STATE OF NEW HAMPSHIRE

PUBLIC UTILITIES COMMISSION

April 21, 2022 - 9:03 a.m. **MORNING SESSION**
21 South Fruit Street **ONLY**
Suite 10
Concord, NH

[Hearing also conducted via Webex]

RE: **DE 20-092**
ELECTRIC AND GAS UTILITIES:
2021-2023 Triennial Energy
Efficiency Plan.

PRESENT: Chairman Daniel C. Goldner, Presiding
Commissioner Pradip K. Chattopadhyay
Special Commissioner F. Anne Ross

Eric Wind, Esq., PUC Legal Advisor

Tracey Russo, Clerk
Doreen Borden, PUC Hybrid Hearing Host

APPEARANCES: **Reptg. Public Service Company of New Hampshire d/b/a Eversource Energy:**
Jessica A. Chiavara, Esq.

Reptg. Unitil Energy Systems, Inc., and Northern Utilities, Inc.:
Patrick H. Taylor, Esq.

Reptg. Liberty Utilities (Granite State Electric) Corp., and Liberty Utilities (EnergyNorth Natural Gas) Corp. d/b/a Liberty Utilities:
Michael J. Sheehan, Esq.

Reptg. N.H. Electric Cooperative, Inc.:
Susan S. Geiger, Esq. *(Orr & Reno)*

Court Reporter: Steven E. Patnaude, LCR No. 52

APPEARANCES: ***(C o n t i n u e d)***

Reptg. Clean Energy New Hampshire:
Christopher Skoglund

Reptg. Conservation Law Foundation:
Nicholas A. Krakoff, Esq.

Reptg. LISTEN Community Services:
Raymond Burke, Esq. *(N.H. Legal Asst.)*

Reptg. Southern New Hampshire Services:
Ryan Clouthier

Reptg. Dept. of Environmental Services:
Rebecca Ohler

Reptg. Residential Ratepayers:
Donald M. Kreis, Esq., Consumer Adv.
Julianne M. Desmet, Esq.
Office of Consumer Advocate

Reptg. New Hampshire Dept. of Energy:
Paul B. Dexter, Esq.
Elizabeth Nixon
Jay Dudley
Stephen Eckberg
Scott Balise
(Regulatory Support Division)

I N D E X

I N D E X *(continued)*

E X H I B I T S

EXHIBIT NO.	D E S C R I P T I O N	PAGE NO.
47	NH Utilities 2022-2023 New Hampshire Statewide Energy Efficiency Plan & attachments	*premarked*
48	Joint testimony of the New Hampshire Utilities by Katherine Peters, Marc Leménager, John James Butler, Eric Stanley, Mary Downes, & Carol Woods	*premarked*
49	Testimony of the Department of Energy by Elizabeth Nixon, Stephen Eckberg, Jay Dudley, & Scott Balise	*premarked*
50	Testimony of the Office of the Consumer Advocate by Courtney Lane & Danielle Goldberg	*premarked*
51	Testimony of Clean Energy New Hampshire by Christopher Skoglund	*premarked*
52	Unitil corrected pages to Plan Attachments H1 and J1	*premarked*
53	**RESERVED FOR RECORD REQUEST** (Revised Attachment F3 to *the March 1, 2022 Plan* labeled the "2022-2023 System Benefits *Charge (SBC)* Calculation")	*(To be filed by 04-25-22)*
54	**RESERVED FOR RECORD REQUEST** *(OCA cost benefit analysis previously completed 01-19-22)*	*(Reserved in the Afternoon Session)*

P R O C E E D I N G

CHAIRMAN GOLDNER: Good morning, everyone. I'm Chairman Goldner. I'm joined by Special Commissioner Ross and Commissioner Chattopadhyay.

We're here this morning in Docket DE 20-092 for a hearing regarding the New Hampshire Electric and Gas Utilities Triennial Energy Efficiency Plan covering 2022 and 2023. This Plan filing, and the Commission's evaluation of it, are largely responsive to directives -- pardon me -- contained in HB 549 and the changes made to it in RSA 374-F:3, VI-a.

Let's take appearances, beginning with the Joint Utilities.

MS. CHIAVARA: Good morning, Commission. Jessica Chiavara, here for Public Service Company of New Hampshire, doing business as Eversource Energy.

CHAIRMAN GOLDNER: Okay. Unitil?

MR. TAYLOR: Good morning, Commissioners. Patrick Taylor, on behalf of Northern Utilities, Inc., and Unitil Energy Systems, Inc.

CHAIRMAN GOLDNER: Liberty?

MR. SHEEHAN: Good morning, Commissioners. Mike Sheehan, for Liberty Utilities Granite State Electric) Corp. and Liberty Utilities (EnergyNorth Natural Gas) Corp.

CHAIRMAN GOLDNER: Thank you. NHEC?

MS. GEIGER: Good morning, Commissioners. I'm Susan Geiger, with the law firm of Orr & Reno, representing New Hampshire Electric Cooperative.

CHAIRMAN GOLDNER: Next, we can go to Clean Energy New Hampshire?

MR. SKOGLUND: Chris Skoglund, Director of Energy Transition, Clean Energy New Hampshire.

CHAIRMAN GOLDNER: The Conservation Law Foundation?

MR. KRAKOFF: Good morning, Commissioners. Nick Krakoff, from the Conservation Law Foundation.

CHAIRMAN GOLDNER: Thank you. LISTEN Community Services?

MR. BURKE: Good morning, Commissioners. I'm Raymond Burke, from New Hampshire Legal Assistance, here on behalf of

LISTEN Community Services.

CHAIRMAN GOLDNER: Thank you. Southern New Hampshire Services?

MR. CLOUTHIER: Good morning, Commissioners. This is Ryan Clouthier. I'm with Southern New Hampshire Services.

CHAIRMAN GOLDNER: Acadia Center?

[No verbal response.]

CHAIRMAN GOLDNER: Okay. The New Hampshire Department of Environmental Services?

MS. OHLER: Good morning, Commissioners. Rebecca Ohler, here on behalf of the Department.

CHAIRMAN GOLDNER: Office of Consumer Advocate?

MR. KREIS: Good morning, Mr. Chairman, Commissioners. I'm Donald Kreis, the Consumer Advocate. With me today is our Staff Attorney, Julianne Desmet. And, of course, we represent the interests of residential customers.

CHAIRMAN GOLDNER: Thank you. And the New Hampshire Department of Energy?

MR. DEXTER: Good morning, Commissioners. Paul Dexter, representing the

Department of Energy. I'm joined today by four members of the Regulatory Support Division, Liz Nixon, Jay Dudley, Steve Eckberg, and Scott Balise.

CHAIRMAN GOLDNER: Thank you. Are there any members of the public that would like to comment today?

[No verbal response.]

CHAIRMAN GOLDNER: Okay. Seeing none. Exhibits 47 to 52 have been prefiled and premarked for identification.

Exhibit 53 was late-filed last night by Liberty. Mr. Sheehan, can you tell us what the exhibit shows, and why the Company was not able to file in a timely fashion, pursuant to the hearing guidelines?

MR. SHEEHAN: The exhibit, as indicated in the cover letter, is a Revised Attachment F3 to the March 1 Plan. And Ms. Tebbetts will explain, frankly, that we've been working through some wiggles in the numbers. And what I filed last night is going to be wiggled further.

So, at this point, we will not seek admission of 53. And we'll work with DOE to file

a corrected version of it promptly. And I apologize for the late filing.

CHAIRMAN GOLDNER: Okay. Thank you.

Anything else we need to cover regarding exhibits?

[No verbal response.]

CHAIRMAN GOLDNER: Okay. Seeing none.

So, just as a preliminary matter, the Commissioners have reviewed the Plan and prefiled testimony, and have no need of the witnesses summarizing their testimony. We have a number of clarifying questions about the Plan and testimony. But our preliminary assessment is that the Plan is largely consistent with HB 549 and other authorities. This preliminary assessment is, of course, subject to the opportunity of all parties to cross-examine the witnesses and point out to us anything we may be missing in our preliminary assessment. After we've heard from everyone, we will consider whether we need to see any particular modifications to the Plan before we are able to finally approve it.

Given the tight timeline and filings

received Tuesday afternoon, the Commission questions, if any, are directed collectively at the Joint Utilities and separately to Energy, OCA, and CENH. For efficiency, we would ask that we have two panels accordingly, pardon me, Panel 1 being the Joint Utilities and Panel 2 being Energy, OCA, and CENH. We have the witness box available for the primary witnesses, and a table reserved up front, to my right, for the rest of the witnesses.

Any concerns with that approach?

[No verbal response.]

CHAIRMAN GOLDNER: Okay. All right. Thank you.

Any other preliminary matters to discuss before we have the witness panel sworn in?

[No verbal response.]

CHAIRMAN GOLDNER: No? Okay. Let's proceed with the witnesses. Mr. Patnaude, would you please swear in the first panel of witnesses.

(Whereupon ***Katherine Peters***, ***Marc Leménager***, ***John James Butler***, ***Marisa Paruta***, ***Eric Stanley***,

Heather Tebbetts*, *Mary Downes*, *Elena Demeris*,** and ***Carol Woods were duly sworn by the Court Reporter.)

CHAIRMAN GOLDNER: Thank you. So, we'll move to the qualification of witnesses and adoption of the prefiled testimony.

Ms. Chiavara, would you like to lead the charge?

MS. CHIAVARA: Absolutely.

KATHERINE PETERS, SWORN

MARC LEMÉNAGER, SWORN

JOHN JAMES BUTLER, SWORN

MARISA PARUTA, SWORN

ERIC STANLEY, SWORN

HEATHER TEBBETTS, SWORN

MARY DOWNES, SWORN

ELENA DEMERIS, SWORN

CAROL WOODS, SWORN

DIRECT EXAMINATION

BY MS. CHIAVARA:

Q Beginning with Ms. Peters. Ms. Peters, can you please state your name, your title, and the company you work for?

A (Peters) Good morning. My name is Katherine

Peters. I'm the Director of Residential Programs at Eversource Energy. My business address is 73 West Brook Street, in Manchester, New Hampshire.

Q And what are the responsibilities of your role at Eversource?

A (Peters) In my role, I oversee the implementation of our residential programs in Massachusetts and New Hampshire, and assist with policy and planning for the Energy Efficiency Programs.

Q And have you ever testified before this Commission?

A (Peters) Yes, I have.

Q Thank you. Did you file testimony and corresponding attachments as part of the filing on April 19th, 2022, marked as "Exhibit 48"?

A (Peters) Yes, I did.

Q Were the testimony and supporting materials prepared by you or at your direction?

A (Peters) Yes.

Q Do you have any changes or updates to make at this time?

A (Peters) No.

Q And do you adopt your testimony today as it was written and filed?

A (Peters) Yes, I do.
Q Thank you very much. Turning to Marc Leménager. Mr. Leménager, can you please state your name, your title, and the company that you work for?
A (Leménager) My name is Marc Leménager. I'm a Senior Analyst with the Regulatory, Planning, and Evaluation Team at Eversource Energy. And my business address is 73 West Brook Street, Manchester, New Hampshire.
Q And what are the responsibilities of your role at Eversource?
A (Leménager) My primary responsibilities include participating in and monitoring regulatory proceedings and stakeholder engagement related to the Energy Efficiencies Programs, as well as planning, coordination, and outreach.
Q Have you ever testified before this Commission?
A (Leménager) Yes.
Q Thank you. Did you file testimony and corresponding attachments as part of the filing on April 19th, 2022, marked as "Exhibit 48"?
A (Leménager) Yes.
Q And were the testimony and supporting materials prepared by you or at your direction?

A (Leménager) Yes.
Q Do you have any changes or updates to make at this time?
A (Leménager) No.
Q And, so, do you adopt your testimony today as it was written and filed?
A (Leménager) Yes.
Q Thank you very much. John James Butler, Mr. Butler, will you please state your name, your title, and the company that you work for?
A (Butler) My name is James Butler. I am Senior Analyst for Regulatory Planning and Evaluation with Eversource. My business address is 73 West Brook Street, Manchester, New Hampshire office.
Q And what are the responsibilities of your role with Eversource?
A (Butler) My current responsibilities include maintenance of the Company and statewide benefit-cost models, regulatory, forward capacity market, and internal KPI reporting, and program and measure planning and coordination.
Q And have you ever testified before this Commission?
A (Butler) No.

Q Did you file testimony and corresponding attachments as part of the filing on April 19th, 2022, marked as "Exhibit 48"?
A (Butler) Yes.
Q Were the testimony and supporting materials prepared by you or at your direction?
A (Butler) Yes.
Q Do you have any changes or updates to make at this time?
A (Butler) No.
Q So, do you adopt your testimony today as it was written and filed?
A (Butler) Yes.
Q Thank you very much. And, finally, Marisa Paruta. Ms. Paruta, will you please state your name, your title, and the company that you work for?
A (Paruta) Good morning. My name is Marisa Paruta.
[Court reporter interruption regarding the microphone.]
BY THE WITNESS:
A (Paruta) My name is Marisa Paruta. And I'm the Director of Revenue Requirements for Connecticut and New Hampshire for Eversource Energy.

BY MS. CHIAVARA:
Q And what are the responsibilities of your role at Eversource?
A (Paruta) As the Director of Revenue Requirements, I am responsible for the coordination and implementation of revenue requirement calculations and regulatory filings for New Hampshire.
Q Have you ever testified before this Commission?
A (Paruta) Yes, I have.
Q And did you file testimony and corresponding attachments as part of the filing on March 1st, 2022, marked as "Exhibit 47", and as part of the filing on April 19th, 2022, marked as "Exhibit 48"?
A (Paruta) Yes, I did.
Q Were the testimony and supporting materials prepared by you or at your direction?
A (Paruta) Yes, they were.
Q Do you have any changes or corrections to make to that testimony at this time?
A (Paruta) No, I do not.
Q So, do you adopt your testimony as it was written and filed?

A (Paruta) Yes.

MS. CHIAVARA: All right. Thank you very much. That's all for Eversource witnesses.

I will turn it over to counsel for Liberty.

MR. SHEEHAN: Thank you.

BY MR. SHEEHAN:

Q Mr. Stanley, could you please introduce yourself and describe your title with the Company?

A (Stanley) Yes. My name Eric M. Stanley. I am the Manager of Energy Efficiency and Customer Programs for Liberty Utilities Service Corp., which provides services to Liberty Utilities (Granite State Electric) Corp. and Liberty Utilities (EnergyNorth Natural Gas). In my role, I'm responsible for all program planning, implementation, marketing, reporting, and analytics for the Company.

Q Mr. Stanley, did you participate in the preparation of the testimony, the joint testimony that's been marked as "Exhibit 48" in this docket?

A (Stanley) Yes.

Q And do you have any changes to that testimony?

