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PANEL I:

DEVELOPING AN ENVIRONMENTALLY CONSCIOUS ENERGY PLAN FOR NEW YORK

Moderator

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Executive Director, Pace Energy Project

Panelists

William M. Flynn
President, New York State Energy
Research & Development Authority

Katherine Kennedy, Esq.
Staff Attorney, National Resources Defense Council

Thomas Peterson
Director, Domestic Policy for the
Center for Clean Air Policy

David Wooley, Esq.
Director, American Wind Association;
Partner, Young Sommer Ward Ritzenberg Wooley Baker & Moore

MR. CLAUDIO: Hello. My name is Erik Claudio. I am a staff member here at the *Fordham Environmental Law Journal*. I will be introducing the first panel today.

I want to introduce the Moderator first, Mr. Fred Zalcman. Mr. Fred Zalcman is the Executive Director of the Pace Energy Project, and has been lead counsel for New York's environmental community in a variety of proceedings before the New York Public Service Commission. Professor Zalcman has been the team leader on a number of consensus-building activities among environmental NGOs on restructuring policy; and among insurance companies on benefits of sustainable energy investments. Most recently, Mr.

Zalcman has focused his efforts on removing economic and environmental regulatory barriers to the development of emerging clean distributed generation technologies.

He teaches energy law at Pace Law School and has significant experience in energy and environmental matters, both as an attorney and as a policy analyst. Prior to joining Pace in 1994, he was head of the Strategic Planning Section of the Illinois Department of Energy and Natural Resources, where he was chiefly responsible for the development of statewide policies and programs for electric and gas integrated resource planning, energy conservation, renewable energy development, competitive resource bidding, and power plant siting and certification.

Next is Mr. Thomas Peterson. Mr. Peterson is en route. He will be here. He is en route from Washington.

Next is Mr. William Flynn. Mr. Flynn was appointed President of the New York State Energy Research and Development Authority (NYSERDA) in Albany by the Board of Directors in November 2000. Prior to becoming President, Mr. Flynn served as Vice President, Treasurer, and Secretary of the Board of the New York State Energy Research and Development Authority since January 1999.

Established in 1975, the New York State Energy Research and Development Authority provides funding to businesses, local governments, educational institutions, and others for energy, environmental, and economic development projects. As President of the New York State Energy Research and Development Authority Board, Mr. Flynn also serves the State of New York as Chairman of the Energy Planning Board, and as a member of the State Environmental Board, the Water Resources Planning Council, and the Disaster Preparedness Commission. He is Chairman of the Association of State Energy Research and Technology Transfer Institutions. He is the State's liaison officer to the U.S. Nuclear Regulatory Commission and represents New York on the National Low-Level Radioactive Waste Forum. He also serves on the Board of Directors of the Center for Clean Air Policy, the Alliance to Save Energy, and the National Oil Heat Research Alliance. Mr. Flynn previously served as First Deputy Attorney General, Chief of Staff, and Special Counsel to the State Attorney General, Dennis C. Vacco.

In the early 1990s, Mr. Flynn was an Assistant United States Attorney and Executive Assistant in the Western District of New York. Mr. Flynn received his Juris Doctor from the University of Dayton Law School in 1987. Prior to law school, Mr. Flynn worked as an

executive assistant to two successive New York State Assembly Minority Leaders, Clarence D. Rappleyea Jr. and James L. Emery.

Next is Mr. David Wooley.

MR. WOOLEY: I would rather be Mr. Flynn.

MR. CLAUDIO: Mr. Wooley is a Director of Windpower New York and the American Wind Energy Association. Mr. Wooley represents the American Wind Energy Association in a variety of state administrative proceedings regarding transmission policy, interconnection requirements, management of state clean energy funds, state power purchase agreements, and renewable portfolio standards. He is registered to lobby for the American Wind Energy Association in New York State, and helped draft the State rule for better standards, a small-term [inaudible] tax credit, and the AQMR [phonetic] requirements.

Mr. Wooley is a Founding Partner of Young Sommer, LLC, an Albany, New York, law firm specializing in environmental, land use, municipal facility siting, and energy law.

In 2001 Mr. Wooley received the American Wind Energy Association's State Leadership Award for his work in developing a favorable policy environment for wind energy in the Northeastern U.S. Mr. Wooley received the Adirondack Council's Distinguished Achievement Award in 1987 for his work on the acid rain issue. The Canadian Coalition on Acid Rain specially recognized Mr. Wooley as one of the twenty-nine leading contributors to passage of the 1990 Clean Air Act Amendments. He has served as Vice-Chairman of the American Bar Association's Subcommittee on Air Quality and Co-Chair of the New York State Bar Association's Energy Committee. He is admitted to practice law in New York, three other states, numerous federal courts, and the U.S. Supreme Court. He frequently appears as a speaker at conferences on air pollution control and energy policy and has published numerous articles on these subjects.

Last but not least, Ms. Katherine Kennedy. Ms. Kennedy is a senior attorney in the National Resources Defense Council's air and energy program. She works to promote energy efficiency and renewable technologies in New York and nationally through advocacy, legislative action, and litigation. She has also worked in the National Resources Defense Council's urban program on land use and water pollution issues in New York City and in the National Resources Defense Council's citizen enforcement program, bringing citizen lawsuits under federal environmental statutes. She is Chair of the Board of the Healthy Schools Network, Inc., a non-profit or-

ganization based in New York that advocates for the protection of children's health in schools.

She is a graduate of Harvard Law School and Harvard College. Ms. Kennedy received the New York County Lawyers' Association Award for Outstanding Public Service in 1993, and in 1999 was awarded a Wasserstein Public Service Fellowship from Harvard Law School. She is an adjunct professor of environmental law at Fordham University School of Law.

Mr. Zalcman.

MR. ZALCMAN: Thank you for that introduction. I appreciate the invitation to be here among so many friends and colleagues and to be among this very distinguished panel.

I have worked with all of these individuals since my arrival here in New York in early 1994, and I have [the] utmost respect for all of them. [I] commend them to you, and congratulate you for assembling such an august body.

At least until the more recent events of the California energy crisis and the Enron debacle, we have seen tremendous momentum for a greater move towards competition in the electric and natural gas industries. That move to competition in state after state has typically been accompanied by a jettisoning of the state energy planning processes. This elimination of forward-looking planning was justified at least in the hopes and expectations that, through greater competition [and] market forces, we would see an appropriate mix of energy resources at the state level.

Perhaps it was simply a case of inertia, but, for whatever reason, here in New York State we retained our state energy planning process. I would rather believe that, rather than simply by accident, it was more of a conscientious decision and a recognition of the value of energy planning, at least through the transition to competition and, I would argue, even in the context of a more competitive environment in electric and natural gas delivery.

To my mind, the essential value of the state energy planning process is that it forces us to look prospectively, to develop policies and programs not so much in the context of today's problems, but tomorrow's.

In New York we are very fortunate that our state energy planning process is very open, very transparent. It is analytically driven. Bill Flynn has a tremendous staff of people who have developed analyses really of the highest caliber, unimpeachable credentials, and those analyses provide advocates with a tremendous resource. You know, we can argue about the implications of that analysis, but at least it is

based on more quantitative information and objective fact. And it forces us to look at energy issues every four years to put energy policy front and center.

Now, I would also argue at a more substantive level that the value of a state energy planning process is [that] it forces us to confront the capacity of our energy system to deliver public interest values — not simply looking at the delivery of electricity or natural gas at the lowest commodity price, which is important to be sure, but to look at other public interest values: energy affordability, fuel diversity, energy security, and especially environmental quality.

Now, we are fortunate to have with us today as panelists several individuals whose life work has been to advance these public interest values; more specifically, to reduce the still very enormous environmental footprint of the electric power sector.

Our panelists will be discussing many aspects of the 2002 State Energy Plan and its bearing on environmental quality.

