 expects the costs of phase one to be allocated to each  
16 customer class, specifically how will the recovery through  
17 rates of phase one expenditures change the current  
18 allocation of costs between customer classes.

19 And answer: Please specify how infrastructure  
20 costs are distributed across customer classes in a before  
21 phase one scenario and how this compares with -- to an  
22 after phase one scenario.

23 And your answer was: Vermont Gas has not  
24 performed a cost allocation study to assess the allocation  
25 of phase one to each customer class, nor has it proposed a

1 specific rate proposal for the project. However,  
2 generally speaking in the absence of a cost allocation  
3 study any rate change would be implemented evenly across  
4 the board with each customer class increasing or  
5 decreasing by the same percentage. Did I read that  
6 correctly?

7 A. You did.

8 Q. Is that still -- is that the answer you would  
9 give today?

10 A. It is.

11 Q. I want to talk about customer -- about project  
12 costs. Now this is addressed by Exhibit 8. Exhibit 8 is  
13 DPS VGS 1-6. You were asked the revised cost estimate is  
14 stated to be approximately 153.6 million. Does this  
15 include distribution level investment. If not, what is  
16 the revised cost estimate for the distribution level  
17 investment necessary to provide service to customers.  
18 Will VGS ultimately request that this cost be borne by  
19 Vermont ratepayers.

20 Did you answer: The 153.6 million does not  
21 include the distribution mains within Vergennes and  
22 Middlebury. However, the economic analyses do include  
23 these investments. The distribution investments are soon  
24 to be 5.8 million plus 16 hundred dollars per service.  
25 VGS will request rate recovery of distribution costs.

1                   Did I read that correctly although too fast?

2           A.       You read it correctly.

3           Q.       So the total project cost is actually not  
4 153.6. It's 153.6 plus 5.8 million, in distribution  
5 investments plus 16 hundred dollars per service. And  
6 you're expecting over 3,000 service drops; correct?

7           A.       One moment please. That's correct. And that  
8 is actually shown on table two of my March 27 testimony.  
9 You'll see the total project cost including distribution  
10 network and service is 162 million, growing to 162.5  
11 million. And that represents the additional service cost  
12 as customers come on.

13          Q.       So the total project cost is over 162 million  
14 that you intend to recover from ratepayers; correct?

15          A.       Correct.

16          Q.       Okay. If you can turn to Cross 9. This  
17 refers to DPS -- this is DPS VGS 1-7. You were asked are  
18 there costs other than transmission estimated at 153.6  
19 million. And distribution construction costs associated  
20 with the project that Vermont Gas would seek recovery for  
21 in rates if the project was completed such as operations  
22 and maintenance not related to transmission and  
23 distribution investment service drops or other costs.

24                   And your answer was: Vermont Gas will request  
25 recovery of the costs required to provide safe and

1 reliable natural gas service to its customers. Vermont  
2 Gas has included an estimate of additional operations and  
3 maintenance costs in its analysis. And then you refer to  
4 Exhibit 1-1.1 and 1-1.2.

5 I'm wondering if you could either walk us  
6 through that or tell us what the operations and  
7 maintenance cost is that you will be asked -- you'll be  
8 asking to recover in rate base.

9 A. Those are actually two separate questions. I  
10 can tell you what we put in the analysis that is reflected  
11 in 1.1. Give me a moment to find it, but I believe it  
12 started at 500 thousand dollars and it escalated at  
13 inflation.

14 Q. That explains to about a million dollars a  
15 year; does it not?

16 A. It does. But the amount that we will reflect  
17 in rates or request to be reflected in rates subject to  
18 Public Service Board approval will be whatever the cost is  
19 that's necessary to provide safe and reliable natural gas  
20 service to our customers.

21 Q. A million dollars a year cumulative each year?

22 A. It's an ongoing maintenance expense. So it's  
23 not a million plus a million plus a million. It's  
24 \$500,000 a year escalated at inflation, is what was  
25 reflected in this model. What the cost that we will put

1 in rates or request to be recovered in rates will be what  
2 -- whatever is necessary to render safe and adequate  
3 service.

4 CHAIRMAN VOLZ: The reason you say it  
5 that way is because there might be offsetting savings  
6 that could cause it to be less than that number  
7 that's on that table, or there could be other reasons  
8 why it might be more?

9 THE WITNESS: That's correct. We don't  
10 have service down there yet. We made an estimate of  
11 a value for operation and maintenance. But what the  
12 actual costs will be will depend on our experience  
13 when we get there, what kind of synergies we can get  
14 from our existing customers, what kind of synergies  
15 we can get with other markets we are expanding into;  
16 Bristol, New Haven, Monkton.

17 This was a number that we used in an  
18 analysis. It's not a number that we are planning on  
19 reflecting in rates until we know what the costs are.