A (Stanley) No.
Q And do you adopt that written testimony as your sworn testimony here this morning?
A (Stanley) I do.
Q Thank you. Ms. Tebbetts, please introduce yourself and describe your role with Liberty?
A (Tebbetts) My name is Heather Tebbetts. And I'm employed by Liberty Utilities Service Corporation. I'm the Manager of Rates and Regulatory Affairs. And my responsibilities include rate-related matters for Granite State Electric and EnergyNorth Natural Gas.
Q Ms. Tebbetts, did you include -- is there a testimony authored by you that was included in the March 1 filing that's been marked as "Exhibit 47"?
A (Tebbetts) Yes.
Q And your testimony, as part of that package, appears at Bates 705, is that correct?
A (Tebbetts) Yes.
Q And your testimony in that package addresses the proposed rates that are Liberty-specific in that Plan, is that correct?
A (Tebbetts) Yes.

Q Do you have any changes or corrections to that testimony?

A (Tebbetts) I don't have changes to the testimony. But we had filed Exhibit 53 last night, and we received some questions from the DOE. And, so, we're going to be working with the DOE to address those questions in the next day. And, so, I think it would be appropriate to get a record request on the docketbook so that we can address those questions.

Q Other than the questions related to what is marked -- what is called "Attachment F3", do you have any other changes to your testimony?

A (Tebbetts) I do not.

Q And do you adopt your written testimony as you've described, as you've qualified, I guess, this morning as your sworn testimony this morning?

A (Tebbetts) Yes.

MR. SHEEHAN: Thank you.

MR. TAYLOR: Good morning.

BY MR. TAYLOR:

Q Ms. Downes, please state your name, your title, and the company that you work for, and your responsibilities and role with that company?

A (Downes) Good morning. My name is Mary Downes. And my business address at Unitil is 325 West Road, in Portsmouth. I am the Manager of Strategy and Compliance. And I am responsible for overseeing the administrative and regulatory requirements associated with Unitil's Energy Efficiency Programs in both New Hampshire and Massachusetts.

Q And have you testified before this Commission before?

A (Downes) Yes.

Q Did you file testimony and corresponding attachments as part of the filing on April 19th, 2022, marked as "Exhibit 48"?

A (Downes) I did.

Q And was that testimony and the supporting materials prepared by you or at your direction?

A (Downes) Yes, it was.

Q Do you have any changes or updates that you'd like to make at this time?

A (Downes) No.

Q And do you adopt that testimony today as it was written and filed as your sworn testimony?

A (Downes) Yes.

MR. TAYLOR: I'll next ask some questions of Ms. Demeris.

BY MR. TAYLOR:

Q Ms. Demeris, please state your name, your title, the company that you work for, and your role and responsibilities for the company?

A (Demeris) My name is Elena Demeris. I'm a Senior Regulatory Analyst for Unitil Service Corp. And, in this capacity, I prepare regulatory filings, do pricing research, regulatory analysis, tariff administration, revenue requirements, and other analytical services.

Q And have you ever testified before this Commission?

A (Demeris) Yes.

Q Did you file testimony and corresponding attachments as part of the filing on April 19th, 2022, marked as "Exhibit 48"?

A (Demeris) Yes.

Q And was that testimony and the supporting materials prepared by you or at your direction?

A (Demeris) No.

Q No. Did you -- I'm sorry. Did you contribute to the testimony that was prepared and submitted on

April 19th, 2022, marked as "Exhibit 48"?
A (Demeris) Yes.
Q And do you have any changes or updates to make at this time to that testimony?
A (Demeris) No.
Q And do you adopt that testimony today as it was written and filed as your sworn testimony?
A (Demeris) Yes, I do.
Q Now, I'll also ask you to reference Exhibit 47, which is the New Hampshire Three-Year Plan and its corresponding attachments. Those were filed on March 1st, 2022. At Pages 620 -- or, Bates Pages 620 to 629, there's testimony submitted by Christopher Goulding. Do you have that testimony before you?
A (Demeris) Could you repeat the exhibit number?
Q The exhibit is Exhibit 47. It is the Three-Year Plan that was submitted by the Joint Utilities on March 1st, 2022, as well as its corresponding attachments. And, within the attachments to the Three-Year Plan, at Bates numbers 620 to 629, there's prefiled Testimony of Christopher Goulding. And I'll give you a minute to find it.
(Short pause.)

BY MR. TAYLOR:
Q And I'll just note, Ms. Demeris, that, if you're having difficulty finding the actual Exhibit 47 as it was filed, you can simply reference the Plan that was filed on March 1st, as the Bates numbering is the same.
A (Demeris) I'm gaining on it. I'm almost there.
Q Well, Ms. Demeris, let me ask you this, because I don't want to make you hunt for it while we do this. Are you aware --
A (Demeris) Oh, excuse me, Pat. So, Bates 620 is the calculations of -- yes. That's, in my copy, that's the bill impacts for the System Benefits Charge for the New Hampshire Co-op.
Q Okay. Then, I'm sorry if I sent you to the wrong place.

With respect to the prefiled Testimony of Christopher Goulding that was included in the attachments to the Three-Year Plan filed on March 1, 2022, have you read and are you familiar with Mr. Goulding's testimony?
A (Demeris) Yes.
Q And, with the understanding that Mr. Goulding could not be present today, do you adopt in its

entirety Mr. Goulding's testimony as your own sworn testimony today?

A (Demeris) Yes, I do.

MR. TAYLOR: Thank you.

BY MS. GEIGER:

Q Ms. Woods, please state your name, your job title, and your employer?

A (Woods) My name is Carol Woods. My employer is New Hampshire Electric Cooperative, which is located at 579 Tenney Mountain Highway, in Plymouth, New Hampshire. My title is Energy Solutions Executive. And I am responsible for the planning, implementation, and regulatory support for the Company's Energy Efficiency Programs.

Q Ms. Woods, have you ever testified before this Commission?

A (Woods) Yes.

Q And did you file testimony and corresponding attachments as part of the filing on March 1st, 2022, marked as "Exhibit 47", and as part of the filing on April 19th, 2022, marked as "Exhibit 48"?

A (Woods) Yes.

Q Were the testimony and supporting materials prepared by you or at your direction?
A (Woods) Yes.
Q Do you have any changes or updates to make at this time?
A (Woods) I do not.
Q And do you adopt your testimony today as it was written and filed?
A (Woods) Yes.

MS. GEIGER: Thank you.

CHAIRMAN GOLDNER: Thank you. So, we'll start with questions. Do any of the parties have any questions for the -- any cross-examination for the witnesses?

MS. CHIAVARA: Excuse me, Chair Goldner. I have just one item. There are a couple of clarifying matters that the utility witnesses would like to address. They will be very brief.

CHAIRMAN GOLDNER: Of course.

MS. CHIAVARA: If that's all right? Okay.

CHAIRMAN GOLDNER: Yes.

BY MS. CHIAVARA:

Q I will turn this over to Ms. Downes and Ms. Peters to address those items at this time, beginning with Ms. Downes.

A (Downes) Thank you. Yes. Thank you. We do want to address a couple of statements in OCA's prefiled testimony.

First, in that testimony, which is Exhibit 50, at Bates 025, Lines 1 and 2, it states that the utilities do not apply free-ridership to downstream measures. This statement is not accurate. In fact, in response to discussion with stakeholders, the EM&V Working Group, the 2022 to 2023 Plan, which is Exhibit 47, at Bates Page 084, as well as the TRM, which is Attachment 1 to that exhibit -- I'm sorry, that's Exhibit 47 as well, Attachment A, Bates 453, we do account for free-ridership for both midstream and downstream commercial and industrial lighting measures.

Also, the Utilities want to respond to OCA's recommendations regarding increased financing opportunities for customers. This is discussed in the OCA's prefiled testimony, beginning at Bates Page 026. While the Utilities

are not currently proposing to dedicate any new funding to the existing on-bill financing revolving loan funds, all of the gas and electric utilities offer zero percent on-bill financing to our residential, commercial, and municipal customers, to help them finance their portion of project costs.

The OBF mechanism for C&I customers is described on Bates Page 030 of the Plan. And, for residential customers, the OBF Program is described on Bates Page 051.

The permitted loan amounts are also included in each of the Utilities' tariffs, and activity regulated to the Utilities' on-bill financing programs is included in the Utilities' quarterly reports, which are filed with the Commission.

Q And Ms. Peters.

A (Peters) Thank you. We would also like to clarify the Utilities' interpretation of House Bill 549's requirement that each electric utility's planned electric system savings must be at least 65 percent of its overall planned energy savings.

The OCA's testimony, at Bates Page 015, states that the Utilities interpret House Bill 549 to mean that the 65 percent electric savings apply to "lifetime electric savings", rather than "annual savings". That statement is not accurate. The text of the legislation does not specify "lifetime" or "annual savings".

All of the Utilities have submitted plans where at least 65 percent of the annual energy savings come from electricity. We feel this approach best captures the balance of program offerings that meet the needs of our customers and also meet the needs of the electric system. They align with the program structures that we have offered in prior years as the Legislature had intended.

Since the Utilities began offering fuel-neutral savings, we have worked to achieve that right balance in offerings that ensures the portfolio is focused on delivering significant electric savings to benefit the system and all customers, and to also be able to deliver the fuel savings opportunities that are so important and critical to our low income residential and

municipal customers. That balance has been an effort of the Utilities, of stakeholders, and of the Commission, as we administer the programs over the years.

The programs that are -- the program measures that are associated with those fuel savings, those measures typically have very long lifetimes. They are measures such as insulation or air-sealing that, once you install them in a home, they last for 20 or 30 years, and deliver savings over that timeframe.

Many of the measures that are associated with electric savings have shorter measure lives, not necessarily because they don't work for a long period of time, but because, as we attribute savings to the program, we apply adjustments, like changing baselines and other market factors, so we lower the lifetime that is attributable to those electric saving measures, in order to ensure that we only attribute savings in the Plan to things that are directly related to the program intervention.

So, this dichotomy between the lifetime of fuel-saving measures and the lifetime of many

electric saving measures makes "lifetime" a different lense in which to view the planning of the types of measures and programs that we offer.

So, in terms of creating a plan that has an appropriate balance of program offerings, to meet customer needs, and to meet policy needs, the annual savings, the savings that we achieve on that yearly basis, gives us a better lense on the measures that we should offer, that should be included in the Plan, and the impacts that they have for the customers each year.

One other thing to note in this is that each Utility's service territory has different customer sector composition. Eversource, for example, has a large base of large industrial customers in our service territory, whereas the New Hampshire Electric Co-op has a much smaller base of commercial customers, and a much larger percentage of their base coming from residential customers that receive those fuel-neutral types of programs.

And, so, this variation means that the annual savings is a -- is a better lense in which to look at the program planning, in order to

assure that all of the Utilities can offer appropriate programming to all of our customers.

In conclusion, each Utility has met the statutory requirement by submitting a plan that includes at least 65 percent of annual savings from electricity in our plans.

Thank you.

MS. CHIAVARA: Those were the only matters we had. Thank you very much.

CHAIRMAN GOLDNER: Thank you. Any other clarifications from the utilities?

[No verbal response.]

CHAIRMAN GOLDNER: Okay. Thank you. We'll move to cross. Does anyone have any questions, any cross-examination for the witnesses?

MR. DEXTER: The Department of Energy does have a few questions.

CHAIRMAN GOLDNER: Thank you, Mr. Dexter. Please proceed.

MR. DEXTER: Thank you.

CROSS-EXAMINATION

BY MR. DEXTER:

Q I would like to ask the Utility Panel, if the

Plan that's before the Commission today were approved as filed, would you please outline what additional filings or approvals would be made in 2022 to either the Commission or the Department of Energy?

And then, I'd like to ask the same question for 2023, but I'd like to start with 2022.

A (Leménager) Certainly. In calendar year 2022, we have a June 1st deadline for our 2021 Annual Performance Incentive filings. There's also the opportunity for the Utilities, or any party, to propose updates for Program Year 2023 on July 1st of this year.

And, additionally, in Quarter 4 of this year, the Utilities would update the rates, to reflect the most current inflation adjustment, as well as updated rates for lost revenues, if applicable.

And then, we also will have, as ongoing, our quarterly report filings throughout the year.

Q And those filings that you just described, are those consistent with filings that have been made

over the past several years under the EERS framework?

A (Leménager) They're similar. The one difference would be the July 1st deadline for an update filing. In prior years, it was later in the calendar year.

Q Thank you. And, so, then I would ask the same question with respect to 2023?

A (Leménager) And 2023 would have similar deadlines and similar updates. The only distinction I would like to make is the July 1st deadline for a filing would be for the 2024 to 2026 Triennial Plan.

Q Thank you. I'd like to ask a couple -- sorry. Thank you. I'd like to ask a couple of questions about the Utilities' proposal to include an incentive related to the -- a performance incentive related to the Smart Start Program. And I would first ask the general question, that isn't it correct that this issue or this performance incentive for the Smart Start Program applies only to Eversource?

A (Peters) Yes. That's correct.

Q And would you please describe, very briefly, the

Smart Start Program, and the performance incentive that goes along with that?

A (Peters) Certainly. Smart Start is a loan offering that Eversource has for its municipal customers. This particular type of loan offering was developed here at the Commission during a series of dockets in early 2000. And this loan offering allows Eversource to make on-bill loans to those municipal customers. The loans are tied to the meter of the customer location. And the customer makes repayments that go back into a revolving fund, which is used, once their payments come in, to make additional loans to other municipal customers.

Part of the original structure of this loan offering was and is a performance incentive. Eversource is able to earn a 6 percent performance incentive on the repayments that are associated with this loan offering, so when customers make the repayments to the Company.

This was put into place in order to encourage the Company to utilize this loan structure, and to ensure that it is administered and used in a way that has customers repaying

loans so that they can come in and then be used again for additional customers.

So, that performance incentive has been in place since 2001. And we continue to collect it today.

Q Would you please indicate the level of the performance incentive under the Smart Start Program that Eversource has collected in 2020 and 2021?

A (Peters) Just a moment. For 2020, the amount was $67,802. And, for 2021, the amount was $48,239.

Q Thank you. Now, in addition -- well, let me rephrase that.

Is it correct that the -- that the Plan before the Commission today includes a comprehensive performance incentive matrix and calculation that applies to all the Utilities?

A (Peters) Yes. The Plan before the Commission includes a performance incentive structure that is designed to articulate and encourage the achievement of the goals of the full Plan itself. Those goals being primarily lifetime and annual electric savings, lifetime and annual MMBtu savings for the gas companies, passive demand

reduction in both winter and summer, and a value component encouraging us to achieve those savings in a cost-effective manner.

Q And, if I were to look for a description of the calculation of that incentive, is that found at Exhibit 47, Bates Page 088, --

A (Peters) Yes.

Q -- for the electric companies?

