

NYSERDA'S 263rd BOARD MEETING

October 4, 2023

Clean Copy of Transcript

Chair Kauffman:

I call this meeting to order. This is the 263rd meeting of the New York State Energy Research and Development Authority. Notice of the meeting and agenda was mailed to the Members September 22, 2023. And to the press on September 25, 2023. A revised agenda was provided today, directed a copy of the notice and agenda, a revised agenda. Be annexed to the Minutes of this meeting. Welcome to the meeting. Meeting is being conducted in person and by video conference, the video and a transcript of this meeting on the web. Do we have a quorum? I'd like ask each of the Members to introduce themselves. Richard Kauffman, Chair of the Authority.

Sherburne Abbott:

Shere Abbott, Member of the Board.

Sadie McKeown:

Sadie McKeown, Member of the Board.

Justin Driscoll:

Justin Driscoll, Member of the Board.

Frances Resheske:

Frances Resheske Member of the Board.

Chair Kauffman:

Thank you. And in Albany,

Arturo Garcia-Costas:

Artur Garcia-Costas, Member of the Board.

Vice Chair Bell:

Chuck Bell, Member of the Board.

Rory Christian:

Rory Christian, Member of the Board.

Commissioner Seggos:

Basil Seggos, Member of the Board.

Chair Kauffman:

Thank you. Before we turn to the formal agenda, I'd like to make one announcement, in the matter of moments at 2:20. Today we will be conducting a nationwide test of the federal emergency alert system, including alerts to wireless cellular devices during the test, all wireless cellular devices will be receiving emergency alert messages accompanied by a unique phone and vibration. All will be revealed in a matter of law. Unique tone can handle that. Okay, so the first

item on the discussion agendas report from the Authority's President and CEO Doreen Harris, on the Authority's recent activity.

Doreen Harris:

Great, well thank you Chair as heading into my fourth year as president. I can assure you if I've heard unique tones. So we'll go ahead and get started and wait for 2:20 with anticipation. So certainly as we head into the fall, I did want to start unfortunately with some observations that I also shared with our staff this September. We have a series of town halls across the Authority in which we did observe and reflect on some very specific challenges that our industry is facing and I'm wanting to share some of those with each of you today. I'd say also though of course there are extreme reasons for optimism and some important milestones We're meeting this year in our progress, some of which implicate this very Board, so I am going to cover those as well. So let's turn to the next slide. The first challenge that I did want to refer to today, next slide as well is the challenge of energy storage and specifically the fires that have been experienced across our state. We did start the year really focusing on immobility fires here in the urban area of New York City, but quite quickly our attention turned to stationary storage fires, which we did see in three different instances across the summer. First in East Hampton, then Warwick, and then Shama ending in July. And so I'd say of course we're thankful that no one has been hurt in these incidents, but it does reflect a very important need for us to pursue not only certain,

Unknown Speaker:

But they're not all timed exactly the same. Did you get one slow

Doreen Harris:

Done. Alright, everyone set?

Chair Kauffman:

Yeah, it was unique.

Doreen Harris:

Well, turning back to the topic of energy storage, I did want to note that upon the third fire that I'm reflecting on here today, we did form an interagency fire and safety working group comprised of NYSERDA, DISH'S, DEC, DPS, NYPA and the Department of State. And ultimately we are working together not only to provide an assessment of these fires, i.e the root cause analysis that will be brought to bear over the coming months resulting from these fires, but also really to not only inspect the systems that exist here installed here in New York over 60 in fact, as well as really looking at the codes, the testing and requirements for these systems in order to make recommendations on potential building or fire code changes as well as training necessities across the state. This working group has been hard at work since and ultimately is making very good progress not only with the inspections that we are undertaking, but also the other work streams that I reflected on as well. And I'd say where possible we also have looked to proactively communicate about the work we're doing. You can see a letter to the editor that I filed in the Watertown Daily Times noting the importance of objective information being inserted into this process. And I'd say that's a critical role. NYSERDA plays and my letter reflects our commitment to transparency but objectivity through these processes. So noting that we'll be reporting further as the months progress in this important work. Next slide please.

Sadie McKeown:

What's the cause of fires? Is it heat?

Doreen Harris:

So we do not have a root cause analysis for any of the fires. They anticipate them to take approximately three to four months. So we should be seeing the East Hampton results first. However, one very major aspect of this has been access to the root cause analysis. We need to gain access so that we can work with appropriate counterparties to address the root cause.

Sadie McKeown:

They were all in one month, so I assumed there was something heat related, but what do I know?

