1	STATE OF NEW HAMPSHIRE		
2		PUBLIC UTILITIES COMMISSION	
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5	Suite 10 Concord, NH		
6	DF.	DE 22-073	
7	KE.	UNITIL ENERGY SYSTEMS, INC.: Petition for Approval of Investment	
8		in and Rate Recovery of a Distributed Energy Resource Pursuant to RSA 374-G.	
9		(Prehearing conference)	
10	PRESENT:	Chairman Daniel C. Goldner, Presiding Commissioner Pradip K. Chattopadhyay	
11		Commissioner Carleton B. Simpson	
12		Alexander Speidel, Esq./PUC Legal Advisor	
13		Tracey Russo, Clerk	
14	APPEARANCES:	Reptg. Unitil Electric Systems, Inc.: Patrick H. Taylor, Esq.	
15		Matthew Campbell, Esq.	
16		Reptg. Clean Energy New Hampshire: Christopher Skoglund	
17		Reptg. Residential Ratepayers:	
18		Donald M. Kreis, Esq., Consumer Adv. Benjamin Silver, Legal Resident	
19		Office of Consumer Advocate	
20		Reptg. New Hampshire Dept. of Energy: Matthew C. Young, Esq.	
21		Alexandra Ladwig, Esq. Elizabeth Nixon, Dir./Electric Group	
22		Heidi Lemay, Electric Group (Regulatory Support Division)	
23	Court Rer	oorter: Steven E. Patnaude, LCR No. 52	
24	Court Web	ofter. Seeven H. Fathaude, Holl No. 32	

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## PROCEEDING

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CHAIRMAN GOLDNER: Okay. Good

afternoon. I'm Commissioner Goldner. I'm joined
today by Commissioner Chattopadhyay and
Commissioner Simpson.

We're here today for a prehearing conference in Docket 22-073, regarding Unitil Energy Systems' proposal to build a solar power installation in Kingston pursuant to the authority in RSA Chapter 374-G. The Commission's authority to convene a prehearing conference is derived from RSA 541-A:31, VI(c) and Puc 203.15(c). And the Commission would like to give the parties here today the opportunity to give their viewpoints regarding the scope and key issues of this proceeding.

An Order of Notice was issued by the Commission regarding this matter on December 21st, 2022, which notes the Commission must render a decision for the first phase of this matter by May 1st, 2023. This first phase is established at the request of the Company, along the lines of what was approved in Docket Number DE 09-137, and as approved by the

Commission in this proceeding's Order of Notice, would be for the determination of whether the Kingston Project is in the public interest under the statutory criteria of RSA Chapter 374-G.

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As a threshold matter, we would like to acknowledge the Petition to Intervene by Clean Energy New Hampshire. And we will address this Petition to Intervene after taking appearances.

So, let's take appearances, beginning with the Company.

MR. TAYLOR: Good afternoon,

Commissioners. Patrick Taylor, on behalf of

Unitil Energy Systems, Inc. With me today is

Matthew Campbell, our Senior Counsel.

CHAIRMAN GOLDNER: Okay. Very good.

And the Office of the Consumer Advocate?

MR. KREIS: Good afternoon, Mr.

Chairman, members of the Commission. I'm Donald

Kreis, the Consumer Advocate, here on behalf of

residential utility customers. With me today is

Benjamin Silver, he is our legal resident this

semester, from the very best law school in all of

New Hampshire, the University of New Hampshire's

School of Law.

CHAIRMAN GOLDNER: Very good. And the New Hampshire Department of Energy?

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MR. YOUNG: Good morning [sic],
Commissioners. My name is Matt Young, appearing
on behalf of the Department of Energy. With me
today is Alexandra Ladwig, who will be serving as
co-counsel, and is one of the Department's newest
attorneys. We also have Heidi Lemay, who is a
Utility Analyst working on this docket, and Liz
Nixon, who is the Director of Electric.

CHAIRMAN GOLDNER: Very good. The

Commission has received a Petition for

Intervention in this docket from Clean Energy New

Hampshire. In keeping with the Commission's rule

on prehearing conferences and the State

Administrative Procedure Act, it's appropriate to

address this petition now.

I'll start briefly with the legal standard for intervention. And, after hearing from the Petitioner, Clean Energy, I'll ask the other parties for their positions.

The Commission's Administrative Rule
Puc 203:17 directs the Presiding Officer to use
RSA 541-A:32 to rule on intervention requests.

Under the statute, there are two standards for ruling petitions for intervention. First, there is a review for a mandatory intervention; second, there is a review for permissive intervention.

That's the extent of detail I'll get into today describing the legal standard.

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But we will now provide an opportunity for the intervenor to give the reasons why they should be granted intervenor status. So, Clean Energy New Hampshire, would you like to make a statement?

MR. SKOGLUND: Yes. Thank you, Chair Goldner, and other members of the Commission. My name is Chris Skoglund. I'm the Director of Energy Transition with Clean Energy New Hampshire. We are a statewide nonprofit organization dedicated to strengthening New Hampshire's economy as we transition to a clean, efficient, and renewable energy system.

We represent the interests of residential, business, municipal, and manufacturing members from across the state.

That includes 34 municipalities, representing more than 300,000 New Hampshire citizens, almost

20 percent of the state's population. We also represent the interests of almost 20 solar companies in the state.

Overall, we have a strong interest in our members, as well as all New Hampshire citizens, local governments, businesses, using clean, affordable and abundant distributed renewable energy resources.

As this is at the heart of the matter related to this docket, we respectfully request intervention status -- intervenor status.

Thank you.

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CHAIRMAN GOLDNER: Thank you. And, although we have not received any written objections to this request to intervene, I'll ask each of the parties whether they wish to make any objections today, starting with the Company?

MR. TAYLOR: We are not going to object to the Petition.

CHAIRMAN GOLDNER: Okay. Thank you. And the Office of Consumer Advocate?

MR. KREIS: We agree with the Petition and believe that Clean Energy New Hampshire should be admitted as an intervenor.

