NYSERDA'S 127TH PROGRAM PLANNING COMMITTEE MEETING
April 28, 2025
Clean Copy of Transcript

Sherburne Abbott:
Good afternoon and welcome. I call this meeting to order a notice and agenda for this meeting was provided with the Committee Members on April 16th, 2025, and to the press on April 17th, 2025. This meeting is being conducted in person and by video conference. The Authority will post a video and a transcript of this meeting on the web To confirm that we have a quorum, I would like each of the Committee Members to introduce themselves. I'm Shere Abbott, Chair of the Committee.

Jay Koh:
Jay Koh Member of the Committee, Member of the Board.

Dale Bryk:
Dale Bryk Member of the Committee, Member of the Board.

Jen Hensley:
Jen Hensley, Member of the Committee, Member of the Board.

Lindsay Greene:
Lindsay Greene, Member of the Committee. Member of the Board.

Charles Bell:
Charles Bell, Member of the Committee. Acting Chair of the Authority.

Sherburne Abbott:
We don't have anybody in Albany, right? I can't see that. No, I think we're good. Okay, great. Thank you. The first item on the agenda is the approval of the minutes of the hundred and 26th Committee meeting held on January 29th, 2025. Are there any comments on the minutes? Seeing none, may I please have a motion to approve the minutes?

Charles Bell:
So moved.

Dale Bryk:
Second.

Sherburne Abbott:
All in favor?

Members of the Committee:
Aye.

Sherburne Abbott:
Opposed? The minutes have been approved. The next item on the agenda is a report on the Authority Strategic Outlook. The item will be presented by the Authority's President and CEO, Doreen Harris. Doreen,

Doreen Harris:
Good afternoon everyone. It's a pleasure to be here again today to present our Strategic Outlook. I'm joined by Erich Scherer, our Director of Strategy who has been responsible for the publication of the Outlook. And I'll just kick us off with a few remarks. First, I do want to share some high level context for this year's Strategic Outlook. Again, intended to look forward three years with respect to our overall strategies and plans as an Authority. Next slide please. So certainly as you're well aware, this year's

Outlook comes on our 50th anniversary year. And I'd say it reflects not only the experience that we've had as an organization over those five decades, but also the impact that we've had, not just here in New York, but certainly around the world. And I'd say in numerous instances, our approaches over those decades have served as models for the rest of the country and the world to adopt. Certainly not only do in part and in large part due to the hard work and efforts of generations of dedicated employees and Boards, but also the staff at NYSERDA today. So the process of developing this outlook, I'd say involved our staff in a very important way, including the components that you'll hear about. But we certainly do consider our 50th anniversary an important inflection point for all of us to define what the next era of NYSERDA looks like so we can continue to have the same impact in ways that will benefit all New Yorkers.

Next slide please. Another unique aspect of this year's Strategic Outlook is that as we speak, and as I had reported to the Board last year, we are in the process of undertaking our State Energy Plan effort, which is intended to be a comprehensive roadmap, really looking forward as a state from an energy planning perspective into 2040 and perhaps beyond. And so the juxtaposition of this Strategic Outlook and the advancement of the State Energy Plan is an important one to note because as we speak as a state, we also are examining the policies and the actions necessary to continue our progress at PACE As a state. So when we look at it

Collectively, it's important to note not only the juxtaposition of these two actions, but also there is a time in which this past year has been a time that we've been working with the NYSERDA team to refresh our mission, vision, and promise. The last time we took up our mission, vision, and promise was my first year as President of NYSERDA. So it's been five years. And it also is important to note that really in looking at what the next era of NYSERDA it can be, it allows us to really think about what has happened since 2019 when our Strategic Outlook involved the update of our mission, vision, and promise as well. And so therefore, this year we sought not only to involve our staffs and we framing the mission, vision and promise, but also looking at this collectively. And of course, it is a complex moment that we work within politically, economically, and even socially.

And so what you'll see in the Strategic Outlook is a reflection not only of the years that have passed, but the mission and vision of the future as well. So with that context, if we turn to the next slide, I am pleased to present to you all our refreshed mission, vision, and promise. On the

left, you see the previous statements and on the right, the new starting with our mission, which is what we at NYSERDA do right now. We've shortened these substantially for impact and clarity. I'll read it. NYSERDA catalyzes New York's Clean Energy transition. This is our revised mission. Our revised vision is the question of why do we do this and what is the future we hope to create through our work? And the revised vision is clean energy that supports a healthier and thriving future for all New Yorkers. And then our promise, our promises and articulation of how we deliver on that mission and vision in a broader sense.

And the promise reads, NYSERDA serves New York State as a trusted, credible resource for energy information, policies and programs through objective analysis and planning innovative solutions and impactful investments that are valued by New York residents and businesses. So I have to say I'm extraordinarily proud of how we at NYSERDA have adapted and flex to meet the ever-changing environment in which we operate and certainly meet headwinds face on. And I'd say our mission, vision and promise is an example of that. It is reflective of our team's collective resiliency that will propel us into the future and to take incredible strides in the years that come. And so with this context, I will pass the presentation over to NYSERDA Director of Strategy, Erich Scherer, who walked through some highlights from this 2025 to 2028 Strategic Outlook.

Erich Scherer:
Thank you, President Harris. Next slide please. President Harris indicated production of the Strategic Outlook falls within my purview and of course working with all of the teams at NYSERDA. So certainly my pleasure to present you with a short overview of this year's iteration. I'll start by talking briefly about what changed in the structure and approach in this year's Strategic Outlook compared to last year. Then I'll give a summary of the first chat, the Strategic Outlook, which discusses NYSERDA and its overall context. And then I'll get straight into the core of the Strategic Outlook, which is the six mission outcomes as well as the crosscutting themes that cut across the mission outcomes. I'll probably take about 10 to 15 minutes for this overview. Certainly happy to be interrupted with questions or comments at any time, but perhaps maybe more expedient to leave those four questions in discussion at the end As you prefer. Of course. Next slide please. So on the overall structure and another slide forward

Please. So I would say the structure of the Strategic Outlook has been a continuous evolution over the years. We're always thinking how we can make this document more accessible and helpful to our readers. Those of you who were at the table last year for last year's Strategic Outlook may recall at that point, we made what we thought is a significant step forward in that regard. We revised the mission outcomes. We significantly shortened the document at that point from 67 to 49 pages this year with this year's Strategic Outlook. We're taking another step in the same direction now. It's going from 49 to 34 pages. So I guess those of you are doing the math in your head, maybe thinking in a couple of years, we're down to a one pager, right? No, I don't think so. But again, the objective theme to make this a helpful summary of does rather than I guess being a fully fledged report, we conclude that that's not really what the Strategic Outlook is supposed to do.

And so you'll also recognize that in the formatting this year it set out more as a brochure style document. So with that in mind, as you can see on the slide, the structure itself is pretty simple. We have an introduction section at the beginning and I'll talk more through the elements in that

introduction section in a moment. And then of course, the six mission outcomes. Again, those are unchanged from last year as well as similar to last year, three themes that cost profit loss, the mission outcomes. Also to note that this year for the first time in the introduction section, we added a summary of the mission outcomes themselves. So again, readers don't have to go through the entire document to get a flavor of NYSERDA's work. Next slide please. So starting

With that introductory section of the Strategic Outlook, I'll skip the mission, vision and promise. Of course, President Harris just covered that bit other than to say the personal level. I'm pretty happy that the presentations, I can now recite our mission far hard without needing to have it on screen, talking about the strategies on the right hand side of the slide, that's of course a core part given the document is called the Strategic Outlook. Last year we had those strategies individually by mission outcome, but we concluded that actually across the mission outcomes, for the most part, they are pretty similar as is probably not surprising. So again, in a simplified approach, we now have the strategies in the single section upfront. I'll mostly let the strategies that's listed here on the slide speak for themselves, data and analysis, of course the important core NYSERDA research function.