A (Peters) Yes, it is.

Q Okay. And do you have that page before you?

A (Peters) I do.

Q Now, I'm going to try to paraphrase the performance incentive calculation. And it's difficult, because it's a complex calculation. But, at its core, isn't it correct that this performance incentive matrix represents a calculation whereby the actual spending on energy efficiency is multiplied by a coefficient that results in a performance -- that results in the performance incentive collected?

A (Peters) Yes. The actual spending, so we have the budgeted plan, and then we have our actual spending, and, when we develop the performance incentive calculations in filings after a program

year, the actual spending for that program year is multiplied by the coefficients related to each of these items in the performance incentive calculation. The --

Q And -- oh, sorry.

A (Peters) Sorry. There's one clarification there, actually. The budgets for the programs include administrative costs for Smart Start for Eversource. And we remove those administrative costs for Smart Start when we calculate the actual savings that are used for the performance incentive calculation.

And just one other item of clarification. The loan amounts for Smart Start, so, the pool of revolving loan dollars, the loans that are made and the repayments that come back, none of those dollars are included in the dollars that are part of the overall portfolio performance incentive calculations.

Q Now, the coefficient that you mentioned has a range, does it not, and that range is based on performance? Is that a fair assessment?

A (Peters) That's correct. The target is five and a half percent. And, if the Utilities achieve

beyond the goals in the targets, it can go up to -- I believe it is 6.875. And, if we do not achieve 100 percent of the goals, we would earn less than the target, on a linear basis.

Q And there is a threshold for meeting the performance incentive, where, in actuality, the performance incentive could be zero, if certain savings thresholds were not met. Is that correct?

A (Peters) Yes. That's correct.

Q And, once the threshold is met, is the lower end of the range in the 4.4 percent area? Do I have that right?

A (Peters) I believe so, yes.

Q Okay. So, what allows the Utilities to earn the higher end of the range? In other words, if the target is 5.5 percent, and that's, again, program spending, minus the Smart Start, times 5.5 percent, what is it that the Utilities do to achieve the 6.875 percent?

A (Peters) It would depend on the component. So, for lifetime or annual savings, it would mean that we achieved lifetime or annual savings that were greater than the goal that we had filed in

the Plan. The same would be true for the summer peak demand savings and winter peak demand savings, achieving savings higher than the goal.

For the value component, it would mean that our actual spend, divided by the Plan net benefits, meant that we had achieved the savings at a lower cost than we had planned, that would be overachievement for the value sector.

Q So, again, at the risk of oversimplification, more savings, generally speaking, would result in a higher performance incentive under this matrix, correct?

A (Peters) That is how the performance incentive for the Energy Efficiency Program Plan portfolio is structured, yes.

Q Okay. Now, if a customer -- well, first of all, I think you've mentioned that municipalities are the primary recipients of Smart Start loans, is that correct?

A (Peters) Yes. That's correct.

Q And what would the municipalities do with the Smart Start loan proceeds?

A (Peters) The municipalities use the Smart Start loans in order to cover their portion, their

co-pay, for energy efficiency projects that they undertake.

Q And are those energy efficiency projects that they undertake part of the NHSaves Programs?

A (Peters) Yes. Those projects are a part of the Program. So, the incentive dollars that go towards those projects would be part of our actual program spend.

Q And would the savings achieved from those energy savings installations, using the Smart Start loan proceeds, would they affect the savings figures that are set forth in the matrix on Bates Page 088?

A (Peters) Yes. The savings targets are part of the performance incentive calculation for those programs, and the savings achieved by the municipal projects are a part of that calculation.

Q So, --

MR. DEXTER: Well, I think I'll leave it at that. That's all the questions we had.

CHAIRMAN GOLDNER: Thank you, Mr. Dexter. Are there any other cross in the room or on the phone from the parties?

[No verbal response.]

CHAIRMAN GOLDNER: Okay. Seeing none, we'll move to Commissioner questions. And we've organized our questions today by topic. And we'll begin with some questions that we have relative to the testing, and specifically the GST and the TRCT testing.

So, Commissioner Ross, would you like to begin?

SPECIAL CMSR. ROSS: Good morning. I just want to acknowledge that tomorrow is April 22nd, commonly referred to as "Earth Day". I can claim to have already been an adult when it was established. And it is a day to consider our Earth and the environment, and what we need to do to protect it. So, I do think it's very appropriate that we're having this hearing so close to Earth Day on energy efficiency here in New Hampshire.

I do have some questions on the Granite State Test, and I believe it's referred to as the "Total Resource Cost Test". And, so, I'll begin with those.

BY SPECIAL CMSR. ROSS:

Q Could one of the witnesses, and whoever feels most ready to answer the question, please just jump in, please summarize the difference between -- the differences between the Granite State Test and the TRC Test, and the benefits and drawbacks of each test?

A (Butler) Thank you. So, the differences between the Granite State Test, which was adopted as the primary test, and the Total Resource Cost Test, which we're using in the Plan as the secondary test, the Granite State Test uses all utility system benefits, and as well as the impacts, nonutility system impacts, like other fuels, water resources, and --

[Court reporter interruption.]

WITNESS BUTLER: I'm sorry.

CONTINUED BY THE WITNESS:

A (Butler) -- income-eligible participant impacts, as well as a New Hampshire fossil fuel proxy.

Where that differs from the Total Resource Cost Test is the Total Resource Cost Test also takes into account participant costs, like customer co-pays, as well as participant non-energy benefits. And those non-energy

benefits are calculated as like non-energy -- NEIs. And those are not included in the Granite State Test.

The TRC also does not include a handful of utility system benefits that are in the Granite State Test. Those include market transformation, credit and collection costs, as well as reliability. Now, the Granite State Test does, as adopted, include reliability. But it was not included -- neither test actually includes reliability, and that was made as a decision per certain stakeholders, that they expressed that they didn't want that in the test.

BY SPECIAL CMSR. ROSS:

Q Thank you. Could someone take two programs, maybe one residential and one C&I program from the proposed current plan, and just walk through how the two tests come out for that program? How they -- what the results of the two tests are?

A (Butler) Sure.

Q And if there's a place in the filing that those calculations are shown, if you could reference that, too, that would be helpful.

A (Butler) So, each utility's cost-effectiveness

report shows both the Total Resource Cost Test, as well as the Granite State Test. That is in the filing for Eversource, we're going to -- for Eversource, and for all the utilities, I guess, we can --

Q You can just indicate in Eversource's, that would be helpful.

A (Butler) Sure. So, while we grab that number, or let me grab where that is, we can basically just use, you know, for example, the ENERGY STAR Homes Program, the Granite State Test there, on a statewide basis, would take into account all of the -- all of those utility system benefits, as well as nonutility system impacts that we discussed. But it would not take into account those participant costs. And those participant costs would be the customer kind of -- would be the customer co-pays, that would not be in that test.

So, we have it here for Eversource. Yes, that's Bates 523. Again, as we discussed, the Total Resource Cost Test and the Granite State Test are on the far -- the two far left columns. They are relatively similar, in terms

of benefit/cost ratio. But, again, the utility -- the Granite State Test benefits are divided by just the utility costs to get that benefit-cost ratio.

Q Which exhibit? I need to --

A (Butler) I'm sorry.

Q Actually, is it the main -- is it the filing?

A (Butler) Yes, Exhibit 47. Yes.

Q Okay. I'll get to that. And while I'm getting it, if you could just give us the numbers, that would be -- for the two ratios on the ENERGY STAR Homes?

A (Butler) Yes. Sorry. Yes. So, yes, we'll just -- yes. Sorry. The Home Performance Program, we'll actually just describe that one. The Granite State Test benefit calculated for that for Eversource would be in the fourth column over, about 29 million. We would divide that by just the utility cost to get the benefit-cost ratio for the Granite State Test. Again, because the Granite State Test does not include participant costs, as well as participant energy benefits.

In order to get the Total Resource Cost

ratio, we would divide what is in that third column, the Total Resource Cost Test, by both utility costs as well as the customer costs that are associated with that program. And then, that, again, that benefit-cost ratio would be in the far left column for that there.

So, that, you know, again, --

Q And could you actually give me the two numbers, the two ratios?

A (Butler) Oh. Yes. Sure. Sorry.

Q And is this now for ENERGY STAR Homes or did we --

A (Butler) I'm sorry. I'm describing the Home Performance with ENERGY STAR Program.

Q Okay. So, you're on the Home Performance?

A (Butler) Yes.

Q Okay.

A (Butler) And the Granite State Test benefit for that is 4.24, and the Total Resource Cost benefit-cost ratio is 4.18. Again, what's included in that Total Resource Cost benefit is, in addition to, basically, all the Granite State Test benefits, it is including a non-energy -- an NEI, a non-energy impact, that's added to it.

It's essentially an adder that helps to account for those non-energy impacts.

Q Okay. Thank you. And could you maybe do the same thing now for a C&I program?

A (Butler) Sure. So, for the Large Business Energy Solutions Program for Eversource, again, on that same page, same exhibit, the Granite State Test benefit is 2.35, and Total Resource Cost Test benefit-cost ratio is 1.44.

SPECIAL CMSR. ROSS: All right. Thank you.

WITNESS BUTLER: You're welcome.

CHAIRMAN GOLDNER: Commissioner Chattopadhyay, do you have any questions on this topic?

CMSR. CHATTOPADHYAY: Yes, I do. Good morning.

WITNESS BUTLER: Good morning.

BY CMSR. CHATTOPADHYAY:

Q So, let's go to Exhibit 48, Bates 021. And, you know, you don't have to dig into the specific numbers, you know, you don't have to go into the Excel files or anything like that. But, if you go to that page, I'm just choosing one of the

rows that is shown on Table 1.

A (Butler) Uh-huh.

Q And I want you to walk through, sort of describe, let's say, let's go with the "Avoided generating capacity costs"?

A (Butler) Uh-huh.

Q Okay? Tell me how would that be modeled, in terms of capturing the benefits? And, like I said, I don't want you to get into the specific Excel files, but give me a sense, --

A (Butler) Sure.

Q -- like, okay, I'm going to look at the numbers from this source, and apply that number to the years, is the number the same for all years? So, just give me a description. How do you model it?

A (Butler) So that the avoided gen -- or, the avoided capacity costs, those are one of the utility system benefits that we get from the latest AESC report. The latest one came out in 2021, and those are what we have included in our model. And, in the model, we take, essentially, all of those levelized capacity cost benefits or avoided costs, and those are applied to the -- those are applied to the capacity costs that

are -- I'm sorry, the avoided capacity is applied to the capacity savings that we model through our model.

So, each measure has a certain amount of energy savings. That energy savings translates to kW saved. That kW is then multiplied by those avoided -- those avoided capacity costs in the model, and those give us a specific benefit per measure for avoided capacity costs.

Q The number that you got from the source that you mentioned --

A (Butler) Uh-huh.

Q Sorry. The number that you got from the source you mentioned, is that number applied to each and every year, as you're modeling it?

A (Butler) Yes.

Q The same number?

A (Butler) For each of the models, there's an annual, essentially, number starting in 2021, and going out, you know, I believe until 2045 or so in the study. It's based on the measure life of the measure. So, if a measure has a measure life of five years, we would take into account the

benefits associated with each five of those years, and then that would be -- that would be the benefit, the full -- the full, again, lifetime benefit. All benefits, I guess, are expressed as kind of a full lifetime of that measure.

A (Downes) This is Mary Downes. I might add that this is specifically related to summer capacity reductions. That's where the benefits are. Winter capacity benefits are deemed to have no benefit, because we're in a winter -- I'm sorry, we're a summer peaking system. So, this is developed, the avoided cost study, all of the details of how that's developed is detailed in the study itself, and it's based on analysis of ISO and the Forward Capacity Market, and the value of summer peak, as determined by the study guide, in coordination with a very large regional study group that is paying attention to all of these details.

So, what we're using for the avoided costs, or the benefits in this case, are similar in nature to those that are being used by energy efficiency program administrators throughout the

Northeast. And we each have our own avoided capacity benefits based on the zone that we're in within the ISO system.

Q So, is the number New Hampshire specific?

A (Downes) Yes.

A (Butler) Correct. Yes.

Q Again, keep the discussion sort of at a philosophical level, okay? So, I have another question.

Let's say you choose a program, and you have two numbers, GST and the TRC. You look at it, tell me what it -- what it gives you, in terms of, okay, whether this program is good or not, I know about the threshold, one, but give me some color, in terms of, let's say, if the GST shows up to be this, and how -- why would the TRC be relevant, and how does that number still help you judge a program?

A (Butler) So, the -- like, again, the Granite State Test is the primary test. It is, you know, essentially, how we judge cost-effectiveness in the programs. But the Total Resource Cost, as a secondary test, is essentially there to add color, to help, you know, differentiate if, you

know, if there is a significant difference, you know, then that might help in, you know, between two different measures. It might help in that selection.

But, again, you know, in statute, the Granite State Test is, you know, what we look to primarily, and that secondary test, again, would be the -- would just be to add color.

Q Just to follow up on the same question. I've read it in one of the testimony, but I just want to make sure I understood that correctly. So, if you had a GST that was less than 1.0, so, it's a "no go", that's what you're saying. But, if the GST is above 1.0, then you take a look at the TRC, and then you might judge whether you should move on?

A (Butler) Yes. I mean, well, it definitely depends on the program. But we look to programs to be above 1.0. Where, you know, where there are exceptions to that would be in the Low Income Program, as well as in the Municipal Program, you know, where those are statutory dollars that must be spent.

CMSR. CHATTOPADHYAY: Agreed. That I

understand.

CHAIRMAN GOLDNER: Okay. The Chair has a couple of questions.

BY CHAIRMAN GOLDNER:

Q Can one of the witnesses just provide a high-level summary of any industry reports or academic literature that shows what programs have been the most effective at reducing energy consumption, and how those programs have been evaluated? So, academic literature, industry reports, anything that you can comment on there?

A (Peters) Thank you. Maybe I'll start, and I probably won't think of everything, so someone may need to fill in.

So, there are -- there are kind of two ways to look at it. For our own programs, we, of course, have our evaluation and measurement and verification offerings, where we undertake third party evaluations of our own programs, and how they are working and what energy savings they are achieving. So, we use those reports and evaluations on a very regular basis, to ensure that what we are doing is actually happening the right way in the field, and the savings that we

are claiming is being achieved.

In terms of looking more broadly, at how New Hampshire might compare to other states, I would say, as just an overall point, you know, each state has its own policy context in which it's working. And, so, state-to-state comparisons, while certainly possible and insightful, are not usually an apples-to-apples comparison, because each state may be pursuing slightly different policy goals with its programs.

One of the key reports that is used nationwide to compare states is the ACEEE does a ranking every year of energy efficiency programs. And that ranking looks at -- actually, the ranking itself doesn't focus just on efficiency programs, it focuses more broadly on kind of efficiency-type initiatives within states. So, things like transportation and so on are also included.