Doreen Harris:

Yes, it's very interesting the ways in which even other fires have been caused actually by supporting systems, not the batteries themselves, but the enclosures, other pumps, things like that. Just noting that it isn't universally the case that the storage device itself is the root cause. But we will see we don't have anything official yet. The next item I wanted to highlight for you, I had also highlighted at our last Board meeting, which was the inflation petitions that were filed by the four offshore wind projects that are not yet constructed for New York as well as the Alliance for Clean Energy of the upstate renewable generators as well as the Clean Path New York project, one of the transition lines awarded under our tier four procurement. And these petitions sought to amend their agreements with NYSERDA to account for unforeseen inflation, supply chain challenges and inflation issues. These petitions were filed with the Public Service Commission and we discussed this in June.

I do want to note that since that time we've seen one additional industry petition filed on behalf of the Champlain Hudson Power Express, which is a project bringing renewables from Canada into New York City. That project is under construction and that petition requested similar treatment for their project. In addition, at the end of August, NYSERDA filed over 100 pages of comments and analysis in that same docket reflecting on the various solutions that were requested by the industry, looking at the potential benefits, costs and risks relative to our progress toward our climate goals, but also the impacts on New York's rate payers. And so I would say those comments were consistent with the principles I just described, really looking at this objectively. And ultimately this is a decision of the New York Public Service Commission that we will be implementing any directive for NYSERDA within an order that would ensue. So I'd say these are with the public service commission for review and we remain no matter what comes out of that docket, I'd say we remain hopeful. We remain committed and recognizing that this industry will move forward and we will as well toward our goals. Next slide.

But I would say it is not that we are doing nothing while that commission proceeding ensues, we see the trends that we are seeing in New York are not unique to New York State. They mirror trends we're seeing across the country. And in fact across the world, you've likely heard a number of different offshore wind projects actually pay damages to exit their contracts that have been issued first in Massachusetts with two different projects choosing to pay penalties so they do not proceed with their project. Just yesterday we saw the news out of Connecticut Park City Wind Project developed by Avangrid paying similar penalties as well. And so ultimately when

we look at this issue, this global issue, I do want to note several actions that have been taken by New York in concert with other States, starting with a letter to President Biden along by Governor Hochul along with five other states requesting increased federal support for the offshore wind industry.

This support would take three different forms, bonus tax credits under the inflation reduction Act, the ability to share revenues from the offshore wind leases themselves and further support for permitting process improvements. In addition, just last week I submitted comments with these other states to the IRS with very detailed feedback on ITC eligibility for these projects as well. And so I would say while we've had a relatively positive and predictable last decades, collectively speaking, this is a bumpy time for the renewables industry and one that the transition will become even more challenging is my observation. So in the short to medium term, we are leaving those stone unturned as that the ways in which we believe we can not only catalyze private sector investment but also maintain progress toward our goals while keeping costs affordable for New Yorkers. So certainly more to come in this respect, but this is the update I had wanted to share. Next slide please.

And certainly as reported to those who were part of the Program Planning Committee meeting today, we at NYSERDA and New York State at large are leveraging federal dollars to the maximum extent possible. And when we look at what the Inflation Reduction Act is doing, even just past one year in it is quite astonishing. I would say there is some dissonance between what we are experiencing here in the short term and ultimately what we see from the perspective of industry building in the longer term. In fact, American clean power just reported that the private sector has invested a total of \$271 billion since last August in new clean energy projects. The Solar Energy Industry Association estimates the IRA could create an additional 160 gigawatts of solar power capacity over the next 10 years. So I would say that these are extraordinarily impressive tailwinds for our work. As I said in the longer term and certainly tailwinds, we intend to leverage.

Next slide. And I did want to observe this for the Board. I think this study actually published in the Journal of Science is quite indicative of what we see even one year in the IRA capable of doing on a national level. This study looks at the outputs of nine different independent modeling efforts to understand the IRA's likely impacts. These models actually anticipate that it will reduce national emissions annually between 33 and 40% below 2005 levels by 2030 and upwards of 48% by 2035. So the orange lines on this graph are the modeling with the IRA and the light blue lines without, but this is very much the impact of the IRA and in fact in the not too distant future as you see here. Next slide. And as you can see on the second graph, all nine models agree that the IRA will have a catalyzing impact on the power sector.

Its decarbonization and most so significant impacts in transportation sector decarbonization as well. Not only I think it's important to note that most of the IRA benefits are through the tax code. So the study predicts that national energy costs could be \$10 to \$52 billion per year lower by 2035. I'd say though one note of caution and also relative to the very real challenges we have in the building sector here is that most of these models do not predict significant impacts from the IRA in terms of building sector decarbonization. So this is something we need to internalize and work away at, but noting that as a specific challenge. And I'd say on that topic, I'd next like

to share some very specific progress that we are making here as a State to improve not only energy efficiency and electrification across our building stock, but I'd say notably through changes to energy and building codes.