Then a few strategies that are reflective of a number of the mission outcomes that we'll run into in a moment. And then target resource deployment referring to various procurement programs combined with technical assistance. And I service action on overcoming other barriers, financing solutions of course, important also including Green Bank activities. And finally, policy codes and standards to recognize NYSERDA doesn't just execute on programs, but also contributes to the design of policies and programs. And then finally, of course, to note that all of this work, all of NYSERDA work is not in a vacuum. We only succeed through strong partnerships with stakeholders, both Other state agencies and beyond. Next slide please. So next, in the introductory section of the

Strategic Outlook, we're covering the upcoming State Energy Plan. Again, President Harris already spoke to this, so I'll just note that it's important in the Strategic Outlook to place er, this work within the broader project in last year's Strategic Outlook. We did that by referencing the scoping plan this year. As President Harris said, we're looking ahead to the process to develop the next State Energy Plan. And as you can see on the slide, and unsurprisingly of course, NYSERDA's work matches very closely with the various topics to be Addressed in the State Energy Plan. Next slide, Dean, I think we going one more slide to

It's this one. Thank you very much. To note the last part of the introductory section of Strategic Outlook gives a summary of funding sources noting both the breadth of the funding sources that contribute to NYSERDA work, but within that also recognizing the role of federal funding as we did in previous iterations of the Strategic Outlook, but again, facing it within the broader context of the range of funding sources that make NYSERDA work possible. Let's keep going to the next slide and the discussion of the mission outcomes. Please. Another slide forward please. Thank you. So as I said, the mission outcomes themselves are unchanged. So in last year we have clean energy, jobs in economy, sustainable in climate resilient communities, greenhouse gas emission reductions, clean electricity, clean inefficient buildings, and clean transportation. I'll note as I get into the discussion of each of these that of course I won't be able to cover the full breadth of the work on each of these mission outcomes, full detail that's set out in the Strategic Outlook.

So I'll limit myself here for each of these mission outcomes to a couple of three four key highlights. If so, starting on the next slide, please. With clean energy, jobs and Economy. So this is the emission outcome that pursues clean energy industry growth, as well as helping New Yorkers share in the benefits of their clean energy transition. So firstly on the topic of economic development, as you would expect, and as in previous gear, a reference to the important development with the Micron investments and Global Foundry investments, this topic probably needs a little further description. And secondly, to note, NYSERDA's participation in the new Energy New York coalition aimed at accelerating battery development and manufacturing in the sovety of Finger Lakes and Western New York regions. Turning to the bottom of the slide and our workforce development efforts certainly want to highlight our newest program in this area, which we're excited to develop over the coming three years geared towards building clean energy career awareness in children grades K-12.

So this program will work to inspire young New Yorkers by providing educational resources and also professional development opportunities for educators. Secondly, to note at the bottom right of the slide, ongoing apprenticeship and pre-apprenticeship clean energy training program. Also, again, contributing to building a high quality workforce and family supporting union job training programs for a range of clean energy technologies. And finally, for this mission outcome, I want to draw attention on the left hand of the slide to the statistics on clean energy jobs. We are providing these annually, and again, as previously, it showed a continued rise in clean energy jobs to more than 178,000 jobs at this point in Time. Moving on to the next slide, please, which takes

Us to our communities mission outcome. In this area, the focus is on NYERDA's work on resiliency and supporting communities with regard to sustainability and clean energy efforts on resiliency. Just last week, Governor Hochul announced the launch of the New York State Adaptation and Resilience Plan. So this is to establish a statewide framework to align ongoing climate adaptation planning and implementation efforts throughout New York's communities. Over the course, over the coming year, this initiative will create a collective vision and gap analysis of the existing state agency initiatives in this area. So that includes aspects such as shoreline restoration, relocation of critical infrastructure to reduce flood risk, relocation and raising of blood prone roadways and right sizing dams, bridges and Ts. Moving on to the other,

Jay Koh:
Yes, just one question. As usual, I'm focused on the resiliency parts of the three-year plan. Most of the references here are to communities or buildings which absolutely need additional resiliency. And the description of clean energy broadly, we used to have a resiliency term, which I think has been, I'm all in favor of making the mission clear and shorter. Where does the resiliency of New York's electricity grid fit into the set of objectives? This is not just the communities that receive electricity and energy and have physical risk and impact increasing climate change events like Hurricane Sandy or coastal areas or buildings, but transmission and distribution of power. If we're doing any of these things, whether it's building new foundries or data centers or trying to accomplish the energy transition, where does the resiliency of the energy grid itself fit into? I would think this is an area we have a lot of expertise in, certainly the physical risk analysis, and we are charged with making the transition successful. If you can't

connect whatever source of power to whatever users of power that make both of those the resilient but not the interconnected in between, then it's not going to really work. Right.

Erich Scherer:
Yeah, I'll just note that there are certainly more reference to resiliency also in upcoming slides. I'm certainly happy, and I know I have <inaudible> and Susanne DesRoches here as well, to also respond to your question. Would it be preferable to take your question and come back when we've seen the other references too as well, or would you like to tell me right now because the

Jay Koh:
Other references are in the context of buildings, communities, I dunno if that includes transmission, distribution and power.

Doreen Harris:
Yeah, it is a topic that is most prominent in our State Energy Plan and in the work that is underway, including various, because you're absolutely right, some of this is under NYSERDA service purview programmatically. I think we've done a good job of incorporating some of them in our, I'd say those principles in our buying power for generation, but from the perspective of transmission planning, we need other agencies to be integrated and that's what the State Energy Plan does. Anything you want to add, John on that?

John Williams:
So the Energy Plan certainly will set out the kind of the State's policy parameters on what we would want to see, and then we need to see how that translates into utility system planning and even individual facility planning. Those would be the things that we would want to make sure that our policies are at least establishing a foundation and so that it can be active

Erich Scherer:
And maybe to add to that logistic procurement programs to build resiliency into The procurement requirements as well. The, no, the

Brandon Owens:
Innovation program has released a couple of ponds on that. 4393 is upon bridge resiliency, and through that we've provided awards to and co-ops, and that's on mobile storage demonstration programs. And we also have some situational awareness projects using metering and drones. And so that's something that we Are address through our creative modernization program.

Erich Scherer:
Okay. I'll continue. By noting the other two items on this slide. The Clean Energy Hubs and Clean Energy Communities, both ongoing established flagship efforts in this area. The Clean Energy Hubs directly help communities by providing information to residents and businesses about clean energy and energy efficiency opportunities. And the Clean Energy Communities, which is a program together with DEC's Climate Smart Communities recognizes and rewards communities for implementing clean energy actions and also provides tools and technical assistance To local governments and communities. Let's move on to the next slide and the GHG emissions

Mission outcome. So in this area, again, highlighting three initiatives. Firstly, I'm sure you're all familiar already with our critical work together with DEC on implementing New York's Cap-and-Invest program. And this year as Governor Hochul announced, the focus is on DEC's mandatory greenhouse gas reporting rule, a draft of which has recently been released for public comment. The second item here, the Regional Greenhouse Gas Initiative or RGGI. This is a 17 year cooperative effort with nine other regional states on reducing greenhouse gas emissions from power plants. This program is currently in its third program review as a comprehensive review of the initiative and to consider changes to the program going forward. And finally, the initiative highlighted here on natural gas system transition. This is an effort together with Department of Public Service to understand the critical issues associated with an orderly transition of the natural gas system, including affordability, rate impacts, Workforce impacts, community impacts.

So with this summary on the GHG mission outcome, let's move on to the next slide and clean electricity mission outcome. So in this area, certainly reasonable to acknowledge the various headwind developments that we've experienced in recent years such as high inflation and supply chain issues. But at the same time, NYSERDA is continuing to make progress in this area by procuring and deploying wind, solar and Energy Storage projects. Some highlights on this slide in this area, firstly, the Champlain Hudson Power Express or CHPE project, the 1,250 megawatt transmission line currently under construction that will bring more than 10 hours of clean hydro electricity from Quebec into New York City expected to conclude construction mid next year. Secondly, NY-Sun program, certainly an ongoing success story, the program that drives distributed solar adoption through residential and commercial rooftop as well as larger community solar projects. And this project achieved this program rather achieved its six gigawatt generation goal a year ahead of the 2025 goal.