But, for our purposes, there is a piece of that that is focused on energy efficiency programs, similar to ours. They look at a number of different factors: The level of savings

achieved, the dollars spent, the impacts that those programs are having. And the states are ranked every year. And there's a significant amount of detail there as to how they review and what they find.

So, we do look to those. New Hampshire is kind of in the middle of the pack, towards the -- or maybe in the top third usually.

Q I thought I read in the testimony, there was a report where New Hampshire is ranked 11. Is that a different report?

A (Peters) That's -- is that it? That's it.

Q Okay. Well, that's better than the middle.

A (Peters) Yes. We are usually in the top third. You know, states that have significantly higher targets for energy savings are usually ranked the highest. But it does depend on, you know, states that have smaller budgets, but still achieve significant changes with those smaller budgets are also noted.

So, that's kind of an important kind of way to look at "How is our state doing compared to other states?" Or, "What are other states doing that we might want to take a look at, and

potentially, you know, adopt some of their methods or outreach items or program offerings?"

Q So, it sounds like it's something that you are actively looking at. You're looking beyond just the Northeast, and you're looking across different sort of industry reports, white papers, this kind of thing, it's not confined to New England?

A (Peters) That's correct.

Q Okay.

A (Downes) I would just add that we have developed over the years multiple objectives for the programs. So, you'll notice that the low income programs are less cost-effective than the C&I programs, for example. And that's because it takes more effort, we're paying a larger -- we're paying 100 percent of the rebate, and there's -- the benefits are not just energy benefits. They're fossil fuels, they're health and safety, they're providing a service to low-income customers that has been deemed to be very important to both stakeholders within this docket, but also within the larger New Hampshire community.

The same thing could be said about many of our other programs. They're not just about saving energy, they're about improving, you know, the quality of productivity in a workplace, they're about helping people access things that they couldn't access on their own.

So, if we were to say what, you know, what is saving a lot of energy? Lighting is a good example, and lighting is now becoming transformed in the marketplace. So, we're now digging deeper to get to good projects and good savings.

C&I has very good electric savings, and that was part of the purpose of us increasing or proposing to increase our budgets in that sector in our original Plan. So, now, we're looking at, you know, the other objectives that the programs are aiming for, energy being, you know, number one, but there are other objectives as well. So, it's hard to say, you know, what's the best program, because they're achieving different ends.

A (Leménager) And just to clarify, the ACEEE ranking for New Hampshire was 18th. The metric

you were referring to was a different study, a different measure.

Q Okay. Do you know what measure the other one was?

A (Leménager) Yes. I can pull that up.

A (Downes) It was a measure by the Department of Energy, at the federal level, looking at, basically, the economic efficiency, like how much energy is used per dollar of the state's GDP.

Q Okay. Perfect. Thank you. Thank you for the clarification.

Okay. Last question on the tests. So, the next one is a tactical question. So, what actions do the Companies take -- and we can perhaps start with Eversource, and if somebody wants to layer in, that's great. So, what actions do you take if the GST statistic approaches 1.0? So, ignoring pilots, low income, municipal, are there tactical or operational actions that you take when the statistical approach is 1.0, because, you know, at that point, it becomes, obviously, you know, below the threshold?

A (Peters) Maybe I'll give a high-level answer, and

then James can fill in with the details, since he does the modeling.

So, as we do the planning, and are putting all of the measures into the Plan and the programs, you know, James and his colleagues are building up those plans, along with our implementation teams, looking at how many of these types of projects and measures did we achieve in previous years? What do we think is a reasonable number we could achieve in the next year? Do we make adjustments to the incentive, *etcetera*?

And, so, you end up, you know, creating kind of a living version of the model while you're doing the Plan, entering those things. And then, you look at, you know, where does that put our budgets if we were to do that many of this measure? Where is the benefit-cost test coming out? I think, if the benefit-cost test was looking low in a particular program, we would look to adjust, and say "Maybe we shouldn't put so much effort and money towards those lower cost measures." We'll still do them, but we'll put more of our effort towards some of the measures

that are getting a higher benefit-cost ratio, in order to balance out that program, make sure that we're focusing our efforts in a way that holistically, for the program, is going to ensure that it is above 1.0.

Q I'm sorry, Ms. Peters. Just a quick clarification. So, you look at shifting budgets between programs, shifting dollars between programs. Do you also look within the program itself and say "Well, wait a minute, it's not achieving what we want. Should we make changes to the program?" I assume you do both?

A (Peters) Yes. Sorry. And it's kind of the second that I meant, you know, if we were doing a certain number of water heaters in the Products Program, and, really, those water heaters were not saving as much energy as, say, the refrigerators were, and we said "oh, we're a little heavy on water heaters, we should probably move more of our effort towards the refrigerators in the Plan, that would help balance it out."

And Mary is laughing a little bit, it might be a silly example. But those are, like, things that come to my mind when I think of

measures, from a high level.

So, I don't know if James might fill in, since he does a lot of this work.

Q No, that's very helpful. I'll just ask the follow-on question, is what happens if your statistic falls below 1.0? So, again, we're ignoring low income and municipal and pilots. But, now, you're monitoring it, right? You see the statistic falls below 1.0. Now what? What happens next?

A (Peters) Yes. So, we would -- oh, sorry. We would make those adjustments as we're doing the planning process, and ensure that whatever we've developed for the final Plan has measures and programs that are cost-effective, and that we are submitting a plan that meets all of our cost-effectiveness objectives.

Q Oh, yes. No, I'm just saying -- I understand you would only submit a plan if it was above 1.0. But, as you get data, you say "Oh, my goodness, it's coming in different than what I thought." Do you kill a program if it goes to 0.8? Do you -- what actions do you take if it falls below 1.0?

A (Peters) Right. So, for the actual results?
Q Yes.
A (Peters) Yes. So, we do look at, especially, we have our quarterly reporting that we do, we also do internal monthly reviews as the bills are paid. As a program implementer, there are a number of different levers and choices that you can make. So, my team, for example, runs the Home Performance Program. If we saw that the Home Performance Program was getting low on its cost-effectiveness, we might undertake a special effort to market for some projects. We might say "Let's go out and identify some customers that we think have very high fuel use, and target them specifically." Do a targeted campaign, to bring in some more projects that are going to be really cost-effective into the program. So, you're looking kind of -- especially, it's important to pay attention early in the year, so that you can have the time to make those marketing type of effects.

If it were something like the Products Program, we could -- I think it would be unusual, but you could take an action that would slow or

reduce the number of incentives that are available for a certain measure, if you felt you really needed to.

And, so, it really kind of depends on the programs and the specific measures what options you have, to kind of do that push-and-take. But a lot of it is marketing, some of it is contracts with vendors. You could pull back and say "Actually, we don't want to spend that much on, you know, midstream lighting or whatever it is this year. We're going to adjust our contract."

So, there's different ways for different programs that you can make those adjustments, and keeping an eye on it throughout the year is important.

A (Downes) I just might add that we actually have, for all the programs, we have project level screening tools. And, so, we're actually monitoring cost-effectiveness of projects as we're approving them throughout the year. So that we really do have our finger on the pulse of how the programs are doing in real-time during the year as we're approving projects.

Q Okay.
A (Stanley) Can I add?
Q Yes. Please.
A (Stanley) This dynamic and challenge is something that we manage regularly. It's a core component of managing the programs. We have numerous examples over the years where, particularly for Liberty, in our gas portfolio, where we've had to make sizable changes to implementation approaches, because the plan that we filed, it's depicting a certain measure mix of activity for the year. But what we forecast is never entirely exact to what we actually achieve.

And we've had examples, particularly Ms. Peters referenced the water heater example, where several years ago the water heater measure is typically a borderline cost-effective measure within our gas portfolio. And we were receiving a high volume of those units. We had to take a step midway through the year of completing shutting down that offering for customers. And we had to pivot to marketing more to heating systems, smart thermostats, in order to change the cost-effectiveness outlook for that program.

So, those are approaches that we've taken in the past. It's an ongoing challenge, because not every measure has the same type of cost-effectiveness. There's varying ranges. And we strive for the most cost-effective measures, and getting a large volume of those. But we can't always fully predict that and reflect that in our assumptions.

Q Thank you.

A (Downes) I would just add that the measure mix, we need a measure mix, because customers are going to be at different places and need different things. And we're trying to hit the market at various places. So, the reason we might want to continue offering a marginally cost-effective water heater, is because that's a lower -- lower cost of entry for customers. And, so, if they get a high-efficiency water heater, even though it may not be highly cost-effective for the program, it leads them to the next higher efficient heating system, or, you know, weatherization. So, there's a trade-off between sort of that lost leader and the measure mix in general.

So, as Eric has described, and Kate as well, it's a -- we're balancing and, you know, weighing a lot of different things, in terms of attracting the market to higher efficiency units, while maintaining a portfolio of programs that can reach everybody.

Q And it sounds like you're -- you have sort of a real-time evaluation going on. So, that it sounds like all the utilities are on top of it. If programs aren't working out or if something doesn't look right, you're making real-time adjustments, which is encouraging.

The statistic of 1.0, and we'll talk -- this is a nice segue into the next topic, which is discount rates. I have one more question before we get there. But, because the discount rate is so low, I think it's one and a half percent, if you fall below 1.0, that means your costs -- your current costs, pardon me, are greater than the return, the overall return. So, that's a very dangerous threshold, if you cross below 1.0, it actually means your costs basically exceed your revenue, if I can call it that, or your benefit.

So, we'll talk about discount rates in a moment. But I think that number 1.0 is something that's -- it seems to me a very hard -- a very hard cutoff point.

So, a last question on this, before we transition to discount rates, is how do you measure goodness or success for your pilots, your low income, pardon me, or your municipal programs? In other words, those programs that aren't judged against a threshold of 1.0, how do you judge goodness? How do you know if you're being successful or not?

A (Peters) Thank you. So, we do pay attention to cost-effectiveness for those programs as well, but the entire portfolio, including those programs, also needs to meet a cost-effectiveness of 1.0. So, even if there is an exception where we could have actuals that are below 1.0 --

Q I'm sorry, Ms. Peters. We had a quick -- can you start off again please?

A (Peters) Oh, certainly.

Q I'm sorry.

A (Peters) Yes. So, there are a couple things. We do pay attention to the cost-effectiveness

definitely for those programs also, because the portfolio, even including those programs, also has to be above 1.0. And, so, if we let them get too low, it would create a dragging effect on the entire portfolio. And, so, those programs, while there's an exception, in terms of, you know, they could fall below 1.0 in actuals, we need to pay attention to that, because we need to make sure that the whole portfolio is still sustaining and maintaining that above 1.0 position.

The other thing for those programs that are important, there are statutory guidelines, in terms of the dollars that we spend. But then we do the reporting, the quarterly reports, the annual reporting, and I think stakeholders have shown there's a high number of interest in understanding how many customers are we serving, what types of projects are we doing within municipalities that are helping those municipal governments and taxpayers.

And, so, there's a lot of the -- kind of less cost test specific, but more, I guess, items related to achievement, of who we're helping, how we're helping them, what are the

energy savings that they have achieved, what are the cost savings that they have achieved. And, so, we look at all of those things in our quarterly and annual reporting.

Eric has an addition.

A (Stanley) Sorry. Thank you. Just one addition specific to the Home Energy Assistance for Low Income Program is a metric we look at across the utilities, is ensuring that there is an appropriate balance of markets being served across the state, so that not all of the investment is happening in one particular region or area.

So, that's another element I think that's important. And also within the municipal program, too, since you have a wide range of municipal-type customers.

CHAIRMAN GOLDNER: Thank you. Any other comments from the Utilities on this topic?

[No verbal response.]

CHAIRMAN GOLDNER: No? Okay. We're going to take a quick stenographer break, coming back at 10:30, and pick up with Commissioner Chattopadhyay with some questions relative to

discount rates. So, off the record. Back at 10:30. Thank you.

(Recess taken at 10:18 a.m. and the hearing resumed at 10:33 a.m.)

CHAIRMAN GOLDNER: Okay. We'll continue with the Commissioner questions. We're targeting, our stenographer is wounded, so, we'll go to about noon for our stenographer, and just go from now tell then.

So, we'll pick back up on the record with discount rates. And we'll begin with Commissioner Chattopadhyay.

CMSR. CHATTOPADHYAY: Again, it's not directed specifically to anyone, but whoever wants to jump in and provide some clarity, that will be helpful.

BY CMSR. CHATTOPADHYAY:

Q I think one of the things that kind of bothers me about the discount rate that has been used, it's 1.4 or 1.5 percent, whatever it is, with the current situation with inflation and all of that, I'm just curious whether the approach that was relied upon is the right approach. And can you just give us a sense of the factors the utility

had considered and what research it had done to come to the determination of what the discount rate was?

A (Butler) Thank you. So, we arrived at a real discount rate to calculate the net present values, and, in doing so, we use a nominal discount rate and the inflation rate. The nominal discount rate was based on the June 2021 prime rate. And that's in accordance with the Final Energy Efficiency Report from 1999. So, we retrieve this on a yearly basis, or whenever we make updates, and it's based on the most recent June prime rate for our nominal discount rate.

The inflation rate is based on, in this model, the inflation rate from Q1/2020 to Q1/2021. And that's, again, based on past precedent, when we typically update the inflation rates. When we submitted these, the inflation rate for Q1/2022 has not been published yet. So, this was what we used.

The nominal discount rate was 3.25. The inflation rate was 2.03. And, so, for 2022, the real discount rate that we used was 1.19. That's what the calculation worked out to.

Q Just a follow-up. So, if you were doing the same analysis right now, what kind of number would you get for the real discount rate?

A (Butler) Well, I know that the nominal discount rate is about 3.5. I believe it's currently 3.5, and, you know, again potential going up soon. And, again, the inflation rate, you know, I believe if we were to look at Q4/2021 versus Q4/2020, you know, that was in the range of about 5 percent, maybe a little more than 5 percent. In that case, because inflation outpaced the real discount rate, that would leave you with a negative real discount rate.

Q Okay. So, just sort of a follow-up, but this is my second question. So, you mentioned the Final Energy Efficiency Group Report that was done in 1999.

A (Butler) Correct. I have the docket for that as well. I'm sorry.

Q So, I -- you know, do you, maybe you weren't involved at that time, but I'm just curious whether other methodologies were looked at at that time? Because, clearly, if you're going to have a discount rate just going from one end to

another, and, as an economist, I can tell you that I'm going to think about what the discount rate customers actually, in the real world, think of, and what we have is a concern for me.

So, I'm trying to understand, are there other methodologies that the Utilities have looked at?