So if we turn two slides ahead, you may have seen a request for a special Board meeting coming up later this year. And this really relates to the ways in which we are going to be implementing our advanced building codes and zero emission code that was part of this past year's budget through two sets of rulemaking processes, one advanced by NYSERDA and subsequently by the Department of State. And you may know that the State Fire Prevention and Building Code Council or the Code Council is responsible for revising the energy code through a public rulemaking process that is led by the Department of State. But prior to finalizing a revision to the energy code, the code Council must determine that the proposed revision is cost effective. And so as we speak, we at NYSERDA are advancing a rulemaking, really looking at changes to the lifecycle cost methodology to evaluate that revision.

We've spoken about this before, Chris Corcoran is here if you have detailed questions on that cycle. But ultimately, we at NYSERDA have developed a set of proposals for measuring cost effectiveness under this new criteria that will be presented to the public in meetings over the next several weeks. And then they will be used by the code council once adopted to evaluate these revisions as I had just described them. And so we're holding public meetings the weeks of October 16th and 23rd across the state, and then the Board will be convened for a special meeting in late November or early December to approve the draft rule prior to the notice of proposed rulemaking with a final goal for our Board to approve that rule in April with the rule going into effect in May of 2024, at which time the OSS will use that rule to revise the energy code. So this is all with a goal to have the updated code in place for March of 2025 to hit our zero emission code in January, 2026 as per the budget requirement. So we'll look forward to seeing later this year to move that item forward as well. Next slide.

I did want to provide a timeline and an update regarding our work in implementing the New York Cap-and-Invest or NYCI program. As it is known, there are quite a few steps in the process to develop the NYCI regulations. And so ultimately in June, DEC and NYSERDA hosted a series of webinars as an initial opportunity for stakeholders to provide input in response to a range of questions that we had asked on various design aspects of a cap and invest proposal. We understand that the impact that cap and invest will have across our State is significant potentially. So we need to make sure the public is engaged in the design at every stage of the process.

And so as a result of the outreach conducted to date, we have taken in a large number of comments which would reflect general support for establishing an economy-wide cap-and-invest program as a means to emissions, but also achieve the requirements of the Climate Act. And so what you can expect next in this process will be pre not only the second stage of outreach, but this is related to pre-proposals. So this is where we are going to be articulating what we are calling the leanings of these programs, meaning where do we believe the program could best be defined and ultimately to take feedback from a second round around those leanings so that we can ultimately develop a strong regulatory proposal toward the timelines laid out for cap and invest. So I will continue to report out, but the next step we're anticipating is this pre-proposal leanings that we will take additional feedback on as well.

Next slide, please. And as I shared with you via email last week and some of you heard about a bit at our PPC meeting, we were very excited to announce a new program supported by the \$4.2 billion Bond Act. This is a hundred million dollars through the New York School Bus Incentive Program announced by Governor Hochul recently and ultimately will be implemented by NYSERDA. I'd say that this is important not only to meet the Governor's goal of zero emission school buses by 2035, but also to reflect a new direction for NYSERDA not only working in electrification of transportation, but notably with school districts as we advance both this program and our Clean Green Schools initiative as well.

And so last slide to end my president's report for this quarter, I share that we had a busier than ever climate week. They told me I attended 35 events in four days. I must say I don't remember every one of them per se, but I will be here to tell you there were some very important convenings and announcements that occurred, both groundbreaking for the Champlain Hudson Power Express substation and Astoria Queens, but also some very significant commitments to heat pumps. As Governor Inslee with the US Climate Alliance said, all Americans have certain rights to life, liberty, and the pursuit of heat pumps.

We certainly saw that true with the US Climate Alliance Member states committing to install 20 million heat pumps by 2030. And we know we as a State are extraordinarily well committed to contribute notably to that goal, not only through our new and Empower Plus program, which the Governor announced was funded at over \$200 million in State appropriations, but also the very specific ways we're working with low-income New Yorkers through our NYCHA collaboration with several of you and others to really advance this technology at scale. So we certainly cannot do this alone, but this was, I would say, demonstrates our increasing prominence in the national and even international clean energy space. And so I'm excited to build these partnerships together. And so with that, this concludes my president's report. I'll turn it back over to the Chair of course for questions, but also to advance our agenda.

Chair Kauffman:

Very good. Any quick questions or comments for Doreen?

Sadie McKeown:

Very quick question. With the schools impressive and I know the goals are there for the buses. What else is NYSERDA doing with the school generally with their buildings or with their educational curriculum? Is there other interventions?