20 CHAIRMAN VOLZ: Okay.

21 MR. YOUNG: Just follow up. May I just  
22 -- so I understand you said this is on Exhibit 1-1.  
23 Or attachment --

24 THE WITNESS: It's on --

25 MR. DUMONT: It's a discovery exhibit.

1 THE WITNESS: No, it's actually shown  
2 in my exhibit. It's shown in my January 15  
3 testimony, it's the -- it's got a really long name.  
4 It's called Attachment Supp. 1, 1515 PSB VGS 1-1.  
5 That consists of -- these pages aren't numbered -- it  
6 looks like 10 pages, maybe a little less. You can  
7 see it on the first page of that exhibit. There is a  
8 line entitled O&M expense. And it starts at \$503,000  
9 and it escalates thereafter.

10 MR. YOUNG: Okay. That's what I wanted  
11 to make sure I understood. You started at 5,000 and  
12 escalated by inflation. The first couple years are  
13 escalating at something greater than inflation.

14 THE WITNESS: Greater than inflation, I  
15 just noticed that. I need to check what it's  
16 escalating at.

17 BY MR. DUMONT:

18 Q. The O&M expense by year 35 is 2.5 million?

19 A. Correct, on this exhibit. I'll check what  
20 it's escalating at.

21 Q. Are you doing that -- are you going to do that  
22 work later?

23 A. I don't have the --

24 Q. I thought you were trying to do that right  
25 now.

1           A.       No.   Sorry.

2           Q.       Sorry.  If you turn to Exhibit 10.  This is  
3   DPS question -- it's question 1-8.  It asks you for your  
4   analysis related to the greenhouse gas reductions of 27  
5   million in your prefiled testimony.  Do you see that?

6           A.       Yes.

7           Q.       And in your answer A, you wrote:  The  
8   greenhouse gas reductions assume that 70 percent of the  
9   residential and commercial load displaces number two fuel  
10  oil, and all the industrial load is replacing number two  
11  fuel oil except for one million gallons of propane.  Did I  
12  read that correctly?

13          A.       You did.

14          Q.       So the 27 million dollars that you attributed  
15  to greenhouse gas reductions, that assumes replacement of  
16  number two fuel oil; correct?  Except for a million  
17  dollars of propane?

18          A.       The greenhouse gas analysis only reflects the  
19  70 percent that's related to fuel oil.  We did not  
20  calculate or take any credit for greenhouse gas analysis  
21  -- greenhouse gas avoided emissions associated with  
22  propane.

23          Q.       So you assumed that the customers that are now  
24  being served by the so-called gas island in Middlebury for  
25  purposes of greenhouse gas analysis are being served by

1 fuel oil?

2 A. For purposes of this calculation, yes. That's  
3 what we did.

4 Q. And if you could turn to Exhibit 20. It's a  
5 Palmer VGS request to admit 1-13. You were asked to admit  
6 that VGS paid for the Middlebury gas island's associated  
7 distribution pipeline network. And your answer included  
8 the statement: The Middlebury gas island associated  
9 distribution network will be paid for over time and rates  
10 paid by Vermont Gas customers; correct?

11 A. That is Vermont Gas's expectation.

12 Q. So can you describe the gas island that's  
13 addressed in the answer to the Palmer request to admit?  
14 Tell us about it.

15 A. I will take you as far as I can. And then  
16 there may be others that are better versed in the details  
17 of the gas island. But there is a compressed natural gas  
18 skid, I'll call a decompression station, located at  
19 Argi-Mark, then the gas comes out of that CNG  
20 decompression skid, and it goes into a preliminary  
21 distribution network that runs from Argi-Mark to  
22 Middlebury College.

23 And off of that as we sit here right now,  
24 Argi-Mark, Middlebury College, and Vermont Cider are  
25 actually -- I'm not sure if Vermont Cider is actually

1 burning as we speak, but are expected to take gas service  
2 off of that energy island.

3 Q. Turn to Exhibit 27. This is in answer to the  
4 CLF question 1-8. This may be in evidence already. You  
5 were asked to identify all analysis and produce all  
6 documents regarding how VGS accounted for or evaluated  
7 financial savings or emissions reductions for customers  
8 currently served by compressed natural gas. And you  
9 objected; all analysis is overly broad and vague. Without  
10 waiving the objection, the financial savings and emissions  
11 reductions do not take into account the use of compressed  
12 natural gas because those customers will use compressed  
13 natural gas only for the period between -- before the  
14 pipeline is in operation; correct?

15 A. That is what that response says, yes.

16 Q. But the baseline what the world would look  
17 like without this project is that the CNG is in place  
18 right now; correct?

19 A. CNG is in place right now. But I do not  
20 believe that that is the appropriate way to look at this  
21 project. CNG is not available for the 3,000 residential  
22 and commercial customers in Vergennes and Middlebury. And  
23 if Vermont Gas were not going to be serving Vergennes and  
24 Middlebury through pipeline, I don't know whether or not  
25 we would have constructed a distribution network there.

1 And if we didn't construct the distribution network there,  
2 I don't know whether each of those customers individually  
3 would have done compressed natural gas service.

4 We heard Argi-Mark testify in the first phase  
5 of this proceeding --

6 Q. I'm going to interrupt you.

7 A. Yes.

8 Q. If you're going to get into what testimony was  
9 in another -- not this case, or was it the early phase of  
10 this case?