A (Butler) No. And, again, I think, because, you know, the Final Energy Efficiency Report was part of an order in Docket DR 96-150, I believe, and we have followed that precedent. We have done annual updates, essentially, to, you know, to take into account, you know, that particular time period in which we're filing the plans. So, we've, you know, essentially relied on past precedent.

CMSR. CHATTOPADHYAY: Okay.

CHAIRMAN GOLDNER: Okay. The Chair has a couple of questions.

BY CHAIRMAN GOLDNER:

Q So, maybe we'll start with Eversource. And, if you can just share your discount rate at the Company level, when evaluating capital, and then your discount rate in energy efficiency, and

maybe share why those are different?

A (Peters) Sorry, we're exchanging glances. I don't believe that any of the witnesses here know the Company level rate. We'd need to take that as a record request in order to get you the accurate answer.

Q We're on a tight timeline. I think your weighted average cost of capital is probably seven and a half, or something like that, for your capital in your rate case would be something in that ballpark, right? You can just ballpark it.

A (Paruta) Yes.

Q Something like that? Yes.

A (Paruta) Yes. Something around that, I think. Yes. That's about right. Subject to check, it would be in that range.

Q Cost of debt is 4, so, cost of equity is 9 something, right? So, something like 7 -- so, we can just use that for discussion, we'll just call it "seven and a half" or something. And I'm just trying to understand. Obviously, one is much higher than the other. So, I'm just trying to understand the Company's position or point of view on why those are different?

A (Butler) I mean, yes, I believe, as I had stated, in the model, you know, this is -- this is how we calculate the net present value. This, again, follows a methodology that is laid out in the AESC for calculating the real discount rate. So, that's how we follow that for the energy efficiency programs.

A (Downes) I would just add that this is not dissimilar from how the Massachusetts energy efficiency programs are designed. The 2021 nominal discount rate in the Massachusetts Plan is 2.33 percent.

Q Yup. Yup. Thank goodness we're no longer a Massachusetts colony. So, we're feeling comfortable on that front.

Okay. So, basically, we've -- and the reason I'm asking is, you have one cost of capital -- one discount rate for capital investments that's higher for your discount rate for EE investments, and we're about to talk about the performance incentive as one of our follow-on topics. So, I just want to point that out.

Okay. The last question on this topic is, do the Companies believe that the long-term

discount rates are the same for participants and nonparticipants?

A (Leménager) I believe the answer would be "yes".

Q Okay.

A (Leménager) The program costs are collected across all customers, so, participants and nonparticipants. I think that one point that is nice to make is that participants in one year may be nonparticipants in another, and vice versa. Where somebody who does not purchase an appliance this year, may very well be a participant in the programs in the following year.

CHAIRMAN GOLDNER: Okay. Okay. Very good. Or, they're waiting for a Liberty water heater, one or the other.

Okay. Very good. So, the answer there is that those are viewed as being the same number. Thank you for that.

We do have a question on nonparticipants specifically from Commissioner Ross.

BY SPECIAL CMSR. ROSS:

Q So, just observing that RSA 374-F:3, VI, requires the Commission to ensure that the Systems

Benefits Charge rates are "implemented in a manner that benefits all customers equitably and does not benefit one customer class to the detriment of another. Costs should not be shifted unfairly among customers."

With that statutory standard in mind, how do the Utilities analyze the impacts on nonparticipants to ensure there's no unfair burden or cost shift of the SBC onto them?

A (Leménager) So, the Utilities, when offering their programs, ensure that there are program offerings available to every customer class. So, residential customers, C&I, and all customers -- all class segments and rate classes within C&I, as well as our municipal customers. So, we have program opportunity available for every single customer. And the cost -- unfair cost shifting is avoided in the programs by having these -- there's the statutory carve-off for the income-eligible programs and the municipal programs being funded through RGGI funding.

Q Yes.

A (Leménager) But all remaining funding remains within its customer segment. So, residential

customers paying into the programs, those dollars collected are kept within the residential programs. And then, likewise for C&I, with the exclusion of that low income piece that needs to be collected for the HEA programs, all C&I revenues collected remain in the C&I sector for program offerings for those customers.

CHAIRMAN GOLDNER: Thank you. Commissioner Ross is making some notes. But is there any follow-on on that one, Commissioner Ross?

SPECIAL CMSR. ROSS: Thank you. No.

CHAIRMAN GOLDNER: Okay.

SPECIAL CMSR. ROSS: I think I'm --

BY SPECIAL CMSR. ROSS:

Q I guess the only follow-up I would ask is, is there a point at which the SBC rate would be high enough that you would determine that it would be an unfair shift to nonparticipating customers?

A (Leménager) I think with the passage of HB 549, we have a dedicated calculation for the increase in the SBC rate and LDAC rate on an annual basis. So, it's not really up to us --

Q That's fair.

A (Leménager) -- to propose a different rate.

SPECIAL CMSR. ROSS: Yes. That's fair. You do have a policy determination now. Thank you.

CHAIRMAN GOLDNER: Well, thank you, Commissioner Ross. I was just -- I did a poor job of seguing into performance incentives. I think we have some questions from each Commissioner, beginning with Commissioner Ross on this topic.

BY SPECIAL CMSR. ROSS:

Q Okay. Referring to Table 5-1 and 5-2 of the Proposed Plan, which I believe are Bates Pages 088 and 089, could you walk through an example using 85 percent -- an 85 percent savings level? What is the rationale for awarding a performance incentive for categories where the performance is below the energy efficiency level assumed in the Plan?

A (Peters) Just to clarify, are you asking "if the threshold were 85 percent" or "if we had achieved 85 percent of a target"?

Q If you had achieved 85 percent.

A (Peters) Certainly. So, as my colleague, Mr.

Stanley, and others were discussing before, the Plan is a plan, and we make every effort to create plans for program offerings that we will actually achieve in the field. But, as you get into the marketplace, customers sometimes decide to do different things than you thought they would, or there's a different level of interest in different areas. Or, you know, 2020 is an example, things happen in the world that you did not anticipate in your Plan, in terms of what might be achievable during a giving year.

And, so, the PI Working Group actually spend a significant amount of time thinking about these minimum thresholds. When should the earning of the PI be able to start, in terms of the achievement of savings?

It used to be, actually, that the lifetime and annual savings had a 65 percent threshold, and that was increased by the PI Working Group through that discussion to the current 75 percent.

So, it acknowledges that there is a goal. The Utilities are incented to achieve the full 100 percent of the goal. But achieving 85

percent of the goal is not necessarily a failure. It is a significant achievement of energy savings in the marketplace. And I will use 2020 again as an example, because I don't think Eversource achieved 100 percent of its savings targets in 2020. But we did pass the minimum threshold.

And, so, when you begin earning, the coefficient is not -- that gets applied, you don't earn your full performance incentive for achieving 75 or 85 percent. You earn a lower portion of that. You don't earn the full amount until you achieve 100 percent. And, so, it encourages the utility to meet the threshold, and continue beyond the threshold towards 100, or, if possible, past 100 percent. Acknowledging that there is a range of opportunity in the marketplace, and different factors may come into play, you always want to be encouraged to achieve more, at a reasonable value. But it is not a failure of the programs if you achieve something slightly less than 100 percent of the goal. But the customers still benefit from the delivery of the programs. And, so, the performance incentive is available, as long as you're above the

threshold, but you're not going to earn the full amount.

So, it's kind of a direct relationship. If you haven't achieved your full goal, you're not going to earn your full amount. But there is a threshold at which you're able to start earning.

Q And, so, do the Utilities believe that this structure actually incentivizes the Utilities to maximize efforts or do you think it just gets them to the minimum floor?

A (Peters) Oh, it absolutely encourages maximizing efforts. If you meet just the minimum threshold, you are not earning your full incentive amount. And, for individual program staff, the point is not so much that their goal is a certain amount of performance incentive, but they need to understand the energy savings objectives that they're trying to achieve with their programs. Everyone who is operating a program or working with our vendors or working with our customers needs to understand what it is during that year that they are striving to achieve. So that, if they're not achieving it, they can make the

appropriate adjustments to try to get there. And having a performance incentive structure with thresholds, but escalating to that 100 percent earning and escalating beyond that to kind of very high achievement, gives the Company directive, but it also flows down and gives the staff a direction in terms of where they're supposed to be working, where their efforts are supposed to be going. If it's not going right, working with management to make those adjustments, so that we are, in fact, achieving the goals and objectives of the Plan. And those goals and objectives are primarily the 5 for electric and 3 for gas target components that are laid out in the performance incentive for us.

A (Leménager) And just --

Q And could I just ask a follow-on? I'm sorry, I didn't mean to interrupt. But, for Eversource, just for example, if the minimum -- if you meet the minimum, you get 5.5 percent, is that --

A (Peters) No.

A (Leménager) No. It would be around 4 percent.

Q Okay. And, if you max out, you're at 6.8?

A (Leménager) Correct. 6.875 is the maximum PI.

Q And the minimum is again?
A (Leménager) It's around 4.
Q So, what is the spread between the minimum and the maximum in dollars for Eversource? Can you give me a ballpark?
A (Peters) We're going to reference the --
Q Okay. And while he's getting that number, let me ask one other follow-up. Do the employees who work in the programs earn a bonus, if they manage to bring the programs in at a higher level of performance?
A (Leménager) No. The annual bonus payout for all Eversource employees is based off of Company earnings. It has nothing to do with performance of energy efficiency programming.
Q Okay. Do you have the number for Eversource?
A (Butler) Yes. For 2022, the difference for Eversource between meeting the minimum and meeting the maximum would be in the neighborhood of about 1.1 million.
SPECIAL CMSR. ROSS: Okay. Thank you. That's helpful. I'm sure it would be lower for the other companies, because they have lower budgets.

Okay. Thank you. That's all I have for now.

CMSR. CHATTOPADHYAY: So, I have a couple of questions.

BY CMSR. CHATTOPADHYAY:

Q Do you -- have you sort of looked at how the PI Program is set in other states? Can you give me a sense of, like, can you compare New Hampshire with other states, including the ones in New England?

A (Peters) So, during the Performance Incentive Working Group, there was a significant amount of review of other states' incentive structures. I likely do not recall them all completely correctly at the moment, because I haven't looked at that report itself in a while. Some states use the -- they kind of create a pool of dollars that is set aside as a performance incentive, and then utilities can earn from that pool of dollars.

I think most states, at least here in New England, have some structure of a set of goals, and a target performance incentive, and then the minimum thresholds you need to meet to

achieve those goals. What those components and targets are slightly differs, because some of that kind of comes into the state policy that is directing the goals and targets of the programs.

But, from my recollection of that discussion in the Performance Incentive Working Group, most states in New England have a PI structure that is, at a high level, similar to the one that we use.

Q Can you explain further what you meant by "pool of dollars"? Is it like a pot of dollars that is later allocated between the different utilities, depending on how they have performed? I'm just trying to get a sense of what you mean by that term?

A (Downes) I can speak to the Massachusetts model, because we are also -- Unitil is also operating in Massachusetts.

So, in Massachusetts, there is a pool of dollars that's set or agreed to during settlement that will be the design level across the entire Commonwealth, that is just that, the design level. And it's based on -- it's now based on a number of different things, and I

won't go into the complication of it, but each program administrator that is undertaking efficiency programs gets a share of that pool based on the level of benefits that they're delivering to customers.

And, so, in reality, when we go to report on our actual achievement, we use the payout rate that was established at the beginning, per dollar of benefit, I'm oversimplifying, that was realized. So, it could be more or less. But there's both a threshold and a cap, as there is here in New Hampshire. And it is roughly 75 percent threshold to achieve, to begin achieving performance incentive, and it's -- there's, again, this is oversimplifying, but there's a 125 percent cap on achievement of what was proposed.

Q So, that pool of money is not necessarily based on your outlay of, you know, to begin with, right? I mean, it's -- that's what I'm trying to understand. Is it a determined number, this is what the pool would be, and then we have some sort of a matrix to look at how the different program administrators performed? And then, you

know, you have a -- kind of a matrix, very similar. But, just give me a sense of, when you say "pool of money", is that -- is that related to how much you end up spending, rather than, you know, --

A (Downes) Only indirectly. So, there is -- a component of the performance incentive is net benefits in Massachusetts, or the value component, which we have here as well. So, if you overspend, presumably, your net benefits are going to shrink, right, all else being equal. However, the pool is the pool. And, so, the payout rates remain static, from the time it's approved, the plan is approved, to the time that you are reporting.

I do want to come back to the work that the PI Working Group in New Hampshire did. It was an extensive amount of work. And I believe, maybe someone can help me find the reference, but I believe it is included in the attachments to the Plan. And it did look at other states. It recommended that we continue to look at other states and their -- and the way that they value risk, for example, with the discount rate.

But that was a very lengthy and thoughtful process that involved a number of stakeholders, including now DOE, which was then PUC Staff. And it was a comprehensive and unanimous report that went to the Commission and was approved, as part of the whole framework for the PI -- the PI mechanism. And we did, at that time, make significant changes to the mechanism that had been in place up to that time.

So, I just want to make it clear that there's a lot of work that's already been done to go into the thinking behind that framework.

Q A very quick sort of offshoot of my question, I mean, essentially driven by the previous discussion in response to Commissioner Ross's questions.

So, when you think about -- let's say you have 65 percent to 125 percent. Are the PIs, the percentages, are they precisely given, like, for 65 percent, it's going to be this much, and, for 75, it's going to be this much? Or is it based on some sort of a calculation?

A (Peters) Can we just clarify, are you asking that question about the Massachusetts pool model or --

Q No, I'm sorry. We're going back to where things matter most, New Hampshire.

A (Downes) So, in our -- in our Plan, we have a PI, you know, worksheet that shows very explicitly what the calculus is. So, there's several different components. They each have a minimum threshold. There's a coefficient that gets multiplied based on your actual achievement, and then there's a max. The max, if you do really well on one of the components, you max out on that, and you can't earn any more on that component.

I'm sorry, I may not be answering your question.

Q I understand that. Like, you have weightages, different, you know, attributes, and you -- all of that I do understand.

A (Downes) Okay.

Q Ultimately, you get a specific number, and I'm assuming that's what you do. And what I'm asking is, whether there is a table that tells us, for 65 percent, this is the PI percentage; for 75 percent, it's this? That's what I'm asking.

A (Peters) So, the amount earned based on the -- it

has two components. It's your actual spend, which could vary, and then it's "did you meet the threshold?" And what weight does that particular line have within the total calculation, *etcetera*.

So, we have, in the Plan, we have tables that calculate the benefit or the performance incentive, the target. But, in the benefit-cost models, the live Excel models that were submitted, you probably could undertake the exercise of seeing what would happen at different pieces, we haven't laid out any specific table of scenarios. But the live Excel spreadsheet is available and the benefit-cost models that does those calculations, if that's helpful.