1 CHAIRMAN GOLDNER: Thank you. And the 2. New Hampshire Department of Energy? 3 MR. YOUNG: No objections. 4 CHAIRMAN GOLDNER: Okay. Thank you. 5 Okay. Well, we appreciate the 6 discussion on intervention. We won't rule on 7 this immediately. But, as required by statute, 8 we will enter an order granting or denying the 9 Petition for Intervention, and specifying any conditions on the intervention in the near 10 11 future. 12 We'll now give everyone the opportunity 1.3 to make an opening statement. Would the Company 14 like to begin? MR. TAYLOR: Yes, Commissioners. 15 Thank 16 you. I appreciate the time and the opportunity 17 today. 18 I should note, I didn't introduce all 19 the folks who are here with me today. You'll 20 notice we have all of the witnesses who submitted 2.1 testimony in the case are present, both for this 2.2 conference, as well as for the technical session 23 afterwards. We also have Tom Meissner, who is

our CTO, and Bob Hevert, who is our CFO, are also

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with us today. And I just wanted to recognize them before I start.

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In 2008, the New Hampshire Legislature created RSA Chapter 374-G, titled "Electric Utility Investment in Distributed Energy Resources". This law expressly carved out an exception to the separation of power generation and distribution services resulting from electricity restructuring in the late 1990s, allowing and encouraging electric distribution utilities to invest in and own limited electric generation equipment in the form of renewable and clean distributed energy resources in the state.

The Legislature recognized that such resources can increase overall energy efficiency and provide energy security and diversity by eliminating, displacing, or better managing traditional fossil fuel energy deliveries from the centralized bulk power grid, in keeping with the objectives in New Hampshire's Renewable Portfolio Standards law.

To achieve these benefits, the Legislature determined that it is in the public interest to stimulate investment in distributed

energy resources by electric public -- electric public utilities. Specifically, the utility may invest in, or own, distributed energy resources on or interconnected to the electric distribution system, subject to certain limitations and requirements.

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The enactment of RSA 374-G was consistent with the state restructuring policy — the restructuring policy principle, recognizing that electric utilities should not be absolutely precluded from owning small-scale distributed energy resources as part of a strategy for minimizing transmission and distribution costs.

Notwithstanding the clear legislative intent to stimulate investment by utilities, the provisions of RSA 374-G have been invoked sparingly in the last fifteen years. Unitil first proposed a series of small-scale projects in 2009, and Liberty Utilities requested approval of a Battery Storage Pilot Program eight years later, in 2017.

So, the Company is, therefore, pleased to now present to the Commission an innovative utility-scale solar project that furthers the

Legislature's intent, and provides significant direct and indirect benefits to customers, local businesses, the Town of Kingston, and, more broadly, the state.

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This is a first-of-it's-kind project for the State of New Hampshire, which lags most other states, with respect -- in the country, with respect to utility-scale distributed generation and operation. And, as a general matter, the state sees only about one percent of its electric generation from solar generation, and that's primarily from small-scale projects.

This Project that we're proposing to the Commission is consistent not only with the statutory intent of the Legislature expressed in 2008, but also the 2022 State Energy Strategy, in that it is a cost-effective project that stands on its own, in terms of providing economic benefits, while supporting, among other things, a safe, reliable, and resilient energy system, achieves environmental protection and enables economic growth.

The Project itself proposed by the -- the Project proposed by the Company is a 4.99

megawatt solar generating facility, with single-axis tracking technology that adjusts the panels during the course of the day to maintain optimal positioning in relation to the Sun. This technology maximizes energy production, and the Company expects the Project's annual energy output to average approximately 8,900 megawatt-hours over the length of the Project, at an assumed capacity factor of 22 percent.

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Unitil will operate the Project as a load reducer, delivering electric generation output directly to the Company's electric distribution system. This will reduce the energy that Unitil receives from the transmission system to meet customer demand. Thereby, reducing overall supply and transmission costs, and offsetting distribution system losses.

Avoided supply and transmission costs are not the only economic benefit that the Project will deliver to customers. The Project will generate revenues and credits from renewable energy certificates, or RECs, which will flow through to customers.

Moreover, the Project is eligible for

Energy Tax Credits, extended under the Inflation Reduction Act of 2022. And this has been modeled as a credit to customers, on a ratable basis over the projected life of the facility, which further supports the economic favorability of the Project.

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Unitil conducted a benefit-cost analysis, estimating direct benefits and costs of the Project over its projected 30-year life, and calculating their present value using a discount rate. The Company used its weighted average, after-tax cost of capital as the discount rate, consistent with the Commission's order in DE 09-137. The benefit-cost analysis shows a present value of net direct benefits to customers of approximately \$1.4 million, and a benefit-cost ratio of 1.09, which supports a finding that the Project is in the public interest.

The Company's analysis demonstrates

that the Project is beneficial to customers, even

when only direct benefits are considered.

Though, the Commission found that it is

appropriate to include indirect benefits in a

benefit-cost analysis for the purposes of

evaluating projects under 374-G, Unitil did not need to do so in this case, given that the Project stands on its own based solely on direct benefits.

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However, there are numerous quantifiable indirect benefits, which serve only to further support a "public interest" finding.

Unitil engaged Daymark Energy Advisors, a well-known energy consultancy, with the expertise in utility-scale solar projects, to conduct an analysis of indirect benefits, and that analysis is provided with the Company's filing. Daymark estimated that the Project will deliver a present value of approximately \$11.2 million in economic benefits to the state.

Additionally, the Project can be expected to support approximately 87 direct, indirect, and induced jobs in the State of New Hampshire through the Project's operational life.

Daymark also estimates \$1.8 million in avoided emissions benefits, and approximately \$567,000 in DRIPE, or Demand Reduction Induced Price Effects benefits.

It must also be noted that the benefits

of the Company's proposed solar project will flow to all customers, unlocking the benefits of solar generation for customers who may not otherwise possess the resources, financial or physical, to invest directly in a solar project.