11 A. It was the early phase of this case. It's on  
12 the transcript.

13 Q. So I'm not going to object. If you want to  
14 just say your recollection is what there was testimony in  
15 the other case, we can go look at the transcript.

16 A. That's fine. My recollection is Argi-Mark  
17 testified in this case that they were using CNG only as a  
18 bridge fuel until the presence of the pipeline.

19 Q. And we know that IPC has CNG; correct?

20 A. International Paper?

21 Q. Yes.

22 A. Yes. International Paper is using CNG now.

23 Q. After phase two was cancelled they put in CNG  
24 facilities; correct?

25 A. Yes, they did.

1 Q. So is it your testimony that you think that if  
2 this project is canceled Argi-Mark will stop using the CNG  
3 facilities that are in place?

4 A. I won't speak to what Argi-Mark is doing. I'm  
5 saying what I believe the basis -- the appropriate  
6 analysis for this case, is what would have happened but  
7 for our pipeline, and I don't know that Vermont Gas would  
8 have constructed a distribution network down there for the  
9 purposes of CNG. And I don't think looking at this case  
10 with CNG today is the appropriate way to do it.

11 Q. I'm going to submit to you that's actually up  
12 to the Board to decide what the appropriate analysis is.

13 A. You asked; I was expressing my opinion. I  
14 agree that it is the Board's decision.

15 Q. And I'm asking for a fact answer, which is in  
16 fact, you don't believe that if this project doesn't  
17 receive continuing approval that Argi-Mark is going to rip  
18 out the CNG facilities and stop using them; do you?

19 A. I don't know what Argi-Mark is going to do,  
20 and I'm not going to testify to that.

21 Q. I'm asking you what your belief is as the  
22 utility executive in the gas business for how many years,  
23 many years?

24 A. Many years. I believe Argi-Mark will make the  
25 appropriate economic decision for Argi-Mark.

1 Q. Are they saving money right now by using CNG  
2 as compared to fuel oil?

3 A. They are saving money as compared to fuel oil,  
4 but they will save in the order of six to seven dollars  
5 per MMBTU more when the pipeline comes.

6 Q. They are saving maybe a million dollars a year  
7 right now by using CNG?

8 A. I don't know what they are saving today.

9 Q. Well their testimony in the past, wasn't it,  
10 they would save \$3 million a year by converting to natural  
11 gas?

12 A. That was something that they calculated back  
13 in 2010 which is why I'm reluctant to say what their  
14 savings today would be.

15 Q. Their savings having converted already to CNG  
16 are around a million to a million and-a-half dollars, are  
17 they not? Annually.

18 A. I've already said I don't know what CNG is  
19 saving today.

20 Q. Give us your best opinion.

21 A. My best opinion is when they go to pipeline  
22 they will save 6 dollars in MMBTU more than they are  
23 paying today. That's the number I know.

24 Q. What's your -- give us your best opinion as a  
25 Vermont Gas executive as to the savings Argi-Mark has

1 right now.

2 A. I do not know what Agri-Mark's oil prices are.  
3 That is why I can't answer the question. I'm not being  
4 difficult. I don't know what Argi-Mark would pay -- is  
5 paying for fuel oil. That is why I can't answer the  
6 question.

7 Q. Give us a ball park.

8 A. I can tell you what roughly they are paying  
9 for natural gas, and you can make your own opinion about  
10 what they may be paying for fuel oil.

11 Q. If you don't answer the question I guess  
12 you're not going to give us an opinion on what their  
13 savings are right now.

14 A. I am not.

15 Q. Okay. Do you think that's relevant?

16 A. How much they are saving now?

17 Q. Yeah.

18 A. I think what's more relevant is what they will  
19 save when the pipeline is built.

20 Q. We know you feel that way.

21 A. Yes.

22 Q. Do you disagree with the definition of  
23 baseline that the Office of Management and Budget uses in  
24 the exhibit that Mr. Heaps presented?

25 A. I actually didn't look at the definition of

1 baseline. So I can't -- I just didn't look at it.

2 Q. Were you here when he testified?

3 A. Yes.

4 Q. Did you listen to what his testimony was?

5 A. I did. That doesn't mean I'm prepared to  
6 testify to what that document said though.

7 Q. The definition of a baseline according to the  
8 United States government is what the world would look like  
9 if the project did not go forward; if this project did not  
10 go forward. Is it your testimony that Argi-Mark would  
11 cease using CNG?

12 A. My testimony is I don't know what Argi-Mark  
13 would do.

14 CHAIRMAN VOLZ: We have been over this  
15 many times. So can you move on?

16 MR. DUMONT: I will.

17 CHAIRMAN VOLZ: Thanks. We understand  
18 your point. But she doesn't know, she doesn't know.

19 BY MR. DUMONT:

20 Q. Does UTC have CNG?

21 A. I believe UTC does have CNG. It's not served  
22 through an energy island. I believe UTC is utilizing  
23 CNG, but it is not through an energy island and it's not a  
24 transaction Vermont Gas is directly involved in.

25 Q. And UTC is what we used to call B.F. Goodrich

1 Aerospace?

2 A. Correct.

3 Q. The largest employer in Vergennes?

4 A. Correct. Actually I don't know if they are  
5 the largest employer in Vergennes. I shouldn't have said  
6 yes so quickly. Makes sense to me, but I don't know that.