A (Leménager) And Bates 525 is Eversource's, in Exhibit 47, Bates 525 is Eversource's Performance Incentive calculation. And there are a number of variables, since there's the components in the PI formula. All of those variables are actuals versus planned. So, if you were to do -- if you could change one of them to 65 percent, you could come up with a number. But, then, in reality, what's probably going to happen, if you spend less, for example, the savings will be lower as

well. So, all of the variables will shift as well.

Q Thank you. That's helpful. The Joint Utility testimony talks about the need for "exemplary performance", it's Exhibit 48, Bates Page 012. Don't need to look at it, but just I'm asking to the Utilities, do you agree that this is a requirement to avail the PI?

A (Peters) I think the performance incentive structure serves as a marker and an indication to the Utilities and our staff as to what does "exemplary performance" mean in the context of these programs. So, we have worked with stakeholders and the Commission over the years to identify the primary goals of what we're supposed to achieve. And those goals are incorporated in the performance incentive. And there's a structure there to tell us -- kind of to encourage us to keep achieving and achieve beyond those particular goals.

You'll notice in that chart on Page Bates 088 there, the lifetime savings has an incentive weight of 35 percent, which is the highest incentive weight, and the value component

has that 35 percent weight; the annual savings has a 10 percent; and the summer and winter peak have 12 and 8.

And, so, as we look at that chart, the policy direction that it gives us is lifetime savings and value to these programs are the two primary things that we need to focus on. But we also need to focus on annual savings. We also need to focus on achieving summer and winter peak demand.

And, if we can, if it's possible, we should work to try to overachieve our planned goals in all of those categories. And, so, that's -- I think it's a mechanism for laying out for us, in a kind of numerical way, what are we trying to achieve, and that kind of guides our program development and implementation.

CMSR. CHATTOPADHYAY: At least I have your answer, but, you know, I will interpret it differently.

But, anyway, you can go ahead. Yes.

BY CHAIRMAN GOLDNER:

Q So, let's -- if we can just, if you don't mind, go to Bates 088, Exhibit 47, the table that we're

talking about here. And let's just take the simplest of examples, just to make sure the Commission understands how the calculation is done. So, let's say, on PI Number 1, the minimum threshold, "75". So, let's say you achieve exactly 75 on that threshold. But you don't achieve any of the other thresholds on PI 2, 3, 4, or 5. So, it's just 75 percent on PI Number 1. What would your percent -- what would your PI be?

A (Leménager) So, the weighting on it, you would apply the 35 percent to our PI amount. So, I think the weighting would be roughly just under 2 percent of PI, if we just targeted -- for example, just able to target one aspect of PI.

Q So, let me just -- let me expose the way I did the math, and I think you're going to correct me. So, I thought what you said was that the minimum threshold was about 4 percent. This incentive weight is 35 percent. So, 35 percent of 4 is 1.3 percent, something like that. Would that be -- am I doing it right?

A (Downes) It might be easier, if you look on -- we referenced it earlier, the actual PI table in the

attachment to the Plan, on Bates --
Q If you don't mind, I'd like to stay just on the simple table.
A (Leménager) Yes.
A (Downes) Okay.
Q My simple mind needs to focus on the simple table. The other one is a little --
A (Downes) There's a percentage right there that will answer your question.
Q Oh, that's okay. If you could just share with me the percentage, I can make a note. I'd just like to focus on the simple table.
A (Downes) Okay.
A (Leménager) So, if you go to Bates 089, just on the very next page, --
Q Okay.
A (Leménager) -- it lays out some of the descriptions.
Q Yes.
A (Leménager) And the second bullet, there's a parenthetical at the end of it, noting that you have to apply the weighting. You're not going to give 4.4 percent just on that amount. It's 4.4 percent in the aggregate. So, if you're applying

the weighting, you're looking at a target of 1.925 percent for -- oh, sorry.

Q So, if you meet the minimum, you get 1.925. Is that what the parenthetical is telling us?

A (Peters) I think maybe we're having a difficult time with this, because all of these assumptions are kind of assuming that you have spent your entire budget, which is the other piece of the calculation. Then, if you spent your entire budget, only achieving the lifetime savings, which, I think, in practice, is not possible, because the measures that achieve lifetime savings also achieve annual savings, and also achieve the winter and summer. So, we may just be having a little trouble in our minds working it out exactly.

Q Well, you could -- I mean, maybe. But, I mean, couldn't you spend your funding, and then not achieve the lifetime savings? For example, you might, you know, it's a bad year, right, for whatever reason, you don't achieve it.

So, I can see -- so, let's assume you spend your full budget, for purposes of this, you know, sort of clarification, you spend your full

budget, and you just achieve 75 percent on PI Number 1. I'm just trying to make sure I understand roughly what the bonus would be. Doesn't have to be to the third decimal place.

A (Stanley) Kate, I've got it.

A (Peters) Eric has got it.

Q Okay. Great.

A (Stanley) Thank you. Yes. So, it would simply be 75 percent times the design coefficient value that's referenced, the 1.925. So, it would be 1.4437 percent would be the rate of earnings for the utility in that circumstance. So, essentially, 75 percent of that design coefficient value.

Q Okay. Okay. So, why, though, it just seems overly complicated. Like, if you have an incentive weight, why wouldn't you just have -- my encouragement would be, in the future, to make this simpler. So that, if you say the incentive weight is X percent, the minimum threshold is Y percent, you know, you start getting a bonus based on 75 percent, it's, you know, 4 percent, whatever it is, just highlight that in a table. I don't think it -- this is a nice, simple table.

And, then, you have to go to, you know, Bates Page 6004 to figure out what the actual, you know, calculation is. It's, I think, in my opinion, overly complicated.

But let me try one more time. So, if this scenario that I just -- that I just expressed is achieved, I think you suggested the overall bonus for that particular utility would be I think you said "1.4 percent", something like that?

A *(Witness Stanley nodding in the affirmative).*

Q Okay.

A (Stanley) Correct. Yes.

Q Thank you. Okay.

A (Stanley) It's the same -- that arithmetic, whether you were to say if we earned on two components, whatever the percent achieved would be multiplied by that coefficient value. And, if it's multiple, you'd sum those two together.

Q Perfect.

A (Stanley) And that's how you would determine that rate of return, if you want to call it that.

Q Perfect. Yes, I think you're just missing a column on the spreadsheet. If it's linear, and

you have a minimum threshold, then you just need to know where the threshold starts. If it starts at 4 percent, it starts at 4 percent. That would be very helpful in the future. But thank you for helping me understand the way that it works.

Okay. I just have a couple of additional questions. So, having had some time to process my prior question about discount rates, in the testimony, Exhibit 48, Bates 010, there's a discussion about putting energy efficiency "on par with other utility investments", by which I assume it means capital investments. And, you know, capital investments have a risk and an associated risk-free premium. But, so far as I can see, energy efficiency has no risk. So, I'm trying to understand why there's -- I'm trying to understand, I guess, why energy efficiency investments shouldn't have more like a risk-free rate, in terms of their return?

So, if somebody can help me with that one, I would appreciate it.

A (Leménager) So, I think part of the calculus is the difference in performance incentive for a successful delivery of energy efficiency programs

and more traditional investments. There is a distinction or a difference in the numbers offered for the opportunity there.

And I think another distinction for the energy efficiency programs is this idea of the minimum threshold to actually begin earning an incentive. It's a little bit different than looking at a, you know, a used and useful investment, in that all of the measures offered are used and useful, because they do screen as cost-effective. So, being able to deliver, in aggregate, the numbers promised in the Plan is enabling the Utilities to have an opportunity to pursue that kind of benefit to the grid and to customers. Where, without having that performance incentive, being able to be relatively "on par", as noted in the testimony, it makes it a little bit less clear of what exactly should the Utilities focus on, where that performance incentive matrix shows us and directs us as to what types of benefits are we trying to achieve with these dollars, and, again, to what weighting, to be able to best allocate the funding for these programs.

Q Okay. Thank you.
A (Downes) Can I?
Q Yes.
A (Downes) I might just note also that the performance incentive is the best practice across the country for energy efficiency programs. And even in jurisdictions like Vermont, which is operated, because of the number of small utilities across the state, they have a nonprofit administrator, and, even in that case, even though they're not-for-profit, there is an incentive, a performance incentive involved in them achieving their goals, in order to motivate the nonprofit company to perform according to what has been set out.
Q Okay. Thank you. And then, the final question I have is just a clarification. Do the utilities gets PI, pardon me, on pilots, low income, and municipal? Let's assume for a moment that the GST is under 1.0. Is there still a performance incentive paid or no?
A (Leménager) Speaking just to pilots, there is no performance incentive associated with pilots.
Q Regardless. Okay.

A (Leménager) And I don't know if you want to address municipal?
Q Municipal and LI, do you have any comments on whether PI gets paid?
A (Butler) Sure. Yes. The performance incentive is just developed based on the portfolio. And, if the portfolio is above 1.0, then it would be achieved.
Q Okay. So, the threshold is on the portfolio, not for the program?
A (Butler) Correct. Yes.
Q Okay. That's an important clarification.
A (Leménager) And one -- sorry, one clarification for the pilots. The expenditures are included in the total budget expenditures. But the actual savings delivered, there is no performance incentive tied to those.
CHAIRMAN GOLDNER: Okay. Okay, very helpful. Thank you.
Okay. We have a couple of questions on a new topic, the impact on the New Hampshire economy. Commissioner Chattopadhyay.
CMSR. CHATTOPADHYAY: Thank you.
BY CMSR. CHATTOPADHYAY:

Q So, very generally, give us a sense what analysis have the parties undertaken which examines the economical factor of the energy efficiency industry specifically in New Hampshire?

And this question, again, goes to whoever feels comfortable responding.

A (Peters) Sure. I think we're all flipping to that portion of the Plan. Yes. Thank you.

So, some areas of analysis are things that we do as we're creating the plan. You'll note, on Bates 006 and 007, we try to outline some of these higher-level economic impacts.

The first is the "Customer Energy Cost Savings". So, we want to understand, for the customer, so not about our benefit-cost model, but for the customer themselves, how much money would they have had to spend on purchasing the energy that they have now saved because they implemented the energy efficiency measures? So, it looks at it a little bit more on a retail rate. So, if a customer, you know, replaced their refrigerator, and between now and the lifetime end of that refrigerator, they are going to spend X number of dollars less per month

purchasing at retail their electricity because of that energy efficiency investment.

And, so, we do that calculation. And the Customer Energy Cost Savings for the Plan that's in front of you now is more than 441 million over the lifetime of the measures. And, so, if this Plan were not to be put into effect, if customers did not adopt the measures and savings that are going to happen because of this Plan, they would end up spending at retail, over the lifetime of those measures, $441 million more on their energy bills.

And that's an important piece, I think, because those are the dollars, and these are participants, I should clarify, these are related to the direct install measures, but those dollars that they are not spending on energy bills are dollars that they then have available to spend on other things, hopefully, within our local economy, although we can't determine exactly what they're spending them on, maybe a different study would do that. But it makes those dollars available for customers to spend on other needs and priorities that they may have.

The Energy Savings I think is fairly clear in the Plan, and we've talked a lot about that. And the Peak Demand Reduction Savings are kind of quantified in the Plan.

The energy efficiency contractors is another area of importance. We have not done, to my knowledge, our own study of the particular economic impact of the contractors in order to quantify it. But we work with -- we undertook an effort a couple of years ago to count the number of vendors and installers that we work with, and the number was almost 1,200 across the state. These are local businesses that employ local workers. Energy efficiency is a very location-specific thing. And, so, it's hard to outsource. You need people in the state who can perform this work.

And whenever we have concerns about program dollars or customer interest, we hear from our contractors. They are running businesses, in many cases small businesses, and they want to be assured that the work they are doing is going to continue into the future, because they need to invest in their employees,

they need to train them. They want to provide benefits.

Many of our small weatherization contractors provide 401k plans and healthcare benefits for the workers who are in homes, kind of doing attic insulation and crawling around in basements, and doing things that are very difficult every day. And I think that's a really important piece of the program, that, unless you're actually getting a project done, you may not see. If it's happening in your house, you end up seeing kind of the level of work that is required to make these improvements. And it's pretty impressive the work that they do, and people that they employ.

The other point -- the next point there also goes to that Highly Trained Workforce. There are some studies that attempt to articulate, you know, for spend inefficiency, what are the full-time equivalents that end up in the marketplace. And, so, we've referenced one of those studies in the Plan. The dollars that this Plan spends, based on that study calculation, is going to support 1,698 full-time

equivalents, or 3.5 million work hours. And, again, that's kind of a calculation from a study, but it gives a sense of the scale at least.

And then, I think, you know, there's some discussion there of the Environmental Benefits, which can have an indirect benefit, I think, on the economy, as we look at our tourism sector, the desire for businesses and residents to locate here in New Hampshire, I think. You know, our environment is something that draws a lot of business and activity in the state, and protecting that environment is something that we also find important as we deliver these plans.

So, those are a few examples.

Q You mentioned the "$441 million", that's for the lifetime benefit, right?

A (Peters) Yes. It's less --

Q And, --

A (Peters) Yes.

Q And, so, just -- okay. Confirm that for us. It is, right? It's for the lifetime --

A (Peters) It's over the lifetime of the measures. So, the energy saved over the lifetime of that measure.

Q And what is that? Like, what period are you using for the lifetime, generally speaking? It depends on different programs, I'm going to assume, but --

A (Butler) Yes. To undertake that calculation, we, as Kate mentioned, take the lifetime of both electric savings, as well as fossil fuel savings, and we multiply that based on kind of a 10-year -- 10-year historic average of the price for that, for that particular energy.

Q Okay.

A (Butler) Yes.

Q And you do use the discounting there as well? Or what do you do? Like, I'm trying to --

A (Butler) No, we --

Q Just an average number, multiplied by the savings that you have?

A (Butler) Correct.

Q Okay.

A (Peters) This is more of an illustrative calculation than a calculation --

Q Yes. And I'm -- you know where I'm going. It looks like it's not necessarily a good presentation of what I would consider --

A (Leménager) Yes. So, there's no discount rate applied, but it is a 10-year historical average price for each type of energy. So, there's no inflation adjustment.

Q Okay.

A (Leménager) But it's going back in time. So, the historical prices tend to be lower than current prices.

CMSR. CHATTOPADHYAY: Yes.

CHAIRMAN GOLDNER: Thank you. Just one other additional question on the same topic. And I'd like each of the utilities to answer sort of one-by-one. So, start wherever is best.

BY CHAIRMAN GOLDNER:

Q But what internal tracking, if any, do the Utilities undertake to record the amount of energy efficiency funding that is paid to out-of-state entities?

And I'm thinking about two different things. There's a big portion of New Hampshire is on the border of our southern neighbor, which is -- so, it would be pretty easy for there to be services coming from Massachusetts. And then, of course, you know, for example, EM&V consulting,

if you look down the list there, there's usually a lot of Boston-based entities, *etcetera*.