Absolutely. And this also on track to achieve its new 10 gigawatts goal by 2030, then offered to large scale resources. As I indicated, the efforts to continue procure large scale resources and deploy them remain ongoing in large scale software, wind and storage technologies. And then finally on the bottom right, the topic of advanced nuclear. I had the pleasure of providing an update to the Board on this at the last Board meeting. So this is the area where Governor Hochul kicked off in January, an effort to develop an advanced nuclear master plan. The effort to produce this master plan is something that I sort of together with Department of Public Service is leading on. And at this point, we're very much in the process of getting the various studies of the master plan underway studies that will cover the full range of the issues you would expect to see coverage on this topic, as well as putting in case technical working groups to ensure that stakeholders participate in this effort as well. Moving on, if I may, to the next slide and our next mission outcome on clean and efficient buildings. So in this

Area, I guess I want to recognize that especially in this area, there have always been a wide range of aspects to be addressed. And we've also had a wide of programs. And so as we progress, the emphasis is now to focus in on the programs that make the most difference, that have the most impact. And so this is an effort that's ongoing also as we move funding to CF 2.0 and EEBE. And so with that in mind, the programs you see highlighted here on the slide <inaudible>, those that have that significant impact, starting with Empower+, this is the program that provides no cost and discounted energy efficiency and electrification solutions to income eligible New

Yorkers. Secondly, the Empire Building Challenge, that's the program that pushes forward new design approaches in large commercial and multifamily buildings together with real estate developers. And then finally, and potentially the program that can be most significant, where we're focusing on really getting to scale, this is the Clean Heat for All challenge program across agency partnership to develop innovative electrification solutions. For instance, window heat pump units, one 20 volt induction stove tops. And so as an illustration of the opportunity to achieve scale here under this program, NYPA will purchase 30,000 package window heat pump

Installations for natural buildings. And moving on to the next slide and our last mission outcome On clean transportation. So in this area, again, a few programs to highlight really just as a summary of much wider efforts detail in the Strategic Outlook. Firstly, the electric school bus program. This is the program that pursues ambitious goals in legislation to achieve a hundred percent sales or zero emission school buffer with significant funding for this program through the Environmental Bond Act and Federal Fundings. Next, the Drive Clean Rebate program, the program that's been up and running since 2017 to provide rebate York buying 190,000 so far. And at the moment, NYSERDA is allocating additional funding to continue this program over the next three years to maintain and evolve these drive clean rebates. And finally, the Charge Ready 2.0 program aimed at increasing the number of EV charging stations and particularly as it relates to workplaces and multifamily buildings, and to give an indication of scale together with other investments through other programs and state agencies.

These efforts on investment in charging stations total nearly $2 billion. Again, as I said, these programs are just a summary of the wider information set out in the Strategic Outlook, maybe just on the area of transportation, I'll highlight one other that's not on the slide, namely funding for the New York Truck Voucher Incentive Program where this year the funding for that program will be expanded, which helps us to continue the efforts of this program, retired diesel trucks in favor of zero emission vehicles. And finally, also, again, to draw attention on the stats on the left hand side of this slide showing the continued progress in this area. So this concludes the overview of the mission outcomes as such. And I'll finish with a brief discussion on the next slide and one slide further, please brief discussion of the three crosscutting themes that we address in the Strategic Outlook.

So these are themes that aren't limited to a particular mission outcome, but that are highlighted in each of the relevant mission outcomes. On the right hand side of the slide, you can see which mission outcomes are involved for the crosscutting theme in question. So the first one here is energy and climate equity in this area, most prominently I want to highlight i's new energy and climate equity strategy to address environmental climate justice and equity issues, NY soda is working on implementation of this strategy through three pillars. Firstly, structural equity, this is to help ensure that state policy and operation prioritize frontline communities. Secondly, procedural equity. This helps to ensure that there's meaningful stakeholder input where NYSERDA decision impact people's lives. And thirdly, distributional equity, which helps to ensure that NYSERDA investments and programs reduce burns and increased benefits to frontline communities. Finally, additional highlights in this area include the work to improve air quality and public health. This is really through numerous programs that will promote clean energy to replace fossil fuel energy and thereby reduce emissions. Secondly, efforts in low to moderate income homes to enable energy upgrades in these homes. And finally, efforts to

expand access to clean transportation options for residents of frontline communities. So I hope I'm more or less stuck to my aim of keeping this two 15 minutes and thereby enabling time. Hold on. I'm my apologies, slightly premature. Two more.

Yes. On the next slide, please, if we could get back into the resiliency topic. So this is resiliency as a crosscutting topic again, how it pops up, if you will, in various mission outcomes. Firstly, just to emphasize the point that NYSERDA has an important role in performing studies in this area. Secondly, I briefly referenced this earlier NYSERDA's role on its procurement programs to build resiliency into those as well. So that NYSERDA's solicitations for large scale renewals and certain building programs now require proposals to consider and mitigate risks from climate hazards. And then thirdly, to highlight efforts to identify opportunities to incorporate climate resiliency into programs at the individual building scale. So develop resiliency solutions for clean and modernized buildings to be able to withstand future disruptions to the energy system. And with that, I'm going to the last slide and the last crosscutting area, which is on energy innovation.

Again, an area where I do want to emphasize that what's on the slide is merely a summary of the much broader efforts, but noting the ones on the slide firstly. And I said this grid modernization program, which develops innovative technologies to improve grid performance, flexibility and resiliency, for instance, through distributed energy resources and virtual power plants. Secondly, the buildings end use applications program. This focuses again on innovative technologies in this case in particular for building electrification in retrofit situations and building technology grid integration issues. And then finally, NYSERDA will continue investing in new solutions that minimize EV impact on the electric grid through advanced vehicle grid interactions. And then as I said, since these are just examples of the innovation work, I'll just briefly note the broader scope of my service innovation work, including power generation storage, advanced fuels such as hydrogen and emerging research areas such as data centers in data centers, industry, and CCS. And with that, I'll conclude this overview hopefully again, still within about 15 minutes and leaving enough time for Questions and discussion. Going to the next slide, please.

Sherburne Abbott:
Okay, thank you Doreen and Erich, so we're going to open this up for questions. I just have a question about process, right? So you've undergone a process to develop this new Strategic Outlook, which includes a revised mission statement, and that mission statement is consolidated from its previous rather broader set of issues, but maintained the set of strategic mission outcomes are the same, the titles and everything else. And I guess the question and the one thing that is different from previous iterations as I recall, is there's no longer the little bubble on the bottom of each page that says measuring progress, how we're going to measure, what are the metrics for measuring progress? So how did you get from there to here?

Erich Scherer:
Yeah, I would say it's really a matter of prioritizing what's important to the readership here because as you're right that the last year's document was quite a bit more detailed and has such additional information, and it's not that this information isn't there at all. There are still indications of progress throughout the document, for instance, on GHG emissions, but at the same time, the recognition, at least the conclusion that we arrived at is that primarily what's

important in an accessible document such as this is that it gives an indication of what NYSERDA will be doing over the next three years. Progress indicators are also covered in a number of other publications, for instance, on GHG emissions in BC's, GHG inventory on clean electricity in the CES biannual report. So it's a matter of prioritizing. If we want to include everything, then it's going to be a very lengthy document. If we want to focus on what we believe is the unique objective of this particular document, then that's how we've Tried to narrow it down.

Sherburne Abbott:
Questions, comments, headline

Jay Koh:
One, maybe it's just sort of missed the last couple updates on this. If you look at the GHG emissions for example, and this is reporting 22 emissions versus the 2035 or 2040 or beyond target, we used to have a simple way for Board Members like me that are not as sophisticated to explain how we were doing towards that target and how each major component of NYSERDA programmatic activity, whether it's technical and supporting the development of the offer, a wind resource, which is now much more question I think or other elements of our energy transition strategy was going to add up towards hitting that goal. And I don't know, it doesn't appear in this document. Maybe it's in some other document that exists, but I haven't seen a version of that probably in a number of years. And so I don't recall that easily to hand, and that would be, I think, helpful to me to understand where that information is very simply to be able to explain.

I think we used to have something like 90% visibility with offshore wind energy efficiency, power demand reduction, and several other programs that would get us to the 2030 target. I don't know where we are on that now, and I don't know where we are likely to be with the, let's say noise around offshore wind for example, which I think was a major component of our kind of bridge to that strategy. So just as one Board member, it would be helpful to understand that in this context it'd also be helpful to understand each of these six strategic areas contributes to that overall set of objectives, GHG one of them, there's other objectives but are CLCPA.

