JOINT HEARING BEFORE THE NEW YORK STATE
SENATE STANDING COMMITTEE ON ENERGY AND
TELECOMMUNICATIONS
AND
SENATE STANDING COMMITTEE ON FINANCE

PUBLIC HEARING:

UPDATE ON THE ENERGY HIGHWAY AND
REFORM OF THE ENERGY VISION INITIATIVES

Legislative Office Building
Van Buren Hearing Room A, 2nd Floor
181 State Street
Albany, New York 12247

May 20, 2015
12:00 p.m. to 3:00 p.m.

PRESIDING:

Senator Joseph A. Griffo
Chairman
NYS Senate Standing Committee on Energy
and Telecommunications

Senator John A. DeFrancisco
Chairman
NYS Senate Standing Committee on Finance

PRESENT:

Senator Betty Little
Senator Liz Krueger
Senator Thomas F. O'Mara
Senator Kevin S. Parker
Senator Michael H. Ranzenhofer
Senator Catharine M. Young

SENATOR GRIFFO: Good afternoon.

I am Senator Joe Griffo, Chair of the Energy and Telecommunications Committee, and I'm joined by Senator John DeFrancisco, who is Chair of the Senate Finance Committee.

You'll have to bear with me today. I'm fighting a little cold here. This is my best Barry White impression, so I may sing a little "Can't Get Enough of Your Love," maybe, at some point.

[Laughter.]

SENATOR GRIFFO: But I do appreciate everyone for being here today.

This is a very important area, energy and telecommunications, and I do appreciate the members of the Governor's team who are here today.

We will have members that will be coming in throughout the hearing this morning.

A session is ongoing at this point in time, as well as another hearing which is across the hall, so we're going to have members coming back and forth.

So, I want to open this public hearing of the joint Committees of Energy, and Finance, and I just want to, basically, greet everyone again, and this

here today is an opportunity for us to discuss some important initiatives in the energy sector: the Energy Highway, and Reforming the Energy Vision.

We're doing this in the spirit of transparency and open communication.

It's great to be able to hear from two panels from the government side and from the industry regarding these initiatives, to be able to have this open dialogue where we can talk about what is taking place.

I would like to just say a few words about the Energy Highway and the REV before I introduce the members -- the distinguished members of the panel.

Our state is incredibly lucky, in my opinion, to have a broad range of fuel sources that we can take advantage of to improve our air quality and to shield our customers from commodity-price volatility.

I think that using tools to enhance efficiency, such as demand response, and integrating even more renewable- and clean-energy sources onto the grid, are goals that we share, as long as we never sacrifice reliability, and always keep safety, security, and cost-containment for ratepayers in the

forefront of our minds.

New York should move forward strategically to replace, upgrade, and modernize our generation, transmission, and local delivery systems.

Our Energy Highway is a measured and intelligent way to do so. This is essential, and should be given a priority on a parallel track with the Energy Vision.

And respective of REV, I think that transparency and broad collaboration, especially with regard to the Phase 2 of the REV proceeding, is going to be key to the process, and should be an open, measured, and efficient process.

REV requires intensive cost-benefit analysis that protects the ratepayer, but also ensures that the competitive markets and appropriate price signals are not disrupted. We need to get it right.

So with that, I want to acknowledge Senator Betty Little, who is a member of the Energy Committee, who has joined us, and then turn it over to Senator John DeFrancisco for some opening comments.

SENATOR DEFRANCISCO: I don't have much to say, other than to confess my, not total, but substantial, ignorance on these issues. And I can't

figure out for the life of me what the Energy Highway is supposed to do, how much it's going to cost; and what REV is, and how that changes anything, as far as what we intended -- what the government intends to do with it, and what the cost is.

So that's my focus.

I don't have to make any other introductory statements, and, if those questions can be answered during this hearing, it would be wonderful.

SENATOR GRIFFO: And with that, I will introduce the members of the panel who are here today.

Again, I want to express my appreciation to the Governor, and to all of you for being here, for your willingness to appear before the two Committees, and also to engage in this dialogue.

With us today is, Richard Kauffman, who is chairman of Energy and Finance for New York, and chair of the NYSERDA board;

Audrey Zibelman, chairwoman of the New York State Public Service Commission;

Gil Quiniones, president and CEO of the New York Power Authority;

And, John Rhodes, president and CEO of

NYSERDA.

So, Mr. Kauffman, I think we'll begin with you, and I'll let you take it from here.

RICHARD KAUFFMAN: I'm failing the intelligence test.

SENATOR GRIFFO: A master of technology.

UNIDENTIFIED SPEAKER: It's on.

RICHARD KAUFFMAN: It's on?

GIL QUINIONES: Yes.

RICHARD KAUFFMAN: Okay. Thank you very much.

Chairman Griffo, Chairman DeFrancisco, Senator Little, thank you very much for the opportunity to be with you, and to discuss our energy strategy with you.

I think there's some branding issues.

I think when we talk about Reforming the Energy Vision, or "REV," that's the overall brand, as it were, for Governor Cuomo's overall strategy to build a cleaner, more resilient, and more affordable energy system for all New Yorkers. And, in concept, it also includes the Energy Highway.

REV places all of us, the customers, at the center of everything that we do.

So the question is, Why are we reforming

energy in New York State, and why take on this initiative?

REV is motivated by several challenges.

First, high energy costs for customers;

Second, an aging and inefficient power infrastructure;

And, third, shifting technology and consumer trends;

And, fourth, the immediacy of climate change.

We have an inefficient and expensive energy system in New York.

Households pay, roughly, $2500 per year for energy, well above the national average.

We have an aging infrastructure, and it's at every point, from large generation facilities, to transmission, to distribution, that contributes to high energy bills and is becoming more expensive to preserve.

Over the past 10 years we have spent $17 billion just to maintain the system, and we're on track to spend another $30 billion over the next decade, again, just to maintain the present system, and this is just the electricity system.

There's much more capital to be spent to improve the gas infrastructure.

Our power grid is not only aging, it has extremely low capacity utilization, a rate of just 54 percent; meaning, that it's built for the hottest summer hours of the year, yet ratepayers pay for it all year long.

Compared to other capital-intensive industries, this is a low number, and it's getting worse.

Through adoption of new business models and technology, other capital-intensive industries have learned how to be much more capital-efficient, and each 1 percent improvement from this 54 percent capacity utilization will yield between 220 and 330 million dollars of annual savings to ratepayers across the state.

We have the potential to save customers billions of dollars a year.

Our power grid was built at a time when electrons could only flow one way, from big power plants to customers, and when there was no capability for customers to adjust their demand based upon pricing.

This dynamic, however, is changing.

Consumer demand is shifting in response to technology change. More and more New Yorkers are

putting solar on their roofs, installing smart appliances and thermostats in their homes. The cost for these distributed solutions are coming down, often at exponential rates.

These market trends are important because they can provide customers with greater control and affordability of their energy.

On top of all of this the climate is changing.

Since 2010, the state has endured nine presidentially-declared natural disasters, including "Sandy," "Irene," and "Lee."

This year we went from one of our toughest winters to what may be the hottest spring on record.

Our current regulatory framework, our agency programs, and our policies must evolve to address and enable these changes.

In some fundamental ways, the regulatory incentives governing utilities have not changed since the time of Edison.

And while our energy-efficiency and renewable-energy programs have helped customers, we need to change them to do more without burdening customers with ever-increasing collections and surcharges.

We are dedicated to reducing collections by changing course.

I just want to say that again: We are dedicated to reducing collections by changing course.

Too often government has been the market as opposed to enabling the market.

The world is changing, and so, too, must government.

In addition, there are meaningful economic opportunities that arise with a cleaner energy system.

The solar industry now employs more people than the steel industry in the United States.

New York's solar industry grew 40 percent last year, and now employs the fourth-largest statewide solar workforce in the nation.

Through New York State's universities and private-sector labs, we have one of the top portfolios of innovative energy-technology intellectual property in the country, and it's time to move these ideas out of the lab and into the market.

Every day, utilities and customers spend millions of dollars on the system.

We want to be sure that we spend this capital in building the energy system of today, not just replicating the one of yesterday.

The energy system of today must be integrated and combine the benefits of a modern and resilient central power grid with the flexibility and innovation of distributed energy resources.

And we see the same kind of relationship in our commuter networks.

Central data servers and mainframes function as the backbone of the network, while we have the benefits and mobility and flexibility associated with smartphones and PCs.

To be clear, REV is not about promoting distributed resources at the expense of the central grid.

It is about integrating distributed resources where they can help the grid, and building a central grid which can accommodate the value of distributed resources.

Put simply, the current business-as-usual approach is not good for most anyone.

Overall demand for electricity is decreasing, while demand for peak electricity is increasing, and customers are reducing their reliance on the grid

itself.

These trends are only likely to accelerate; meaning, unless we change our approach, we will have a system which is more and more costly for businesses and individuals, and one where there will be inadequate economic incentives to replace old generation facilities.

These are not New York problems. These are problems that are nationwide.

REV addresses these issues by building a modern and integrated network able to harness the reliability benefits of our central grid and the flexibility benefits of distributed energy resources.

REV will increase the efficiency of the central grid;

REV will make our energy system more affordable and valuable for customers, as well as provide them with greater choice and control;

REV will provide economic opportunities for greater private investment in New York, meaning new projects and new jobs;

And REV will reduce carbon emissions.

To create an integrated power system requires integrated policy and coordination among the various

state entities involved with the electricity sector, and that's my job as the Governor's Energy Czar.

You will hear from NYPA, DPS, and NYSERDA today.

You will hear that there are transmission projects under construction that will use state-of-the-art technology.

You will hear that utilities are already changing and are being smarter about building their systems.

In Brooklyn and Queens, rather than build a billion dollar-plus substation, Con Ed will spend hundreds of millions of dollars less in alternative-energy solutions that will cost customers less money and reduce emissions.

And you will hear, that through the changes in its policies, NYSERDA is driving tens of millions of dollars in private-sector capital and building the grid that touches customers.

The nation is looking to New York.

Nearly every day we meet with innovative global companies eager to participate in what we're doing.

Of course, reforming our energy sector is a big challenge, but, after all, we're New Yorkers and

we're used to big challenges.

New York has been a pioneer in energy since Thomas Edison created the nation's first power grid over 100 years ago.

I want to make it clear:

We're not trying to create a market, or stand in the way of market forces that are developing.

Instead, we're trying to create a better framework that will allow market forces to work better.

And now I'd like to introduce my colleague, Gil Quinones, president and CEO of New York Power Authority.

GIL QUINIONES: Chairman Griffo, Chairman DeFrancisco, Senator Little, thank you very much for the opportunity to be before you today.

I have a written testimony, just before I start my remarks, and I just want to make sure they are entered into the record.

I will not read my testimony in the interest of time. I will, instead, give you an executive summary of it and touch on the salient points of my testimony.

With that said, I just want to also point out that there is an attached appendix to my testimony,

starting on page 7, listing select infrastructure projects of the New York Power Authority in various stages of completion, as well as a map on page 11, on their approximate locations across our state.

As Richard said, I am here to discuss with you the role of NYPA, and where NYPA fits in advancing the overall energy strategy or agenda of New York State which is called "Reforming the Energy Vision," or "REV."

I will also discuss specific projects that NYPA has undertaken to advance many of the recommendations of the Energy Highway blueprint.

I am pleased would to report as the chair of the Energy Highway Task Force of the Governor, that the 13 specific recommendations of the Energy Highway blueprint has been assigned to the appropriate agencies, they've been launched, they're well underway, and they are in various stages of planning and implementation.

I will also discuss NYPA's projects with its customers.

We are currently providing innovative solutions to our customers, solutions that our customers value.

But before I go and delve into those specific

examples, I'd like to talk about what's going on with our power grid. I think it's an important background and context before I discuss the specific example.

I did bring a poster with me. It's a little bit further away from you, but it is also on page 6 of my written testimony, exactly the same chart.

SENATOR GRIFFO: You're testing our eyesight.

[Laughter.]

GIL QUINIONES: Sorry about that.

So the grid of today is really the grid that was developed by Thomas Edison over 100 years ago on Pearl Street in Lower Manhattan.

It is also the grid that Nikolai Tesla and Westinghouse envisioned when they invented a way to transmit electricity long distance from Niagara Falls to Buffalo.

It is a one-way power-flow system; meaning, that the left side, shaded on green, involves a large generation connected to large transmission systems, and then, moving on to the right, to the distribution system, all the way to businesses and residences.

It's a one-way power flow, or a one-way flow of electrics.

Our grid, right now as we speak, is changing. It's changing in many fundamental ways.

On the left side, if you look at the diagram below the one on top, large-scale renewables are getting connected. Large wind farms, for example. Grid-scale solar. Batteries are starting to be integrated on the left-side generation-transmission portion of the grid.

On the right side, where the distribution meets the customer, we call it "the edge of the grid," a lot of exciting innovation is happening on that side. Solar panels, batteries, more efficient devices, building equipment, controls, big-data analytics, are all developing on that side of the grid, changing, fundamentally, the grid that Edison and Tesla invented.

Now, instead of a one-way flow from right to left, it is now a two-way flow, or even a multi-flow, grid.

And why is that important?

It's important because, in our vision of REV, we would like to create an environment and the rules of the road so that that integrated grid, left to right, and right to left, is flexible, resilient, connected, and optimized.

And why is that? Why do we want those characteristics?

Because, in the end, we all want a power grid that is reliable, affordable, and environmentally responsible for all New Yorkers.

So with that, let me cite a few of the activities that NYPA is doing at the edge of the grid, on the right side, where the distribution meets the customer.

An example -- one example is our program we're calling "K to Solar."

"K to Solar" is a program that we have launched last year in partnership with the State Education Department and with NYSERDA, to help foster and install solar panels in our school system.

We have 698 school districts, as you know, and we have already signed up about half of them. About 300 have expressed interest to work with NYPA to install solar panels in schools.

And we're not only installing -- you know, helping them install the panels, but we're also helping them integrate that -- those type of installations and concept into their curriculum.

What better way for us to scale up, to really

foster clean energy and energy efficiency, than exposing our children, our future leaders, with best practices in this area.

Another example is Build Smart New York.

In December of 2012 Governor Cuomo signed an executive order, Executive Order 88, calling on all public buildings, state buildings, to lower their energy-use intensity by 20 percent by 2020, to save in operating costs, to save in their utility bills.

But it's really more than that.

It's not only to lead by example, but the Governor wanted to inspire a shared vision and a call to action to the private sector, that if we can do it in government, that it makes good business sense in the government sector, that the private sector should do it as well.

Now, moving on to the left side of the grid, the Energy Highway, the Energy Highway is focused. And in the spirit of the Energy Highway, let me cite the projects that we're doing, from north-south, of the NYPA Energy Highway.

In Messina, where we have our St. Lawrence-FDR power project, we're building the substation of the future.

This will be -- after this project is

completed, will be the most sophisticated substation in terms of communication, controls, and protection, and situational awareness.

Why are we doing it in Messina?

Because most of the wind farms are connected to our transmission grid in that area, and we're helping private-sector wind farm developers to effectively integrate their projects into our transmission system.

We also intend to replace what we're calling our "Moses-Adirondack transmission line." That's the line that emanates from Messina, heading down to -- halfway to Marcy, near Utica. And we're going to apply the most advanced technology in doing that upgrade and replacement.

In Marcy, near Utica, where we have our hub -- transmission hub, we have what we're calling the "flexible AC," or, "alternating-current transmission system." Basically, this is an equipment that switches power from two transmission lines, about 200 megawatts in milliseconds. And what it does is, during times of congestion, we're able to help out in creating a reliable grid in that area.

And, lastly, we're going to apply smart-grid

technology to a transmission line that we're calling "Marcy South," which is from Marcy, near Utica, all the way down to the Lower Hudson Valley.

It's an existing transmission line where we're going to be putting smart technology, and we're going to be able to transmit, or transfer, power from upstate to downstate without upgrading or changing the lines, which is applying smart-grid technology and increasing the utilization and the efficiency of that line, mitigating any impact to adjacent landowners.

So those are the type of projects that we have been undertaking to advance the Energy Highway.

And aside from, or excluding, our normal life-extension and modernization programs, our normal capital and operation and maintenance projects at NYPA, we are planning to invest over $1 billion over the next 10 years in smart-grid, smart-generation, and transmission technology, as well as advanced asset-management systems, to make sure that we build the foundation, and we usher the grid into the grid of the future, into the new Energy Highway of the state of New York.

