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TRANSCRIPT OF THE MINUTES

of the

COMMITTEE ON ENVIRONMENTAL PROTECTION

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HELD AT: Council Chambers
City Hall

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Chairperson

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G. Oliver Koppell
Peter F. Vallone, Jr.
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A P P E A R A N C E S (CONTINUED)

Sergej Mahnovski
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Dr. Sanjoy Banerjee
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Wyldon King Fishman
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A P P E A R A N C E S (CONTINUED)

Martha Cameron
Co-Chair
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CHAIRPERSON GENNARO: Okay. Thank you. Good afternoon. I am City Councilman Jim Gennaro, chair of the Committee on Environmental Protection. I'm joined by my colleague Peter Vallone, and thank you for coming today for our hearing. Like most people hearing the events of what happened over the weekend at Newtown, Connecticut no one knows really what to do or say, but somehow I just think it's appropriate that we start this proceeding with a moment of silence for the victims of that terrible tragedy, and we will do that now, and then we will proceed. So a moment of silence in memory of the victims.

[pause]

CHAIRPERSON GENNARO: Thank you. I think maybe I said already that we are joined by my colleague Peter Vallone. Did I say that, Pete? Okay. Fine. Peter is for that, and I'm for him. So good afternoon. And you know what? This is a lovely opening statement that is really terrific, and I read it over, but I'm just going to read the last part of it that gets to really the intro that we are going to be hearing today, which is Intro 887, which defines renewable energy systems

broadly and requires the city to establish a so-called sustainability web portal and a link to the website on the Department of Buildings homepage and other relevant city homepages. The purpose of the portal would be to inform the general public about the economics and feasibility of renewable energy systems in plain language. The providers of sustainable energy would be expected to develop the websites to link to that and to explain their technology and the cost saving from particular technology for different sized New York City buildings. The portal would explain the cost, tax savings, energy use, and generation potential related to different renewable energy systems. Finally the portal would be user friendly and easy to understand, and identify which agencies have to approve which aspects of these various systems and must make available any relevant agency contact information, any online approval forms and contact information on relevant designers and contractors of such systems. The portal would have to have a directory of links to relevant websites on various kinds of sustainable energy and such links would be verified on a quarterly basis. Now the run up

of the pages that I didn't read and the opening statement was about how it is very important, you know, the people to do whatever they can to use these new technologies and the real genesis for this bill is that if you are the average person, you are the average homeowner, you have a job, your spouse has a job, you've got kids, you've got a lot going on. You would like to be more green and you are hearing about all these various kinds of tax incentives and things that if you do this kind of energy system, there is some kind of inducement from the federal government. There is some kind of inducement from the state, some kind of inducement from the city, some kind of a way that I can get this done in such a way that I can basically get this system NY subsidized because we want people to use this, but for the average person on the street who is not a real buff and hasn't totally immersed oneself in how to be green, we think that it is really - - upon the city of New York to provide some kind of portal where the average person that really wants to get involved and how they can make their home more green could see what is available to them and say

that oh, if I do this, I can get a rebate, I can get a tax credit, I can get this. We can have lower bills. Wouldn't this be nice? And so what we want to do is capitalize this process and get people doing this and I think if there was one stop shopping that we would certainly have the ability to make more of this available in the city, so that is where we are. And the first witness that we will call, we will call the administration forward, and—

[pause]

CHAIRPERSON GENNARO: Okay. Sergej, right?

SERGEJ MAHNOVSKI: That's right.

CHAIRPERSON GENNARO: Okay, and Sergei is a very busy guy trying to revamp the city and make it more green and I did send you a note when you stepped into the role of the director of the Office of Long Term Planning and Sustainability and I once again congratulate you on that role, and I don't have your sign in slip before me, so I forgot your last name, and I know that your name is Sergej and you had the Office of Long Term Planning and Sustainability, and I know

where to find you, but for the purposes of the record and the good people here today, I would ask you to identify the members of your panel and yourself, but before we do that, we have the ritual that we do in this Committee. I would ask the counsel to the Committee - - Swanston [phonetic] to give the oath to the witnesses, and once that is done, you can make an introduction of yourself and the members of your office, and then proceed with your good testimony, and once again, welcome, and once again, my congratulations on taking over the Office of Long Term Planning and Sustainability. It's a pleasure to have you.

SERGEJ MAHNOVSKI: Thank you very much, Chairman.

COUNSEL: Please raise your right hands. Do you swear or affirm to tell the truth, the whole truth, and nothing but the truth today?