Doreen Harris:
So I think there's two pieces. It's a great question. Erich, do you want to speak to the ways in which the Strategic Outlook itself, it does reflect on the objectives, but we have new tools. We're using that John's team and Jen Meissner who was here had really effectuated toward clarity in that respect on the broader progress as opposed to the NYSERDA contributions for it,

Jay Koh:
Right?

Erich Scherer:
Yeah. Again, on progress, there are other sources such as the dashboard that provide metrics, as I said, Strategic Outlook itself, primarily focus on what will be doing, noting that again, it's NYSERDA as an important role, but it's still different from the overall statewide effort to achieve the goals. Of course, the State Energy Plan is really the upcoming platform where these more statewide aspects will be addressed with meet like John, you jump in.

John Williams:
Yeah, so the energy plan, I'll start. We'll give a much longer term kind of projection as to where we need to be going with various types of activities. The one Jay that provides the snapshot of NYSERDA contribution to the stake goals just based on activity and where we think our pipelines are taking us, that comes in our, what we call our metrics and accomplishments report that comes to the Board for review and that's part of the public Authority's law requirements. And that'll be coming, I want to say in the June time period. So maybe what we can make sure to do is highlight that at the upcoming June meeting and we'll show those thermometers or whatever the best new way to do it on a running basis. Maybe we can also just make sure there's awareness of, and Erich mentioned the dashboard. So there is what we call the Climate Act dashboard, which looks at a statewide basis from a lot of different programmatic activities even outside of NYSERDA purview about how those are all accumulating towards progress towards those big climate act. So there's a couple of spaces that does get reported out on, we'll just be sure to highlight those when the next reports come to

Jay Koh:
Maybe just two follow-ups on that. One is it'd be very useful at some point to understand how this strategic set of plans and the progress that we're driving towards within NYSERDA in the broader context is reflected in the budget priorities that we approve every year as a Board to understand how the humans and the dollars that we're spending on behalf of rate payers in New York reflect the objectives and the efficiency and efficacy of the programs that we're resourcing to actually achieve those objectives. Because I think that would draw a much clearer line between why does the Board approve this kind of budget or why does management propose this kind of budget with these specific program priorities within dollars in humans? And then enabling environment interventions like efficiency standards or other kinds of activities. And then how those programs actually how to what NYSERDA is supposed to contribute and then what the overall state's supposed to do.

John Williams:
Well, that's fair and good. Yeah, we're working actually on that with some of the emerging program portfolios that are actually going to be coming out starting next year, looking to make sure that for some of the critical metrics that we have a very standardized approach across all programmatic activity right now we have a lot of individualized metrics based on the nature of the activities that we're doing, which we want to make sure that when we're thinking about what any one particular programmatic intervention is looking at, that we have a good clear understanding how we're making progress towards those objectives. We need to elevate that a little bit more or blow out some of those metrics a little bit more to make sure that they're falling in sequence with a lot of different other types of activities as well. So that's part of what our standardized metrics are going to be doing and we'll be coming forward with all of that. That should help to give a better clarity on how that's helping inform program design and portfolio design. We'll be able to get this in these upcoming Strategic Outlooks can demonstrate those contributions, but it'll also help to look at the broader dashboard type of metrics as well. So a lot of that type of work is underway.

Jay Koh:
The other only comment is my understanding is that NYSERDA is the primary coordinator of the New York State Adaptation Resiliency Plan. My wrong about that. So to the extent that that can be an actionable plan that has metrics and figures of merit, not just, Hey, we should be more resilient, thank you very much, and that we can actually track our contribution as NYSERDA through the programs that we're executing towards the metrics that should be outlined in that statewide plan for which we hold the 10 or at least our major coordinating feature. I'd like to have more visibility on that by the timeframe that's possible simply because otherwise I think this would be a missed opportunity to actually attempt to try to measure for the state what it should be doing in the resiliency context since we are definitely facing increasing physical risks and impact forever now. And also to understand how we as an agency that's supposed to have the technical expertise and responsibility for the energy transition as the mission are actually contributing towards the resiliency of the execution of that mission.

John Williams:
We'll certainly take a look into that. I'm biting my tongue on my flip answer that the Office of General Services is going to dispute what our role and their role might be, but Jay, completely agree with you there. We will be short up, look at that plan and we can thank you.

Lindsay Greene:
Can I make two comments on the Energy Plan, separate topic. I think the restructure of the Strategic Outlook makes a lot of sense just for the Energy Plan. One, I guess I want to make sure it covers in scope. Two things that I feel like are a barrier to grid evolution and modernization. One is site location citing locations, particularly for large scale or medium scale Energy Storage facilities. I live this all the time at the Navy. It's a very, very critical issue that I don't think our zoning guidelines and our building and fire code are equipped to really handle. I know at least in New York City there was some attempt to address that, but I still think it's very clunky. And then the second is if there's any way to catalyze a conversation or development or something around fire safety for batteries of every scale and size and how you get the firefighting apparatus and first responders comfortable with all of the new technologies, not just lithium, but other battery types and chemicals and chemistry labs. All of that is unknown and is untested and people aren't comfortable with things they don't know. But the more we can do to alleviate some of that gap between where the r and d and the industry are going and the first responding universe, which just has to contain is incredibly necessary and be beneficial.

Doreen Harris:
So you'll hear a little bit about that at this meeting.

Lindsay Greene:
Oh, sorry I didn't.

Doreen Harris:
No, no, no, it's totally fine. David Sandbank, I think it's David who will be presenting on our Energy Storage programs, but in integrated within that are the very topics you're describing as a central aspect of how one actually cites Its, right, but I think from an innovation perspective, it's also important to note that lithium mine is not the end, right?

Lindsay Greene:
Yes,

Doreen Harris:
Yes. And I do agree that we need to be ready for future iterations as well. So we'll get started, but we have more.

Lindsay Greene:
Great, thank you.

Doreen Harris:
Sure.

MarieTherese Dominguez:
I just underscore that, but we may be in a better place as the State of New York than the feds will ever be. So all the more reason to do it, coordinating the large scale energy with fire and overall potentially say that the former district.

Lindsay Greene:
Thank you.

JoAnne Hewett:
A question about the budget. I saw that there was a small line of federal funding expectations in the budget, small but non-zero, and I was wondering if you all have done any planning to understand the impact from the scenario that that federal funding does not materialize?

Doreen Harris:
Pam, do you want to take.

Pam Poisson:
Yes. And what you saw on the budget is really the current fiscal year plan slice. There was part of a larger allocation of grants. There's been extensive planning going on over the past several months, are closely in concert with the program teams and not to get ahead of things, but I'd say that we are still proceeding ahead with the expectation that we will have access to those. But that'll backup plan in place that I know there will be more opportunity to discuss particular,

JoAnne Hewett:
I think we, okay.

Sherburne Abbott:
Any other questions? Go?

Charles Bell:
No. Great work by the team.

Members of the Committee:
Great work.

Sherburne Abbott:
Can I just make one small thing? It is a living document in some respects. So to the extent that you can make links to these other ongoing efforts, I think it helps the public draws the public to the effort that is beyond NYSERDA in a meaningful way and one of them in particular this. So having gone through this process in the federal government when we hid the decline, so to speak, back in 2015 before Paris, nobody really understands these baseline changes and how our measurement systems do change and get upgraded because we learn things and we know more science and we apply that to doing the right thing. It would be good in this section on the target 2050 target, 85% reduction, where you talk about the DEC report and admissions inventory, it would be good to have a link in there to the 2021 report because people will read this and say you're not using the same numbers. That this was the big debate debated Noah between operational data and scientific data and the fact that we got better at measuring the temperature of the oceans. And it took a lot of conversation to get that idea out into the public that it wasn't simply science trying to Rules change its rules and hide what was that actually going on. So I think it's really useful information to have that link to the report so it's referenceable All around.