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As I noted previously, a utility's ability to own and invest in distributed energy resources is subject to certain limitations and evaluative criteria. A utility's ownership of an individual generation project is capped at 5 megawatts. And, while a utility may own in or invest in multiple electric generation facilities, ownership is capped at 6 percent of the utility's total distribution peak load in megawatts. This proposed project does not exceed the statutory size limitations.

Before a utility can recover the cost of distributed energy resource investments under RSA 374-G, it must demonstrate the investment, and recovery of that investment through rates, is in the public interest. RSA 374-G:5 sets forth nine factors for the Commission's consideration when making a "public interest" determination. And the Company has addressed each of these

factors in the testimony supporting the Petition.

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For the sake of time and efficiency, I'm not going to recount all the ways in which the Company meets each of the requirements, to the extent that they're applicable, as that analysis is presented in greater detail in our filing. And suffice it to say, Unitil believes it has presented more than sufficient evidence supporting a finding that the Project is in the public interest, and not simply because the Project is beneficial and economical under the Company's benefit-cost analysis, though that is a critical factor. Unitil has also shown that the Project will support the reliability, safety, and efficiency of service on its system, that the Project will deliver energy security, environmental, economic, development -- energy security, environmental, and economic development benefits to the State of New Hampshire. And that the Project will not negatively impact wholesale electricity for energy service markets.

Unitil is using a competitive RFP process to contain cost, and the Company has employed, and expects to continue to employ, the

services of multiple local businesses in the development of the Project. The Project will also result in meaningful tax revenue to the Town of Kingston.

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And, as Commissioner Goldner already noted, in DE 09-137, the Commission approved a two-stage process for authorization and rate recovery of a distributed energy resource project under RSA 374-G, finding that such a process is in the public interest. I won't walk through that, as the Commission has already indicated that it intends to follow that process. But the process is consistent with RSA 374-G:3, which authorizes recovery only of authorized and prudently incurred investments. And it's also just an efficient and reasonable way to ensure that the company only invests in a project that's in the public interest.

Unitil has requested a ruling on its

Petition within six months of the October 31st,

2022 filing date. Commissioner Goldner indicated

"May 1st", and I believe that's a Monday, because
the six months expires on a weekend.

To that end, we have circulated a

procedural schedule that will enable the parties and the Commission to satisfy the six-month timeline. We're in discussion with the Consumer Advocate and the Department of Energy, and we should be able to provide a proposed procedural schedule to the Commission very shortly after this prehearing conference today.

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In closing, I'll note that Unitil has experience in developing, constructing, and operating distributed energy -- distributed electric generation equipment. The Company's affiliate, Fitchburg Gas & Electric Light Company, developed a 1.3 megawatt solar generating facility, consisting of over 3,700 solar panels on F.G. Fitchburg -- FG&E property, in Fitchburg, Massachusetts.

The facility was approved by the Massachusetts DPU, and commenced operation in September 2017. And we've operated it as designed since that time.

Unitil will leverage that experience,
as well as its expertise in engineering,
electrical design, and interconnection, to
efficiently develop the Kingston Project, control

costs, and deliver real benefits to its customers, as well as the local/regional economy in the state. It's our hope that the success of this Project will stimulate additional solar projects and investment in the State of New Hampshire, and the further realization of legislative purpose underlying RSA 374-G.

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We look forward to working with the parties in this case, and presenting this innovative and beneficial Project to the Commission for a finding that it's in the public interest.

So, thank you for your time, and thank you also for your patience. I know that was a long statement.

CHAIRMAN GOLDNER: Thank you. And let's move to the Office of the Consumer Advocate.

MR. KREIS: Thank you, Mr. Chairman.

Let me clear and up front. The Office of the Consumer Advocate is very keen on getting to "yes" in this particular docket, and I just want to explain briefly why that is. It's clear, reading through RSA 374-G, that the public policy

of this state, does favor the development by our distribution utilities of projects like this one. This is probably a paradigm example of what the General Court had in mind when it approved RSA 374-G.

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And, to be perfectly candid, no utility in this state is in a better position to execute on a project like this than Unitil. It's a very competently run utility, and it has experience doing this exact kind of project, albeit in the state to our south.

So, I think that we can and should conclude this docket in a way that keeps faith with the Legislature's expectation that the Commission would rule within six months of the Petition. And, so, as Mr. Taylor just indicated, I am very confident that in short order, after meeting today after the prehearing conference, we'll be able to send you a procedural schedule that you, the Commission, will readily approve.

Let me also just say, because I just can't resist, that there's something in this filing that I think the utility and its consultants have really gotten right. And that

is that the report of the consultants at Daymark, which appears as "Exhibit GPP-2", and, again, I'm looking, I think, at Page 11 of that document, applies a discount rate to indirect benefits of "2.39 percent". And they picked "2.39 percent", because that apparently is the yield on a 20-year, investment-class New Hampshire General Obligation bond issued last year.

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Well, I've been studying discount rates. And what I discovered is that, basically, you have to make up a number. And, you know, here, these consultants have plucked out of thin air a number that happens to correspond to that 20-year yield on a state-issued General Obligation bond. That's great. I think 2.39 percent is there estimate of what a social discount rate for the state is. And I agree that that is the appropriate discount rate, or that's the appropriate perspective from which to calculate a discount rate. That's a pretty plausible figure, and I'm glad to see it in the Company's filing.

Here are the concerns that I have about what the Company is proposing. Section 5 of the

statute, in Paragraph I, says "A New Hampshire electric public utility may seek rate recovery for its portion of investments in distributed energy resources from the Commission by making an appropriate rate filing." And, so, again, the public policy of this state favors the development of a project like this, and the recovery of the cost of the project in rates.

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But it doesn't say which rate, and it certainly doesn't say that the Company is entitled to a "risk-free investment". In fact, the law of this state says the companies, the utilities, don't ever get to make investments that are guaranteed to be recovered by the Company. There has to be some risk.

