

CITY COUNCIL
CITY OF NEW YORK

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TRANSCRIPT OF THE MINUTES

of the

JOINT COMMITTEES ON ENVIRONMENTAL PROTECTION
AND TECHNOLOGY

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February 25, 2010
Start: 01:00 pm
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HELD AT: Hearing Room
 250 Broadway 16th Fl.

B E F O R E:

JAMES F. GENNARO
Chairperson

DANIEL R. GARODNICK
Chairperson

COUNCIL MEMBERS:

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G. Oliver Koppell
Peter F. Vallone, Jr.
Brad S. Lander
Stephen T. Levin
David I. Weprin

A P P E A R A N C E S

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Richard Sobel
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Mike Bergey
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Joe Polidoro
Green Cities Energy

CHAIRPERSON GARODNICK: For green technologies and projects throughout the city. First we're going to hear on the subject of oversight on opportunities for wind power in New York City.

An incredible 75% of greenhouse gas emissions and 85% of water use in New York City are attributable to our buildings. The Mayor's 2007 plaNYC called for a 30% reduction in greenhouse gas emissions by the year 2030. And in 2008, the City Council and the Mayor reaffirmed that commitment by passing it into law.

Green technologies and efficiencies in buildings represent the best way to achieve such reductions. Throughout the city, green technologies are gaining ground, which is demonstrated by a growing number of LEED certified buildings. While these building projects are a great first step, the city can go further in promoting green technologies and efficiencies, particularly in preexisting buildings. These technologies would especially benefit the residents of New York City. All around, it is without loss, it is a great opportunity.

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2 In July 2008, the Mayor and the
3 Speaker asked the Urban Green Council to conduct a
4 review of the current building codes and make
5 recommendations on how they could be amended to
6 promote more sustainable practices. Their final
7 report was released on February 1, and this bill
8 is the first of many improvements to the building
9 code that will promote the use of green
10 technologies.

11 This bill would create an
12 interagency green team and an innovation review
13 board. This green team will facilitate the use of
14 innovative technologies, design and construction
15 techniques, materials and products that will have
16 a significant environmental and sustainability
17 benefit.

18 The green team will strive to
19 promote interagency cooperation and best practices
20 so that everyone can be on the same page when it
21 comes to protecting our environment. The green
22 team will work with innovators so that new
23 technologies will not die a slow death as they
24 meander through the system. We want to act fast
25 and be a leader in environmental technologies.

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2 This bill will prevent the city from being weighed
3 down by a lack of coordination among agencies.

4 The innovation review board will be
5 led by the commissioner of buildings. They will
6 meet to review specific innovative projects that
7 will use new technologies, design or construction
8 techniques, materials or products. This will give
9 the Department of Buildings the appropriate
10 resources to act fast and eliminate obstacles that
11 stand in the way of implementing these
12 technologies. This review board will streamline
13 approvals for these specific innovative projects.

14 Our goal is to make it easier for
15 new technologies to be employed in our buildings.
16 Our current system can be an impediment to the
17 implementation of new and good ideas. The green
18 team and the IRB will help to make our system
19 conducive to development so that our city can
20 stand at the forefront of green technologies.

21 With that, we're going to get right
22 into it. On behalf of the administration we have
23 Rohit Aggarwala, who is here. I think we have
24 representatives of the Department of Buildings as
25 well, but Mr. Aggarwala is going to present the

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2 testimony on behalf of the Mayor. We welcome him
3 and thank him for being here today.

4 Again, we've asked to bifurcate
5 this hearing so that we're going to do the
6 testimony first on the legislation and second on
7 wind power. We apologize for that, but we want to
8 be able to accommodate Chair Gennaro so that he
9 can be here for that portion of the hearing.

10 Rohit, go ahead.

11 ROHIT T. AGGARWALA: Thank you,
12 Council Member. So any mistakes I make this time,
13 you'll get to fix in half an hour. Good
14 afternoon, Chairman Garodnick and members of the
15 committee. My name is Rohit T. Aggarwala. I'm
16 the Director of the Mayor's Office of Long-term
17 Planning and Sustainability.

18 I appreciate the opportunity on
19 today's Preconsidered proposed local law to amend
20 the City Charter and the Administrative Code of
21 the City of New York in relation to streamlining
22 approvals for environmentally beneficial
23 technologies, design and construction techniques,
24 materials and products.

25 I'm joined, as I will be later on

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2 as well by Deborah Taylor, the Chief
3 Sustainability Officer at the Department of
4 Buildings, who will assist me in answering any
5 questions that you have about the Preconsidered.

6 First of all, I'd like to
7 reiterate, as I often have opportunity to do, my
8 appreciation of your, the Council's, several
9 individuals on this committee and the staff's
10 efforts on behalf of the City Council and New York
11 to make the city a leader by example in planning
12 for a sustainable future. I won't actually repeat
13 all the things that you just said about the
14 importance of buildings, but you can read them in
15 my submitted testimony.

16 We agree that that city has to
17 continue to raise the bar for construction methods
18 and building energy performance. To that end, the
19 Mayor and the Speaker did jointly announce the
20 Urban Green Council to assemble the Green Codes
21 Task Force. And as you've pointed out, we're all
22 very proud of the great world class work that they
23 submitted to us jointly on February 1st and we
24 look forward to future collaboration with the
25 Council in the review and implementation of many

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2 of these recommendations.

3 Among the task force's
4 recommendations is that the city continue to
5 streamline approvals for sustainable technologies
6 and projects through the creation of an
7 interagency green team, convened by the Office of
8 Long-term Planning and Sustainability and an
9 Innovation Review Board convened by the Department
10 of Buildings.

11 Recognizing the importance of
12 exercising its existing charter authority to
13 permit, in specific cases, experimental or
14 demonstration practices not in compliance with the
15 Building Code, the Department of Buildings has
16 independently established the Building
17 Sustainability Board to expedite the review of
18 green technologies. The building mounted wind
19 turbine pilot process is actually a good example
20 of what we've already done, although it also
21 highlights the opportunity that could be addressed
22 by the Preconsidered Intro.

23 The Preconsidered Intro would act
24 on the recommendation of the task force by
25 establishing the interagency green team and it

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2 would expand on DOB's work thus far with the
3 creation of the Innovation Review board. As the
4 market for green technologies continues to develop
5 alongside public awareness and policy, there will
6 be times where the cutting edge of these new
7 technologies, design and construction techniques,
8 materials and products does not fit into the
9 city's existing regulatory structure and therefore
10 faces significant obstacles to implementation.

11 Furthermore, as energy technologies
12 and building systems become more integrated and
13 complex, they often do require review by an
14 increasingly diverse base of expertise. Today's
15 Preconsidered Intro seeks to overcome these
16 obstacles by putting into place a process to
17 coordinate and expedite the city's consideration
18 of new technologies and building techniques.

19 One thing I'd like to add here
20 that's not in my written testimony is that just as
21 part of the Preconsidered Intro in some ways
22 formalizes and establishes permanently a practice
23 that the Department of Buildings has started,
24 which I think is a productive thing for the
25 Council to act on because it ensures that I'll

live beyond the discretion of this administration.

In a similar way, there have been a number of instances where in an informal way my office has already worked with other agencies in specific examples of innovative technology, specific locations or building projects where new technologies or new designs were getting hung up in the permitting process where we have convened an interagency working group. So I think we welcome the idea that the Council would act to formalize these and make them permanent.

CHAIRPERSON GARODNICK: Thank you very much for your testimony and also for the critical role that you have played personally in making all of these new initiatives possible through planNYC, the Greater Greener Buildings plan, which we were very enthusiastic to approve here in the Council last year.

Let me ask a couple of questions about the interagency green team and then I'm going to go to some of my colleagues and I will come back and ask a few more questions if they're not already asked about the Innovation Review Board.

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2 You noted that this is going to be
3 a team that will be headed by the Office of Long-
4 term Planning and Sustainability. And as the
5 legislation describes, its purpose is to
6 facilitate the use of innovative technologies and
7 will assist innovative projects in addressing city
8 agency regulatory requirements.

9 Help us understand what the problem
10 is here. Why are we having this conversation?
11 Why is there a need for an interagency green team?

12 ROHIT T. AGGARWALA: That's a good
13 question. The place we start is that
14 sustainability is inherently interdisciplinary.
15 It's the reason that we have lots of
16 sustainability efforts going on in different
17 agencies but there still is a need for a Mayor's
18 Office of Sustainability to coordinate them all to
19 make sure that agencies are thinking along
20 coordinated lines to make sure that opportunities
21 aren't falling between the cracks.

22 I think the way that we might think
23 about it is that technologies that are well
24 established essentially are the technologies that
25 the existing silos--not to be overly negative

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2 about it--but the existing structures of city
3 government were actually built around it.

4 So if you assume that a building is
5 a self-contained structure and then eventually it
6 connects to the sewer system and it doesn't go
7 very far below ground, then keeping a completely
8 separate Department of Buildings' approach to
9 permitting what's in the structure and a separate
10 DEP sewer permit makes sense and you're never
11 going to drill that far down. When you introduce
12 a concept like geothermal into that structure, you
13 begin to require a much more interagency
14 coordination and interagency thinking than we
15 formalize.

16 This doesn't mean the existing
17 structures are bad. It means that they are well
18 tailored to address existing technologies. And it
19 also doesn't mean that the agencies are
20 necessarily trying to get in the way of new
21 technology. It is just that we're dealing in a
22 structure that was not designed to handle these
23 things. And this is a way that we can essentially
24 create that interagency coordination without
25 losing the focus.

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2 I don't think it would make sense
3 to say this means that the way we've structured
4 the water/sewer system and the way we've
5 structured the Department of Buildings is now
6 obsolete. I wouldn't agree with that. We just
7 have to make sure these connections get made.

8 CHAIRPERSON GARODNICK: You have
9 done some of this work already in coordinating
10 among agencies. That's truly even part of the
11 mandate of your office today. What will be the
12 process for involving agencies across the table
13 from you to ensure that they're collaborating and
14 working together here? Do you envision something
15 that is a more routine nature? Where you meet
16 periodically to evaluate specific challenges that
17 are out there? How do you envision this working
18 specifically?

19 ROHIT T. AGGARWALA: Deborah can
20 chime in on some of this because she and I have
21 worked very closely on. In fact, probably all of
22 the examples of this have involved Deborah Taylor
23 in some way because she is the leading
24 sustainability and green person at the Department
25 of Buildings and has done spectacular work in so

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2 many things.

3 I would envision this best working
4 as something that would have infrequent standing
5 meetings but then meet as necessary when things
6 come up, which is really how we've done it. I
7 think it is reasonably well reflected in the
8 legislation or in the drafts that I've seen most
9 recently.

10 It would create the opportunity,
11 for example, a couple of years ago, wind
12 geothermal was fairly new. There were a lot of
13 questions about how many different agencies were
14 needed to permit different aspects of it. And
15 people were getting hung up on standards that were
16 being interpreted different among different
17 inspectors, different agency's rules or approaches
18 or philosophies because the rules weren't really
19 there, that were seemingly at odds.

20 In a lot of ways, the solution
21 comes up when you simply convene the conversation
22 and you figure out what each agency is trying to
23 do. Because we can't lose sight of the fact that
24 most of these agencies are very rightly first
25 thinking about the public safety and then thinking

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2 about the fact that they have the legal obligation
3 to conform to the law. But we're all working
4 together in a spirit of constructive problem
5 solving. It doesn't mean that every project gets
6 approved. And I think that's one of the things we
7 can't kid ourselves.

8 We'll talk a little later about
9 building mounted wind turbines. We're very
10 enthusiastic about that. But the fact that you've
11 got moving devices that are not yet tested that
12 could have vibration effects, or that could have,
13 on a day like today, the throwing of ice or
14 something onto a sidewalk. These are real
15 concerns that we have to be therefore cautious
16 about how quickly we bring things into practice or
17 where we choose to put them into a pilot phase to
18 start.

19 So I think it's really a question
20 of when we have a specific example that has come
21 to our attention and we would make it known to the
22 building community and to others in the green tech
23 community that we are seeking these kinds of
24 examples and then that instance gets solved
25 around.

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2 And usually what happens is it
3 educates the different departments and the
4 departments themselves begin to routinize the way
5 that they handle it, as we saw at the Department
6 of Buildings with the Building Sustainability
7 Board. So it becomes less of a one-off exception,
8 maybe graduates into a formal pilot project. And
9 then once there is enough data that we can think
10 about establishing formal permanent rules, it can
11 get worked into the Building Code.

12 CHAIRPERSON GARODNICK: So let's
13 just work with the example that you gave on the
14 subject of a new technology, a new plan where
15 there's a question as to how many agencies
16 actually need to issue a permit. You convened
17 this group and you've got DOB and you've got DEP
18 and you've got DOT and everybody else sitting
19 around. I just threw in DOT. I don't know if
20 they actually would have any interest in that.

21 But they're all sitting around the
22 table and they all feel that there is a safety
23 rationale for them to have to issue a permit on
24 that new technology. So what happens next? This
25 Green Team does not have the authority to say

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2 we're taking all of those concerns and we're going
3 to issue a new permit that we will be able to say
4 yes or no to. How do you move from there in a
5 swift and collaborative way to ensure this thing
6 gets done and doesn't essentially continue to have
7 the problems that it would have if you went to
8 each agency independently and hit a roadblock?

9 ROHIT T. AGGARWALA: For example,
10 one of the devices that Deborah and her team at
11 DOB designed was when we had to develop the rules
12 on the Green Roof tax credit, which we know we've
13 had a lot of learnings from. It was a brand new
14 thing. Nobody had really ever defined a green
15 roof before. But one of the things that knowing
16 there were a number of hurdles for people to get
17 that tax credit, the Department of Buildings
18 essentially assigned an ombudsman to be the single
19 point of contact to help people work through the
20 system.

21 I think, to your point, I don't
22 think it would be a smart move to try to take
23 permitting that's for the purposes of public
24 safety away from the people at given agencies just
25 because we want to see a technology move forward.

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2 But the correct balance to strike is to make sure
3 that things aren't falling through the cracks
4 because of a lack of imagination or a lack of
5 willingness to put some extra thought into it.

6 I think the right answer is we're
7 simply going to have to put the extra effort in to
8 help the pioneers through what's almost
9 necessarily going to be a difficult process. The
10 delays and the uncertainties are the things that
11 we can easily squeeze out, even if it's not the
12 number of permits. And then again, as there is
13 body of knowledge about how these things play out,
14 then we can make it more routine and do so with
15 full confidence that we're not endangering
16 anything.

17 CHAIRPERSON GARODNICK: I want to
18 go to my colleagues in a second. I want to note
19 that we've been joined by Council Member Levin
20 from Brooklyn and Council Member Vallone from
21 Queens.

22 On the subject of how we speed that
23 along, and I just want to push this point because
24 I want to make sure we all understand. That even
25 if you are convening, even if you are identifying,

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2 and even if there is a desire to try to find the
3 right route to an approval here, it seems that
4 those permitting structures still stay in place.
5 How will you speed it along in that instance? How
6 can you, even with this bill, speed it along?

7 ROHIT T. AGGARWALA: The biggest
8 single challenge is not, I think, the simple
9 number of permits. If we were going to try to do
10 that we'd be taking a very high risk approach that
11 may or may not actually solve the problem. The
12 place that we can help is making sure that
13 agencies are interpreting things consistently with
14 each other. Speeding up the response times so
15 that things don't linger, because if a given issue
16 is being addressed in an interagency working group
17 meeting that's run out of the Mayor's Office will
18 almost always get faster attention than something
19 that's just going through a normal process.

20 Most of what I understand about the
21 building community and the technology
22 implementation community is that they don't see
23 the number of permits as being the main obstacle.
24 It's the duration and often the sequence where
25 they have to get one permit and then the next one

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2 and then the next one. And if it's intended to be
3 30 days between each permit, that's only a couple
4 of months. When each permit goes from 30 to 90
5 days, then all of the sudden you're in years. And
6 that's when the number of permits begins to hurt.
7 If we can speed all that up, then even without
8 removing any of the statutory roles that an agency
9 has to play, which we should do only with great
10 deliberation, we can still have a big impact.

11 CHAIRPERSON GARODNICK: So
12 essentially we're talking about a contemporaneous
13 review, allow you all to put it on the top of the
14 list for a variety of agencies all at the same
15 time so it's not done in sequence, if I understand
16 you correctly.

17 ROHIT T. AGGARWALA: I think that's
18 fair. I'm just conferring with my more expert
19 colleague here about whether there's anything
20 she'd like to add.

21 DEBORAH TAYLOR: Good afternoon.

22 CHAIRPERSON GARODNICK: Identify
23 yourself please.

24 DEBORAH TAYLOR: Deborah Taylor,
25 Chief Sustainability Officer with the Department

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2 of Buildings. I can give you another good example
3 which I think will illuminate this for you. Three
4 and a half years ago or so, we began to be
5 approached by manufacturers of micro-turbines. We
6 began to find that there were installations of
7 micro-turbines, some of which, as we determined,
8 were not safe installations for various reasons.

9 We assembled a task force, of which
10 Rohit's office was a part, but also on that task
11 force were there the Fire Department and various
12 stakeholders in the industry. REBNY was a part.
13 Engineers and architects were a part of that. Out
14 of that came the rule that we developed in 2007 on
15 micro-turbines.

16 Following that, we realized that
17 there were still problems because there were
18 problems with approvals by the Fire Department and
19 there were problems with approvals with ConEd. So
20 we have subsequently developed yet another task
21 force, which Rohit's office is again a part of,
22 that works with Con Edison, working with the
23 manufacturing community and we have now brought in
24 also DEP, because they are now concerned with the
25 increase in cogeneration in the city. They're

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2 beginning to watch for the emissions from those
3 cogeneration plants. So they have concerns about
4 that.

5 It would greatly expedite all of
6 this if we had had the Mayor's Office in the kind
7 of group that you're talking about in this bill be
8 able to assemble that team directly, respond to it
9 directly, and work through all of the approvals'
10 processes.

11 CHAIRPERSON GARODNICK: Thank you
12 very much. With that, I am going to go to one of
13 my colleagues, Council Member Lander.

14 COUNCIL MEMBER LANDER: Good
15 afternoon. It's an honor to be here. Thank you,
16 Mr. Chairman. It's my first Environmental
17 Protection hearing and I'm looking forward to
18 working with the committee and with the
19 administration on this really important set of
20 goals.

21 I have a couple of questions about
22 agencies that aren't listed in the legislation,
23 one permitting, and two, that have a lot of
24 buildings. On the permitting side, the Landmarks
25 Preservation Commission, I chair the Subcommittee

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2 on Landmarks. In December, an applicant came to
3 me before I joined the Council, who was trying to
4 achieve passive house status and was having a
5 challenge with LPC because they wanted double hung
6 windows and he had found some very innovative
7 German windows that looked double hung.

8 So it seems to me that there ought
9 to be some place to include them, not nearly as
10 regularly as some of these other agencies. So,
11 maybe in that tier of folks who can be brought in?
12 But I don't know what other technology issues will
13 present, but they do permit and so I think ought
14 to be included here.

15 And then I wonder about the role of
16 agencies like the School Construction Authority
17 and NYCHA who obviously have a huge number of
18 buildings and where it seems like, to the extent
19 that this is going to be partly elaborate. Some
20 of this is about permitting and streamlining, but
21 some of it is about figuring out what works and
22 getting knowledge and getting to scale on those
23 things. Do you see a role for them here and how
24 might that work? Does the legislation need to be
25 adjusted?

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2 ROHIT T. AGGARWALA: To your first
3 question, Landmarks, I believe, in both of the
4 entities established by this legislation falls
5 into the kind of second category where when
6 there's a matter under consideration, then either
7 the director of long-term planning or the
8 commissioner of buildings has the ability to bring
9 them in.

10 CHAIRPERSON GARODNICK: I will jump
11 in to say that they are for both the Green Team
12 and the Innovation Review Board.

13 COUNCIL MEMBER LANDER: Sorry, I
14 just missed it.

15 ROHIT T. AGGARWALA: Sure. SCA and
16 NYCHA, that's an interesting question because what
17 you're positing is less of their role as, for want
18 of a better term, "the problem", you know they're
19 not one of the agencies we're trying to coordinate
20 here but rather learn from.

21 I would argue that we are pretty
22 well plugged into what SCA and NYCHA are doing
23 through some of the other things that have to
24 inform this, which is the 30 by '17 effort to
25 green city property, the close partnership that my

office has with NYCHA already in terms of their work and with the Clinton Climate Initiative and others to green their own properties.

It is possible that there is a way to incorporate that in the legislation. I'm not convinced it's necessary quite honestly because I think we'll do it regardless.

COUNCIL MEMBER LANDER: Thank you.

ROHIT T. AGGARWALA: Sure.

CHAIRPERSON GARODNICK: Thank you, Council Member Lander. Next is Council Member Vallone.

COUNCIL MEMBER VALLONE: Thank you. I read the testimony. Did you take a clear position on this Introduction?

ROHIT T. AGGARWALA: Yes. We're comfortable with it.

COUNCIL MEMBER VALLONE: Good to know. Because I'm the Council Member who represents the district right now that provides 80% of the power for the entire city. So anything we could do to force us to rely less on traditional power sources and more on solar and wind and things like that. Did you have any

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suggestions on how to make this bill even better?

ROHIT T. AGGARWALA: Sorry, we did not actually put forward any specific suggestions.

COUNCIL MEMBER VALLONE: Let me give you that chance to do that now. Before we pass it, is there anything else you'd like to see in it or any other assistance we can provide to you to streamline its processes as much as possible?

ROHIT T. AGGARWALA: I think we've had the opportunity since we have a good collaborative relationship with the Council staff, I think we've been able to give some suggestions already and I think we're pretty comfortable.

COUNCIL MEMBER VALLONE: Thank you.

CHAIRPERSON GARODNICK: Thank you, Council Member Vallone. Ms. Taylor, a question for you on the subject of the Innovation Review Board. We talked a bit about the Green Team and Council Member Lander talked about both. But let's just talk about the DOB and the concept of Innovation Review Board almost sounds antithetical to innovation, just as a bureaucratic-sounding title.