SERGEJ MAHNOVSKI: I do.

CHAIRPERSON GENNARO: Thank you. Thank you, sir. Please proceed.

SERGEJ MAHNOVSKI: Well, good afternoon, Chairman Gennaro and members of the City Council Committee on Environmental

Protection. My name is Sergej Mahnovski, direct of the New York City Mayor's Office of Long Term Planning and Sustainability. I am joined here by Stephen Caputo, senior policy advisor in our office and Alison Kling, the New York City solar coordinator at the City University of New York, and Jimmy O'Con [phonetic], policy advisor also in the mayor's office. Thank you for the opportunity to testify today—

CHAIRPERSON GENNARO: So we have got three people from OLTPS, and the representative from CUNY. Okay.

SERGEJ MAHNOVSKI: Thank you for the opportunity to testify today about Introductory 887 and the creation of an online sustainability portal, but before beginning my testimony, I'd like to take a moment to recognize the leadership that you and this Committee have shown on energy and environmental policy over the past decade, and in particular since Mayor Bloomberg released PlaNYC, it was through your work that the City Council passed the New York City climate protection act in 2007 to codify the PlaNYC greenhouse gas emissions reduction goal of

30 percent by 2030, and would require the production of annual progress reports. I'm happy to report that the six annual greenhouse gas inventory was published last week, and we are now more than halfway to achieving the 30 percent reduction goal thanks to a cleaner electricity supply and also increasing energy efficient of our city, so since its founding the Mayor's Office of Long Term Planning and Sustainability, which I now direct and which the City Council helped to institutionalize back in 2008, has had a strong partnership with you on energy, climate and sustainability issues, so we look forward to continuing that relationship. After all much work remains to be done as we are entering into the last year of both the Bloomberg Administration and your tenure as the chairman of the City Council's Committee on Environmental Protection, so I have had the opportunity to testify before to this Committee on two occasions back in November 2011 on the topic of overcoming impediments to solar energy development and in June of 2012 on the topic of geothermal energy. I'm happy to report some significant progress on both accounts. Last

November during our testimony, we reported that just over seven megawatts of solar capacity were installed city-wide and we were about to enter into the last year of eligibility of the city's solar property tax abatement without certainty of the program's renewal. Since then we have increased our capacity by over 60 percent to reach 11.5 megawatts in operation and Con Edison now reports that another 12 megawatts are in the permitting or inner connection phase. We also work successfully with the state legislature and Governor Cuomo to extend the city's solar property tax abatement for two years at a level of ten percent of total project costs. The city has also made good progress on the geothermal front. I know we have spent some time talking about that, Chairman. So the Department of Design and Construction is just days away from releasing its fully revised and expanded geothermal design manual, which will set the standard for best practices in the design of geothermal systems in New York City. The Office of Long Term Planning and Sustainability has also examined a number of geothermal and heat exchange technologies as part

of our study on strategies to achieve an 80 percent reduction in greenhouse gases by 2050, which the scientific community has identified as a necessary target for global emissions reductions in order to prevent the worst impacts of climate change. This 80 by 50 study will be finalized early next year, and I would enjoy the opportunity to return and discuss with you the results as well as next steps in evaluating the potential for expanding the use of geothermal heat exchange in New York City. So we are going to come back to you, and I know we have had that discussion, so we look forward to that.

Introductory 887 would require the city to create a sustainability portal that will serve as a one-stop website for any party interested in investing in renewable energy systems in New York City. The purpose of such a portal is to retrieve information on local state and federal initiatives to help building owners and project developers to more easily navigate the permitting process and to provide access to resources that would reduce the time and costs of installation of renewable energy systems. We

agree with the goals and objectives of Intro 997. There are many resources available at all levels of government and on governmental organizations to facilitate the development of renewables, but these resources are scattered across innumerable locations and they have not been organized specifically for New Yorkers, so building owners and managed seeking to develop renewable energy and distributed systems in New York City may also be hampered by the lack of sufficient information about complex permitting and interconnection processes, so as I alluded to you before New York City's annual greenhouse gas reductions are roughly half of our 2030 target goal, yet in order to achieve the remaining reductions, we need a higher penetration of renewables and distributed resources. So a sustainability portal that bridges information gaps has a potential to encourage private investments at a faster rate. Property owners and tenants will better be able to decide what type of renewable and distributive energy systems are most appropriate for their homes or businesses, and they will have an easier time identifying and applying for available