Now, as you may or may not know, the 2002 State Energy Plan was released in draft form in December of 2001. Bill Flynn and his colleagues on the State Energy Planning Board have been riding the circuit, so to speak, taking public comments from Buffalo to Long Island. And indeed, today marks the end of a supplemental opportunity for parties to provide written comments to the Energy Planning Board.

The 2002 Plan, I think, will be especially important because it really represents the convergence of several perhaps disparate processes, and our panelists will be discussing these here today.

First, the Draft State Energy Plan reports out the preliminary findings of the Greenhouse Gas Task Force, a Blue Ribbon panel appointed by Governor Pataki to examine ways to reduce New York's contribution to greenhouse gas emissions. Tom Peterson from the Center for Clean Air Policy has been intimately involved in that process and, no doubt, will be sharing with you the work of that group.

Secondly, the State Energy Plan provides a vehicle for evaluation and review of policy options for implementing the Governor's Executive Order, Executive Number 111, which calls for up to 10 percent of the State's facilities' electricity requirements to be met through renewable energy resources by 2005; and then, an even more ambitious goal, 20 percent by 2010. Here, I believe, Dave Wooley will be focusing his comments on opportunities for renewable energy.

Thirdly, the release of the State Energy Plan coincides with the sunseting of New York's Article X process for the siting of new generation facilities. I think this step provides an important focal point for consideration of necessary modifications to Article X and, more broadly, the relationship between the Article X process and state energy planning. I believe Kit will be focusing some of her comments on that aspect of the State Energy Plan.

So, I guess, without further ado, I will turn the floor over to Bill Flynn.

Again, I appreciate you having me here today.

MR. FLYNN: Thanks, Fred.

Fred Zalzman is one of the leaders here in New York with whom NYSERDA deals, and I will talk more about the collaborative efforts of NYSERDA. But I want to know who gave you my presentation, because I have nothing to say now because Fred has said it all.

First of all, I would like to thank the people here at Fordham for inviting me to be here.

A little personal commercial. Eric Montroy asked me some time ago to be on the panel today. As Fred mentioned, I have been running around the state doing [the] Energy Plan, so I have been a little bit busy, and I was not able to commit early on. I did not know that he was a Montroy of the western New York Montroys. If he had told me that he was a western New York Montroy, since I am from Western New York, I would have signed up nice and quickly. He is lucky.

And I am very happy to see his father here with us today, the guy with his head bowed right now, Terry Montroy, in the back. Terry and I went to LeMoyne College, another Jesuit institution, and as I told him earlier today, he graduated decades ahead of me. But my only message to you, Eric, is [that] your father, when I got to the District Attorney's Office, was one of those attorneys who came through the door that over time became somebody who I looked up to and very well respected in Western New York. I know for a fact that your father is one of the most-well-respected attorneys in western New York. I do not know you that well, but if you become half the lawyer that your father is, you are going to have a very promising career. So thanks for having me here.

I also have a couple other people here from NYSERDA, Sharon and Michael in the back. They are not even attorneys, but they are checking on me, making sure, and will report back to NYSERDA on how I did.

I would also like to thank the panel besides Fred, Kit, and David. Again, I will get into more about how we do things at NYSERDA. They are two individuals and their organizations, along with Pace and a lot of other ones across the State, that we reach out to, that are stakeholders with us when it comes to energy, environmental, and economic development, and we try to balance those views and interests.

We have some of the best people in state service, [and] in public service, that work at NYSERDA. And I am not just saying that. I am sure everybody up here on this panel will say that, as Fred has already commented. But we are humble enough to know that we do not have all the answers. [W]hat we do know is where to find the people who do have the questions and who have the answers, and then there is a professional dialogue that goes on to seek results. These people are several great examples of the types of people that NYSERDA reaches out to [in order] to accomplish what we try to do, whether it be in our programs or our Plan.

So, enough of the commercials. Let's get into the presentation.

[Slide] NYSERDA, New York State Energy Research and Development Authority. I am going to speak to you with two hats on today: my NYSERDA hat as President, and also my hat as Chairman of the Energy Planning Board.

[Slide] A little bit about NYSERDA. We were established in 1975 by the State Legislature.

Our mission right now is to identify solutions to the State's energy challenges in ways that benefit the State's economy and the environment, and also forge public/private partnerships. The key word there in that third bullet is "partnerships." As you can see, [in] some of the other areas, we partner off with people.

Our process at NYSERDA is to reach out to the public, to get their input, whether it be for NYSERDA programs or to be on the Planning Board.

[Slide] Also, at NYSERDA some of our responsibilities:

- Research and development. [This] is the backbone of the Authority. That is what the Authority has been doing for twenty-five-plus years.
- Next is the System Benefits Charge administration. I will give you some more specifics later.

In 1998, through deregulation, the Public Service Commission put out an Order where they divested themselves from the public benefit programs that the utilities used to do in the State. However, the Public Service Commission felt that it was important enough that those

programs continue [so] the Public Service Commission signed up NYSERDA to be the administrator of that program statewide, but for the territories of the Long Island Power Authority, the New York Power Authority, and, at the time, the service territory of Rochester Gas & Electric. So we administer programs across the State, starting in 1998, and I will get into that more.

- Next, energy planning and analysis. The Chairman of NYSERDA has a seat on the Siting Board, which I am sure Kit will get into a little bit more.
- The President of NYSERDA has a position on the State Energy Planning Board, of which I was then chosen to be Chairman.
- We helped with the Greenhouse Gas Task Force, as Fred mentioned, [which] the Governor put together for input into the State Energy Plan.
- The Executive Order 111, which I will touch upon, and [with] which David is intimately involved with.
- And, last but not least, public awareness of energy efficiency, which is a component of our administration of the System Benefits Charge.

[Slide] NYSERDA funding. In 1995, approximately \$25 million. That was from [the] statutory general fund, funding from the State budget for research and development, and federal grants that we competed for.

Fast-forward to 1998. Boom, it triples because of the System Benefits Charge. At that time, beginning in July of that year, it was a three-year program, approximately \$75 million per year for three years. Those three years, as we call it SBC-1, are over. There will be a report coming out in the next several months about the findings of our administration of the program which we are very happy with.

We have an SBC Advisory Board that consults us, all made up [of] the stakeholders on the outside, which David serves on and NRDC serves on. Fred is on it, and then we have people from businesses, from the utilities, from the State Business Council, a wide variety of people, probably about twenty or twenty-five people who counsel us on the administering of the program. Then they have to report back to the Public Service Commission about the job that NYSERDA is doing.

Then, in 2001, January of 2001, the Public Service Commission extended the program for another five years, so that would make it eight [years]. They doubled the amount of annual monies for the

program to approximately \$150 million. So we are now just starting out the first year of administering a five-year program at around \$750 million over the next five years.

So, [with] \$750 million plus [which] we have already done, at the end of the eight years, we will have administered approximately \$1 billion of public benefit programs in the State.

But that is not the best of it. The best of it is those monies, on average, get leveraged at approximately two/two-and-a-half-to-one. So when all is said and done, over an eight-year period, we will be doing public benefits programs of around \$3 billion just here in this State.

[Slide] Of that money, over the next five years, a little pie chart here.

Of course, since it is St. Patrick's Day, they made the biggest slice of the pie in green. Energy efficiency will make up most of it. That is industrial, commercial, and business oriented. That is about \$438 million, or 56 percent of the program.

Over in the light purple is low income. That is from the SBC-1 programs. Proportionately, that received the largest jump from the first three-year program to the next five-year program.

Then, the R&D program. Above and beyond what our research and development people do with the \$17 million statutory funding, they now have over the next five years, a little over \$200 million to do research and development in the SBC program.

[Slide] Let's look at the Planning Board. NYSERDA, as I told you, is on the Planning Board, and myself as Chairman. The other four members of the Energy Planning Board are the Chairperson of the Public Service Commission, the Chairman of Empire State Development, Commissioner of the Department of Public Transportation, and the Commissioner of the Department of Environmental Conservation.