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2 So let's understand from you how
3 exactly you anticipate as a department to identify
4 whether a new project identifies a new technology
5 here. What will that mean for you? How will you
6 know to spark up the Innovation Review Board?
7 Perhaps, we could have more artfully described
8 that one. I mean Green Team sounds pretty cool,
9 Innovation Review Board perhaps less so. But how
10 do you identify it? How do you trigger this
11 group?

12 ROHIT T. AGGARWALA: We're going to
13 have the capes.

14 CHAIRPERSON GARODNICK: Okay.

15 DEBORAH TAYLOR: We regularly get
16 approached by manufacturers, by architects and
17 engineers with new products and with new
18 technologies. So they come to us with these.
19 There is a section in the construction codes which
20 we have been pointing up considerably lately and
21 that's 28 and 113 which says that if a technology
22 or a material is not addressed by the codes, then
23 it has to be approved by the commissioner.

24 So anything that's new that comes
25 to the department that comes into the city that is

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2 not addressed by the codes will be subject to the
3 review of this board. That assumes that the way
4 it comes to us at that point in time is a really
5 viable and well documented technology.

6 CHAIRPERSON GARODNICK: So, if I
7 understand you correctly, today if it's not
8 specifically enumerated by code, it goes to the
9 commissioner? Is that what I heard you say?

10 DEBORAH TAYLOR: Technology that's
11 correct. We have a board that does review these
12 technologies right now and makes recommendations
13 from a technical standpoint to the commissioner.
14 So we would see this board being a level above
15 that where if there were stakeholder interest in
16 this technology or proposal, then we would elevate
17 that to the Innovation Review Board.

18 CHAIRPERSON GARODNICK: But we're
19 not adding another level are we? I mean, what I
20 want to make sure about is that we're not adding
21 another level of bureaucracy that new technologies
22 would need to go through. If it's replacing that
23 advisory committee to the commissioner, that is a
24 good thing. If it's the advisory committee to the
25 commissioner which will decide if it's going to

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2 the Innovation Review Board, that's not such a
3 good thing.

4 DEBORAH TAYLOR: All of these
5 technologies that come to us, there are very few
6 experts about them. And just by definition, there
7 is nobody in the city that has very much
8 experience with them. So we really need to go to
9 industry experts. We need to go to mechanical
10 engineers and we need to go to water engineers.
11 We need these real experts to advise us on just
12 the technical aspects of these technologies.

13 Once we get that advice and once we
14 can develop a plan as to how it could safely be
15 accomplished in New York City, then it may affect
16 unions, it may affect other agencies, it may
17 affect a number of different stakeholders. We
18 would do that anyway. We have that right now in
19 our plan. The legislation simply formalizes what
20 we already have.

21 First we have to get the proposal
22 together. We've had a number of proposals that
23 have come to us that have been very ill-defined,
24 some that simply don't want to comply with our
25 regulations but don't offer any mitigating safety

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2 factors. So we need to resolve those issues first
3 of all.

4 ROHIT T. AGGARWALA: Just to jump
5 in. I think, Council Member, your concern is well
6 founded in the sense that creating a standing
7 interagency meeting as a solution to a problem
8 with bureaucracy does have a certain irony.

9 The risks would be two, and I think
10 they are avoided by the current draft. One risk
11 is to create essentially an unnecessary drain on
12 time. Mandating overly frequent meetings that you
13 would spend a lot of time trying to schedule, and
14 it would actually wind up being a substitute for
15 people actually getting work done. That would be
16 a risk. I think this bill doesn't go so far as to
17 do that, and I'm grateful for that.

18 The other way would be if a new
19 technology had to go through one of these. So
20 this became yet another hurdle, as you put it. I
21 don't think this does. So if something actually
22 can be directly handled by the commissioner of
23 buildings because it is fully within the building
24 commissioner's control, if it only affects the
25 construction code, if it's in his purview to

1
2 change, this doesn't necessarily get in the way of
3 it. What this really does is those things where
4 the internal to DOB Building Sustainability Board
5 is insufficient because it is actually a DOT or a
6 DEP involvement that's the issue. This then
7 provides an opportunity.

8 So if you had to get the approval
9 in some way from one of these two entities then I
10 think you'd be creating more harm, but I don't
11 think that's the way it's written.

12 CHAIRPERSON GARODNICK: Thank you
13 for that answer. I think that deals with the
14 concern that I have and I'm sure others would have
15 in hearing some of the notions of creating
16 additional levels. But the key here I think we
17 all agree on is how you streamline, how you make
18 it easier and how do you not get too locked in to
19 rules so that you actually create impediments to
20 new technologies even when you're trying to help.
21 Council Member Koppell has a question.

22 COUNCIL MEMBER KOPPELL: I thought
23 that my colleague, Council Member Lander, had a
24 very good suggestion and I completely didn't
25 understand your response, Mr. Aggarwala, to that

1
2 suggestion that these boards should include
3 representatives of the New York City Housing
4 Authority and the School Construction Authority.

5 I didn't understand your answer at all.

6 ROHIT T. AGGARWALA: What I was
7 trying to express and perhaps not clearly, was
8 that the way I understand this Preconsidered is
9 that the agencies that are involved and are listed
10 are those agencies that have administrative
11 oversight over discretionary activities done in
12 the private sector. They essentially grant
13 permission for private citizens to do things, so
14 if you need a building permit or you need
15 Landmarks' approval or you need something related
16 to a Consumer Affairs' permit of some sort.

17 Whereas, Council Member Lander's
18 suggestion, the way I understood it, was that
19 because SCA and NYCHA are themselves significant
20 building actors that should they be included
21 because they might bring insight into the way a
22 landlord might think about a given technology or
23 something like that.

24 My belief or my comment was I
25 didn't think that was necessary to achieve this

1
2 goal because neither SCA nor NYCHA has authority
3 over private actors who could introduce technology
4 into a given building. If we wanted to make sure
5 we had everybody who could provide insight on that
6 as part of this board, it would be a very long
7 list and go well beyond just NYCHA and SCA.

8 COUNCIL MEMBER KOPPELL: Well, I
9 wish I had a transcript that could read back
10 because what you said is absolutely untrue. NYCHA
11 and the School Construction Authority put out
12 billions of dollars in contracts to private
13 contractors and have to make decisions in putting
14 together bid specifications as to what they should
15 in fact ask for and oftentimes are offered.

16 So it's no different whatsoever if
17 a developer wants to get a permit from the city to
18 put in a new heating system in his private
19 building or a contractor comes to the Housing
20 Authority and they're building a new housing
21 project or the School Construction Authority and
22 they're building a new school, many of which are
23 built by outside contractors. It's the same
24 issue.

25 While it's true that the public

1
2 authorities are not technically perhaps as much a
3 part of the city as the Building Department, since
4 the Mayor appoints at least most of the members,
5 if not all the members, of these authorities, it
6 is really the city acting when these permits are
7 granted by these authorities that do a huge amount
8 of construction.

9 So I couldn't disagree with you
10 more that they shouldn't be involved. They
11 definitely should be involved. In fact, I would
12 suggest they probably ought to be involved more
13 than some of the agencies you do suggest should be
14 involved. So it's beyond me that you wouldn't
15 have representatives of those large construction
16 authorities as part of this team.

17 ROHIT T. AGGARWALA: We can agree
18 to disagree.

19 COUNCIL MEMBER KOPPELL: And Mr.
20 Chairman, I would suggest that we consider
21 amending the bill to provide that. It just
22 doesn't make any sense. Do you have an answer to
23 that? Am I wrong that they grant billions of
24 dollars of contracts to private contractors?

25 ROHIT T. AGGARWALA: Council

1
2 Member, you're not wrong that they grant billions
3 of dollars in contracts. But I do think there is
4 a very different role between a regulatory agency
5 such as the Department of Buildings and an agency
6 that is purchasing and then owning and operating
7 something like NYCHA.

8 I think the role of the city agency
9 and the perspective the city agency takes on
10 technology has to be different in a regulatory
11 agency where the question is really not whether I
12 think your technology is a good technology but
13 because it's your money and your property. All I
14 should be concerned about is my regulatory
15 requirement to protect the safety of people who
16 use the building and make sure the air doesn't get
17 dirty and all of that. That's a regulatory
18 function.

19 We shouldn't be deciding whether
20 the technology itself is appropriate in a given
21 building for the economics or for the aesthetics
22 or any of those things except Landmarks and some
23 of the other places where that is a regulatory
24 role. What NYCHA and SCA are doing on their
25 property, that's actually more in the way of Local

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2 Law 86, for example, which mandated certain
3 standards for SCA construction.

4 So I do think that what you're
5 proposing, while I don't disagree that those
6 agencies wind up having a great deal of impact on
7 the way green technology is developed and expanded
8 in the city, I do think that their role is rather
9 different from what is the purpose of this
10 specific Preconsidered.

11 COUNCIL MEMBER KOPPELL: Well, I
12 couldn't disagree with you more. Why do you have
13 the Department of Design and Construction as
14 included? They don't give the building permits.
15 They do the building. It just doesn't make any
16 sense to me. Why do you have the Department of
17 Design and Construction? Because they build the
18 project, so naturally they should be involved in
19 trying to make sure that those projects utilize
20 the appropriate technology. It's the same thing
21 with SCA and NYCHA. I mean, your position, it's
22 just completely illogical to me. I don't
23 understand it. As I said, I suggest to the
24 Chairman that these agencies be included.

25 CHAIRPERSON GARODNICK: Thank you,

1
2 Council Member Koppell. Let me just make sure
3 that I understand your position and then we're
4 going to go to Council Member Levin. The
5 distinction that you're making here is that the
6 likes of SCA or NYCHA, because they are not
7 permit-issuing institutions, that they are not
8 appropriate for the bill because they're permit
9 institutions. If the School Construction
10 Authority is building something, they themselves
11 would have to get permits and approvals from the
12 agencies that are in this bill. Is that fair?

13 ROHIT T. AGGARWALA: That's
14 accurate. So if NYCHA wanted to do micro-turbines
15 three or four years ago, they would have had to
16 get a building permit and they would have had to
17 submit that to this board or this board might have
18 gotten involved. And Council Member Koppell makes
19 a good point that DDC is not quite in exactly the
20 same role as the other regulatory agencies I
21 described. I think the one difference is that DDC
22 does issue their design guidelines on a regular
23 basis which don't have to apply to city buildings
24 because they're not mandatory even for city
25 agencies. But they are a way that we seek to help

1
2 and guide what the private sector does at least by
3 example.

4 COUNCIL MEMBER KOPPELL: Mr.
5 Chairman, just briefly if I might comment.

6 CHAIRPERSON GARODNICK: Go ahead.

7 COUNCIL MEMBER KOPPELL: Of course,
8 the School Construction Authority and the Housing
9 Authority issue design guidelines all the time.

10 CHAIRPERSON GARODNICK: Thank you.
11 And I think we understand the point here, which is
12 there could be a question as to whether DDC
13 belongs in the bill, but your point is that the
14 likes of School Construction or NYCHA, they
15 themselves have to get the approvals which are at
16 question here. Let me welcome Council Member
17 Crowley who had joined us. Welcome. I'm going to
18 go to Council Member Levin.

19 COUNCIL MEMBER LEVIN: I'll just
20 make this very quick, but it's kind of following
21 up on Council Member Koppell's point and maybe to
22 clarify something. If I understand it, you're
23 saying that organizations or authorities like SCA
24 and NYCHA do not have to come before the
25 Innovation Review Board because DOB is going to be

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2 granting the permits. But is there no role for
3 these? I mean SCA certainly does a massive amount
4 of construction in the city on into the future as
5 far as the eye can see. Is there no role for them
6 in the interagency Green Team? I mean unless I'm
7 misunderstanding this.

8 ROHIT T. AGGARWALA: All I was
9 trying to express was I think they would be
10 serving a different role than the currently
11 designated or envisioned members. That because
12 they are not granting permits, they would be there
13 more in the way of providing their experience and
14 advice as a landlord, as a client of a design as
15 opposed to as a regulatory overseer of a design.
16 We have a difference of opinion. Honest people
17 can have honest disagreements and so I do that
18 with great respect to Council Member Koppell, but
19 that is the way I see it.

20 COUNCIL MEMBER LEVIN: The language
21 in this bill says, "Facilitate the use of
22 innovative technologies." That doesn't pertain to
23 regulatory requirements. That pertains to
24 innovation. I mean, they do a lot of
25 construction. I don't know how much compared to

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2 DDC, but they do a lot of construction and these
3 are our schools, they're meant to be permanent
4 structures. They're meant to be sustainable or at
5 least that's what one would hope. And following
6 under the Mayor's vision, under that aspect of it,
7 wouldn't they have a role there? Not as a
8 regulatory thing in granting permits but as
9 facilitating the use of innovative technologies.

10 ROHIT T. AGGARWALA: It is not the
11 way I've understood the intention of this bill as
12 described in the legislative findings, which to my
13 understanding is really about clearing away
14 impediments to the discretionary private use of
15 innovative technology. So that's not the way I've
16 envisioned what the role here is.

17 COUNCIL MEMBER LEVIN: Maybe more
18 broadly, do you believe that they would be a
19 counterproductive voice in the room? Would they
20 not contribute? I imagine that they would
21 contribute something.

22 ROHIT T. AGGARWALA: As I think
23 this then gets back to Council Member Garodnick's
24 question about at a certain point everybody is
25 going to have a useful role to play. We have a

1
2 number of different ways, some of which are
3 already legislative, some which are administrative
4 practices that we've put into place where many of
5 these agencies meet together or many of these
6 agencies exchange viewpoints. So it's really a
7 question of whether the resource, the time frankly
8 of the staff people at the two agencies are well
9 invested in this.

10 COUNCIL MEMBER LEVIN: There are a
11 lot of employees at SCA. I imagine that they
12 could spare somebody for an afternoon once a
13 quarter to be able to participate in those
14 discussions. I think sustainability of our
15 schools is a worthwhile goal. I wouldn't want to
16 see them be excluded or have to then go to another
17 agency to find out. If they're involved in the
18 conversation, I would think that that would help
19 to streamline at least the processes that pertain
20 to schools. At least they'd be part of that
21 conversation

22 DEBORAH TAYLOR: I would just say
23 as an agency that's one of silos that Rohit talked
24 about--

25 ROHIT T. AGGARWALA: [interposing]

Only in a good way.

DEBORAH TAYLOR: Well, first of all, the SCA or NYCHA or any other agency can become an applicant to this whole process. If they are an applicant and if there's something that they want to forward or if there's a technology that they're very interested in, they can certainly do that on a single-project process.

But I would also say that plaNYC has really increased the interagency discussions that go on. And Rohit's Green Team will be active on many, many issues that may take place before they come to the Department of Buildings. So as agencies are interested in those issues, he will be inviting them to come to the table. But if they're not particularly interested in certain issues, if they're not relevant for certain agencies, there is no reason for them to participate. I think that's the intention behind this is trying to be reasonable with the resources that are dedicated.

ROHIT T. AGGARWALA: And again, I just refer to the declaration of legislative findings and intent which speaks to the disparate

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2 agencies, the delays of regulatory proceedings and
3 things like that. That's the way I've interpreted
4 the rest of this bill. So maybe I'm misreading
5 it.

6 COUNCIL MEMBER LEVIN: I'm sorry,
7 one other question. This is kind of going on a
8 converse point. Because those two authorities are
9 authorities and not agencies, does that present
10 another type of impediment to them joining into
11 the discussion or no?

12 ROHIT T. AGGARWALA: Not to them
13 joining in the discussion.

14 COUNCIL MEMBER LEVIN: Would that
15 be an impediment to them having a formal role in
16 the discussion?

17 ROHIT T. AGGARWALA: Actually, I
18 would have to check with the Law Department. I do
19 not know where there's a jurisdictional question
20 about how you would mandate their inclusion or
21 something like that. So I leave that to follow up
22 with our respective councils.

23 COUNCIL MEMBER LEVIN: Just one
24 last point that I'd like to make is that I think
25 that it would be a good use of somebody's time at

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2 the School Construction Authority or at the New
3 York City Housing Authority to participate. They
4 have awfully big staffs and I think that they
5 could probably dedicate one high level staff
6 member's afternoon once every quarter to
7 participate in those discussions. Thank you, Mr.
8 Chair.

9 CHAIRPERSON GARODNICK: Thank you,
10 Council Member Levin. We're going to go to
11 Council Member Crowley. I should also note that
12 we've been joined by the chair of the
13 Environmental Protection Committee and we're glad
14 he made it back here to Manhattan through all the
15 snow. Council Member Crowley is next.

16 COUNCIL MEMBER CROWLEY: Thank you,
17 Chairman Garodnick. Good afternoon. I'm sorry, I
18 was a little late coming from Queens and the roads
19 aren't that great. I'm sorry I missed your
20 testimony, Mr. Aggarwala. I'm hopeful that this
21 new agency will help the smaller, more mom and pop
22 businesses who want to go green, maybe their roof,
23 or the Homeowner Association or even my district
24 office. I mentioned briefly to you in a prior
25 conversation that the landlord at that particular

1
2 office is interested in putting in solar panels on
3 the roof. But I'm not sure where to send him for
4 this type of information. Would this team provide
5 that type of information to the smaller business?

6 ROHIT T. AGGARWALA: Yes and no.
7 The way I understand the intent of this
8 Preconsidered is not to provide a one-stop shop.
9 This is not to be an information center, which is
10 not to say that such an entity is not needed.

11 I know we've got colleagues here
12 from NYSERDA. I know a project that they're
13 working on is to make sure that there is a central
14 location for information about the various
15 incentives, resources, et cetera, that are
16 available that are provided by any number of
17 agencies at any number of levels of government.
18 Some of it from the state, some of it from the
19 federal government via the state, some of it
20 local, et cetera. There is no question or problem
21 there.

22 I think the specific challenge that
23 it is my understanding that this bill is
24 attempting to address I when new technologies pose
25 challenges to the way that agencies that need to

1
2 permit them have done business in the past. So
3 the value here to a mom and pop, usually it is
4 simply the case that mom and pops are not going to
5 be the first adopters of a given new technology.
6 It's not always the case, but it is usually the
7 case that they are not.

8 What this really helps them in is
9 that this should more quickly take the experience
10 of the two or three say true pioneers who are
11 doing something for the first time and ensure that
12 the various agencies learn from the experience of
13 those two and three and more quickly develop the
14 processes either as a pilot program or as formal
15 rule making. So that when the mom and pop comes
16 with the fifth micro-turbine proposal in New York
17 City, that the rules are already there because one
18 or two big players have gone first and the city
19 has convened several agencies to focus on it.

20 COUNCIL MEMBER CROWLEY: So this is
21 specifically for the micro-turbines?

22 ROHIT T. AGGARWALA: No, I just
23 used that as an example because Deborah had talked
24 about that as an example. We've already been
25 through that. I think we all learned from that

1
2 experience and it helps inform the need for this
3 kind of thing.

4 CHAIRPERSON GARODNICK: Thank you,
5 Council Member Crowley. I will just make a note
6 that I do think we have to walk that line here
7 between how we structure this legislation. We
8 will take into account the comments of our
9 colleagues. But how do we make it useful so that
10 we're not actually adding additional obligations
11 to agencies which could create additional
12 obstacles as opposed to making them be part of the
13 process and the solution. But we're going to have
14 to take a look at that. With that, I want to turn
15 now to Chair Gennaro, who has some comments and
16 may even welcome the discussion of wind at the
17 same time.

18 CHAIRPERSON GENNARO: Thank you,
19 Chairman Garodnick. I certainly appreciate your
20 holding everything down. You folks can just stay.
21 I greatly appreciate the opportunity to work with
22 you on the maiden voyage of the technology
23 committee. Congratulations and my apologies for
24 being here late. I was with the Mayor. I didn't
25 make him write me a note but he said to tell

1
2 everyone you were with me and they'll cut you a
3 break.

4 It had to do with Jamaica Bay.
5 We've done a lot of great things there, the
6 Bloomberg administration and the Council and DEC.
7 So this day is kind of like Jamaica Bay's prom so
8 to speak. It was a really, really terrific thing
9 and I just had to be there in order to make sure
10 everything that was said today at that event got
11 memorialized. I wrote it all down so nobody can
12 back off because I was there writing it down. So
13 I had to be there and it was certainly a pleasure
14 to be there.

15 And I told the Mayor that I had to
16 get back quickly, Rohit, because I said that you
17 were testifying before the committee. So he said
18 what the heck are you still doing here, get back
19 there. Thank you.

20 I think I'm going to dispense with
21 my opening statement regarding the topic of the
22 oversight hearing, which is what we're going to
23 get into now, wind power in New York opportunities
24 and impediments. We all know what we need to do
25 in order to facilitate a greater use of wind and

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2 take down some of these impediments, which we seek
3 to do through the bill as well.

4 But we thought it was appropriate
5 to focus some of the committee's direct attention
6 on wind power specifically. We have folks here
7 who are going to speak to some of the things that
8 they've tried to go through in order to make this
9 happen and the difficulties. We have someone here
10 from Local 3, which is based in my district. We
11 look forward to hearing what they've had to go
12 through to try to do this.

13 We have a local entrepreneur, Craig
14 Axelrod who is here. I don't know if he's going
15 to be testifying, but it's been my great pleasure
16 to work with environmental folks that want to make
17 good things happen with regard to wind power.
18 Certainly we're going to make some headway on that
19 issue through the passage of the bill. But I
20 think it was important to focus on this as an
21 oversight topic.

22 Based on the experiences of people
23 that I've dealt with, I have some of my own ideas
24 that I seek to crystallize in an as yet unwritten
25 bill. Today's proceedings will certainly be of

benefit in the drafting of that bill.

I think for the purposes of having the administration shift now from the bill part of the testimony to the oversight part of the testimony, why don't we call Jim Gallagher from EDC to be part of the administration. It's already done. I know that you were here to speak on the oversight topic.

I just want to know how Dan did when I wasn't here. Did he do okay? Was he okay? I see a lot of smiling faces, so that's great. Dan always does very well. Thank you, Dan.