Erich Scherer:
Yep. Thanks for that. There's one link to the various DEC reports, but certainly, but

Sherburne Abbott:
Not to the 2021. So that if I'm really interested in this topic and I want to know whether or not you're changing the rules, I can actually go find it.

Erich Scherer:
Yeah, understood. Thank you.

Sherburne Abbott:
See, it's a great job. That's not a really nicely done. Thank you very much. Okay, so may I please have a motion to recommending approval of the Strategic Outlook entitled *Toward a Clean Energy Future: A Strategic Outlook 2025 – 2028*?

Jay Koh:
Moved. Second,

Sherburne Abbott:
You move, and second, the Strategic Outlook is opposed. Strategic Outlook is recommended for approval. Thank you, Doreen and Eric. That was really great. Okay, next item is the report on the Authority's AI work. Cheryl Glenton, Vice President for Operations will present this item.

Cheryl Glanton:
Sure, It is my pleasure to talk to you today about where we are on our AI journey. We are beginning, we're being very deliberate, and our goal is to ensure that we have a system and culture of responsible AI use. Next slide, please. To do that, we're starting, we're establishing our

foundation. Last year we rolled out our AI policy, which sets expectations and outlines the processes to request and to use approved AI systems. We have an AI Governance team, which is a cross-functional team that is responsible for reviewing and approving all AI requests. Our training is focused on ensuring that all employees have the ability to upskill work to meet the current and evolving needs. And finally, we are hiring in this area, we have an AI intern who's starting in May. We are interviewing for an AI architect, and these two positions will be dedicated to the team. In addition, we have a higher level position associate director of technology who will be responsible for implementing AI and other new technologies at NYSERDA. We go on to the next slide a little bit more about our training.

We started in 2024, making sure that all of our staff read and acknowledged the AI policy. Currently, we have a third party delivered AI risk management course that is taking place right now where everybody, all of our employees will take that live training between now and the end of May. And then we will be rolling out specific technical tools as we roll out the tools themselves so that people have real time information of how to use those. And beyond training, we're working, we're planning on working with our managers to make sure that employees have access to use and ability to use AI for their work so that we learn these skills and we don't get a chance to use them. Going on to the next ap next slide.

So as we said, we've got a governance process where all AI tools are approved for use before they are broadly used within NYSERDA. So far we have meeting transcription and meeting summarization that's approved. We have our first use of a large language model that's been approved for an evaluation contracting work. And then we are developing an internal chat bot for us here. It has been approved to build and test, and I would say that we're really impressed with the platform that we chose in terms of the amount of features that have responsible AI built in. We can configure it and set tolerance levels for our prompts. And then all of the outputs are based upon users, users access and the data classification of the underlying data. So that even if I prompted for something, if I don't have access to that data, it won't return a prompt. And then once testing is complete, we will be using this technology to and approving for many more use cases that are being requested of this type of tool.

In addition, many software today come with AI components that you can turn on, and so we're evaluating those components as well, one by one by the governance team to make sure that if they're applicable, we can turn 'em on and approve those for use as well. Going to transition now into some of the ways that we are using and planning using AI at NYSERDA. Excellent. So this first example, while not AI specifically, is a current example of using computer aided technology, in this case, computer vision models to improve our effectiveness. The evaluation team was working on a multifamily building stock evaluation, and as part of that, they were creating a dataset of all the multifamily buildings in the home. In addition to traditional data gathering techniques, they obtained high resolution images for each building and paired that with a computer vision model to extract additional building characteristics like the presence of HVAC, equipment on rooftops, calculating window to wall ratios and other desired characteristics in site visits. The team found that the high resolution images in the communal bottle were very accurate with what they found on the grounds and the value is in creating this data set is to use it going forward, obviously for our own program design, but more importantly

by having it available to the market for deeper insights. So if you go to the next slide, the next slide please. This data set is going to

Be a published publicly on Open NY, which is where our data will reside and always we, or often we do, we're pairing that data with an interactive dashboard. The blue image on the right is a mockup of the main screen. It is an interactive dashboard. So if you chose a filter for say, ownership type, you would then the table down below would dynamically upgrade just to show you the information you had selected. Likewise, on the map on the left, if you picked a county, it would update for just the information from your county. There are other views as well being planned. One is we'll allow a building owner to put in a specific address exhibit the characteristics of that building, or a developer would be able to input a zip code and look at a group of buildings that might have characteristics that are helpful for them in terms of implementing their technology. Let's go to the next slide please. Another example is our technical

Services team is planning on using AI to analyze approved and substantially complete studies from our flexible technical assistance program or flex tech. I leveraged data-driven insights to strengthen our understanding of market trends and best practices. Currently, the customer efficiency measures and building information is embedded within PDFs. AI tools will identify and extract that information and put it into a database. Once the data is available, we unlock deeper insights that will broaden the use beyond a single customer. And again, this information identified in this analysis will help us increase the rate at which clean energy technologies are identified through studies for best practices by creating guidance documents that streamline replication. Next slide, please. As I said when I was talking about the tools,

We have one use of a large language model that use case that's been approved. It is with an evaluation contractor who is using AI tools to complete an analysis of direct and indirect benefits from one of our commercial programs. Ai. AI tools are enabling the rapid prescreening or web scraping to identify services offered by non participant vendors. It's also being used to analyze NYSERDA part, participating to vendors and to create vendor reports. The web scraping was so fast that the vendor reports were able to be completed before the team went out to survey and to discuss with the non participant vendors. So they had a much richer discussion because they understood that business models going into those conversations. It was really, really impactful. And in addition to this, and really the reduced time and increased effectiveness is used for this evaluation, but the model can also be updated for future evaluations as well. We go on to the next slide. The

Energy markets team is looking at a couple of other potential use cases for ai. They spend a lot of time analyzing and digesting data for end users. By using ai, they'll be able to do this more efficiently, which will allow them to spend more time curating data sets or giving increased insights beyond the tools capable today. Another potential use of chatbots is to provide a plain language summary to accompanies some of our more technical reports, so they're more accessible to all. And the final potential use case is patterns and trends and other data sets are on our website using AI to look at the who is interacting with that data will allow us to identify who are the users? Are they academic, are they industry partners? What are they looking at? And then

once we have that information, we can curate the data sets to the needs that the users are actually using it for.

And if you go to the next slide, the final potential AI use is putting an AI agent attached to NYSERDA website. We're investigating this as a way to help people find the programs and information that they want based upon putting in questions. If they're interested in learning more, the chatbot will take their information automatically create a lead that's forwarded to NYSERDA. One of the cool parts about this technology is that it's accessible so that the chatbot answers the user in the language which the question was posed. So really these are exciting opportunities that we are beginning to get our toes wet in. Again, we're being very corporate because we want to make sure we have responsible AI use. And with that, I'm happy to answer any questions.

Sherburne Abbott:
Thanks very much, Cheryl. That's really exciting. It's really, really good because I think the first time we talked about this in PPC, it was kind of an what are we going to do internally? And I started to improve our own processes. This is a broader look at the utility and ways in which AI can actually be used to catalyze the clean energy transition, so to speak. So it's exciting. Thank you. That was really interesting. Are there any questions, comments,

Jay Koh:
Just anything? It's great that we're doing this systematically with some policy, I think to put the Audit and Finance Committee hat on too much. But I do think eventually just making sure we consult with third party advisors to make sure we're following good practices within New York state and then thinking through some of these implications and I'm sure come around in privacy and then what usage models and equitability and so on.

Cheryl Glanton:
We are very taking that very seriously, Jay, from the standpoint of we worked with NYPA because they're ahead of us on this in terms of understanding what they were using from a best practice perspective. We sent the folks who were developing the policy to NYSERDA training to really understand again what the best practices are from that perspective. And the governance's processes is all called deliberate from the standpoint of we're learning things like the system has to be ethical. Well, what does that mean? How do we interrogate whether the options are? And really just kind of figuring that out. And then the piece with the internal chatbot is that the trick there is making sure that we have it set up because it's not a best practice to put it on your live data. So where are we going to put the data? How do we make sure that the data's classified? So again, we get all the controls and how do we make sure that the information stays within our use so that it's not sent out to the world without context or without information. So again, all those things are top of mind for us. We are looking at it from a security perspective. How does it integrate with our other systems, the people part of it, everybody's got a role in this.