incentives, and developers will be better equipped to navigate the permitting and interconnection process. So the sustainability portal concept is in line with the Bloomberg Administration's overall desire to make it easier to do business in New York City. And just if I may quickly say, there are two strong precedents for this type of one stop shop portal. The first is our New York City clean heat website, which can be accessed at nyc.gov/cleanheat. As you may know—well, as you do know that clean heat program aims to improve air quality by eliminating the use of heavy heating oil in buildings—less than 10,000 buildings in the city having heating oil. Roughly one percent of the buildings contribute more pollution than cars and trucks combined, so it's not just a regulatory aspect of this, but basically the information resources that are available are a tremendous asset in that program, and I'm just going to paraphrase here we think that that the fact that we have had a website has been tremendously helpful and all the resources that go with it. Another strong example is the PlaNYC green buildings and energy efficiency

website, which can be accessed at nyc.gov/gbee. Like the clean heat website, the green buildings and energy efficiency website is a one stop shop for general information, technical guidance and help for accessing financing and incentives. So more importantly the website provides a comprehensive guide to understanding and complying with the greater, greener buildings plan and the city's landmark energy efficiency laws would not have come to fruition without the work of this committee. So in conclusion, the sustainability portal for renewables would be a perfect complement to these other online resources and would play a similar important role in facilitating market activity through better access to information. The portal could bring together and serve as a single point of entry to the valuable online tools that already exist in its space including the New York City solar map, and we have our colleagues from CUNY here also the Department of Buildings Development Hub and technical guidance related to distributive generation including - - eligible installer list and Con Ed's customer guides pertaining to system

interconnection. So through informing the public of the resources available to support renewable energy systems in New York City, we will be able to accelerate the rate of investment needed to achieve PlaNYC's ambitious goals for clean energy and carbon reduction, so I just want to thank you for the opportunity to testify, and we would be thrilled to take any questions.

CHAIRPERSON GENNARO: Now normally—and first of all, thank you for the comprehensive testimony that you provided, and thank you for the compliments that you paid to me personally and to this committee and to the Council as a body and to the partnership that we share with the Bloomberg Administration. It has been a wonderful tenure that we have had and all the things we have been able to do, that is this Council and the Bloomberg Administration. As we are the beacon to all of the cities on their journey to urban environmental sustainability, like we are the leader. I don't think there is any big debate about that. So it's been great. In going through your statement, and I'll go through some of the things that you mentioned in here, but I was—it's not quite clear

whether the Bloomberg Administration actually supports Intro 887 and would be supportive of doing it. It's not made clear.

SERGEJ MAHNOVSKI: I'm sorry. I guess implied was very much so.

CHAIRPERSON GENNARO: Okay. Great. Yeah, so—

SERGEJ MAHNOVSKI: [interposing] Unless there is other provisions - - . the answer is yes.

CHAIRPERSON GENNARO: And one of the good things about the relationship that this Committee and this Council enjoys with the Bloomberg Administration is that we trust you, and so we wrote this bill and it has the intent—tying together some of these other websites or other sources of information, but even as you go through this, it is all kind of like inside baseball and whenever this, and this site deals with this particular thing, and this site with this particular thing, and you have to kind of be kind of like on the inside—it sounds like special handshakes and codes and winks and stuff like that. And we want like a portal for people that

don’t know the special handshake. They don’t know anything. And the people that are just moving from like regular coffee to like decaf--you know what I mean—in their journey towards being more green or maybe decaf isn’t even green. Maybe it’s about tea—green tea. They are just going from coffee to green tea. It’s like people like that who are trying to get established, and they have purchased a home, and they are hearing about various kinds of incentives and I think it’s certainly within our capability to give them some kind of portal that would make a lot of sense to them, and so this would be great, and we look forward to working with your office as I guess the lead on this on what kind of language changes we could do in order to make this everything it can be ‘cause we wrote it from our side of the table, but we don’t know everything and we want to work with you in a very cooperative way to get this done. So we got a deal on that, right? Which is good.

SERGEJ MAHNOVSKI: Yes.

