
Committee Meeting

of

SENATE ENVIRONMENT AND ENERGY COMMITTEE

“The Committee will meet to hear testimony from invited guests on the impacts of climate change in New Jersey, and what actions the State is taking, and should take, to reduce its greenhouse gas emissions by 2050”

LOCATION: Committee Room 6
State House Annex
Trenton, New Jersey

DATE: February 10, 2022
10:00 a.m.

MEMBERS OF COMMITTEE PRESENT:

Senator Bob Smith, Chair
Senator Linda R. Greenstein, Vice Chair
Senator Richard J. Codey
Senator Edward R. Durr, Jr.
Senator Jean Stanfield



ALSO PRESENT:

Christina Denney
Eric Hansen
Office of Legislative Services
Committee Aides

Joseph Gurrentz
Matthew H. Peterson
Senate Majority
Committee Aides

Rebecca Panitch
Senate Republican
Committee Aide

Meeting Recorded and Transcribed by
The Office of Legislative Services, Public Information Office,
Hearing Unit, State House Annex, PO 068, Trenton, New Jersey

Bob Smith
Chairman

Linda R. Greenstein
Vice-Chairwoman

Richard J. Codey
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NEW JERSEY STATE LEGISLATURE

SENATE ENVIRONMENT AND ENERGY COMMITTEE

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COMMITTEE NOTICE

TO: MEMBERS OF THE SENATE ENVIRONMENT AND ENERGY COMMITTEE

FROM: SENATOR BOB SMITH, CHAIRMAN

SUBJECT: COMMITTEE MEETING - FEBRUARY 10, 2022

The public may address comments and questions to Eric Hansen or Christina Denney, Committee Aides, or make bill status and scheduling inquiries to Pamela Cocroft, Secretary, at (609)847-3855, fax (609)292-0561, or e-mail: OLSAideSEN@njleg.org. Written and electronic comments, questions and testimony submitted to the committee by the public, as well as recordings and transcripts, if any, of oral testimony, are government records and will be available to the public upon request.

The Senate Environment and Energy Committee will meet on Thursday, February 10, 2022 at 10:00 AM in Committee Room 6, 1st Floor, State House Annex, Trenton, New Jersey.

The committee will meet to hear testimony from invited guests on the impacts of climate change in New Jersey, and what actions the State is taking, and should take, to reduce its greenhouse gas emissions by 2050.

The State House Annex has reopened to the general public. Visitors to the State House Annex are required to show ID and proof of full vaccination or a negative COVID-19 PCR or rapid test conducted within the previous 72 hours.

All visitors are required to undergo a temperature screening prior to proceeding through security. Masks are mandatory at all times inside the State House Annex, including in Committee Rooms and in the hallways and other facilities.

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(OVER)

Senate Environment And Energy Committee

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The following bill(s) will be considered:

S333 Singleton	Prohibits persons convicted of criminal animal cruelty offenses from owning domestic companion animals and from working or volunteering at animal-related enterprises; establishes presumption against pretrial intervention for certain persons; designated as "Moose's Law."
S336 Singleton/Rice	Establishes Office of Clean Energy Equity in BPU; directs establishment of certain clean energy, energy efficiency, and energy storage programs for overburdened communities; makes change to community solar program.
S417 Smith, B/Codey	Requires environmental sustainability plan for State House Complex.
S419 Smith, B/Greenstein	Establishes Renewable and Efficient Energy Financing Program; authorizes BPU to transfer up to \$20 million annually in societal benefits charge revenues to New Jersey Infrastructure Bank for purposes of program.
S1005 Ruiz	Authorizes common law public nuisance suits regarding lead paint under State law; exempts Attorney General from certain aspects of public nuisance claims when pursuing lead paint actions.

Issued 2/3/22

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SENATOR BOB SMITH (Chair): So let me welcome everyone to the most interesting Committee in the Legislature, in my opinion.

We have two new Senators joining us today. We have Senator Ed Durr; we're thrilled to have him on the Committee. And we also have Senator Jean Stanfield -- brand-new. And we welcome you both to the Committee, and we hope you also find it the most interesting Committee in the Legislature.

SENATOR STANFIELD: Thank you.

SENATOR SMITH: So we have a whole bunch of things we're trying to do today. One, before we get into any business, we're going to get into some business that's not on the list; and that is that we're announcing today the formation of a Forest Stewardship Task Force, and also Co-Chairs for that effort.

And for our new Senators, forestry is an issue that you'll end up really feeling a lot of pain, and bruises, and body marks from, because it's a very intensely felt issue in this state. There are literally hundreds, if not thousands of people who have an interest in what we do with our forest policy. And we've tried, over the last 20 years, to develop good forestry policy for private landowners and for public forests; and we're not there yet. And we're not there yet because things have dramatically changed; namely, what we're going to hear about in our first -- some of our early testimony.

We have two of our great public servants to talk about global climate change and what it means to New Jersey. But one of the things it means is, that our forests are at risk. I'm sure you've seen the footage, two or three years ago, of half the country burning down, all right? I mean, it

wasn't just California; it was really like from the center of the country, out west. And we could be in that same situation.

And you also need healthy forests, sustainable forests, so that we can mitigate the impacts of global climate change.