That concludes my testimony, and I would like now to transfer the baton to my friend, and

chairwoman, Audrey Zibelman.

AUDREY ZIBELMAN: Thank you, Gil.

Good afternoon, Senators.

As you know -- thank you.

Am I good?

I also might have a problem, a vertical problem, but I'll stand up -- I'll sit up.

Good afternoon, Senators.

As you know, the commission, the Department of Public Service, played a significant role of implementing the regulatory portions of both the Highway and of REV.

My remarks today will focus on how many of the objectives of the Energy Highway are already in place and helping to achieve our goals, and, also, on the core regulatory aspects of the REV proceedings.

As Gil noted, modernizing the power and gas distribution systems for the twenty-first century is a core aspect of the energy policy.

We need delivery systems that are flexible, that can deal with the changing nature of generation, that are efficient, and that they're capable of accommodating both today's world and the future world.

And as you will note in my written testimony that we've submitted, on appendix -- in the appendix, the commission over the last several years has actually approved billions of dollars of investments in both transmission and in generation.

But what I want to do today is really focus on two of the projects that I know are of most interest to the Senate.

One is the AC transmission project, and that project, which was announced several years ago, the objective was to increase 1,000 megawatts of additional transfer capability between the western part of New York to the eastern part and to the south.

This was to allow to us take advantage of underutilized generation, to make the system actually more efficient, and also take advantage of new wind resources to make sure we can use them throughout the state.

Of particular significance of this project is that we used the a competitive process, and now we have four different developers who have now put in more than 21 different projects that the commission is considering.

We, also, in response to both the desire of

the local community, and also the Governor's intent to reduce local land impact, asked the developers last year to refine their projects to see how we can meet the needs by minimizing land impact.

We are now in the process of reviewing these proposals so I can't opine on the eventual outcome, but what I can tell you, is that the effort of using both, competition, and on getting the developers to rethink the projects so that they can think about how to minimize land impact, we're going to be in a much better position, if we decide to choose one of these projects, to know that we have hit the best solution for customers.

The other projects I wanted to talk about are the TOTS projects.

These are three major transmission projects, including the Marcy line that Gil referred to, and these were projects that we asked for, to make sure that the system would remain reliable in the event of an Indian Point shutdown.

What is particularly good about these projects, it's 600 megawatts of additional transmission. And the commission, through its analysis, found that even if Indian Point does not shut down, having these projects in place, having

the transmission in place, is going to help us reduce the cost of power in New York.

So it's, basically, we call it a "no-regrets project."

The other thing I wanted to mention, and I would be remiss if I didn't, is the significant efforts that the commission has made with respect to the replacement of old gas infrastructure.

As you know, there's a significant concern that because of the number of pipeline that we have that is, we call, "leak-prone," not that they're leaky, but they're older pipe and they are prone to safety violations, we need to replace it.

We're also concerned, of course, about methane leakage.

The commission has over the last several years endeavored to improve and accelerate the replacement of leak-prone pipe. And I'm very pleased to note that, with our most recent efforts to take a look at how to ensure that the investments could be entered into in a non-disrupted way, we're now in the good position of having reduced the time of replacement from, initially, where it was 60 years and higher in some utilities, to that, within 20 years, we expect all the leak-prone pipe

in the state to be replaced.

Turning next, then, I wanted to talk about the REV proceeding.

And on page 6 of the written testimony, we have what is known as "a load-duration curve."

And if you turn to that chart, as you see, is that what it shows is that, all the hours of the year, how much electricity is consumed in New York.

What you'll see there, that is, on average, in New York, we consume about 19,000 megawatts of energy. So it's for every hour of the year, over the last 2011 -- or '12, '13, and '14.

But what you'll also see, in the left-hand corner, on those high summer days, because that's when we peak in our system, we can consume in the order of 34,000 megawatts a year, but that's only for less than 80 hours a year.

So what that means, and this is, essentially, what Richard was talking about when he talked about the inefficiency of the system, is that because electricity can't be readily stored, for those last 80 hours of the year, we need to have generation, transmission, and distribution that, for the rest of the year, just sits idle, just in case we peak during those periods.

So what REV is about is saying, Well, wait a minute. If we can use investments in CHP (combined heat and power) plants, and behind-the-meter solar, if we can become better users of electricity, we can cut that peak.

And what that amounts to is, between 1.2 to 1.7 billion dollars a year's of savings in what we pay for electricity, just by becoming bigger users.

So if there's any message about REV, it's about, how do we become better users?

Not to reduce what's in the grid, but actually become better users of it and help us save money.

So let me turn, then, to the key elements of the regulatory process, and we broke it down into two tracks.

Track 1 is what we call -- is really more about regulatory policy, and it would say, moving forward, when we have the ability to use distributed energy resources, what should be the role of the distribution utility? what should be the role of retailers? what should to be role of customers? what should to be role of suppliers?

And then, in Track 2, once we sort of say, well, what does this new climate look like? is,

well, what's the regulatory rate-making changes that need to be made in order to accommodate these changes?

We issued a Track 1 order in February, and what we did is, is that the staff produced a white paper, where they identified what these policy changes could look like.

We received numerous, almost 1,000 pages, or more, of written comments.

We had many technical meetings and public meetings.

And, in large part, many -- everyone who came to us said, Yes, we do need to make a change. We may quibble about the details, but we need to make a change.

And so it ended up in the order, the commission identified what I call -- what I think is best described as a "five-point game plan" of the elements that need to be changed.

The first is, is the changing the role of the utility business model, where, traditionally, you think of the role of the distribution utility to deliver energy to the meter as much as a consumer might use.

It's to really say, Well, wait a minute. If

we have customers who have invested in things like rooftop solar and storage, or smart thermostats, we have customers who have combined heat and power plants, or have fuel cells that they've invested in, how can we use those resources, both, to maintain the rely about it and the resiliency of the system in -- on blue-sky days or in storm situations, but also to reduce the peak, and to, basically, avoid costs in the system.

So part of it is to say that the role of the distribution utility is really to integrate these resources so they become part and parcel of how we manage the system and make the system more efficient.

The second piece was to say, Well, how are we going to make this better and tell people about the opportunities?

So one of the things that is very clear, and we heard for -- many people who came to these proceedings, is the need to make information available.

So when you think about it, you know, when you go to the gas pump, you know how much you're paying for gas.

In terms of electricity, you really don't

know anything until you pay the bill at the end of the month.

So how do we make information available to customers about how they can save money on electricity?

Secondly is, if somebody wants to invest in a behind-the-meter generation, but where's the best place to put it?

So that kind of information today the utilities know, but others don't.

So part of REV is to make sure that there's transparency so people can make these decisions.

The third is to build on the successes.

We know this is a major transformation, moving from a one-way grid to a two-way grid, as Gil talked about, is going to take time, so we need to learn how to do this.

So, we're doing projects.

As Richard mentioned, the Brooklyn-Queens project.

We're looking at how to reduce demand in Brooklyn rather than -- by building a substation.

And we've asked all the utilities to come forward with demonstrations, working with third parties, to say, How do we build this business model

where utilities can actually now start partnering with folks to develop out business models that will help us, both, meet all our goals, but do it in a less -- a more cost-effective way.

And then the fourth piece that we also said is, is that we need to do this, as well as maintain our objectives around energy efficiency and renewables.

John will be talking in a bit about what we're doing with respect to the role of NYSERDA and utilities on energy efficiency.

The other things that we have certainly done is implement the New York Sun Program.

And we've also asked staff and NYSERDA to re-look at how we procure grid-based renewables so we can do it better.

The last, and most important, piece of REV is for customers, and so one of the major things that we talk about is, How are we going to make the power system better for customers?

And if you take customers, they're sort of not all of, certainly, one of ilk.

So one is, in terms of large industrial and commercial customers, a lot of these customers, even today, most industries, hospitals, data centers, all

have invested in backup generation.

They have all said to us, Look, if you can give us the price signal and we can reduce our demand and get compensated for it, we're happy to do that.

So that's the benefit to them. It reduces their energy bills.

It's also a benefit to the grid because what we're doing is consuming less and, therefore, not having to pay for the energy during the most expensive times of the day -- year.

So one of the things we've done is, we've asked all the utilities to put in what are known as "demand-response tariffs," where they'll actually compensate consumers who are willing to voluntary reduce their consumption, maybe by using internal generation, maybe by shifting their use to a different time, to help us maintain the reliability of the system and also make it more economic.

We've also directed and said we will create what we call "self-direct energy-efficiency programs."

Particularly, a lot of our large industrial and commercial customers have said they will voluntarily invest in energy efficiency, and if they

can do it themselves, they would rather do it themselves than pay into a system-benefits charge.

So we have a program going to allow that to happen.

We've also looked at how to change our standby rates, and these are the rates that people charge if they have combined heat and power. The utility will charge them a standby rate just in case they need -- just in case their system goes out.

And we've said, Well, wait a minute. We need to make these prices work so that they don't become prohibitive against investment, because we want these investments to occur.

The other -- another thing we've done in REV is to take a look at how to protect the interests of mass-market and low-income customers. We wanted to give customers a strong voice.

We've developed, at the Governor's request, a position of the consumer advocate.

We've already, with this consumer advocate, begun a process to look at reducing the bills so that there's a standard discount to make it easier for low-income folks to pay their bills.

The other thing that we're doing is really going after retailers.

One of the things that we know is that, in order for competitive markets to work, people have to have confidence. And there's been a significant concern about a number of retailers, or "ESCOs," who have behaved in practices that people simply don't want to see.

So we're going after these retailers to make sure that the people who participate in the market understand that our business practices are there to protect consumers.

We also have a number of protections in place for low-income customers, and have asked NYSERDA to work with the utilities, to make sure that when it comes to energy efficiency, low-income customers have the same opportunity as everyone else.

And, lastly, we've put in programs around community aggregation and community solar.

"Community aggregation" is so that people can pool together to buy supply and get economies of scale at municipal level.

And "solar" is so that, when you have people who live in either motel -- in apartment buildings, or, in fact, have roofs that they can't put solar in, they have a chance to invest and get the advantages with -- themselves.

The next part of the REV proceeding is what we call "Track 2," and that's where we'll be making the rate-making changes.

So, today, as you know, the traditional mechanism of regulating utilities is for them to make money by investing in capital.

One of the things that we want to do is say, moving forward, we want utilities to be -- to get value, not just in investing in a new plant, but in helping make the system more efficient.

And that's -- that is sort of the same as Richard was talking about, making the system more productive.

So what will be happening there is, staff will be putting together a white paper, identifying the regulatory changes and the rate-making changes, so that the utilities' interests are really in concert with their customers' interests of making the system lower cost and more efficient and reliable.

And that what we will do is, is that once the staff issues the white paper of these changes, we'll have both a commentary process, I have no doubt we'll have additional what we call "technical conferences," we'll invite comments on it.

Certainly, invite your comments on the changes that we're proposing for rate-making. And then the commission will be making a decision on that by the end of the year.

Once we make these changes on the policies of rate-making, utilities will then move forward, and when they file rate cases, we'll implement these new policies in the rate cases, and those, again, of course, are public processes.

So that's now the end of my comments.

I'm going to turn it over to John Rhodes, the president and CEO of NYSERDA, to talk about what we're doing there.

JOHN RHODES: Thank you, Audrey.

And I, too, join my colleagues in thanking you, Senator Little, Chairman Griffo, Chairman DeFrancisco, for the opportunity to present my remarks today.

They will focus on NYSERDA's role in REV, on some key elements of our proposed clean-energy fund, and on our commitment -- continued commitment to better customer service and to transparency.

We've talked about how the objective of REV is to build an integrated network that will be able to harness the reliability of the central grid and

the flexibility of distributed energy resources in order to become cleaner, more resilient, and more affordable.

As you've heard from my colleagues, we're strengthening our transmission system, and we're changing the regulations to promote how distributed solutions may find their way into the grid.

However, even with these reforms and investments, market gaps will persist in the near term, and this is where NYSERDA comes in.

Our role is to address those gaps and accelerate private investment in clean energy into those gaps. NYSERDA's role is as an enabler of markets.

Through the clean-energy-fund proposal that we have before the commission, we intend to focus on identified market gaps and use our limited public dollars to address those.

This will give us better bang for the buck. That will allow us to reduce collections.

In addition, the clean-energy fund will reduce customer energy costs by supporting increased deployment of energy efficiency, reducing bills, and distributed generation, such as solar and wind.

We achieve this greater impact for a dollar

across our programs, leading to greater levels of clean energy than current program approaches.

These new approaches will increase the flow of private capital into the clean-energy sector in New York; and, so, will simultaneously increase jobs.

New York Sun is a concrete example of this strategy in action.

The previous solar program was successful, but did not provide the certainty and long-term predictability that the market needed.

So through concerted attention to multiple barriers to prevent the adoption of solar, we have developed a new program that provides greater market certainty to developers, so they have the rationale to invest; uniformity across the state so that the same approaches work in every part of the state; and resulting in greater predictability and transparency in program design.

And they have also become considerably -- we have worked on becoming much more customer-friendly, leading to much better customer orientation and much better customer adoption.

We're already seeing the positive results of this work.

In 2014, we installed 105 megawatts of solar, which was double what was installed in the prior year. And we have a pipeline of 450 megawatts, which was a real multiple of what we've had.

And as Richard mentioned, we've seen an expansion of solar jobs, the solar job market, to 7,200 jobs; up 40 percent, up 2,000 jobs, over 2013.

The clean-energy fund significantly reinforces New York State's commitment to accelerate the growth of clean energy, to improve its economic competitiveness, and to protect the environment.

It's designed to deliver on three long-term outcomes.

The first outcome will be significant reductions in greenhouse-gas emissions from New York's energy sector.

Next, new investment opportunities will attract private capital to investing in clean energy in New York.

And, finally, we'll see greater levels of scale for clean energy in the state economy.

We intend to achieve those outcomes through the clean-energy fund, through four portfolios of programs.

First, there's the New York Bank --

Green Bank, which is a financing entity designed to draw in interest from the private-sector financial community to invest in energy efficiency and clean energy.

A key structural element of the New York Green Bank is the ability to recycle funds as investments demonstrate progress and are repaid.

The money goes out, it comes back in, and it can go out again.

Second, we've already discussed New York Sun, a portfolio element that provides a comprehensive approach to the rapidly expanding solar market in New York.

By focusing systematically on known barriers, the initiative is on track to deliver 3 gigawatts of solar by the time it's done; and, more importantly, to lead to a market where costs are reduced so that subsidies are no longer needed and solar can flourish in New York without the need for state support.

Third, we will continue to invest in market development of energy efficiency and clean energy, as these are demonstrated to be the single most cost-effective approaches to reducing customer energy use and, therefore, customer energy bills.

And, finally, we have a technology and business innovation portfolio that will enhance New York's participation in the clean-energy economy, and we will continue to pursue our successful strategies that spur companies, that spur investment, and spur jobs throughout the state.

We plan to build on the strong foundation that we've developed at NYSERDA over the past decades, but we know that new approaches are needed to achieve the energy savings and bill savings and greenhouse-gas reductions that are imperative to the state's future.

In short, we have done well, but we can and will do better.

One metric, existing programs have realized a private-sector funding leverage of 2 1/2-to-1. For every dollar we put in, the project puts in 2 1/2.

We believe that with our new approaches and our new clean-energy-fund model we can increase that ratio to 6-to-1.

Likewise, we are going to achieve better bang for the buck, and one way to measuring the bang is, how much does it cost to reduce each ton of carbon dioxide?

Current approaches result in the cost of

$190.

Our intended future approaches can reach a level of $50, a reduction of nearly 75 percent.

Besides improving our impact, we're also committed at NYSERDA to insert -- ensuring that the customer experience with these programs is continually improving.

We're focused on a more customer-friendly approach to our programs, as well as to administrative interim procedures that facilitate contracting and other engagement with the market, and we've already made very good gains in this effort.

For instance, in our single highest-volume program, applications for residential solar, the applications are now approved within 3 days, down from 28 days at the beginning of 2014.

In energy efficiency, in our home performance with Energy Star Program, our most significant energy-efficiency program, approvals now typically occur on the same day, down from around 13 days in early 2014.

An application by a homeowner to receive a free audit can now be completed online by a typical homeowner in less than five minutes.

We have trimmed 50 days from the process for approving projects in our new-construction program, and we're just getting started.