7 Q. Turn to exhibit Cross Exhibit 44. Do you  
8 recognize Cross Exhibit 44?

9 A. It's a page from a Vermont Gas Power Point  
10 presentation.

11 Q. Is it an accurate copy of a Vermont Gas Power  
12 Point presentation?

13 A. It looks like a Vermont Gas Power Point  
14 presentation. What presentation it came from, I don't  
15 know off the top of my head.

16 Q. Well are the numbers on it accurate? And we  
17 will go through them one by one. The Addison County  
18 market consists of 3,000 residential and business  
19 customers and a potential load of 1 billion cubic feet.

20 A. I think this should be an approximate in front  
21 of that one BCF. It's an order of magnitude accurate.

22 Q. Okay. So that's accurate. And it says 1,000  
23 Vergennes and 2,000 Middlebury; is that accurate?

24 A. I actually don't have the split by communities  
25 with me. But again, order of magnitude that looks about

1 right.

2 Q. Largest customer Cabot Cheese 372,000 million  
3 cubic feet. That's what we are calling Agri-Mark now;  
4 correct?

5 A. Yes. When you say Cabot that is Agri-Mark.  
6 If you're going to ask me if each of those MCF are  
7 accurate, I can save you time going down the list. I'm  
8 not going to be able to tell you if they are or aren't as  
9 I sit here right now. I can check them. I don't have the  
10 loads by customer memorized.

11 Q. Are these approximately accurate?

12 A. For Cabot, Middlebury College, Goodrich, I  
13 would say yes. The -- the other five under other  
14 business, I'm not familiar with those -- just given how  
15 small some of those are this must have been a presentation  
16 that our marketing department worked on. I'm not  
17 personally familiar with those. Porter Hospital I  
18 probably have. But Addison County Asphalt, Otter Creek,  
19 Connor Homes, Jobs Corp. I'm not familiar with those  
20 customers.

21 Q. So looking at this exhibit we know that Cabot  
22 Cheese has CNG; correct?

23 A. Cabot Cheese is using CNG.

24 Q. And Middlebury College, same?

25 A. Middlebury College just started using CNG

1 recently.

2 Q. Goodrich?

3 A. Correct.

4 Q. How about Porter Hospital?

5 A. I don't know.

6 Q. Addison County Asphalt are they getting CNG?

7 A. I don't know. Not to my knowledge. But I  
8 don't know.

9 Q. Otter Creek, Connor Homes, or Job Corp.?

10 A. I've already said I'm not familiar with those  
11 customers. I can tell you that at least those last four  
12 for purposes of our analysis we did not assume those were  
13 interruptible customers, and anybody receiving CNG service  
14 is an interruptible customer. So for especially somebody  
15 around 2,000 MCF or 4,000 MCF that is materially smaller  
16 than other interruptible customers on our system.

17 Q. Do you agree that approximately half of the  
18 demand projected in Exhibit 44 is being met already  
19 through CNG?

20 A. It is being met with CNG right now. Whether  
21 or not it will be met with CNG in a long-term basis, I  
22 don't know. And we are not getting -- again we are not  
23 getting the full economic benefit of the pipeline with CNG  
24 because it is not available to residential or commercial  
25 customers. And it doesn't provide the full economic value

1 to the customers that are using CNG, nor does it provide  
2 the same environmental benefits, because there is still  
3 trucking associated with it.

4 Q. If we turn to Cross Exhibit 21. This is an  
5 answer to one of Mr. Palmer's questions. Request to admit  
6 1-18. Admit that the VGS claimed GHG emission reduction  
7 NPV benefit includes VGS or NG-Advantage customers who are  
8 currently receiving CNG by either direct tank or  
9 deliveries, or else through the Middlebury gas island  
10 service distribution network. And you admit that?

11 A. I did.

12 Q. If you could turn to Exhibit 41. The direct  
13 testimony Mr. Nagle. It was August 14, 2013.

14 CHAIRMAN VOLZ: In this Docket?

15 MR. DUMONT: Page four. Of Exhibit 41.

16 BY MR. DUMONT:

17 Q. Do you agree that Mr. Nagle's analysis of the  
18 benefits of the pipeline presented here, and he assumed  
19 that CNG would not happen, I'm sorry, let me start over.

20 He assumed that CNG and the project were  
21 mutually exclusive; if you had one, you would not have the  
22 other.

23 A. He assumed that for the life of the project.  
24 I don't think at the time this was written that the use of  
25 CNG as a temporary alternative until the project arrived

1 was considered. But this testimony does appear to have  
2 them as mutually exclusive.

3 Q. If you could turn to Exhibit 42, which is Mr.  
4 Poor's testimony of the same date, August 14, 2013.

5 CHAIRMAN VOLZ: Also in this Docket;  
6 correct?

7 MR. DUMONT: Yes.

8 THE WITNESS: What page please?

9 BY MR. DUMONT:

10 Q. It's page four of Exhibit 42 -- I'm sorry.  
11 Page 11 of Exhibit 42. Lines 2 and 3. Mr. Poor testified  
12 in the LNG and CNG scenarios it was assumed that the  
13 proposed project would not be constructed. Correct?