Let me also welcome Council Member Levin. This is your first time here as a member of the committee.

COUNCIL MEMBER LEVIN: My very first meeting of Environmental Protection Committee.

CHAIRPERSON GENNARO: Is Bill here? Why don't you hand out the books? We prepared some books that talk about what this committee has done for the last eight years, every topic that we've done, every bill that we've passed. We brought them here. I planned on being here at the

1
2 beginning of the hearing to pass them out to all
3 of the members of the Committee on Environmental
4 Protection. But if we can pass those out to those
5 folks who, like Liz, have already been a member of
6 the committee and Council Member Koppell and
7 Council Member Vallone. This is where the
8 committee has been for the last eight years. The
9 book is very thick. Sorry for all the paper.

10 CHAIRPERSON GARODNICK: Light
11 reading, right?

12 CHAIRPERSON GENNARO: It seems un-
13 environmental but it is double-sided. We've been
14 able to do a lot of good things with the Bloomberg
15 administration over the last years as chronicled
16 in this tome that we're handing out today. We're
17 sort of showing off a little bit, but I think it's
18 good to let the new members know what's gone on
19 here for the last eight years. And for someone
20 who wanted to do away with his opening statement,
21 it seems like I made a pretty long one. Sorry
22 about that.

23 With that said, I'd like to turn
24 the floor over to my good friend Rohit and the
25 folks from the administration to hear your

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2 perspectives on how we create new opportunities
3 for wind power in New York and how we knock down
4 some of those impediments that have been brought
5 to my door from folks like Craig and folks like
6 Local 3. I look forward to your good testimony.

7 ROHIT T. AGGARWALA: Thank you, Mr.
8 Chairman. I also will skip over a couple of
9 paragraphs from my written in the interest of time
10 and completely repeating myself. Although I will
11 introduce in addition to Deborah Taylor, Chief
12 Sustainability Office from DOB, we also have Jim
13 Gallagher, Senior Vice President for Energy Policy
14 at EDC who will assist me in answering any
15 questions you all have.

16 The two plaNYC goals that are most
17 relevant to the topic of this part of the hearing
18 are the reduction of carbon emissions and the
19 provision of a clean, safe, reliable energy supply
20 for the citizens of New York and then a bit of a
21 third byproduct here is the air quality goal of
22 achieving the cleanest air of any big city in
23 America, as Council Member Vallone has pretty much
24 alluded to.

25 Before I start on wind, I do want

1
2 to acknowledge the fact that in fact the city's
3 long-term most abundant renewable resource is
4 sunlight. So we can't forget and we can't lose
5 sight of the work that my office, that several
6 other city agencies are doing with CUNY, with Con
7 Edison and with NYCEDC to overcome barriers to
8 solar power deployment in New York City through
9 the U.S. Department of Energy's Solar America
10 Cities Initiative.

11 One of the things we're working on
12 right now is developing a citywide solar map that
13 will make it easy for individuals, even down to
14 the small building owner level to determine really
15 the likelihood that solar power makes sense in
16 their specific location. That'll be a very
17 powerful thing. And then this spring, under the
18 Mayor's Green Economy plan that we announced last
19 fall, we will be establishing a series of Solar
20 Empowerment Zones to target market outreach
21 efforts across the five boroughs and particularly
22 to focus the potential for solar power to reduce
23 peak demand in specific overtaxed parts of our
24 grid. I'm sure I'll throw him to your mercy, but
25 I'm sure Joe Oates will testify a little later

1
2 from ConEd and can answer more details about that
3 particular one. I know that Chairman Garodnick
4 was an early advocate of Solar Empowerment Zones
5 and we're pleased to be taking his good ideas and
6 turning them into reality. I don't know if we
7 asked. I'm sorry about that.

8 Although the city's densely built
9 environment limits the amount of renewable energy
10 that we can capture from wind sources, a number of
11 important wind opportunities exist, which I'll try
12 to cover. These opportunities include the
13 installation of large-scale wind turbines on
14 vacant and underutilized sites, the development of
15 offshore wind power, which is probably the largest
16 single renewable opportunity we have in the very
17 near term, and the use of building-mounted small
18 wind turbines.

19 Before I go into these though, one
20 of the contexts I'd like to stress--

21 CHAIRPERSON GENNARO: [interposing]
22 Are these remarks in your statement, Rohit?

23 ROHIT T. AGGARWALA: Yes, I'm down
24 towards the bottom of page two, although I am
25 trying ally it a little bit in the interest of

1
2 time. One of the critical hurdles that we've
3 faced thus far that we're a little bit optimistic
4 about changing right now to the development of
5 wind power in the New York metropolitan area has
6 been the limited allocation of the New York State
7 Renewable Portfolio Standard funds to the
8 downstate region.

9 The amount of installed wind
10 capacity in New York State has grown tremendously
11 over the past decade. In fact, according to the
12 leading industry association on this, New York
13 State ranks number eight in the nation for wind
14 capacity with 1,274 megawatts. The reason for
15 that strong growth statewide is the state's
16 Renewable Portfolio Standard, the RPS.

17 Under the main tier program of the
18 RPS, which provides incentives paid for by New
19 York State's rate payers to medium and large scale
20 renewable energy products that deliver electricity
21 into the wholesale market over 30 large wind
22 products have been funded.

23 While this has been a remarkable
24 achievement for the state, it has had limited
25 impact on the city. Rate payers from New York

1
2 City provide roughly 40% of the funding for the
3 statewide RPS program. But the projects funded by
4 the main tier are built almost exclusively in
5 rural areas upstate. From a technical standpoint
6 this is understandable, given that rural areas in
7 New York offer vast tracts of cheaper land which
8 drives down the cost of the projects.

9 However, little of this energy
10 actually winds up making it to New York City and
11 the value of electricity generated in New York
12 City is higher than that generated upstate which
13 then faces transmission barriers. For this
14 reason, well over a year the city has in written
15 and oral testimony asked the state's Public
16 Service Commission to recognize this discrepancy
17 in order to distribute the RPS in a more
18 geographically equitable way by taking into
19 account both the greater costs and the great
20 benefits of New York City based clean energy
21 generation.

22 The PSC recently acted on this by
23 issuing an order to allocate up to \$30 million in
24 RPS funds for New York City and the surrounding
25 areas specifically. This new allocation would

1
2 take into account the unique attributes of these
3 densely populated transmission constrained areas.
4 The city has been involved in discussions with PSC
5 staff and other stakeholders like ConEd and
6 NYSERDA to help shape the final order, which we're
7 optimistic will be released in April 2010.

8 While we don't believe that this
9 recent order will fully eliminate the gap between
10 upstate and downstate funding, we think it's a
11 step in the right direction and we're very
12 enthused about the willingness the PSC has shown
13 to work with us on this. That just establishes
14 one piece of context, which in terms of financing,
15 there is actually a very big light at the end of
16 this tunnel right now that we've been working to
17 realize.

18 Moving then to one of the several
19 clear wind opportunities, which is wind
20 development on vacant sites. As we discussed in
21 plaNYC, the city has as many as 7,600 acres of
22 vacant and unutilized sites that can be classified
23 as brownfields. One in particular, the Fresh
24 Kills Landfill in Staten Island has been the
25 subject of in-depth research on the potential for

1
2 wind power development.

3 In the fall of 2007, BQ Energy, now
4 Axio Power conducted a feasibility study for
5 installing a commercial scale wind power
6 installation at Fresh Kills Landfill. This
7 NYCERDA funded study found the site well suited
8 for wind power and estimated that seven turbines
9 could be installed for a total capacity of 17.5
10 megawatts. Based on average wind speeds recorded
11 at the site, we expect approximately 35,000
12 megawatt hours could be produced each year, enough
13 to power 5,000 homes.

14 This installation of wind power has
15 been strongly supported by Staten Island Borough
16 President James P. Molinaro and was included by
17 the Parks Department in the Fresh Kills Lifescape
18 proposal that's become the basis of the Parks'
19 plan to develop Fresh Kills as a 21st century
20 destination park.

21 Despite the enthusiasm for wind
22 power at Fresh Kills, a number of hurdles exist.
23 The installation of wind turbines in landfills has
24 precedent in Europe but has not, to our knowledge,
25 been done in the United States and certainly not

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2 in New York State where the New York State
3 Department of Environmental Conservation will be
4 the key determiner of whether the project can move
5 forward through its permitting role.

6 Furthermore, NYCDEC has little
7 experience in permitting renewable energy projects
8 at landfills. Fortunately, Axio Power has
9 recently received additional NYCERDA funding to
10 examine these engineering and permitting questions
11 in greater depth.

12 And after consultations with the
13 borough president and with Axio Power over the
14 last two months, we the city have agreed to work
15 with Axio as they undertake this study in order to
16 fully understand the feasibility, particularly of
17 the anchoring method that would need to be used
18 and its consistency with existing New York State
19 requirements.

20 My office will work in
21 collaboration with Sanitation, Parks and the
22 Office of Environmental Remediation and DDC on
23 this project. If it can be accomplished safely
24 and done in compliance with New York State
25 standards in a way that works with the park

1
2 currently under development, then I have every
3 reason to believe that we will enthusiastically
4 support a project proposal there.

5 Moving to offshore wind, in
6 December I traveled with Mayor Bloomberg to
7 Copenhagen for the U.N. climate conference and
8 stopped on the way at the Horn Reef 2 Offshore
9 Wind Farm in Denmark, which is the world's largest
10 currently operating offshore wind facility. That
11 facility which remarkably was constructed in only
12 20 months, demonstrates the potential for offshore
13 wind here at home.

14 The city believes that at least
15 until a point at which solar panels decrease
16 significantly in price, offshore wind is the most
17 promising opportunity we have for large scale
18 renewable electricity generation in New York City.
19 Because of the many jurisdictional issues and the
20 technical challenge of bringing between 350 and
21 700 megawatts of power in from the ocean, the city
22 helped found the Long Island/New York City
23 Offshore Wind Collaborative, which we currently
24 believe is the best framework in which to make
25 offshore wind in New York a reality.

1
2 Colleagues are here from Con Edison
3 and will be testifying in greater detail on the
4 collaborative. We are enthusiastic members of
5 that. We see this as the best hope for, say, over
6 the next ten years to bring in a large amount of
7 renewable electricity within the city's
8 jurisdiction.

9 There may also be additional,
10 although limited offshore wind opportunities in
11 waters closer to the coast within the three miles
12 that are under state rather than federal
13 jurisdiction. While these projects would
14 necessarily be much smaller in size, the fewer
15 permitting issues in fewer jurisdictions means
16 there may be an opportunity to move those faster.
17 We're looking into them. There are a couple of
18 different ideas out there. I don't think any of
19 them are at a point where the city is even needed
20 to weigh in specifics on them.

21 Then, moving on land to build-
22 mounted wind turbines, in early 2008, the
23 Department of Buildings began to receive a number
24 of requests to install wind turbines in the city
25 on tops of buildings.

1
2 On investigation, the department
3 learned that there existed no national product
4 standard for wind turbines, nor would any testing
5 laboratory such as Underwriter Laboratories or
6 Intertek test them, which of course is generally
7 speaking a prerequisite for widespread standard
8 approval under the Buildings Code.

9 As a result, in order to facilitate
10 the adoption of this emerging technology, DOB
11 worked with several manufacturers to develop
12 conditions under which it could legitimately
13 accept their proposals as pilot projects.

14 At the end of that year, and again
15 we work interagency on so many things, it was EDC
16 that hosted a teleconference with a number of
17 important participants including NREL, the
18 National Renewable Energy Lab, NYSERDA, ConEd,
19 architects from Portland where they do have a
20 number of building-mounted wind turbines, my
21 office, DOB and several other city agencies.

22 During that session, NREL indicated
23 their reluctance to pursue building installations,
24 or small wind, because of public safety concerns
25 and the potential for untested products to flood

1
2 the market with no standard for product safety or
3 durability.

4 Nonetheless, because we did want to
5 foster this technology because people did continue
6 to want to do it on their own, some people in New
7 York City began to install systems without
8 notifying the department, including, for example,
9 two installations of parapet-mounted wind turbines
10 in the Bronx and on an office building in the
11 Brooklyn Navy Yard. One billboard in Times Square
12 advertised that it was going to have a windmill
13 right there onsite.

14 I'm going to depart from my written
15 statement here for a moment. But I think this
16 actually characterizes in some ways, or
17 demonstrates the need for the organization in the
18 Preconsidered. One of the challenges that we face
19 is that there are legitimate needs that there
20 regulatory agencies have to look out for. There
21 can be ill-advised projects that if we don't get
22 ahead of them, if we don't have a constructive
23 solution, they will simply go around us.

24 That can actually be very
25 detrimental both to public safety and it could in

1
2 some cases wind up unnecessarily discrediting new
3 technology if you have a widely publicized failure
4 or dangerous situation as a result of one that
5 might be put together on a pilot basis or in an
6 un-permitted way.

7 In order to bring formality and
8 safety to this process, the department in
9 September of last year, developed a technical
10 bulletin that established a procedure for
11 manufacturers to get their product approved in New
12 York City and a second procedure for small pilot
13 projects which is the installation side.
14 Basically the technology and the installation both
15 required review.

16 The Bronx and Brooklyn owners were
17 able to work through the bulletin and get
18 themselves approved as pilot projects, but the
19 Times Square application was not, due to the
20 significant safety concerns that we had around
21 untested technology in such a high visibility and
22 heavily populated location.

23 At the end of 2009, the American
24 Wind Energy Association published their standard
25 which was followed shortly by a third party

certification procedure published in 2010, this year, by the Small Wind Certification Council. These two organizations had worked closely together and the AWEA standard--

CHAIRPERSON GENNARO: [interposing] Rohit, if you could just hold on for a second. Sergeant, if we could just close the door. We're getting some noise drifting in from outside. Either make them stop the noise or close the door. Thank you. Sorry about that.

ROHIT T. AGGARWALA: These two organizations had worked closely together and the AWEA standard recognized the SWCC certification while the SWCC certification involved testing against the AWEA standard. The limitation of small wind turbines under the standard was a rotor diameter of about 52 feet.

CHAIRPERSON GENNARO: I'm sorry, I just have a question. The limitation of small wind turbines under the standard was a rotor diameter of about 52 feet. So it's 52 feet and smaller, right?

ROHIT T. AGGARWALA: Correct. And 52 feet is a pretty large small turbine, but it's

1
2 nowhere near as big as the standalone windmills.

3 Currently, DOB plans to present the
4 new standard and certification procedure to its
5 Building Sustainability Board for review and
6 recommendation. This board is of technical
7 experts in various sustainability fields. It was
8 assembled last year by Commissioner LiMandri to
9 assist the department in evaluating the many new
10 technologies coming to market related to energy
11 conservation, renewables and sustainability but
12 not addressed by the construction code.

13 The department intends to gather
14 board members' expert analysis of these standards
15 to identify any additional safety parameters that
16 might ease installation concerns and to obtain
17 recommendations for replacing its technical
18 bulletin with standards for evaluating the use of
19 building-mounted wind turbines in our dense high
20 rise city.

21 NYCEDC has set aside a small amount
22 of funding to install several vertical access wind
23 turbines on buildings of different types, heights
24 and locations as part of an urban wind
25 demonstration. This also was part of the Mayor's

Green Economy plan that we launched last fall.

EDC is also currently working with installation teams and other stakeholders to identify the optimal building demonstration sites. For example, NYCEDC recently installed meters to test wind conditions at one of their facilities at Hunts Point. The installed turbines will be equipped with remote monitoring equipment that will provide data that can be analyzed and compiled by EDC and made available to the public. This will help educate the public and allow potential owners and investors to make informed decisions.

As you can see, I think we're covering the breadth here. We're trying to approach this on all sides. I think this example of the building-mounted wind, and again, since we didn't get to really do this as one piece of testimony but it really does speak to the Preconsidered. It shows the trajectory that so many of these technologies inevitably will follow.

You have the very informal stage that in many cases New York City is a difficult place to do true innovation when public safety

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2 could be a concern or things like that just
3 because of density and so many issues that city
4 government has to watch for.

5 You then have a stage where in an
6 essentially ad hoc basis, the city does need to
7 put in a pilot way some standards around something
8 so that we can make sure that we don't completely
9 get in the way of it but it also doesn't get out
10 of hand.

11 And then usually without too much
12 time passing, but it can take a couple of years,
13 you do begin to get the established procedures. I
14 think on small wind we're really on the verge of
15 that where what was three years ago a technology
16 that was really at its absolutely starting phase,
17 now is about to have standards that will then get
18 recognized by DOB that we can begin to formalize
19 through normal code procedures. I think it's
20 actually a good story.

21 CHAIRPERSON GENNARO: Thank you.
22 Do any other members of the panel have statements
23 at this time, or just here for questions? Thank
24 you for your comprehensive testimony, that I have
25 some questions on. I guess I'll start with the

1
2 back of the statement and work forward. I'll ask
3 the Council just to keep track of other members
4 that may have questions on this topic.

5 With regard to the process that
6 you're working that you talked about in the latter
7 part of your statement, do you have a timetable
8 for how long it will be? Let's say you're a small
9 businessperson. You want to market some small
10 sort of rooftop units for like the lowest level
11 density homes that we have. You know, single
12 family homes, two family homes, these things
13 aren't much bigger than and old style roof
14 antennae.

15 We see this going forward in other
16 countries. We see this going forward in other
17 counties nearby. Suffolk County I think is a
18 little ahead of Nassau County. We're a little
19 behind Nassau County. So it seems like there is a
20 working paradigm for this within a 50-mile radius
21 of where we sit now. I just want to know where we
22 are on that very small scale vertical access type
23 of stuff, which is probably less problematic than
24 like the big blades and all that.

25 I think people fear the whole

1
2 bladed concept more than like the vertical access.
3 Suffolk County I think has figured this out.
4 We've got to keep up with Suffolk County, you
5 know. I'd welcome your answer to that.

6 DEBORAH TAYLOR: Surely. Again,
7 Deborah Taylor, Chief Sustainability Officer with
8 the Department of Buildings. Just to address your
9 issue of the small units on residential homes, I
10 just want to refer back to Rohit's testimony where
11 even the federal laboratory ENREL did have
12 concerns when we spoke to them a year ago about
13 the abundance of product out there for sale on the
14 market that has not been tested and much of that
15 they felt was not good product. That's what we're
16 concerned about.

17 CHAIRPERSON GENNARO: If I could
18 just jump in right there, and please forgive me.
19 There are presumably, and I'm not the ultimate
20 expert on this, but if other New York counties are
21 figuring this out then there must be some that
22 have been approved and have been tested that meet
23 some national standard or something. I won't ask
24 you to speak for the buildings officials in
25 Suffolk County, but what are they doing out there

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2 that they're approving these things? Not that I'm
3 asking you to speak for them. You don't speak for
4 them, but you're in the business and you kind of
5 know what's going on.

6 DEBORAH TAYLOR: Yeah. We have
7 found that with micro-turbines, with wind
8 turbines, a lot of other jurisdictions don't have
9 the concerns that we do. We do have the concerns
10 about density and we do have probably higher
11 public safety concerns than many other
12 jurisdictions I would just have to say from my own
13 experience.

14 And I also want to say that with
15 regard to the European products, there are
16 European standards and the AWEA standard is a
17 takeoff on the European standard.

18 We do have the buildings bulletin
19 that Rohit mentioned. We have that in place right
20 now. It does allow pilot projects for small
21 installations.

22 CHAIRPERSON GENNARO: But for a
23 pilot, that's got to be some complicated process
24 that calls for all kinds of independent testing.
25 It's a big mishegas to go through that whole pilot

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thing, right?

DEBORAH TAYLOR: Let me just say, the pilot project says that you can install a small one or two-kilowatt product now, assuming the manufacturer will stand by the product for where it's being used and assuming that the owner affirms that they understand that there's not national standard and no testing standard.

Now there is, we just have one. So we are looking at this in the Building Sustainability Board. It's on the agenda for the March meeting. I have read it and I think it's a good standard. I'm the one that will be presenting it. So I would hope that we could have something within a couple of months after that. I can't guarantee that. Our experts are there exactly for that purpose to advise us.

CHAIRPERSON GENNARO: So within possibly as early as a couple of months there will be New York City approved standard out there. And then once someone wants to market things like this shows that their product meets that standard, then they're good to go.

DEBORAH TAYLOR: Absolutely.

CHAIRPERSON GENNARO: And in terms of the permitting from the Buildings Department, all of that will follow because they're using an approved technology.

DEBORAH TAYLOR: That's correct.

CHAIRPERSON GENNARO: Just in terms of where we're going from here, it's a little complicated because we had the bill and now we're having the oversight topic. Now we have the administration that's speaking on the oversight topic.

When this panel comes off, we have one panel that's going to speak to the bill and that's fine. They should take their time and speak on the bill because it's my bill, so just knock yourself out. Then we'll go back to other folks that want to speak on the oversight topic. So we're doing the oversight topic, one panel on the bill and then back to the oversight topic. That's how things are going to play out. We'll have a couple of panels when we get back onto the oversight topic.

You made mention of the Long Island/New York City Offshore Wind Collaborative,

1 something that I'm not terribly familiar with.
2 The city helped to found this and this is the
3 structure that we think is best based on your
4 testimony to make the whole offshore thing to get
5 going in New York City. Now just a brief little
6 bit on who are the players that are part of that
7 and the kind of collaborations that you've formed
8 on that.

10 JAMES GALLAGHER: Jim Gallagher,
11 EDC. The primary members of the collaborative
12 would be Con Edison, New York Power Authority, the
13 Long Island Power Authority and the City of New
14 York. But then there are also many other parties,
15 including state government entities that are
16 involved in the process.

17 The reason why it makes sense for a
18 collaborative effort like this to pursue wind is
19 because it's going to come in at an above market
20 cost. I mean, it's going to be expensive. It's
21 better to allocate those costs over a broad range
22 of energy users rather than any one single entity
23 going alone. In fact, Con Edison, when they
24 testify later, they'll be going into more detail.

25 CHAIRPERSON GENNARO: When was the

collaborative created?

JAMES GALLAGHER: Slightly over a year ago, May of 2009.