We've consolidated 17 shop windows, points of entry into NYSERDA in our commercial programs, down to one.

We have gone from being 100 percent paper-based procurement, to being nearly 100 percent electronic-based procurement, and we're beginning to roll out electronic contracting and award letters.

And we just started a new program, New York Prize, which doesn't have any prior experience so there's no benchmark.

We just turned around our first contract for that for the Town of Monroe in 10 days.

And there's more we can do, and we're going to keep doing it.

Finally, as a public-benefit corporation, NYSERDA understands the need and importance of full disclosure of its investments made on behalf of the public, and for transparency in the effectiveness of our approaches.

Through existing legislative, administrative, and regulatory requirements, NYSERDA has and will continue to build a robust reporting regime,

including financial statements that look back at the years, annual budgets and plans that look forward, program reports that are annual and quarterly on our different programs.

Also, in the State's recent budget language, we were required to produce more detail on our operations, so we're going to build on our work to date with -- to meet these new requirements, semiannual reports, that include more detailed reporting, with regional breakdowns by county and by utility-service territory, for solicitations, for awards, for expenditures, and for commitments.

And we stand fully prepared to meet these new requirements.

Thank you.

RICHARD KAUFFMAN: Senators, I hope you see that there are technology, market, and customer forces that are challenging the current grid system.

I hope you will also see that we're embarked on integrated policies that can turn these challenges into opportunities.

These policies are pro-consumer, pro-growth, pro-innovation, and will reduce carbon emissions.

We're dedicated to transparency, to enacting REV in a public manner subject to comments, review,

and reporting.

We welcome your feedback, input, and participation in realizing these goals for the benefit of all New Yorkers.

So, thank you very much again for the opportunity to be with you, and we look forward to your questions.

SENATOR GRIFFO: Well, thank you all very much for the presentation.

I also want to welcome:

Senator Liz Krueger, who is a ranking member of the Senate Finance Committee. Thank you for being here;

And, Senator Mike Ranzenhofer, who has joined us, too, who is also a member of the Senate Finance Committee.

I know the members have a number of questions.

I'm going to start with one or two, then we're just going to bring it down the line, and come back, because I think this is a great opportunity for us to -- to have that opportunity to have that dialogue right now. Some of it may be repetitive, but I think it's important to ensure that we have a complete and accurate understanding of what we've

discussed here.

Chairwoman Zibelman, you talked about the AC transmission proceeding.

I know that, originally, there was supposed to be a conference scheduled for mid-June.

Is that still scheduled?

AUDREY ZIBELMAN: Thank you, Senator.

There is going to be a conference this summer. It will not -- it's not going to be scheduled in June, but we're going to have it later this summer.

Our next point in this process, is that the staff has been reviewing all of the proposals, and they've been reviewing it from a number of different versions. So, we're in the process of doing that.

Staff will be coming out with its recommendations and its ranking of these proposals.

We're then going to be having conferences. We expect it will be three days, where each part -- where parties get to present and hear from each other, and cross-examine, if you will.

And then what -- next, we'll have is some written comments and reply comments, with the expectation that, by the end of the year -- before the end of the year, it will be back in front of the

commission for a decision.

SENATOR GRIFFO: So you don't have a specific date, but you will be bringing it to the relative parties?

AUDREY ZIBELMAN: It will be. We're getting to that. We're narrowing it to that point.

SENATOR GRIFFO: Any reason for the delay?

AUDREY ZIBELMAN: Just --

SENATOR GRIFFO: I mean, any specific reason?

AUDREY ZIBELMAN: -- it is just the complexity.

When you have 21 different projects, one of the things that has to be reviewed, for example, is every project needs to -- will be reviewed for every hour of the year, across the system, to see its impact.

Those, in itself, they just take time to make the computer runs.

We're looking at the economics.

We're looking at how it achieves -- affects cost.

We're looking at how it achieves the transfer.

We're looking at other attributes of the project, such as the environmental impacts.

All of those things take time.

Normally, you know, you would expect that to be a multi-year process.

The fact that we're looking at 21 different projects in a 6- to 8-month period is pretty phenomenal.

So it's -- I think, from that perspective, it's right on track, and accelerated.

SENATOR GRIFFO: And can you continue to provide us with the status of the cost-benefit analysis for the REV process?

AUDREY ZIBELMAN: Yes.

So what we will do -- what we've done, is the commission did a generic cost benefit on REV, looking at the -- as I said, the relative advantages of being able to be more efficient users of electricity.

We've also required a specific cost-benefit-analysis approach for every major investment associated with REV. And, of course, as we're looking forward, the utilities will be filing rate cases, and we'll be looking at the costs and the benefits in those.

So, all of this will be within the vise of making sure we're achieving what we want to do,

which is a more efficient and affordable system.

SENATOR GRIFFO: And I appreciate you being so succinct too. Thank you very much.

AUDREY ZIBELMAN: Sure.

SENATOR GRIFFO: You've been great.

Do you anticipate an increase in delivery rates that would be necessary in order to achieve the REV, at this point?

I mean, I know you're looking at this, but --

AUDREY ZIBELMAN: I think that, you know, it's -- that is an interesting question.

What we're really looking for, frankly, is a reduct- -- is looking at how it affects overall bills.

You know, we need to make investment in delivery.

The analysis we have on a business-as-usual basis, is that we're talking about a $30 billion investment that we would have to make just to maintain the system.

So we're going to need to make investment, in any event.

The question is, where you make an investment, and making sure the investment is there to help reduce the overall bill.

If, in fact, and, again, it would be presumptuous of me to say so, that you're going to see increases in the delivery bill. They should be accompanied with reductions in the overall bill.

And I think the ultimate issue is, the customer pays the overall bill, and what are we doing there to help make sure electricity as a whole is affordable?

SENATOR GRIFFO: Do you see that added in some form of a surcharge, potentially, on those utility bills?

AUDREY ZIBELMAN: No. We would see it as, part of the revenue requirements of the utilities is looking at, how do we make certain that the system is delivering what we want it to do?

SENATOR GRIFFO: And do you believe that, if we have any saving on the commodity side, and avoid a transmission-delivery cost, that that may be enough to offset some of those increases, potentially?

AUDREY ZIBELMAN: We would expect that. And, also, we expect value to customers.

So, you know, one of the things that we're talking about is creating what we call a "two-way market."

So not only are you looking at the potential of making sure that the investments that are made are more efficient, we're also looking at the opportunity for customers to actually get compensated for being able to supply services to the grid.

So, net-net, the advantage is, is that we call them "pro-sumers," is that people who actually can actively work in the market and look at how they can manage consumption.

For example, we have businesses or buildings in New York that have already invested in ice storage, that allows them to make ice at night, rather -- and melt it during the day.

Bank of America is one example.

How do they get compensated for that today? Because that's a huge advantage to the system.

And how do we incent those types of investments, when people can shift load and help us reduce costs.

So, we look at this as a combination of, both, making certain that the resources are more affordable, or -- and then, also, that people get paid for the services they provide.

SENATOR GRIFFO: Thank you.

I'm going to -- I have a number of other questions for all the panel, but I am going to turn to Senator DeFrancisco, and let us go down the line here with the other members, and then we'll come back.

AUDREY ZIBELMAN: Sure.

SENATOR DEFRANCISCO: This is pretty complicated stuff, and -- but my head is swirling around here, so I'm going to try to simplify it as best I can, because I'm simple-minded.

Mr. Kauffman, first of all, you're the energy czar.

A plan for energy in New York State, there was a draft plan a year ago; correct?

There's still a draft plan today.

Has there been public comments, has there been anything from the community, to try figure out whether that draft plan is good, bad, or indifferent?

RICHARD KAUFFMAN: Does this still work?

SENATOR DEFRANCISCO: Yes.

RICHARD KAUFFMAN: So there has been substantial public comment on the state energy-plan draft. My colleague, John Rhodes, can give you more details on that.

But the short answer is yes. And we expect that that -- that the final draft of the plan will be released shortly.

SENATOR DEFRANCISCO: Okay. But I'd like to continue with you for a minute.

Is the comment period over now for that draft plan?

RICHARD KAUFFMAN: The comment period is over, yes.

SENATOR DEFRANCISCO: Okay. So what is the -- is there a reason nothing, as far as the final report, has happened in over a year? Is there a rationale?

Is it the concept that REV is now what we're going towards and, therefore, this draft plan is going to be substantially changed?

RICHARD KAUFFMAN: No. No, no.

I think that, as -- Senator, as you point out, this is complicated stuff, and so there --

SENATOR DEFRANCISCO: Yeah, but you're the czar.

RICHARD KAUFFMAN: Well --

SENATOR DEFRANCISCO: I'm just a lowly senator.

[Laughter.]

RICHARD KAUFFMAN: Well, things didn't work out so well for the czars.

They worked out better for the senators.

[Laughter.]

RICHARD KAUFFMAN: So -- so the -- what the state energy plan -- we really want the state energy plan to be quite comprehensive, and to refer to things that we have been working on.

For example, the commission has asked NYSERDA to prepare a proposal for support of large-scale renewables, and so we wanted to be sure that the state energy plan anticipated or connected to that, because, otherwise, what happens is, you have a state energy plan which is incomplete.

So it is not that we -- the concepts that we have been talking about and pursuing since I've arrived in the administration over two years ago, are the same principles and philosophies that we've been pursuing from the beginning, and so there's nothing new or surprising in the state energy plan.

SENATOR DEFRANCISCO: So REV is something consistent with the Energy Highway, which was what was announced earlier on in the Governor's administration?

RICHARD KAUFFMAN: That's correct.

SENATOR DEFRANCISCO: Okay.

So are -- with respect to REV -- well, the Energy Highway, isn't the main purpose of the Energy Highway is to deliver high-voltage power through the major lines throughout the city -- throughout the state?

RICHARD KAUFFMAN: That's one part of it, yes.

SENATOR DEFRANCISCO: Okay. And is it fair to say that you need the major lines to fit in all the local REV components in order to make this work?

RICHARD KAUFFMAN: That's correct.

SENATOR DEFRANCISCO: Okay.

And how would you characterize the condition of the high-powered lines that are on the Energy Highway?

RICHARD KAUFFMAN: Of the current system, or the system that is going to be built?

SENATOR DEFRANCISCO: No, we don't -- it doesn't help us, the one that's going to be built.

RICHARD KAUFFMAN: Right. I think I've already said, Senator, that the current grid is aging and needs to be improved.

SENATOR DEFRANCISCO: Okay. If that's the case, shouldn't we be improving that Energy Highway

now before it becomes non-usable, since it's going to take a while to get this REV in place; correct?

RICHARD KAUFFMAN: Well, so, I think we're -- we are -- I hope that you have not taken away from any of our comments that we're putting our brake -- putting a brake on building the grid infrastructure that's going to support the integration of distributed resources, because that's not true.

SENATOR DEFRANCISCO: And is there a timeline that you have now in place that's going to show the schedule for improving the Energy Highway as you're studying and implementing REV over a period of several years?

RICHARD KAUFFMAN: Audrey, do you want to talk about that?

AUDREY ZIBELMAN: Sure.

So we have a number of different projects.

In our Appendix 6, we talk -- Appendix A, I have a number -- we have a number of projects that we've listed that the commission has approved around transmission.

The TOTS projects, were projects that we identified as --

SENATOR DEFRANCISCO: Excuse me one minute. I don't want to cut you off, but, I'm looking for a

timeline.

All those projects say, by this year we'll have this; this year we'll have that; this year we'll have that.

AUDREY ZIBELMAN: Sure.

So the 2000 -- the TOTS projects, which would be the 600 megawatts that we're looking to have in place to protect against in the -- an Indian Point shutdown, will be in place in 2014 -- '16. Summer of 2016. They've already been approved.

Other projects are already under construction.

And then on the AC projects, again, because that's proceeding as still pending in front of me, the expectation is, is that we will be in a position to select a winner by the end of this year.

We will then need to go through what's known as an "Article 7 siting process" which will finalize the approval process, and then from there you would begin construction.

So that would take a bit while, but the objective would be to start, you know, as soon as possible.

SENATOR DEFRANCISCO: Okay. And does your chart, I didn't study it, but does it show on a map,

the timelines on the various pieces that you just mentioned?

AUDREY ZIBELMAN: It does not.

That is information that I believe we can get for you --

SENATOR DEFRANCISCO: I would appreciate that, because I just want to see where the deficiencies are likely to be.

Did you have anything to add? Because Mr. Kauffman referred to you in a minute.

JOHN RHODES: He talked about the -- he talked about the state energy plan and the process.

I will just only echo what he said, which is, when we received considerable comments, I believe the number is 50,000 comments, on a broad range of topics. And we're presenting a broad range of views. Those have been reflected in the plan as we refine the draft, as has the current thinking that Richard mentioned, around integrating large-scale renewables and clean-energy-fund thinking, and certain aspects of REV that have become more clear over the time, so that the state energy plan will be comprehensive and on target when it is issued imminently.

SENATOR DEFRANCISCO: Okay.

And the -- what's difficult for us, especially during the budget process, is that all of these various proposals come out, and there's others that were out there, that never quite got completed before budget.

So now here we're policymakers, and we're trying to figure out what's going on. And, a plan -- an energy plan is supposed to be in place by the time the budget is coming out. And -- or at least before the end of session.

And what are we supposed to do under those circumstances to set policy?

Does anybody have a hint for the Senate?

Okay.

I have the same feeling.

It's very difficult to do that.

RICHARD KAUFFMAN: Was that a question?

SENATOR DEFRANCISCO: Yeah.

RICHARD KAUFFMAN: Okay. Well, we're always happy to engage at any point with you or your staff, to give you any details on our thinking about policy. We don't have to have a big hearing. We're always available.

SENATOR DEFRANCISCO: That's great, but the report was supposed to come out in December of 2014;

correct?

RICHARD KAUFFMAN: And there's other material that's available all the time.

I will submit it to you.

SENATOR DEFRANCISCO: All right.

Now, correct me if I'm wrong, the New York Green Bank, the New York Sun, are both subsidized by the taxpayers; correct?

RICHARD KAUFFMAN: That's not correct, actually.

SENATOR DEFRANCISCO: Okay. How are they paid for?

RICHARD KAUFFMAN: The -- these come from collections.

SENATOR DEFRANCISCO: "Collections" meaning, what?

RICHARD KAUFFMAN: From ratepayers.

SENATOR DEFRANCISCO: Well, isn't that subsidized by ratepayers?

RICHARD KAUFFMAN: Well, when you say "subsidized" --

SENATOR DEFRANCISCO: Well, it's helped paid for by the taxpayers. In fact, that's where the money comes from: surcharges. Correct?

RICHARD KAUFFMAN: It comes from utility

bills, yes.

SENATOR DEFRANCISCO: Okay. Utility bills that are paid for by utility consumers?

RICHARD KAUFFMAN: That's correct.

SENATOR DEFRANCISCO: Okay.

Now, that being the case, and we're talking about doing things efficiently, and, hopefully, lowering the costs for taxpayers, in your computations, as far as some of these innovative programs that are trying to be put together, does it take into account that we want to lower taxpayers' rates and, somehow, be in a position to stop some of these additional surcharges?

And, if so, are there any computations anywhere about what the cost would be of some of these innovations now that are called "REV"?

RICHARD KAUFFMAN: Okay. If I might, and I think that I said it a couple times during my remarks, that we're committed to reducing collections.

And the other thing that I tried to -- I think that you've heard from several of us, is the objective of our policies, in almost every respect, is to find a way to improve costs.

So what are the ways in which we can improve

costs?

It is not just about collections.

We're mindful of the fact that when we increase collections on customers, we're adding to customer bills.

And, so, let's start from there, because that's where you started.

When John Rhodes talked about doing things to animate markets, he talked about the kind of payback and the bang for the buck that we expect to get on those collections. He talked about an improvement of the ratio of private-sector funds-to-ratepayer funds going from 2 1/2 to 6 times, and that's a measure of getting much more value, so that we believe that by the policies that NYSERDA is embarking, we're going to be able to draw in much more capital from the private sector, do more, while collecting less from ratepayers.

That's one way in which we're going to, through our policies, put more money back in the hands of customers.

When we talk about capital efficiency, as we said before, those 80 hours, there is capital inefficiency in the system that ratepayers have to pay for all year long. And we have the potential to

save customers billions of dollars a year through the policies that we have proposed to -- that we are proposing here.