Lindsay Greene:
That's great. That's great. It sounds like you're already doing this, but the difference between largely free assistive tools versus things you pay for and are you paying for closed loop system that's only working within your own users. And data has a direct implication on the security and

privacy benefits. I've seen this sort of come across just in my own personal exploration, trying to understand the topic, but folks using proprietary data, if they're whatever version of premium closed access they have protects the inputs they're putting into the system as well as protects whatever data is inherent to them, whether it's IP or just,

Cheryl Glanton:
And again, one of the things about the platform that we're using is one of the first questions is, are you going to attach to connect to the rest of the web or not, right? <inaudible>

Lindsay Greene:
That's great. Great.

Sherburne Abbott:
Anything else? Great. Thank you. So no formal action is required on this item. The next item on the agenda is a report on the Authority's Energy Storage program. I note that several years ago when we through the PPC, wanted to go into a deeper dive into particular programs to kind of understand the connection with the larger changes, Energy Storage I think was the first program that we did the deep dive in. So it's NYSERDA to see the return. So David Sandbank, Senior Vice President for Distributed Energy Technology is going to give us updates. David,

David Sandbank:
Thanks and thanks for having me. And it's NYSERDA to be back. So why don't we move advance to the next slide. And I think what I should say here is I'm giving a overview on Energy Storage, but it's many, several different programs at NYSERDA. So we're all involved from my side of the shop to Georges Sassine side of the shop, to innovation, communications, marketing, everybody. So we're all involved in it. So I'm going to give you a brief overview. I will say that I'm totally open and game to make this a conversation. So I'll stop at each slide for questions because the subject matters do change because of the different sectors that I'm going to cover. So we're going to start out with an overview of the applications and use cases. And then I'm going to get into, oh, alright. Well you'll know just someone just advanced this slide before I could get to the end of the topics, but I'm okay with that.

So let's start with this slide. I think it's really important for everyone to sort of get a grasp on, and I think a lot of you already know this, but we're going to cover some areas of which we think Energy Storage is really beneficial for our electric grid. It's interesting how a lot of us have already experienced the benefits and enhancements of mostly up to this point lithium ion storage. You're all using laptops right now that use it and iPhones and smartphones and now power tools and electric vehicles and e-bikes. So it's really taken over our consumer world and given us an enhanced lifestyle, so to speak. And we really feel like that can be translated into our electric grid as well. It's a great tool to have in a toolbox and we think should be used. There's some use cases here we decided to bring up to go over about those use cases.

Obviously with backup power, our residential program, I'm going to get a little bit more into that. We have about 200 megawatts for that program. And the use case for a lot of homes is backup power. That's something that they're interested in. However, giving someone the opportunity to have Energy Storage for backup power also allows that home to be flexible on their load. There's

the grid of the future proceeding. We're watching closely and we're also working with some of the utilities to figure out what programs are in place so that not only can the homeowner participate and benefit from the Energy Storage and resiliency program, but that it actually improves and helps the entire utility territory at large on the transmission and distribution grid services. I'm just going to highlight a couple points here. Obviously with distribution and transmission deferral, it defers costly upgrades for utility infrastructure and contribute to emission reduction.

So whether a utility feels like this is a bridge to wires or a reduction in the amount of wires, that's something that Energy Storage could provide the system with system optimization and enhance the time matching between generation and load. Obviously that helps us with our capacity utilization rate. It can really help bring down our cost for all rate payers the following, energy arbitrage, frequency regulation, lack, start energy reserves and spinning reserve replacements are really good examples of use cases that Energy Storage is going to currently provide. The grid, once we start mass deployment, along with some future use cases that the utilities will come up with based on our order, it asks them to look at how can they use Energy Storage for transmission and distribution benefits. So there's a lot it can do. It's already doing it for our lives, so let's integrate it into the power grid and let it enhance and make it less expensive. I'll stop there. And Anthony, did you want to add something?

Anthony Fiore:
No, just that we could stop here for any question, but Lindsay, this goes to a comment you made earlier about strategic placement.

Lindsay Greene:
Yes.

Anthony Fiore:
And what use case it serves by where you place this. So we're happy to answer your question.

Lindsay Greene:
No, I mean I think you're touching all the red topics, like how do you get people to engage on these and evolve the natural resistance or skepticism that is necessary to actually have the widespread adoption that I think is needed.

David Sandbank:
Sorry. I was going to say we'll get into that a little bit later. We are seeing some resistance in the market speak to, we're addressing

Anthony Fiore:
That. I just want to point out the ability to use this technology in today's grid to optimize what is already on the grid. Right. And JoAnne, when we were out at Brookhaven a little last week, there was this incredible statistic about how much energy is actually wasted. It's not matching up to load in a real plan basis and that's where storage today, this current system plays a very large role for can flavor.

David Sandbank:
Okay, thank you. I'm going to move on to the bulk storage procurement slide now please. Thank you. So as I mentioned earlier, this is going to be under Georges Sassine's Large Scale Resource program. It's the bulk procurement goal here is 3000 megawatts. Good news is we're going to do three of these solicitations each about 1000 megawatts per solicitation and the first solicitation will be launching this June and it's going to be launching with a really interesting pioneering mechanism called the index storage credit, which is the first of its kind. It's somewhat mirrors the rec strike price that we're all used to and the industry is used to and it's slightly different, but we feel that it's a really good way to provide the amount of security that a financier or project owner would have, but also protect the rate payer on the upside and downside. So we feel pretty good about that and that we're leading the nation in that regard.

NYSERDA implementation plan for the bulk storage program is approved by the Public Service Commission and has been by in March, 2025. The program manual and draft RFP to be posted for mid-May and again the first solicitation in June. The eligibility for that so far is pretty much the joint utilities plus NYPA and as I said, it's targeting three 1000 megawatts solicitations on an annual basis. And it's important to note that we understand that long duration is critical for the future of the grid here and that we have a carve out of 20% of the megawatts to be long duration storage for future use because that's going to be more critical in the mid third 2030s than it is now. But it takes a while to develop and we want to make sure we get our feet we with the fee projects.

Jay Koh:
Two quick questions if I may. One is what's the order of magnitude of total procurement expenditure I think is being done here? That's a range of dollars?

David Sandbank:
In dollars. It's about $1.6 to $1.7 billion. It's interesting because on this particular slide and with both storage, it really depends where the capacity prices and energy prices swing so that we'll note in a future date. Whereas the residential and what we call retail, let's call it commercial market, it is a finite amount of money that we have to plan for. So it's sort of

Jay Koh:
In any guesstimate on tariff impact or other. We've had lots of shocks to major programs where we've been trying to really push the market offshore wind being emblematic of increases in inflation, increases in interest rates, and now federal confusion let's say. I'm sure we've thought about this a little bit, but

David Sandbank:
We have thought about it a lot and there's a lot to think about and everyday changes and we live in an uncertain world. We know right now things stay the same, we'll be good when they change, we'll have to adapt to what those potential changes are. Storage is slightly more challenging, I would say, than solar because you can't procure storage and hold onto it because it degrades over time and it's more costly to store because you need temperature controlled rooms. So the tariffs are a concern, we just don't know where they're going to land. And the investment tax credit is even the greater concern because if that goes away, the CapEx cost will be 30% more expensive.

So we're keeping an eye on it. We're seeing where it goes. And I wish I had an answer for you, but

Doreen Harris:
This is why though the Chair isn't here, but the Public Service Commission designs these programs in a manner that allows us to periodically report on our progress, our budgets, and ultimately to adjust. I mean, there was an assumption of certain cost structure when these were approved, and should that change, it will impact our ability to get these numbers at the funding sort of expected. So why we have to review these programs much like we do on the Clean Energy Standard Program.

David Sandbank:
To answer your question, yes, we've thought about it, what to do yet,

Doreen Harris:
But this is a market program, so the market will drive the, it's not an incentive based program in the sense that there's not a fixed budget, but there is obviously control mechanisms

Lindsay Greene:
Should they'll respond and tell you what you need. Exactly. I think money is a response to it as its time. One of the installations that we had seen planned for the Navy yard that has already come forth to tell us they would like to switch from a internationally made battery to a domestic battery in response to the federal confusion noise. But doing so has drastic implications on the weight and efficiency of the batteries they can buy. And so where we were going to put them is no longer suitable. We need to find an alternative location and that may take more time. My question on this is do you have a minimum size, say you're procuring one gigawatt per year per procurement, does each potential applicant have to respond with a minimum amount of megawatts to be valid?