CHAIRPERSON GENNARO: We certainly look forward to hearing more from ConEd about that. I don't know if NYPA is testifying, but they're in the room. I'm glad to see that. With regard to the concept that's currently out there now for this offshore, off the Rockaways or whatever, has that been defined to great detail? Is it going to be a localized thing? Are they going to be stretched out along the shore? What's the concept there and what stage of development is the physical outline?

ROHIT T. AGGARWALA: Let me give you just a preliminary answer and again, Joe Oates can expand on that.

CHAIRPERSON GENNARO: The weather is getting worse and we want to move through everybody, so I don't want to spend a lot of time.

ROHIT T. AGGARWALA: Con Edison and the Long Island Power Authority looked at what would be the most appropriate spot to bring power in to serve both systems. The Rockaways turned

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2 out to be the most appropriate spot. Then you
3 have to consider shipping lanes coming into and
4 leaving New York City. You can fairly quickly
5 begin to narrow down the regions where you can
6 site wind. It's a fairly expansive area that Joe
7 can go into more detail on.

8 CHAIRPERSON GENNARO: From ConEd
9 you mean?

10 ROHIT T. AGGARWALA: From Con
11 Edison.

12 CHAIRPERSON GENNARO: Then I'll let
13 them do that. Backing up further towards the
14 front part of your statement, Rohit, with the wind
15 concept at Fresh Kills, I notice you make mention
16 of how they would be tethered or anchored. When
17 you're dealing with a landfill substrate, I mean,
18 speaking as a geologist, it's going to be tricky
19 to do this. I don't know to what extent that gets
20 involved in piercing the cover of the landfill and
21 all of that. It sounds like a lot of yelling and
22 screaming. So are we close on that? This is
23 really a viable thing though, right?

24 ROHIT T. AGGARWALA: Well, look, I
25 think the spirit in which we are eager to enter

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2 into this, and I think the folks at Axio are doing
3 the right thing. I think the borough president's
4 office has been quite thoughtful and responsible
5 on this. It is actually accepting that it is a
6 tricky question. It's probably not impossible
7 because at the very least we know they've done it
8 in Germany. Germany is not a place with overly
9 lax environmental standards. However, each site
10 is going to be unique. This is going to be the
11 kind of thing that we're going to have to get down
12 in the weeds and figure it out.

13 With this new grant from NYSERDA,
14 we are enthusiastic about working through it. It
15 could be an absolutely great thing. It could turn
16 out not to actually work. It could turn out that
17 it might feasibly work but only if the laws or the
18 regulations of New York change dramatically. At
19 that point we'd have to figure it out, but we're
20 going to start this process with an open mind.

21 CHAIRPERSON GENNARO: Sure. I
22 certainly support it but I'm recognizing this is
23 going to be challenging from a scientific point of
24 view and from an engineering point of view and
25 from a regulatory point of view. So let's do it,

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2 let's do it right, and the whole country will go
3 to school on our work, right? As usual.

4 With regard to this PSC and the
5 RPS, you indicated that you're happy that there is
6 going to be up to the \$30 million RPS funds.
7 Those two words, up to \$30 million sort of caught
8 my attention. What are the triggers? Like, how
9 do we get the \$30 million and not \$3 million?
10 Because anytime I see the words "up to", you get
11 the mail at the house like, you may have won up to
12 a million dollars, or maybe you just get a spoon
13 or something.

14 ROHIT T. AGGARWALA: Let me
15 explain. I'm very familiar with the commission's
16 RPS program because before coming to the city I
17 was director of the office. I managed the program
18 for the first four years.

19 The one thing that struck me after
20 coming to New York City was seeing how little of
21 the money was coming downstate. So far, New York
22 City residents have committed to about \$300
23 million of contracts for upstate wind with about
24 \$5 million coming back to the city for renewable
25 projects.

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2 We have, along with Con Edison,
3 been very active in proceedings before the
4 commission and I believe the commission has heard
5 us and they are working to try to address this
6 regional equity problem. I agree with you 100%
7 and that we're also concerned about the words "up
8 to". We are reminded about that often.

9 CHAIRPERSON GENNARO: Just to kind
10 of move quickly, I just want to note to staff,
11 Bill, if you're here. I just wonder if there's
12 anything that we from the Council can do to let
13 the PSC know that we're looking at this and we're
14 all on the same team with the administration and
15 \$30 million would be great, but we want to make
16 sure that we get that. If there's anything that
17 we could do, a letter that we could write, a Reso
18 that we could pass or whatever these things are.

19 ROHIT T. AGGARWALA: There may be
20 things that you could do.

21 CHAIRPERSON GENNARO: I just want
22 to direct Bill and my staff to work with Mr.
23 Gallagher and Rohit or whoever we need to and add
24 the Council's voice. I don't think it's going to
25 hurt us. Anything we could do that could get us

1
2 closer to the \$30 million mark, we should do.

3 In the interest of all of the folks
4 that we have yet to come, and we still have some
5 people that want to testify on the bill, let me
6 recognize who wants to ask questions. We have
7 Council Member Crowley and Council Member Levin
8 for much briefer questioning that I did. I'm
9 sorry about that.

10 COUNCIL MEMBER CROWLEY: Thank you,
11 Chairman. Actually, my question was partly
12 answered. The \$300 million, over how much time
13 was that accumulated to that number? And then the
14 \$30 million that's available, is that over a year
15 or over how much time would that be spent?

16 ROHIT T. AGGARWALA: The
17 commission's program is designed to ensure that
18 30% of the electricity used in the state is from
19 renewables by the year 2015. That program began
20 in 2003. So since 2003, all electric rate payers
21 in the state have been contributing into that
22 fund. The \$300 million is an amount of money that
23 the contracts that have been written so far and
24 agreed to by NYSERDA which is administering that
25 program for the commission. The city has

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2 committed to about \$300-\$350 million of those ten-
3 year contracts. So the money is being collected
4 on an annual basis and it will continue over the
5 next ten years. The \$30 million is beginning this
6 coming year and will be for five years.

7 I should also state that the \$30
8 million as proposed by the commission right now is
9 for photovoltaics, fuel cells and anaerobic
10 digestion and does not include wind. I mean we do
11 intend to stress that wind should be an option on
12 the table.

13 COUNCIL MEMBER CROWLEY: Would that
14 just be a percentage of how much it would cost?
15 You would help subsidize the cost a contractor
16 would pay to install?

17 ROHIT T. AGGARWALA: The way it
18 would be conducted as we believe, and it hasn't
19 been finalized yet, the details of the \$30 million
20 program, it would be an auction. So developers
21 will have an opportunity to bid in a price that
22 they believe they need to make the project work
23 for them. That's the way that the upstate wind
24 projects would have been handled and we expect
25 this project to go the same way. There may be a

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2 limit on the amount of money going to individual
3 projects, but \$30 million could go pretty fast.
4 But what's especially important to us is that we
5 do make sure it goes fast to demonstrate that
6 there is a demand for this in New York City.

7 CHAIRPERSON GENNARO: Thank you,
8 Council Member Crowley. I recognize Council
9 Member Levin.

10 COUNCIL MEMBER LEVIN: I have one
11 quick question and then just a very quick
12 statement and then I unfortunately have to run out
13 to another meeting. My question is regarding the
14 standard code for wind turbines. You mentioned
15 the density of different areas as a safety
16 concern. Are we looking to establish a code for
17 what type of products or how much of it could be
18 in any particular area based on the zoning of a
19 particular area? How do we establish it? Is it a
20 uniform thing across the city or are we looking at
21 different areas of various densities and uses?

22 DEBORAH TAYLOR: It's basically a
23 building code, so it would not be a zoning issue.
24 There will be zoning issues that a project would
25 have to address as well, such as permitted

1
2 obstructions. But our proposal right now would
3 simply apply to installation on buildings.

4 COUNCIL MEMBER LEVIN: Would there
5 be a different standard for bigger buildings,
6 smaller buildings, more dense buildings, less
7 dense buildings?

8 DEBORAH TAYLOR: That would be
9 subject to engineering. There are two different
10 things. One is the product acceptance and that's
11 just is the product a good viable product or not.
12 The other one is that installation and that
13 depends on the engineer for that particular
14 project and that particular installation. So
15 there are structural requirements that would apply
16 to that. If it's an existing building, it would
17 have to be examined to make sure it could take the
18 wind turbine. There will be forces from the wind
19 turbine on the building. We need to make sure of
20 that. But that's an engineering project and
21 that's specific to each installation.

22 COUNCIL MEMBER LEVIN: So it would
23 be instance by instance and not really a uniform
24 approach across the city? What are we going to be
25 doing?

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2 DEBORAH TAYLOR: The big issue is
3 the product approval. Once we get an acceptable
4 product, then it's like every other project.
5 Every project you have the construction codes and
6 those are the standards that you have to use to
7 build your project.

8 ROHIT T. AGGARWALA: So in that
9 sense it will be site-specific but not a different
10 standard.

11 COUNCIL MEMBER LEVIN: I was just
12 curious. Sorry, I have to run but I do want to
13 recognize Andrew Kimball from the Brooklyn Navy
14 Yard who's from the 33rd District which I
15 represent. They built the first building-mounted
16 wind turbines in New York City recently and I do
17 want to recognize his efforts and the efforts of
18 the Brooklyn Navy Yard of being a leader of
19 sustainable energy in the City of New York. With
20 that being said, thank you, Mr. Chair.

21 CHAIRPERSON GENNARO: Thank you,
22 Council Member Levin. I look forward to serving
23 with you on the committee. You've got your
24 reading for tonight.

25 COUNCIL MEMBER LEVIN: Thank you.

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2 CHAIRPERSON GENNARO: With that, I
3 want to thank this panel for everything that you
4 brought to this conversation today and on the
5 oversight topic and this important bill. We look
6 forward to working with you going forward. Thanks
7 a lot.

8 We're going back to the bill.
9 Again, just to lay it out, we have one more panel
10 that's going to speak to the bill and then we have
11 a couple of panels that we'll switch back to the
12 oversight topic. This panel will be from NRDCM,
13 Pierre Bull it looks like, Richard Leigh from the
14 Urban Green Council and Matt Doss from EDF.

15 CHAIRPERSON GARODNICK: Mr. Chair,
16 can I just jump in with a question to see if there
17 is anybody else who is here to testify on the bill
18 in addition to this panel. This is it. This is
19 the whole group on the bill. After that time
20 we're going to adjourn the Technology Committee
21 hearing. Thank you.

22 CHAIRPERSON GENNARO: I'd like to
23 publicly thank Council Member Garodnick for his
24 indulgence with the schedule working around the
25 fact that I was late which held him up, so I owe

1
2 him one. When we get together for Stated Meetings
3 his seat is right next to mine on Council. So
4 because I owe him, I actually have to deliver on
5 that. I want to welcome this panel. I have the
6 statement of Mr. Bull and Urban Green and is there
7 another statement from EDF. Does EDF have a
8 statement? Thank you. Why don't we start with
9 the gentleman closest to us. I'm sorry, what's
10 your name.

11 PIERRE BULL: Pierre Bull.

12 CHAIRPERSON GENNARO: Pierre Bull.
13 Mr. Bull, from NRDC, thank you for being with us
14 today. I was just with Peter Lehner this morning
15 and Brad Sewell and a couple of other NRDC folks
16 that were down at Jamaica Bay. This is my second
17 encounter with NRDC today. Please commence with
18 your good testimony.

19 PIERRE BULL: Thank you. Good
20 afternoon Chairman Gennaro, Chairman Garodnick and
21 members of the Committee on Environmental
22 Protection and Technology. Thank you for the
23 opportunity here to testify on the intended
24 legislation to establish the interagency Green
25 Team for the Mayor's Office of Long-term Planning

1
2 and Sustainability and the Innovation Review Board
3 with the Department of Buildings. My name is
4 Pierre Bull. I'm an energy policy analyst with
5 the Natural Resources Defense Council.

6 Through much of the last century,
7 New York was a national and global leader in
8 bringing bold and innovative technologies to the
9 forefront. Whether through the world's first
10 large scale suspension bridge, represented by the
11 Brooklyn Bridge, the first large scale electric
12 distribution grid by Thomas Edison or one of the
13 first and still among the most extensive
14 electrically powered transit systems in the world,
15 the city has built a legacy upon which cutting
16 edge inventors, designers and builders can thrive.

17 As we now enter the second decade
18 in the 21st century, we face a whole new set of
19 large and complex environmental problems with
20 serious consequences that threaten our quality of
21 life both globally and at home. Chief among
22 these, complex challenges we now face is global
23 warming. As a coastal city that lies in what is
24 currently a temperate climate regime, New York has
25 a very important stake in seeing that we address

1 this challenge by employing scalable solutions.

2 The greenhouse gas emissions that
3 stem from aggregate energy use in New York's
4 buildings represent the single largest contributor
5 of the city's greenhouse gas profile, nearly 80%
6 in all.

7 The city has already taken a
8 tremendous step forward to address these emissions
9 and move toward achieving its mandate to reduce
10 citywide greenhouse gas emissions 30% by 2030 with
11 the passage of the landmark Greener Greater
12 Buildings plan legislation last December. The
13 NRDC applauds and wants to thank the Speaker, the
14 Mayor, Council Member Gennaro and Council Member
15 Garodnick and other members of the Council for
16 their strong leadership on that issue.

17 The opportunity is here today to
18 further build upon that important achievement and
19 for New York to harness the environmental and
20 economic benefits of showcasing to the world the
21 best performing new green building technologies
22 that will make the city's skyline greener.

23 In July 2008, Mayor Bloomberg and
24 Speaker Quinn asked the Urban Green Council to
25

1
2 convene the New York City Green Codes Task Force
3 to identify impediments to and opportunities for
4 green practices in the laws and regulations
5 affecting buildings in New York. NRDC is one of
6 the participating groups in the task force which
7 recently released its report with 111
8 recommendations.

9 Implementing the recommendations of
10 that comprehensive effort will be a critical piece
11 of achieving the city's 30 by 30 green house gas
12 reduction target, one of which includes the
13 implementing of the legislation and passing that
14 that is before us today.

15 The legislation before us today to
16 establish an interagency Green Team in the Mayor's
17 Office of Long-term Planning and Sustainability
18 and an Innovation Review Board within the
19 Department of Buildings represents an important
20 new foundation for the city to emerge as a leader
21 on implementing new and exciting green building
22 technologies as it continues to move toward its
23 environmental goals and become a center of green
24 innovation. It will not only help to reduce
25 greenhouse gas emissions but will result in a

number of other benefits, including creation of much needed jobs, increased economic development and improved air quality.

As stated in the intent of this legislation, many building owners and developers are eager to implement new technologies, materials and products that address environmental concerns. However, many innovative green building projects have difficulty obtaining permits because the technologies introduce interdisciplinary issues that are hard to regulate by separate agencies. We support the Council in streamlining the process to speed up the adoption of sustainable building practices and technologies that then provide the range of environmental sustainability and health benefits associated with green building.

We look forward to continue working with you on this and other efforts.

CHAIRPERSON GENNARO: Thank you, Mr. Bull. I greatly appreciate your being with us today. I'd ask everyone after they read their statement just to stay back until the whole panel has read their statement and then if the two chairs or other members have questions or comments

1
2 we'll pose them at that time. Next, the speaker
3 from EDF who is Matt Davis. I'm sorry, Matt
4 Davis. It looked like Matt Doss and that's, of
5 course, a very familiar name to people in city
6 government. A little penmanship, Mr. Davis. This
7 is like an official government document here.
8 He's trying to stay under the radar. And who
9 could blame him? Thank you for being here. Sorry
10 for not being able to read your handwriting.

11 MATT DAVIS: Thank you for having
12 me. Good afternoon everybody.

13 CHAIRPERSON GENNARO: I'm not going
14 to give any further hard time. That's it. You've
15 been through enough.

16 MATT DAVIS: Feel free. My name is
17 Matt Davis and I'm a Research Fellow with
18 Environmental Defense Fund, a national nonprofit
19 organization based in New York and representing
20 over 500,000 members nationwide. I'm here today
21 to express our support for the proposal to help
22 bring new green technologies to the New York City
23 market by streamlining the city's regulatory
24 approval process.

25 EDF has long recognized the power

1
2 of markets to drive innovation and to solve our
3 most pressing environmental concerns. It is with
4 this principle in mind that we endorse the current
5 effort to open the doors to new technologies and
6 practices.

7 By their nature, many new
8 environmental innovations are subject to rules
9 governing, for instance, public health, building
10 codes and fire safety, among other areas, yet
11 these myriad regulatory hurdles can lead to delays
12 and uncertainty for businesses developing new
13 technologies. What we need is a centralized
14 regulatory mechanism that can harness the benefits
15 of green environmental innovations while building
16 on the existing regulatory expertise within our
17 government.

18 We think the proposed bill does
19 just that. By consolidating representatives
20 across departments and creating a new group within
21 the Department of Buildings specifically dedicated
22 to evaluating new technologies, the city would go
23 a long way towards ensuring that promising
24 innovations can be brought to scale.

25 What's more, the bill achieves this

1
2 without subsidies or handpicking which new
3 technologies will be installed in buildings.
4 Instead, it let's the market do what it does best
5 and ensures that scientists, inventors and
6 entrepreneurs can bring their ideas to New York
7 City.

8 The next decade will likely see the
9 development of exciting new technologies in smart
10 electricity grids, cheap solar power and electric
11 vehicles and wind power in buildings that promise
12 significant environmental and economic benefits.
13 Bringing them to New York will require the type of
14 interagency cooperation that this bill
15 establishes. EDF hopes the City Council will take
16 this important step towards the green economy of
17 the future.

18 CHAIRPERSON GENNARO: Thank you,
19 Mr. Davis. Your presence here is greatly
20 appreciated. Always good to be with folks from
21 EDF.

22 MATT DAVIS: Thank you for having
23 me.

24 CHAIRPERSON GENNARO: Mr. Leigh?
25 Am I saying that right?

1
2 RICHARD LEIGH: Yes, that's
3 correct. Richard Leigh, I am director of advocacy
4 and research at the Urban Green Council. For the
5 last year and a half, my life has been consumed by
6 the Green Codes Task Force. We're very happy to
7 have it out.

8 By the way, I also bring you
9 greetings from our Executive Director Russell
10 Unger.

11 CHAIRPERSON GENNARO: Of course.

12 RICHARD LEIGH: He's sorry he can't
13 be here, but he's in Southeast Asia.

14 CHAIRPERSON GENNARO: He's like the
15 high priest of green building. Everyone knows
16 that.

17 RICHARD LEIGH: We're very proud of
18 being able to shepherd this effort of over 200
19 professionals into some sort of completion and
20 we're very grateful to the Council for starting so
21 quickly to look at some of these measures. This
22 was a very good one to choose to start up with.

23 Let me digress from this for one
24 second.

25 CHAIRPERSON GENNARO: Sure.

1
2 RICHARD LEIGH: I am also a member
3 of the Building Sustainability Board that Deborah
4 Taylor was discussing. There is one factor that
5 you might want to keep in mind on this question of
6 laying of bureaucracies. That is that we are a
7 group of outside professionals not operating
8 within the Department of Buildings but just coming
9 in at the pleasure of the commissioner. While
10 what you will put in motion if you pass this law
11 is a group of people from within the departments.
12 So we're actually looking at this from very
13 different perspectives.

14 And also because we're there at the
15 pleasure of the commissioner, if he wants us to go
16 away, we're gone. So we're nowhere near as
17 embedded as the procedures you'll be putting in
18 place. I just wanted to point that out.

19 CHAIRPERSON GENNARO: Part of the
20 rationale for moving forward and getting that
21 crystallized and embedded.

22 RICHARD LEIGH: That's a side
23 point.

24 CHAIRPERSON GENNARO: It's quite
25 all right. I'm very happy to have you. Did you

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have more to your statement?

RICHARD LEIGH: Yes. I wanted to speak to the Preconsideration.

CHAIRPERSON GENNARO: The Preconsidered.

RICHARD LEIGH: In particular, because prior to coming to Urban Green Council, for several years I was working with NYSERDA programs trying to implement new technologies in New York City. We did, indeed, run into many problems where there were different agencies banging into each other. So my testimony presents three of these for your consideration.

The first one I won't spend time on because it's the micro-turbines and Deborah Taylor gave an excellent history of that problem. I'm glad it was resolved.

But speaking for the engineers who were quite frustrated at the time installing these systems and then finding out they could not turn them on, I think life would have been much better if the Green Team had been in place and people could have been exchanging information.

I believe what happened was the

1
2 Fire Department didn't even know it was coming.
3 Then once they found out, they quite rightly had
4 to deal with high pressure gas. It's scary stuff.
5 So that was my first one.

6 The second one is that a great deal
7 of efficiency can be gained by using gas fired
8 equipment to make hot water or heat apartments.
9 That is what is called condensing. That is,
10 instead of exhausting the products of combustion
11 at 300 degrees Fahrenheit, which would burn your
12 fingers and carrying steam away with it, it
13 condenses that steam out and the exhaust is much
14 more temperate at 120-130 degrees. It is in fact
15 much safer to deal with.

16 Condensing equipment can be vented
17 in a way that's called side wall venting and it
18 simply comes out through the wall of the building
19 into an empty space. There are restrictions on
20 this. It has to be a ventilated empty space. It
21 can't just be a little air shaft. But doing this
22 and sidewall venting makes the installation of
23 this equipment much less expensive and it's a
24 gigantic difference. Because otherwise you have
25 to run a chimney all the way up the building.

CHAIRPERSON GENNARO: I wanted to find out why this was such a better concept.

RICHARD LEIGH: So being able to sidewall vent makes this equipment much more accessible. There are absolutely reasonable restrictions on where and when you can do it. But in those restrictions there is one that says that you can't do it if the sidewall venting will result in an inconvenience resulting from vapor or condensate, that's water dripping from the thing.

This is perfectly reasonable but it is extremely vague and practitioners complain to me again and again that they could not tell in advance or get direction from the department in advance as to exactly when an installation would be allowed and when it wouldn't. There are in fact installations that went in and were then disallowed so that they then had to go to the unanticipated expense of adding a chimney.