So we're absolutely committed in what we're doing to reduce customer bills in the aggregate, which is a function of energy efficiency, better capital efficiency, and reduction in ratepayer collections.

SENATOR DEFRANCISCO: And is there any calculations you made, or pro forma, or anything, that basically shows how you get into billions of dollars?

RICHARD KAUFFMAN: I think you just heard some calculations that were presented here, and I'll turn over other comments to Chair Zibelman.

SENATOR DEFRANCISCO: I mean, are there calculations?

You're estimating billions of dollars, and my question is, How did you compute that?

And what were the -- you mentioned the components, but, is there any estimated calculation that you have to show that this is real?

AUDREY ZIBELMAN: Thank you, Senator.

Yes.

So the way that we come up with our

calculations is that the staff of the Department of Public Service looks at published information that comes out of the market -- the wholesale market, and we look at what the prices of energy are in these top 100 hours.

And you have to remember that a lot of these power plants, for example, they will not be run many of the hours of the year, so they need to make up one year's worth of revenue requirements in just a few short hours.

That's what drives the prices up during this demand, because people have to be able to recover their costs, and that means that every generator that's running during that hour gets this highest price.

That's what we look at, and when we sit and look at that, and we take a look at the amount of transmission and the distribution, that's what we're saying is, if we can make our usage more efficient.

That's not saying that you're not going to have a bulk power grid, but it's saying you're not going to have plants that you're going to run.

It would be like running a hotel, that you say, I'm only going to use the rooms two weeks a year. The rest of the year, I'm going to have staff

sitting there, and I've got to pay for them, but I'm not going to use it.

That's what we want to make more efficient, so that's a big piece of those calculations.

We also know, when we move power from a power plant to a consumption, there are losses in the system. These are physical losses.

We calculate those out.

So these are all based on, really, engineering calculations of what the cost is of waste in the system that you could avoid by, basically, making your usage much more efficient.

And, again, we're never going to say that we're just going to have distributed resources.

We're always going to have a bulk power system.

The challenge, and this is really what markets are all about, is how to make it as most efficient as possible.

That's what we're looking to do with REV. .

SENATOR DEFRANCISCO: Okay.

And last question on this point, I'm just trying -- what I'm looking for, if you can do it, I'm trying to figure out, we're going to have this in place, this in place, we've got a timeline -- at

least that's what we're planning on, a timeline; and if there's some type of assuming that the timeline is met, what are the savings? What is the result of this plan?

Because it would seem important to know whether or not the plan has some kind of calculations behind it, to try to understand that this is not just, it's going to save billions of dollars, but when we get this online, we estimate, this is our estimate on this. Get this online...that's the type of thing.

I don't know if you've done that, but it would seem like something that would make sense.

AUDREY ZIBELMAN: So, yes.

So let me tell you how we'll work.

So as I said, the next -- once -- now we have the -- sort of the idea, we want to make it more efficient.

Now the next question is, How? Right?

So what we will be doing, what we call our "Track 2," is identifying real metrics of what we want to achieve.

So, for example, if we have a metric around for utilities that say, "We want you to reduce your peak by a certain amount of megawatts, and we expect

a certain amount of savings," what we will be doing is measuring, exactly, did we achieve the goal, and did we achieve the savings?

And, so, within the utility rate plans, like we always do, we'll be identifying, what are the outcomes? and how are we achieving them?

And if we're not achieving them, what are we going to do?

Because, again, the goal here, of course, is to make it work better. And that's -- and if we're not measuring it, obviously, we shouldn't be doing it.

SENATOR DEFRANCISCO: Okay.

Positively, last question.

Mr. Rhodes, there was an order by the PSC, dealing with the Green Bank, back on December 19, 2013, and this quote caught my eye, and I just think it's an important quote, along the lines I've been asking.

"NYSERDA further asserts" -- you're asserting -- "that this model of public-private financing will reduce the need for ratepayers to continue funding grant and incentive programs at the currently levels.

"The Green Bank will be able to deploy its

capital in successive rounds of financing, and to redirect it as the clean-energy financing markets evolve, without the need for additional rate-based contributors.

"NYSERDA also states that the Green Bank will earn sufficient market returns on its investments to become self-supporting; thus" -- well, there's a caveat here -- "if successful, the Green Bank may allow a partial shift away from the subsidy model for clean-energy funding."

And I assume those assertions were part of the basis for the ultimate order.

So, from December 19, 2013, has there been any such savings?

Or -- and, secondly, what calculations did you use to make that assertion?

JOHN RHODES: So the assertion was based on the recognition that if -- so one point was "self-sustaining" in that assertion, which is, that once we have the money collected and it's used to capitalized the Green Bank, and then it goes out to support a clean-energy project, and the clean-energy project repays the money, it can go back out again.

So in contrast to other kinds of ways that NYSERDA disperses money, this money comes back.

So that's the point about self-sustaining.

Then about -- and then the other point about self-sustaining is that we need to charge money for the value that the Green Bank provides to its partners, two reasons:

One, is to keep the Green Bank whole.

The more important reason, is to make sure that we're actually providing value, because if someone is willing to pay for something, then it probably does have value.

And so those are the bases on which we made those assertions.

We actually calculated numbers around leverage and recycling, and other metrics, that are in the report that's associated -- the business plan that's associated with those comments.

And we can share them with you.

SENATOR DEFRANCISCO: That would be good.

And so I'm just trying to figure out, just for now, was your -- has your assertion panned out in the last year and a half?

That the taxpayers are less subject to this program's subsidies, or whatever you want to call them, and that has panned out over the last year and a half, since in report?

JOHN RHODES: I would say so.

SENATOR DEFRANCISCO: And you've got some numbers to show that?

JOHN RHODES: We can describe where the Green Bank is in its --

SENATOR DEFRANCISCO: Well, if you can give numbers that confirm your assertion, that would be much more comfortable than knowing where the Green Bank is.

JOHN RHODES: Okay.

All right?

Okay. Thank you.

SENATOR GRIFFO: Thank you, Senator DeFrancisco.

We were joined briefly by Senator Cathy Young, who has now left to go to another meeting.

I'm also joined here by the ranking member of the Energy and Telecommunications Committee, Senator Kevin Parker; and, also, another member of the Energy Committee, Senator Tom O'Mara.

I want to thank them both for being here too.

I want to quickly, before I turn to Senator Little, follow up on the Green Bank. Maybe, Mr. Kauffman, you can answer this one.

When you look at the projects that we were talking about, and I think it was 2014, there were 7 inaugural projects that were identified. 2015, there was a creamery in Orange County.

Can you give us more specifics on exactly where we have seen activity there, relative to projects and financing, beyond that? Or is that it so far?

RICHARD KAUFFMAN: Well, the Green Bank is in the process of going from the term sheet through to closing, and continues to work with private-sector partners that are coming in with new ideas.

And so I think it's in -- I think it's very important to understand that this is a specialized finance company. It's very similar in a lot of ways to a private-sector finance entity, and, so, in that it is not in the subsidy business. And as a result, it -- these are complex financial transactions that take a while to close.

This is not unusual.

The other Green Banks that have been set up takes them about a year to -- from announcement of transactions to closing; so we're very much on track.

But I will -- we can share with you, as we've

shared with the DPS staff, the nature of the projects, and you can see, with the transactions that have been announced, exactly how they fulfill the strategy of the Green Bank, which is to fill in a financing gap, and to provide much more substantial leverage on this capital than what the capital would have been used for in the former grants.

SENATOR GRIFFO: And in the initial capitalization order at the PSC, the bank was to set up two advisory committees.

Have them -- have they both been established?

And can you give an idea how people are brought to that advisory committee, who may be on that, even by segments of industry, or --

RICHARD KAUFFMAN: John, do you want to talk about that?

SENATOR GRIFFO: John?

JOHN RHODES: I believe that there were two committees, but only one advisory committee, that were envisioned by the Green Bank.

SENATOR GRIFFO: Just to get some idea of what this is, for people --

JOHN RHODES: Okay. So the advisory committee, which consists of -- includes outsiders

from the Green Bank who are generally very seasoned executives with financing-transaction background in the relevant sectors. And I believe the membership of the advisory committee is public, and we can certainly share it with you.

SENATOR GRIFFO: And can you tell me how they're appointed as members the advisory committee?

Who makes that appointment?

How are they selected?

JOHN RHODES: We have -- it is a -- it is -- there's a nomination process, and, ultimately, the vetting of those -- of the candidates comes to me, and I issue the invitation.

SENATOR GRIFFO: And you're relying on private investors; correct, to be a part of the Green Bank?

JOHN RHODES: Correct.

SENATOR GRIFFO: And it was established administratively; correct?

JOHN RHODES: Yes.

SENATOR GRIFFO: So, as a result of that, can we have any assurances of continuity?

What if there was a change, how would that work, potentially?

JOHN RHODES: I'm sorry?

SENATOR GRIFFO: If it was a --

JOHN RHODES: A change?

SENATOR GRIFFO: Yeah, if there was a change in administration, or something like that, what ensures that this goes on?

Because if you're relying on private investors, there has to be some sense of continuity, obviously. There's no assurance of that.

Would that cause a reluctance -- I'm just trying to understand, would that cause a reluctance, potentially, for private investors?

JOHN RHODES: The -- I --

RICHARD KAUFFMAN: Are you talking about with respect to the advisory board, or with respect to for the activities of the Green Bank?

SENATOR GRIFFO: Both, actually.

I mean, the activities of the bank itself, because it was established administratively, was it not?

JOHN RHODES: So I think that one of the hallmarks of the Green Bank, as of New York Sun, as of --

SENATOR GRIFFO: It's not statutory; correct?

JOHN RHODES: Correct.

-- but we're -- we are -- we are promising

predictability.

And it's clear that the level of predictability that we have already established, with the orders that are in place and the initial capitalization that is in place, is sufficient to generate a lot of promising discussions about transactions, and quite a volume of what is called "deal flow" --

SENATOR GRIFFO: All right.

JOHN RHODES: -- with a serious partner.

SENATOR GRIFFO: I'm going to turn it over to Senator Little.

SENATOR LITTLE: Thank you.

And thanks for all your written comments.

This is probably a huge oversimplification of the goals of REV, but, is it that, like the homeowner trying to reduce their demand charges, the entire state is trying to, through infrastructure improvements and other means, to reduce the demand -- high demand that the state has?

AUDREY ZIBELMAN: That is a wonderful -- is this on?

That's a wonderful summary.

SENATOR LITTLE: Okay. I got it, then.

Thank you.

But I wanted to talk about the Energy Highway, and, I represent the North Country, a lot of rural areas, and we have a lot of wind, and we're certainly getting a lot of solar.

Somehow, not many of our volunteer fire departments are loading up with solar panels all over.

But the biggest problem we have, and what I've heard, is that the capacity for the transmission to the areas that really could use this power isn't there, coming from the North Country.

But, Gil, you mentioned the Messina line.

So, are you expecting that, like, from the North Country -- Clinton, Franklin county -- that energy to move to that direction, and then go down towards the Utica area?

Is that --

GIL QUINIONES: So we have a line called "Moses-Adirondack," that goes from Messina --

SENATOR LITTLE: I saw both of those.

GIL QUINIONES: -- also called "Taylorville line." It goes from Messina, headed about halfway towards Utica. It's 73 years old, and it requires upgrade and replacement.

And while we're doing that, we are also

working with all the wind farms that are connecting to our grid to make sure that when they build their substation, that they can effectively connect to that line that currently exists, and when we rebuild it, it can carry more of those -- power from the wind farms from the North Country.

We're also looking at upgrading our line that goes east-west, actually interconnects us to Vermont. It's called our "PV 20 line," part of our life extension and modernization. And that upgrade should also help the wind farms in the North Country.

The last thing that we're doing up there's we're separating circuits and sectionalizing our transmission system so that we avoid the bottlenecks that you're talking about.

So we have done one, we call the "Moses-Willis tower separation" of the circuits, and sectionalizing that circuits.

Over time, we also need to apply technology in that process. And we're installing a lot of sensors to be able to really figure out how much power the lines are carrying at any moment. That's called "dynamic line-rating technology."

And so we're doing current technology, and

exploring better technology over time, to solve the problems that you have.

SENATOR LITTLE: And isn't there a line that comes, like, directly south of Plattsburgh-Gary (ph.)? It's south, almost like the Northway, or something, big transmission line?

But is the capacity -- the basic question is, is the capacity beginning to improve?

And I know you're saying --

GIL QUINIONES: Yeah, right now there is still capacity to integrate wind in the North Country.

SENATOR LITTLE: Okay.

GIL QUINIONES: But it's -- we need to improve it. You know, as we replace aging infrastructure, instead of just replacing like in kind, our view is, we should replace it with the most effective and efficient technology out there.

SENATOR LITTLE: Because there is interest in more wind in the North Country, and there's certainly a lot more capacity for wind farms, and they have helped in agricultural areas.

They've certainly helped to keep taxes down, as many of those areas have lost a lot of other businesses, and all.

The other question I had for you on the transmission is the Champlain project.

I keep seeing that they're moving along, and moving along.

Our biggest issue with the Champlain project is it's from Quebec to New York City, I understand, to replace the Indian Point power that New York City may eventually not have, but no one can connect into it. There's no connection ability from any of these power sources in the North Country.

But is it online, as the newspapers are reporting?

And do you expect it's going to be able to be completed?

RICHARD KAUFFMAN: The project has all its permits from the state and federal entities, and it's really, at this point, a market decision by the developer as to whether or not that project --

SENATOR LITTLE: The cost is enormous, isn't it?

RICHARD KAUFFMAN: That's for the developer to worry about, and to figure out whether the developer wants to proceed based upon the market.

SENATOR LITTLE: Uh-huh. Okay.

All right. Thank you.

That's on the transmission.

Another one, even in Warren County, where we have a double H camp wanting to have more solar to operate the camp. It only operates -- well, it operates part-time in the winter, but a big thing in the summer. And, you know, National Grid doesn't have the transmission-ability lines in there.

So that's a huge issue, going forward.

The other one would be, to the chairman of -- Zibelman, on the PSC, wind, solar, water, very, very important renewables, and they're a great fit for my communities in the North Country. But so is biomass, and I don't see lot of attention given to biomass and a lot of consideration.

Actually, we have one project, a plant in Chateaugay. It's a small plant. I can remember getting it up and running, or getting something for it, when I first got into the Senate, telling people I had 18 jobs. And, of course, people from Long Island looked at me, like, so what? McDonald's has 18 jobs.

But in the North Country it is an important thing.

And they -- I thought, they're looking to get a maintenance tier support. And I understand they

do have a purchase agreement, or a possible purchase agreement, for the power they produce, but they haven't made it to the PSC meetings yet.

Do you have any status on that you could share?

AUDREY ZIBELMAN: I know that both sides have -- Chateaugay and the purchaser have met with staff.

Staff is reviewing it, and we expect it, you know, to be brought in front of the commission, but I don't -- I can't you give you a specific date.

But it's -- I know it's in the works, and staff is working it.

SENATOR LITTLE: That's really important to that community, in that we lost the Chateaugay Correctional Facility. It's closed.

And, really, 18, 20, 30 jobs are like 500 jobs someplace else.

So, as soon as that could get before the PSC, I would really appreciate it, and hope that that can happen.

AUDREY ZIBELMAN: Okay. Thank you.

SENATOR LITTLE: All right.

And thanks for all the information. You certainly have provided more reading for us.

So, good. Thank you.

SENATOR GRIFFO: Thank you, Senator Little.

Chair Zibelman, I might want to just follow up on that.

What type of environmental benefits do you envision being monetized to help support the build out of the distributed energy resources?

AUDREY ZIBELMAN: Senator Griffo, one of the things that we asked our staff to do was to develop a model for a benefit-cost analysis, including, you know, all the value streams associated with distributed energy resources, some of the technical issues I talked about, but also to take a look at the environmental attributes and how we would model those into the system.

The staff is now in the process of developing what we -- a white paper, a concept of an approach.

We've asked them to file that in front of the commission. As we always do, we will solicit comments and input.

I'm sure we will get lots from all sides, and then the commission will make a determination about how best to model all -- you know, all relevant attributes when we're comparing one from another.

SENATOR GRIFFO: Would one of the benefits be

lower carbon emissions, potentially?

AUDREY ZIBELMAN: That would be one of the things that I know staff is looking at, how to model that in.

There's, obviously, complexity associated with that because we're part of RGGI and how we do it.