CHAIRPERSON GENNARO: Okay. Good. That is on the record, and he swore, which is

always good. And as you said very nicely in the third paragraph of your statement that your office looks forward to working with us in a very cooperative relationship, and as you say here, much work remains to be done as we are entering into the last year of the Bloomberg Administration and my tenure as chairman of this committee, and this is like a little outside the scope of this committee, but I'll give myself a little latitude here, and I've got certain things that I kind of want to get done before I leave, and I would think that the Office of Long Term Planning and Sustainability with regards to PlaNYC has some things that certainly will be carried forward into the next administration because after all, the Office of Long Term Planning and Sustainability is now has to be part of the permanent office of the mayor. It was a great idea to create it in the first place, and I thought it was also a good idea to write a law, which I did to make sure that every mayor after Mayor Bloomberg has to have the Office of Long Term Planning and Sustainability, so some of the things can be passed on to sort of like the next mayor and to the next Council, but I

think I would feel good and you would feel good if we could sort of jointly try to figure out what things we want to like—what kind of post it notes in the form of laws we want to leave for the next administration and that we want to write and we want to do and we want to put on the books before they get here, so that we way we just have those locked and in place, and that's it. And I am—also, thank you very much about the 80 by 50, which--

[break in audio]

CHAIRPERSON GENNARO: Yeah, so one of the things that I want to—I'm having a bill drafted now that would it would be sort of like the natural follow up to the 2007 30 percent bill, so if we could just do—let's just do 80 by 50 now. Let's just do it. You know? You're putting all the brainwaves behind it anyway. But again I'm going—

SERGEJ MAHNOVSKI: [interposing] Well, we are trying to see how difficult it is and how much it would cost, but we would be thrilled to come by and speak with you and show you the early results to see how it looks it looks and

whether it's—

CHAIRPERSON GENNARO: And again, it could be whatever it makes most sense for it to be at this point in time. Right? We certainly felt comfortable enough back in 2007 to make the 30 percent a mandate, and that made sense to do it that way and I just think that we should put something in law regarding 80 by 50, whether it's an actual mandate or milestones or whatever creative sensible thing that we could come up with that I just think there is something that we could do in the form of a local law that would really help that kind of mandate that that process move along. And so again, I'm going a little far field, and we have been joined by Council Members Koppell and Lander. Very happy to have them with us, and what else did I have? Made some notes here in your statement. That was really what I had in mind is to kind of get the handshake from you regarding 887, and just to be so bold as to put on the record that I know that you have things that you want to reduce to law before the Bloomberg Administration ends. I want to help you do that. I've got some things I would like to get

done too, and perhaps you can help me do that, and it's really been great working with the Office of Long Term Planning and Sustainability and the good folks at CUNY. Let me ask my colleagues if they have any questions for this panel? If there is nothing else the panel wishes to put on the record at this time, then we will move to the next panel. - - ?

SERGEJ MAHNOVSKI: No, we are thrilled to work with you and here is our analyst who is going to be doing our website. He is going to be updating - - working very closely with us.

CHAIRPERSON GENNARO: Mazel tov. Okay.

SERGEJ MAHNOVSKI: And Steve, Alison, any thoughts before we exit? I was just wondering if you guys have anything you wanted to— no, thank you very much, Chairman.

CHAIRPERSON GENNARO: Thank you for being here. We look forward to getting this done and the other things we want to do before next New Year's Eve.

SERGEJ MAHNOVSKI: Great. We will look forward to getting back together and talking

about that.

CHAIRPERSON GENNARO: You bet. Okay. Thank you, Sergej. Appreciate it. Thank you to the rest of the members of the panel. Appreciate you being here today.

[background conversation]

CHAIRPERSON GENNARO: Just to kind of move the hearing along—we are kind of on the clock today—I have a medically related appointment for a family member that I have to present at, and so we are going to panel some of the witnesses. We will have a three person panel and talk to Sandjoy Banerjee of City College. We ask him to come forward. Wyldon King Fishman of New York Solar Energy Society, and our old friend, Annie Wilson, from the Sierra Club. If that pane could come forward, we would appreciate that. I saw Annie. Where did she go?

FEMALE VOICE: She is coming. - - .

CHAIRPERSON GENNARO: Okay.

[pause]

CHAIRPERSON GENNARO: Okay, and while the statements are being given out, the

counsel can swear in the panel.

COUNSEL: Would you please raise your right hands? Do you swear or affirm to tell the truth, the whole truth and nothing but the truth today?

CHAIRPERSON GENNARO: Okay, and with regard to this panel, is there—I have one written statement from Ms. Wilson. Is there written statements from—

MALE VOICE: Yes.

CHAIRPERSON GENNARO: Okay. Sergeant - - . Right. I have one statement from Ms. Wilson, but Dr. Banerjee and Wyldon. Okay. Great. So why don't we proceed? Why don't we start with you Dr. Banerjee?