So anyway, today we're announcing the appointment of four co-chairs. You might say, "Why four co-chairs?" Because this is a model that worked several years ago for beach access -- also a very contentious issue -- and we asked those four co-chairs to invite everybody in the world who had an interest in that topic to come to meeting, after meeting, after meeting, after meeting. And roughly, about nine months after the beach access task force did its job, they came back to us with a report -- which we're going to share with everybody -- and the report said, "What is it that everybody can agree on, and then where do we still have substantial issues?" And from that, we were able to put together a beach access Bill that took another two years to get passed. But we think we have a better beach access policy now than we did previously.

So the same thing with forests. And by the way, we also did one task force that didn't work, and that was for natural resource damages. We appointed Co-Chairs; they met, they met, they met, they met. Then they came back about nine months later and said, "We couldn't agree on anything." So that happens, too.

But I don't think that's going to happen here. We have four outstanding Co-Chairs, and let me just tell you about them.

We have Eileen Murphy. Eileen Murphy is the Vice President of Governmental Relations at New Jersey Audubon. Her experience includes 21 years with the New Jersey Department of Environmental Protection and

10 years with Rutgers University. She's a charter member of the US EPA Science Advisory Board. She received her Ph.D. from Rutgers in environmental sciences, and a master's in outdoor education from Northern Illinois University.

Eileen, I don't know if you're here; but if you're here, would you stand up? (Dr. Murphy stands) There's Eileen, over there. Thank you very much for coming down today.

The next Co-Chair -- Andy Bennett graduated from the University of Tennessee with a degree in forest management. He is an Approved Forester in the State of New Jersey, recognized as a Technical Service Provider by the NRCS; licensed with the NJDEP as a Certified Pesticide Applicator, Certified Tree Inspector, member of the Society of American Foresters, and serves on the Board of the New Jersey Forestry Association. Andy and his teammates at Ridge and Valley Forest Management serve more than 650 private landowners in northern New Jersey.

Andy Bennett, are you here? If you are, would you stand up and give us a wave? (confers with staff) He's not here. That's right; he could not make it today.

Tom Gilbert is well-known to all of us. Tom Gilbert is the Co-Executive Director of the New Jersey Conservation Foundation. He has over 20 years of experience working in the nonprofit sector on forest, natural resource, and energy policy issues. He previously served as the Senior Conservation Finance Director with the Trust for Public Land, Director of Eastern Forest Conservation for the Wilderness Society, and Executive

Director of the Highlands Coalition. He received a bachelor's in history and a master's in natural resource planning from the University of Vermont.

Tom, if you're here, would you stand up and give us a wave?
(Mr. Gilbert stands) Thank you.

And Anjuli Ramos, who is the New Jersey Director for the Sierra Club. Anjuli Ramos replaced Jeff Tittel, who retired last year. You know, the Sierra Club has deep roots in conservation and the protection of New Jersey forests. She has extensive experience in climate change, specifically climate pollutant inventory work, from her time at the New Jersey Department of Environmental Protection. She received a master's from Rutgers University in environmental chemistry.

Anjuli Ramos, if you're here, would you stand up and wave? (Ms. Ramos stands) There's Anjuli over there.

So, you remember that scene in the Rocky films? You may consider the scene in the Rocky films when you have Mister T with the gold necklaces who says, "I pity the fool." I don't want to say that to you; but you have no idea what you've signed up for, okay? (laughter)

I mean, it's going to be rough and tough because the opinions in forestry run the whole gamut. And your job is to get everybody who wants to participate in this, to participate, so we get all points of views covered and, hopefully, what would been 17 hearings by this Committee will end up being one hearing at the very end. So you're really doing a major favor for the people of New Jersey in helping us to get this right, hopefully the first time around. And we've already talked; we're here to help, but we're basically going to get out of your way. And anybody who wants to participate on the

Forestry Task Force -- for the moment we're going to say, send your cards and letters to--

(confers with staff)

All right; so we're going to issue a press release that will have an e-mail address. And these four people are involved in so many environmental organizations, I'm sure they have e-mail lists that would make our e-mail list look pretty small. But, for example, the New Jersey Highlands Coalition just did a forestry seminar open program; they had over 600 people attend. So we are-- And we're going to use their e-mail list; we're going to use all four of their e-mail lists; we're going to use our e-mail list, and hopefully we'll capture everybody.

We're asking that you try your best to have this report -- consensus policy stuff we can't agree on -- back to us by the end of the year. And if you can do that -- again, you'd be doing great favor for the citizens of New Jersey. So I wish you all well.

And also, while the Commissioner of the DEP is here -- it would be lovely if we could get somebody from the DEP to also be involved with the Task Force so we make sure we're not missing anything, okay?

So the plan for today's hearing, or meeting -- we have two of our outstanding public servants in this State to come to us and tell us a few things. And we're not doing bills on this today, but the plan is for the whole bunch of next Environmental Committee meetings -- we're going to start with what I think is the existential threat to this state and to the planet: global climate change. And what we're asking people to talk to us about is, what damage has already been done to New Jersey, what are we currently doing to mitigate global climate change, and then, thirdly, what should we be doing, all right?

So we're asking-- And I guess it's also seniority; not that he's an old guy, but we're going to ask our first witness, the President of the BPU, who is absolutely critical to our energy policy in the State, Joe Fiordaliso, President of the Board of Public Utilities, to come forward and give us his view of global climate change and what we should be doing.

Joe, welcome.

JOSEPH L. FIORDALISO: (off mike) Thank you.

You sure this is not age before beauty? (laughter)

SENATOR SMITH: Well, it's any way you want to take it.

MR. FIORDALISO: Okay. (laughter)

SENATOR SMITH: We'll just call you the *senior* public policy member.

MR. FIORDALISO: Good.