One of our Green Codes Task Force recommendations is to clarify this piece of Building Code. But I think if the Innovation Review Board were in place, it would have been able to deal with this from the beginning.

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CHAIRPERSON GENNARO: Right.

RICHARD LEIGH: So again, I applaud the measure because this is another problem where New York has been held back substantially over the last five years and will not be held back if you go ahead.

CHAIRPERSON GENNARO: Thank you.

RICHARD LEIGH: There's another example in the written submission and I won't make you listen to me explain it to you because I'm sure it's self-explanatory there.

CHAIRPERSON GENNARO: Thank you, Mr. Leigh. If I can just ask William Murray of my staff, when Mr. Leigh leaves the stand to have a further conversation about the sidewall venting. We should be versed on that. Did you have a question?

CHAIRPERSON GARODNICK: I just have one question for the panel. Thank you, Chair Gennaro. I just have one question for the panel. You were here when there was some discussion among our colleagues on the subject of whether additional agencies should be included in this process, specifically the School Construction

1 Authority or NYCHA.

2
3 They're not intuitively agencies
4 that I would have included in the bill because
5 they're not permit issuing agencies I just wanted
6 to make sure that you agreed with my inclination
7 as opposed to the comments that were made before.
8 And if you don't agree, I'd like to know why so
9 that we can actually that in consideration as we
10 go forward.

11 RICHARD LEIGH: Well, speaking from
12 the Green Codes Task Force, at the meetings that I
13 was at where we discussed this proposal, it simply
14 didn't come up. It didn't occur to us to bring
15 the School Construction Authority and NYCHA into
16 the measure. I was not present at all the
17 meetings.

18 CHAIRPERSON GARODNICK: Is that
19 because they're not permit issuing agencies?

20 RICHARD LEIGH: At least as far I'm
21 concerned, it didn't occur to me because they're
22 not permit issuing agencies. I can't speak for
23 the minds of the other folks who were on the
24 committee. I can certainly understand where they
25 have a dog in the fight. They could provide a lot

1
2 of input. But because they don't issue permits,
3 they don't regulate, I'm inclined to agree with
4 the proposal as written.

5 CHAIRPERSON GARODNICK: Either of
6 you gentlemen want to comment on this?

7 MATT DAVIS: I'm not sure I can
8 give an EDF stance on this issue, but I think I
9 can say that our internal interpretation of the
10 bill was similar to Rohit and the one you espouse
11 that this was really a coalition of permit issuing
12 regulatory agencies.

13 PIERRE BULL: I'd say we agree that
14 it's sufficient just having the permitting
15 agencies involved. I think the problem is you
16 might end up getting adrift with getting too many
17 other cooks in the kitchen, if you will, with this
18 kind of thing.

19 CHAIRPERSON GARODNICK: Thank you
20 very much.

21 CHAIRPERSON GENNARO: Thank you. I
22 want to thank this panel for their good testimony.
23 Mr. Bull, Mr. Davis, Mr. Leigh, we thank you for
24 being here today. And I'll turn it back over to
25 Chairman Garodnick.

1
2 CHAIRPERSON GARODNICK: Yes, thank
3 you very much, Chair Gennaro. I want to thank
4 everybody who testified on the subject of the
5 legislation today and for participating in the
6 first hearing of the Technology Committee of this
7 term. With that, I know there's still work to go
8 on in the Environmental Protection Committee, but
9 the Technology Committee is going to be adjourned.
10 So thank you very much.

11 CHAIRPERSON GENNARO: Thank you,
12 Chairman Garodnick. We greatly appreciate your
13 indulgence today in working with my schedule and
14 moving things around. Thank you, Dan.

15 Jumping back to the oversight wind
16 topic, we'll have two panels. Just one moment
17 while we do some housekeeping here.

18 [Pause]

19 CHAIRPERSON GENNARO: We have two
20 more panels on the oversight topic. If anyone
21 else wishes to be heard on the oversight topic
22 that I don't call, you should let us know. We
23 would want to hear from you. The first panel that
24 we're going to seat now are representatives from
25 ConEd and NYSERDA. From ConEd, Joseph Oates, and

1
2 George Jee. From NYSERDA, Mr. Luke Falk. So that
3 will be the first panel.

4 The second and final panel, unless
5 we get further witnesses that wish to come forward
6 and speak, are Michael Yee from Local 3 and my
7 good friend Nancy Anderson from the Sallan
8 Foundation, Steven Else from BroadStar Wind
9 Systems. I'm very grateful to have BroadStar with
10 us. They came all the way from Texas and we're
11 treating them to some New York winter weather.
12 Although Dallas has been having their share, is
13 that right? Dallas has been. My aunt lives down
14 there and she's complaining. And Andrew Kimball
15 of the Brooklyn Navy Yard Development Corporation.
16 they were mentioned earlier. So that will be the
17 second panel. Then counsel is indicting that we
18 have a phone-in presentation?

19 COUNSEL: Two.

20 CHAIRPERSON GENNARO: Two phone-in
21 presentations. I'll guess they'll be the third
22 panel. Bergey Windpower Company and Green Cities
23 Energy wish to make presentations via speaker
24 phone and PowerPoint. We should have done the
25 whole thing on Twitter. There you have it. Where

are the slips for this panel? Do you have them?

[Pause]

CHAIRPERSON GENNARO: Sorry about that. Dan leaves and everything falls apart. Grateful to have you with us here today. Will ConEd be presenting one piece of testimony or two statements?

JOSEPH OATES: Just one.

CHAIRPERSON GENNARO: And you are Mr. Oates?

JOSEPH OATES: Yes, sir.

CHAIRPERSON GENNARO: Do we have ConEd's statement?

COUNSEL: Yes, we do.

CHAIRPERSON GENNARO: We'll hear from ConEd and then from Mr. Falk from NYSERDA. We're grateful to have Mr. Jee here as well who I guess will be available for questions. Thank you, Mr. Oates, please commence with your statement.

JOSEPH OATES: Thank you. I'm going to summarize my statement in lieu of reading the whole thing in the interest of time. Thank you, Chairman Gennaro and members of the committee.

1
2 My name is Joseph Oates. I'm the
3 Vice President of Energy Management for Con
4 Edison. In that role, we are responsible for
5 buying electricity and gas for those customers of
6 Con Edison who choose to buy their supply from the
7 utility.

8 And George Jee, who's with me, is
9 the a director in energy management and he is our
10 project manager on the offshore wind project that
11 I'm going to speak about.

12 Rohit Aggarwala and Jim Gallagher
13 have summarized some of the key aspects of the
14 project. It is a collaborative process right now
15 with a number of parties, including the City of
16 New York. However, the project did start with an
17 initiative that Con Edison undertook with the Long
18 Island Power Authority prior to the formation of
19 the collaborative.

20 A number of years ago LIPA had
21 tried to construct an offshore wind farm off of
22 Long Island and eventually decided it wasn't the
23 thing to do. They approached us and they said if
24 we could work together--

25 CHAIRPERSON GENNARO: [interposing]

LIPA did? LIPA approached Con Ed?

JOSEPH OATES: Approached Con Edison and said if we could work together and try and find a way where we could interconnect a wind turbine project between the two utilities perhaps it might be a way to lower some of the costs. So we initiated some studies on our part and eventually formed a collaborative to invite others.

CHAIRPERSON GENNARO: So at first it was like a Con Ed/LIPA thing that morphed into the collaborative that includes NYPA and other entities.

JOSEPH OATES: The City of New York and others. So our goal there was instead of starting off in the ocean somewhere we said let's start at a point on the two utilities' electric systems, find a good place to connect this project and then work our way out to a project out in the ocean.

And our goals were really to try and see if there was a way we could explore whether an offshore wind project off Long Island and New York City could help meet some of the

1
2 state's renewable goals, recognizing that a lot of
3 money that our customers are spending to support
4 these projects are going to fund projects in
5 upstate. We're not getting the economic benefits
6 in terms of lower energy prices. We're not
7 getting the environmental benefits of lower fossil
8 fuel emissions. And finally, we're not getting
9 the economic development benefits that go with the
10 funds being spent upstate.

11 So that's really been our goal.
12 We're working through the process and trying to
13 see whether we can--

14 CHAIRPERSON GENNARO: [interposing]
15 I'm just going to ask the sergeant to close the
16 door. We're getting some noise drifting in from
17 the corridor. Thank you, sergeant. Forgive me.
18 Do you have to keep it open then? All right,
19 we're good.

20 JOSEPH OATES: So we're really
21 working through a process right now to prepare to
22 go forward with issuing a request for proposals to
23 seek bids from developers who would actually go
24 out and do this. Again, it's a very complicated
25 process because it involves many entities. The

1
2 state and the city entities who have been helping
3 us have been very helpful but we need the federal
4 government's involvement because they have the
5 permitting rights to site the wind turbines.

6 CHAIRPERSON GENNARO: Because it's
7 beyond three miles?

8 JOSEPH OATES: In federal waters,
9 that's correct.

10 CHAIRPERSON GENNARO: Ordinarily I
11 wait until the end of statements before I ask
12 questions.

13 JOSEPH OATES: Go ahead, because
14 that's all I really wanted to say. You can read
15 the rest.

16 CHAIRPERSON GENNARO: Thank you.
17 Now, are we really at a point where we can ask for
18 proposals? Isn't it more like an RFEI, we're
19 asking for people who have an interest in doing
20 this? Or did you put something out there saying
21 that we want somebody to build this, we want it to
22 be within these parameters, we want it to be
23 roughly in this area or precisely in this area, or
24 we're looking for people that may have a concept,
25 and the Rockways all the way out to Amityville for

1
2 all I know and somebody else may say well just
3 keep it one thing there? Like I don't know what
4 you're asking for. Can you give us a little bit
5 of what the proposed bidders have been given in
6 terms of latitude and where this would go?

7 JOSEPH OATES: We haven't started
8 that bidding process but we did issue an RFI and
9 we got responses from 30 parties including wind
10 developers.

11 CHAIRPERSON GENNARO: So you've
12 already done the RFI?

13 JOSEPH OATES: Right. So we've
14 learned a bunch of information. We're preparing
15 now to get ready to issue an RFP.

16 CHAIRPERSON GENNARO: In terms of
17 the RFI you had 30 responders?

18 JOSEPH OATES: Right. So some of
19 them were wind developers. Some of them were folks
20 who could manufacture some of the other technology
21 we'd need, you know the cables to connect the
22 project.

23 CHAIRPERSON GENNARO: These are big
24 outfits.

25 JOSEPH OATES: Big outfits. We've

1
2 met with them all. We had some comments from
3 environmental outfits. We had some comments from
4 the insurance industry. They need to be involved
5 to help insure everything.

6 CHAIRPERSON GENNARO: Did we--see,
7 we're pals already. Now if things go south, it's
8 just going to be just him. Right now it's we. We
9 did that and so now what people are asked to
10 propose for, that's what I'm interested in. Do
11 you say you've got to go from here to there? Can
12 you cluster it, or what are they asked?

13 JOSEPH OATES: Right. So what
14 we're doing right now is preparing to do this RFP
15 process but we really need to work with a division
16 of the Department of Interior called the Minerals
17 Management Service. They're the entity that's
18 going to have the permitting process for both
19 temporary and permanent installations. So we've
20 had a couple of meetings with them.

21 CHAIRPERSON GENNARO: So you've got
22 them involved.

23 JOSEPH OATES: We've got them
24 involved. We've engaged with them to talk to the
25 collaborative. The location we're looking at, as

1
2 Jim Gallagher mentioned, there are shipping lanes.
3 There are shipping lanes that go from New York to
4 Massachusetts, out to the Atlantic and then sort
5 of down along the coast of Jersey. So you're not
6 able to put wind turbines in those particular
7 areas. However, between those shipping lanes
8 there are areas where you could site turbines.

9 So we had said that as part of this
10 process we wanted to locate these turbines at
11 least 13 miles offshore because one of the lessons
12 learned that we heard from LIPA with their project
13 is that when you're closer to shore, one of the
14 things we're looking to test is public acceptance.
15 The closer they are to shore, the more resistance
16 to the project.

17 CHAIRPERSON GENNARO: How close was
18 that other project?

19 JOSEPH OATES: That was within
20 state waters.

21 CHAIRPERSON GENNARO: So it was
22 less than three miles?

23 JOSEPH OATES: Yes.

24 CHAIRPERSON GENNARO: So you could
25 really see it?

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JOSEPH OATES: You could see it.

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So one of the things that we want to do is make

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sure it was out there. So we've, again, started

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on land, found a spot where the cable can come in,

6

interconnect to a LIPA substation.

7

CHAIRPERSON GENNARO: Where is

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that? Where does the cable come in?

9

JOSEPH OATES: In the Rockaways.

10

It's an underwater cable, an underground cable.

11

It would interconnect to a substation in the LIPA

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system in the Rockaways. And then another

13

transmission line would be built from that point

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to interconnect with an existing Con Edison

15

substation in Queens, so all underground.

16

CHAIRPERSON GENNARO: But in terms

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of the physical array out on the water, what's it

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look like?

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JOSEPH OATES: So in the physical

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array, if you think about these shipping lanes,

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there's sort of a fan effect coming out of the

22

harbor. So they're actually wedges between the

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shipping lanes which are the locations where you

24

could put an offshore wind turbine project. So

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that's really what we're working right now.

CHAIRPERSON GENNARO: Where would it be? My geography is pretty good. I was raised in Bellmore along the south shore of Long Island. I still have a boat out there. I know Queens pretty well. I live there now.

JOSEPH OATES: If you think about an in and out shipping lane that's parallel to the Long Island coast.

CHAIRPERSON GENNARO: The south shore.

JOSEPH OATES: South Shore. And another shipping lanes that's parallel to the New Jersey coast and another set of shipping lanes that are splitting those two. In between those three sets of shipping lanes there are two wedge shapes. One close to New Jersey, one close to Long Island. We're looking at the one close to Long Island because that's the one that's closest to the LIPA and the Con Edison system.

CHAIRPERSON GENNARO: So it would kind of like wedge out, so to speak.

JOSEPH OATES: When I said it's as close as 13 miles, that's the closest point and then they would get farther and father away from

1
2 the shore.

3 CHAIRPERSON GENNARO: Are people
4 given a precise footprint? Like we want the array
5 to look like this or we want so many of them? I
6 just wonder what the parameters are. I don't want
7 to give away the story here. But I say okay, you
8 can build 50 real big ones or you can build 100
9 smaller ones. And roughly this would go from like
10 where to where? I know the whole field that
11 you're talking about, so to speak. It starts here
12 and it kind of wedges out.

13 JOSEPH OATES: Right. We haven't
14 settled on the number of turbines, the size of the
15 turbines, where they're going to be located. We
16 need to first go through the MMS process.

17 CHAIRPERSON GENNARO: The MMS
18 process with the Interior Department?

19 JOSEPH OATES: The Department of
20 Interior, because they hold the right to grant
21 temporary and permanent use of this area.

22 CHAIRPERSON GENNARO: So what you
23 want to do is go to them first and then when you
24 go to the community that's going to bid on this
25 you'll say this is what we've got approval for and

1
2 this is where we want the things to be.

3 JOSEPH OATES: And MMS prefers to
4 work with a state task force in this case. They
5 really want to work with a state task force that
6 is seeking to achieve a unified effort on the part
7 of the state to achieve its renewables goals. So
8 that's really why we've been working with them.

9 CHAIRPERSON GENNARO: So working
10 with the Department of the Interior in connection
11 with the state that has an interest in meeting
12 their goals. This will be a public process, the
13 federal issuing of the permits or their sanction
14 or whatever?

15 JOSEPH OATES: Yes. It starts with
16 the state task force which to my understanding the
17 state has indicated they want to work with MMS to
18 advance this project. Again, there is no
19 guarantee we're going to do this project, but you
20 have to go the process in order to have a shot at
21 it.

22 CHAIRPERSON GENNARO: One thing
23 that folks like me that represent the public, it's
24 like the public naturally wants to be involved in
25 the process and it should be a process with a lot

of daylight.

JOSEPH OATES: That it our intention. We have had a bunch of discussions with I would say government entities right now. When we get to the point where we're further along with MMS, we are planning to have a very active engagement with the community. And I know LIPA is very sensitive to that and interested in doing that with the South Shore communities. So it is going to be an open process.

CHAIRPERSON GENNARO: Is there any political temperature in Nassau and Suffolk for how they feel about this?

JOSEPH OATES: I'm going to punt on that one.

CHAIRPERSON GENNARO: I don't blame you. A wise man. You know, Citizens Campaign for the Environment, have they weighed in?

JOSEPH OATES: LIPA has identified a bunch of key stakeholders that they've had some conversations with we understand but there is more to come.

CHAIRPERSON GENNARO: I don't pay so much attention to the politics out in Long

1
2 Island but is this like a topic of conversation in
3 political circles in South Shore campaigns for
4 this or that?

5 JOSEPH OATES: I'm not aware of
6 any, but LIPA is really the expert on that, but
7 we'll be part of that.

8 CHAIRPERSON GENNARO: Thank you. I
9 appreciate your presentation. We'll get the
10 statement.

11 [Pause]

12 CHAIRPERSON GENNARO: A little
13 paperwork. Thank you, Mr. Oates. We have a
14 statement from NYSERDA.

15 LUKE FALK: Good afternoon,
16 Chairman Gennaro. Thanks for the opportunity to
17 testimony before you and the committee today.
18 NYSERDA is a public benefit corporation created in
19 1975 through the reconstitution of the New York
20 State Atomic and Space Development Authority. We
21 strive to facilitate change through the widespread
22 development and use of innovative technologies to
23 improve the state's energy, economic and
24 environmental well being.

25 Although my written comments are

1
2 fairly extensive I'm just going to try to
3 summarize in relation to some of the conversations
4 that have happened already today.

5 CHAIRPERSON GENNARO: Sure.

6 LUKE FALK: Something that I'd like
7 to start out with is just a look at the scope of
8 our budget. We have gone to approximately \$600
9 million a year which is funded through multiple
10 sources. We primarily administer the Systems
11 Benefits Charge Fund which is a rate payer fund.
12 We also administer funds from the regional
13 greenhouse gas initiative and the stimulus act and
14 state energy programs.

15 In addition, we administer the
16 renewable portfolio standard. It's a critical
17 part of what we do to lessen our state's heavy
18 dependence on fossil fuels and reduce harmful air
19 emissions. The RPS is an important fiscal support
20 mechanism to encourage the development and
21 installation of renewable energy systems, so it's
22 salient to today's discussion.

23 The RPS funding stream is also a
24 rate payer generated surcharge. And the goal of
25 the initiative, as was stated earlier, is to have

1
2 30% of the electricity that is used in the state
3 be from renewable sources by 2015.

4 RPS is broken into two targeted
5 sectors. The large utility scale systems which
6 fall into what's called the main tier, and smaller
7 end use customer installations, which fall into
8 what is call the customer sited tier. Through
9 funding allocated to the customer sided tier,
10 NYSERDA administers and incentive program which is
11 explained in detail at the end of the remarks
12 here, to incent the installation of small wind
13 powered renewable energy systems. So if you're
14 looking for our small wind program and details
15 about it, it's at the end.

16 To date this funding is supporting
17 the installation of 54 projects throughout the
18 state, totaling 564 kilowatts of small wind
19 capacity. However, NYSERDA has not used RPS funds
20 to incent a customer sited wind project in New
21 York City. There are many contributing factors as
22 to why this is the case. The most important of
23 which seem to be--

24 CHAIRPERSON GENNARO: [interposing]
25 I just want to keep up here. You're talking about

1
2 a customer sited wind project. Forgive my
3 ignorance on this, but the difference between a
4 customer sited wind product and other small wind
5 powered, I don't understand the difference.

6 LUKE FALK: I'm happy to explain.
7 Through the RPS there's the main tier which is the
8 larger supply side installations and then there's
9 the customer sited tier which are the smaller end
10 use sited tier.

11 CHAIRPERSON GENNARO: Okay, because
12 you're making reference to main tier versus
13 customer sited tier.

14 LUKE FALK: Right. We've funded 54
15 projects in the customer sited tier, the smaller
16 end use installation throughout the state, none of
17 which are located in New York City. There are any
18 contributing factors as to why this is the case.
19 The most important of which seem to be the state
20 of the market for urban sited small wind
21 technologies, a low cost effectiveness of these
22 technologies in relation to other customer sited
23 renewable systems targeted through the RPS and a
24 lack of adequate permitting procedures for this
25 technology in New York City.

1
2 We understand that the Department
3 of Buildings and a large group of stakeholders in
4 the administration is seeking to deal with the
5 permitting issue. So we are enthusiastic and
6 actively engaged in supporting those efforts to
7 the extent that it's possible for us to do so.

8 In terms of understanding the
9 potential for building-mounted wind, we are
10 funding a project that the Council may be
11 interested in knowing about. It's a roof-mounted
12 wind performance evaluation and monitoring
13 contract.

14 Very little data exists on the
15 performance of roof-mounted wind systems and
16 understanding of actual systems performance of the
17 roof-mounted wind and the field is necessary to
18 establish markets for these systems and help
19 determine which sites are suitable.

20 NYSERDA has contracted with AWS
21 Truewind to conduct a monitoring and performance
22 evaluation campaign for roof-mounted small wind
23 installations. The first system to be monitored
24 is being installed by the New York State Office of
25 General Services in Albany.

1
2 There has been one project that did
3 install an array of 10 one-kilowatt parapet-
4 mounted wind turbines which also received NYSERDA
5 administered rate payer funding through our multi-
6 family performance program. The project's located
7 in the Melrose section of the Bronx as a 63-unit
8 affordable housing development called the Altona.
9 It received the Energy Star label for multi-family
10 construction and LEED certification at the
11 platinum level and was developed by Blue Sea
12 Development Company. I know that Les Bluestone,
13 the principal of that development company, is
14 enthusiastic about sharing any data and insight
15 that you might have into what it's like--

16 CHAIRPERSON GENNARO: [interposing]
17 Les Bluestone?

18 LUKE FALK: Yes.

19 CHAIRPERSON GENNARO: Is he related
20 to Eric Bluestone?

21 LUKE FALK: They are related. Eric
22 and Steve run a different development company
23 called the Bluestone Organization.