And what the Company appears to be proposing here is, essentially, guarantied cost recovery by putting this asset into distribution rates. Well, this is not part of its distribution plant.

And, so, that raises two questions in my mind. One is, "Did the Company correctly calculate the direct benefits to ratepayers from the Project?" Because many of those benefits

will flow only to customers who remain on the utility's default service. But they're not proposing to include this in their Default Energy Service rate. They're proposing to include it in their distribution rate. So, there's a disconnect there that I need to think about, and that I think the Commission needs to think about.

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And then, the related question, of course, is "Whether that is the right place for rate recovery?" And I haven't been convinced of that yet. And I'm openminded, happy to talk about it with the Company, eager to address that at hearing, and, ultimately, to see how you address that question yourselves.

There are a smattering of other questions and concerns, things I'm curious about, things I think we need to clarify in the Company's filing. But, as I said, I am confident we can get all that done, in time to meet that May 1 deadline, and even give you folks a few weeks to write your order.

So, I think that's all I have to say by way of an introductory peroration.

CHAIRMAN GOLDNER: Thank you. Let's

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move to the New Hampshire Department of Energy.

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MR. YOUNG: Thank you, Mr. Chairman.

At this time, the Department does not have a position regarding whether the Project meets the statutory requirements of RSA 374-G.

The Department has reviewed the filing, and we look forward to working with the Company to address relevant questions and clarify the factual context for the record. To that end, the Department has provided a list of preliminary issues for today's technical session, and we look forward to that discussion.

As Mr. Taylor and Mr. Kreis have indicated in their remarks, we have had preliminary conversations regarding a procedural schedule prior to today's prehearing conference. And the Department will endeavor to finalize that schedule with all relevant parties.

CHAIRMAN GOLDNER: Thank you. And I'd also like to extend an opportunity for an opening statement from Clean Energy New Hampshire.

MR. SKOGLUND: Thank you, Commissioner.

At this time, Clean Energy New Hampshire has no position.

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                                       Okay.
                    CHAIRMAN GOLDNER:
                                              Thank you.
                   And let's move now then to Commissioner
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         questions, beginning with Commissioner Simpson.
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                   CMSR. SIMPSON:
                                    Thank you, Mr.
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                    I only have a few questions at this
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         time.
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                   First, I want to ask about the
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         nameplate capacity of the system, the 4.99
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         megawatts, which seems like a deliberate
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         selection. It's just under 5 megawatts. So, I'm
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         curious to hear how the Company came to determine
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         that as the appropriate size of this facility?
         Was that due to land constraints? Is it due to
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         ISO-New England participation? Are there siting
         reasons for that? Local zoning considerations?
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                   And I open that up to anybody from the
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         Company.
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                   MR. DUSLING: Yes. So, we limited the
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         size --
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                    [Court reporter interruption.]
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                   MR. DUSLING: Oh, sorry. Jacob
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         Dusling, Unitil.
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                   So, we limited the size to 4.99
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         megawatts for various reasons.
                                          One is the
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requirements of the RSA, which doesn't -- you have to be under 5 megawatts. It's also an -- I'll call it an "unwritten limitation" from an ISO approval process. Typically, anything under 5 megawatts is looked at a little differently from an ISO perspective.

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You know, the site that we're looking at can accommodate the 4.99 megawatts. So, economy of scale, the cost-benefit gets a little better in that case.

So, in general, that's the reason behind it.

CMSR. SIMPSON: Okay. Thank you. And I understand the Petition to say that the Project will not participate in the ISO-New England market, and the Company will utilize the output from the facility as load reduction, is that correct?

MR. DUSLING: That is correct. And that's another reason for the 5-megawatt.

Anything over 5-megawatt would not be able to qualify as a load reducer.

CMSR. SIMPSON: And then, thinking about the questions that the Consumer Advocate

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raised, can you just touch on how the Company would intend to transfer the output benefits to all customers? What mechanism the Company would foresee using?

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MR. GOULDING: Chris Goulding, from Unitil.

Yes. We had a couple different mechanisms that the different benefits were going to flow through. There was the REC benefits for the REC proceeds. Those were intended to flow back through the External Delivery Charge. And then, the load reducer, it was going to reduce load for all customers, so that would flow back through the energy, default service, or competitive supply rate.

In terms of the cost of the Project, our intention was to include that as a distribution -- in distribution rates. And that's how we have modeled it in the bill impacts.

CMSR. SIMPSON: So, the energy output from the facility would go to reduce the Company's default service supply obligation?

MR. GOULDING: I'm going to have to

1 hand this one off to Jeff Pentz. 2. CMSR. SIMPSON: Thank you. 3 MR. PENTZ: Good afternoon. Jeff 4 Pentz, Unitil. 5 So, because this generator, at 4.99 6 megawatts, you know, is eligible to be a load 7 reducer, and will be a load reducer, what that, 8 in effect, does is reduce the amount of energy that is coming into the metering domain for 9 10 Unitil from the transmission system. And that 11 does not exclusively benefit default customers, 12 default service customers only. It benefits 1.3 customers, the wholesale cost for competitive

supply -- competitive suppliers as well.

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So, that's why the direct benefits for the avoided cost of energy will not just affect default service customers, but all customers.

It's reducing the amount of energy that is then purchased by wholesale suppliers.

CMSR. SIMPSON: So, those costs would -- or, the benefits would be spread across all of your customers, and would not have an impact on the Company's default service procurements, is that correct?

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                    MR. PENTZ:
                                That is correct.
                    CMSR. SIMPSON: Okay. Thank you.
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                    And, then, purely procedural, the
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         Chairman noted that the Company has petitioned to
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         move forward in two phases. So, if the Company
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         were to receive Commission approval to develop
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         this Project, can you confirm that you would then
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         proceed with construction at that time?
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                    MR. TAYLOR:
                                 That is correct.
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                    CMSR. SIMPSON:
                                    Okay.
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                    MR. TAYLOR: And then, we would
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         subsequently, as we have proposed in our
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         Petition, we would subsequently seek recovery of
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         the investment through base distribution rates in
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         a rate case, or a subsequent step adjustment.
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                    CMSR. SIMPSON:
                                    Okay.
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                    MR. SPRAGUE: Commissioner Simpson, if
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         I could just add to that?
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                    CMSR. SIMPSON: Please.
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                    MR. SPRAGUE: We are going through --
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                    [Court reporter interruption.]
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                    CMSR. SIMPSON: Just identify yourself
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         for the court reporter, please.
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                    MR. SPRAGUE:
                                  Kevin Sprague.
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usually knows who I am, but he couldn't see him.