Doreen Harris:

Yeah, we have a Clean Green Schools initiative that is, it's funded through the Clean Energy Fund, but there is an additional sum of money through the Bond Act that we are working to move forward through a similar process to that which we just saw with the school buses, which will allow us to ramp up that program by another a hundred million dollars. And so really these programs need to intersect both with one another. We're touching the same constituent, but also to your point with respect to the education within the building itself. So our workforce team has a number of different programs. We've sort of been in schools and out of schools with curriculum over the years. We see the opportunity to reinitiate that work and our workforce team is doing so.

Chair Kauffman:

All right. Again, very good, Doreen. Thank you. The next agenda item concerns a private and an executive session. Section 108 of Public Officer's Law authorizes the Members to convene an executive session to discuss the employment history of particular persons. Additionally, Section 108 of the Public Officer's Law authorizes Members to convene in private session. For the purpose of discussing attorney client privilege matters, we have a motion for resolution number 1707 to enter into executive session to discuss the employment history of particular persons and to convene in private session for discussing attorney client privilege.

Commissioner Seggos:

Second.

Chair Kauffman:

Thank you. All in favor?

Members of the Board:

Aye. Aye. Aye.

Chair Kauffman:

Any opposed? Alright. The Members will now enter an executive session at a private session. During that time, the webcast will be made up upon a return reconvene the meeting, an open session, no formal action was taken during the private session and the executive session. Next item on the discussion agendas report on the meeting of the Governance Committee from Chair Arturo Garcia-Costas. Arturo.

Arturo Garcia-Costas:

Thank you Richard. So the Governance Committee met earlier today and a quorum was present throughout the meeting. The Committee received a report on the Authority to Diversity, Equity, and Inclusion work from DEI Officer Michelle Andry. The Committee was able to ask questions and was satisfied with the discussion, which focused quite a bit on goal four of our DEI strategy. We also went into private session to discuss attorney client privileged matters. No actions were taken during that session. And finally, the Authority's, General Counsel and Secretary Peter Costello discussed the process for how Authority Board Members are appointed. The Committee was able to discuss the process and ask them questions and nothing else emerged from that discussion. This conclusion matter report.

Chair Kauffman:

I thank you, Arturo. The questions for Arturo? Okay, thank you. There's no formal action on this report. The next item on the discussion agenda is report from the Program Planning Committee and considerations of revision Budget for Fiscal Year 2023-2024, Shere Abbott, Chair of the Committee Chair the meeting as she had to leave, I will give her report. So the Program Planning Committee met just before this meeting. The PPC received a presentation from the Authority's' Chief Financial Officer, Pam Poisson, on proposed revisions to the Authority's' Budget for Fiscal Year 2023-2024 to reflect material updates resulting from new business developments. The details were included in the meeting package and CFO summarized the key items. First adjustments were made the beginning of the year net position based upon strong RGGI Auction

outcomes from the prior fiscal year. Next, the revenue budget has increased by \$282.1 million due to updates to State appropriations based on updated timetables for expenditures, a net decrease in utility surcharge assessments and three revenue budget adjustments related to the Clean Energy Standard portfolio due to updated revenue forecasts and timing of certain transactions that materialized subsequent to the approval of the original budget.

Additionally, the program expenditure increase pertains to an increase in ZEC generator payments and higher expenditures in the deployment of NY Serta's Empower Plus funding offset in part by lower anticipated payments under the Offshore Wind Port Development Initiative and the New York State Bond BAC based on revised timing of expenditures. Lastly, the salaries and benefits increases were a result of a higher than projected general salary increases set by the State as well as a one-time payment of \$3,000 for eligible employees. While budget benefit costs increase due to recent market movements and actuarial evaluation updates for retirement and health benefits costs, the PPC unanimously recommends that the Members approve revisions to the Budget for Fiscal Year 2023-2024. The Authority's General counsel Peter Costello discussed proposed revisions to the Committee's Charter. The proposed amendments clarify the Committee's responsibility relative to reviewing the Authority's activities relative to the state's progress towards advancing the goals of the Climate Leadership and Community Protection Act of 2019.

Committee unanimously recommends the approval of the revisions of the PPC Charter. And lastly, the Committee received a presentation on the Authority's' various focus areas in goals from Chief Program Officer Anthony J. Fore; NYGB President Andrew Kessler; Vice President for Distributed Energy Resources Technology David Sandbank; Assistant Director Distributed Energy Resources Technology, Single Family Residential Director Courtney Moriarta; Vice President for Innovation John Lochner; Government Affairs Program Manager Matt Brown; Clean Energy Transportation Director Adam Ruder; Clean Energy Transportation Senior Project Manager Vincent Riscica; Vice President for Clean and Resilient Buildings Susanne DesRoches; and Senior Advisor to the President Erich Scherer long presentation. Yeah. Committee was able to ask questions. Was pleased with the discussion. This completes the report on the Program Planning Committee meeting. Are there questions if not, may have a motion for resolution number 1708 approving revisions to the Authority's Budget for Fiscal Year 2023-2024.