SENATOR GRIFFO: And then would we place that same value of the carbon emissions if we were looking at this at both the ISO and at the utility distribution level too? Would that be considered as a possibility?

AUDREY ZIBELMAN: It would -- in a benefit-cost analysis you would take a look at all the benefits, all the costs, and make a determination on how to best move forward.

SENATOR GRIFFO: Okay. Thanks.

Senator Ranzenhofer.

SENATOR RANZENHOFER: Thank you.

First of all, thank you, Chairman Griffo and Chairman DeFrancisco, for convening the hearing, and the panel for obviously being here today.

You know, a lot of times when we're dealing with subjects, we say this is not rocket science.

But this actually is rocket science. This is

very complicated stuff. So, I'm still trying to get my arms around this.

So I have some very -- questions that are specific to my district.

I represent the Buffalo-to-Rochester area, and the concerns I hear mainly from people that are involved in manufacturing is not only the high cost of energy, but the peaks and valleys, where, all of a sudden, they will get an energy bill where it just doubles their costs.

And I just wanted to know, you know, what you have going on in my area, in that area, which is going to improve there -- there a lot, not just for themselves, but, obviously, the more successful they can be, the more people they can employ.

You know, we -- you know, we're somewhere between Senator Little's district and the Long Island district in terms of how many jobs are important.

Every job is important, but, you know, a lot of these companies would like to add jobs, but their -- the predictability of their energy costs really, you know, cause them to hesitate.

So if you can just update me on what you have going on in my area, and then I have some just

general questions for you after that.

GIL QUINIONES: Senator, as you know, the Power Authority is right there in Western New York.

We have economic-development programs that provide low-cost power (hydropower) to attract and retain businesses in -- within the 30-mile radius of the Niagara Power Project.

We have two programs, Expansion Power, and Replacement Power, as well as the statewide program Recharge New York.

So that's one tool --

SENATOR RANZENHOFER: I'm not really talking about programs.

I'm talking about in terms of updating systems.

GIL QUINIONES: Oh.

And -- so aside from that, one of the areas that we're looking in Western New York is, when we -- it's time for us to upgrade, you know, life extension and modernization of our transmission system in that area, one of the -- the focus that NYPA has is, how do we make the system more robust and more effective and efficient?

So, we're in the middle of planning that. We do not have a specific project to present to you

right now.

We are evaluating options, but as we narrow down those options, we will be happy to brief you about of them.

SENATOR RANZENHOFER: And what type of timeline are we talking about, kind of going back to some of Senator DeFrancisco's questions?

You know, when I go back into the district and I say, you know, I was in a hearing today, and advised by the panel members that they're working on projects, and, you know, you'll let me know when you have it, I mean, what kind of timeline are we talking about where they can actually see some reduced energy costs based on what you're doing?

GIL QUINIONES: Well, the selection should be done this year of what project we would propose to do.

After that, there is a process that we have to go through with the Public Service Commission, where, if it requires siting with the New York Independent System Operator and the federal Energy Regulatory Commission.

Typically, a transmission project, depending, if it's a new project, it can be five years to seven years. But if it's just a modification, say,

application of smart-grid technology on the existing system, it can be a lot shorter, similar to what we're doing with the Marcy South line, the one that I described, that emanates from Marcy, all the way to the Lower Hudson Valley.

So depending on the final design scheme that we come up with, it could be two years. It could be five to seven years if it requires siting and it requires to go to the federal regulatory process.

SENATOR RANZENHOFER: Okay. And is there anyway of expediting that, or is that a pretty standard timeline that you just referred to?

GIL QUINIONES: We always try to expedite it, but it's a public process and it's a regulatory process.

SENATOR RANZENHOFER: Okay.

Mr. Kauffman, in -- I was reading through your comments today, and you had mentioned in here that the average household pays $2500 per year for energy.

So when all is said and done, you know, if someone who's watching this out wherever they're watching it, you know, what do you expect the average household energy cost to be as a result of everything that you're doing, five years down the

line?

If it's $2500 per year right now, you know, when I tell my constituents, when I go back to the district, that, you know, they're doing all these things. Right now you're paying $2,500 a year. In five years you are going to pay....

You know, what is that number going to be, so somebody has some, you know, comfort that all of this is going to have significant savings for them?

RICHARD KAUFFMAN: Well, thank you, Senator, for the question.

I think what I'd like to do is to come back with you, to give you, on a household basis, that exact number, the calculation of that number.

SENATOR RANZENHOFER: Well, I mean, you mentioned it in your testimony here.

I mean, is there -- I mean, is there some number that you are looking to achieve after all is said and done?

RICHARD KAUFFMAN: Well, we're -- we are looking to achieve very substantial cost savings, as we've talked about, from the different areas of both energy efficiency and improved capital efficiency and reduction in collections. I mean, those are in the aggregate.

And, so, you're asking for a household number.

I'd like to take that and reflect on that and return to you.

SENATOR RANZENHOFER: Okay. I mean, do you have in terms of a percentage?

I mean, you're going through this process.

I mean, is there some -- you know, and before you start the process, I imagine that you list your goals, and, actually, you know, you list them here, of more affordable energy; you know, lower the cost; improve the aging infrastructure.

You know, you have four or five goals or objectives that you're trying to achieve.

So if -- you know, for instance, if the average energy household is $2500 per year right now, and you were to say, "Well, you know, we hope to get it down, you know, to $2450," someone looking at that may say, Well, you know, that's not really a significant savings.

So, when you go into the process, I mean, do you have a thought in mind of where you want to be at the end of the day?

I mean, you very clearly know where you are right now. You have said so in your written

testimony.

I mean, where are you trying to get to, you know, other than -- I know you're using "significant savings," but, you know, an average person hearing that, Well, what does that mean?

And that's what I'm trying to get an understanding, so when I go back into my district, I can tell them, you know, what -- you know, what is a "significant savings" for -- you know, for them.

I mean, what does the energy czar feel a "significant savings" is to make this all worthwhile?

I mean, I know there are other goals to modernize, and, you know, clean energy, and things like that.

But in terms of, on the financial side, you know, what are you really trying to accomplish at the end of the day in terms of savings?

Whether you get there or not is another story, but, you must have some sort of idea of where you're trying to get at the end of this process.

RICHARD KAUFFMAN: Well, again, Senator, I hope we're not talking past each other because, of course, we've -- and here in our comments we've talked about a number of different numbers, about,

improved, what each percentage increase in capacity utilization means.

I talked about 220 to 330 million dollars for every percentage point.

Chair Zibelman talked about a reduction of energy costs for -- for shaving the peak of the top 80 hours.

So, we absolutely have calculations in the aggregate.

And you're just asking us to -- which I think is fair, to come up with it, translate it, by household.

And so as I said, we're happy to take that homework assignment back and revert to you.

SENATOR RANZENHOFER: Okay. So I guess today I'm not going to get a number from you.

RICHARD KAUFFMAN: Right.

SENATOR RANZENHOFER: That would be fair to say.

Today, anyway.

Okay.

Another question I have for you, and this is just really for my own information, you talk about, you know, "more and more New Yorkers are putting solar on their roofs," and, "the costs are coming

down significantly."

So I drive through my district, and maybe, you know, this is a statewide thing, I just don't see, you know, just from my own observation, you know, more and more people using solar.

Now, again, I don't know what you mean in terms of number, you know, "more and more New Yorkers."

You know, so, obviously, if you had two people one year, and you had five people the next year, that would be more, but I don't think that's what you're referring to.

So, I mean, what type of numbers are -- do you refer to when you say "more and more New Yorkers are using solar"?

Because the second half of that question is, you know, when I -- when we talk about it just out in the community, the general comment is, Well, if I am, you know, this many years old, and I'm going to have the house for this amount of time, and this is the cost, you know, am I going to be able to recoup my investment?

And the comment is that, very often, Well, it's still very expensive, and I would have to live here for, you know, 20 years. And I think the

average person owns a home for 7 years.

So I'm trying to -- you know, if you could just tell me, or define for me, you know, what is the increase in the usage of solar on the roofs?

And what has been the, what you refer to, you know, the cost of these distributed solutions?

One of them, I presume, is the roofs are coming down off at an exponential rate.

So where -- you know, where were we? where are we now? in terms of this exponential reduction in cost, and this increase in people using solar on the roofs?

Because I -- just my own personal experience of being in my district, I just don't see that.

RICHARD KAUFFMAN: You must have a different district than Senator Little, because she just talked about --

SENATOR RANZENHOFER: Yeah.

RICHARD KAUFFMAN: -- you must not have as many firemen in your district.

SENATOR RANZENHOFER: Well, we do have a lot of firemen, and we do have a lot of firehouses.

But that's the beauty of New York State, is, every district, and, you know, I can't tell them, Well, in Senator Little's district they're doing

this.

People want to know what's going on in my district when I'm there.

RICHARD KAUFFMAN: Of course.

SENATOR RANZENHOFER: So if you could --

RICHARD KAUFFMAN: Well, actually what I would like to do is turn this to my colleague John Rhodes who can tell you more -- he did talk in the aggregate, again, about the pipeline of solar in the state, and so he can talk to you about the progress that we're making with New York Sun.

SENATOR RANZENHOFER: Good.

Okay. Thanks, John.

JOHN RHODES: So I think I mentioned in my testimony that we've already seen a doubling of installations from last year to this year.

So, this year -- sorry -- in 2014 we installed over 100 megawatts of solar, which is double what it was the prior year.

We have 450 megawatts of solar in the pipeline. That means it will be built out over time.

New York Sun, I -- it would be reasonable to think that by the time we're done with New York Sun, 8 or 10, or 6, years from now, we're estimating that

the run-rate will be around 500 megawatts per year.

So it's just a -- it's not exponential, but it's a 5x, 6x multiplication of what's happening now.

I want to caution that not all solar happens on rooftops, so some of it will be, you know, larger installations, ground-mounted, and the like.

But, five -- but those are meaningful numbers.

The other point I would make is that one of the really strong developments in solar is the advent of a -- of financing, which is really turned the calculation from, I have to buy the solar array and put it on the roof and wait for 20 years, or 10 years, of cost savings to pay me back, to one where it's financed.

It's actually no money down, or very little money down, and I'm cash-positive from day one.

And that is, in fact, one of the, you know, really promising developments, in terms of business model, that is leading to the acceleration of solar.

SENATOR RANZENHOFER: Okay. But --

JOHN RHODES: I can give you more numbers, and I will do so, about the progress of the program.

SENATOR RANZENHOFER: Okay. And that's the

exponential reduction in terms of the financing, as opposed to the capital outlay in the beginning?

JOHN RHODES: I think so, yes --

RICHARD KAUFFMAN: No, I'm sorry.

There's been significant cost declines in the panels, and those cost declines have been seven --

AUDREY ZIBELMAN: 6 to 8 percent a year.

RICHARD KAUFFMAN: -- yeah, it's 6 to 8 percent per year, but it's -- but on a compound -- that's true over a long period of time. But I think it's something, like, 70 or 80 percent the last 3 years.

I mean, enormous cost declines, and then -- and those are the panel costs.

And then you have the other costs of installation and financing, and those costs have gone down as there's more and more installation.

And beyond the solar, and this is the point about the other distributed solutions, battery costs are declining -- also declining rapidly.

The thing that's really important to understand, and I think members of your district, the people that are in the manufacturing business, will understand this, is that, that you're right, that when you look at the penetration in the markets

in the aggregate, these are small penetrations, but because they're growing rapidly, the economics that come from manufacturing things at scale are enormous.

And so that's one of the things that we're seeing as the solar industry and as the battery industry begin to get to scale, the manufacturing-cost declines are really enormous.

And so that's one of the things that we're trying to anticipate and prepare for in our policy.

It's not that we're trying to -- as I said before, it's not that we're trying to create a market.

We're trying to create a framework so that we wind up not costing ratepayers a lot more money for building an infrastructure that can't take into account the changes that are -- that are coming.

SENATOR RANZENHOFER: Okay. Thank you.

My thanks to the panel.

And thank you, Chairman.

SENATOR GRIFFO: Thank you, Senator Nozzolio.

Gil, you talked about --

SENATOR RANZENHOFER: Senator Nozzolio?

[Laughter.]

SENATOR GRIFFO: I mean, Senator Ranzenhofer.

Senator Nozzolio's in the other room. I just --

SENATOR RANZENHOFER: I don't know. I don't know how to take that.

[Laughter.]

SENATOR GRIFFO: You see now, you talked about czars. But I'm a Senator from Rome, and we've had some tough times in the Roman Senate.

SENATOR RANZENHOFER: You know, I do have to leave for another meeting, so don't take any offense.

[Laughter.]

SENATOR GRIFFO: Gil, would you consider hydro an important part of clean energy?

GIL QUINIONES: Hydro --

SENATOR GRIFFO: Hydropower, yes, the water -- hydro --

GIL QUINIONES: Hydropower is clean energy, of course.

NYPA is the largest, you know, state-owned public power. 70 percent of what we produce is clean hydroelectric power.

SENATOR GRIFFO: And we talked today about, you know, the Energy Highway was the beginning of this process, along with Reforming the Energy

Vision, right now.

What's your belief -- you've been around for a long time -- I mean, are we making the progress needed in the Energy Highway?

I mean, should we be accelerating and investing more right now to build those lines?

I know you have a number of projects you've talked about, and when we talk about the sources of clean energy and hydro being very important.

GIL QUINIONES: We are on a good path.

I mentioned about the NYPA projects.

Chairwoman Zibelman talked about what -- the proceedings that she -- they have at the PSC with the investor-owned utilities and private-sector developers.

I think we're on a good path.

We need to keep going and keep the momentum moving forward.

SENATOR GRIFFO: Senator Krueger.

SENATOR KRUEGER: Thank you, Mr. Chair.

I want to thank all the panelists.

I apologize for coming in late. Session ran longer than we thought.

I've read through your testimony, and, I've listened to my colleagues' questions, and they've

covered many of the questions I think we would all have around your sort of broad assignment, except for the part of the assignment which is reduction of carbon emissions.

So yesterday some of us held a hearing on climate change in New York, and there were a series of scientists who testified, and when I asked them what the sort of number one and two things the State of New York could be doing to help address issues of climate change and the impacts it's having on the state now and in the future, I was basically told reduction of carbon dioxide emissions (CO2), and that that was heavily from both vehicles and buildings, so that we had to do significant reduction.

So, in all of the proposed changes, and your proposals are large and will, no doubt, be very impactful, and they're obviously complicated, and people have different feelings about different parts of what you've proposed so far, and I am also looking forward to your report come June, and more detail, what are we doing about ensuring a continuation beyond the end of 2016 for large-scale renewable initiatives, going forward?

Because we have a sunset of the renewable

portfolio standards, and I don't know whether part of your grand plan for the state includes new commitments to meeting renewable and sustainable standards of energy, going forward.

RICHARD KAUFFMAN: So, thank you very much, Senator Krueger, for your question, and for your ongoing commitment to climate-change issues.

So, you know, there's a lot in what we're doing that will accelerate our progress towards reducing carbon emissions.

So the system, as it's currently structured, we talked about how capital inefficient it is, and how expensive it is, and getting more expensive for customers, and why we want to build this integrated grid, because it will reduce costs, but it will also improve energy efficiency significantly, because we need to move beyond, frankly, the programs that we have had in place because they're not doing enough.

We have to accelerate progress towards climate change.

And so this is one of these, I think, good things, where the environment and the economy are often cast as in opposition.

This is one of the cases where, by the things that we're going to do are not only going to save

customers money and promote economic growth, it's going to have the effect of deploying more renewable energy and deploying more energy efficiency, and creating markets of these things.

Now, with respect to the large-scale renewables, I think we did briefly touch on that at a couple of points.

So, there's an options paper that will be advanced in the next -- by June 1st, that will provide a lot of clarity, as to at least a point of view, as to how we should support large-scale renewables in the state.

SENATOR KRUEGER: And the State of New York has a committed goal of 80 percent greenhouse-gas-emission reduction below 1990 levels by 2050.

That was an executive order, Number 24.

Are we on target for that?

Any chance we can get there before 2050?

How do your, you know, big-picture, big-scale plans, tie into meeting that target?

SENATOR GRIFFO: John, do you want to?

JOHN RHODES: We believe the directions we're proposing put us on track to that target.

We say that, recognizing that we need to

do -- as I think you've heard throughout the panel, that we need to do more than we've been doing.