Through the planning process there have been some recommendations that if the extension of the planning process goes forward, there would be some additional members of the Planning Board. They have talked about the Consumer Protection Board, the Department of Health, and a representative from Parks and Recreation. If one and/or all of those happens, or if somebody gets taken out of it that will be discussed in the Legislature. But those are some of the ideas about the future makeup of the Planning Board.

[Slide] That legislation is in Article VI of the State Energy Law. In that legislation are some of the responsibilities that the Energy Plan has to take care of, which are the bullets that you see in front of

you: forecasting; assessment reports; issue reports, which Fred touched upon; environmental impact statement; helping guide energy decision-making; and information and filing requirements.

[Slide] Now, Fred touched upon the process. It is a four-year process, but obviously it gets accelerated as you get to the goal line. So I would say that in the four-year process, by when we get to the summer of last year, to use a sports analogy, we are inside the red zone. We are now inside the twenty by December of 2001, and that is when we issued the Draft Energy Plan. Subsequent to that, by law, the Energy Planning Board had to [hold] three public hearings statewide to seek public comment, [and] also take in written comments.

Four years ago they held five public hearings. Given that I wanted to make sure that we did more than [we did] four years ago and the fact that energy is such a hot topic, we did nine this year: Buffalo, Rochester, Syracuse, Binghamton, Albany, Watertown, two in Manhattan, and one in Mineola.

We just finished that process. As Fred told you, the public written comments close as of 5:00 p.m. today. And, as of yesterday, the tally that was running [revealed] we had received over 700 written comments on the Plan, over 400 people attended our nine hearings; and we had over 200 people testify at those hearings, some of them here today.

Beyond the people that we work with, we had people from all across the State [who] worried about residential weatherization programs, utilities, [and] Article X. We would spend a full day at those sites taking their comments and their ideas, which, by law, we have to respond to in the Final Plan.

So, needless to say, back at the shop at NYSERDA they have a lot of work to do, just based upon the numbers that I gave you, making sure that those issues that people raised during that issue-seeking process are addressed in the Energy Plan.

We are looking at tentatively issuing the Plan sometime in May of 2002. And, as I said before, they will be incorporated.

On the bottom there you see the website (www.nyserda.org). [Y]ou can receive [the Draft Energy Plan] through our website, or, if you want to stop me afterwards and give me a business card or an address or whatever, we will be more than happy to send you a copy of it.

[Slide] The Energy Plan itself. The mission is to provide broad statewide energy policy direction to people across the State, the Legislature, [and] decision-makers, whether they be at the state or local

levels. Also, [to] support a flexible, market-based approach to growing the State economy, improving the environment, and improving implementation systems.

Next is trying to put together a blueprint to inform the decision-makers, [and] to hopefully ensure customer choice, a well-maintained energy infrastructure, an efficient transportation system, and obviously, adequate energy resources and diversity.

[Slide] Some of the objectives:

- (1) To support safe, secure, and reliable operation of the State's energy and transportation system's infrastructure.
- (2) Promote a cheaper, cleaner, and healthier environment.
- (3) Stimulate sustainable economic growth through greater reliance on market forces.
- (4) Increase energy diversity in all sectors of the State's economy through greater use of energy-efficient technologies and alternate fuels.
- (5) Ensure fairness, equity, and consumer protections in an increasingly competitive market economy.

[Slide] Some of the recommendations that are in the draft and that we are still working on:

- Re-authorize Article X, which is the plant siting process. There is no doubt, I believe, in the Planning Board's mind that we do need increased generation, and we believe that power plants will have to be sited. But those power plants that will be sited need to be cleaner and more efficient for the public.

[W]e could sit here and discuss [the Article X process] all day, as Kit and I had to do about two weeks ago up at Albany Law School. The forum there was a full day on just Article X. I did somewhat discuss the issues there. It was a discussion on the Article X process. It was very interesting, very invigorating. We took that information and incorporated it into the plan.

But the views of the Article X process — a large, large, large majority believe that the process should continue. A very small minority says let it lapse.

What is going to be the difficult part is if it goes forward? Do you leave it in its present state or do you change it? And, if you change it, how do you change it? Is it too slow, too fast? Are the monies put behind it? Maybe Kit is going to get into that issue more. But it

is a very involved issue and one that I hope everyone here in the audience keeps their eye on.

- Next is Article VI of the State Energy Law, continue to do energy planning. There are those people, believe it or not, who think that planning is a waste of time. I humbly disagree with those people. I think, done in the open process by which the Planning Board has done it, and to come out with the type of information and document that Fred and I have just mentioned, that planning can be a tool to help businesses, environmental groups, and academia, to help them plan for the future when it comes to energy and the environment.

Now, in the old planning process it was forecasted out twenty years. You know, quite frankly, I do not know what is going to happen in twenty minutes, let alone twenty years. That is way too far. One of the recommendations in the Plan is that we take that twenty-year forecast period and push it back to ten years, which is a much better way of looking at the future of energy and environment and economic development here in New York State. So I hope that we are able to follow through on that one.

- The Center for Clean Air Policy. As Fred told you, I am on the Board. You have one of the speakers here today, Tom Peterson, and I see that Nat has delegated his responsibility here to Tom today, so a Board Member will talk to you, the Executive Director.

The Center for Clean Air Policy is facilitating the Greenhouse Gas Task Force that the Governor put together. David is on it. [Inaudible] from NRDC is a representative on it. And they too — it kind of mirrors the State focus that NYSERDA puts together when we do our energy efficiency programs — are looking at just the greenhouse gas implications of the Energy Plan. I believe that we are going to have a meeting here next week, on the 21st. The work of that group will be incorporated into the Plan. I will let Tom get into more of the specifics there.

[Slide] I touched upon energy diversity, which is an ever-increasing issue because of security and the environment. A couple of bullets here which the Board believes in are:

- Increasing energy efficiency in all sectors.
- Increasing renewable energy, which is just music to David Wooley's ears.

- Supporting clean coal technology, which is not music to David Wooley's and Kit Kennedy's ears.
- Supporting biofuels R&D, which is music to Kit's and David's ears.
- And to become the national leader in distributed generation deployment, which I hope is music to everyone's ears here in New York State, because if we are going to build new clean generation, that means that our economy is going up, and that is a good thing for all of us.

[Slide] A couple of highlights of some other recommendations:

- Security was an issue before the 9/11 attacks, and obviously even more so now today. But I do not mean security from the perspective of protecting the infrastructure — Jim Kelstrom [phonetic] is heading up that effort here in New York State — but energy diversity is also energy security, where we have to become less reliant on the oil situation over in the Middle East.

All the plants right now that are on schedule in the Article X process are all going to be powered by natural gas. And, quite frankly, I do not think the Energy Planning Board sees that as necessarily a real good thing. There have to be other means of power for generation, whether it's wind or solar or geothermal. But there needs to be a mix so that we don't become, let alone reliant upon oil from the Middle East, but we just don't become reliant on one source of energy here in New York State.

- Support investments in electricity distribution, maintenance, expansion.

I will go over quickly the next two slides. I hope this information is in your packet.

[Slide] This just gives you an idea of peak electricity demand from 2000 to 2021. As I said before, you know, twenty years is tough to do. But if there is any place where they have people that can get it close to right, it is NYSERDA, working along with the other members of the Planning Board and getting input from the outside.

If you do not have these, I can get them to you. I do not want to waste much time on it.

[Slide] The Executive Order. The Governor came out with the Executive Order. That is the one good thing about being President of NYSERDA, is that we have a Governor who is the national leader when it comes to energy and environment. He is a firm believer that

you can increase economic development at the same time you can increase environmental responsibility. I firmly believe in that.

- The Executive Order 111 is an example of that, because if you are going to talk the talk, you've got to walk the walk, and the Governor did that through this Executive Order here.