Thank you very much, first of all, for having me here, Mr. Chairman and members of the Committee.

I would be remiss if I didn't start my remarks with a compliment; and that compliment is, without your efforts, Mr. Chairman, an awful lot of our efforts would not be in existence today.

SENATOR SMITH: So what you're saying is, I'm a serious pain in the *arse*?

MR. FIORDALISO: Well, you can interpret it--

SENATOR SMITH: You can say "yes."

MR. FIORDALISO: --any way you'd like. (laughter)

SENATOR SMITH: Yes, okay.

MR. FIORDALISO: Not at all.

It's actually a pleasure to work with you, because we get things through. We have good dialogue with the Legislature as far as climate change is concerned.

So on behalf of the Board of Public Utilities, I want to say "thank you."

Good morning, Mr. Chairman and members of the Committee.

I want to thank you for inviting me here today to speak with you, and giving me the opportunity to discuss both the threats we face from climate change, as well as the efforts undertaken by the Administration to negate the threats.

Most people don't go to bed at night worrying about climate change. We have to, because it's been proven that it has a direct effect on our way of life. As you know, a recent United Nations intergovernmental panel on climate change referred to our current situation as a *code red* for humanity; *code red*. The U.N. report verified what most of us already know: That climate change is affecting nearly every part of our planet. It is intensifying, and that some of the consequences are or soon will be irreversible.

Greenhouse gases, a majority of which are the result of human activity, are placing the planet, and every human on it, in danger. Under Governor Murphy's leadership, the State is taking concrete actionable steps to allow us to reach a goal of 100 percent clean energy by 2050. And when you combine our clean energy and nuclear goals, we are already more than 80 percent clean, hopefully by 2030.

New Jersey's Clean Energy Program -- administered by the Office of Clean Energy, which is part of the Board of Public Utilities -- and the

Legislature designated the New Jersey Board of Public Utilities as the *Office of Clean Energy* back in 1999. Let me assure you the Board takes seriously the need to keep energy costs affordable for all New Jerseyans; that's in our mission statement. Is clean energy expensive? Yes, but how expensive would it be if we did absolutely nothing?

As I will mention throughout my remarks today, the Board is focused on bringing down the cost of clean energy because there is simply no separating the fight against climate change from issues of energy affordability.

I assure you, the Board clearly identifies the cost of each of the initiatives before they are enacted. And we continually assess and reassess the best way to deliver economic, climate, and local health benefits to the residents of our state.

Over the last decade, the impacts of climate change have been increasingly evident, as New Jersey has faced an endless procession of storms that are more severe and coming in more frequent intervals than any other time in our life. Eight major storms since 2011 have cost the lives of 67 New Jerseyans. They caused over 7.5 million multi-day customer outages, and they cost the State several billions of dollars in damage and economic loss.

There's a full description of the storms in my written testimony that shows just how devastating they have been to our electric grid. The Board has made major infrastructure investments over the last decade to harden our infrastructure, and those investments have been effective in lessening the effects of these storms.

We will likely never get to zero outages, but we have made tremendous progress. And one of our goals is to reduce those outages and to reduce the duration of those outages.

I understand that sea level rise and global temperatures -- temperature increases of 2 or 3 degrees Celsius seem abstract. However, major changes in weather patterns and the unprecedented number of super storms that we have experienced is not abstract, nor is it the only negative effects of climate change. Increasing heat in our urban centers; increasing health concerns, such as asthma, from growing emissions, and nearly every facet of life will be negatively impacted.

Unfortunately, we anticipate the trend of increasing global climate-related threats will continue to get worse. This is why it's so important for the Board to propel Governor Murphy's clean energy goals forward.

There's a cost to combating climate change. But as I said before, the cost of doing nothing is far greater. There has been a concerted effort to scare residents about mandates and costs. And to be clear, the Board has issued no mandates as of this point. We hear that the State has no idea what this will cost, but also we can't possibly afford it. And that's been going around also.

Let me be absolutely clear. The Board of Public Utilities does not put a program in place without knowing what the impact to the ratepayer will be. Every offshore wind solicitation award has included the ratepayer impact. Our solar proceedings all include cost estimates; please underline *estimates*. The same for energy efficiency for electric vehicles.

Now, to be perfectly clear: Some of these numbers are estimated because they depend on market forces which cannot be predicted with 100 percent accuracy. But we do not put programs into action without those cost

estimates being known and made public. This Board has had more stakeholder encounters than in the previous 10 years combined.

Before we do anything, we have stakeholder encounters. We want to hear from the public; we want to hear from the experts. We don't pretend to know it all. We've never done this before, so we're all learning together.

I'm proud to say we are more than halfway to meeting the Governor's offshore wind goal of 7,500 megawatts by 2035. The offshore wind program will create 7,000 high-paying jobs and produce an estimated \$4.7 billion -- that's with a *B* -- dollars in economic activity. It will power more than a million homes with clean, renewable energy.

We are taking advantage of our prime coastal location by developing the New Jersey Wind Port in lower Alloway's Creek, which is expected to produce another \$500 million in economic activity in South Jersey.

We are investing in a state-of-the-art manufacturing facility, to build the monopile foundations for the turbines that will serve the nation's offshore wind industry, right here in New Jersey. And I don't remember the last time we were able to recruit a manufacturing firm to come back to New Jersey. This is exciting stuff; and it's not only exciting for South Jersey, it's exciting for the entire state. The facility is currently under construction at the Paulsboro Marine Terminal, and will create more than 500 high-paying skilled jobs.