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I will say that we are going through a competitive bidding process. We have gone through several rounds of that competitive bidding process. So, we feel rather good about our assumptions as to the cost of the Project. However, through the final bid process, if the costs come back such that the Project is no longer a viable project, we would then, at that point, have a decision to make, and probably would not go forward, if it was not a beneficial project to our customers.

CMSR. SIMPSON: Okay. And then, in terms of the cost recovery component, I recall from the Petition the Company stating that they would wait until a subsequent electric base distribution rate case for recovery. But I just heard mention of a "step adjustment".

So, was that in the Petition? Did I just miss it? Or, is that a new element to the proposal?

MR. TAYLOR: No. That is something that we included in our Petition.

CMSR. SIMPSON: Okay. So, can you

explain how you might make that decision, of whether you would seek cost recovery in a step prior to the Company's next base distribution rate case?

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And then, as a second question to that, how would you treat the costs incurred, from a regulatory perspective, whether lag between a step or the next distribution rate case?

MR. TAYLOR: Sure. Well, as to the first question, I think it comes down to timing, when the Project goes into service and when we submit our next base distribution rate case.

And, so, our current plan is, assuming the Commission were to approve the Project as being in the public interest, or make a "public interest" determination prior to May 1 of this year, that would then enable us to, ideally, start construction this year.

And, so, it really, in terms of when we were to try to put it into base distribution rates, if the Project were, obviously, completed within the test year, it would be able to be included within base distribution rates. If the timing didn't work out, we would seek to recover

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         it through a step adjustment.
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                   CMSR. SIMPSON: Okay. I think I better
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         understand. You mean a step adjustment as per a
 4
         future distribution rate case, and not a step
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         adjustment per DE 21-030?
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                   MR. TAYLOR: Oh, no. No.
 7
                   CMSR. SIMPSON: Okay.
                   MR. TAYLOR: We're submitting that step
 8
         adjustment, I believe, next month.
 9
10
                   CMSR. SIMPSON: Okay. That makes
11
         sense.
                   MR. TAYLOR: You won't see any of this
12
1.3
         Project.
                   CMSR. SIMPSON: Okay. Thank you.
14
15
         Those are all the questions that I have at this
16
         time. Thank you.
17
                   CHAIRMAN GOLDNER: Thank you. Let's
18
         move to Commissioner Chattopadhyay.
19
                   CMSR. CHATTOPADHYAY: Good afternoon.
20
                   So, there was -- Attorney Taylor, you
21
         went through a description of the benefits, et
2.2
         cetera. So, there was a discussion about "tax
23
         benefits", "tax credits". Can you give me a
24
         sense of what are you exactly talking about?
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MR. TAYLOR: Sure. Exactly, I'm going to look behind me, and Andre Francoeur can give you a better sense for that.

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MR. FRANCOEUR: Thank you for the question, Commissioner.

We anticipate, based on the advice of some of the vendors during the RFP process, that the solar facility would qualify for a 30 percent Investment Tax Credit, and that's what we've included in the financial modeling. And, per IRS normalization, we would be required to flow back that tax credit rateably over the life of the utility property to the customers.

CMSR. CHATTOPADHYAY: And I can't even pretend that I fully understand what you're talking about. But these tax credits that you're talking about, are they one-time or they're going to be happening, you know, for years?

MR. FRANCOEUR: So, the Inflation

Reduction Act of 2022 opens a couple different

avenues. The one that's included in this

financial model that's been submitted is an

Investment Tax Credit, and that would be a

one-time tax credit, that would allow the Company

to offset tax liability with whatever the tax credit that we calculate, which would be a function of the capital investment.

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From the customers' point of view, they would receive the benefit of that, per IRS normalization, rateably over, so, let's say the project we've modeled is 30 years, we would flow that credit back evenly over the 30-year life.

"IRS normalization" means that we are intended to -- we have to provide the tax credit back to customers over the life of -- similar to like a depreciation expense, except it's a credit to customers, if that makes sense?

CMSR. CHATTOPADHYAY: Yes. Thank you. Did the Company try to get a sense of what the benefit-to-cost ratio would be if you included the indirect benefits?

MR. TAYLOR: We've --

[Atty. Taylor and conferring with Company representatives.]

MR. TAYLOR: We had not done that analysis. We felt that the direct -- the benefit-cost analysis using solely the direct benefits showed that the Project stood on its

own.

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The indirect benefits, we didn't model them. You know, some of those benefits, which are quantified, aren't necessarily benefits that flow directly to customers. They may be more broad, in terms of, for example, avoided emissions. So, it wouldn't necessarily be an exact match, in terms of the model that we did. And, so, I think we're presenting the indirect benefits just as some additional benefits that are clearly going to, we believe, clearly flow from the program, and just further show the advantageousness of the Project.

So, at this time, we have not included them in the benefit-cost model that we have.

CMSR. CHATTOPADHYAY: So, if the cost of the Project ends up being more than what you have estimated right now, 10 percent higher than that, then the benefit-to-cost ratio would be lower than one, wouldn't it? Just the way you have looked at it at this point?

MR. TAYLOR: I wouldn't want to say that it would -- so, you've given an example of, "if the costs were 10 percent more, would it

cause the benefit-cost ratio to go below one?" I don't know that that's the case. So, I wouldn't want to speculate on that.

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You know, as Mr. Sprague said, you know, if the cost of the Project, you know, was such that it caused the Project to not be economical, then we would have a decision to make.