DR. SANJOY BANERJEE: Thank you, Mr. Chairman. Good afternoon, Mr. Chairman, members of the panel. Good afternoon to this distinguished audience. It's a great honor to be invited to provide testimony regarding the creation of a sustainable energy web portal. I am Sanjoy Banerjee for the record, CUNY distinguished professor of chemical engineering and director of the CUNY Energy Institute, which is headquartered

at City College in New York. The opinions I present here are strictly my own and do not necessarily correspond to those of CUNY and the CUNY Energy Institute. First I want to give you a little history so we place what I'm going to say in context. The Energy Institute as CUNY has it now was formed about four years ago, and it grew out of an existing institute called the Clean Fuels Institute, which goes back to the 1970s. The Energy Institute was formed by the Board of Trustees. The Clean Fuel Institute was actually at City College because at that time CUNY did not exist. It was headed by a very eminent scientist, Professor Arthur Squires [phonetic], whose work was really related to clean coal combustion, so we have a long history, and much of what he did - - coal combustion today has found its way into many of the much cleaner coal plants that you see. As things went on, he passed away and Professor - - succeeded him, another extremely eminent person, and - - realized that the Achilles heel of renewable energy, which was intermittent like solar or wind, was that you needed a storage system, so a lot of the work that - - instituted

was related to energy storage. Now he was one of the major national proponents for solar thermal energy. He was very eminent, and a member of the academies and so on. So his major contribution related to what became the Energy Institute was the institution of a program on thermal energy storage for central solar plants. A mark of his greatness is that he received a major grant from the Department of Energy when he was in his 80s, and this was shortly before he passed away a year ago, and we still work on the technology that he initiated at the institute today. So having said all this, what has this to do with the sustainable energy web portal and why am I dwelling on my illustrious predecessors?

CHAIRPERSON GENNARO: Yeah, you took the words right out of my mouth.

DR. SANJOY BANERJEE: So partly it is because I believe that the late Professor - - saw that for renewable energy to make a useful contribution, it had to be coupled to energy storage, and that is because such sources of energy are intermittent. The sun doesn’t necessarily shine when you need it; neither does

the wind blow, and that was partly the reason that this program was started, and this has something to do with the portal as you will see as I go on in spite of unfortunately not having made this clear right away. So the idea that I'm putting forward is that some of the penetration of renewables to low carbon futures are going to be critically dependent on making available resources for storage; otherwise the penetration will not be very high because it will destabilize the grid, and it will cause all sorts of other problems. So the message that I'd like to get across is to further the development of technologies with low carbon footprints, the development of which I have mentioned earlier, is one of the key missions of our institute and we would suggest that the New York sustainable energy web portal incorporate a substantial component related not only to the renewable technologies themselves, but to energy storage technologies, which are necessary in order to take such projects forward. I would be very happy to help the people developing the websites to make the necessary connections. I'm a director of the New York Battery and Energy Storage

Consortium, which is called NYBEST [phonetic]. It's funded by the state. It has actually succeeded very well in bringing together technologies in this regard, and I think it would be a real asset to the website to have such resources available because they make much more economical the integration of renewals in order to meet our energy needs, so let me conclude with a statement of strong support for the initiative that will provide a one stop information source for enhancing deployment of low carbon energy sources, while New York continues to lead the nation in efficiency of energy use. I pointed this out when I talked to the New York Academy two years ago. It indeed does—sort of a surprise, but it is true. There is still room for improvement. Particularly we should aim at one, reducing our use of fossil fuels for heating--this is really a fairly high priority--perhaps by increasing solar thermal installations to this end. Two, reduce our need for high carbon emitting - - capability in the city through use of perhaps solar PV [phonetic] associated with electrical storage. Three, increase the efficiency and reduce losses

in our transmission distribution network by load leveling and - - management. Four, increase the energy efficiency and reduce fossil fuel usage in our public transportation system by relying more on renewables generated electricity. So many thanks for your kindness, once again in inviting me, and for your attention. I am happy to take questions.

CHAIRPERSON GENNERAO: Thank you, Dr. Banerjee. What I'll do is I'll hear the statements of the panel, and then I'll go back and pose questions and comments, and thank you for all of your excellent work on what you are doing, and how we can capture and hold on to this energy that we produce. Thank you. On behalf of the Solar Energy Society, Wyldon King Fishman, correct? Okay. Okay. Thanks for coming. Please state your name for the record, and proceed with your good testimony.