24 CHAIRPERSON GENNARO: Bluestone
25 Organization. That's Eric. So Les is his?

LUKE FALK: Brother.

CHAIRPERSON GENNARO: Brother.

Forgive me, I didn't mean to interrupt.

LUKE FALK: So then we go on in this testimony to detail some other contracts that we are supporting that may be of interest. One is to a company that's been awarded a product development contract to refine small wind turbines so that the product gets a better power production at slow wind speeds and so that it becomes more cost effective in relation to its installed cost.

One is with a company called True Scape which we are supporting. They develop software tools capable of providing accurate and in context visualization of wind projects. So when the projects are being planned, the software can help that. We're helping to expand their presence in the downstate market.

Then we are also supporting a wind test center. So to the comments earlier about there being no centralized sort of UL entity that does wind testing, we're actively trying to support the development of such an entity.

I'm not going to talk about our

1 participation in the offshore wind development
2 just to say that we support it and are
3 participating in it. So if you have any questions
4 beyond that, I would just submit these comments to
5 the Council.
6

7 CHAIRPERSON GENNARO: Thank you,
8 Mr. Falk. With regard to the earlier conversation
9 I was having with Rohit Aggarwala regarding the
10 RPS and the \$30 million and not getting what other
11 parts of the state get. We were talking about
12 having a conversation with the PSC. Is that you
13 folks also? You have to forgive me for not
14 knowing much about how this works.

15 LUKE FALK: You're forgiven.

16 CHAIRPERSON GENNARO: Are you a bad
17 guy in terms of us not getting the \$30 million?

18 LUKE FALK: There's been an email
19 chain going around my office about how everything
20 is my fault, but I didn't think that it got here.
21 Fair enough.

22 CHAIRPERSON GENNARO: If you're not
23 the bad guy, you can mount a defense here. I'll
24 give you this opportunity. I was just curious
25 about how that worked.

LUKE FALK: I'll take the opportunity to put in a word for us being the good guys. We do work them.

CHAIRPERSON GENNARO: Because I hear wonderful things about NYSERDA like all the time.

LUKE FALK: Good.

CHAIRPERSON GENNARO: So how does this whole RPS and the \$30 million involve you guys?

LUKE FALK: The way that it involves us is that the Public Service Commission and the Department of Public Service staff are our sister agency and we work closely together and have for many years. They are the regulatory apparatus which instructs us as to how we are able to administer the rate payer funds.

So we set up programs and file operating plans that are ultimately reviewed and approved by the commission. Our programs are designed to maximize cost effectiveness.

With RPS, I think that there has been a special focus on more of a resource acquisition approach where you want to target the

1
2 programs to the most cost effective resource that
3 you can, not necessarily to support nascent
4 markets like small wind.

5 But to get to the geo-balancing
6 issue, I think that small wind is not part of that
7 discussion. It only pertains to anaerobic
8 digestions, fuel cells and PV installations. I
9 think it's worth noting that it is a main tier
10 issue rather than an end use customer sited issue.
11 Maybe I'm wrong about that, but someone from the
12 audience may want to correct me if I am.

13 But we are an active participant in
14 the negotiations to get the city as--

15 CHAIRPERSON GENNARO: [interposing]
16 Because you're putting forward things to the PSC.
17 So what you put forward is like the feed stock for
18 the PSC, right?

19 LUKE FALK: Correct. So to the
20 extent that we can be a facilitator of getting
21 downstate RPS installations facilitated, we are an
22 enthusiastic proponent of accomplishing that goal.

23 CHAIRPERSON GENNARO: Great. On
24 that note, I see that Mr. Oates from ConEd I think
25 wants to weigh in on that point.

1
2 JOSEPH OATES: Yes. I think Jim
3 Gallagher and Rohit mentioned that we have been
4 strong advocates for trying to get some of these
5 RPS dollars spent downstate. I think NYSERDA has
6 done a nice job on the main tier getting a bunch
7 of wind turbines installed but they've all been
8 upstate.

9 We've really been taking a position
10 with the Public Service Commission that this is
11 great but the downstate customers who are funding
12 these projects are funding projects that are not
13 producing environmental benefits downstate,
14 economic development benefits downstate.

15 And also the installation of wind
16 turbines upstate helps to dampen electricity
17 prices. So when I go out to buy electricity here,
18 my customers have spent money supporting wind
19 turbines upstate but they're not getting any
20 benefit from lower energy prices down here. So
21 again, their model is designed in a certain way.

22 CHAIRPERSON GENNARO: NYSERDA's
23 model?

24 JOSEPH OATES: NYSERDA's model is
25 designed in a certain way. All we're saying is

1
2 that model has worked well but we want to make
3 sure that you're not forgetting about the source
4 of some of this funding is the downstate
5 customers. Let's try and find some things that
6 benefit downstate customers more directly.

7 CHAIRPERSON GENNARO: NYSERDA
8 ultimately reports to the Paterson administration.
9 So in terms of the paradigm that NYSERDA may be
10 using, which so has seemed to favor some of the
11 upstate projects, not because NYSERDA has got a
12 problem with downstate but by the model they're
13 using it just means that those are the things that
14 are drawing the dollars. So changing that
15 paradigm is really an issue to take up I guess
16 with the Paterson administration. I guess, right?

17 JOSEPH OATES: I think so. And
18 again, I think NYSERDA and the Public Service
19 Commission--

20 CHAIRPERSON GENNARO: [interposing]
21 Who's the governor's energy guy?

22 JOSEPH OATES: Tom Congdon. So
23 we're all working on this together.

24 CHAIRPERSON GENNARO: He's like the
25 secretary to the governor for energy?

1
2 JOSEPH OATES: The deputy security.
3 But just in terms for your benefit, Con Edison is
4 not standing by and saying we're happy with this
5 one. It has worked well. We want to make sure
6 going forward there are some projects and some
7 ways that this program can be designed to get more
8 direct benefits to the customers down here who are
9 funding it.

10 CHAIRPERSON GENNARO: So just a
11 little note to staff from the chair. This is now
12 an official area of inquiry for the committee. We
13 should figure out how we can make a difference on
14 this. Let me know how we can make a difference.
15 If we can't, we'll punt. But we should do
16 something.

17 LUKE FALK: The formal comment
18 period I've just been told has officially closed
19 for the state--

20 CHAIRPERSON GENNARO: [interposing]
21 The common period with regard to the projects?

22 LUKE FALK: The geo-balancing issue
23 of the RPS funding stream.

24 CHAIRPERSON GENNARO: So there was
25 a public process.

LUKE FALK: Right. But we can work with you in whatever way we can facilitate to get your views expressed and conversations.

CHAIRPERSON GENNARO: Now that Mr. Falk has opened the door on that, Bill and Samara and Siobhan, we should endeavor to take him up on his offer. Mr. Oates has a reply on that one? No? He's good. He's not going to push his luck.

JOSEPH OATES: I want to make sure it's still "we".

CHAIRPERSON GENNARO: It's still we. But when it changes, it'll be a subtle shift but it'll change in the wind. With that said, I'd like to thank this panel very much. I just want to reassert the note to staff that this whole RPS thing is officially an active area of interest with the committee. I will take Mr. Falk up on his gracious invite. We'll work with ConEd and others to make sure we say the right things. We'll try to help. I thank this panel.

Mr. Falk, I've got someone I'd like you to meet, Craig Axelrod from the audience. If you folks don't know each other already, you should come to know each other. I think there

1
2 could be some fruitful collaboration there. I
3 want to thank this panel. I appreciate it.

4 The next panel, Nancy Anderson,
5 Sallan Foundation. Steven Else, all the way from
6 Dallas. Michael Yee from Local 3. Andrew Kimball
7 of Brooklyn Navy Yard Development Corporation.

8 [Pause]

9 CHAIRPERSON GENNARO: Why don't we
10 bring up Richard Sobel from the New York
11 Electrical Contractors Association? Is that like
12 Richard Wishnie and all that? Is this that group?
13 What's that?

14 [Pause]

15 CHAIRPERSON GENNARO: So you're
16 like a Local 3 guy. I think I have all of the
17 statements. Let me start with my good friend who
18 I haven't seen in a long time. Nice to see you.
19 Please to see you, Nancy.

20 NANCY ANDERSON: In the interest of
21 time, my remarks will be an abbreviated version of
22 the written testimony. Good afternoon, everybody.
23 I'm Nancy Anderson, Executive Director of the
24 Sallan Foundation. The foundation's mission is
25 advancing useful knowledge for greener cities. I

1
2 appreciate the invitation to offer testimony at
3 this Council oversight hearing.

4 Today, the U.S. faces a four-part
5 crisis. Climate change and rising emissions
6 linked to energy consumption, volatile energy
7 prices and affordability, energy security and
8 electric power reliability in the face of
9 spiraling demand. I will focus on the
10 opportunities and impediments for facing this
11 crisis as related to wind power for New York City.

12 Earlier this month, the Sallan
13 Foundation cosponsored Smart Grid for Smart
14 Cities, a conference held at NYU. It plugged into
15 the potential for 21st century power system
16 solutions at the urban scale that must be
17 integrated with the 20th century legacy. The
18 takeaway message from this conference is that
19 smart sustain cities need smart electric power
20 grids. It's just dumb to stay vulnerable to
21 blackouts and every increasing demands to add
22 expensive new power and new distribution capacity.

23 So what can a smart grid do for us?
24 It can lower electric power costs through the
25 creation of system-wide efficiency improvements.

1
2 Without system-wide IT capability, we face utility
3 bills growing 20% and peak power demand soaring by
4 one-third. Improved electric power service
5 reliability and smaller environmental impacts will
6 be major benefits of a smart grid. Getting the
7 smart grid we need rests on funding and forging a
8 robust political consensus.

9 And here are three opportunities a
10 smart grid offers for wind power, the subject of
11 today's hearings. First, since the power of wind
12 is stochastic, it's on, it's off, the power source
13 switching capacity of a smart grid would improve
14 reliability and service by integrating electric
15 power from multiple sources. It won't just be
16 wind alone. It won't just be natural gas alone.

17 Second, development and deployment
18 of power storage batteries would permit the
19 seamless integration of wind power into the power
20 grid and facilitate demand management.

21 Third, IBM's study of its smart
22 grid pilot project in Washington State will offer
23 insights into customer behavior when confronted
24 with new rate structures that vary with the time
25 of day and with power demand and should prove

1
2 useful for New York City's endeavors.

3 Such opportunities raise the
4 question of whether our current regulatory regime
5 is up to the job of growing a smart grid here. In
6 her 2010 State of the City address, Council
7 Speaker Quinn called on the city to "cultivate an
8 economy of innovation". This will mean attracting
9 clean tech venture capital here.

10 In this context she called for a
11 renewable energy investment initiative and
12 envisioned a burgeoning green tech sector bringing
13 much needed good green jobs for New Yorkers.
14 These jobs should include the design, installation
15 and maintenance of wind energy systems that are
16 easy to connect with ConEd's distribution grid.

17 Similarly, at the Smart Grid Smart
18 Cities conference, James Gallagher, who just left,
19 our Mayor's point person on this, also talked
20 about the need for smart policy and smart
21 regulation.

22 Just moving ahead here very
23 quickly, the remarks of Jim Gallagher at this
24 conference also highlighted the importance of
25 integrating energy policy and linking utility

1 regulation with the goals of plANYC 2030, the
2 city's greener greater building legislation and
3 the fact that smart grids need smart buildings.
4

5 One of the most visionary
6 opportunities opened by the prospect for wind
7 power and a smart grid is a shift from macro power
8 generating and distribution systems with
9 centralized operations and controls to the
10 potential for decentralized micro grids that
11 combine heat and electric power generation.

12 The report on research by Columbia
13 University highlighted which buildings in New York
14 are currently capable of being hooked up to the
15 grid, which would mean buildings that would be
16 powered at least in part by wind power would be
17 able to feed some of that power directly into the
18 grid and use other parts of that power for their
19 own purposes. Some buildings can do it; some
20 buildings can't.

21 Energy guru Amory Lovins called
22 such developments disruptive technologies. The
23 will require new business models to bring new
24 competitors into an innovative electric power
25 marketplace and strategic public policies and

1
2 investments to make energy efficient buildings New
3 York's new normal. These could include wind power
4 friendly, demand respond real time pricing, the
5 next generation of battery storage technologies
6 and a city able to plug into a network of
7 distributed electric power generation.

8 Now it's up to us to look over the
9 horizon, to seize and to meet our opportunities
10 and to get them right. We might not have another
11 chance. The work of Councilman Gennaro and
12 Garodnick I think are stellar opportunities to
13 seize this moment.

14 CHAIRPERSON GENNARO: Thank you,
15 Nancy. I appreciate that very much. That's a
16 very lofty perspective. I appreciate that. Sit
17 tight, let's hear the statement from the panel and
18 then we'll come back to you for questions. Mr.
19 Else, do I have your comments here? First of all,
20 thank you for coming here from Dallas.

21 STEVEN ELSE: It was interesting
22 flight up this morning, but I got here eventually.
23 One canceled and one canceled on the way back.
24 And yes, we did have a lot of snow the week before
25 last. I've never seen that much.

CHAIRPERSON GENNARO: I heard about that.

STEVEN ELSE: I really want to thank you for the opportunity to talk to you today. It's very, very critical what you're doing to our industry. I think the small wind industry which my company, BroadStar Wind Systems is a part of. We're developing a new type of turbine technology which will go commercial in the back part of this year, which is exactly focused on what you're working on which is bringing wind power to within a municipality and putting that power at the point where it's needed.

The reason that's so important, if you look at the reports from NERC of our electric reliability in North America--

CHAIRPERSON GENNARO: [interposing] NERC?

STEVEN ELSE: It's the National Energy Reliability Corporation. It's basically an oversight authority for the government. Every one of our grid infrastructures in North America, or the U.S., hits the wall by 2017. And we can't solve that with just more generation. It's

1 generation, it's transmission infrastructure and
2 it's energy efficiency.

3 I think the small wind industry,
4 which I've said we're a part of, is very much--

5 CHAIRPERSON GENNARO: [interposing]
6 When you say small, like what kind of scale are we
7 talking about?

8 STEVEN ELSE: Less than 100
9 kilowatts in turbine size. If you used the
10 European definition, micro would be less than 1.5
11 kilowatts. We're actually a 12 kilowatt turbine.

12 CHAIRPERSON GENNARO: What kind of
13 facility would have your apparatus?

14 STEVEN ELSE: We've targeted so far
15 our marketing effort basically at corporate
16 America predominately.

17 CHAIRPERSON GENNARO: Commercial
18 buildings?

19 STEVEN ELSE: Commercial buildings.
20 So we're going to, for instance, my test facility
21 is in Reno, Nevada. It's with J.C. Penney. It's
22 a 1.6 million square foot distribution center.
23 We've had three turbines up there for quite a
24 while.
25

CHAIRPERSON GENNARO: 1.6 million square feet?

STEVEN ELSE: We actually have enough room on that facility for up to 70 turbines or about a half to 600 kilowatts of wind power in that facility. So we're very much following in the footsteps of distributed solar.

Now, we have two renewable sources of energy in North America. One is wind and one is sunlight. It was mentioned earlier on. Solar was very much, back in the early 2000s, where we are today. Wind, in a distributed environment, like a city like where we are now, has not gone mainstream. It's not gone mainstream for commercial reasons, for rebate reasons and emotional reasons. A lot of perception about big wind turbines, not in my backyard.

CHAIRPERSON GENNARO: It's also like distribution with local utilities and hooking up to them. That's got to be an issue also, right?

STEVEN ELSE: It is. We have all the same issues that solar has on putting in a CHP system or any other those issues. And there is

code that's out there throughout North America.

So what you're doing is both innovative and it's absolutely critical for technology like mine and the rest of my industry to actually put this stuff and prove that it works.

We've been collecting data in Reno now with anemometers on both our turbines for over six months. There has been a lot of criticism about whether turbines can even work on a building. I'm glad to say that our study of six months shows that on the parapet of a building, the wind accelerates 20-40%. Every little bit of wind speed that you get vastly increases power. It will work with the appropriate technology.

I don't want to spend a long time talking today, but what I do want to do, I have a lot of experience in the small wind industry. Also, a member of my board is a guy by the name of Greg Kats. He chairs several committees and just came out with a book which is called, "Greening Our Built World," which is exactly focused at what we're talking about and zero energy. He's probably the number one authority in North America on that right now.

CHAIRPERSON GENNARO: Where does he hail from?

STEVEN ELSE: He's in D.C. right now. I'm not sure exactly where he was born but that's where he hails from. He's an ex-DOE guy. He was part of the Clinton administration. We want to offer our services in any way we can do to help you with something that's so critical for our industry. Because I think what you're doing will kick start it.

CHAIRPERSON GENNARO: The whole idea is to try to create a regulatory environment in New York City that works. Hopefully, other jurisdictions throughout the country will say if they figured it out up there, let's do something like what they did in New York City. I think this could be a boon to the industry nationwide.

STEVEN ELSE: I think you're exactly right. Also, taking a leadership position on PACE financing and other things. It's not just having the right technology, it's being able to finance it at the same time. Our technology does pay for itself faster than solar but you're still dealing with paybacks that are in the five to ten

1
2 year timeframe, which is out of typical commercial
3 financing of equipment. So things like that will
4 enable this to happen.

5 CHAIRPERSON GENNARO: I think
6 between the PACE and what we're doing here, we
7 just really want to get something going. I have
8 people coming to me all the time with technologies
9 that they'd like to see implemented but it's a
10 whole ordeal of the standards and the
11 certifications and getting the feds to come
12 forward and the local bureaucracy to figure out
13 what they're going to do. I think the folks from
14 Local 3 are going to give voice to that. I've
15 been prodded by a lot of people that just want to
16 do good things and look at me as chairman of this
17 committee and say you have to help me. I'm
18 getting paid to do this, so I'm not volunteering.

19 STEVEN ELSE: It's fantastic. It's
20 incredibly hard to develop this technology. We've
21 spent many, many millions of dollars developing
22 it. I have a team of engineers predominately from
23 Lockheed Martin who have developed this
24 technology. But that's only half the equation.
25 The other half is actually getting it out there to

1
2 where it can be seen to prove that it's viable,
3 it's safe and it works. That's the phase that
4 we're in, as is everyone else in our industry.

5 CHAIRPERSON GENNARO: I'd say that
6 Mr. Else, you're hired. As I do, I tend to rely
7 on people that are actually trying to do this type
8 of thing. I think that's how you make good public
9 policy. You talk to the people that are actually
10 trying to get it done and find out what kind of
11 roadblocks they're running into and try to figure
12 out how you get the bureaucracy and the regulators
13 to focus on this in such a way that we can get
14 this to happen. I've been in government for 27
15 years, so I understand all the insanity that goes
16 into all this government nonsense and I am part of
17 that. So I am of it.

18 STEVEN ELSE: Don't worry, we have
19 all the same issues in my country of birth, so I'm
20 very pleased to hear you say that from my country
21 of citizenship now.

22 CHAIRPERSON GENNARO: It's kind of
23 like one small world. We're all sort of dealing
24 with the same stuff. Some countries win more gold
25 medals than other countries. I'm just saying that

1
2 just showing off a little bit. Are we ahead? I
3 think we're ahead. Okay. We look forward to
4 working with you, Mr. Else. Please hang back
5 towards the hearing. I can make an introduction
6 of my personal staff and the staff to the
7 committee. We look forward to a long
8 collaboration and maybe you can help to bring some
9 chicken fried state to New York City. There's not
10 a lot of that here.

11 STEVEN ELSE: I probably can.

12 CHAIRPERSON GENNARO: There's not a
13 lot of that here and I think we need that. Thank
14 you, Mr. Else.

15 STEVEN ELSE: Thank you. I
16 appreciate it.

17 CHAIRPERSON GENNARO: From Local 3,
18 Mr. Yee and Mr. Sobel. Thank you for coming
19 today. As everyone knows, I represent the main
20 building of Local 3 and the headquarters and all
21 that. The Council central staff in pulling
22 together this hearing, heard of Local 3's plight
23 in trying to get something done. I also heard
24 about it from the Deputy Borough President Barry
25 Grodenchik. I think Dr. Finkel was in contact

1
2 with Barry Grodenchik who called me. So I look
3 forward to your good testimony today, Mr. Yee and
4 Mr. Sobel.

5 MICHAEL YEE: Thank you, Mr.
6 Chairman. Thank you to the other guests who are
7 indulging us today and hearing what we have to
8 say. As the Chairman said, I represent the
9 Educational and Cultural Trust Fund of the
10 electrical industry which is part of the Joint
11 Industry Board. We are a labor management
12 association, as you alluded to as Local 3 as a
13 partner.

14 CHAIRPERSON GENNARO: Pardon me.
15 They talk about the Joint Board and Local 3 and to
16 a lot of people it's all the same, which it isn't.
17 But it's all one big family over there right? So
18 to speak.

19 MICHAEL YEE: So to speak. I'm
20 here to give testimony as to our efforts to bring
21 small wind turbines into New York City and
22 actually onto our property at 158-11. The Joint
23 Industry Board of the Electrical Industry
24 purchased 12 architectural wind turbine generators
25 in April of 2009. It was anticipated that we

1
2 would install them on our office building located
3 at 158-11 Harry Van Arsdale Jr. Avenue in
4 Flushing, New York. During the process of doing
5 the required engineering of the project, it came
6 to light that the New York City Department of
7 Buildings had no regulation for such
8 installations.

9 On October 15, 2009, we met with
10 Mr. Robert LiMandri, the commissioner of the New
11 York City Department of Buildings. Mr. LiMandri
12 expressed his desire to promote renewable energy
13 projects in the City of New York. He stated that
14 he was aware of the department's efforts to
15 develop regulations for installations like ours
16 and would review our suggestions we proposed.