Rory Christian:

Second.

Arturo Garcia-Costas:

Second.

Chair Kauffman:

All in favor?

Members of the Committee:

Aye.

Chair Kauffman:

Aye. Any opposed? Alright. The revisions to the Authority's Budget for Fiscal Year 2023-2024 have been approved. We will consider the approval of the PPC Charter amendments as part of the consent agenda. So you're going to have to hear from me some more. The next item on the agenda is report from the Audit and Finance Committee that Committee's Chair Jay Koh was unable to attend the meeting. Therefore I led the meeting. I'll provide the report. The Committee meeting was held earlier today and a quorum was present throughout the Committee. Reviewed the proposed amendments to the Authority's Internal Control Manual. The updates will make the Internal Control Manual more understandable to all audiences and ultimately more likely to be effectively internalized and applied by those bound to these controls. The Committee unanimously recommends approval of the amendments to the Internal Control Manual. Next, the Committee considered proposed amendments to the Authority's Investment Guidelines. The amendments would expand the list of permitted investments to diversify holdings within NYSERDA portfolios and to slightly improve expected returns without taking on additional risk as well as to assist in meeting net zero investment portfolio goals by 2040. These changes were reviewed by the Authority statutory fiscal agent, the New York State Department of Taxation Finance, as well as the NYSERDA Investment Advisor.

An additional proposed update would provide the Controller and Assistant Treasurer authorization to execute investment management operational functions. If so, delegated by the CFO as opposed to only in the CFO's absence. The Committee unanimously recommends approval of the amendments to the Investment Guidelines. Lastly, the Committee received report from the director of Internal Audit, Mary Peck on their recent activities Committee was able to ask questions and was satisfied with the response. We'll consider the resolutions on the Internal Control Manual and the Investment Guidelines as part of the consent agenda. The next item on the discussion agenda is a report from the Waste and Facilities Management Committee. From that Committee's Chair, Chuck Bell. Chuck please.

Vice Chair Bell:

Thank you very much Richard. The first item on the agenda was a West Valley update. Brad Frank presented the Committee with an update on the West Valley Site Management program with focus on the US Department of Energy's work to demolish the main plant processing building. Brad described the meticulous work that is being conducted to safely dismantle the thick reinforced concrete walls of the rooms and hot cells that make up that building. Brad showed photographs and a short video of the equipment used to conduct the work, including three industrial scale water misting systems for controlling the generation and dispersal of dust from the demolition work. Brad also reported that as to the debris from the demolition, over 9,200 tons of waste have been transported by rail and truck to out-of-state, low level radioactive waste disposal facilities lease. Also, the Department of Energy has released a draft request for proposals in September seeking a contractor to perform the next phase of cleanup at the West Valley Demonstration Project that will remove the source of the groundwater plume, the lagoon system, and the main plants below grade cells. This next phase of work is valued up to \$3 billion and is expected to last a decade. Brad is on the line here and available to answer any questions. Are there any questions or comments for Brad?

Vice Chair Bell:

Okay, hearing none. The second agenda item was nuclear coordination report. Alyse Peterson presented the report providing an update on the ending point decommissioning noting that the removal of all remaining spent fuel rods from the spent fuel pools in November will prompt a step down in nuclear regulatory commission required operations on the site. Emergency planning and staffing at the site, Alyse noted that all low level radioactive waste from the site continues to be shipped to Texas and that under an agreement with the DEC Holtec will be performing a series of environmental investigations at certain areas of the site with an eye toward eventual site restoration. The lease also noted that in August, Governor Hochul signed legislation restricting discharges of any radiological substance into the Hudson River in connection with the decommissioning of a nuclear power plant. Unless such discharge is federally preempted a bill that only currently relates to Indian points. The legislation was in response to whole tax intent to discharge treated water that meets NRC discharge requirements from Indian Point spent Fuel pools to the Hudson at least noted that Holtech has publicly stated disposition that federal law does preempt State law on this issue. Alyse also provided an update on low level waste reporting activities and noted that a recent federal court case out of the Fifth Circuit has invalidated interim nuclear storage, a cornerstone of current nuclear waste disposal planning and that additional litigation may therefore be likely. This concludes my report.