As you can see, 35 percent reduction in energy consumption by 2010, coming up with some reduction strategies:

- Trying to build new buildings, at least in the State infrastructure, that will be "green" buildings.
- Procurement of energy-efficient products through the Office of General Services.

And then, the last two:

- The purchase of renewable power, which David Wooley was very helpful in helping us craft in 111. Ten percent of State facilities by 2005 and 20 percent by 2010.
- And then, if you have been reading about the Federal Energy Bill, they have been arguing over fuel efficiency standards. Well, in alternate fuel vehicles, the State fleet, non-emergency vehicles, the fleet has to be AFV's, 50 percent by 2005 and 100 percent by 2010. That is very aggressive, but there is no doubt in my mind that we have the people that are putting that plan together and that we can get it done, especially when the Governor tells you to get it done.

[Slide] The last slide is the Executive Order schedule. It has been implemented. We continue to meet on a regular basis. It is an opportunity for business and the environmental community to get involved with the State agencies and to follow up on the Executive Order.

So that is a real quick run-through of the Energy Plan. If you have comments or questions, I will jump in at the appropriate time. But there are some issues that I have raised [for which] there are much better people than I, and some of them — one sitting to my right and two on my left here — can get into it a little bit deeper.

So again, thank you very much for having me, and I will turn it back over to Fred.

Thank you.

My bonus is that I get to introduce David Wooley. I know they pumped him up earlier with all his background. David is the type of person that if you need something he is always there for you — and

sometimes when you do not want him around, he is always around. He is a great advocate on behalf of his cause, and he is a very good friend of NYSERDA. It is my pleasure to turn the microphone over to my friend, David Wooley.

MR. WOOLEY: Thanks, Bill.

I was only half-kidding when I said I wish I was Bill Flynn, because Bill is heading up a very important effort and has both huge responsibilities and a huge opportunity to really set the "light attracts" essentially for the energy future and the environmental future of our State, our region, and I think our country.

You know, I have worked in two closely linked areas — that is, energy policy, particularly as it affects the electricity sector, but also in air quality policy. In addition to the work I am doing with the Wind Energy Association, I also work with the Clean Air Task Force, which represents citizen groups throughout the eastern United States in efforts to try to force a cleanup of older power plants, and serving as counsel in a number of the so-called new source review cases that have been brought against power producers in the Midwest to try to essentially get modernization and upgrade.

So every day I am dealing with this deep interaction between both energy policy and environmental protection. I think that they are so closely linked you cannot separate them, but not linked in the sense of being a trade-off, one against the other. I think that is the wrong way to think about these two issues.

Rather, I would submit to you that to achieve a secure and low-cost electricity and energy supply for the long term you would pursue exactly the same sets of policies that you would pursue to protect the environment and public health. I think this is because both the economic and environmental risks are traceable directly to a growing dependence on imported fossil fuels, and I think that if we can get to the heart of that matter, we will have both a cleaner environment and a healthier economy, an economy that is producing more jobs.

I just want to give you a couple of things from a historical perspective about where we are in New York right now on energy, and then go through what I would call a "facing of facts."

Historically, in the recent past there have been some major changes in the electricity sector. We have restructured our electricity sector to be more reliant on market forces and less on regulation, though there certainly continues to be a mix. The same is true in the natural gas supply and marketing at both the national and state level.

And we have had some recent lessons to learn about how you cannot rely exclusively on markets. The debacle in California, you

really cannot underestimate the dire impact [it] has had on the economy and the environment of that state. I mean, literally, there is not enough money for elementary schools because of serious policy mistakes that ended up pumping a bunch of money into people's pockets in other states for electricity that did not have to happen. Certainly, the Enron collapse is another example.

We really have to look at a mixture here of market incentives and forces and regulations if we want to move forward.

But we are currently still facing a shortage of electricity supply. I think we are going to see that we are facing a strain on natural gas supply over the longer term.

All of this kind of comes from our history of both good and bad things that have happened in the State.

On the good side, we have made a lot of investments in renewable energy historically in New York. An example that I like to turn to is the investment made by the State in the 1930s and 1950s and later in the hydroelectric facilities, really on the frontier, made at a time of incredible economic uncertainty in the State, made at a time when the private sector had no ability to make those investments. They were very high capital cost in the beginning. And what was the result? Today the lowest-cost part of our electric supply.

We also were an early advocate of air pollution control nationally. New York City got off coal in the late-1960s/early-1970s.

New York was an early proponent of acid rain control in the 1980s, which also led the nation, by setting a standard and getting out front and becoming a leader.

On the other hand, we have had some mistakes, too. We had some disastrous investments in nuclear power. It is not only a problem in the past, but it is literally true that today there are policies being put forward that would essentially discourage investment in distributed renewable generation out of a concern that they will interfere with paying off all that nuclear power debt.

So the point is that decisions we make in energy policy have extremely long-term consequences, not only for the environment but for the economy. We have to think in terms of twenty-, thirty-, fifty-year timeframes when we talk about energy policy.

Okay, a few "facing of facts." New York, New England, Mid-Atlantic, most of the mid-Atlantic states, are fossil fuel-poor states. We do not have much, if any, coal, natural gas, or oil. And we are essentially — and one of the reasons we are there, one of the reasons why we are in the situation we are today, is the fact that there has been a fifty-year national policy to put deep subsidies into oil, gas,

coal, and nuclear energy development that has essentially brought us to this point of dependency on those kinds of resources.

We are increasingly dependent on natural gas here in New York, based on long-distance pipelines. That is a risk not only from a security standpoint, but from the standpoint of price volatility that we do not have very much control over because we do not produce it here.

The transportation sector, heavy reliance on a doddering 17th-century monarchy, and maybe in the future some of that dependence will shift towards Russia. Great. You know, that is a huge risk for you, and I think we've really got to do something about that.

At the same time, we've got this abundant, untapped energy potential in two areas: first, renewable energy — wind, solar, biomass; and second, energy efficiency.

I am going to talk a lot about renewable energy, but probably, if I could focus your attention on one thing, it would be efficiency, because every building, every industrial facility, we have in the State could cut their electric consumption by 20 percent through energy efficiency, which would have a short payback. So don't forget about energy efficiency even if I am really talking mostly about renewables.

- **Renewables:** We could be [producing] 10 percent of our electric supply with wind energy in ten or fifteen years if we really applied ourselves. Today the technology is advanced to the point where it could produce power at quite low cost over the long term. We have excellent wind resources stretching from the western side of the Catskills all the way to the Great Lakes and from the Pennsylvania border all the way to the Canadian border. There are ridge line, ridge line, ridge line, high plateau, all the way through there, often in farmland and often easily developable in a way that produces strong economic development effects in those communities.
- **Solar:** We have excellent solar resources here that could be tapped not only by small residential-size photovoltaic systems, but by large-scale systems, (in the future, I envision) 500-kilowatt/1-megawatt systems on essentially every warehouse and shopping center and commercial building roof in the city. That potential really would exist if we were to seriously pursue that technology.

- Biomass: Farm-based biomass could displace 20 percent of the coal use in our existing coal-fired units. We could do a tremendous amount with methane production, again farm-based. That is an economy that needs a break, needs a little bit of support.

So we have this huge untapped potential.

[Slide] On the environment side, we have persistent air quality problems: acid rain, urban smog, mercury contamination, climate change, all largely — not exclusively, but largely — related to the electric power sector.

I cannot emphasize enough the importance of really focusing on what I think is a looming climate crisis. I read a story just a couple of days ago that talks about new research showing that the Arctic could be ice-free in the summer by 2050 — ice-free. Think of the implications of losing the polar ice cap in the Arctic in terms of ocean currents, biodiversity, fisheries. The climate really is facing a serious problem.

One projection was that Glacier National Park on the northern border of the United States with Canada could have no glacier in thirty years.

There is an acceleration. There is a feedback mechanism that I think is quite alarming, and we really need to focus on it.