14 A. That's what that testimony says.

15 Q. So from the department's point of view, in the  
16 initial proceedings the department assumed that if you had  
17 this project, you would not have CNG. If you had CNG, you  
18 would not have this project; correct?

19 A. That appears to be what the department assumed  
20 at that time.

21 Q. I can speed this up. I'll ask you to look at  
22 22, 24, 25 and 26. And then I'll ask you a collective  
23 question.

24 A. I'm sorry 22 through?

25 Q. 22, 24, 25 and 26.

1 A. 22. 24?

2 Q. Yes.

3 A. And 25?

4 Q. And 26. Yes, 25 and 26.

5 A. Okay. I've read them.

6 Q. Am I correct that Vermont Gas has not analyzed  
7 the energy savings of the project as compared to the  
8 installation of cold-climate heat pumps at each home you  
9 propose to serve?

10 A. We have not done an analysis of the project  
11 compared to cold-climate heat pumps. I do point out,  
12 however, that even at quote, full saturation, under our  
13 analysis there is still -- well somewhere around 30  
14 percent -- it was 30 percent after 20 years, so probably  
15 declines after that. So there is certainly room in that  
16 market for customers that choose to use a cold-climate  
17 heat pump to do so. I don't view this analysis and the  
18 analysis of cold-climate heat pumps to be mutually  
19 exclusive.

20 Q. So the company did not analyze the energy  
21 savings, or the greenhouse gas reductions, or the NPV of  
22 the project as compared to installation of cold-climate  
23 heat pumps at each home you propose to serve; correct?

24 A. Well first of all, we did not do an analysis  
25 of each home to start with. We did not do a customer-by-

1 customer analysis, but no, we did not do an analysis of  
2 cold-climate heat pumps.

3 And I think that has been discussed in this  
4 docket before. This is about a choice that customers can  
5 make. And it is just simply another choice that somebody  
6 can make. They can choose to heat with cold-climate heat  
7 pump, they can choose to heat with natural gas, or fuel  
8 oil or propane. We are bringing a choice that's more cost  
9 effective and environmentally superior to what they are  
10 using today.

11 Q. My next question relates to a question that  
12 the Chairman asked earlier today. Your analysis assumed  
13 zero penetration of the market you're seeking to enter by  
14 cold-climate heat pumps; correct?

15 A. No. I don't agree with that. If it assumes  
16 zero penetration, I made no assumption about the  
17 penetration of cold-climate heat pumps. I made an  
18 assumption about the penetration of natural gas. And it  
19 left room in there for other heating sources to be used.

20 Q. If you could turn to Exhibit 29, please. This  
21 is an answer to one of Conservation Law Foundation's  
22 questions. Question 1-18. Identify the assumptions  
23 regarding future fuel use 35 to 35 years -- 34 to 35 years  
24 in the future on which VGS's analysis relies for the  
25 claimed breakeven point referred to on page four line 19

1 of Mr. Rendall's 3/27/15 testimony.

2 Your answer was: Objection. Analysis not  
3 conducted. Without waiving the objection, Vermont Gas did  
4 not conduct an analysis of Vermont's energy use 34 to 35  
5 years in the future. Rather, it made assumptions  
6 regarding the fuel use of approximately 3,000 customers in  
7 Addison County 34 to 35 years in the future.

8 A. Which is I think exactly what I just said.  
9 Regarding how much natural gas they would use, 34 to 35  
10 years in the future. I made no assumptions about what the  
11 folks that do not convert to natural gas will be using for  
12 their fuel.

13 Q. So the analysis you did would be the same even  
14 if the subject of cold-climate heat pumps had never  
15 entered this case, you would have the same numbers as are  
16 discussed on this page; correct?

17 A. That's correct.

18 Q. So that assumes zero penetration; does it not?

19 A. No, it does not. It says nothing about the  
20 penetration of cold-climate heat pumps. It simply talks  
21 about the penetration assumed for natural gas.

22 CHAIRMAN VOLZ: But I think the point  
23 is, if you made the analysis and cold-climate heat  
24 pumps was to what extent did the -- did the advent of  
25 cold-climate heat pumps as an alternative in Vermont

1 affect your projection of how much penetration of gas  
2 you would have?

3 THE WITNESS: We did not modify our  
4 penetration rate or assumed penetration rate for  
5 customers based on any specific analysis of cold-  
6 climate heat pumps. And I think partially because  
7 the penetration rates that we assumed were fairly  
8 conservative to start with. So there was certainly  
9 room for cold-climate heat pumps to materialize in  
10 that market. And at least the current DPS figures  
11 still show natural gas as more cost competitive than  
12 cold-climate heat pumps, so I'm not sure what we  
13 would have adjusted for.

14 CHAIRMAN VOLZ: Okay. Thank you.

15 MR. DUMONT: I have maybe five or ten  
16 minutes more. It's quarter of 5. I can keep going.

17 CHAIRMAN VOLZ: Why don't you keep  
18 going.

19 THE WITNESS: Please.

20 BY MR. DUMONT:

21 Q. You just answered the Chairman's questions by  
22 saying the latest information from the department says  
23 that gas is a better deal for customers than cold-climate  
24 heat pumps. Did I understand you correctly?