Chair Kauffman:

Thank you, Chuck. Are there questions for Chuck? There being no formal actions required. So what I'd like to do now is to turn to the consent agenda and then we will go after that to the last item on the discussion agenda. So on the consent agenda, there are four resolutions to be considered. Information on these items was included in your meeting materials resolutions number 1709 1710 and 1711 and 1712 were recommended for approval by the Committees. Resolution number 1713 would approve the Periodic Contracts report. Counsel's Office compared the list provided by Members of entities with which each Member is associated that he or she believes may enter into contracts with NYSERDA to list the contracts in the Periodic Contract reports, Counsel's Office reports just three potential conflicts. Specifically, the Authority has entered into or anticipates entering into New York Power Authority identified by Justin Driscoll, Consolidated Edison identified by Frances Resheske and the Alliance for Sustainable Energy LLC identified by me. Can we assume that you two wish to abstain from the vote to approve contracts with that specified identity? And I will abstain from the specified identity?

Frances Resheske:

Yes.

Justin Driscoll:

Yes.

Chair Kauffman:

Okay. Are there any questions on these items? May I have a motion approving resolutions number 1709 through 1713.

Arturo Garcia-Costas:

So moved.

Commissioner Seggos:

Second.

Chair Kauffman:

Thank you. All in favor?

Members of the Board:

Aye. Aye.

Chair Kauffman:

Any opposed? Alright, thank you. Resolutions number 1709 through 1713 have been approved. Thank you. So now I'd like to go back to the discussion agenda for a report on the Authority's Climate Impact Assessment work. Amanda Stevens, Senior Project Manager for Energy Research will present this item. Amanda,

Amanda Stevens:

Thank you very much. So I'm just going to give you an update today on where we are with this. I'm going to have to go pretty quick. I don't have a lot of time, so I'll probably skip through some of the slides that you have in your packets. Next slide please. In fact, you can go forward a couple. I'm going to give you just a little bit of an overview and talk a little bit about timeline and then we probably won't have time to go through any of the example products, but so just a refresher, kind of an overview here. The assessments going to be providing up to date information on impacts and adapting to those impacts with climate change. Like the rest of the environmental research program. This is really hoping to provide the scientific foundation for good policy in New York at all levels of decision making.

So similar to our first climate assessment that we did that was released about 12 years ago and was called Clate. We are not calling this one Clate. This is the New York State Climate Effects Assessment, but there has been new science and information released since then. So it's time to update it. Something that this is not. So could you go to the next slide please? I think it is not a risk assessment. So we're not delving into the details of specific assets. That's not going to that scale. It's also not an adaptation plan. It doesn't prescribe policy or even give recommendations. It's not a policy document. It's really grounded in the science and information that's out there next. So the focus of this again is on the physical climate changes, the impacts of those changes. And on adaptation we are not talking about greenhouse gas reduction, emissions reduction, things like that. Obviously it comes up at certain points in the assessment, but that is not the focus of this one. Next, there are three main components to the assessment. One is climate change projections. Those were developed by Columbia University. The next are these what I think of as the meat of the assessment that sector chapters that were developed by technical working groups. And then we have an economic impact modeling that was performed by industrial economics. And I'll go through each of those real quick.

So on the first component on the projections, this is just a quick look at what we are developing or have developed. Most of these were this same as what climate they did a number of years ago, but the ones in green are new. So things like heat index days over 95, those are new this time around. Next, real quick, look at just some example projections. You can click through three times here. Extreme heat is one that I want to mention. This is going to be a hazard across the state. So it's not just places like New York City or even just urbanized areas that are going to be experiencing these extreme temperatures. So places like Lake Placid in the Adirondacks, they're not used to this kind of heat, so they may not be prepared for what's coming. Sea level rise, not hugely different from last time around, but it does represent a narrowing from the climbing projection. So kind of the lower end is a little bit higher. The higher end is a little bit lower. So the science is narrowing in there. But these numbers also don't preclude the possibility of really extreme sea level rise if we had rapid ice melt from the ice sheets.

Arturo Garcia-Costas:

Does this in any way align with the information ConEd at recently released?

Amanda Stevens:

Yes. Yeah, they in fact used our projections for that. And it also should align with the NPCC, the New York City panel. Been using our productions as well. And so the last thing I just want to note is on precipitation we will have tables of numbers for that, but the story really is in how the rain will fall. An inch over a day is very different than an inch that you get in 30 Minutes. So we're going to be seeing more of this extreme precipitation downpours. We're going to see a little bit of drought in between. In the near term, we're likely going to have more lake effect snow, but we're also going to see more rain, snow expectation and winter changing to rain, which gives a lot more likelihood of flooding. So good stuff ahead of us. Next please.

So these are the technical chapters and the sectors that they cover, there are eight of them are a little bit different than climate. They cover the same general ideas. And we also made sure that each chapter had an equity lens. So that's kind of a crosscutting theme here. So these chapters were developed by technical working groups, and this is where we really tried to bring in a new diversity of people. Climbing was developed almost solely by academics, which is not a bad thing. But this time around we wanted to bring in other perspectives. So we have businesses, state, mobile government, community focus groups, NGOs, many different types of people and backgrounds that we're working on actually development of these chapters. Next, just to give you an idea of that, visually, we had nearly 80 individuals for more than 60 different organizations on these working groups.