But, as we've currently modeled it, it is economical.

CMSR. CHATTOPADHYAY: And would you be deciding that on the basis of the direct benefits?

[Atty. Taylor and conferring with Company representatives.]

MR. TAYLOR: I think, if that were the case, you know, it's a decision that we would have to make and go back and look at our modeling. You know, it may be at that time that we would want to take a look at the indirect benefits as well, and how that might interact with the benefit-cost analysis. But that's just, really, speculation.

I think, at this point, we have a

1 project before us, based on some good 2. information. You know, we've done some very 3 robust modeling. And the Project that we're 4 bringing to you right now is one that is 5 favorable and viable. 6 CMSR. CHATTOPADHYAY: I think I heard 7 the capacity factor, of course, it's in the 8 testimony as well, is you assumed it to be "22 percent"? 9 10 MR. TAYLOR: Correct. 11 CMSR. CHATTOPADHYAY: Where did that 12 assumption come from? 1.3 MR. TAYLOR: I'm going to give that 14 over to Mr. Sprague and Mr. Dusling. 15 MR. DUSLING: Jacob Dusling. That's 16 the capacity factor in year one of the facility, 17 and that same from a pretty extensive RFI/RFP 18 process and information from vendors. So, we 19 based the filing on a specific RFP response from 20 EDF Renewables, and that was -- they gave us that 2.1 anticipated annual energy production that that 2.2 capacity factor is based on.

if that capacity factor actually varies, what

CMSR. CHATTOPADHYAY: Have you tested,

23

happens to the benefit-to-cost ratio? Did you conduct any sensitivity analysis?

And let me just add that, with respect to the costs, as I understand it, if you find that the costs are higher than the benefits, then you have a decision point where you can decide "We will not go ahead with this Project." Right?

MR. TAYLOR: Yes.

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CMSR. CHATTOPADHYAY: But, to clarify,

I'm not asking about cost-based sensitivity. I'm

just curious, whether you have considered, you

know, what happens with the capacity factor, if

that doesn't pan out to be 22 percent? Did you

do any analysis?

MR. SPRAGUE: As we were pulling together this filing over the past year, we've done a lot of different sensitivities. There are a lot of different assumptions in the model.

We've tried to base those assumptions on facts.

And, as we did each of those, we did run it through sensitivities.

We believe that the model that's been provided is a conservative model. We don't think that we're, you know, pushing the envelope in any

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means in order to make it a profitable -- or, a beneficial project. It's, you know, we tried to be conservative. We have tried to make the Project stand on its own two feet. That's one of the reasons why we did not include the indirect benefits.

So, at the -- between that -- if the Commission were to approve this first phase, but sometime between that point and when we start the Project, there's going to be an update of that model. You know, what's changed? We have better pricing information. We might have better information on interest rates, discount rates, or other inputs that we're putting into the model. And all of those will go into the decision on whether to go forward or not.

CMSR. CHATTOPADHYAY: In your testimony, Mr. Kevin Sprague, you had mentioned, I think it's Page 10 of 34, you don't have to look at it, I'll just -- so, you talked about the "Sawyer Passway Project". Hopefully, I'm pronouncing the name correctly. That project went to operations November 22nd, 2017. Are you tracking what the capacity factor is?

1 MR. SPRAGUE: Yes. 2 CMSR. CHATTOPADHYAY: Can you give me a 3 sense of --4 MR. SPRAGUE: That capacity factor is 5 between 16 and 17 percent. But I will say it's not an exact duplicate of what we're proposing 6 7 here. So, that project is fixed-panel, 8 meaning it faces one way all day. What we're 9 10 proposing is a tracking model, which will have an 11 effect of increasing the capacity factor. 12 CMSR. CHATTOPADHYAY: You did say 1.3 something like "it's been operating as designed." 14 Can you elaborate? What do you mean by that "as 15 designed"? It's doing what it's meant to do? 16 MR. SPRAGUE: So, meaning that it's 17 producing the amount of power that it was 18 designed to export. 19 CMSR. CHATTOPADHYAY: So, would you be 20 able to confirm that that 16 or 17 percent that 2.1 you mentioned was what you had projected when you 2.2 first requested the Massachusetts DPU to approve 23 this? I believe 24 MR. SPRAGUE: I believe so.

1 we can --2. CMSR. CHATTOPADHYAY: Okay. 3 MR. SPRAGUE: I believe we could show 4 It is something that we -- that the 5 Department and the Attorney General's Office is 6 keen to keep an eye on. So, they do ask those 7 questions. 8 CMSR. CHATTOPADHYAY: I think that's 9 all I have. Thank you. 10 Okay. I just have a CHAIRMAN GOLDNER: 11 couple of questions for the Engineering 12 Department and a couple for the Finance 1.3 department. So, the first question for the 14 15 Engineering Department is that, and I think I'll 16 address it to Mr. Sprague, is the 30-year time 17 window, my understanding of solar cells is they 18 often don't last 30 years. Is that given 19 assumption that you're going to use the same 20 cells for all 30 years? 2.1 MR. SPRAGUE: So, that assumption is 2.2 based upon the warranty period that the providers 23 are giving to us. In our model, we are modeling

a half a percent reduction in output every year.

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                    CHAIRMAN GOLDNER:
                                      Linear?
                    MR. SPRAGUE: Yes. So, we are taking
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         that into consideration as we're modeling it over
 4
         that 30-vear timeframe.
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                    CHAIRMAN GOLDNER: Okay. And any -- on
 6
         the motors, to change the direction of the
 7
         mirrors and stuff, have you thought through any
 8
         replacement costs or maintenance costs for those
 9
         pieces?
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                    MR. SPRAGUE: So, we have costs in the
11
         model to replace the inverters. Those are
12
         typically computer-based type of equipment.
1.3
         are replacing those in the 15-year timeframe.
14
                    Okay. As for the motors, we haven't
15
         proposed in the model replacement for those, but
16
         we have modeled a maintenance contract to keep
17
         those in operation --
18
                    CHAIRMAN GOLDNER:
                                       Okay.
19
                    MR. SPRAGUE: -- throughout the
20
         lifetime.
2.1
                    CHAIRMAN GOLDNER: Okay. Thank you.
2.2
                    And then, in terms of how these things
23
         are grounded, not in the electrical sense, but in
24
         the mechanical sense, there's typically, right,
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some big cement blocks underneath, correct?