David Sandbank:
No, it's not

Lindsay Greene:
Considered.

David Sandbank:
It's not a minimum amount of megawatts. Most of the megawatts will be 25 megawatts and greater

Lindsay Greene:
Okay.

David Sandbank:
And most of the megawatts in the commercial program will be five megawatts and less. I think you'll see

Lindsay Greene:
Okay

David Sandbank:
There's always two buckets.

Lindsay Greene:
Got it. Great. And then is the expectation that someone responds with a site in mind or is the permitting and lability made up term a part of your process for evaluating them or working with them after you award?

David Sandbank:
Yeah, the site is critical, right? Because of understanding the project economics, the interconnection advancement. So they would have to come with a level of maturity prior to that, otherwise it becomes a greater risk. And the LSR team has evolved into really understanding how to do that best.

Lindsay Greene:
Okay.

Anthony Fiore:
We're also going to be putting out an RFI next month to talk about these things with industry and see what kind of feedback.

Lindsay Greene:
Okay, okay, good. Because that I think gets to the point of are they worried, what environment are they working in in terms of the hurdles they'll have to overcome? You can achieve site control with letter of intent from a property owner, but that is it the same thing as a green light from your local permanent authorities where they complete the battery or not. And that's the level of engagement that I think is most prone to friction and where you can't necessarily get a letter of support in advance

David Sandbank:
And it's different within the FDNY than it is outside. And just so you know, Seth Dunn is doing a great job. He works with Georges's team and he's the ones managing the program and has much more detailed information.

Lindsay Greene:
Okay. Okay, great. As long as there's that dialogue, great. I think that's different than visibility you see as a property owner. So that's why I ask all my questions. Apologies. Thank you.

David Sandbank:
No, all good. Thank you. Okay, I'll advance to the next slide please. So we talked about both storage. Now we're going to talk about five megawatts unless, which is what we call the residential and commercial program. Where the residential program is what I discussed earlier. Believe it or not, we need to procure a total of with all programs, about 4,700 megawatts to get to

six gigawatts by 2030 because we've already procured about 1,300 megawatts. So we're really talking about a 4,700 megawatt program. And when you add up the 3000 megawatts plus the 1500 megawatts for this program and a 200 for stole residential storage, that gets us to the 4,700. So the residential and commercial programs will roll out in a very New York sun-like program. It's like the large scale resource program is doing it in a way they've done it in the past. We're doing this in the way we've done this in the past and have seen good success is with transparency and certainty with megawatt blocks.

So the industry knows what the incentive is and how much is left so they can procure and go out and do their jobs. And so that's how we're going to move forwards in both residential and commercial. With our program too, there's expanded access below any households you can think of. The residential solar project is similar to New York Sun where you get a base incentive if you're a market rate customer, but if you're a low income customer, you'll get an added incentive to help you be able to afford a solar plus storage type project. When it comes to the five megawatt projects, the larger projects and how it affects disadvantaged communities, basically we are finalizing design via a stakeholder RFI to be published in April. We intend to launch our program in the DAC program in June, 2025 and think about that as storage for critical facilities, food bank shelters, that type of use case. That's what we're targeting for the disadvantaged communities on the larger, smaller projects. Let's say our commercial program for storage is already launched last week, so we're up and running there. I'll stop and see if there's any questions. Okay, great. Okay,

The next slide, please. This is the fun part. This is all the work we're doing on Governor Hochul's interagency fire safety working group, which NYSERDA is a part of, and obviously the governor created that working group after we had three incidents here in New York state, it raised concern about what is going on and we wanted to look into it in a responsible manner and doing so, we've really released, I'm going to tell you what we've done so far as key milestone deliveries. We have done preliminary silent water data report that we released and it confirmed, and I apologize for this typo, no harmful containments contain.

It actually showed just like it did in moss landing that there are all levels that we've noticed are within the acceptable ranges. So that was really good. We also saw within that report that there was no nine 11 calls, no emergency room visits, and thankfully no one injured as first responders or the public. We also released fire code updates and recommendations. There are 11 fire code updates that are provided to our code counsel, which are now under consideration. So we're expecting to see our 2025 code accommodate many of those code recommendations. And then it was interesting, we had to inspect all of our larger in-service projects and we did that and really saw some key findings there and learned a lot. As a matter of fact, a lot of the code recommendations for things were things that we saw within the projects we inspected, but not just in the fields, but also looking at all the paperwork and data from that project because many of the projects that we visited and two out of the three fires were not NYSERDA projects. There were more utility projects like non flyers and whatnot. So we were able to learn what's happening outside of our program as well. And so what we took out of that was we really enhanced our inspection process as we were accompanied by real nationally renowned subject matter experts to enhance our inspection process and we feel it should be a statewide accepted process. And we had a conversation with the joint utilities so that they can also adopt our

inspection process as we feel it's really well thought out and great to abide by a state standard. The next slide is also about fire safety and whatnot, but I'll stop and see if there's any more questions or if there's any questions about ion.

Charles Bell:
Gotcha. Do you look at issues related to flooding?

David Sandbank:
I think what that is that would be in the environmental study, and it's not something that we do per se at NYSERDA, well for our side of the shop, but it would be in the environmental study and then in the local Authority's having jurisdiction to look at. I believe, Anthony, you probably know more about this than I do though. Yeah.

Charles Bell:
So is there a state agency that has oversight over that type of a risk like the Department of Homeland Security and Emergency Services, or is there anyone that looks at that more systemically?

Anthony Fiore:
You're talking about if the containers were prone to flooding? Yeah, yeah. Well, that would come out in the design process, which we do review the design process and you might want to mention the consultants that were brought on Board to help the Authority's having jurisdiction. Yeah, because I think that directly answers Chuck's question.

David Sandbank:
Yeah, Chuck. One of the things we learned with doing these inspections and looking at the current codes and standards is a lot of the codes and standards are good the way they are, but they're not necessarily being enforced sometimes. And what we thought some of these code recommendations that we recommended were make it so that you have to enforce a few of them, right? So give you an example like Anthony's referring to, there's the peer review, local Authority having jurisdiction can enforce it, but a lot of times, and understandably so, they might not have the skillset and expertise to look at a peer review and dissect it and look at it and say, oh, this is a concern, or it's not a concern. So what we've done is we've taken all these lessons learned and we've taken the critical most important recommendations and put them as mandatory requirements within the NYSERDA program for both bulk and commercial projects. And the peer review is the most important one there. And we have two companies. One is ESRG, the other is DNV, and there's another one after that that is going to Camelot that is going to do these peer reviews on behalf of NYSERDA, give us a recommendation, and then the company can then take those peer reviews and give it to the local Authority. Having jurisdiction understanding where we stand on that project, that I think is going to help a lot. I don't know if that helps

Anthony Fiore:
Just in terms of your question about jurisdiction, TEC does IT is responsible for looking at current pay flooding in the environment.

Charles Bell:
Okay. Okay. Thank you.

David Sandbank:
Pleasure. So a lot of what we're seeing now are concerns communities because of the incidents here. Next slide please. And that's understandable. We feel like we need to do a good job now of educating the communities. So we're going to launch a public engagement and market confidence campaign, and that is really to educate and provide awareness to address these concerns. So if they have the local Authority's having the jurisdiction have the information they need to be informed to make their decisions. And right now there's a lot of information flying around, but we would like to be able to provide all of our lessons learned in an honest way and give them, here's how you can deploy safe lithium ion projects within your communities and here's how NYSERDA is going to help you, and here's the changes we're making. So we are going to launch that public campaign as a NYSERDA campaign, and we also have been talking and communicating with a lot of other states, I would say talking with California and the CPUC and CEC on a monthly basis. We've had Massachusetts and Illinois contact us and I was at a conference in Denver on a Energy Storage panel, and I'm hearing that even in Oklahoma, they're using our milestone deliveries to help Authority's having jurisdiction understand how to deploy storage. So I know that I'm starting to make progress when Oklahoma's reading what we're doing.