17 Approximately a month later, on
18 November 18, 2009, we meet Building Sustainability
19 Board of the New York City Department of Buildings
20 at their inaugural meeting. Brian Patnoe,
21 representing AeroVironmental, the manufacturer of
22 architectural wind, the turbine we are proposing
23 to install also attended. Mr. Patnoe's
24 presentation pointed out that the units have been
25 safely installed throughout the country and why

1
2 the 25-foot setback requested per the Department
3 of Buildings bulletin will have a major impact on
4 the operation of the turbines.

5 Two similar installations are
6 installed in New York City. One on an apartment
7 complex in Melrose featured in a New York Times
8 article and one at the Brooklyn Navy Yard's new
9 arts building.

10 The Joint Industry Board is a
11 proponent of generating safe distributed renewable
12 power in recognition of New York City's long-term
13 plan NYC initiative to reduce carbon emissions.
14 This is evident in our installation of a 50-
15 kilowatt solar photovoltaic installation on one of
16 our properties in Queens.

17 The architecture wind product we
18 proposed has distinctive features that make it
19 particularly well matched for use in a
20 metropolitan setting. Safety is a principle that
21 our industry promotes and we are integrally
22 involved in setting safety standards that govern
23 our trade.

24 We understand the New York City
25 Department of Buildings' concerns and we are

1
2 confident that our installation would be a safe
3 one.

4 CHAIRPERSON GENNARO: Mr. Sobel, do
5 you have a statement to support Mr. Yee's
6 statement?

7 RICHARD SOBEL: Yes, I do.

8 CHAIRPERSON GENNARO: I figured I
9 would take your statement and then I'd have
10 questions and comments for you and the other
11 panelists.

12 RICHARD SOBEL: My name is Richard
13 Sobel. I'm an electrical contractor and a
14 professional engineer here in New York. I'm
15 represent New York Electrical Contractors
16 Association. We're the other half of the Joint
17 Board. We're the management side. We're the
18 contractors. Local 3 is the labor side. The
19 Joint Board is how we come together.

20 I'm a code guy. I've sat on
21 national code panels writing the code for solar,
22 fuel cells, a lot of the alternative energy for
23 many, many years through the 90s and into the
24 2000s. I sit on New York City's Revision and Code
25 Interpretation Committee for almost 20 years. I

1
2 chair one of New York City's six code making
3 panels. So I'm very active in the code making
4 process.

5 A little more than a year ago we
6 started represent AeroVironment, AV Wind, the
7 product that's installed at Melrose and the
8 Brooklyn Navy Yard.

9 CHAIRPERSON GENNARO: So Quantum,
10 your company, markets for?

11 RICHARD SOBEL: We were the value
12 added reseller for the AeroVironment products
13 after the Melrose and Brooklyn Navy Yard project.
14 We didn't install those two projects.

15 CHAIRPERSON GENNARO: Did you not?

16 RICHARD SOBEL: We did not.
17 Subsequently we became their representative here
18 and they've got a very innovative product. They
19 have a patented technology. They're an aerospace
20 company. They make the drone planes for the DOD.
21 They make all these neat aerospace products. It's
22 about a six-foot turbine and they patented the
23 technology that if you mount this thing at a
24 certain angle at the parapet of a building, the
25 aerodynamics of the building, wind strikes the

1 building, it rises up the face.

2
3 CHAIRPERSON GENNARO: So that's why
4 the setback is a killer for you?

5 RICHARD SOBEL: Correct. So it has
6 to be within a foot of that edge of the parapet to
7 get that acceleration of wind coming over the edge
8 of the parapet. It's an integral part of the
9 design of the turbine.

10 We proudly installed that 50kw
11 solar system the Joint Board has. We were
12 contracted to install the wind system, design and
13 install the wind system. We got our New York City
14 permit, but we ran into some problems
15 subsequently.

16 CHAIRPERSON GENNARO: You got a
17 permit?

18 RICHARD SOBEL: We had an
19 electrical permit.

20 CHAIRPERSON GENNARO: Electrical
21 permit?

22 RICHARD SOBEL: I'm here to speak
23 about maybe the perspective of the engineers and
24 contractors and labor of what we see as maybe some
25 of the impediments to move the whole process of a

1
2 widespread installation of wind forward. I think
3 the first thing is the approval process. So
4 typical all these years working in the code in New
5 York, a new electrical product comes out and the
6 first thing the advisory board looks for and the
7 BC looks for, is it a listed product? Meaning,
8 there is a nationally developed testing standard,
9 a national testing lab, like a UL tested to that
10 standard, puts their sticker on it. Then here in
11 New York we don't have to worry it meets all the
12 testing because it's done. It's listed.

13 Unfortunately, there hasn't been a
14 testing standard for small wind.

15 CHAIRPERSON GENNARO: Now I'm
16 involved, so that's going to change soon.

17 RICHARD SOBEL: Excellent. Very
18 encouraged to hear Ms. Taylor's comments that
19 we've been anticipating in the past year some of
20 these standards coming out on a national level.

21 CHAIRPERSON GENNARO: From DOB?

22 RICHARD SOBEL: Well these
23 standards coming out on a national level.

24 CHAIRPERSON GENNARO: But Taylor is
25 from DOB?

1
2 RICHARD SOBEL: Yes, that's
3 correct. So to try to stopgap the problem, the
4 Sustainability Committee issued a technical
5 bulletin, 2009015.

6 CHAIRPERSON GENNARO: DOB
7 Sustainability Committee?

8 RICHARD SOBEL: DOB Sustainability
9 Committee. With a very noble goal and that noble
10 goal was to ensure the safety here in New York.
11 Because this is not just an electrical product,
12 it's also mechanical and there are these concerns,
13 if the turbine gets struck by something, a bird,
14 what if it gets icing on it. All these factors,
15 and you're mounting it at the edge of a parapet of
16 a building, potentially over a sidewalk, over a
17 street. They had these concerns.

18 So they developed this bulletin.
19 It outlined two things. It outlined a procedure
20 where a testing standard could be developed by a
21 manufacturer and then the product put through its
22 paces with a whole bunch of field testing and
23 pilot program where an owner could choose to
24 install this product in a two-year period, do an
25 amount of testing and if it meets it at the end,

1
2 they could keep it. If it doesn't meet the
3 standard, then they have to remove it at their
4 expense.

5 Unfortunately, the factories
6 weren't willing to commit the resources to go
7 through with all this field testing just for us
8 here in New York. And the many, many, many owners
9 we had lined up to do these products just weren't
10 willing to commit to and install a product that
11 they'd spend a lot of money going through this
12 pilot program and potentially in two years have to
13 take it down. So we proposed collectively some--

14 CHAIRPERSON GENNARO: [interposing]
15 Because that's what's offered right now, like you
16 could be a pilot.

17 RICHARD SOBEL: Right.

18 CHAIRPERSON GENNARO: And
19 everything that goes along with that.

20 RICHARD SOBEL: And that's pretty
21 much why you haven't seen any of these products
22 installed subsequent to the two that were already
23 up.

24 CHAIRPERSON GENNARO: Which didn't
25 go through the thing to put them up?

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2 RICHARD SOBEL: Nobody is willing
3 to go through it.

4 CHAIRPERSON GENNARO: But the two,
5 they just put them up, there was no approval?

6 RICHARD SOBEL: They were put up
7 before it was even written.

8 CHAIRPERSON GENNARO: Please
9 continue.

10 RICHARD SOBEL: So AeroVironment
11 said we're selling these products around the
12 country and we're going to pull back from the New
13 York market until it gets to such a time that
14 maybe these standards are written, there's a
15 national standard, we could have it tested and we
16 could much more easily accept it. The market, the
17 people that are going to pay for these and install
18 kind of said the same thing. We'll wait until the
19 dust settles, until we know that if we're going to
20 make this commitment then we can put it right up
21 and use it.

22 So it's very encouraging to hear
23 that there is potential a national standard that
24 these manufacturers, such as the gentleman in the
25 panel can attest to. Have that listed label and

1
2 then hopefully the approval process with New York
3 would really go through quickly. So that's step
4 one.

5 Step number two is I'd like to talk
6 a minute about incentives. There are a few buyers
7 out there that want the marketing pizzazz of wind
8 or solar. But nine out of ten the question asked
9 is what is my return on investment. For these
10 alternative energy products, be it solar, PV, be
11 it wind, it all comes down to the incentives.

12 On their own, these products
13 without the incentives, they just don't justify
14 the return on investment. Luckily for solar here
15 in New York, there's a wonderful package of
16 incentives. NYSERDA, there's investment tax
17 credit, there's accelerated depreciation and there
18 is the New York City property tax rebate that was
19 initialized last year. So you put that whole
20 package together, the solar model works very, very
21 well and people are doing it.

22 The wind model with the
23 AeroVironment system that I'm familiar with, they
24 can't apply for the NYSERDA money and they're not
25 subject to the New York City property tax rebate.

1
2 Those are two big impediments to the financial
3 model of making these work for clients. So I
4 would certainly encourage perhaps looking into
5 expanding the NYSERDA rebate money and perhaps
6 including wind power as well in the property tax
7 rebate program.

8 CHAIRPERSON GENNARO: I just want
9 to have a brief sidebar with counsel.

10 [Pause]

11 CHAIRPERSON GENNARO: Maybe you and
12 the counsel to the committee should have a chat
13 afterwards. I was puzzled because I thought that
14 it was not technology specific, the whole property
15 tax thing. That's been reaffirmed by counsel.
16 But you're out there doing it.

17 RICHARD SOBEL: It would be my
18 pleasure. Our understanding from the DOB is it's
19 only for PV. That the property tax rebate is only
20 applicable for PV installations.

21 CHAIRPERSON GENNARO: The plot
22 thickens. You got to speak on the record.

23 COUNSEL: The PACE energy financing
24 has not been passed yet by New York City.

25 CHAIRPERSON GENNARO: He's talking

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about the property tax thing.

COUNSEL: That's what you're talking about, right?

RICHARD SOBEL: The 35% property tax rebate over four years.

COUNSEL: That's a different thing. That's not the PACE energy.

CHAIRPERSON GENNARO: I know.

RICHARD SOBEL: Could we still talk? It could be fun.

[Pause]

CHAIRPERSON GARODNICK: Bill, we should work on the property tax thing for wind as well. Please continue.

RICHARD SOBEL: The other little bit factor that people are often making the decision wind/solar what do I do. People like wind. First of all the visibility of it. From the marketing point of view, they like the idea of having it on the edge of the building. Solar is very easy to very precisely calculate what the production will be. You can model what the sun is going to strike this roof over a period of time. You can get very accurate estimates.

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2 Wind is much more elusive. We can
3 use historic data, but it's much more elusive and
4 it's much more difficult to give a client really
5 accurate numbers of what your production should be
6 going forward.

7 So as a result of that, they want
8 a little more fudge. Making that decision, all
9 other things being totally equal, you're going to
10 see more solar. So if we really want to promote
11 wind, we have to think about the whole incentive
12 package. If it's just a matter of wind versus
13 solar, again, like I said, all things being equal,
14 it's probably going to tip towards solar. So if
15 we really want to promote wind, we want to really
16 take a look at that incentive package.

17 I believe too one of the things is
18 it's an industry in its infancy. Solar panels,
19 they're building zillions of them right now all
20 over the world. The prices keep falling. It's
21 getting cheap. Small wind is a relatively cottage
22 sort of product. And I believe if the incentives
23 are there they will come. I think factories will
24 make greater commitments to producing the product
25 if they know that there's a viable market. We

1
2 have to development that viable market here in New
3 York for them. I think then that'll also help the
4 pricing drop down where we don't have to forever
5 need incentives to keep this going forward.

6 CHAIRPERSON GENNARO: Thank you.

7 RICHARD SOBEL: You're welcome.

8 CHAIRPERSON GENNARO: So that wraps
9 your statement, right?

10 RICHARD SOBEL: Yes.

11 CHAIRPERSON GENNARO: Just a couple
12 of comments. Nancy, I want to thank you for being
13 here. I know we should catch up, so I could be
14 more versed on the good work of the Sallan
15 Foundation. We should commit to do that.

16 NANCY ANDERSON: I'd be happy to do
17 that.

18 CHAIRPERSON GENNARO: That would be
19 great. You used a word here in your testimony. I
20 always like to point out words that have never
21 been used in this committee before since I've been
22 chair. Stochastic.

23 NANCY ANDERSON: It's a real \$10
24 word.

25 CHAIRPERSON GENNARO: It is now

1 part of the lexicon of the Committee on
2 Environmental Protection. I'm sure no other
3 committee has used it. So we are leading once
4 again. Thank you for giving us a new word.

6 NANCY ANDERSON: You're welcome.

7 CHAIRPERSON GENNARO: I appreciate
8 that. Mr. Else, thank you for coming here. You
9 have my commitment that we'll work with you. Talk
10 to staff, hang out. You get to meet them in a
11 little bit. We should figure out how we can do
12 good things for the country. Why should we limit
13 ourselves to just New York.

14 STEVEN ELSE: We have a number of
15 companies here in the city. We have anemometers
16 up in several companies.

17 CHAIRPERSON GENNARO: The wind
18 measurement things. I look forward to future
19 collaboration. I'm not letting you off the hook
20 on that chicken fried steak.

21 Mr. Yee and Mr. Sobel, I guess it's
22 kind of like a two-track thing here. There's the
23 thing that you're trying to do. Your installation
24 and what you're running into in terms of DOB who
25 has now locked themselves in to this 25 foot

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2 setback thing which they're pretty married to at
3 this point, absent some sort of change of heart or
4 whatever.

5 With regard to the process that DOB
6 is using to figure out what these standards are
7 going to be, which DOB talked about. Are folks
8 like you part of that process? Do you get to
9 participate in that? How does that work?

10 RICHARD SOBEL: Neither of our
11 organizations are represented on the
12 Sustainability Committee. We applied for
13 membership.

14 CHAIRPERSON GENNARO: So basically
15 the process they're doing to move this forward,
16 they put together this committee and neither of
17 your organizations are represented. But that
18 doesn't keep us from trying to represent and make
19 sure that your ideas have some voice in that
20 process. Obviously you're going to the deputy
21 borough president. Right? Somebody reached out
22 to the borough president's office. I guess Dr.
23 Finkel did.

24 MICHAEL YEE: Dr. Finkel did have a
25 conversation with him.

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2 CHAIRPERSON GENNARO: Feel free to
3 work with William Murray of my staff, sitting to
4 my right. I can't claim to be an expert like the
5 folks doing this at DOB, but certainly in the
6 interest of representing an entity within my
7 district, I want to make sure every possible idea
8 on how this could be done and be done safely is
9 represented, so feel free to talk to William
10 Murray from my office regarding that. Please give
11 my regards to Chris Ericson. We haven't spoken in
12 a while. I've tried, but that's a whole other
13 story. Work with Bill and he can be a good
14 contact into the micro issue of what you're trying
15 to do and the macro issue of this paradigm that
16 we're trying to create for all kinds of
17 installations throughout the city. So Bill's your
18 guy.

19 MICHAEL YEE: Thank you, Mr.
20 Chairman. And don't feel bad, I work in the same
21 building with Mr. Ericson and I don't get to see
22 him either.

23 CHAIRPERSON GENNARO: Called a
24 couple of times but I guess he's a busy guy. Give
25 him my best. I'm very grateful that it's

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represent here.

MICHAEL YEE: Thank you for your time.

CHAIRPERSON GENNARO: Thank you all.

[Pause]

CHAIRPERSON GENNARO: I'll just call for a little order. We have Nancy that's going to be testifying. He can just be on the phone. We get that ready while we hear Annie's testimony. We'll ask for some order and people can have conversations outside. Annie is a frequent flier of this committee.

ANNIE WILSON: Thank you. I had not planned on speaking today. So I'm unprepared but I had wanted to.

CHAIRPERSON GENNARO: Sure.

ANNIE WILSON: As an afterthought to bring a very important matter to the discussion.

CHAIRPERSON GENNARO: Just state your name for the record.

ANNIE WILSON: I'm Annie Wilson with the Sierra Club, Atlantic Chapter. Thank you

1
2 so much for taking the lead on the direction of
3 the efficiency and the implementation within the
4 city. It's just so important for our future, for
5 our air and for the job creation issues that we
6 have under this recession of course. As a long-
7 term plan, I find that what I've heard today is so
8 encouraging. I feel a little better than when I
9 walked in earlier today.

10 CHAIRPERSON GENNARO: Well let's
11 not pop the champagne cork yet.

12 ANNIE WILSON: I want to pop some
13 bad news first. That's why I came here.

14 CHAIRPERSON GENNARO: Some bad
15 news?

16 ANNIE WILSON: Yes. Last week I
17 was informed that there is a project that is
18 underway. It hasn't been announced publicly. But
19 for 2,000 megawatts of power coming down from
20 Hydro Quebec and that this cable would be built
21 under the Hudson River to New York City. Now, if
22 you can understand, 2,000 megawatts and its
23 implications on all of the proposals and projects
24 discussed today and the disturbances within the
25 community of what is or isn't renewable energy. I

1
2 wanted to bring to your attention this matter. I
3 would be happy to forward the article. I want to
4 explain also quickly.

5 CHAIRPERSON GENNARO: Yes, because
6 it is a little off topic.

7 ANNIE WILSON: It is off topic but
8 it does displace everything that has been
9 discussed today. If there is suddenly 2,000
10 megawatts of solid power by 2017 as had been
11 explained earlier our grid will max out by, it is
12 of grave concern. So I will be happy to forward
13 the articles and the research we're going to
14 follow up with. This power imports has been
15 advertised as surplus power which is absolutely
16 incorrect.

17 CHAIRPERSON GENNARO: Is it like
18 some big DC cable or whatever? It's going to come
19 in as DC power?

20 ANNIE WILSON: Exactly. Your
21 committee had heard a DC project about four or
22 five years ago.

23 CHAIRPERSON GENNARO: It was way
24 back.

25 ANNIE WILSON: It was called the

1
2 conjunction line.

3 CHAIRPERSON GENNARO: Yes, the
4 conjunction. Steve Mitnik.

5 ANNIE WILSON: Steve Mitnik,
6 correct. There was also another proposal called
7 the New York Regional Interconnect that was
8 canceled last April when that proposal was
9 withdrawn from it's Title VII proceedings.

10 CHAIRPERSON GENNARO: But this is
11 similar? It's a DC thing, so it doesn't lose
12 voltage or whatever?

13 ANNIE WILSON: I don't know all the
14 details, but I just wanted to let you know that
15 this is happening as we speak. We'll forward you
16 the information. And that there is no surplus
17 power. New dams will have to be built for this
18 import or export, depending on how you look at it.

19 And that the communities impacted
20 are gravely concerned that there is a river called
21 the Rupert River that was destroyed over the
22 summer for 800 megawatts and that the community
23 had actually proposed I believe 1,200 megawatts of
24 wind power as a substitution that was refused.
25 There was another project that was approved over

1
2 the summer for the Romaine River east of Quebec
3 City. One of the communities has filed an
4 injunction over transmission line issues. There
5 would be another 5,000 megawatt development in the
6 Lower Church Falls area where a natasanon
7 [phonetic] which is the name of the land area
8 where the indigenous people live. There are no
9 treaties.

10 So I will end my comments on this.
11 I will forward information as it comes along.
12 Environmental organizations have already begun to
13 discuss amongst ourselves since this recent
14 announcement how we're going to address this
15 matter, how we're going to outreach and do what we
16 have to do. So thank you very much.

17 CHAIRPERSON GENNARO: You can talk
18 to Samara or you can talk to Bill Murray of my
19 staff. Thank you, Annie for bringing this because
20 I really hadn't heard about it.

21 ANNIE WILSON: No, you hadn't.
22 That's why I came to say something.

23 CHAIRPERSON GENNARO: Thank you,
24 Annie.

25 ANNIE WILSON: Thank you very much.

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Bye-bye.

CHAIRPERSON GENNARO: You bet.

Good to see you.

COUNSEL: Now they're trying to set up the PowerPoint presentation.

CHAIRPERSON GARODNICK: Are we going to do this in a sequence here? What are the two entities we're going to be talking to?

COUNSEL: Bergey Power.

CHAIRPERSON GENNARO: You've got to talk on the record, or just give it to me here. So the first presentation.

COUNSEL: Mike Bergey from Bergey Power.

CHAIRPERSON GENNARO: So this is going to feed into the sound system here or something? Right?

[Pause]

CHAIRPERSON GARODNICK: Mr. Bergey, can you hear me?

MIKE BERGEY: I can, yes.

CHAIRPERSON GENNARO: I'm the chairman of the committee. My name is Jim Gennaro. I thank you for being with us today.

1
2 The staff that put together this hearing thought
3 it would be important for the committee to get the
4 benefit of your views and to see your PowerPoint.
5 I thank you for being with us and thank you for
6 your patience. Without further ado, feel free to
7 start your presentation.

8 MIKE BERGEY: Thank you, Mr.
9 Chairman. Do we have the PowerPoint up?

10 MALE VOICE: Yes, it's up.

11 MIKE BERGEY: I appreciate the
12 opportunity to speak today, the accommodation.
13 I'm calling from Norman, Oklahoma where we're just
14 as tired of winter as you guys are. But we're not
15 going to get 13 inches of snow today, so you got
16 the worst of it.

17 New York City is one of my favorite
18 cities in the world. My wife and I have two kids
19 in college there. We get there often. I actually
20 do feel that a few more wind turbines around the
21 city would be very nice.

22 CHAIRPERSON GENNARO: I'm for that.

23 MIKE BERGEY: May I have the second
24 slide please? The next two slides just provide
25 some bona fides of my company and myself. I think

1
2 the bottom line is that we've been around for
3 three decades, have installations all over the
4 world and have a wide body of experience with
5 turbines in all sorts of applications.

6 Next slide. Just a little bit
7 about myself. I'm a mechanical engineer, been in
8 the industry over 30 years. I was president of
9 our national trade association twice, was on the
10 board of directors for a long time, until my wife
11 asked me to cut back on some of those activities.
12 I've been involved with most of the policy
13 initiatives around the country in small wind and a
14 lot of the technical areas as well.

15 My latest activity has been to lead
16 the development of the industry certification
17 standard that's just been approved and pretty
18 soon, by the end of this year, you'll see
19 certified wind turbine products, which we think is
20 a sign of maturity in the industry.