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MR. SPRAGUE: So, there's a couple of different ways you can do it. You can ballast them, which are the big -- you know, essentially set them on the ground with a big, weighted cement pier. The other way to do it is actually to anchor them into the ground.

So, we've allowed the vendors to propose a solution. That's going to be one of the evaluation points. Obviously, the anchor solution will result in potentially less wetland impact and less rainwater runoff that we need to deal with. So, that is -- we are going to look at the different types of foundations that will be proposed.

CHAIRMAN GOLDNER: And I assume, I didn't see it in the filing, but I assume that there's remediation costs included? So, taking the land back to what it was before at the end of the 30 years? What happens at the end of 30 years, I guess?

MR. SPRAGUE: So, I think -- I believe our assumption in our model is it's going to last longer than 30 years. But, from a net present

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         value standpoint, any reclamation at that time is
 2.
         kind of negligent now. But we don't --
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                    CHAIRMAN GOLDNER: I think you mean
          "negligible"?
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 5
                    MR. SPRAGUE:
                                  "Negligible", sorry.
 6
                    CHAIRMAN GOLDNER: I was going to let
 7
         you run with it, but --
 8
                    MR. SPRAGUE: Yes. I appreciate that.
 9
                    Yes. We assume that this is going to
10
         last longer than 30 years. And, at the end of
         30 years, we're not going to pull all this out
11
12
         and turn it back into field and forests, like it
1.3
         is now.
14
                    CHAIRMAN GOLDNER: Okay. And just,
15
         when we come back and we look at this, I think
16
         the Commission would want to understand, if you
17
         have a 30-year plan, it should be a 30-year plan.
18
         So, if it doesn't go back and it's a longer plan,
19
         then what does that look like, because then you
20
         would have to replace a lot of things at 30
2.1
         years?
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                    And, so, I'm just suggesting to be
23
         thoughtful about what the total picture looks
24
         like.
                And the remediation piece would be
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something to think about, in terms of how you look at that 30-year -- 30-year period. Because I don't know if it would be negligible, depending on -- I don't know the flavor of what the land looks like.

In the Midwest, you know, a lot of times they will take very high-quality farmland, because it's always on the ridgetops, because, obviously, you want your solar arrays to be as high up as possible. And then, you destroy, you know, excellent farmland, and there's nothing you can do to remediate it at the end. So, it becomes a pretty big issue.

So, I don't know what the topography looks like here, but that remediation piece would be important for us to hear about, I think, when we come back.

Okay. So, let's --

CMSR. SIMPSON: Can I just make one comment in line with that?

CHAIRMAN GOLDNER: Sure.

CMSR. SIMPSON: I think one of the prongs of the statute, at 374-G:5, I(b), requires "A discussion of costs, benefits, and risks".

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         And the "risks" piece is one element that I
 2.
         think, in our initial review, we wondered about
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         how that might be quantified and addressed.
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                    So, I think the Chair's question about
 5
         "lifetime" and "what does the remediation or
 6
         recycling of these components look like?", it
         might be helpful to outline some of that in a
 7
 8
         future supplement, looking at the risk piece --
                    CHAIRMAN GOLDNER: Yes. Yes.
 9
10
         metals on a solar array and such.
11
                   CMSR. SIMPSON: -- and sensitivity.
12
                   CHAIRMAN GOLDNER:
                                       Yes.
1.3
                   CMSR. SIMPSON:
                                    Thanks.
14
                   CHAIRMAN GOLDNER: Thank you. Okay.
15
                   That's a good seque over to the
16
         financial piece. The Consumer Advocate brought
17
         this up earlier, and now I'm confused. So, I'm
18
         hopeful that the Finance team can help untangle
19
         this.
20
                    So, I had thought that you were using a
21
         discount rate of "6.71 percent" to calculate the
2.2
         PV.
              The Consumer Advocate mentioned a number of
23
         2 something percent. Can somebody help me
24
         understand what the discount rate is in this
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1
         analysis?
 2.
                    MR. TAYLOR: Well, the Finance folks
 3
         are certainly more versed than I am. Just I
 4
         think what I heard the Consumer Advocate to point
 5
         out is that the indirect benefits were quantified
 6
         by Daymark using the discount rate you just
 7
         mentioned.
                    CHAIRMAN GOLDNER:
 8
                                       I see.
                    MR. TAYLOR: That's not the discount
 9
10
         rate that the Company used. But I will let Todd
11
         and Andre address that.
12
                    CHAIRMAN GOLDNER: Okay. They were
1.3
         nodding violently in agreement.
14
                    [Laughter.]
15
                   MR. KREIS:
                                That was the point I was
16
         making, Mr. Chairman. I was referring to the
17
         indirect benefits.
18
                    CHAIRMAN GOLDNER: The indirect
19
         benefits. Thank you. Thank you, Attorney Kreis.
20
         That is helpful.
2.1
                    And then, what is the current estimate
2.2
         for kind of the all-in cost? So, everything?
23
         So, land purchase, solar arrays, little motors
24
         inverters, the whole thing?
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And the reason I'm asking the question is that, you have estimated a PV of about 1.4 million, pardon me, of direct benefits, which is probably small, relative to the total investment. So, which means that this "risk" question that the other Commissioners were asking about becomes very relevant. Because, if you're off by just a little bit in your calculation, you go PV negative, right?

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So, maybe somebody can comment on that?

In other words, what's the total cost of all-in cost, and then how does that relate to the PV number?

MR. FRANCOEUR: The total capital cost -- and this is Andre Francoeur, for the record. The total capital cost of the facility is 14.1 million, rounded. And the total land improvements and land acquisition costs that we've modeled in this project are \$1.6 million.