WYLDON KING FISHMAN: Thank you for inviting me. My name is Wyldon King Fishman. I am speaking on behalf of the New York Solar Energy Society, NYSES. NYSES is a 501(c)(3) since March of 2008 with a mission to educate children,

families and teachers about energy efficiency and renewable energy. We serve as a resource for sound technical information. NYSES is a chapter of the American Solar Energy Society, which is a chapter of the International Solar Energy Society. We are more academic than business to business. The city's blueprint for the solar website beginning with section 1—and also, to sort of precede this with saying, I wouldn't say I'm exactly positive on the renewable energy portion, but I'm basically telling you why within my statement. It's kind of complicated, so let me go through the whole thing and give you the clarity so we can get to the grassroots style of a website that you are speaking of, City Councilman Gennaro.

CHAIRPERSON GENNARO: Sure.

WYLDON KING FISHMAN: Using renewable energy will not mitigate climate change. We need a crash course in eliminating burning fossil fuels. Climate change is caused by burning too much and stuffing our atmosphere with pollutants like carbon dioxide. Our buildings are using too much fuel, and you can see this with the windows left open on the upper floors. Our

automobiles and trucks are burning too much fuel as they run on inefficiently powered gas engines. The heat given off by gas engines is indicative of wasted energy. The way to stop the wasteful burning of fossil fuel is by sealing or weatherizing our buildings, recladding and insulating them. We need to add solar site orientation requirements to the building code, so future buildings are zero energy dependent in the first place. Let’s build the energy factory into the building. We shall not be mitigating climate change if all we do is invest in solar panels. Most consumers do not know they should first focus on energy efficiency; sealing buildings, insulating at R56 for the roof and R22 for the walls, and then after cutting energy usage to the bone, investigate least cost solar, such as solar heat, solar hot water, and solar cooking, even awnings and shutters are extremely effective at means of dropping the energy usage of a building. Most apartments have air conditioners hanging out of the windows in the winter. Stopping the wind from stealing the heat is the key to a building burning less fuel. Caulking around baseboards and

pipes is a great start. It is our leaky buildings that are causing climate change. Also, a super insulated building does not need much heating or cooling. A truly efficient building can produce more energy than it uses, clean its own water and air and be extremely comfortable to live or work in. Many New Yorkers rent. Landlords collect rent and automatically add utility increases to the rent. How can landlords be incentivized to cut their buildings' burning of fuel? The proposed website outline mentions the site should have information on geothermal or ground source heat exchange. It is 54 degrees under this building. That is pretty warm in winter, and it is pretty cool in the summer, but it is important to know we live in large buildings with small footprints, and there is not always enough ground under one large building to have enough ground source heat exchange wells. Each well picks up the heat in the summer, and gives that heat back to the building in winter. A weatherized and insulated building needs far less ground source heating and air conditioning. The proposed outline mentions listed approved solar installers.

Do we have a special certificate required by New York City for PV installers? Isn't it the job of the city to list approved solar installers and to be required to update the website only every three months? The proposed outline mentions listing permitting agencies. Installers need to know how permits are issued and how to navigate and unless you envision the homeowner installing solar panels and needing to navigate the process, the installer has to do this as part of their job and training. This is what an installer is trained to do—draw up the plans. The installer has to know how new the roof is and comply with the fire department regulations. The electricity company has to come out and meet the installer. Currently. NY - - gives an installer the certificate upon completion of the solar energy proficiency test and upon completion of three free installations. The proposed outline mentions solar calculators. Homeowners need a basic chart rather than utilizing the many solar calculators out there. The rule of thumb is 100 square feet of roof space equals 1 kilowatt of solar electricity, which equals $10,000. In New York City, permits and

inspections can require an expediter, so even though the price of solar modules has come down, costs have not come down as much as in other municipalities. To take advantage of the solar rebate incentives and taxes, pictures have to be taken of the roof location, including no trees or structures blocking the arc of the sun in both summer and winter. An installer knows best how to document the installation. New York City has the oldest grid in the world. If you make solar electricity and send it to the New York City grid, it can shut it down. There are sensors and equipment, which look for electricity coming from the wrong direction. It shuts the section down. Community solar is limited by this as the warehouses with sunny roofs need to be connected to where the homes have the trees and the shade. The proposed website mentions LEED [phonetic]. It is not a good idea to assume energy efficiency with LEED because LEED buildings do not measure energy usage. Passive house and zero energy building techniques measure energy with excellent rating systems. Financing would be one area for the city to create a page for more information.