21 Can I have the next slide please?
22 The basic technology is mature. There are a lot
23 of different companies offering a lot of products
24 with five to ten-year warranties. They have been
25 proven in tens of thousands of applications,

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2 hundreds of millions of operational hours. So
3 there are field proven products that are
4 available.

5 Can I have the next slide? First
6 the opportunities. I think the city does have a
7 very good opportunity to use the icon value of
8 wind. You see wind turbines showing up in TV
9 commercials. They were proposed on the initial
10 version of the Freedom Tower. They do convey a
11 sense of a company or a city getting it, being a
12 part of the environmental solution, the
13 stewardship. So I think that they have, beyond
14 their energy value they have a value to the image.

15 But counter intuitively, your tall
16 buildings which some might think would give you an
17 advantage, because of the height, actually reduces
18 your opportunities to use wind. I'll go into this
19 more in a minute. Although you get some exposure
20 from being up high, you have much more sheltering
21 of the wind from those tall buildings.

22 Nonetheless, there are places in
23 New York City where small wind systems can be
24 installed and generally you can say that those are
25 areas with proper exposure, including the tops of

1
2 some buildings.

3 Can I have the next slide? The
4 impediments are significant. Because the urban
5 environment is the worst place you can pick to use
6 wind power, and that's because of the sheltering
7 and the turbulence issue. I'll get into that in a
8 minute.

9 I appreciate particularly the
10 opportunity to speak for you today because I've
11 sort of watched what rolled out with the Freedom
12 Tower, the big sign in Times Square, some of the
13 proposals for stadiums. So I've seen that there
14 have been plenty of people who have come before
15 various public officials and have painted an
16 overly optimistic picture of the opportunity of
17 wind in the urban environment. So I'm sort of a
18 devil's advocate in that case here.

19 For those projects that are viable,
20 permitting will be the main impediment. In fact,
21 permitting is the main impediment for the wind
22 industry around the country. So I think you very
23 rightly have come together to see what you can do
24 about that.

25 Can I have the next slide please?

1
2 From the perspective of the small wind industry,
3 the mainstream is ground mounted wind turbines.
4 And I've shown a bunch of pictures here. The
5 turbine on the bottom left is one of our ten
6 kilowatt systems that's at the Liberty Science
7 Center across the river in Jersey City.

8 Then the one next to it is a one-
9 kilowatt turbine that was installed temporarily at
10 East 34th, a pier there that I think is now a
11 ferry terminal. But you can see that that's the
12 most common way in which wind turbines are used,
13 representing probably 98-99% of the market.

14 Can I have the next slide? Wind
15 industry considers building-mounted to be a fringe
16 application. It's only 1% if that of the market.
17 It's been approached not as cautiously as it
18 should have been perhaps. And we'll get to that
19 further in a minute.

20 Can I have the next slide? And
21 then, for us, the radical fringe, the truly wacky
22 stuff, is the building integrated. And I know
23 architects are well meaning, but sometimes they
24 just come up with kind of loopy stuff. The three
25 images in the center are from the original version

1
2 of the Freedom Tower. When we got the call from
3 the London based, if I remember correctly,
4 architects, we told them they were loopy. And
5 they just kept making calls until they found
6 somebody who would work with them. That company
7 is out of business now.

8 Can I have the next slide. The
9 basic problem you face is turbulence. That's the
10 disturbance of air flow by obstacles. You just
11 have a very obstacle ridden landscape. Turbulence
12 ruins the effectiveness or greatly diminishes the
13 effectiveness of the air foils and that is true
14 both for horizontal access turbines and vertical
15 access, even though they're unsubstantiated claims
16 to the contrary.

17 Can I have the next slide? I
18 believe that if you approach urban turbines, it's
19 important to recognize you're primarily doing it
20 for the looks not for the energy. That's because
21 in the two drawings up at the top there, the
22 isolated and urban, show the flow patterns of wind
23 and sort of show that wind tends to go up high, up
24 above the obstacles. The rough terrain is
25 sheltered. And so you have very low average wind

1
2 speeds in amongst the buildings. And because the
3 power in the wind goes as a cube of velocity that
4 means that there's very little energy available.

5 Can I have the next slide please?

6 We know that because the data is in. The U.K. has
7 conducted what were called the Warwick trials
8 where they looked at 26 building-mounted small
9 wind turbines over a year. The results were
10 shockingly poor, 5-10% of what was predicted.
11 People were accused, and I've got a quote here of,
12 "exploiting customer's enthusiasm". The industry
13 got a real black eye. You can find the reports
14 online. But I want to point out that it's not
15 mainstream industry, it's the hustlers that we
16 have in our industry.

17 Can I have the next slide please?

18 Small wind has always attracted inventors and it's
19 been a fruitful area of innovation. But in this
20 day and age with venture capital chasing green
21 investments, penny stock options being available,
22 the power of internet promotion and the power of
23 computer renderings, we seem to have a plague of
24 people who were selling mortgages a couple of
25 years ago and are now doing small wind turbines.

1 Hustlers, as I call them, will make
2 some pretty outrageous claims. They're not very
3 helpful to our industry. What really separates
4 them from the mainstream is that they just don't
5 have the track record. So I would urge caution
6 there.

7
8 Could I have the next slide please?
9 This is my last one. My recommendations then
10 would be to definitely do streamline permitting
11 for proven products and applications. I guess
12 you've already discussed this but I thought the
13 paper on the Interagency Green Team and the
14 Innovation Review Board would be very helpful. So
15 we'd be in support of that.

16 But I would exercise extreme
17 caution in nurturing innovative wind turbine
18 products. I don't think that a heavily populated
19 area is the best place to work the wrinkles out of
20 a design. So I would definitely look at a track
21 record before opening the doors for some of these
22 new entrants.

23 I think it would be worthwhile to
24 investigate the real efficacy of building-mounted
25 wind turbines and to produce a white paper or a

1 frequently asked question thing that would be
2 available to people who naturally have an interest
3 in applying wind systems in New York City. We've
4 received a couple of dozen calls. We don't like
5 to mount wind turbines on buildings, so we've
6 pushed them away. Even out here in Oklahoma we've
7 seen a strong interest in using wind in the city.

8 I would look for exposed locations
9 for ground mounted turbines along the riverfront
10 parks and that sort of thing. I hope you will
11 pursue using more small wind systems in the city.
12 I think they're not only fun to watch but I think
13 they send a message that the city is part of the
14 solution. With that, I again appreciate the
15 opportunity to share my views.

16 CHAIRPERSON GENNARO: Thank you,
17 Mr. Bergey. We appreciate you producing this
18 PowerPoint and giving us the benefit of your
19 views. Members of the committee and staff of the
20 committee doesn't have your depth of knowledge on
21 these issues. As we navigate this subject matter
22 we're trying to bring all voices that have
23 something good to bring to the table. One cannot
24 argue with the fact that you've been doing this a
25

1
2 long time. Your work with various boards like the
3 AWEA is certainly recognized by this committee.

4 But we do wish to endeavor to bring
5 all viable entities and methods of generating wind
6 power forward. Certainly, as you indicate, we
7 should have a healthy skepticism of some folks who
8 make claims. The city I think has a pretty good
9 track record because we have all kinds of
10 purveyors who constantly come before this
11 committee and try to make inroads, whether it's
12 with sanitation related technology or sewage
13 processing technology or paving technology and
14 everything that you can think of.

15 So I think the city has a good
16 sense about the types of technologies we try to
17 promote and those that we need to see a proven
18 track record before proceeding. Your comments
19 along those lines are duly noted.

20 So we thank you for being here
21 today. This is the first time I think I've had a
22 remote testimony given over a speaker. It
23 happened one other time when I was a staff member
24 for the committee. I'm thinking that the guy was
25 in Oklahoma too. It rings a bell. It was like 15

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years ago.

MIKE BERGEY: We do have airports but it's a day coming and a day going.

CHAIRPERSON GENNARO: Right. Mr. Bergey, I certainly wish you and your company well in your efforts to bring a green clean wind power to cities and other areas throughout the country. And for being with us here today, we thank you greatly.

MIKE BERGEY: Thank you, Mr. Chairman.

CHAIRPERSON GENNARO: You bet. Take care now. Bye-bye.

MIKE BERGEY: Bye.

[Pause]

CHAIRPERSON GENNARO: These next people got as far as Philadelphia. This is on the record now I'm speaking. I'd like to go to the historic part of the city where they have Independence Hall and a place there called City Tavern. It's restored and they serve some pretty good food there. Am I speaking to Mr. Polidoro? Can you hear me?

JOE POLIDORO: Yes, I can.

CHAIRPERSON GARODNICK: Thank you for being with us. I'm the Chairman of the committee. My name is Jim Gennaro. We have members of the Council staff are here, people who have come to be part of this hearing. Mr. Polidoro, you're going to be the final word here today. We thank you for the opportunity to get the benefit of your views. We do appreciate it. Without further ado, we do have a technician deployed to take us through the PowerPoint. We look forward to the benefit of your views. I ask you to start your good testimony.

JOE POLIDORO: I will also provide an electronic version of the written testimony. I had full intentions of actually being there today. Due to all the trains being delayed or halted out of Philadelphia due to obstructions on the train tracks, no trains were leaving after 9 a.m. this morning. That's why I'm dialing in by phone.

I was fortunate enough to listen to the previous presenters. I agree with 99% of what was spoken today. Due to the interest in time I'm going to limit the presentation to three to five minutes.

CHAIRPERSON GENNARO: You were actually able to hear the whole hearing, is that right?

JOE POLIDORO: Yes, I was dialed into the speaker phone prior to this.

CHAIRPERSON GENNARO: You heard the hearing from its outset where it started at 1:30 or whatever?

JOE POLIDORO: I think I dialed in at 2 p.m.

CHAIRPERSON GENNARO: So you were here for longer than I am. I'm glad that you had the benefit of hearing folks that came before. That'll give you better ability to shed light on what they have to say as well as your own perspective. So please commence.

JOE POLIDORO: Once again, in interest of time, I'll keep this at three to five minutes. I want to thank the Council for this invitation. If you go to slide number two, essentially this is a quick overview of what we're focusing on.

Then you got to slide number three. The top three bullets are the three bullets that

1
2 Green Cities Energy promotes. We believe in
3 utilizing a basket of energy solutions, everything
4 from wind, solar, to nuclear and coal. We believe
5 that you need a blend of different technologies to
6 meet today's exponential growth needs.

7 Number two, we believe that
8 generating electric or reducing electric from the
9 source has the greatest amount of benefits and
10 obviously the least amount of line losses.

11 Number three, we're just looking
12 for a fair trade for renewable energy, just to
13 have a level playing field across the board.

14 If I got to slide number four, one
15 of the things we see pretty much throughout the
16 mid Atlantic and throughout the Northeast Corridor
17 as well is the double-digit rate increases. Not
18 so much the fault of any one party, but
19 essentially predicated upon commodity causes.

20 Many energy companies were forced
21 in one way or another to divest some of their or
22 all of their generation. Independent financial
23 institutions that primarily drive the growth of
24 independent power have either merged or ceased to
25 exist. The development of new generation to meet

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2 the growing needs has been out of balance for
3 maybe close to eight years now.

4 Slide number five. The focus of
5 this presentation will be the small structure
6 mounted wind energy turbines. We have a template
7 that I'll also send electronically, a four-page
8 small structure mounted wind energy turbine
9 template for a use ordinance. In the upper left-
10 hand quadrant is what we're referring to.

11 On slide number six, the swift
12 turbine, made in the USA. The manufacturer is
13 Cascade Engineering. It has received quite a bit
14 of press from local magazines, local newspapers to
15 Time magazine and other national publications
16 since 2008. That's when this particular unit
17 received its UL listing.

18 I got to slide number seven. There
19 are four different pictures of swift turbines in
20 the field. The top right is a four-story building
21 where you could hardly see the turbine itself.
22 It's only seven foot in diameter and it has a
23 controller associated with it so it rotates in the
24 direction of the wind to maximize the wind speed
25 and maximize the capability of it.

1
2 If I go to slide number eight, a
3 nice little write-up here. There is a swift unit
4 on the Corning Tower in Albany. Essentially it is
5 receiving good press and it is meeting its
6 expectations.

7 Slide number nine, one of the
8 benefits of this particular turbine, the noise
9 level is at 35 decibels max. So that's just above
10 a whisper. From an ordinance perspective, it
11 meets all the noise ordinances across the country.
12 One of the key things that we look for from the
13 town when we go to install these it to really
14 develop a use ordinance. We provide the local
15 township municipality with a four-page use
16 ordinance, the model template, which I'll give to
17 the Council electronically later today.

18 Slide number ten is basically a
19 high level rule of thumb for energy production. I
20 just wanted to highlight what one of the previous
21 speakers was referring to where you have
22 predictability with solar panels or solar thermal,
23 but unfortunately with the wind you need to do a
24 lot of upfront work in order to determine what the
25 Kwh output would be.

Slide number eleven through fourteen are probably the four most important slides here in reference to New York City. The one situation that North Jersey, New York City and Southwest Connecticut all face is you're pretty much relying on three different independent system operator grids.

The important thing is on the hot summer days, roughly 50% of your electric can come from grids outside of New York. So you're relying upon out of state power imports coming in to feed the needs of New York City. At the national level, one step above the independent system operators, you have your NERC regions which have reliability standards. And those standards even change from within ISO to ISO.

Slide number thirteen, if you're caught up with me, just shows during the normal day, potential power flows throughout the day and the interchange limits. Real life physical limitations of the kilowatt hour flow from areas into New York and New York City.

Slide number fourteen, we'll spend about 30 seconds on here. We could spend 30 days

1
2 on this slide in all reality. The one unfortunate
3 situation for New York City is none of the
4 organizations or even the government organizations
5 that manage the data related to this actually take
6 the core hours for their analysis. Typically they
7 take a blended average over 24 hours where in New
8 York City between 11 a.m. to 7 p.m., those core
9 hours are when electric prices are the highest and
10 the greatest amount of imports come in.

11 So one of the things that we pride
12 ourselves in is we're one of the few companies in
13 the country that can determine what x number of
14 megawatts would equal in terms of a reduction of
15 real time prices. And we are able to determine
16 that data and also get a true benefit of if there
17 was one megawatt of small scale wind in New York
18 City, what would that correlate to in terms of
19 reduction in real time prices and the impact on
20 the cost of electric for the real time price
21 recipients.

22 The key thing is for New York City,
23 right now everything published from either the ISO
24 or the utilities or the federal energy commission
25 is 100% derived data and very few companies will

1
2 actually provide the hourly detail data and
3 capture the core hours from 11 a.m. to 7 p.m.

4 Slide number fifteen. Basically
5 this slide is from the EIA. This talks about the
6 benefit of having local power where when you have
7 power coming in from long distances you have line
8 losses associated with it. So this table here is
9 known as the infamous line losses chart here.

10 Once again, the chart speaks volumes of the
11 downside of having power from far away and
12 transporting the power and the line losses
13 associated with it.

14 Finally, on slide sixteen, one of
15 the strategic advantages for small wind, it's easy
16 to install, easy to put into place. Green Cities
17 Energy, aside from a homeowner or a building owner
18 purchasing the unit, we also offer rent to own
19 systems where essentially there's little if any
20 out of pocket for the consumer and they can
21 essentially lock in a retail rate of 16 to 18
22 cents a kilowatt hour and lock in that rate until
23 the system is paid off in five years. It's
24 essentially a way for someone to rent to own or a
25 power purchase agreement based on the output alone

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2 of the generating unit, whether it be solar, wind
3 or whatever the technology may be. And on the
4 right demonstrates the chart where essentially, as
5 I said, a person could be avoiding that double-
6 digit rate increases.

7 Finally, having the generation at
8 the source, we're all helping to increase grid
9 reliability and also we want to help companies
10 become more competitive in their respective
11 industry. And also, for some companies, electric
12 isn't their highest cost but obviously it's been
13 their most volatile and unpredictable cost the
14 last few years.

15 On slide seventeen, aside from
16 wind, we see that we're involved in biomass, smart
17 grid and solar as well. What we see is wind,
18 biomass and smart grid are pretty much four to
19 five years behind solar in terms of a regulatory
20 framework and long-term price certainty around the
21 manufacturing costs of the product as well as what
22 the market will bear.

23 That's pretty much what I had. If
24 there are any questions, certainly I could field
25 them now. I understand it's late in the day, so I

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won't take offense if there aren't any.

CHAIRPERSON GENNARO: Thank you, Mr. Polidoro. The first question, is where were you coming from and how are you going to get home?

JOE POLIDORO: Well I never did leave Philadelphia.

CHAIRPERSON GENNARO: So you started in Philadelphia.

JOE POLIDORO: I went back into the office.

CHAIRPERSON GENNARO: I thought that you were coming from some place further south and you got as far as Philadelphia and that's where you stopped. I need not worry that you're stranded, right?

JOE POLIDORO: No, not at all.

CHAIRPERSON GENNARO: Is Philadelphia kind of the home base for Green Cities?

JOE POLIDORO: Yes.

CHAIRPERSON GENNARO: You do solar and the biomass and the other things at your headquarters, right?

JOE POLIDORO: Yes. And we have

1
2 two offices in New Jersey as well and one right
3 outside of Cooperstown, New York.

4 CHAIRPERSON GENNARO: I see. I
5 guess it was that office that worked to get the
6 thing going in Albany, right?

7 JOE POLIDORO: We basically, due to
8 uncertainty with the cost, we had many other
9 parties working in conjunction with that. I mean,
10 the key thing for us is we know the product works.
11 Where the regulatory framework is uncertain,
12 that's where we bring other parties in to actually
13 pretty much take the lead. I mean we're more than
14 content with working in the states that are
15 working with renewable technologies. Hopefully
16 New York will be one of those states.

17 CHAIRPERSON GENNARO: With regard
18 to what you have come across, which states really
19 are the leaders in trying to make this happen?

20 JOE POLIDORO: For wind it's a
21 patch quilt type of regulatory environment. For
22 the various categories some of them are more
23 advantageous than others.

24 CHAIRPERSON GENNARO: Let's talk
25 about wind.

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2 JOE POLIDORO: I think the key
3 thing is--

4 CHAIRPERSON GENNARO: [interposing]
5 Wind, I want to talk about.

6 JOE POLIDORO: --when you get to
7 the point where we're at with solar where you have
8 across all 50 states, universal use ordinance,
9 USE, then certainly that's where we need to be. No
10 one state has a statewide use ordinance for small
11 structure wind right now.

12 CHAIRPERSON GENNARO: I see.

13 JOE POLIDORO: If we turn the clock
14 back five or six years ago, there may have been a
15 handful of states in '04 that had the universal
16 approval and once it hit 35 to 40 states, in 2007
17 I believe federally it became universally accepted
18 where you didn't need any additional permitting at
19 the township level.

20 CHAIRPERSON GENNARO: Your
21 testimony is that we've come a long way and we
22 have like a national standard already and some
23 products have been certified nationally?

24 JOE POLIDORO: For solar for
25 example--

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CHAIRPERSON GENNARO: [interposing]

No, no, no, I'm talking wind. I'm talking wind.

JOE POLIDORO: For wind, I didn't think there was a national standard.

CHAIRPERSON GENNARO: Wind is kind of behind solar in that regard. There is not a functioning national standard. Although you do say in your presentation that you have a product that's UL1741 certified. What is that?

JOE POLIDORO: I'll get you the exact definition. But the swift turbine is certified. There is a testing criteria. I think the one gentleman mentioned it earlier where it satisfied the electrical as well as the mechanical testing requirements. For example, aside from the electrical code requirements, it also passed the mechanical. So at 95 miles an hour, essentially the unit cuts out. I mean very rarely would New York City see 95 mile an hour wind.

CHAIRPERSON GENNARO: I see.

JOE POLIDORO: But essentially it's designed to cut out at 95 miles an hour so it doesn't ruin its own gears. Also, in conjunction with that, the national testing facilities only go

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2 up to 95 miles an hour. There's a method behind
3 the madness in a sense. Several companies local
4 to us has a wind testing facility where they could
5 go above 95 miles and hour. But very few
6 facilities can go above 95 miles an hour. The key
7 thing is you want the unit to go into free spin at
8 95 miles an hour or above. On the manufacturing
9 of the product, that's the consistency of it.

10 CHAIRPERSON GENNARO: Mr. Polidoro,
11 I thank you so much for making yourself available
12 and for putting together this PowerPoint and being
13 willing to listen to the whole hearing from
14 Philadelphia and giving us the benefit of your
15 views. It's certainly good to know what you're
16 doing and how you're doing it. You've given us
17 valuable comments here that will help us as we
18 figure out where New York City would go in terms
19 of creating opportunities for wind power. So Mr.
20 Polidoro, thank you very much for being with us
21 today and we wish you all the best.

22 JOE POLIDORO: My pleasure and
23 certainly keep me on the invitation list. In
24 future meetings I will certainly make it a point
25 to be there in person.

CHAIRPERSON GENNARO: You bet. We would certainly welcome that. Thank you, Mr. Polidoro. You're getting the same snow we're getting?

JOE POLIDORO: I think we're going to be close to a foot.

CHAIRPERSON GENNARO: Wow. Let's hope you win that contest.

JOE POLIDORO: All right. I'm going to sign off here. Thank you very much.

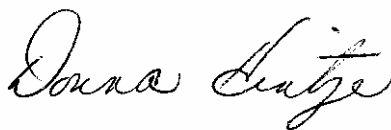
CHAIRPERSON GENNARO: Very good, Joe. Thank you.

JOE POLIDORO: Take care.

CHAIRPERSON GENNARO: Bye. With no one else wishing to be heard, Bill, why don't you bang the gavel and end the hearing. That's it. Thank you very much. I want to thank the staff that put the hearing together and the witnesses and this nice gentleman who was working the PowerPoint. I appreciate that. With that being said, this hearing is adjourned. Thank you.

C E R T I F I C A T E

I, Donna Hintze certify that the foregoing transcript is a true and accurate record of the proceedings. I further certify that I am not related to any of the parties to this action by blood or marriage, and that I am in no way interested in the outcome of this matter.



Signature____

Date March 8, 2010