Finally, one of the “face the fact” points, and one of the things I think we should all keep in mind, is that New York cannot solve all these problems alone, but it has an enormous influence over what its neighbors do and over what the national policy does. I think that is particularly true with Governor Pataki in the Governor’s Mansion because he has such enormous influence and has such a good record and reputation in this area. There is an enormous opportunity that has to be seized over the next few years to project that influence and really influence what happens nationally and internationally as well as regionally.

In terms of the State Energy Plan, there are a lot of good things in that Plan.

One of the things that I [would] like to quote is a statement by Governor Pataki in his State of the State Address, just a couple months ago: “I will introduce a program to improve our environment and reduce our dependence on imported foreign energy by leading the nation in the development and deployment of renewable energy resources by biomass, solar, and wind power. By doing so we cannot only clean our air but also create new industries, expand

markets for New York agricultural products, diversify the State energy supply, and increase our security." So that is a good mandate.

The Plan talks about the procurement mandate for State agencies; expanding net metering, which would be a way of encouraging people to make investments in wind, solar, biomass on their facilities, on their farms, [and] on their buildings. It talks about having the New York Power Authority and the Long Island Power Authority mak[ing] investments so that there are more renewables in the portfolio of generation resources they rely on. It talks about examining the possibility of a renewable portfolio standard which would essentially say: "If you want to sell electricity to New York, you are going to have to have a certain amount of renewables in your generation mix." And it talks about tax incentives.

This is the right mix. The message that I am trying to project in the comments on the Plan and in my contacts with the State Government is we need more detail here and we need more specific consequences.

If there is a criticism I have, it is that I am worried that there is a certain amount of complacency about a couple of the projections that are in there, and here are the things that I think we should avoid.

Even though they are really expressed in the Plan as a projection of the future, ("here is what we think will happen") — and these may be accurate baseline projections — my point is we ought to have a plan and a commitment to avoid the following:

- A 72 percent increase in a natural gas basis for our electricity supply. Risky, very risky.
- A 24 percent increase in coal usage over the planning period.
- A 21 percent increase in gasoline.

We are headed in the wrong direction, and we need to take some dramatic actions to move in a different way.

I want to conclude with one point and a series of recommendations that I hope all of you will consider and, if you agree with me, get your voices heard in the State Government.

One is that we really need to lead the nation by establishing, as some of our neighboring states are doing, a cap-and-trade system for greenhouse gas emissions in the electric power sector. I think that we [have to] do something that is at least as strong as what the New England governors and eastern Canadian Provinces' premiers committed to last summer. If New York were to do that, it would not

only boost the effort that those leaders have done, but also take the lead. I think that this is the time to do it and we cannot put that off.

Article X is the electric power siting statute that is expiring. The question is what should we do — should we renew it; should we change it? Kit is going to say a lot more on that.

- But the one thing I would urge is that if you are going to do something that makes it easier to site large-scale fossil-fuel-dependent generators, we better also balance it with something that creates opportunities to expand distributed renewable generation. I really think we have to be very, very careful to stop suppressing distributed generation, which I am afraid we are doing with some of the Public Service Commission policies which are in play right now regarding exit fees and standby charges.
- We should adopt a renewable portfolio standard and the State Power Authority should make rapid moves to increase the amount of renewables in their generation mix.
- At the same time, we should promote consumer choice of “green” power supplies.

I think that the two are compatible, to have both a regulatory mandate that all retailers have a certain amount of renewables in their mix, but also on top of that give consumers the opportunity to buy more renewables than is in that base mix. There is too much at stake for us to rely on one or the other, and we should pursue those at the same time.

- We should set a statewide goal of 4,000 megawatts of new renewable energy generation.
- In the mobile sector, I think we really need to begin to turn the corner towards shifting a portion of our mobile sector energy use away from imported fossil fuels and toward electricity, toward biofuels and hydrogen.

I think that if we do all these things in the electric sector relative to renewable energy, we are going to create the ability and the capacity for the electric sector to supply in a clean way some of our needs in the mobile sector.

A couple of general things:

- Do not rely only on markets. We need a mixture of market mechanisms, incentives, and policy.
- Take the longer view, with an emphasis on self-reliance and on indigenous resources.

- And finally, let's turn to our own people for the solutions. Let's turn to our farms, our wonderful talent in people who understand the engineering, electricity. We can do a lot with our own people, our own resources in New York, for energy efficiency and development of renewable energy. I think that is where our strength is and that is where we ought to turn to for the solutions. New York has got the ability to do this not only for itself but for the nation and, I think, setting a standard for the world.

Thank you very much.

MR. ZALCMAN: Thank you, David.

As you were speaking, I had in my mind's eye a great big ocean liner. I think you have given a nice policy prescription for how we can begin to turn that ocean liner around.

Our next speaker is Kit Kennedy from NRDC. Kit and I have co-counseled together on several key New York Public Service Commission proceedings. Kit has been really one of the most articulate voices within the environmental community for sound public policy. Kit will be speaking to, in particular, the need to revisit our policies for the siting of new major generation facilities and other policy measures, again, to begin to turn the course of this great big ocean liner.

Kit?

MS. KENNEDY: Thank you, Fred. It is a pleasure to be here.

At this forum the Fordham Environmental Law Journal is asking an important question: how can society balance its need for energy while ensuring that the environment is protected and preserved? This is a timely debate here in New York because, as you have been hearing about, we've got the Draft State Energy Plan.

Here it is. I am going to show it to you so you can see what it looks like. You have about five hours to e-mail in your comments if you are interested in shaping energy policy in New York. You can go right to NRDC's Web site, www.nrdc.org, and we have a sample letter all written and waiting for you to send to Bill and express your views. It is really important for as many New Yorkers as possible to know about the Energy Plan, to know about the energy situation in New York, and to weigh in.

As all the panelists have said, NYSERDA has really done a great job in putting together the facts and analysis in this Plan. You can look at this. You can understand where we are now in New York and where we need to get to have a better energy future; what the

potential is for renewable resources like wind, solar, and biomass, which David was talking about; what the potential is for energy efficiency.

What we need to do is take this Plan and add to it recommendations and a plan on how we get there, what are the specific action steps that the Public Service Commission has to take, which the Legislature has to take here in New York, which the Governor has to take, and which Congress and the President have to take nationally, to get us into a good situation.

Before I get to the topic of energy efficiency, which I am going to talk about a little bit, as well as power plant siting, I just want to go back a bit and give you a bit of perspective on why electricity generation is so important to the environment. These are kind of the basics, but a lot of people do not know about them.

The electric generation sector nationally here in the United States produces two-thirds of the nitrogen oxides which are the key component of urban smog, which exacerbates asthma, hurts people through promoting lung disease, and makes us all cough on the hot, smoggy summer days. Two-thirds, that is a staggering percentage.

The electric generation sector also produces two-thirds of sulfur dioxide emissions which cause acid rain, which are threatening the Adirondacks and other beautiful areas that we all care about.

The electric generation sector produces a third of the carbon dioxide in the United States. Global warming is a key concern everywhere, including in New York. As we sit here today, having gone through this very warm winter, looking at a drought situation threatening us this summer, we all have to contend with the seriousness of the threat of climate change, and carbon dioxide is the key gas.

Power plants in the United States also produce a third of the mercury emissions, and mercury, as we all know, concentrates in fish and poisons people who eat them.

Power plants in the United States also have a big impact on our lakes, rivers, and oceans. Older power plants use a tremendous amount of water to cool down their systems. They take in the water, killing fish through the intake process, and killing smaller fish and fish eggs as they go through the cooling process, and heat gets transferred to the water and effectively boils the fish.

So we know we have a lot of problems from the existing fleet of power plants.

We also know that we need electricity. We have a huge need for electricity. It is something that we count on, we need a reliable supply, and that is a basic proposition and unassailable fact, too.

So where are we? Is there a conflict between our need for a cleaner environment and our need for electricity to power our homes, our schools, our hospitals?