We need to find a way to make faster progress and do so with more impactful use of dollars.

SENATOR KRUEGER: And my -- some of my colleagues asked you some of the specifics around the Green Bank and long-term, you know, I guess, the ability to ensure that it can continue as an investment vehicle to move big green projects forward.

Is there anything that would prevent the state pension funds from being invested in green projects through the Green Bank?

Or is the absence of statute leave you in a -- like an inability to actually come up with that answer?

RICHARD KAUFFMAN: Well, I don't know about the specifics of the State.

One of the things that we -- since we are not in the subsidy business, we are originating assets that are -- they're not rated assets from a rating agency, but there would be investment-grade type of assets for those that are financially-oriented, that would generate a return of 67 percent, which is a pretty good interest rate for investment-grade type

of assets.

So there are -- there have been some conversations from different entities that have said, Can we -- is there an opportunity for us to participate?

And so, you know, the answer is, you know, possibly.

That would be something that we would consider doing, although nobody has come forward to give us any money as of yet.

But the more funds that we would have would mean more opportunities to do more.

SENATOR KRUEGER: To oversimplify, the idea of the Green Bank is that there will be a mechanism where private investment can be directed at energy projects that meet the State's goals, but also are both energy efficient, sustainable, and, of course, hopefully, lower the cost, with more options in the state of New York for consumers?

RICHARD KAUFFMAN: That's correct.

SENATOR KRUEGER: That's correct.

So I am one of the people who actually thinks the State of New York ought to be divesting from fossil fuels with our pension funds.

That is a controversial issue, and not a

question for you per se.

But one of the questions I get, Well, then, what would you have them invest in instead that addressed, you know, a better outcome?

And I think perhaps one of the answers are, energy projects that meet sustainability and climate-change targets.

But I'm not actually proposing today, okay, everybody, you know, write a statute that allows that, but maybe write a statute that allows that possibility for pension funds to be able to be invested in large-scale, good public-policy goals here in the state of New York for energy.

Say, a proposal, as opposed to a question for you.

I know someone answered the question before about alternative energy to replace Indian Point. I think there was a specific answer, but I think I missed it.

What -- are -- is the State of New York committed to closing Indian Point at this time?

Do you have a time frame, and a replacement strategy?

RICHARD KAUFFMAN: So the Governor has repeatedly said that he wants to close Indian Point.

Even before he was Governor he was saying that.

SENATOR KRUEGER: Yes, I remember that.

RICHARD KAUFFMAN: So as you know, Entergy, who's the owner and operator of Indian Point, is seeking a 20-year license from the NRC. And the State opposes this relicensing, and we are in litigation on multiple fronts, opposing the relicensing, and this involves state entities, including the Department of State, DEC, and the Attorney General's Office.

SENATOR KRUEGER: And what is your plan for replacement of the energy?

RICHARD KAUFFMAN: So in terms of replacement, so the State has done a contingency plan, and so the good news behind that contingency plan is that there are lots of developers that are prepared to commit capital to provide replacement power.

And as we were just talking about, the REV policies will encourage energy solutions across the state to offset impact of Indian Point shutdown.

SENATOR KRUEGER: Thank you.

Mr. Chair.

SENATOR GRIFFO: Thank you, Senator Krueger.

Mr. Kauffman, as the core load increases

downstate relative to natural gas services, do you anticipate that there may be need for an increased pipeline capacity into that region?

RICHARD KAUFFMAN: Okay, I didn't hear -- I'm sorry, I didn't the first part.

SENATOR GRIFFO: The core load increases in the natural gas services.

RICHARD KAUFFMAN: Oh, the core load.

I think that I'll turn that over to Chair Zibelman.

AUDREY ZIBELMAN: Yes.

So, one of the things that we are actually doing, that we talked a little bit about in our testimony, is integrated planning around both natural gas and electricity.

So we certainly think that, from the economic perspective, additional pipeline capacity into the state will be useful. Right now, the state has a pipeline capacity. It gives us an advantage of low-cost natural gas.

And that as we increase, really, demand for natural gas as a resource, that's necessarily going to give us an opportunity to look at investments. And there are pending investments now in front of the DEC.

The commission itself, this commission, doesn't approve that. That's more of a DEC-FERC issue.

SENATOR GRIFFO: Do you anticipate that that pipeline capacity could be available for use in the power sector, such as that transmission level, or in distributed energy resources?

AUDREY ZIBELMAN: Absolutely.

SENATOR GRIFFO: Okay. Thanks.

Senator Parker.

SENATOR PARKER: Thank you, Senator Griffo.

Let me actually begin by thanking you, Senator Griffo, Senator DeFrancisco, for convening us and bringing us together on this important conversation.

Certainly, I want to thank the panel for your time and your patience in answering every question.

I only have five or six hundred questions this afternoon. I'll submit the rest in writing afterwards.

[Laughter.]

SENATOR PARKER: But I do want just to thank you for being here, and being patient.

And, really, thank the Governor for this REV initiative.

Some of you may know, some of you may remember, that myself and Kevin Cahill, in 2009, when I was the chair of the Energy Committee, actually put forward the first bill to actually require the State to do planning. And I feel like REV is kind of like the illegitimate stepchild of that legislation.

[Laughter.]

SENATOR PARKER: But, no --

UNIDENTIFIED SPEAKER: Thanks, dad.

[Laughter.]

SENATOR PARKER: But, no, but, truthfully, the notion of planning for our energy future is really critical.

One of the things that happened when I first got here is that, when David Paterson, then the Democratic leader of the conference, made me the chair of a task force on alternative-energy futures; right?

And so this notion of not just planning out our energy needs, but also looking at the future of alternative energy in the context of those energy needs, I think is critical.

And I see -- you know, my sense is that REV is trying to accomplish exactly that.

And I have some -- hopefully, some more basic questions, and I think Senator Ranzenhofer expressed what a lot of us feel, that this, literally, is rocket science, but we're trying to understand it in some very plain ways.

So let me say, I think that the work that the Green Bank and New York Senate is doing is actually incredible. And I wanted to thank Mr. Kaufman, very much, for being involved with that.

The solar conference that I brought to Brooklyn just two weeks ago, that really was well -- you know, well received, you know, over 400 business people from around the country coming to talk about how they increased the production of solar energy and solar resources in the state, and I think it's a good start and, certainly, an important part of our energy mix as we go forward.

I have, though, been dealing with some questions around capacity over the summer.

So I've seen a couple of different capacity reports that have indicated to me that, and as we talk about climate change, Senator Krueger, and I know that some of Mr. Kauffman's remarks, talk about climate change, and the Governor has been famous for saying that we're having 100-year storms

every 2 years, that we are looking not just at, you know, crazy winters like we had this year, but then, also, a significant heat wave this summer.

It's been indicated to me that, in New York City, that we're not going have enough capacity to meet demand, and that the result of that may be brownouts in places like Brooklyn.

So can you, in fact, speak to that, and let me know what the plan is?

AUDREY ZIBELMAN: Senator Parker, thank you.

For the coming summer, we've done an analysis for the needs in terms of both locationally and statewide.

There is sufficient capacity to meet the demand for this summer.

As sort of we move forward into the future, of course, what we looked at is, I mean, we just don't plan for the next year, but we look out for the next several decades, and we do see a need for additional capacity additions.

And that's one of the reasons we are pursuing both the transmission and -- as well as taking a look at what we can do on the demand side.

The study that the New York ISO has performed, and I know you have a witness from the

New York ISO this summer, also confirms that, for the coming summer, there's sufficient capacity locally and statewide.

SENATOR PARKER: Okay. And how is that demand going to be met?

AUDREY ZIBELMAN: It's being met, largely, through generation, supply. There's, also, we have 1,000 -- 1100 megawatts, roughly, of demand response in this state that we count on. We also count on reserves from other states.

Right now, we've a surplus. So what we planned for is 117 percent of peak demand. Our actual supply portfolio in New York is at 124 percent.

So for the coming summer, we're in good shape, but, clearly, over time, you want to -- we have old plants that can, potentially, retire.

And one of the things we want to do in the -- you know, is make sure that we have maintained sufficient reserves, both, in terms of supply, and, also, distributed generation that you can use to manage demand.

SENATOR PARKER: Okay.

If that changes in anyway, can somebody give me a call, so I can let me constituents know to get

candles, or something.

[Laughter.]

AUDREY ZIBELMAN: If that changes in any way, everybody will hear me.

SENATOR PARKER: Okay.

All right, great. That's good to know.

I also have some questions, again, I think, hopefully, straightforward, about reliability and resiliency.

Again, you know, on the heels of "Sandy," we're really, really concerned about that. I know that this has been a top priority for REV.

Can you talk about -- and I'm specifically interested -- I mean, you can talk about the entire state because, obviously, the state has been dealing with issues of storms, and what that has meant in terms of access to electricity in particular.

But can you talk -- speak a little bit about how REV is addressing what we see the greater need for, resiliency and reliability in our grid, and in our infrastructure, generally.

AUDREY ZIBELMAN: Sure.

So there's, I would say, two aspects of it.

One, of course, is maximizing the availability of clean energy to reduce carbon-energy

efficiency, and things like that. So, that's a forward look to make sure that we're doing those types of things.

But the other piece is using distributed energy better.

So one of the things that we identify in the REV order of Track 1, is the ability to use distributed energy to maintain mission-critical load, and we also identify the opportunities, because we have improved technology to develop what we call "microgrids," which is basically the ability to use parts of the system, and can operate independently, and also support resiliency.

So the commission, in its Con Ed rate case, looked at the opportunity to use distributed energy to create greater resiliency.

And NYSERDA, through the New York Prize, and other activities, is helping accelerate that by looking at how we can develop microgrids throughout the system.

So, to me, it's -- as we -- as to us, as we've said in policy, this is the "am" (ph.) solution. This is not just environment or economics. It's not just the bulk power grid versus distributed energy resources.

It's really how we take all the benefits of technology can operate in concert to create both more resiliency and flexibility on the grid, and then, also, ensure that not only are we able to create a more reliable system on blue-sky days, but also recover from major storms in a much faster way.

SENATOR PARKER: And I'm not exactly sure about this.

So, how does -- so we have another "Superstorm Sandy," how does using more solar and more -- more solar, and more, you know, wind turbines, and water turbines, how does that help us be more resilient, you know, post-aid, the next storm?

AUDREY ZIBELMAN: So, Commissioner Parker, it's not just using solar, wind -- and wind turbines.

SENATOR PARKER: Okay?

AUDREY ZIBELMAN: Certainly, those are resources that you're going to have on the grid.

You can also have combined heat and power, storage, thermal, efficiencies, things like that, geothermal.

More importantly, as Gil was saying, you have more intelligence on the network.

One of the things that we need to have is a smarter grid so that we see, when someone's out, that they're out, but, also, that we can isolate portions of the system so that we can keep the lights on in different areas so that people have places to go to be safe, et cetera, but also greater visibility, and then a hardening.

So the other aspect of what we're doing, and we certainly require Con Ed to do, and we're doing in Long Island, is actually hardening the system so it can withstand storms better.

So these -- none of these are individual solutions that you can say, Hey, that's it. We're just going to do that.

They all work in combination.

SENATOR PARKER: Great. Great answer.

And as it relates to microgrids, which is -- I'm really excited to hear you talk about microgrids, and, particularly, creating more smart grids in addition to that.

What do you -- where is REV on -- this is also related to resiliency and reliability, and particularly because, in New York City, we have a large number of people who are in public housing, many of which who were the victims who lasted the

longest in terms of being in the dark and the most inconvenienced, because if you live on a tenth-floor walk-up in a public-housing project, you know, with no lights, and you're now walking through a dark cavern, you know, outside of losing your food, and everything else.

What is the thoughts -- or, how does REV speak to maybe the notion of maybe microgrids around some of our housing -- public-housing assets?

AUDREY ZIBELMAN: Yes, I'm going to let Gil talk specifically about what (unintelligible) doing.

GIL QUINIONES: Thank you, Senator Parker.

One of the activities that NYPA is doing right now is to explore the feasibility of a microgrid at Red Hook, NYCHA housing.

And if we can find a solution that can be replicated to other NYCHA housing locations that are also vulnerable to, you know, storms in future, that will be the goal.

But, we would be happy to brief you at some point when we complete that feasibility study.

I have heard previews of it from my engineering staff.

I haven't had a chance to look at the complete report, but once I do, we would be more

than happy to share that with you.

SENATOR PARKER: How soon do you think that might be?

GIL QUINIONES: It could be weeks, not months.

SENATOR PARKER: Okay, great.

And what do you think about the same notion around some of our hospitals, which, again, suffered through the same?

Are we doing feasibility studies for hospitals as well?

GIL QUINIONES: We've -- in hospitals, we've done a little bit more than feasibility studies.

In fact, Coney Island Hospital, we helped them upgrade their boiler, and then chiller systems. Raised them so that they are above the flood levels. Built protective walls so that, just in case another storm comes by and floods the Coney Island Hospital, they should be in much better shape than they were during "Superstorm Sandy."

SENATOR PARKER: Now, would -- but would a microgrid be appropriate for them, and would that help their situation?

GIL QUINIONES: It depends.

Many hospitals have what's called

"co-generation systems," or combined heat and power, because they have a need for the steam that is a byproduct of local generation.

And we are exploring a number of those, not just in hospitals, but also in water and wastewater facilities across the state.

SENATOR PARKER: Okay. Thank You. That helps.

Mr. Rhodes, really quick, so one of inside jokes that no one ever talks about outside, is the fact that NYSERDA is a great place to raise money, but not a good place to spend money.

And I wanted to hear what your thoughts were around how we're going to better market the resources of NYSERDA so that people actually know.

I mean, I've been sitting in the Democratic Conference when people have said, Yeah, we really ought to do this kind of program.

And I'm, like, Yeah, NYSERDA already does that.

And they're, like, Really?

And these are people who have been -- who are legislators who have been here for a long time, who actually, you know, have some wherewithal about how to access government resources.

So if they don't know, I'm clear that the people who represent my district and the people of Brooklyn are not as aware as we'd like them to be.

JOHN RHODES: So I guess there -- thank you, Senator, for that question.

I think that there are three main things that we're doing.

I think I mentioned how we're becoming easier to do business with. This isn't so much about the awareness point, but if you're aware of NYSERDA, now we're pretty easy to deal with, so that is going to increase demand for the programs that we offer, and are going to offer.

The second point is, that we've talked about enabling the market and working with -- and working to address gaps and barriers. That means we have to do the work to figure out where it is that there would be appetite for the kinds of things that we would do, and develop programs that would be -- that would find uptake.

And this is really the classic definition of "marketing," which is to build a product that people want.

And then the final thing is, that we're talking about enlisting the private sector.

In my comments today, I've talked a little bit about -- I've emphasized enlisting the private sector as a source of investment money.

It's also true that the private sector is where a lot of the boots on the ground are in terms of sales forces that can go out.

One of the terrific things about New York Sun is that, rather than NYSERDA promoting solar, we now have a whole sector of solar installers who are promoting solar. And so that is the third tool in the toolkit.

SENATOR PARKER: Let me interrupt you for a second.

As it relates to that, what are you doing in terms of incorporating MWBEs in the context of your expanded market and your enlisting of private-sector resources?

JOHN RHODES: We are -- we're paying attention to that factor, and we're trying to expand it as much as is possible.

SENATOR PARKER: Okay. We should have a specific conversation about that in another chat.

JOHN RHODES: I've noted that. I took that as an action.

SENATOR PARKER: Okay. Thank you.

If I can have one more question?

SENATOR GRIFFO: Sure.

SENATOR PARKER: In addition to the workarounds, I guess, you know, making it easier, I'm really interested in utility scale.

I think, ultimately, you know, utility scale is the answer, uhm, you know, to what we're going to need to do, whether it's -- I'm not just talking about solar.

I'm just talking about whatever renewable and sustainable resources that we're going to be using, and I think this is both, from an industry perspective, but also energy as a commodity, we need to be looking at utility scale.

And I wanted to see where REV was in terms of looking at that, because, ultimately, as we -- you know, having been person who drafted, you know, the bill on, you know, green-collar jobs, I think that was critical, and I think it was important for the time.

But, if we go down that path, you know, to the extreme end, we get to a point where, you know, you have a bunch of people who don't have distributed resources on their rooftops.

And I know we're talking about shared solar,

and those other things.