And New Jersey is leading the way on modernizing our electric grid to ensure that we can deliver all that power to New Jersey customers in an affordable and environmentally friendly way.

The offshore wind program is the centerpiece of our clean energy revolution here in the State of New Jersey. And we are working to make New Jersey the supply chain for all of the East Coast offshore wind industry, which will continue to bring new economic opportunities. Our 130-mile coastline, our location, is perfect to be the supply chain for the offshore wind industry.

Solar: The solar industry in New Jersey is one of the biggest success stories, having recently reached 150,000 solar installations, making New Jersey the number one state for installed solar per square mile. Think about that; New Jersey. Other states discovered that they have sun -- states like Florida and Arizona -- so they're building a lot of solar. We don't have nearly as much sun as they do, but we're outpacing them because of the dedication of your Committee and the Governor.

The industry supports over 6,000 jobs, and we are continuously growing that number. We have been successful in implementing the Legislature's solar reforms from the Clean Energy Act of 2018. These reforms are significantly lowering the cost of solar without diminishing the participation in the program. In many cases, new solar costs only half of what we were paying just two short years ago. As renewable energy increases its production, the costs come down. In fact, the pipelines for our various solar programs are full of applicants eager to take part in New Jersey's solar program, even with substantially reduced incentive levels.

From the widely successful community solar program -- which is bringing the benefits to low- and moderate-income communities -- to upcoming programs, like grid scale and dual-use agriculture solar -- we continue to grow the industry while lowering the cost. And through legislation that was proposed and passed by Senator Singleton, we have

created, within the Board of Public Utilities, an Office of Clean Energy Equity to ensure the fact that every segment of our population, in every region in our state, has the opportunity to participate in the energy revolution that is occurring in the State of New Jersey. Regardless of income, regardless of location, it is extremely important that all of us have the opportunity to participate. Because to mitigate the effects of climate change requires the efforts of each and every one of us, all 9 million people who live in this state. And we can do it -- we *can* do it.

As you've heard me say before, the lowest energy cost is the energy we don't use. And that is why we are so proud of our Energy Efficiency Program, which could not be successful without the cooperation of our utilities. And our utilities have been cooperative over these years, as far as clean energy is concerned. Energy efficiency helps reduce greenhouse gas emissions and mitigate climate impacts, while bolstering the economy, which is a necessary co-benefit during the global crisis.

The Board has enacted several utility-specific Energy Efficiency programs that will help to lower energy costs for customers, reduce greenhouse gas emissions, improve air quality, support environmental justice, and bolster the economy with new jobs. Energy Efficiency projects are labor-intensive, and therefore these initiatives are helping to support and develop local economies and expand job markets. We have made it a primary goal to ensure that those in environmental justice and overburdened communities not only have access to Energy Efficiency programs, but also have access to the jobs that will be created through these programs.

Transportation: Forty percent of our carbon emissions come from transportation; 40 percent. And if you drive the Turnpike and the

Parkway every day, as you sit there -- particularly the Parkway lately -- you see these emissions being spewed up into the air. Forty percent.

We have initiated an electric vehicle program, with incentives, to encourage people to buy electric vehicles.

We're looking at electrification of buildings, always keeping in mind what will it cost the ratepayer to implement those programs.

The electric vehicle program is one that has caught on. And to be perfectly frank, incentives help to encourage people to go out and participate in the program. That's how we started the solar industry -- through incentives. And we have modified it over the years because the goal was always -- and I've been around a long time at the BPU -- the goal always was to reduce the incentives as the years went on, and as the industry matured, so that they could stand on their own two feet. I'm a firm believer in the fact that government -- if there's something in the societal benefit -- government has an obligation to participate. But then, at a certain point, we have to pull back a little bit and let the industry put its feet in the open market.

And over the past 15 years, we have pulled back. But our commitment to solar, our commitment to electric vehicles, our commitment to offshore wind energy efficiency, electrification of buildings remains strong, and we are encouraged by the cooperation that we're getting.

One of the things that keeps me enthusiastic, keeps me going -- number one, I have an outstanding staff; but number two, we have, each and every one of us, a moral obligation to ensure the fact that we do everything possible to mitigate the effects of climate change.

That's how future generations are going to view us. If you have children, if you have grandchildren -- I only have six grandchildren -- but their kids, and subsequent generations are going to judge us on how well we handled this crisis. There is no question about it. Because this is the crisis of our generation, of our time; and how we handle it will say an awful lot about our generation, and how we handle a situation as devastating as climate change.

Again, Mr. Chairman, members of the Committee, I want to thank you for this opportunity. I never try to miss an opportunity to talk about clean energy and the mitigation of climate change.

SENATOR SMITH: Great.

Joe, we can't thank you enough for coming in today, updating us on what the BPU is doing.

Let me ask first -- are there any Senators who have questions for Mr. Fiordaliso, our President?

GOVERNOR CODEY: Yes, but--

SENATOR SMITH: Governor Codey.

GOVERNOR CODEY: The Committee does not know this, but Joe was my employee. He's famous for--

SENATOR SMITH: That explains a lot.

GOVERNOR CODEY: So yes, the day I woke up and found out I was going to be Governor he was on an island--

MR. FIORDALISO: That's true.

GOVERNOR CODEY: --and he couldn't get off of it. (laughter)

MR. FIORDALISO: A hurricane was coming through that island, and we couldn't fly out.

SENATOR SMITH: So I only have one question, and that is, what more should we be doing?