The answer, as David said, is absolutely not. That is because we have tremendous technologies at our disposal which we can use to improve the way we use power and the way we generate power. This is all talked about in the Energy Plan.

David has talked a lot about renewable resources and distributed generation. These are all technologies that we have today, we know how to use today, and we need to get them out there, overcome barriers to having people put a solar panel on their roofs or a fuel cell in their basements to provide cleaner power for their own homes.

I want to talk a little bit about energy efficiency, which has to be part of the mix. After all, when we look at a situation where electricity demand is going up — and we are seeing that certainly in New York — there are two ways to address that issue: we can build new power plants, and we can also reduce demand through better energy efficiency programs.

Energy efficiency programs take a number of different forms:

- If you own a business, you can have experts come to your business to show you how to use less electricity, how to switch from motors that use more electricity to motors that use less electricity. They do the same job; they are just a lot more efficient.
- The same is true in your home. If you replace the washing machine in your basement from a top-loaded washer to a front-loaded washer, you can save a tremendous amount of electricity and water at the same time.
- If you buy a new air conditioner, NYSERDA has got a great air-conditioner rebate program going. You can trade in your old air conditioner that maybe does not work so well and uses a tremendous amount of electricity, get a new one that will keep you just as cool but use a lot less electricity. It will save you money, and NYSERDA will also give you a small check.

MR. FLYNN: Seventy-five dollars.

MS. KENNEDY: Seventy-five dollars. I did it last summer.

So these are really win/win programs. When we talk about energy efficiency, we are not talking about the days when Jimmy Carter wore a sweater in the White House to show that he had turned down the thermostat; we are not talking about freezing in the dark. We are

talking about being as comfortable as ever but using a lot less electricity.

Where are we in New York with energy efficiency?

We've got NYSERDA, which has great programs, and NYSERDA's staff is really unsurpassed in designing and implementing great programs. But the limits they face are limits of funding basically.

Bill explained how last year the System Benefits Charge, which funds energy efficiency in New York, was doubled, and that was a great event. But it is still true that, even after the doubling of our System Benefits Charge, we are still below where we were in New York in the early-1990s in terms of energy efficiency funding. We probably have to double our SBC again to get to where we were in 1993 or 1994. That is something we can and should do. We should increase energy efficiency funding.

We should increase the length of the program to ten years so that we know that these programs are going to exist and continue to exist, so consumers can really get to know about them and use them.

Another way to promote energy efficiency is through taking another look at building codes and appliance standards. New York made a great improvement on this just last week. Very quietly, without any fanfare, New York adopted a new Building Energy Code, for the first time in ten years. Just that one change alone, that one improvement in New York's Building Energy Code, is going to save half-a-million tons of carbon dioxide a year from making sure that our buildings are built in such a way that they use less electricity. So that is a great achievement, and we need to follow on that success with other standards for appliances and for buildings and standards that will set a minimum which cannot be surpassed in terms of electricity usage.

What are the barriers to energy efficiency? What do we have to overcome to get to a situation where we really are realizing our potential for energy efficiency?

One is funding, which I have talked about. You want NYSERDA to have more money to do what it does so well.

Another important barrier which people really do not know about is the way we regulate our utilities. Right now, Con-Edison makes its profits based on how much electricity it wheels through its wires (it sends through its wires). This is for all utilities in New York. I don't mean to pick on ConEd.

It gives utilities an incentive to have its customers use as much electricity as possible, rather than an incentive to promote wise al-

ternatives to electricity where they are the least-cost and environmentally-best way of meeting customers' electric needs.

There are some folks in the audience today who are in the business of distributed generation, trying to sell customers solar panels, fuel cells, micro-turbines. And, unfortunately, these businesses meet tremendous resistance from utilities because they do not want their customers to be more reliant on renewable sources or more reliant on energy efficiency, for the simple reason that they will make less money.

We can change that through changing the way we regulate utilities. Again, something similar was done in the early-1990s, although we think we know how to do it better now. We should be rewarding utilities, not for sending more electricity through their wires, but through meeting their customers' needs in the least-cost, most environmentally beneficial way. So that is another one of our recommendations for the State Energy Plan and for promoting energy efficiency.

So we need more energy efficiency. We need more renewable energy.

Do we need more power plants? Yes. That is also an important part of the mix. When we build new power plants that use the best technology, that are sited appropriately, we are increasing the possibility that they will replace some of these dirty, old power plants which cause so much pollution. It is also one way of reducing electric prices for consumers. It can and should be part of the mix.

The challenge as we look at new power plants is how to ensure that we do not just build, build, build, [but] that energy efficiency and renewables stay part of the mix. And, how do we deal with the additional environmental impacts that even the cleanest fossil fuel plants are going to produce?

As Bill mentioned, most of the power plants that have been sited in New York over the last two years — and six power plants have been approved by the Siting Board in the last two years, totaling over 3,000 megawatts of power — they are all combined-cycle natural gas power plants. When I say they are combined-cycle, I mean that they use natural gas very efficiently, about twice as efficiently as older power plants, so that they can produce twice as much electricity using the same amount of fuel. So they are much, much better than coal-burning plants, than oil-burning plants, than even the old natural gas plants, but they still have impacts for the communities where they are sited.

One of the ones that is being most discussed and talked about now is fine particulate pollution from power plants. Scientists are increasingly realizing that it is these various fine particles that are emitted from a number of sources, including power plants and diesel vehicles, that really cause the most serious health impacts on people, including lung disease and heart disease. We've got to address this and deal with this as we site new power plants and as we try to clean up the existing power plant leech that we have.

There have been a number of mentions of New York's Article X law which governs power plant siting for larger power plants, power plants of 7 million megawatts and up. There is a lot of debate about Article X, which is going to expire at the end of this year.

Some people think the problem with Article X — everyone seems to think there are some problems with Article X, but some people think the problem is that it takes too long to site power plants. Other people think that the process should take longer.

I think our view is that Article X has some advantages, but speed is not the issue. A lot of the power plants that have been approved in the last few years have been approved very, very quickly.

Most recently, the Bethlehem Energy Center Plant up near Albany was approved in about six months, in large part because this was what is called a "repowering" project. That power company is going to shut down an existing older polluting unit and build a sort of spanking-new one right next door, and as a result, they are going to get a larger power plant, they are almost doubling the capacity of the power plant, and they are getting huge reductions in acid rain emissions and smaller contributing emissions, and they are using a lot less Hudson River water. So that is kind of a win/win situation.

So I think the idea that it takes too long for a power plant to go through Article X is becoming a bit of a myth.

Really the issues are: How do we make sure that the best power plants are approved, and that the question we ask of each power plant is not simply do they meet all the legal and regulatory requirements, but are they the best power plant in the best site?

One crucial issue here is environmental justice. If we are going to build power plants in communities that are poor, in communities that are predominantly of color, we have to make sure — we have a responsibility to those communities to make sure that their health is being protected, that their issues are being addressed. This is a particular debate in New York City, where three new power plants have already been approved in heavily populated and poor areas and where a number of other power plants have been proposed too.

Right now the Article X process just does not deal with environmental justice issues at all. In fact, in case after case, the ruling from the judges of the Siting Board has been, unfortunately, "No, you cannot even raise environmental justice concerns. You've got to deal with that someplace else." And that is one important reform for Article X.

I agree with Bill that Article X has some benefits. It provides communities with intravenous funding, so if there is a power plant being built near your house, you can get money to hire an expert and examine the impacts of the plant and to participate in the siting process. That is a real benefit.

But we have to deal with the environmental justice issue, the issue of cumulative impact of looking with particular care at areas where more than one power plant has been sited, and we also have to look at this issue of fine particulate pollution in a lot more detail.

I will close just by saying that we cannot solve our energy challenges here in New York just through having a better siting law. We need better environmental regulation, better utility regulation, in New York and nationally.