And in addition to that, we had about another 175 individuals and 130 organizations as advisors to each of these working groups. So we had a lot of different perspectives involved in this. Next, we also had State agencies involved, which I mentioned, so we can skip over that one. The third component is the economic impacts modeling. Next slide please. These, as I mentioned, was being developed by industrial economics. They are looking at actually modeling the economic impacts of climate change on these different sectors under a couple of different emission scenarios as feasible. Some of them look at the costing of adaptation measures as well. So yeah, I think we'll just stop there for that one. We do have some overarching findings in this slide, please. And I want to just focus on two of them here. One takeaway is on this second one here.

That's a big one for me as I read through all of this stuff, it's really confirmation that our climate response has to be two pronged.

We cannot mitigate our way out of all of these impacts they're occurring now. They're going to continue to get worse and they're going to get worse as we keep putting more greenhouse gases that we can't escape climate impacts, we need to adapt. However, we also can't adapt our way out of the worst consequences. We have to keep reducing our greenhouse gas emissions to make sure that we can reduce the chances of those worst impacts as much as we possibly can. So this really has to be a two-pronged approach and that's really what struck home to me. And the other one is third bullet here that I just want to mention is that the impacts are really two really vulnerable populations. It's not going to be me. I'm going to have some impacts, but it's not, yes, I can turn on more air conditioning if I need to.

So it's really these vulnerable people and communities and populations that are going to be impacted the worst by this. And we need to continue to work on that. Next slide. And then one more. So just quick on timeline up to now, we actually started this way back in 2020. We needed a needs assessment, brought the working groups together in 2021. Over the past couple of years, we are now have gone through peer review for most of the chapters on the next slide. So what's remaining is to get all of these technical chapters finalized. They're in various stages of review, fact check, copy, edit right now. So we are getting there with these. The economics piece itself is 500 pages, so that's kind of on a separate track. It's big enough that it's kind of its own thing. So we'll be going to peer review with that, hopefully shortly.

Certain communications test review, we don't know yet what chambers engagement is going to want to be on this. So those are next steps. Next slide. This is a little bit out of date because things have progressed. One more click since I put these slides together. We did do a quiet launch of the projections in September, and that was because the utilities needed to submit their vulnerability studies to DPS in September and they actually used in reference and cited our projections. So we needed to get 'em out there. So they are up and available. We did not do a big splashing announcement because there are a number of companion pieces that we think will really tell the story better together. So we're waiting until those are done so that then we can say, Hey, come look at this, read all this stuff about it and learn about it. Not sure I still have this on October. I'm not sure if that's going to happen, but sometime this year I'm hoping we'll at least have all of that projection stuff ready. The technical chapters could be ready this year or they could be early next year. So that's the track that we're on. And I will stop right there. I think

Commissioner Seggos:

Just a quick question of course. On the cost of inaction, have you modeled the actual costs?

Amanda Stevens:

For some things? For some things? Yeah. So it depended really on what models were available and there weren't a lot that actually modeled that particular thing. There's some on the transportation side of things, and I think there's a couple of other aspects that they were able to do that on, but it's not a lot.

Commissioner Seggos:

An action in that case would be adaptation actions as opposed to mitigation actions?

Amanda Stevens:

Yes. They would be adaptation actions.

Commissioner Seggos:

Got it.

Arturo Garcia-Costas:

So can I follow up on that?

Amanda Stevens:

Yes.

Arturo Garcia-Costas:

Yeah. So channeling Jay Koh is not with us today. Okay. In terms of are you confident that the research that you're doing right now is going to be channeled appropriately into essentially my service planning processes, especially as we get ready to access all this historic federal funding? Earlier today we had a presentation that talks about \$2 billion. We make it up to \$2 billion of that funding. But even if we get less than that, that's a lot of investment going out in a short period of time. So as I listened to you to your presentation, I couldn't help but think also about CLCPA implementation, the disadvantaged communities designations, how this data science should be overlaid that disadvantaged communities on a map that has been developed by New York State and to help a bit triage or guide some of our investments to make sure that we don't invest in things that are really super vulnerable to being affected in 10 years' time or 15 years' time, or really invest in areas that are particularly vulnerable in which our investments can help build resilience.

Amanda Stevens:

Yeah, absolutely. And I sure hope so. There are a number of folks here who are working on that, I think in various aspects. And once this is out, I'll be working with 'em to see how we can do that. I absolutely agree. It's really critical. And I will just mention too, it's kind of an aside, but there's the extreme heat adaptation plan, but it's in process too. It's a multi-agency effort and they are doing almost exactly that. Part of the things, one of the things that we're looking at doing is kind of overlaying some heat vulnerability with the disadvantaged communities and trying to figure out how to prioritize some of that work.