MR. FIORDALISO: We have to keep our foot to the pedal. You know that better than anyone, Senator, and you are one of the people who has not taken their foot off the pedal. And we have to look at every possible way to mitigate the effects of climate change.

But we have to look at it, too, in a prudent way and in a logical way. I want to assure people that it's not that we take some mud and throw it up against the wall and hope something sticks. We don't deal that way. We look at it, we get the advice of experts, we get the advice of the stakeholders, we get the advice of the general public, and keep in mind the cost to the ratepayer. And I believe-- And every day -- and I'm sure you've seen it -- every day somebody comes in my office with some innovative idea. I mean, it's so exciting to see what goes through people's minds, and so on.

We have to get more involved in storage. Storage is an expensive part of this. However, it's one of the vehicles that's going to make green energy work. We have to get involved with it, and ensure the fact that our grid is stronger, our grid is able to accept the renewable energy that we want it to interconnect. We work very closely with our utilities to ensure the fact that they are constantly working on their grid; constantly. I mean, offshore wind is going to do us no good if there's no place to connect it.

So, I mean, this is a priority; we have to continue to work in that direction -- storage, new initiatives. But taking them individually, taking them prudently and making sure-- Again, I mentioned before in my testimony, we've never done this before.

SENATOR SMITH: Right.

MR. FIORDALISO: And are we going to make mistakes, are we going to trip? We may, yes. But you know what? If you don't make mistakes, you don't learn.

So with the cooperation of you, and your Committee, and the Legislature, we're going to make it work.

SENATOR SMITH: Pedal to the metal.

Thank you very much for coming in today; it is much appreciated.

GOVERNOR CODEY: Mr. Chairman.

MR. FIORDALISO: Thank you, sir.

GOVERNOR CODEY: Joe, I'm so proud of you.

MR. FIORDALISO: Well, thank you.

GOVERNOR CODEY: You've come so far.

MR. FIORDALISO: I have.

GOVERNOR CODEY: Now you're a big shot; I mean--

SENATOR SMITH: Good teacher; no question.

MR. FIORDALISO: I had a good teacher.

GOVERNOR CODEY: A big shot.

SENATOR SMITH: For sure.

So I'd like to invite to the microphone Shawn LaTourette, who is our Commissioner of the Department of Environmental Protection.

And again, as you're coming up, Commissioner, the questions are: What kind of damage have we already suffered? What are we currently doing about it, and what should we be doing?

Commissioner.

COMMISSIONER SHAWN M. LATOURETTE: (off mike) I like to be prepared, so I will distribute one to each of you. (distributes information packets)

As I said, thank you for inviting both Joe and I here today. President, thank you so much for all the work that you and your team are doing to advance our main energy agenda.

But to answer the Senator's first question about what we're in for and how bad it will be -- I thought that I would show you.

So one of the things that we have the pleasure of doing at the DEP is serving as your science agency. We work with academics and experts, throughout the state and around the world, and we prepared -- two years ago, or a year-and-a half-ago -- the State's first ever Scientific Report on Climate change, right? Because as the President mentioned, we hear one horrifying report after another from the international scientific community, but it can leave you wondering what it means for us here in New Jersey. It can feel abstract, esoteric.

But there should be no mistake that New Jersey is ground zero for some of the worst impacts of climate change. And that's not hyperbolic; I'm not an alarmist. I think many of the wonderful environmental advocates who have joined us here today would agree with that. But the impacts to New Jersey are real and potentially devastating. In many respects, due to the fact that we're unlike California and many parts of the West, in that we are a water-rich state, we enjoy many benefits from that; but it is also punishing us. New Jersey has a risk of sea level rise two times greater than most other places on the planet. Our projections that we've done with scientists from

around the country and world suggest that we have a serious likelihood of experiencing 2 feet of sea level rise increase by 2050, and 5 by 2100.

Precipitation is increasing throughout New Jersey; the President remarked upon that. I'll show you some of that data, because the Idas and the Sandys -- they're just going to keep coming, and we need to be more ready than we are.

Shockingly, we're going to see periods of drought between all of this intense rain. Right now, we are in an incredible dry spell. Today, as I sit here before you, I am concerned for the status of the aquifers in the center of our state. And I'm concerned that we'll see an even worse wildfire season this year. Last year, in New Jersey, we saw over 900 wildfires, which is kind of shocking. So thank you to all of the folks who have volunteered to be part of our forest management program.

If you go to the third page of the slide deck that I provided you -- and that I'll make available to the public as well; many of the folks here have seen it before -- you'll see a picture of Atlantic City today. Flip the page, and you'll see Atlantic City with 2 feet of sea level rise. It's counterintuitive, right? We think of sea level rise and we think eroding beaches. Sure, they are eroding; and we're throwing lots of money at them. But the sea level rise -- it comes in from the back; it floods out the back bays. The Delaware Bayshore, in the southern part of the state, is the most vulnerable within this decade.

You flip to the next page and you'll see Atlantic City with the 2100 projection. And I want to be clear about one thing. These projections are based on a moderate emissions scenario -- meaning, it's not the worst.

The worst would be between 8 and 10 feet, drowning the Barrier Islands. And again, that's not alarmist; it's just science.

And so the question of, "What do we do?" it hits me hard in the heart. I love the Barrier Islands.

One of the most-- Oh, before I do that, the southern part of the state-- If you look to the next page, you'll see Bridgeton and Millville. If you flip that page, you'll then see the 2 and 5 feet of sea level rise in the southern part of New Jersey; again, the most vulnerable,

Townships like Downe and Salem in Cumberland County -- we have to do more to help them.