The New York State PUC has taken some great strides towards getting us there recently. Recently, they issued proposed regulations that would impose more stringent environmental requirements on older power plants. That is a real step forward, although the environmental community would like to see the cuts be even deeper to really make sure that we are reducing the impact of those old power plants and putting them on a level playing field with the newer power plants which face much more stringent environmental regulations.

We also have to ask a lot more of our President and Congress in terms of policy issues. If you have been following the debates in Congress this week, it has been pretty depressing. The Senate has recently rejected improvements to fuel efficiency standards, which were much needed and would have been a much better solution to our oil dependency problems than drilling in the Arctic, which is another issue that the Senators are going to be debating, too.

So I guess, in closing, I would urge you all to get involved in these energy debates. They affect your lives very deeply. Send Bill an e-mail, let him know where you want New York to go on energy policy issues. Call your senators and urge them to keep these energy bills strong.

MR. FLYNN: You can join NRDC.

MS. KENNEDY: Join NRDC. It only costs \$10.

Thanks for being here and spending the day on this important issue.

MR. ZALCMAN: Thanks, Kit.

All of our speakers have alluded to the tremendous potential we have for energy efficiency in the State, the untapped reservoir in our homes, our businesses, our industry.

One of the studies that I did not mention, and I do not believe Bill did, that NYSERDA is commissioning is a half-million-dollar study to take a look at the potential in New York State for energy efficiency and renewables. There has not been a study of that sort done in New York State since 1990, I believe. This should give us an important frame of reference to understand really how much potential is out there, how much can we tap cost-effectively. That study was not completed in time for incorporation into the Draft Energy Plan, but, Bill, I believe you will have some preliminary results for inclusion in the Final Report, and I would urge you all to look for that.

Our speakers have also alluded to New York's legacy of leadership on energy and environmental issues. We saw that in the acid rain debate. I think we have another opportunity here with respect to Governor Pataki's leadership on the greenhouse gas issue.

The question is often posed: Well, why should New York go up front, why should New York take steps to reduce its greenhouse emissions, when there seems to be a gridlock at the federal level?

We have Tom Peterson from the Center for Clean Air policy to talk about the work of the Greenhouse Gas Task Force and to, again, identify options for demonstrating where environmental and economic goals are congruent, where we can achieve significant deep reductions in our emissions of carbon and other greenhouse gases without impairing — I would in fact argue, in ways that enable — our industry to take advantage, in a more competitive and global marketplace, to take advantage of new and emerging opportunities.

With that, I will turn the floor over to Tom Peterson from the Center for Clean Air Policy.

MR. PETERSON: Thank you, Fred. Thank you also for acknowledging our involvement in the Energy Plan.

I know we want to have some time for discussion, so I am going to go through things at a clip.

As I look out in the audience, I have seen a few nodding heads, and I just want you know that you have no excuse. This is the third day this week that I have had to get up before the birds did, and I am in a different state each time, so if I start weaving and my eyes flutter and I forget where I am, please understand.

It also reminds me of my father, who was a scientist at the National Institutes of Health for many years. During one of those years and assignments, he was doing a briefing for a number of high-ranking people in the military. He was, as it turns out, the last speaker on a panel. By the time his turn came along, every single person but two in this group had fallen asleep. So he was encouraged and enthused, he had an audience of at least two, so he jumped into things. At one point during his presentation, he turned around to demonstrate something on the chalkboard, and when he turned back the last two had gone to sleep.

So, hopefully, we are off to a better start, and we will hold you just for another fifteen or twenty minutes here.

Sleep deficit is a sort of interesting theme. I've got a little girl who's ten months old, so I have been through a lot of that. But one of the most severe cases I ever saw was in Geneva, Switzerland, when I was at one of the climate negotiations, and one of our lead negotiators, on about the third or fourth day, was trying to hold a conversation with me about what was going on. He would periodically stop in the middle of a sentence, sort of begin weaving, his eyelids would go back and forth, and I wasn't sure whether he would come back; and then, remarkably, he would pick right back up in the middle of a sentence, and we got through a conversation.

The bottom line was that there were some things people were negotiating somewhat in their sleep. This is not atypical of treaties, but there are those who believe that it had something to do with some of the difficulties we have had in that treaty process.

A lot of what I would like to talk with you about today actually is the response that New York State and other states are making to the vacuum that has been created by the failure of the United States to become a part of the international treaty that has been adopted for greenhouse gases. There is this very big theme of state and local governments stepping up to the plate in the absence of federal action on the greenhouse gas issue. This is nothing new. The same thing happened on our acid rain and mercury controls in the past.

This had a lot to do with the creation of the Center for Clean Air Policy. It was formed in 1985 really as a breakaway group from the National Governors Association out of frustration with the acid rain issue, in the interest of promoting market-based approaches to advance that.

The New York Greenhouse Gas Task Force, as Bill mentioned, really has two principal goals: one is recommendations for the State Energy Plan; the other, separately but on a parallel track, is recom-

mendations for a greenhouse gas plan for the Governor. Both of them are on-track, I guess, for roughly May/June. The Center is chairing the analysis in both of these and facilitating the Task Force, the folks here and many others.

[Slide] The starting place. I will not get bogged down in the details, but it is important to know that the platform that has really made this discussion possible is the work that NYSERDA has done on inventorying energy and greenhouse gas emissions in the State and then forecasting that forward under different scenarios. Without that basic background work it would be very, very difficult to have a conversation.

The main takeaway point here is the smallest slice of the pie in terms of emissions in New York is industry, and the largest slice is transportation. And we see this nationwide, where the biggest sources of unresolved problems are typically those that involve a large number of small emitters — transportation, residential, commercial — not that the power generation sector is not still a predominant sector, but these other sectors, lots of folks, smaller creators of emissions, but in aggregate that is really the nut we've got to crack.

[Slide] The forecast that NYSERDA has done. I will not get bogged down in this, but again, I do not want anybody to underestimate the importance of having this ground-level work done in advance to be able to deal with these issues.

[Slide] Some targets that have been set outside of New York on greenhouse gases recently. As Bill indicated, one of the key goals for this whole process in New York is to set a statewide target. Part of the consideration for that target is the top-down process of determining what we think it should be and what others are advising it can and should be, and what a reasonable and achievable goal might be. You can see where these other states, cities, regions, and countries have come out.

The general reference point that is being used for the targets is the base year of 1990. The New England-Eastern Canadian Premiers Agreement has set a goal of stabilizing 1990 emissions by the year 2010 and cutting 10 percent beyond that by the year 2020. You can see that is actually one of the less stringent of these targets.

I think you are going to be seeing a lot more of these emerging at the state and the local level in the coming year and thereafter, and in no small measure because of the absence of a strong federal target.

[Slide] I will not spend too much on the process.

[Slide] Some of the key decisions the Task Force has to make:

- Setting a state-wide target and then translating that down to the sectors through either quantitative or qualitative goals and targets.
- Figuring out which policy mechanisms need to be used to implement all the different sectoral actions that are identified.
- Setting the targets.
- Another big decision that has to be made is designing and implementing a reporting system for emissions. I do not want you to get bogged down in the methodology of what we are doing, but we have a fairly intensive process that is combining analysis and stakeholder input and review. Part of that is bottom-up.

We are doing a lot of hard work in actually costing out and sorting out individual actions to see which of those really make sense in terms of reporting. Some of this is what we call top-down, trying to get some aggregate sense of really what the state could and should do.

[Slide] A key piece of this, which I will get into in a minute, is the overall policy architecture of the State. The note I will make there is that many of you have probably heard a lot of discussion about cap-and-trade programs and climate change. I have been working on this issue for a while and have a fair amount of experience at the national and international levels on the issue.

The great hope a few years ago was that the whole thing could be fixed with one policy mechanism: if you just design the right cap-and-trade program, all the different sectors that play in that, all the different actors, will be incentivized [sic] by that.