Rory Christian:

On an earlier slide when you had sea level rise, that is from today or is that total?

Amanda Stevens:

So that is based on a baseline. In fact, let me go back to it. I don't get it wrong. The sea level rise baseline, I think I, I'm going to get it wrong because I don't have it here. It's not from today. There is a baseline that that is from, but it's maybe like 2000. It's not from like 1900. It's a recent baseline.

Vice Chair Bell:

Would there be any plan to have community level meetings after the assessment comes out? Because I'd love to see that it's a big deal for the citizens of New York State and just thinking of the subway flooding and the rainstorm we experienced in New York City and this New York citizens and residents we're really involved in this, right When they get more involved, according to what you're saying. So it really seems like a great opportunity to get out there and present it and discuss it with people at the grassroots level.

Amanda Stevens:

We don't have concrete plans, but that is definitely on my list of things that I think we need to do. Almost like a road show of this stuff we are developing in addition to, I didn't get to that. In addition to the big technical chapters, we are developing a lot of other outputs. We're going to be having fact sheets that are region based, two page things that are looking at hazards. So we're hoping we'll have different outputs that'll be more easily digestible than 500 days work and to be used in things like that if we want to do community workshops and really talk to the people and get this information out that way.

Vice Chair Bell:

Terrific. And congratulations having so many partners.

Amanda Stevens:

Thank you.

Vice Chair Bell:

Sounds great.

Chair Kauffman:

So the utility vulnerability assessments, these have been done by the utilities?

Amanda Stevens:

Yeah, so this was a requirement I think the DPS did about a year ago or so. I'm sure you know better than I do. And they were required to do vulnerability studies on climate and because they had such a short timeframe to do it on, it was very fortuitous that we had just done our projections. So rather than spending their time and resources on each of them doing their own projections, they were able to use ours to do that. Those were submitted in September and then they have to do an adaptation plan as well. Right.

Chair Kauffman:

I don't know if this is a question for you. Is, what's the national, what to call it? Is there any kind of national initiative to do this? Because I'm just thinking anything that we can do that can have an influence on other states that are skeptical or not doing things would be helpful. And the utility part is kind of interesting because that's real dollars and utilities wouldn't be messing around if they in what they say.

Brad Frank:

So it's interesting you pose that question because that's going to be one of the topics discussed at NRU in November. There's a lot of talk around different risks. Cybersecurity is one, climate change is another. I do not believe other utilities have moved at the pace that we have. So my hope was to spread the gospel.

Chair Kauffman:

Okay, terrific. Perfect. Thank you.

Arturo Garcia-Costas:

Do you happen to know whether the MTA, speaking of what happened with subways a couple weekends ago, whether the MTA has done a vulnerability assessment similar to what DPS and the PSC required the utilities to do?

Amanda Stevens:

I don't know. Yeah, I'm not sure.

Arturo Garcia-Costas:

Because some of the things that I'm hearing particularly about unexpected outcomes because of the heat that's being generated by the subways themselves together with extreme heat days are creating electrical fires, electrical failures, and things that the system was not designed to do. And that's above and beyond obviously the deferred maintenance issues that congestion pricing is hoping to address. So I mean, I just think that we can't really be playing catch up all the time with these major systems and start looking at your research like yours and say, okay, how can we get ahead of this? Yeah. Great.

Doreen Harris:

Arturo, your question was about the MTA in particular?

Arturo Garcia-Costas:

Yes.

Doreen Harris:

Yeah, they literally just released a report today on this matter. It's a needs assessment focused on protecting against flooding specifically. Just so you know, I can send it to

Arturo Garcia-Costas:

You. Yeah, please do send it to me. Attorney. Just on flooding or generally on climate?

Doreen Harris:

It's a 20-year needs assessment.

Arturo Garcia-Costas:

Okay.

Rory Christian:

I was going to say the closest thing that I was familiar with up until that was the post sandy report on the flood barriers that they would need, but that requires them to shut down the subways to put those in place. So not like what we have on Friday the other day.

Chair Kauffman:

Alright. Other questions or comments for Amanda? Great. Well thank you very, very much, Amanda.

Amanda Stevens:

Thank you.

Chair Kauffman:

Alright, so that takes us to other business. Does anyone have any other matters they wish to discuss in that case? We have a motion to adjourn the meeting.

Rory Christian:

Second.

Arturo Garcia-Costas:

That was out of order.

Commissioner Seggos:

So Moved.

Chair Kauffman:

All in favor?

Commissioner Seggos:

Cheating.

Members of the Board:

Aye.

Chair Kauffman:

Okay. The meetings adjourned. Thank you all very much.