We would like to see a treatment of property assessed clean energy on bill financing, market based - - , payment for power produced - - and tariffs, leasing, power purchase agreements, and also include banks. Please include a glossary of terms such as escalating clauses and service contracts. The German success of renewable energy installation was driven by three initiatives, an 800 number for more information, not a website. Two, the Germans had money for big media push, and three, they had K through 12 education. It takes one week to get a solar system. On top of this, utilities pay more for solar power produced, so the systems are very easy to finance. The amount paid by utilities for the energy produced is reduced a little at a time. Each time the rate drops, purchasers rush to take advantage of the higher rate. All this solar has saved utilities more than twice their expenditures. This is called the merit order effect. Many solar companies are waiting in the wings to enter the New York market, The juggernaut surrounding permits and financing dampens the demand for renewables. On top of these difficulties one

building owner said he was afraid of vandalism such as spray paint. Another building owner said he had low demand side management electricity rate from Con Edison, and if he would shut down his factory when they needed the electricity. Another company is paid considerably high rent by Con Edison for space for a large generator. We continue to burn fossil fuel, and create point source pollution and heat on a hot summer day instead of peak shaving [phonetic] with clean, renewable energy. In order to promote the transition to clean, renewable energy we need to correct worker compensation rates. Last session the legislature neglected to pass a bill establishing the rate for solar installers similar to linemen and tree climbers. The insurance companies are charging 35 percent rather than the more customary 6 to 10 percent. Our energy demand is loaded with waste. Climate action plans need to focus on undoing the dependency on burning the carbon based fuel stored for millions of years underground. We certainly need more engineers and if you'd like I can slow down here, and let you finish that because I have taken quite a bit of

your time except to say that our website is easy to understand by the public.

CHAIRPERSON GENNARO: Thank you. Thank you very much. I appreciate your comprehensive testimony. And like I told the good professor, we will hear from the last witness on the panel, Annie, and then I'll have questions and comments. Thank you. Hi, Annie, how are you doing? Okay. Push the button.

ANNIE WILSON: Hi. Good afternoon. Annie Wilson, and I'm representing the Sierra Club New York City Group today. We have approximately 11,000 members in the New York City area. My comments are very brief, and I will begin with Super Storm Sandy has brought death and destruction to our coastal area. Hurricane Irene ravaged our upstate communities. We have to enact immediately all of the preventative measures that have been deliberated over the past 25 years. This proposed local law is a very appropriate response to this manmade climate crisis that we are experiencing. Will there be sufficient financial resources for a massive all sector public education and outreach campaign? Hopefully

there will be a very visible media campaign that includes postings in the subway, billboards, television, social media and Internet. PlaNYC, the New York City Energy Efficient Corp, the New York Public Service Commissions on Waste New York, and Con Ed have been promoting an increase in gas use through efficiency programs. Expanding the fossil fuel infrastructure via the Spectra and Transco pipelines and the PGM transmission line is not consistent with our urgent need to reduce our greenhouse gases. There is also a proposed 1,000 megawatt - - transmission line that might connect Queens to destructive dams that have not yet been built in Canada. The impacts of increasing reliance on outsourced supply must be studied and compared with in city deployment of renewable forms of energy. The creation of jobs within the city and economic revitalization must be assessed as well as the economic losses due to imports. Public procurement through power purchase agreements of locally produced renewable energy provides an opportunity to jump start our renewable energy economy. We must meet New York City’s energy needs with renewable resources

within the city. For example, there is a 5,000 megawatt of solar energy potential for New York City rooftops, while there is only 8.5 megawatts of installed solar. There is also solar energy potential using parking lots, roadways, street lights, et cetera. Other forms of renewable energy such as geothermal, thermal wave technology, run of the river systems are all compatible with our urban habitat. The proposed New York City sustainability portal interactive website for sustainable energy will provide a much needed consolidation of information. There are numerous websites that contain valuable information that do not connect with each other, such as - - , U.S. Department of Energy, Sunshine Initiative, Resource Center and Desire U.S.A. New York City Solar Roofs. The rapid deployment of renewable energy will be greatly facilitated by Intro 887. Thank you for your consideration of these comments.