25 A. The April report. I actually don't know what

1 the May and June one, but I'm recalling the April report.

2 Q. Have you read Mr. Neme's surrebuttal  
3 testimony, rebuttal testimony?

4 A. I have.

5 Q. He disagrees with what you just said, you  
6 understand that?

7 A. I recognize that.

8 Q. Do you feel that you have more expertise about  
9 the energy efficiency of cold-climate heat pumps than he  
10 does?

11 A. I do not. But I don't think that it's my job  
12 or actually the job of anybody in this room to dictate  
13 what customers will use. I think we have a very cost  
14 effective alternative for customers that's on the table.  
15 And customers will make the right decision for themselves.

16 Q. And presumably, they will make a decision  
17 based on which source gives them the most bang for the  
18 buck dollars per BTU; correct?

19 A. We have spent a lot of time talking about  
20 dollars per BTU. And undeniably, that is a factor that  
21 customers -- and it's a considerable factor that customers  
22 look at. But I don't think we can ignore other things  
23 that factor into a customer's decision making. Comfort,  
24 aesthetics, availability of energy efficiency programs,  
25 regulated prices. Consumers weigh a lot of things before

1 they make a decision.

2 Q. Is electricity a regulated price?

3 A. It is. I didn't mean to imply it wasn't. My  
4 point was simply that there is other factors that go into  
5 consumer decision making besides price.

6 Q. If you could turn back to Cross Exhibit 3, the  
7 last line on the bottom. This was again in answer to  
8 department request VGS 1-1. And you finish your answer by  
9 saying since the Board did not quantify the net impact of  
10 the project in its initial order, a direct comparison is  
11 not possible. Did I read that correctly?

12 A. You did read that correctly. As I'm reading  
13 it here, I realize it's poorly worded. What it should  
14 have said is the Board did not aggregate and quantify the  
15 net impact of the project in its initial order. Because  
16 there is numerous places in the initial order where there  
17 are economic benefits articulated. There is not any one  
18 place where they are compiled and rolled up into a number.

19 Q. So the important point is to do apples to  
20 apples comparisons, is it not? If we are going to compare  
21 the situation we are in now with the situation the Board  
22 addressed in December of 2013?

23 A. The reason I'm hesitating is I think the  
24 appropriate comparison is actually to where the Board was  
25 after the first remand so in its October order.

1 Q. Well again that's the legal decision for the  
2 Board to make, not for you to make.

3 A. Well actually you asked me the question, so  
4 I'm answering it the way I view it.

5 Q. Fair enough.

6 A. You're correct, it's a legal opinion.

7 Q. If we want to do an apples-to-apples  
8 comparison between the situation we are in now and the  
9 situation the Board was in when it made its decision in  
10 December 2013, don't we need to look at the decision the  
11 Board issued in 2013?

12 A. The Board's decision in 2013 should guide our  
13 thinking in this Docket. Yes.

14 Q. And as we went through with Mr. Heaps, the  
15 Board's analysis was 20-year NPV; correct?

16 A. Correct.

17 Q. And your expert, Mr. Heaps, when he did a 20-  
18 year NPV a few weeks ago he came up with negative numbers  
19 for this project; correct?

20 A. I'm sorry. Can you repeat that?

21 Q. Yes. Mr. Heaps' prefiled testimony page 10,  
22 minus 7 and minus 10 million dollars.

23 A. For what aspect?

24 Q. The 20-year NPV.

25 A. Actually I don't have Mr. Heaps' testimony in

1 front of me. I would like to read that in context. I  
2 would like to read it in context before I agreed.

3 MS. HAYDEN: Jim, do you have the page?

4 MR. DUMONT: Page 10.

5 THE WITNESS: Thank you. I believe  
6 you've taken Mr. Heaps' testimony out of context. He  
7 for purposes of this, was replicating something Dr.  
8 Dismukes did. And he said using Dr. Dismukes'  
9 analysis as modified for a few key points, that's  
10 where that number comes from.

11 That is not Mr. Heaps' independent  
12 economic analysis of the project over 20 years.

13 BY MR. DUMONT:

14 Q. So Mr. Heaps' own view was we can leave out  
15 the lost disposable income caused by rate increases;  
16 correct? We don't have to include that in the analysis;  
17 correct?

18 A. Mr. Heaps' testimony speaks for itself.

19 Q. Okay. So is what's on page 10 of his prefiled  
20 the only NPV analysis submitted by your company that does  
21 take into account job losses, income losses from loss of  
22 fuel dealer jobs and loss of disposable income through  
23 rate increases? That's a yes or no.

24 A. Actually I'm sorry. I didn't hear a question.  
25 Can you repeat it?

1 Q. Mr. Heaps' testimony on page 10, the 20-year  
2 NPV, the only analysis submitted by your company in all of  
3 these proceedings is the 20-year NPV of this project which  
4 takes into account the job losses, from loss of fuel  
5 dealer jobs, and the associated cash losses from loss of  
6 fuel dealer jobs, and the loss of disposable income from  
7 rate increases?