One of the things that's important to recognize, based on this moderate emissions scenario, is that between now and 2050, the harm that we'll experience -- its baked in, right? It doesn't matter how many EVs we put on the road, how many wind turbines are twisting in the ocean, between now and 2050 we just have to get more ready for the bad things to continue.

That doesn't mean we shouldn't be doing all of the things that President Joe laid out. We should be doing them, and we should be doing them faster. Because depending on how fast we do those things, it will determine just how bad it is after 2050.

The 1980s, honestly, was the lost decade to get climate change under control; and we didn't do anything. It seems too hard and too big, but there's a pathway. And this Legislature tasked DEP with identifying that pathway.

But before I get to that, I just wanted to touch upon what we experienced in Ida, and how underprepared we all felt for that intense rainfall. Part of the reason that we felt and experienced that under-preparedness, is

because every stormwater apparatus, every piece of infrastructure in this state, is undersized. Because the last data point we use in developing any stormwater control is from 1999. We pursued studies with academics and the National Oceanic and Atmospheric Administration to fill the gap of the last 20 years and, shocker -- there's been more rain since 1999; between 2.5 and 10 percent more, depending on where you are in the state. And when we project that forward -- using a downscaling of climate models, again, in a moderate emission scenario, not the worst case -- those increases go from 20 to 50 percent, depending on where you are in the state. And if you visualize the State of New Jersey in your mind's eye, and you drew a teardrop in the middle of it, put the tip of that teardrop up around Milford -- inside that teardrop would be the hardest hit areas, with the most increase in rainfall.

Those are the communities that were so devastated by Ida. It's just science.

But the economic impacts of climate change -- if you flip to the next page -- are so real. And we experience them constantly; it's not some far-off proposition. And we are now in a position, scientifically, to identify the cost of a devastating event that is related to the anthropogenic nature of climate change. So for Sandy, for example, studies have been able to identify the amount of that cost that was because of anthropogenic sea level rise. Thirteen percent of Sandy's damages were because we didn't do anything in the 1980s.

We have to do a better job at integrating climate risk across our government, across our businesses, our industry, our insurance markets; everywhere. It is beginning to affect the bond ratings. Large financial

institutions are evaluating our preparedness, for example, in the case of issuing sovereign debt. It's well past time that we follow suit.

Now, to put in perspective the climate policy of the State, I would flip you to the to the next page. And I think of this really simply: The climate policy of the State of New Jersey is to reduce and respond to climate change. To *reduce* means to mitigate our emissions. All of the energy items that the President was speaking with you about: how we move forward on solar, and wind, and electric vehicles, and so forth. That will reduce our emissions. There's other modes for reducing our emissions as well that are unrelated to energy.

And how we respond to climate change; how we prepare ourselves. Because we are not ready; Ida showed us that.

In each of these channels of policy there's really a three-part framework. The thought leadership and direction of the big pieces of planning, like the energy master plan or our Global Warming Response Act Report; like our Climate Change Resilience Strategy.

But a plan isn't worth the paper it's written on without action. And so we think of that action in two different ways, too: incentives, like the President had spoken about with respect to energy; but there are incentives on the adaptation side as well. The Blue Acres program; Resilient New Jersey planning grants; the changes, for example, that Senator Smith shepherded on the Municipal Land Use law.

But because incentives in the free market are not enough to do the job, we have to perform supportive regulatory reform. And by that I mean, don't -- not beating folks over the head, but we do need to lead ourselves to a place where we are more forcefully reducing these emissions

and becoming more resilient. We are one of the few states without a Flood Disclosure Law, for example.

If you flip to the next page, you'll see--

SENATOR SMITH: By the way, by *Flood Disclosure Law* you mean that before there are real estate transactions, the potential buyer has the ability to -- or there is part of the transaction some disclosure information that makes sure everybody knows what they're buying.

COMMISSIONER LaTOURETTE: Correct.

SENATOR SMITH: Okay.

COMMISSIONER LaTOURETTE: That is not the case in New Jersey.

SENATOR SMITH: Got it.

COMMISSIONER LaTOURETTE: It is in Texas.

SENATOR SMITH: Okay.

COMMISSIONER LaTOURETTE: So I've brought for you all -- and I'll leave them here with Matt-- these pieces of thought leadership and direction. The Legislature, through the Global Warming Response Act, tasked DEP with an important job: Measure the emissions inventory of the State of New Jersey. We have done that for you. Tell us all the ways that this State -- Senator, to answer your question -- can reduce those emissions. What are the specific things we must do, as a policy matter, as a legislative matter, and as a regulatory matter.

We issued what we call the *80 x 50 Report* -- how we reduce emissions 80 percent by the year 2050, because that is the law the Legislature passed. We put that report together, and I brought you copies here today.

We built that road map for you, and we are here to help you in implementing it in any way you will have us.

There are many things that we can do on our own within our own authorities. As the President described, BPU is working incredibly hard -- and thank you to your entire team, again. DEP, too, can do many things; but there are so, so many more that are necessary and that we cannot do without you.

So if you flip to the next page, you'll see what our greenhouse gas emissions profile is. And this is from 2019, because it takes a -- there's a lag in collecting the information, verifying the information, and putting it out. But our net emissions now are just under 98 million metric tons of carbon a year, and we have to get that down to the 20s.