So, I'm just trying to get a handle on how much money is leaving New Hampshire, versus how much money is staying here. Is there any internal tracking? And maybe just if each utility by utility could go through.

And, if you don't, that's fine. It's just a question for understanding.

A (Peters) In terms of the vendors who may be participating in installing the measures or doing the EM&V work or that sort of thing?

Q Yes. How much money is leaving the state versus how much money is staying in the state?

A (Peters) Well, so, the customers are all New Hampshire customers. So, any incentive that we pay for a project is ultimately intended to benefit the customer that's installing those projects.

Q Sure. Sure.

A (Peters) I don't know of a particular list that we have put together that lists out our vendors and what state they are located in. It's something that we could undertake, if it's of

interest, I think.

I know -- I would say a vast majority of our vendors are New Hampshire entities. But, as you said, there are companies that do weatherization installs across the border. They would have to be registered to work here. Some of our EM&V vendors are larger companies that are located, you know, or have offices in multiple places.

So, I don't think we have undertaken an effort to put that list together. But it's something we could do.

Q Yes. I'm seeing interest on this from the Legislature as well, how much money, in any program, not just energy efficiency, stays in the state and leaves the state. So, that may be something to consider in the future.

A (Peters) Yes.

Q Yes. Thank you, for Eversource.

A (Downes) Oh, yes. Speaking for Unitil, we haven't done that analysis. But I will say that, particularly for our income-eligible and Home Performance Programs, which are weatherization-based, those are -- I can get you

the details, but those are predominantly New Hampshire-based companies. Similarly, for engineering support, I would say, for, you know, looking at projects and figuring out costs and benefits and all of that, that those are -- that's largely going to be New Hampshire-based. But we haven't done an analysis of that.

But, to Kate's point also, the benefits of that work that's being done is accruing to the customers in this state.

Q Oh, I understand. I'm just trying to figure out how much money is leaving. Yes, I know how much is staying. So, --

A (Stanley) So, for Liberty, I could say with confidence that, from an implementation standpoint, in terms of vendors who are supporting customers with things like energy audits, technical analysis, engineering studies, that 90 percent of those workers are largely based in New Hampshire. There could be folks who come from out of state, who travel across the border to do that work. But it's certainly, at least in terms of Liberty's territory and the customers we serve and whatnot, that tends to be

more of the exception.

Now, when you're talking about services when it comes to market research, evaluation, software that we use, there's less of a pool of available resources to be leveraged in New Hampshire, although there are options, and we do leverage them. There are lots of qualified and successful vendors that we all leverage. But that's where more of the out-of-state work, at least for Liberty, that I could reference is coming from. It's more kind of speciality skills, where it might be harder to draw from local pools.

Q Thank you.

A (Woods) So, I would say, for the Co-op, that our answer would be very similar to Liberty's. That a majority of the services are provided by companies that are here in New Hampshire. We do have a -- we don't have a tracking system of out-of-state costs. I think we have a rebate processer for products that their processing fees would be going to an out-of-state company. But that would be pretty much the incentive for the Co-op.

CHAIRMAN GOLDNER: Okay. Thank you.

Okay. We'll move on to another topic, we'll call this the "No Direct Cost", pardon me topic, for services and equipment.

BY CHAIRMAN GOLDNER:

Q So, under the Proposed Plan, my question is, what services and equipment would be provided to consumers, whether they be residential, C&I, governmental, at no direct cost? And then, maybe share the rationale behind this approach.

A (Peters) Thank you. I think the primary program where customers receive work at 100 percent incentive, essentially, Is the low income program. There is no customer cost for those items.

There may be -- there are a few other items kind of within the Home Performance Program or other programs where a specific item may be no cost to the customer, but the overall project does have a cost to the customer.

Q In the testimony, there was some municipal -- I know some municipal 100 percent, there may be others, but I noticed that. So, I'm just trying to understand the philosophy behind the 100

percent rebate and why you do it?

A (Peters) Yes. And I think, even in municipal, I would have to double-check, most of those projects have some level of customer costs, but there may be a piece of it, whether it's the air sealing or a particular measure within that that is no cost.

As I was saying, I know, in Home Performance, some of the air sealing is no cost, but you almost never do that without doing the insulation. And, so, there is a customer cost for the project itself. It's just a matter of kind of how we put that package together for them.

Q Oh, I'm still struggling with the "why" part. Why not some other percentage, 100 versus 90 versus 80? If there's no "skin in the game", kind of thing, you know, what's the logic behind not putting skin in the game?

A (Peters) Yes. You know, some of that goes back to the question earlier about ensuring that the programs are cost-effective. And, so, we can look at, for that particular item, what is the cost of doing air sealing and how much energy

savings are we getting? And, for the program as a whole, is it serving us best to ensure that the customers who need air sealing are very likely to get it, and those energy savings? And, so, there's some level of calculation there as you're trying to make sure that the project as a whole, again, it's very rare to do just that one piece alone, but the project as a whole is going to be cost-effective and achieve enough energy savings.

Not sure if anyone else has a better example here.

A (Stanley) Yes. So, for -- there are a few examples of incentives where we'll pay 100 percent of the cost to the customer, where there's no out-of-pocket fee. And we do that in those instances where those measures are highly cost-effective. Actually, the cost of providing that service or widget or measure to the customer, the cost of that is far lower than the projected energy savings. Yet, we still see challenges, even though those measures are highly cost-effective, there are barriers or frictions with customers still being willing or confident in viewing that those measures are worthwhile to

pursue.

For example, with our Small Business gas customers, we have deployed services where we will install, at no cost to customers, pre-rinse spray --

[Court reporter interruption.]

WITNESS STANLEY: I'm sorry. I'll slow down.

MR. PATNAUDE: Would you just repeat that.

WITNESS STANLEY: Oh, I'm sorry.

CONTINUED BY THE WITNESS:

A (Stanley) -- pre-rinse spray valves. We'll offer that service to customers where we'll provide installation of those measures at no cost to a facility, because the natural gas savings are so high, it far outweighs the cost for us to provide that service at no cost to the customer. Yet, a measure, even though it's highly cost-effective, there can be less receptivity or confidence of customers to be willing to install those measures. So, that's an example that we do.

Also, we offer what we call "visual audits" to residential homeowners at no cost to

customers, and the reason we do that is the same reason. The measures that we can install upon a simple site visit and exploration of that home, we can install those measures at a relatively low cost, and those measures generate enough savings that outweigh that cost for us to send a technician to the home. That service also, though, tends to lead to the customer being open and presented other opportunities that we can offer them to further participate in our programs that maybe they wouldn't participate in otherwise. So, we can, in visiting that home and offering those no to low-cost measures, we can up-sell them on other energy savings opportunities and offerings for them to participate in.

CHAIRMAN GOLDNER: Thank you. Anyone wanted to add to that?

SPECIAL CMSR. ROSS: Yes. Just a question.

BY SPECIAL CMSR. ROSS:

Q When you have free items, how do analyze future returns? And do you apply the net present value of the amount of that rebate or how is that

handled in your modeling?
A (Stanley) It's handled in the same manner for all measures, in those where there's a customer copay or there isn't a customer copay. So, the projected energy savings of that particular measure, in comparison to the cost of that measure. It's all taken into account.
Q So, it's a utility cost then that you put into the model?
A (Stanley) Correct.
Q So, in this case, the utility cost is 100 percent of the cost. There's no participant cost on that measure?
A (Stanley) That's correct.
Q Okay.
A (Stanley) That's correct.
SPECIAL CMSR. ROSS: Thank you.
CHAIRMAN GOLDNER: And, Commissioner Ross, do you want to continue with the topic of market barriers?
SPECIAL CMSR. ROSS: Yes.
BY SPECIAL CMSR. ROSS:
Q And I'm going to refer to the statute. Again, RSA 374-F:3, X, states that "Restructuring should

be designed to reduce the market barriers to investment in energy efficiency and provide incentives for appropriate demand-side management and not reduce cost-effective customer conservation. Utility sponsored energy efficiency programs should target cost-effective opportunities that may otherwise be lost due to market barriers." So, that's the statutory language.

As part of the program design of the proposed EE plan, what analysis was done to identify market barriers and design programs to reduce those barriers?

A (Stanley) So, our programs are inherently structured to address market barriers. We do not operate in a perfect market. There are numerous frictions and inefficiencies that exist that our programs are inherently designed to address.

I would reference Exhibit 50, on Page 14 of 15 of the Direct Testimony of Ms. Lane and Ms. Goldberg, on behalf of OCA, where they listed out various market barriers --

Q I'm sorry. Was that Page 14 and 15?

A (Stanley) That's correct.

Q And working from memory, I think it was up-front costs and customer information were the two pieces I recall from looking at that testimony?

A (Stanley) Yes. And customer information, it goes much deeper than just information in general. There's not only lack of awareness or expertise when it comes to energy savings solutions or opportunities, there's also solution complexity or intimidation customers often face. Typically, we see a lack of trust or confidence in solutions, or even proposals that customers get from customers -- from contractors. Customers can be unwilling to take action, even if a solution is presented to be cost-effective and in their best interest, oftentimes customers can still be hesitant to take action, because they might not trust the analysis or the service provider presenting that analysis to them.

So, our role with managing and delivering our programs, we're able to provide confidence to customers. We're able to provide confidence to contractors, in terms of providing solutions that can overcome that confidence barrier the customer can have or trust barrier.

The up-front cost barrier noted first, of course, that's a core element of us providing incentives to customers, we're helping reduce that up-front cost for customers that's most certainly a barrier for most taking action in our programs. But it isn't always up-front costs. Again, a lot of time it's, again, awareness, understanding of opportunities for ways to save energy.

Customers sometimes don't know how to take a first step in order to make an improvement in their business or home. They might not know who to contact, who to call. And, when they -- if they learn about those opportunities, again, they might not have confidence or trust that what they're doing is in their best interest. And that's the role that we play, essentially, as trusted energy advisors for customers to overcome those barriers.

Q How have you -- I mean, I understand anecdotally you've had this experience with customers. But how have you -- have you undertaken any studies or has anyone tried to actually develop evidence on what these customer -- what these barriers,

market barriers are, whether they exist?

I mean, we're 20 years into a program, and a lot -- you know, other than the lighting, there really hasn't been a lot of market transformation. So, I'm just kind of curious to know who's analyzing market barriers?

A (Downes) Sure. So, the market barriers are to high-efficiency products and services and behaviors. And, so, lighting is a very obvious measure or, you know, suite of measures that's changed, that we all probably have done ourselves, hopefully, we've done ourselves.

But what we call the "baselines" or the minimum efficiency of equipment has achieved market transformation over time. So, the furnace or boiler that you could buy on the market today is quite different than one that you may have bought 20 years ago, or a refrigerator, or, you know, a spray valve.

So, that is -- we're constantly evolving the programs as markets themselves evolve. And we do, in fact, research this. Some of it is our implementation staff and our vendors are experts in their field, and they know what's

changing in the marketplace. And we get advice, and we amend and change our programs over time, and from year to year, in order to reflect those new minimum efficiencies and practices.

And, in fact, the evaluation plan that we included in our larger plan includes looking at what are the opportunities for additional electric savings, given that lighting has largely been met, the high-efficiency lighting. So, we know that the LED folks are going to be coming up with new ways to save energy and control lighting and all of that. So, we'll continue in that market. So, we do do that research. Some of it is informal, and some of it is more formal.

I will also say that, in the Plan itself, we've included a table that lists what we know to be the market barriers, and how our different programs are aimed at overcoming those barriers, along the lines of what Eric said. Cost is the most obvious thing, and the most expensive one. But, just by virtue of having "NHSaves" as a brand that is well recognized, we can increase the recognition of it, but that people know that it's associated with their

regulated utility. And that, if they operate and work through NHSaves, they can have some faith that what they -- what services they receive or what products that have been rebated, they can have some trust that it will work.

And that if, for whatever reason, doesn't work, they have someone that they can call who they can relief from. And, in fact, we do get calls, and we do provide relief when things go awry.

A (Stanley) Can I add? We, at Liberty particularly, and I know it's the same with all the Utilities, but we regularly see customers considering solutions that they're thinking are best for them, in terms of energy savings and have the highest return on investment. And, in fact, when we're able to work with the customer and evaluate those same project proposals they're reviewing, we are able to present them with information that shows that what they were thinking is the best option actually isn't the best option.

Just over the past month, there is the Food Co-op in the Lebanon area, and they were

very concerned about their energy usage over this past winter, looking to ways that they could reduce their electric bill. They received a contractor proposal from a very reputable entity to replace all of their refrigeration units. They were ready to proceed forward with the project. They reached out to us to see if there were incentives available, you know, for the project they were considering. We recommended that we pursue -- evaluate their site a little bit more in detail to consider what they were -- what was in front of them for a proposal. And we determined through our analysis that, if they had moved forward with the project that was going to cost them tens of thousands of dollars to replace all their refrigeration units, it would have saved them little to no energy on their electric bill, because their main culprit for energy losses or lack of -- or, you know, poor energy use had nothing to with the refrigeration units, it had to do with their electric hot water usage. But they weren't even considering that, and the contractor they were working with wasn't even proposing a solution in that regard.

So, that's one of many examples I could share of where we helped provide the customer direction, in terms of where best they could be making investments, and preventing that customer from, at the end of the day, making a poor choice for an investment.

SPECIAL CMSR. ROSS: Thank you.

BY CMSR. CHATTOPADHYAY:

Q The example that you were talking about at the end, for that customer, did it choose to do what the utility said that customer should have been doing, and did you provide that customer incentives?

A (Stanley) Yes. We're still -- this is an active project. We're working with them now. And, yes, they're no longer considering their refrigeration replacement, and we're working with them on addressing their electric hot water.

Q Do know whether, without the incentive, your project would be better than the project that they were thinking about previously?

A (Stanley) Absolutely.

Q So, the question really is, that kind of analysis is very helpful, something, you know, and we just

talk about market barriers, market barriers, everything is market barriers. It's kind of crazy. You've got to demonstrate what's out there. So, that's the kind of focus that I would like to see in any analysis.

So, anyway, I'm going to go to the next question. So, anybody knows what "market failures" is?

Really, I'm just asking. And I can give you the definition. It's "a situation in which there is an inefficient allocation of goods and services in the free market."

So, I'm trying to understand, when you talk about "market barriers", have you thought through which ones you're talking about are market failures and which ones aren't market failures. And, you know, I'm just trying to unravel the issue of "market barriers" for me.

A (Downes) So, yes. In terms of -- let's take equipment that might be used by a C&I customer that uses energy. And a market failure, I believe, might be that the customer, but for lack of information and availability of a high efficiency piece of equipment, would be willing

to adopt that high efficiency piece of equipment. But their contractor doesn't know about it, or the contractor knows about it, but they can't get it from the distributor.