8 A. That's what -- that is what this table shows.  
9 But again I need to go back and see where that number came  
10 from. Because he has -- my understanding of reading this  
11 testimony here is it's simply his modification of Dr.  
12 Dismukes' work. I would want to trace that back and see  
13 what was in and what wasn't in it.

14 Q. Has the company submitted any other analysis  
15 that takes into account the lost jobs, the lost cash that  
16 goes to fuel dealers, and the loss to disposable income  
17 that arises because of rate increases?

18 A. The company has not.

19 Q. So this is all there is; isn't it?

20 A. This is a number in Mr. Heaps' testimony. My  
21 only point is I'm looking at this table, I read back to  
22 see what it was prepared for, and it was Mr. Heaps taking  
23 Dr. Dismukes' analysis and modifying it. I don't know  
24 that this is Mr. Heaps' independent assessment of what the  
25 outcome otherwise would be, and I'm frankly not

1 comfortable testifying to what Mr. Heaps might or might  
2 not have done.

3 He simply started with Dr. Dismukes' work and  
4 modified it. And yes, those are the numbers that are in  
5 this table. I think it is not accurate to characterize it  
6 as the company's analysis of what it would have looked  
7 like.

8 Q. But the company has submitted no other  
9 analysis that takes into account the factors that Mr. Carr  
10 took into account when he testified for the company in  
11 2013; correct?

12 A. That is correct.

13 MR. DUMONT: I think I'll stop there.

14 Thank you.

15 CHAIRMAN VOLZ: Okay.

16 MR. DUMONT: I will move exhibits. Go  
17 through my notes and move them tomorrow morning. Is  
18 it okay if I move my exhibits tomorrow morning?

19 CHAIRMAN VOLZ: That will be fine.

20 Because it will take so much time?

21 MR. DUMONT: I just have to go through  
22 my notes.

23 CHAIRMAN VOLZ: Why don't we wait until  
24 tomorrow morning to do that.

25 And Mr. Grayck, you're not ready to go

1 today.

2 MR. GRAYCK: That's correct.

3 CHAIRMAN VOLZ: Mr. Saudek, are you  
4 ready to go now?

5 MR. SAUDEK: I think I could be much  
6 better if I kind of digest what's happened.

7 CHAIRMAN VOLZ: And then start tomorrow  
8 morning.

9 MR. SAUDEK: Yeah.

10 CHAIRMAN VOLZ: You'll be here tomorrow  
11 morning at 8:30 to meet with the staff?

12 MR. SAUDEK: I will. I'm sorry I  
13 missed it.

14 CHAIRMAN VOLZ: You weren't this  
15 morning, and so that's a problem. So if you don't  
16 show up at 8:30 tomorrow morning, you might not get  
17 to cross examine because we need you to identify the  
18 exhibits you want to use in the cross examination and  
19 meet with the staff.

20 MR. SAUDEK: I'll be here.

21 CHAIRMAN VOLZ: Okay. Thanks. Do you  
22 have any questions, or did you want to wait until  
23 tomorrow as well?

24 MS. LEVINE: I do. I can wait until  
25 tomorrow.

1 CHAIRMAN VOLZ: I don't want you to  
2 wait. I'd rather go if people want to go because I  
3 would like to get this over with.

4 MS. LEVINE: Don't you love our  
5 company?

6 CHAIRMAN VOLZ: Yeah. Well I mean I  
7 would like to complete this efficiently is what I  
8 meant to say.

9 MS. LEVINE: If you would like me, I  
10 have five minutes and I can do it now.

11 CHAIRMAN VOLZ: That would be great.

12 MS. LEVINE: That's fine. I feel like  
13 I'm in law school, and I'm the only person in the  
14 room who was prepared when a professor asked a  
15 question.

16 CHAIRMAN VOLZ: You get an A plus.

17 MS. LEVINE: Does that mean you'll  
18 decide in my favor?

19 CHAIRMAN VOLZ: Not at all.

20 CROSS EXAMINATION

21 BY MS. LEVINE:

22 Q. Good afternoon, Ms. Simollardes.

23 A. Good afternoon.

24 Q. Your March 2015 testimony at table two  
25 provides an analysis of the 35-year net present value; is

1 that correct?

2 A. Which table please?

3 Q. Table two.

4 A. Yes.

5 Q. And the basis of the 35-year time frame is  
6 because that's roughly when the project will break even in  
7 terms of new customers?

8 A. Yes, with a caveat on what the definition of  
9 break even is. It is roughly between years 34 and 35 is  
10 when the Vergennes and Middlebury markets on their own  
11 provide Vermont Gas's currently authorized rate of return  
12 which is approximately three years different than where we  
13 were in the first remand.

14 Q. And you would agree that estimating benefits  
15 going out 35 years is not particularly reliable?

16 A. Nor is estimating costs out 35 years, and  
17 that's why we use a discount rate to adjust for that  
18 uncertainty.