CHAIRMAN GOLDNER: So, we're talking about something like an all-in cost of 16 million or so. And then, a PV, right now, based on your cost of capital, direct PV return on that investment would be about 1.4 million, is that

1 correct? 2. [Mr. Francoeur indicating in the 3 affirmative. 1 4 CHAIRMAN GOLDNER: Okav. 5 MR. FRANCOEUR: That's correct. 6 CHAIRMAN GOLDNER: So, my encouragement 7 would be, as, you know, as everyone goes off to talk about it, is to sort out the "risk" piece of 8 this. And, if the 1.4 is safe or the 1.4 is 9 10 risky, and just looking at that total picture. 11 Ideally, you would see something a 12 little bit more, a larger positive number there 1.3 to get more comfortable. 14 CMSR. SIMPSON: Can I add one thing to 15 that? 16 CHAIRMAN GOLDNER: Of course, yes. 17 CMSR. SIMPSON: It would be interesting 18 to understand where you were conservative in your 19 modeling. Given the assumptions that you're 20 making, what assumptions were conservative? 2.1 Which were not so conservative? Which do you 2.2 think are really true to what you expect during 23 the procurement and construction and operation 24 processes?

1 That would be helpful. Thank you.

2 CHAIRMAN GOLDNER: Yes, certainly.

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Certainly, the direct cost is very interesting to the Commission, because that's really, in the end, money is going in, money is going out, so, to ratepayers's benefit or not benefit. So, that direct piece is very important. So, I appreciate you're taking that as sort of the primary view. Not that other views can't be useful or helpful, but that, certainly, the ratepayer view would certainly be a very important one.

And then, and the numbers that you were talking about, the "14.1 million" and the "1.6", is that after the Investment Tax Credit or before?

MR. FRANCOEUR: That's before the tax credit.

CHAIRMAN GOLDNER: Before the tax credit. So, the tax credit, just to make sure I don't invert this late in the afternoon, it would be 16 million, times 0.7, would be what you would actually -- that would be actually the money flow out?

MR. FRANCOEUR: The land improvement

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1
         and land acquisition costs are ineligible --
 2
                   CHAIRMAN GOLDNER: Are ineligible.
 3
                   MR. FRANCOEUR: -- for the Investment
 4
         Tax Credit.
 5
                   CHAIRMAN GOLDNER: Okay. So, it would
 6
         be 14.1, times 0.7, would be the money out of
 7
         Unitil?
                   MR. FRANCOEUR:
 8
                                   Net.
 9
                   CHAIRMAN GOLDNER: Net. Net.
10
                   MR. FRANCOEUR: That's correct.
11
         I'd also add that, you know, we're continuing to
12
         investigate the best way for us to monetize the
1.3
         potential avenues of the Inflation Reduction Act.
14
         When we filed this, we -- the Inflation Reduction
15
         Act, as you know, was quite new. And we filed
16
         this Investment Tax Credit the same way that we
17
         filed it with our Massachusetts solar project,
18
         which was something we're very comfortable in.
19
         But we continue to investigate other avenues that
20
         might potentially further de-risk this Project,
2.1
         to your point.
2.2
                   CHAIRMAN GOLDNER: Okay, thank
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               And I just -- I just want to -- I'm sorry
         you.
24
         for coming back to the math one last time.
                                                      But,
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         when you did the PV calculation, you used about
         10 million for the non-land costs and about
 2.
         1.6 million for the land costs to do the PV
 3
 4
         calculation. I just want to make sure I
 5
         understand how you dealt with the tax credit?
 6
                    Does that make sense? So, 14, times
 7
         0.7, is about 10 million.
                    I'm just -- yes, you know what I'm
 8
         trying to ask? I'm trying to ask how you did the
 9
         PV calculation? What's in and what's out in the
10
11
         PV calculation? I'm not quite clear.
12
                    MR. FRANCOEUR: Let me try and say it
1.3
         in a different way, --
14
                    CHAIRMAN GOLDNER:
                                       Thank you.
15
                    MR. FRANCOEUR: -- and maybe we can
16
         connect in the middle here.
17
                    CHAIRMAN GOLDNER:
                                       Thank you.
18
                    MR. FRANCOEUR: The revenue requirement
19
         reflects the cost -- the entire economic model is
20
         from the vantage point of our customers. So, the
2.1
         costs out -- the net cost is -- reflects the
2.2
         discounted cash flows of the revenue requirement.
23
         So, in the revenue requirement, there's a few
24
         components that are quite typical. But the rate
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1
         base is not lowered for the Investment Tax
 2.
         Credit. It's not netted down, the CapEx isn't
 3
         netted down. The revenue requirement includes,
 4
         like we discussed earlier, that separate line
 5
         item, which reflects the flowback of the
 6
         Investment Tax Credit. Does that --
 7
                    CHAIRMAN GOLDNER: Yes.
 8
                    MR. FRANCOEUR: Does that help?
 9
                    CHAIRMAN GOLDNER: I understand.
                                                       Okay.
10
                    Okay, very good. I think that was all
11
         I had.
                    Do the other Commissioners have any
12
1.3
         additional questions?
                    [Cmsr. Simpson indicating in the
14
15
                    negative.]
16
                    CMSR. CHATTOPADHYAY: No.
17
                    CHAIRMAN GOLDNER: Okay. Very good.
18
                    I'll just ask then, are there any other
19
         matters that require our attention today, before
20
         you go off to the technical session?
2.1
                    [Multiple parties indicating in the
2.2
                    negative.]
23
                    CHAIRMAN GOLDNER: No. Okay.
                                                   Well, I
24
         appreciate the help with the Commissioners'
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1
          questions today. That was very helpful.
                    Thank you, everyone. And we are
 2
 3
          adjourned.
                     (Whereupon the prehearing conference
 4
                     was adjourned at 2:27 p.m., and a
 5
                    technical session was held thereafter.)
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