So, what we do, as an intervention in that case, may be to make sure that the distributor is stocking high efficiency equipment that they might not otherwise do without our intervention. That the contractor is aware of and comfortable with that high efficiency equipment and knows how to install it. Perhaps there's a slightly different, you know, exhaust thing, you know, exhausting that needs to happen with that piece of equipment. So, we provide training to those contractors.

And then, perhaps the customer isn't sure that that's the right option for them. So, we help to reassure them, through an audit or through customer interactions, that that is a better solution for them than a low efficiency piece of equipment.

So, those are just, you know, in one example, several ways in which we might intervene in order to correct the market failure.

CMSR. CHATTOPADHYAY: I agree that information can be an issue. So, I do understand the point you're making.

CHAIRMAN GOLDNER: Okay. Just a couple more questions on market barriers.

BY CHAIRMAN GOLDNER:

Q So, outside of the issue just discussed, is price a market barrier for customers, other than low income residential ratepayers? That one is clear. But can you share any other -- any of your thoughts on market barriers for, you know, relative to price?

A (Leménager) In short, yes. In a little bit more detail, the financing offerings that we have as part of our programs help enable customers to be able to make the -- to handle the up-front investment to be able to realize the long-term net benefit of making that investment. So, by having the financing offerings available, customers who, even if the funding is available, it just may seem too steep to make the full purchase price up front, can take advantage of these funding and financing opportunities we have, to be able to make the best allocation, in

terms of, overall, their bill will be far better off over the long-term than it otherwise would have been. So, it helps restore that market efficiency, if we're going back to that terminology.

Q Okay. Perfect. So, low income -- low income residential ratepayers clearly have a barrier. Financing helps with others, people who aren't low income. Obviously, there's no need for a financing if there's no payment.

Anything else that you would wish to add to the list?

A (Peters) Yes. I have -- I have another example, actually. If you think about our Large Commercial customers, for example, companies that, you know, have access to capital, and make capital improvements on a regular basis, you may initially think "Well, cost is not a barrier. These are well run companies that have access to capital."

But, in fact, as we work with them, many of them have processes where they do their capital planning in which internal projects essentially compete with each other for what gets

funded in a given year. And our Commercial and Industrial Program staff work very closely with these companies to analyze and plan out energy efficiency projects, so that the company can actually make the internal argument that spending money on an efficiency project, which may have a slightly longer payback than perhaps buying a new piece of equipment that will be working on the floor, you know, in two months from now, actually, it makes more financial sense to do the efficiency project.

And our incentive offerings help to overcome of that barrier, and then the technical analysis that we can do, in terms of on helping them understand that the savings will be realized, based on all the calculations, also can help.

And, so, that's an example where you may not have a problem with access to capital, but the company and the ownership need to make a decision about what they're going to invest their capital in. And it's our job to help them understand the benefits and kind of overcome initial hurdles to making those investments in

energy efficiency work.

Q Yes. I just have a follow-up on that one. So, large companies, as you said, access to capital, no problem. So, when they upgrade something, they upgrade a piece of equipment, they're doing it ostensibly for a good reason. Either some sort of efficiency improvement, more than likely, maybe extra capacity, which would be tied to jobs, for example.

So, are you concerned that you might be sort of helping the company make the wrong decision by providing a subsidy that might cause them to move in the wrong direction, relative to jobs or efficiency and other aspects?

A (Peters) I don't think so. I mean, ultimately, these entities we're talking about are typically very sophisticated entities, when we're talking about these types of projects. And I think what we're doing is helping them to have a full awareness and calculation regarding the energy efficiency option that they may have. And --

Q But you're changing the mathematics. I'm sorry for interrupting. Your changing the mathematics on their decision-making. So, you're interfering

with sort of the process of them determining, because they might be increasing their capacity, right? They might be doubling their capacity that adds 50 new jobs in New Hampshire, but they say "No, I'd rather do this other project, because I have this subsidy coming." So, I mean, does that concern you?

A (Peters) But, ultimately, what they're going to achieve, in terms of benefit from the project, is reduced energy costs, and that's part of the analysis, too. So, it helps them overcome that initial barrier. They will have reduced energy costs, which actually provides more cash flow to put into some of the other things.

And, so, I think it's all part of a fairly comprehensive analysis that needs to be done. But I'm confident that saving costs on energy is something that is good to do earlier, rather than later. Otherwise, you're just wasting the money that you're spending on the energy. If you could have undertaken a project with us to reduce it, and you decided not to, you're kind of throwing money away each time you pay your energy bill, if it's higher than it

needs to be. And, so, you know, I think that's an important piece of the calculation.

Q But it seems like they would take every project, right, because you're subsidizing the project. So, I'll do the math, and I'll say "Oh, this is a good deal" or "a bad deal". So, I'm just not quite sure I buy the trade-off example. And what we started off talking about was the market barrier for price. So, I'm just -- I'm still struggling with the answer.

A (Peters) I think Eric may have a clarification there.

A (Stanley) Yes. I can share an example where we literally just met with a customer yesterday, as we're able to start meeting more in person, they're one of the largest university systems here in the state. And they have a fixed capital budget each year. They can't exceed that capital budget. It's a pretty strict -- it's a pretty strict ceiling.

And they made it clear that, when they are considering projects, and particularly for energy savings projects, they're not going to move forward if there isn't a utility incentive

with it, and that helps close the deal to motivate them to take action. And the particular project we're looking at with them, this energy savings from that will allow them to reinvest that money in other aspects of the university that they wouldn't have been able to -- they wouldn't be able to do otherwise.

So, as Ms. Peters referenced, it's creating a cash flow for them, where they're spending money on this efficiency project that's generating savings that they can -- that they can use those funds elsewhere.

Q I totally understand. I guess the problem I'm having is the "price barrier" piece of it, not that the energy efficiency structure is working as intended, I have no doubt that's true. I'm just trying to understand why price is a barrier. And I understand some companies have capital constraints, and this I'll assume sneak under the "capital constraint". So, that can happen, too. So, I do appreciate that example.

A (Downes) May I add that, generally speaking, I think this is true not only for for-profit companies, but I used to work at the State, and

managed a bunch of Federal Recovery Act money that came in that was dedicated to State buildings to do energy efficiency projects. And, so, the competition between capital funds and operating costs is a real one.

So, generally speaking, those are two different calculus. So, you look at your energy bill, and that's an operating cost. And, so, it's month by month by month you've got a bill. And, so, you're not thinking about, in that same, you know, calculus, if I invest in some capital money to change out the heating system, I would reduce my operating expense by so much every month. Like that's just -- it's a disconnect, if you will.

And, so, if you're able to help the capital budget folks make a decision to invest in an energy efficiency project that will reduce the operating costs, all the better. But it takes that -- it requires a push, right? It requires sort of pushing the capital expense of the energy efficiency project into the operating budget. And that's also what financing does.

The State of New Hampshire has the same

issue, and they have been investing for years and years in energy efficiency projects, using NHSaves projects, not because they couldn't do it on their own, but because they have other things that are taking those funds. Does that --

Q I understand. No, that helps. And I think Ms. Peters began by talking about large companies, and often large companies have unique facility budgets. So, the Utilities Department has a budget, and they're operating within that budget. So, a lot of times there's not spillover into other areas, in my experience, but there can be.

But that was -- I was just trying to understand a little bit better the perspective from the utility point of view, and I think you've helped with that.

Last question on barriers is, you know, how do the Joint Utilities analyze the success of programs in removing market barriers? So, how do you measure the -- how do you measure the success? And how has the experience gained over the last 20 years helped to inform this analysis?

A (Downes) One of the things that we do is we look at where it's available, it's not available for

all measures, but we look at the sales in the state. So, the EPA, at the federal level, has some measures of what percentage of dishwashers, for example, have -- are high efficiency that are sold in this state. So, dishwashers is an example where we no longer rebate dishwashers, because there is enough of a market saturation for high-efficiency equipment that our rebates are no longer needed.

So, we look at that on an annual basis, looking at, you know, at what the -- particularly appliances and smaller items, what's reached market saturation that we don't need to support anymore.

And lighting is one of those areas where we're really pretty much getting out of the market, because both the price has come down, and the market saturation and penetration have increased to the point where our intervention is no longer probably, you know, a good use of ratepayer dollars. So, that's relatively easy.

In other areas where we do process evaluations, we have not done one in a while, but that's one of the things that we look at, is what

is the customer's attitude about high-efficiency equipment in a particular market? You know, where could we leverage additional energy efficiency? You know, what would be the best approach? And, so, that's definitely something that we take on on a regular basis.

And I don't know if anyone else has anything to add.

Q Well, if I could just follow up on that.

A (Downes) Sure.

Q I'm interested in your decision-making process. So, you talked about dishwashers, and, you know, kind of the market is there, so there's no need. But how do you -- how do you know? Who makes that decision and what data are they using?

A (Downes) Sure. So, in that instance, it's EPA data that we are -- that's publicly available. And we, collectively, we work together very closely, the four electric companies and two gas companies, we make decisions together. And we consult with our advisors, our vendors often have good insight into the marketplace. And, so, we make those decisions, our implementation teams work together to make those decisions, make

recommendations, and execute them.
Q Is that made -- is the decision made in the executive level or is it at the operational level?
A (Downes) No. It's made at an operational level.
Q Okay. Any other Utilities care to comment on that one?
A (Stanley) I would just offer that we're at -- so, the market is constantly evolving, the opportunities for saving energy are constantly evolving. And we're -- some opportunities that might exist for energy savings, there might not be a sizable opportunity for a particular measure or technology. So, we're taking those factors into account in determining the type of measure mix that we're proposing to go after in our Plan, the areas of focus that we think will present the most return on ratepayer investments for the programs.

We had an example several years ago of this polymer bead washing machine from a company that was very promising, but it was a very specialized equipment. And we could not achieve the type of engagement with customers to deploy

that specific technology that we anticipated. We moved away from promoting that specific technology because of the limited application. Even though, on its own, there is a sizable savings for that measure, but it's not something that we think there's a sizable market to go after. So, we're not going to prioritize that, we're not going to emphasize that in the market, because we don't think there's that opportunity to be achieved.

So, those are -- that's an example of -- are examples of pieces we take into account.

CHAIRMAN GOLDNER: Thank you. Okay, we're getting close to noon. Let's have one more question from Commissioner Chattopadhyay relative to supplemental funding.

And then, let me ask a question before Commissioner Chattopadhyay's question. And that is, I know people many people have traveled and are far from home. The Commission could start up again at 12:30. But, if folks need more time for lunch, that's certainly fine. Is there a preference on coming back at 12:30, 12:45, or

1:00?

Mr. Dexter, any thoughts on that? Mr. Kreis?

MR. DEXTER: Mr. Dexter is always in favor of a longer lunch, irrespective of where he came from. So, I'd just put that out there.

There are a lot of people here, and I don't know what people's lunch plans are. I would recommend a one-hour lunch break at this point, because not only do people want to eat lunch, but I'm sure they want to chat about what happened this morning.

So, if the Commission could accommodate that, I think that would be a good road to take.

MR. KREIS: I think that's reasonable, too, Mr. Chairman, even though I'm paying my witnesses by the hour.

CHAIRMAN GOLDNER: Thank you. So, let's return at 1:00.

And, before we go, I'll just mention one more question from Commissioner Chattopadhyay. And then, we just have a few more questions for the Utility witnesses after lunch,

and so just to scale what we're talking about, there's not very many questions after lunch for the Utility witnesses.

So, Commissioner Chattopadhyay, I'll let you ask the last question before lunch.

CMSR. CHATTOPADHYAY: Thank you.

BY CMSR. CHATTOPADHYAY:

Q So, if you go to Exhibit 47, and Bates Page 016, there are two pages there, I get confused, 016 or the 020. But I think it's Bates Page 020, right?

CHAIRMAN GOLDNER: Yes, 020.

BY CMSR. CHATTOPADHYAY:

Q Yes, 020. And there it says "attracting charitable funding for utility energy efficiency programs that are otherwise funded by a system benefits charge is a high bar."

I'm just curious what the Commission can do to lower the bar? Any thoughts?

A (Peters) Certainly. This is something we've been looking at over the years. We actually did some specific research, and we had a grant writer come in and do a whole review of available potential charitable funding sources. I believe it's -- one of the attachments to the Plan was the report

that he wrote.

And one of the things that he found as he was talking to charitable organizations, and this isn't really a surprise, but -- so, the efficiency programs are something that is, you know, kind of designated by a state policy, and has a specific funding source that is, you know, set in a regulated manner.

And, so, as charitable foundations look at how to best use their dollars, they're looking at that and saying "Why do you need our charitable dollars to do these things that are related to state policy, where the state has dedicated certain funding sources towards it?"

And, so, we realize that the best avenue to work with those types of charitable foundations would be to look for gaps, where our funding, as directed, perhaps could not meet a certain customer need, but the customer did need to do that thing. I'm thinking particularly of like health and safety barriers, for customers who want to weatherize, you know, there's knob and tube wiring, or they just have significant kind of structural work that they need to do on a

home. And it's not really saving energy to do that work, but, in order for them to proceed with a weatherization project, they need to do it. And, so, could we partner with a nonprofit and make an application to a charitable foundation to get some money to help overcome those barriers, and then our programs could come in and do the weatherization work.

And, so, we've been exploring over the past several years a few of those opportunities. We've had one successful grant so far with a CAP agency that I think accessed some Department of Agriculture funds.

I think there's going to be opportunity, depending on what happens, and we don't want to count on any of it before it gets finalized or through, you know, there may be federal funds coming that relate to energy or the environment. I think it's going to be important for us to stay connected with the Department of Energy and our partners at the state, and any nonprofits that may be eligible for those funds.

And more than -- rather than bringing those funds in to our programs, I think our

opportunity is going to be to coordinate and collaborate, so that we are not kind of duplicating efforts, but we're actually using any additional funding that's available to do things beyond what we're able to do with the funds that we have for the programs.

So, that's part of how we're thinking about it.

Q I like what I'm hearing. Do the other utilities have anything to share?

A (Downes) The report that Kate mentioned is very informative, and we have work to do to follow up on that. And it's some of the organizations in the state that we would like to develop, we have relationships with, we'd like to develop close relationships with, include the Community Development Finance Authority, or CDFA, as well as New Hampshire Housing, which were interviewed as part of that research, and expressed an interest in working with us to, you know, better coordinate services, particularly to low income customers, but -- and in the case of CDFA, also with business customers.

CHAIRMAN GOLDNER: Okay. Thank you.

We'll go off the record and return at 1:00 p.m. Thank you.

(Whereupon the lunch recess was taken at 12:03 p.m., and which ends the Morning Session of the hearing. Please note that the Afternoon Session will be provided under a separate transcript noted as "Afternoon Session ONLY".)