19 Q. And the discount rate applies to both the  
20 benefits and the costs?

21 A. Yes.

22 Q. And common practice in terms of other  
23 proceedings that you have been involved with have not  
24 involved evaluating benefits over more than a 10 or 20-  
25 year time frame; is that correct?

1           A.       I've actually never been involved in a  
2 proceeding that evaluated economic benefits the way this  
3 one is being approached. I said this earlier when I was  
4 testifying, the Public Service Board does not have a guide  
5 or a cookbook or a manual about how economic benefits are  
6 being calculated. I have not seen an economic benefit  
7 analysis performed the way this one is being addressed  
8 including future rate impact, et cetera.

9           Q.       You have been involved in other proceedings  
10 that have looked at future benefits of the project; is  
11 that correct? Other expansion proceedings, for example?

12          A.       Yes. But -- yes, I have.

13          Q.       Okay. And do those look out over a 10 or 20-  
14 year time horizon?

15          A.       That was my point. I have not been involved  
16 in a proceeding that even began to look at economic  
17 benefits the way this one does.

18                   CHAIRMAN VOLZ: What do you mean by  
19 "the way"?

20                   THE WITNESS: We have not -- we have  
21 tried to take into account what the rate impact over  
22 a time period would be. The expansion projects I  
23 have been involved in mostly been around transmission  
24 system looping, and the economic benefits there have  
25 either been a quantification of greenhouse gases,

1           which yes, we use 20 years, or they were less  
2           concrete and they were more this project will enable  
3           construction-related jobs, this project will enable  
4           Vermont Gas to continue to expand and bring the  
5           benefits of natural gas service, or we have  
6           quantified property taxes, but we have never done  
7           this sort of ledger analysis that says here's a  
8           stream of benefits over 20 or 35 years, here's a  
9           stream of rate impact over the same time period.  
10          Subtract one from the other and see if it's an  
11          economic benefit.

12                           I have never been involved in a 248  
13          proceeding that attempted to analyze economic  
14          benefits that way.

15                           CHAIRMAN VOLZ:   Okay.   Thank you.

16          BY MS. LEVINE:

17           Q.           And those other cases that you were involved  
18          in are much smaller cases in terms of --

19           A.           Agreed.

20           Q.           -- dollars or --

21           A.           Agreed.

22           Q.           -- than this case?

23           A.           Yes.

24           Q.           And would you agree that there has been growth  
25          in the past two years of both net metered solar and heat

1 pumps in Vermont?

2 A. I can't speak to the heat pumps because I  
3 truly don't know what the count is. Nor can I  
4 articulately speak to net solar other than what you see  
5 driving around the state or see on the Public Service  
6 Board's calendar. There does appear to be a tremendous  
7 amount of activity related to at least net solar.

8 Q. And would you agree that both the legislative  
9 and Public Service Board decisions have favored reducing  
10 fossil fuel use to address climate change impact?

11 A. Yes.

12 Q. And that looking forward 35 years there will  
13 likely be an increase in the use of renewable and non  
14 fossil fuel use in Vermont?

15 A. That is clearly one of our state goals. And I  
16 think that this project helps enable that.

17 Q. This project would deliver fossil fuels to  
18 Vermont customers; correct?

19 A. This project will deliver a fossil fuel to  
20 Vermont customers, but it delivers a cleaner, more  
21 affordable fossil fuel to Vermont customers. And you  
22 heard Mr. Rendall speak this morning about renewable  
23 natural gas. Hopefully this pipe will have more renewable  
24 natural gas in it five years in the future. I don't know.

25 Q. That's a hope. There is not commitment to

1 that; is that correct?

2 A. The only commitment we have at the moment is  
3 to the renewable natural gas project in Salisbury to bring  
4 biomethane to Middlebury College.

5 Q. And your evaluation did not look at the -- to  
6 what extent over a period of 20 to 35 years gas would  
7 replace heat pumps?

8 A. It did not.

9 MS. LEVINE: Thank you. That's all I  
10 have.

11 CHAIRMAN VOLZ: Okay. All right. So  
12 we will break now for the evening, and we will come  
13 back tomorrow and continue with Ms. Simollardes. And  
14 we would like the lawyers at least to be here  
15 tomorrow at 8:30 to do a prehearing meeting to go  
16 over what we are going to be doing.

17 So thank you for today, and we will see  
18 you tomorrow.

19 (Whereupon, the proceeding was  
20 adjourned at 5 p.m.)

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I, Kim U. Sears, do hereby certify that I recorded by stenographic means the Technical Hearing re: Docket Number 7970 at the Third Floor Hearing Room, People's United Bank Building, 112 State Street, Montpelier, Vermont, on June 22, 2015, beginning at 9:30 a.m.

I further certify that the foregoing testimony was taken by me stenographically and thereafter reduced to typewriting and the foregoing 257 pages are a transcript of the stenograph notes taken by me of the evidence and the proceedings to the best of my ability.

I further certify that I am not related to any of the parties thereto or their counsel, and I am in no way interested in the outcome of said cause.

Dated at Williston, Vermont, this 25th day of June, 2015.

A rectangular box containing a handwritten signature in cursive script that reads "Kim U. Sears". The signature is written in dark ink on a light-colored background.

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