And you can see from this slide that transportation is our biggest emissions problem. That is largely based on our car culture and the emissions from vehicles. Electric generation, as the President mentioned, is cleaner in New Jersey than many other places in the country, in part because of the shift from coal to natural gas. We don't have much remaining coal here.

But if you look at residential and commercial -- which are separate on this chart -- together they represent the second-largest source of our greenhouse gas emissions. That's our buildings; they're incredible energy wasters. And it is a gargantuan undertaking to electrify them. And as the President said, there are no mandates; there are scare tactics, but there are no mandates. This is work we must do together. Climate change requires a culture change. We have to begin thinking about this differently.

And we can; the tools are there. But change is hard, even scary.

If you flip to the next page, you'll see what our pathway is to get to 80 percent by 2050, and to the interim target of 50 percent by 2030.

Our plans -- the Global Warming Response Act planning, the Energy Master Plan planning -- our plans will get us there. But we are not well on our way, because we need more help. We need help from every sector of civil society. This is not a job that the BPU can do alone, despite the fact that they're heroes; or the folks at the DEP, who have made the cause of protecting our environment the cause of their lives. It requires industry, government, this Legislature, everyone, rowing in this direction -- and fast.

I'll share just a few things that DEP is doing, within our existing authority, as a very first step. The Governor announced, when the energy master plan was unveiled, a suite of regulatory reforms called *New Jersey Protecting Against Climate Threats*, or *NJPACT*. And it has two components, just like climate policy generally: reduce and respond.

We have the suite of reforms we call the *Climate Pollutant Reduction program*, or *CPR*. In that first phase, there's about five rules moving right now that will reduce, at its full implementation, 8 million metric tons of carbon. Last week at a hearing, that DEP was holding on just one of these rules -- there are five -- there was a lot of concern that it's not enough. That concern is well-placed.

SENATOR SMITH: Yes.

COMMISSIONER LaTOURETTE: In some ways, we're at the beginning of the beginning, because we should have started so much sooner.

But again, this is just the first step. The Climate Pollutant Reduction program will be an iterative one; as soon as these five rules are out, the next five will come, and so forth.

Phasing down emissions from electric generating units -- constrained, of course, by the auspices of the Federal Clean Air Act and the State Air Pollution Control Act that were very technology-driven. They are not driven by climate imperatives, although we can force them in a particular direction.

We've put forward rules to advance the transition to an electric vehicle future in the medium-duty sector. We're working on a rule for cargo handling equipment because our ports are dirty and they are harming the health of the residents, overwhelmingly minority Black and brown residents, creating a huge environmental justice problem that has persisted for far too long.

But where are we in that? Flip to the next page, on transportation. This is just one example in why we need more help.

The electric vehicle pathway. That blue line that you see at the top, as the highest, is the plan from the Energy Master Plan. The orange one is the very ambitious piece of work by this Legislature for electric vehicles and getting more of those on the street, with incentives that Joe's team is working so hard on. But then that green line at the bottom is where we actually are. It is not enough.

And we do need more help and we do need to move faster. But again, climate change requires a culture change. We have to encourage folks; we have to open hearts and minds to the projections I showed you. Because New Jersey is going to look and feel different than it does today, no matter what we do. But we are in control of how much worse; all of us together are in control.

Turning quickly to the resilience conversation.

SENATOR SMITH: Let me stop you for one second.

COMMISSIONER LaTOURETTE: Sure.

SENATOR SMITH: A little-- I'm as crazed as you are about global climate change. But the one thing on this transportation EV chart is you're not showing EV sales. You know, you have recent EV sales; we really don't have numbers for anything beyond 2021. So you might want to take-- Hopefully, we're going to be talking about much larger EV sales in the future. This one kind of says, "There's going to be no change," and we have seen the national auto companies in this country make major commitments to EV production in the future.

So just saying, from the point of accuracy--

COMMISSIONER LaTOURETTE: That is a fine point.

SENATOR SMITH: --you might want to take that out.

COMMISSIONER LaTOURETTE: That is a fine point. The United States is trailing behind all other countries in EV adoption; all of them. The ones that are meaningfully working on it. And it's not growing at the clip that it needs to, is the point to be conveyed.

But I appreciate that, Senator. I will adjust it.

You know, you'll hear that New Jersey is but one state in one region in one country, on one planet; and even if we do all the hard work of reducing our emissions, what if Pennsylvania doesn't, or China doesn't? I think there's courage in leadership. But that also presents the issue of resilience more starkly, right? Because we are so interdependent, we have to be ready for it to get worse; and we're not. And so there are two exercises underway on that. There is a statewide climate resilience strategy, that has

been put forward in its inaugural edition, identifying all the things that we need to be doing -- only some of which we are.

And then, if you flip to the next page, similarly we're pursuing a reform known as *Resilient Environments and Landscapes*, or *REAL*, because climate change is real. And that reform is intended to adjust our environmental land use scheme to make sure we're using current data, that we're not informing the design of our infrastructure based on 1999's rainfall. We have to give the water more places to go. We have to better protect our flood hazard areas, and recognize that they are a lot larger than they look on a FEMA map, because that FEMA map is also informed by the past, not the present, and certainly doesn't project into the future. It is why you probably heard from many of your constituents post-Ida, "I don't even have flood insurance," or, "I didn't know I was in a flood area." Because the flood zones are just way bigger than they are depicted on these maps; the maps are backward-looking. So we will adjust them for New Jersey.

SENATOR SMITH: Right? And even when you adjust the maps, the problem is that Mother Nature is not necessarily our best friend on this. Look at Ida, and you had nine inches of water in areas of the state that never had that kind of rain before.