And then really importantly, on May 7th, this May 7th, we decided to put forth a fire safety working group statewide webinar for all municipalities to teach them our lessons learned to tell them they don't necessarily have to wait for 2025, Codes, here's what we're doing in program moving forwards. Here's what you need to do and here's how we're going to help you. So that's what that webinar is really all about.

MarieTherese Dominguez:
What about for New York City?

David Sandbank:
So it's interesting. New York City, I would say FDNY is our gold standard for permitting and fire safety. A lot of what the fire safety working group did was work with FDNY to better understand how they do what they do because they're the most sophisticated Authority having jurisdiction in Energy Storage maybe in the country. So a lot of what FDNY did was ahead of the rest of the state. I'd say we caught up to them maybe leaped over a little bit, but we are now partnering with FDNY, we're providing them resources to help them do their peer reviews as well as their operations team. So it's becoming a little bit more of a partnership between FDNY and the state itself.

Anthony Fiore:
Yeah, just model. It's not necessarily alone. Right. At table will be at DNY as well as the office control so that people understand this is not just NYERDA's department, but it's fire professionals who're also c communicating.

MarieTherese Dominguez:
I just see it play out with e-bikes and storage all of the, it's just,

David Sandbank:
Yeah, that's a concern for a lot of people and interesting enough, like Energy Storage has, and I'm glad you brought that up because our May 7th tune in on May 7th, we're going to talk about that because Energy Storage has so many more standards and regulations we have to abide by, but what happened is the technology got pretty quickly forwardly advanced without rules and regulations on the e-bike and micro mobility side that it caused a big issue with 65,000 bike delivery service messengers in New York City alone. A lot of 'em were using non UL solidified components and the wrong chargers with the wrong batteries, long extension cords. That is not something that can happen with Energy Storage. So much highly regulated than that. So it's two different issues, but the same with the

MarieTherese Dominguez:
Players in terms of,

Lindsay Greene:
Yeah, I think if there's ever a world where there's a moment or ability to do a public awareness campaign, that fact alone I think will go a long way to separating the micro or even car based mobility from the other places that energy is needed because people have no idea. They barely understand the UL standard in general or the fact that not all chargers go the same, even if it technically physically fits, but that's just a whole, you just want to separate mentally for people that what you can do for your home or for a building or one you might see on the street is a very different thing. It's much more highly regulated. There are standards, there are protections. Maybe the fire department feels differently about those than they do about micro mobility, but people don't know that. And so it will just feed fear and disinformation. I a hundred percent, I mean bus ads, TikTok videos, not whatever. We're not supposed to use TikTok or are we, I don't know. I can't keep up

Jay Koh:
Be required use.

Lindsay Greene:
I think that is actually very important. Otherwise, this will get thrown in with NIMBY issues because it's concerns already is, and that would be very, very bad.

David Sandbank:
Before these incidents happened, we worked with the Mayor's Office to come out with a campaign and a one pager on the difference between micro mobility and standalone storage.

MarieTherese Dominguez:
But unless you're doing it in multi-languages and going to Grubhub and all of the service delivery elements, it's not people in their minds don't distinguish between, I didn't mean to interrupt you.

David Sandbank:
No, no, no, you're right. Really the ad advertising distinction. Yeah, no, I agree with you. And you're absolutely right.

Lindsay Greene:
Even if that's something the fire department about, if it's like there's ads about prep for STDs and there's ads about free tax prep, there should be ads about there are safe batteries and it's important not to be afraid of them because they're really important for clean energy or whatever, whichever buzzword focus grouping the best.

Doreen Harris:
When one looks at the risks that come with the deployment of these goals, you've hit the exact, this is the biggest risk coupled the risk of cost implications. And so coupled with all of the work that David laid out, our communications and marketing team have a campaign that will be advanced. I don't think we're targeting micro mobility though. We're trying to focus on the resources that we're responsible for.

Lindsay Greene:
That's fine. Even if you're just saying

Doreen Harris:
This is not micro mobility. Right. And the communication with those communities as well. We have a siting team that literally how many meetings have they had on this topic with AHJs all across the state. These projects are all, for the most part, cited locally, so permanent locally. Therefore, we literally have to get to every AHJ at the same time. It's the biggest risk of this program.

David Sandbank:
One more slide on this, and I'm going to hand this off to my colleague Brandon Owens, and he's the VP of Innovation. Take it away.

Brandon Owens:
Thanks, David. Happy to give the background on the role that the innovation team has played in Energy Storage, and there's actually quite a bit going on starting with CEF 1.0. This is the period between 2016 and 2025. We've funded a total of $53 million in projects. That's 62 Energy Storage projects. The bulk of the focus has been on long duration Energy Storage. That's over 10 hour storage, so think overnight. Primarily that's flow batteries, compressed air, thermal energy. Our work is focused mainly on hydrogen pumped hydro and nuclear hydrogen hybrid projects. We right now have 23 advanced storage projects underway, totaling $39 million. We do have a new solicitation that's going to hit the street next month. That one's focused on long duration Energy Storage, but also lithium ion alternatives. That represents a slight pivot, a strategic pivot that we're going to continue on in the CEF 2.0 period. It's focused on lithium ion alternatives. That would be solid state batteries, sodium ion, lithium sulfur, zinc base, zinc air. Several of those have manufacturing potential in New York state.

In CEF 2.0, there's going to be more of a focus on lithium ion alternatives. These are short duration. The focus there is because of the supply chain concerns with lithium ion, the US gets over 80% of its lithium ion batteries from China. And we know some of the concerns and considerations there. So this program is going to focus both on long duration Energy Storage, but also non lithium ion short duration solutions moving forward in the CEF 2.0 period. As you guys know, we submitted that petition in December. We are expecting an order by the end of the year. We proposed $39 million in funding over a five year period for the power generation and the Energy Storage focus area. So we'll be dedicating some of that funding to ongoing Energy Storage research. The focus is going to be on these late stage Energy Storage solutions. And again, it's a long duration Energy Storage plus non lithium ion alternatives. And one of the goals is going to be positioning New York as a hub for next generation battery manufacturing. I mentioned some of the New York manufacturing potential. There's manufacturing potential for solid state batteries, sodium ion, zinc air. All of those have manufacturing potential in the State of New York. And so that's where we're going to be taking the r and d program around Energy Storage moving forward.

David Sandbank:
We have to give a nod to Brookhaven here too, and JoAnne probably speak to this, but than I can. But we did also provide some funding for Hex beam at Brookhaven, which they like the tout that they can use it to look at T-Rex skulls and understand what the intensity is that the chemistry and stuff is there, but

Dale Bryk:
It's actually a Stegosaurus.

David Sandbank:
But it produces this high intensity x-ray beam that allows you to look at batteries while they're operating non-destructively under different load scenarios so that you can understand at a very elemental level what is happening and understand the safety of the technology. And there's been examples where folks have come in and actually saw something happening and say, oh, we've got to go back and redesign. And so I think that type of innovation and research is really important to the advancement of this technology as well.

Brandon Owens:
And we've got photographic evidence of that. I think that's

Pam Poisson:
Exactly, I thank you for that plug. And I just want to mention that one of the things the team is working on and has some promising results is non flammable lithium ion batterie. So stay tuned

Jay Koh:
To be confused with in flammable.

Sherburne Abbott:
Thank you so much. That was really great. Any question?

Dale Bryk:
Can I just ask the question, am I reading this right, that there's a decrease in this investment from 53 to 39?

Brandon Owens:
Well, 53 was over the 10 year period.

Dale Bryk:
Okay. So it is actually an increase over because it's a shorter annual increase. Okay. That makes sense. Okay. Great Job. That's very important.

Sherburne Abbott:
So no formal action is required on this item. The last item on the agenda is other business. Is there any other business before the Committee? Seeing none. Okay. May I have a motion to adjourn?

Jay Koh:
So moved.

Sherburne Abbott:
Second. All in favor?

Members of the Committee:
Aye.

Sherburne Abbott:
Opposed? Meeting is adjourned.