I do not think that is going to happen anytime soon. As a consequence, that is one of a couple of different key mechanisms that have to be employed. What we are doing in New York is bringing all those things together under one hood.

There is a not-insignificant issue over the criteria that need to be considered in figuring out which actions the State should be recommended to undertake. It would be nice if this was a purely empirical, "cookie cutter" sort of an exercise. It is more complicated than that, and it is a process that requires a lot of review and input from everybody involved.

[Slide] The policy mechanisms that we are focused on:

- Cap and trade I mentioned.

- Something called “negotiated agreements” or “covenants.” These are agreements that are made with entities or sectors that give them some graduated scale of energy efficiency or emissions efficiency, and so they enter some agreement that says, “We will promise to continue to get more and more efficient.” Typically, that is in return for something.

New Jersey has a very well developed program that exchanges some regulatory incentives for this. The Dutch have a very well developed program on negotiated agreements that we have spent a fair amount of time working on.

- Regulatory approaches. One of the great opportunities is to look at existing approaches and how carbon dioxide and other gases can be added to that so they can be targeted and made more effective.
- Similarly, the funding mechanisms. One of the large opportunities that exists in the State is to look at the expenditure of funds on infrastructure and services that have energy and emissions implications and seeing if those could be targeted more effectively.
- Public Benefit Charge Funds. We have a very significant project at the Center looking at how public Benefit Charge Funds could not only improve energy efficiency and renewable energy but reduce emissions in the process. So targeting those funds.
- Open space protection funds could be targeted to reduce transportation demand by encouraging land use efficiency.
- Highway funds, transportation funds. In general, there is an enormous opportunity to target those expenditures so that they will be more efficient.
- And probably the best example of all, which we have spent a fair amount of time talking about here in New York, is the redevelopment of New York State trade incentives, ensuring that that process moves forward in a way that is efficient both in terms of on-site energy efficiency and then in terms of maintaining growth downtown instead of having it escape out into decentralized areas that require a lot more transportation demand. It is the smart growth issue.

- Voluntary programs continue to be important at getting started, getting actions started in particular areas. In some cases, these are important ongoing programs. They certainly are part of the mix.
- And then, measurement and reporting is something that we feel very strongly is sort of like a glue that holds us all together. You've really got to be able to track what is happening at a base level with emissions and then also the effect that different programs have on reducing them.

[Slide] This all plays out into a matrix. Depending on the action you are talking about, it fits in this box, one of these boxes somewhere. So part of what we are doing in this process is figuring out what goes in which box and then how these boxes all work together in a coordinated system.

[Slide] We made a series of recommendations to the State Energy Plan. We did that back in November. That is a subset of the recommendations that will be made to the Final Greenhouse Gas Plan. Some of the key ones:

- A base multi-pollutant cap for the power generation sector.
- Significant increase in renewable energy.
- You can see, at the cross-cutting level setting a State target, and then putting a mandatory inventory registry in place, something that will ensure that we have a very clear and ongoing understanding of where the emissions are going and whether they are changing.
- And then, there is a long list in transportation, a long list there, and that I think is reflective of both the importance of that sector and its complexity.
- I have talked a little bit about the inventory registry. I think we can move on from that.

[Slide] I just wanted to zoom in on one particular piece of this puzzle — and mind you, when it is complete, we will have a comprehensive picture for all the sectors — but one sector I thought you might be interested in seeing a little bit more about is transportation.

I am going to put some federal numbers up just to give you the drift of where things are. These are largely reflective of what is happening in New York State, and I will show what we are doing in New York.

Cap[tion] A, you can see since 1990, things have flattened out in a big way. Very significant issues, political and technical, about get-

ting those lines back up so that we are actually on a reduction path. As the previous speaker mentioned, the news this week from the Senate is not particularly glowing in terms of getting these lines moving back upwards again. So it does not appear that the simple fix of doing something like Cap A is going to fix transportation.

[Slide] Here is the next reason why. Historically, we have out-driven the gains we have made in technology and pollution control in the transportation sector because of the rate at which people drive in this country. That rate is twice population growth and is increasing.

Vehicle Miles Traveled, VMT. This is the transportation demand issue. There is a very clear sense that unless transportation demand is addressed in some meaningful way, there is little hope that transportation efficiency will improve in some substantial way.

[Slide] Just another quick slide. This is something I did back when [I] was at [the] EPA, some research on development patterns in the United States. That big blue block there is land consumed by houses, single-family new homes that are on ten acres or more. Each of those other blocks is based on lot size. The next block is five-to-ten acres, and then one-to-five.

The basic story here is that we have been consuming an enormous amount of landscape. The figures on the density of single-family homes in this country are that we have doubled the amount of land for single-family homes that we use since the 1950s. It has gone from a little bit less than an acre now to about two acres, and it is increasing. We are becoming less dense and we have much poorer access to basic services than we used to. So the proximity and density implications of these development patterns are huge for transportation. It is the sprawl and landscape issue.

[Slide] Here is some empirical work done by John Holslaught [phonetic] that shows this relationship between density and VMT. This gets into the quality-of-communities issues, all the issues of infrastructure and services in growth locations that you have to get at to deal with transportation demand.

[Slide] This is a chart that takes the laundry list in transportation and spreads it across the policy mechanisms that I referenced earlier — the measurement systems, cap and trade, negotiated agreements, regulatory approaches, funding efforts, voluntary programs — showing which of these things potentially fits where. That is something that we are discussing in the Task Force.

[Slide] So you add that all together and here is what it looks like. This is preliminary information. By the middle of next week when

we have our next Task Force meeting, we will have these curves in place for every sector.

This shows in transportation what happens when you add up all the different potential measures that are being suggested for the State. Then you start to bend this growth line down.

The yellow line at the bottom is what we call the “stretch” goal, and that is where you really reach. Each of these lines is increasing in stringency. The black is business as usual, the green, the blue, and the gold. An enormous amount of effort goes into getting down below where we are today, but we are able to dissect out which things you need to do to get to which level and what that involves, and so a lot of our discussion is how to get there from here.

By the way, that does not include Cap A. I could have thrown up another line that shows what happens if you add Cap A to that. It bends it down a bit, but it is not the be-all/end-all.

[Slide] The next steps:

- We need to do more analysis. We are very serious about the work that happens in New York and the announcement in New York, having concrete detail behind it, having some real justification, so that it is not a rhetorical goal that is set based on hopes and wishes, but has some real strong analytical rigor behind it.

We have been just absolutely delighted with the support Bill Flynn’s group at NYSERDA has provided and the other state agencies. This is a really, really hard process, putting all these numbers together. There is more work to do there.

- We also need to more clearly define the mechanisms that will be used for implementing all these different measures that we have identified and how they are sequenced, because a lot of these things are going to be difficult to do immediately. They are going to take some forward evolution.
- We need to fold these together in targets.
- And we need to identify contingencies. There are things that can be done with the Governor’s authority at present, things that will require legislation, and then there are things that will require federal action as well. So a lot of what potentially can be done will require additional agreement outside the Governor’s authority, so we need to get some more clarification on those things.

- A final note is there is a real potential, we think, we hope, that the work that happens here in New York and the leadership the Governor has provided can be translated into stronger action in other states. We certainly are hoping this will have an impact on the strength and the specificity of the New England Agreement that currently has a set of targets but does not have the level of detail that we are contemplating in New York.

We are hoping that this could influence other states to think about the process of putting a target into place and a comprehensive plan, and that this will help as a general response, at the state level, to this vacuum that exists right now in terms of the lack of federal action. We think that this is not necessarily a bad thing, that the states are finding the need to step forward, because we do regard them as laboratories of democracy. We think states always should have been leaders in this process of dealing with global climate change, and this is a wonderful, wonderful way for one of the strongest states in the country to show how that can be done and to lead others.

I really appreciate the invitation to be here. I would be happy to answer any questions and get into the discussion. Thanks.

MR. ZALCMAN: Thanks, Tom, for helping round out the future.