And unfortunately, we're going to see more of those storms, because every time this planet gets a little bit warmer, the atmosphere can absorb and hold more water -- it just means more water to come down.

And so even the predictability-- I believe you do need more information involved in property transactions. But there's going to be a lot of -- we're just not going to be able to guess, because Mother Nature is not

necessarily on our team. But she doesn't have a choice, with all the global climate change gases in the atmosphere.

Sorry to interrupt.

COMMISSIONER LaTOURETTE: No, that's fine Senator. I appreciate the comment.

The water doesn't know to stop at a line on a map, right? It's a fiction in ways, where we're making an assumption about risk; an informed and educated assumption. Those assumptions just need to be updated, and we're doing that.

I'm not trying, in my testimony here, to take away from any of the good efforts of this Legislature or the Murphy Administration. We have moved more boldly on these issues than any Administration in this State's history. The problem is just so big, and we -- the royal *we*, all around the planet -- just waited too long. You can't turn on a dime. But there is too much at risk to not push further, and to not do more.

So I'll leave it there, and I'll thank you all for being here; I'll thank the audience for listening. And I'm happy to take any questions you have.

SENATOR SMITH: Sure.

Members of the Committee -- anybody have any questions for Commissioner LaTourette?

Senator Greenstein.

This is a profile in courage and persistence. Senator Greenstein had a flat tire on the way down here today, and still managed to get transportation here.

SENATOR LINDA R. GREENSTEIN (Vice Chair): Gotta get here. (laughter)

SENATOR SMITH: She didn't want to miss today's meeting--

GOVERNOR CODEY: She changed it herself, too. (laughter)

SENATOR GREENSTEIN: That would really be a profile in courage.

SENATOR SMITH: Senator, you have a question.

SENATOR GREENSTEIN: I do have a question.

Commissioner, it's always great to hear you. I was listening in the car on the way, so I heard most of the hearing -- my friend's car.

How will you ensure that New Jersey utilities are fully aligned with the transition to clean energy, including decarbonization of the electric and building sectors, enhancing energy efficiency, modernizing the grid, and supporting electric vehicle charging infrastructure?

I'm particularly interested because we're trying to work on this bill on carbonization -- or decarbonization of concrete. And in fact, I was very pleased that the League of Conservation Voters made it one of their top five legislative priorities for this year. So that's a good thing, and we're working closely, I believe, with your agency, and certainly the Governor's Office, trying to get it through. And I'm just wondering what you generally think of that issue -- the building sector, essentially.

COMMISSIONER LaTOURETTE: So on the first part of the question, for the utilities, I think that's probably more a question for the President, in terms of his direct line to the utilities.

But we do regulate the air emissions of the utilities. And one of the things that we are working on for that particular issue, in the first phase

of our CPR reforms, is instituting a cap on carbon -- a cap that is independent of any market mechanism.

And so that is something that we're pursuing; it's in open rulemaking now. I think that those types of reforms, from my perspective, send an important market signal. There's no confusion among industry, the direction that we're going. There's concern, I think, from the industry perspective on the pace of that transition; and I can understand it, right? If you're trying to electrify the transportation sector, you want to be careful with respect to your approach to fossil fuel-fired power plants, for example, because you'll need them to power all the EVs. We have great offshore wind goals, but all of those projects won't be deployed for some time. The first one perhaps will start next year, but it's going to take time, right?

And we're part of a regional marketplace for energy. So there's a risk that, depending on how all these things are sequenced, that you trigger the firing of dirty coal plants in Pennsylvania -- which, by the way, blow on us and contribute to our inability to meet ambient air quality standards. It's not because of our power plants, primarily; it's because of the others.

So I think it's important to send those market signals, and to work closely with the industry.

And on the concrete issue, building products are a huge source of greenhouse gases--

SENATOR GREENSTEIN: Yes.

COMMISSIONER LaTOURETTE: --in part because of how they're manufactured. And we're not so great about reusing our buildings, right? And so every time we knock one down and build another, we are contributing further to the problem.

So I think that that is worthy to pursue, and thank you for doing it.

SENATOR GREENSTEIN: Thanks; and I have just one follow up question.

With all these different goals that you've been talking about -- which are virtually all just wonderful goals -- are there some that you see that you might not be able to get to until later; or any that conflict? I mean, there's just so much to be done.

COMMISSIONER LaTOURETTE: There is so much to be done, and in the report that I'll leave you with it gives you the pathway and the sequence of, in what method, what's the most important? And from my perspective, looking at the largest sources of emissions -- right? -- is among the most important. And when we do that, the benefit to health, particularly in underserved and overburdened communities, is undeniable. So a focus on the transportation sector is a good one, but it can't be the only one. We need the renewable resources to power that electrification.

SENATOR GREENSTEIN: Thank you.

SENATOR SMITH: Thank you, Senator Greenstein.

Any other questions? (no response)

If not, Commissioner, we really appreciate you coming in today. And this will be a string of informational sessions for this Committee. Next Committee meeting we plan to have in Rutgers University and Princeton University to give us their view of what we should be doing, more than we're currently doing.

And I very much appreciate the document that you provided today, with the pathway, and what you think the DEP can do, and what we should be doing in assisting you to accomplish your goals.

So thank you so much for all your hard work, and be prepared to work even harder.

COMMISSIONER LaTOURETTE: We will do whatever it takes.

Thank you.

SENATOR SMITH: Thank you, Commissioner; I appreciate that.

(MEETING CONCLUDED)