But you also, you know, obviously, is -- you're going to be pushing back on the utility who, eventually, especially with net metering, you know, get to a point where the break-even point is bad for them, and then the people are stuck on the grid, you know, have an increasing bill instead of a decreasing bill.

And my sense is that, you know -- you know, utility scale, you know, alternative energy, is the answer.

I'm not sure of whoever agrees with that.

You know, places like California have done things like a minimum charge on a bill, and a couple of other things they've done.

So I just wanted to kind of see what your thoughts are.

And, really, while I -- I mentioned it, really, on both issues, where, how do we make sure that we don't get to this place where, you know, poorer communities are stuck on the grid with very high bills; but, also, where utility-scale projects are our priority.

RICHARD KAUFFMAN: So if I might, thank you, Senator Parker, for your question, because I think,

in a very clear way, you've highlighted why we need to make the changes that we're proposing to make, or in the process of making, because we've said this several times, there are changes that are going on with respect to technology, and how customers are acting, and we don't want to -- and we want to build this integrated network, because if we don't build the integrated network, the kinds of issues you described become a bigger and bigger problem.

We wind up with, who bears the cost of the system, and how the -- and inequities that can occur, and so we want to think about it on a network basis.

It can't just be that a project is good for a customer, but has no benefit for the system as a whole.

And so that's part of the -- really, at its essence, what we're trying to do when we talk about building out a network.

And so we're not -- so the elements -- the elements of changing the incentive structures are such that we're not going to -- we're not going to dictate -- it's going to be less about dictation of answers, and more about creating market structures and price signals that will permit distributed

resources of, potentially, very large scale in areas where it's going make sense for -- where it's going to make sense for the grid.

That's the way in which we build a grid which is going to be both more energy efficient and more capital efficient, and be more equitable to all ratepayers.

SENATOR PARKER: And if I could, just a quick statement, and, again, I want to thank everybody for their answers, and just the patience that you've shown myself and the rest of my colleagues.

And I want to thank Chairwoman Zibelman for the pay raise to commissioner, earlier.

[Laughter.]

SENATOR PARKER: It seems to me that there's a lot of work of be done as it relates to REV as we go forward. And, as much as we know the Governor likes to do things unilaterally, he -- I would advise that he does have some willing partners in the Legislature that would love to work with all of you, and with the Governor, to make sure that we are, you know, making -- you know, that we're dealing with the issues of climate change in a responsible way, that we're reducing our dependence on fossil fuel and using more reliable, sustainable

energy sources.

We're certainly all vested in a more resilient and reliable grid system, and energy system, and, certainly, want to just extend a partnership to -- and that it would great if there's a set of legislative recommendations that we can work on with you to make sure that these ideas that come out of REV become, you know, a lasting part of not just -- of just this administration, but as we go forward, if there are things that are good ideas that we can work on them and, you know, make them, you know, part of the statute of the state of New York.

And, certainly, I think the members of the Senate certainly would like to, you know, as you see from the questions you've gotten, certainly want to be a partner in those things.

And I hope you'll lean on that front.

SENATOR GRIFFO: Thanks, Senator Parker.

I just have a few quick questions on follow-up.

Chair Zibelman, can you give me a status of the PSC proceeding on the national gas infrastructure?

AUDREY ZIBELMAN: The status of natural gas

infrastructure --

SENATOR GRIFFO: On the proceeding.

AUDREY ZIBELMAN: -- the commission issued an order in April, in which we're looking at the idea of coming up with a financing mechanism so that we can continue to finance natural gas infrastructure without having to file a rate case.

And that was, we issued a request for comments. I can't tell you the exact dates that comments are due, but they're going through the comment process to get back.

But in addition to that, within each rate case, we've actually looked at, when utilities come in as accelerating replacement of natural gas, as well as incentives for convert- -- so people can convert from natural gas.

And it's a combination of these activities that we've been able to actually increase the amount of natural gas infrastructure in this state.

SENATOR GRIFFO: I also want to compliment some of the state agencies relative to the clean-power plan, because they're all on the same page. I think that's good. And we should receive credit in New York for what we've done to reduce the carbon footprint.

And I know we're watching the big case before the Supreme Court.

And I would just make a request there, because that is going be important as to whether FERC has jurisdiction over demand response or if it's the State's right.

So if you could provide the Committee with any filings or motions or outlines that you may have relative to what your involvement will be in that, we would appreciate that to keep us informed.

AUDREY ZIBELMAN: Certainly.

SENATOR GRIFFO: And then the final thing, because I think this is very important, because when we talk about weighing public policy versus the cost to ratepayers and consumers, we talk about the new position at the PEC [sic], which I believe is being called "chief consumer advocate"? Is that correct?

We have a number of these similar type positions within various areas of the administration, and the attorney general's office. For instance, we have the consumer-protection division of the Department of State. We have at the NYSO, the consumer-interest liaison. The AG's Office, bureau of consumer fraud.

And now, this, what we're talking about at

the PSC.

Is there a way that we could look at everything and make a determination, not only that they could collaborate or communicate, but maybe we look at how this best can work?

Is it best in the format that is currently presented? Or is there a better way to look at that because there are a number of similar activities taking place across various agencies?

I don't know wants to take that, but just, generally, because, again, it's important to all of us, I think, when we talk about consumer issues.

AUDREY ZIBELMAN: We can take that as a homework assignment, and come back.

SENATOR GRIFFO: Okay. It's a good assignment.

I -- anyone else?

Senator Krueger?

SENATOR KRUEGER: No. Thank you.

SENATOR GRIFFO: Senator DeFrancisco? Senator Parker?

I just want to, again, extend my appreciation to the Governor for facilitating the energy subcabinet to be here today.

Each and every one of you have extensive

knowledge and experience on these issues.

And this is an important issue. It may be technical, it's complicated, but it's extremely challenging.

And there are things we didn't get to today.

I wanted to talk about the -- what we're doing in measures to protect the power grid, not only against natural disasters, but also acts of terror.

So I know that no on these facilities, and that will be another conversation at another time, because I want to be sensitive to all of your time today.

But I do really, again, sincerely appreciate your willingness and your access to have this exchange, because this is going to be important, not only on REV and the Energy Highway, which are two very important issues, as Senator Parker indicated, that we want to have the continuing dialogue, but also involvement and input in, but all aspects of energy policy right now, which is going to be critical to the state, for our future, and to the residents of this state.

So I again want to thank you all.

And, Senator DeFrancisco?

SENATOR DEFRANCISCO: Ditto.

[Laughter.]

AUDREY ZIBELMAN: Thank you.

SENATOR GRIFFO: Thank you all.

SENATOR GRIFFO: We'll proceed with the next panel that will be called down right now.

This panel is from the industry, and it will include:

Darren Suarez, director of government affairs for The Business Council;

Kevin Schulte, board member of the Alliance for Clean Energy New York;

Ted Skerpon, president and business manager of the IBEW Local 97, and, chairman for New York State IBEW Utility Labor Council;

Phil Wilcox, business representative, IBEW Local 97;

Karyn Burns, the director of communications and government relations for the Manufacturers Association of Central New York;

And, Richard Dewey, the executive vice president of the New York Independent System Operator.

If you could all please come down, we'll begin Panel 2 shortly.

(Pause in the proceeding.)

UNIDENTIFIED SPEAKER: Are we ending at 3:00?

SENATOR GRIFFO: Well, that all depends; right? I would hope so.

I've learned a lot from Senator DeFrancisco, and he likes -- he runs his meetings very, very well.

So, I would ask all of the panelists here to -- if you have testimony and you can avoid reading it, but include it as part of the official record, we would appreciate that, and you could summarize, and then we can have opportunities to have a conversation.

I know Karyn has asked to go first because she has a family commitment.

KARYN BURNS: I apologize, yes.

SENATOR GRIFFO: Without objections.

Then we'll go to Mr. Dewey, Mr. Wilcox. Okay?

Karyn, I know you'll be brief.

SENATOR DEFRANCISCO: Excuse me.

Can I add to that, you know, we hear so much stuff that goes around in circles and circles and circles, and I'm not criticizing any one group because everybody does it.

Can you just tell us, straight up, what the damn problem is, and how you think it should be solved? And that goes for the Business Council as well.

So if we can do that, this would be wonderful, and maybe we'd all understand what we're talking about.

All right?

Go ahead.

SENATOR GRIFFO: There he is.

UNIDENTIFIED SPEAKER: You got it.

SENATOR GRIFFO: All right. Karyn.

KARYN BURNS: We'll just have --

SENATOR GRIFFO: Karyn, just identify yourself, and then, quickly.

KARYN BURNS: Yes.

Yes, and I did submit some testimony, so, please feel free to read it afterwards.

Thank you very much, and I appreciate your accommodations for me leaving a little bit early.

I'm Karyn Burns, and I'm the vice president of communications and government relations at MACNY (the Manufacturers Association.)

We're based in beautiful Syracuse, New York. We're comprised of about 330 manufacturing companies

within about 33 counties, and we represent about 55,000 hard-working jobs -- or, people.

I'm actually here today with my colleague, John Lawyer (ph.), who is our vice president of purchasing solutions.

And the reason that I brought him today here is because, you know, to your point, Senator, and a lot of it was discussed today, the big issue here with manufacturers is the cost of energy, and that often is comprised not with the energy itself, but the taxes and the added fees and the assessments that are included on top of it.

So as we go through, you know, the REV process, and I believe it was Senator Ranzenhofer who mentioned it, you know, asked it, straight up, saying, What is this impact going to be on manufacturers, generally speaking?

And that's what I'm here today to ask.

I wish I -- I mean, to the Senator's point earlier, I wish we had an answer, I wish we would know how much this is all going to cost; but, quite frankly, that answer's not there.

I don't think anyone knows it, and that's something that needs to be taken into consideration.

We can certainly appreciate that the intent

is, obviously, to save money down the road, but that's obviously going to be at a cost to something, somebody. And, if history's going to repeat itself, it's going to be on the taxpayers. Particularly in the energy-intensive manufacturing sector, that's something that they simply can't afford.

We already are working on, you know, added fees to energy as it is.

We do have some great programs, as we talked about earlier, which include many economic-development programs, such as Recharge New York, and it is a reduction of fees -- or, sorry, reduction on the cost of energy, which is wonderful.

But something like this, we just need to be able to, you know, make an assessment, how much it's going to cost, and, just be cautious.

I don't know if you wanted to add anything?

SENATOR DEFRANCISCO: I don't think he does, really.

SENATOR GRIFFO: Mr. Dewey --

SENATOR DEFRANCISCO: Okay. Who's next?

[Laughter.]

SENATOR GRIFFO: Mr. Dewey has had double-duty today. He appeared at the

cyber security hearing, and he's here now, so, I want to thank you. I want to thank you for hosting the tour of the Assembly and the Senate Energy Committees this Monday.

RICHARD DEWEY: Sure, sure.

Thank you.

Thank you for having me, Chairman Griffo, Chairman DeFrancisco, and Senator Parker.

My name is Rich Dewey. I'm the executive vice president of the New York Independent System Operator.

The New York ISO is an independent non-profit corporation that performs three key functions for New York consumers.

First and foremost, we maintain the reliability of the bulk-power network, the transmission grid.

We also administer the wholesale energy markets. We try to do so in the most efficient manner for consumers.

And, we also are responsible for planning New York's energy future, both from a reliability and from a demand standpoint.

And as such, we act as a non-voting member of the New York State Energy Planning Board.

As an independent resource, we strive to be that authoritative source of information for market participants, regulators, and policymakers.

We have no vested interest in the specific outcomes, and we have no financial interest in any of the participants who take -- who play a role within the market.

As the executive vice president, I'm responsible for operations, markets, and planning; the three key functions.

I have a bachelor's degree from Clarkson University, and a master's degree in engineering from Syracuse University.

And, I'm pleased to be able to speak with you today.

You have my testimony that we submitted.

Just a very high-level summary, some of the key points I want to talk about:

The New York electric consumers are -- today enjoy benefits of 15 years of competitive markets.

We have a system that's operated to some of the strictest reliability standards in the country.

We have the most efficient energy markets in the country at the wholesale level.

We produce price signals that have led to

10,000 megawatts of new generation, located at the right location.

And, we have made some -- we've enjoyed some efficiency improvements within the markets themselves that have led to significant reductions in emissions from the generation fleet.

So, we've made some tremendous progress in those 15 years.

As we sit here, we're a bit at a crossroads, and we've heard a lot about the aging infrastructure, the transmission system.

We need to continue to understand what those necessary investments are.

Much of the transmission network, which is so important, from moving power from where it is most cheaply generated, down to the load centers where it is most urgently needed, it is at least 35 years old, and, very soon, will be reaching end of life.

At the same time, there's new technology that's being introduced that gives us a lot more options at the local level and the distribution level, and we really need to understand how to best integrate that into -- into the system.

The topology of New York's power grid is important to understand.

Two-thirds of the load, or the consumption, is in the southeastern part of the state, New York City and Long Island, but the vast majority of the efficient, inexpensive, and most of the renewable supply is in the northern part of state.

So, it's absolutely imperative for successful markets and for reliable operation of the system to be able to move as much of that power across the state as we possibly can.

The Energy Highway blueprint recommends actions and policies that would help make this happen.

We applaud the efforts of the Governor and the Public Service Commission in advancing this forward.

And, we think it's absolutely important to improve reliability;

Transport more clean power to the load centers;

Improve access to the renewables, which we all learned about, the majority of them are upstate;

And then, also, to maximize fuel diversity of the generation fleet, another important aspect to maintain our reliability, where we don't find ourselves dependent on any one fuel type or any one

fuel source.

At the same time, we see benefits to some of the improvements at the local level.

Some of the technology enhancements that could enable the introduction of microgrids and distributed energy resources near the load centers could improve reliability of those particular areas at the distribution level.

And, at the same time, the introduction of a lot of the market concepts that have enabled us to achieve significant efficiencies at the wholesale level could be applied at the distribution level, and there's some opportunity there.

We're work closely with both the Public Service Commission on these initiatives. As the independent source of information, we perform studies and analyses to help inform decision-makers about the cost, the reliability aspects, and some of the risks of the various pieces of those two proceedings.

We believe it's an exciting future. We think that there's an opportunity here for a "best of both worlds," where we've got an improved and robust transmission information -- or, transmission system that can help open the playing field for all of the

resources -- all of the generating resources, and give them access to additional markets.

We also think this is an opportunity to leverage some of the new technologies that are available, to help modernize the local distribution grids, help improve the customer experience, and, also, add value, from both a market and reliability standpoint.

I thank you for the opportunity to speak with you today, and when it's time, I appreciate any questions you might have.

SENATOR GRIFFO: We were going to have everybody speak, and ask questions, but, I think we may just ask some questions while you're speaking, if anybody has one.

I think Senator DeFrancisco does.

SENATOR DEFRANCISCO: So, what do you specifically think should be done?

I understood all the goals, and we heard that from the past group.

What ought to be done in order to protect the energy supply in the state?

And what --

RICHARD DEWEY: Well, very specifically, we feel that reliability, and the needs to ensure and

enhance reliability, has to be the highest priority.

The transmission infrastructure is aging. Some of it is nearing end of life.

You heard from Gil and the earlier panel about some of the improvements that have been made by NYPA. That investment needs to continue.

Some of the existing challenges with building transmission centers around right-of-ways, and access to land, to build transmission lines, a lot of the proposed upgrades that we're talking about are to replace in -- replace in place --

SENATOR GRIFFO: Time out --

RICHARD DEWEY: Yes, sir.

SENATOR DEFRANCISCO: -- time out.

Everybody here wants reliability.

Okay, now we got that out of the way.

Is -- are the people that spoke at -- the last group of people, is what they're saying, is there a specific-enough plan to know that your goal of reliability is actually going happen, based upon a what they just presented?

Or, is there a list -- is there a time frame, what should be doing next in order to make it a smooth transition?

RICHARD DEWEY: I can tell you that the

reliability studies that have been performed by the New York ISO lay out that time frame for when the need is most urgent and when the upgrades are required.

And, we can look at that from a reliability -- from a resource-adequacy standpoint, when there's enough generation, and we can look at it from a transmission-security standpoint of when those bottlenecks need to be replaced.

SENATOR DEFRANCISCO: But is that ready now? Have you done --

RICHARD DEWEY: Those plans, we do that on an annual basis. Those plans are ready and public.

The next step is that, in response to that, market solutions are solicited, so private investors or public investors that want to propose solutions to solve those problems would then bring them forward.

The Energy Highway is an example of that, of a vehicle or a process by which those solutions are being prioritized and assessed.

Chair Zibelman talked about how the -- those solutions are being looked at.

I don't know the schedule of when these projects are set to kick off.

I can only tell you when -- from the analysis of the system, when it's needed.

SENATOR DEFRANCISCO: Okay. I think we're getting a timeline, if I understood them correctly.

Thank you.

SENATOR GRIFFO: Phil.

PHIL WILCOX: Thank you, Senators, for this critically important meeting.

I'll forgo my written testimony in the interest of time.

Attached to our testimony is just a broad-based list of support from all over New York State to expedite the transmission investments.

We have an epidemic of struggling generators upstate that represent thousands of jobs, tens of millions in tax revenue to the communities that they reside in, and hundreds of millions in economic impact that stand threatened as we sit today.

One of the architects of the Energy Highway blueprint was a fellow by the name of John Dyson, and, he's a former NYPA chairman, vice chairman, and he was a member of the Governor's Energy Highway Task Force.

And his quote was, "Every struggling upstate

power generator that is environmentally compliant deserves a lifeline until the Energy Highway transmission work is completed.

"They struggle, in part, due to transmission congestion that is no fault of their own; and, thus, have been denied the competitive promises of deregulation and fair market access."

So, from our perspectives, step one, get the transmission work done, efficiently move power from one end of the state to the other, and then assess your needs for additional distributed generation.

Those are my comments.

SENATOR GRIFFO: Thanks, Phil.

SENATOR DEFRANCISCO: Perfect.

SENATOR GRIFFO: Ted.

SENATOR DEFRANCISCO: Perfect. I even understood it.

Thank you.

[Laughter.]

SENATOR GRIFFO: Ted.

TED SKERPON: I was going say ditto, but --

[Laughter.]

TED SKERPON: My name is Ted Skerpon. I'm the president and business manager of International Brotherhood of Electrical Workers for Local 97, and

I sit as the utility chair, representing over 15,000 utility workers.

And I do thank you, Senators Griffo and DeFrancisco for taking the time.

I will be very brief.

We do have submitted comments.

And, Senator Parker, for hanging in there with us too.

Phil touched on most of issues that we're here for. And, to me, it's not rocket science. It's pretty simple: We have supply, we have demand.

We know where the supply is.

How do we get the supply to the demand?

That's our main problem.

Our issue here today is, REV can work. I think it's going to take time to really figure out what it's going of cost, and how we're going to work it.

However, if we do not upgrade our transmission, we'll get nothing to market. We'll have nothing more of a stranded cost again that our ratepayers, our consumers, are going to be stuck paying.

Long story short, without the upgrade of the transmission, REV will not work.

And I get very frustrated as a labor leader in New York State, when I see power being imported from Canada, from New Jersey, when we're all supposed to be taking care of New York State.

So, as I said, long story short, take care of the transmission upgrades, REV will follow, and we'll be able to do what we need to do for the future.

SENATOR GRIFFO: Go ahead.

SENATOR PARKER: Ted, have you -- I have a bill that would actually improve Article 7, that would actually fast-track the Article 7 transmission process.

TED SKERPON: Yep.

SENATOR PARKER: Have you seen it? Have you guys thought about an updated Article 7?

TED SKERPON: We have.

And as I heard today, that this technical conference and everything may be delayed even longer than we thought, that raises concern.

If we can fast-track this, we would gladly take a look and see what we can do.

SENATOR PARKER: Okay.

SENATOR GRIFFO: One of the --

SENATOR PARKER: A support memo for my bill

would be great.

But, go ahead, Mr. Chairman.

[Laughter.]

SENATOR GRIFFO: One of the things that I would be concerned with is, I think there's an agreement that we need to invest in our transmission system, but we also are looking at looking at existing lines, as opposed to new lines that could cause concern to communities, both, environmentally, from a public-health perspective.

I mean, we've seen some proposals in the past.

We had with one in Upstate New York that we fought, the New York Regional Interconnect.

We don't want to see projects like that again.

So I don't think that's what you're (inaudible).

TED SKERPON: No, we have -- under the existing rights-of-way is what we're looking at.

I mean, that's already been out there. It's been proven, it can be done.

So, I understand the projects you're talking about in the past, where, you know, it wasn't what everybody was looking to do.

This is an existing rights-of-way.

It's there now. It's there today.

SENATOR GRIFFO: So would it be safe to say, so far, for those who have spoken, and those who haven't spoken are free to join in, and we'll come to Kevin next, that we say we're on parallel paths with the REV, and the transmission improvements on the Energy Highway, but I think what you're saying is, there may be a deficiency there, and that -- really, that should be priority one: that the investment and the improvement on the transmission lines should be taking place, and then the REV could be following?

TED SKERPON: I guess I go back to high school.

If I build a whole bunch of widgets and I can't get them to market, what good are the widgets?

So if we move forward with REV, not even knowing the costs, and we have a bunch of stranded costs sitting out there that we can't get to market, what are we really doing?

I think as time goes on and we find out costs, and these new initiatives come about, we will be able to efficiently get them to market once, as

I said, that transmission is upgraded and we're able to move it.

PHIL WILCOX: And just briefly, Senator, I think, again, going back to John Dyson, when the blueprint was completed in 2012, he would be stunned to realize that, 3 years later, we are don't have any steel in the ground or conductors in the air.

It's really appalling, and we need to expedite that.

SENATOR GRIFFO: Kevin.

SENATOR DEFRANCISCO: Excuse me, last question: Does -- do you have any estimates as to what the transmission lines, to get them back online, or operating more efficiently, would run?

Or has the government in any way provided some estimates?

TED SKERPON: The pricing?

SENATOR DEFRANCISCO: Yeah.

TED SKERPON: Yeah, I believe that it's 1.2 billion for the transmission upgrades that are defined in the proposal -- one of the four proposals, anyways, that would address a congestion from Utica, east, and, Albany, south.

And the cost-benefit analysis is included in that. We can provide that for you.

SENATOR DEFRANCISCO: I think we just settled another lawsuit for a billion and a half, if I'm not mistaken.

DARREN SUAREZ: That is correct.

SENATOR DEFRANCISCO: That is correct.

What do you think?

Billion and a half, billion and a half?

DARREN SUAREZ: There's that great potential, but I think, too, as you look at it, one of the great things actually about transmission, and one of the things we care about significantly, is cost.

And one of the great things that upgrades in transmission do, is they actually reduce the cost for customers.

And so these projects that have been proposed, and this is why we actually agree very much with everything that Phil said, that priority should be the AC transmission upgrades; get that process going forward.

It was good to hear today that, you know, the Public Service Commission is moving forward.

It was unfortunate to hear it's not on the time frame that we had earlier understood.

So, I think that those costs can actually be taken care of as a result of the savings that

customers will receive.

And that's one of the great things that, sort of, is contained in the AC proceeding, is to make sure that the customers that are benefiting will actually receive a benefit.

And, they'll pay a little bit more, but they'll actually see a reduction in their overall cost.

SENATOR GRIFFO: Kevin.

KEVIN SCHULTE: So, I'm Kevin Schulte. I am the owner of Sustainable Energy Developments. We're a wind and solar developer in Western New York.

I'm here today on behalf of the Alliance for Clean Energy New York, as a board member.

The Alliance represents a diverse group of renewable-energy and energy-efficiency companies, clean-energy consultants, and the environmental community.

We are the voice of clean energy for the state of New York.

I think the first and most important thing, other than to thank you for the opportunity to speak here today, is to tell you that we are supportive of the REV proceeding and the long-term possibilities it creates for renewable energy and energy

efficiency in the state.

I think the clean-energy goals are good.

It's an ambitious, innovative, and, potentially, extremely positive clean-energy business opportunity for the state.

At the same time, our members approach it with some level of trepidation and uncertainty as policy changes for our respective companies.

Again, at a general level, we're very supportive and appreciative of the policy goals.

We do not advocate for them to slowed down -- we do not advocate for them to slow down or step away from the initiative, but, we are actively pushing for assurances that the transition will be smooth for our businesses, making sure the process is open, transparent, and profitable for our member companies, and to ensure we have no backsliding in the markets that are all on a growth path.

I think I can break my comments down into two basic pieces: One is for large-scale renewables, and the other is for distributed.

The large-scale renewable side of things, we were very happy in February that that process was engaged in.

We believe that this will be the next

generation of our RPS.

We think four main components of the large-scale renewable programs should be considered.

The first is, that the statewide renewable-energy target should ensure at least 50 percent of New York's electric energy is coming from renewables by 2025.

The second should be a utility procurement model, with flexible contracting mechanisms, such as bundled contracts and long-term PPAs, in order to send a clear long-term signal to renewable-energy companies and investors to attract them in New York.

The third, is that the program should be consistent statewide and include Long Island.

And that -- the fourth is, that the LSR should track -- should track -- should maintain the current eligibility for the RPS, and foster diverse technologies; and, particularly, off-shore wind.

From a distributed-renewables and energy-efficiency perspective, again, I think our comments are somewhat similar.

We are approaching, with some trepidation at the end of the RPS, that programs like those that support distributed wind and energy efficiency are ending at the end of this year, and we want to

ensure that there are smooth transitions to new programs as we go into 2016.

Overall, I think our comments are consistent, that we're supportive of the process, we're excited about the future of renewable energy in the state, and we're here to be engaged.

SENATOR GRIFFO: Go ahead.

SENATOR DEFRANCISCO: Are any of the last panelists still here? Or anybody from their offices?

You know, I would hope that we would be able to get a taping of this, and copies of all the testimony, because it would seem that what these people say, who are the experts in their area, on the ground, doing the energy work, rather than philosophizing, that they should listen, to see what the suggestions are. They may even agree.

So I would ask the Chair to get copies of all the testimony, and if we could get tapes of this, hand-delivered to each of the four speakers, and maybe they can take a look it, 'cause what is being said here, it seems to me, to make a lot of sense.

Secondly, Darren, this is a little off-board, and I will ask for a real, real short answer.

DARREN SUAREZ: Yes.

SENATOR DEFRANCISCO: Comprehensive and short.

DARREN SUAREZ: Okay.

SENATOR DEFRANCISCO: What does the Green Bank do that a commercial bank could not do in providing loans for energy-type energy -- solar-type energy?

DARREN SUAREZ: Well, it...

SENATOR DEFRANCISCO: Come on.

DARREN SUAREZ: All right.

UNIDENTIFIED SPEAKER: Nothing.

DARREN SUAREZ: It actually does a pretty good amount, in terms of what it, it would -- it, potentially, has the ability to fill in a market space that isn't being addressed, in terms of being able to aggregate resources that -- or, loans that may not otherwise, sort of, be marketable.

And, it has the potential to, basically, fund additional projects.

There is -- there's real potential for it.

How -- sort of how it plays out I think it's unclear.

It certainly, in Connecticut, has worked well, to allow for the residential solar market to expand.

SENATOR DEFRANCISCO: You don't know how it plays out yet?

DARREN SUAREZ: No, and I don't think we do.

I think -- but -- so we support it, really, actually, because, right now, the current system doesn't work.

The current system basically have assessments, and charge, basically, customers, oh, nearly a billion dollars annually.

We haven't met our renewable goals, and, so, you know, it's sort of like: There's another alternative. We'll certainly take that path, because the one that we're on doesn't work.

SENATOR DEFRANCISCO: Have you got a suggestion, Business Council, for another alternative?

DARREN SUAREZ: Yeah, leave customers their money.

So that was actually --

SENATOR DEFRANCISCO: That sounds pretty good.

DARREN SUAREZ: -- it was contained, actually, in the REV proceeding, which one of the pieces allowed for large -- larger (unintelligible) customers to make energy-efficiency upgrades on

their own and with their own money.

SENATOR DEFRANCISCO: And, lastly, now, I hope I didn't forget what I was thinking here:

The -- let the customers pay their money.

This is one of the main benefits, if I'm not mistaken, that the Green Bank can actually guarantee loans from private banks?

DARREN SUAREZ: Yeah.

SENATOR DEFRANCISCO: Well, wouldn't a guarantee of a loan, alone, reduce some of the risks of private banks, and not require a -- a relatively extensive staff to do what banks do anyway?

DARREN SUAREZ: Yes, that's true.

SENATOR DEFRANCISCO: Okay.

SENATOR GRIFFO: Darren, are you familiar -- you mentioned Connecticut.

Are you familiar with the Connecticut Green Bank.

DARREN SUAREZ: A bit, Senator.

SENATOR GRIFFO: Were they established by statute or administratively? Do you know?

DARREN SUAREZ: They were established by statute.

SENATOR GRIFFO: So I think that's something that we may want to have staff look into, too, is to

determine how many of the Green Banks that do exist were established by statute, or how they were established.

DARREN SUAREZ: Yeah, New York has, certainly, unfortunately, a long history of establishing things without statute, like the RGGI program.

SENATOR DEFRANCISCO: Really?

I hadn't noticed.

[Laughter.]

DARREN SUAREZ: Yeah, well.

SENATOR PARKER: Can I jump in?

And, Chairman DeFrancisco, I think, you know, just so there's clarity about this, the Green Bank does not use taxpayer dollars.

It actually uses a systems-of-benefit charge, which is actually being -- which is collected through the utilities and is there already, and, frankly, sitting, unused, in NYSERDA.

So to say that they should -- they would -- to give the money back, you would have to get rid of the systems-benefit charge.

DARREN SUAREZ: Right, which would be great, Senator. Honestly, that would be a real step forward.

And I think that's the intent, is to eventually get rid of SBC and RPS.

You're looking at $950 million worth of money that's going to --

SENATOR PARKER: You get rid of the renewable portfolio standard?

DARREN SUAREZ: Yeah, potentially, those fees that are associated with that. Yes.

SENATOR PARKER: Okay.

DARREN SUAREZ: And look to a new model, and sort of market innovation and a market approach that sort of assesses and evaluates those in a sort of more real manner.

Right now, the money is not going out the door, so that's why the money was available. And NYSERDA hadn't been spending it, and that's why it was available.

SENATOR PARKER: Right, and, you know, I agree with that. I just made that point in front of NYSERDA. I mean --

DARREN SUAREZ: No, I'm agreeing with you.

I'm just sort of saying -- you're saying that we should spend it. I'm just saying, just give it back.

SENATOR GRIFFO: Ted, you wanted to add

something to that, I think?

TED SKERPON: No, I'm set. I'm good.

SENATOR GRIFFO: Okay. Aren't we all?

They were getting excited there, Senator Parker.

[Laughter.]

SENATOR PARKER: I saw.

SENATOR DEFRANCISCO: So let me clarify this. Business and labor agree. Is that correct? Is that correct?

And, it seems pretty --

UNIDENTIFIED SPEAKER: Fundamental.

SENATOR DEFRANCISCO: Almost, almost.

Well, I didn't expect miracles, you know.

No, but, seriously, these are excellent suggestions.

And it just seems to me, if we can't get it, a change administratively, we really ought to try to do something legislatively, because it's got to get done, and the sooner it gets done, the less problem we've going to have down the road.

SENATOR GRIFFO: Darren, did you want to add anything officially? Or are you --

DARREN SUAREZ: No, I'm okay.

You know, I think, in terms of -- yeah, you

didn't hear my full testimony, but I think Senator DeFrancisco probably appreciates that.

SENATOR GRIFFO: And you have provided testimony; correct?

DARREN SUAREZ: I have provided testimony.

And the main things to hear, just from our members, are about our concern regarding costs so that we can stay competitive with other locations, and transmission upgrades are part of that.

SENATOR GRIFFO: Senator Parker, do you have anything to add?

Senator DeFrancisco?

Now, any members of the panel have anything they want to add?

I would just conclude with saying that, you know, we understand the importance of the Energy Highway, and the Reforming the Energy Vision.

I think these are initiatives that need to work in tandem to provide New York with a strong centralized grid; a modernized, upgraded backbone of transmission, flexibility, and resilience, so that we can do what we need to do to provide distributed resources.

I think that would be, hopefully, an objective and goal that we can concur on.

And I want to thank you all for being here today.

And I'm am going to adjourn this meeting of the Energy Committee, and the Finance Committee, with Senator DeFrancisco's concurrence.

The joint Committee is adjourned.

(Whereupon, at approximately 2:58 p.m., the public hearing held before the New York State Senate Standing Committee on Energy and Telecommunications, and the Senate Standing Committee on Finance, concluded, and adjourned.)