CHAIRPERSON GENNARO: Thank you, Annie. I like that you capitalized the last word of your - - . Thank you for the consideration of these comments, capital c, and I would have

capitalized that as well because your comments are always very good, and I really appreciate your being here. Yes, good to see you. Let me just kind of make some statements to the whole panel. Some of the bills I have done run the gamut from very complicated, very esoteric to the more simple, and this is one of the more simple ones, and I do like all the esoteric of various kinds of systems and ways that we can move forward on all kinds of frontiers, and Ms. Fishman, I do have a couple of solar bills, and I think you'll like very much—that are in the Housing and Buildings Committee now, and we will certainly as we try to move those forward we will get the benefit of your good views on that, and I appreciate your being here, and now you are a good resource for us regarding moving those solar bills, and Professor, I actually didn't know of some of the work going on with your institute, and now I do, and it would be my hope that you have made some kind of connection with the Office of Long Term Planning, within the mayor's office. Perhaps, your coming here today will create that linkage. Who is here from the administration? Are people still here

from the administration? Okay. Sure. Make sure you talk to Dr. Banerjee. I think he has got some very excellent brainwaves that I think OLTPS should certainly avail itself of. We don't get these kind of brainwaves walking in here like every day. We should take advantage of the good professor and his good institute and all that he has to offer. With that said, I would like to thank the panel for being here today. It would be great—I know Annie, you are on a first name basis with the people at OLTPS, but it's very important that Ms. Fishman and Dr. Banerjee create that linkage with the Office of Long Term Planning and Sustainability because I think you have a lot to offer the city as it continues its journey down the road of urban environmental sustainability. Thank you very much for being here today.

[long pause]

CHAIRPERSON GENNARO: We will be right with you in one minute. We are just working on stuff.

[long pause]

CHAIRPERSON GENNARO: Okay. We finally got a couple of housekeeping stuff squared

away. We are going to call the next panel. Mr. Mickey Bennett from Solar One Energy and Lisa DiCaprio—am I saying that? - - and—

[long pause]

CHAIRPERSON GENNARO: Okay. I'd ask the—

COUNSEL: Can you please raise your right hands? Do you swear or affirm to tell the truth, the whole truth and nothing but the truth today?

CHAIRPERSON GENNARO: Thank you. Thank you both for being here. I have a statement from Mr. Bennett, and Ms. DiCaprio, do you have a statement as well, like a written statement? You submitted that? Okay. No. Okay. Bill, - - or the Sergeant, if you could provide me with Ms. DiCaprio's statement, that would be greatly appreciated.

[pause]

CHAIRPERSON GENNARO: Okay. Mr. Bennett, nice to see you again. We will be starting with you. Thanks for trying to work with us. Some of the concepts you work with us have been—have made their way into the solar bills that

are in the Housing and Buildings Committee, and Bill, why don't you come forward and sit next to me? I know that you and Mr. Bennett have a relationship regarding sending information back and forth. Have a seat. Mr. Bennett, the floor is yours. Please state your name for the record, proceed with your statement. Thank you for the good work you do regarding all the solar stuff and thanks for giving us the good perspective of someone who is actually on roofs doing this stuff, and so I appreciate you being here today.

MICKEY BENNETT: Thank you very much.

CHAIRPERSON GENNARO: And make sure you speak right into the microphone just like I am doing.

MICKEY BENNETT: That is exactly what I am looking forward to today is to bring the perspective of what it's like after about five years of doing - - tag work. Most of our work is in Queens and Brooklyn, and so we are very into the city market and it's important to us and our ten employees that we have grown to. It's especially important in my mind to laud the

efforts that you are putting out here. Many times people sit back and say, well, we have got this good work done, and we have got that good work done. We're all set. And I think that solar is something that is very important to the city and to its grid's future, and I certainly believe in distributor generation and I wanted to point out some recent happenings over the last year. Basically, like in California that is sort of where we look to see where our future could be, and the public support for solar is I think best evidenced by a 60 percent increase in residential PV installations year over year, and of those 60 percent increase year over year 85 percent of them were financed by PPAs, which are power purchase agreements. Those are third party ownership models where you as a homeowner would opt perhaps to pay $1,000 or a couple of thousand dollars in return for how much you put down, your bill increases at a much slower rate than if it were simply subject to the public utility, and the popularity of that model I think is important for us to look at as currently there is only one company that is doing this in New York, and that

is Sun Run [phonetic], and they are doing pretty well with it, but there is so many more hurdles to bring more people in as was previously noted. I know the goal for this law is to enable the public to get more information about renewable energy systems to upgrade, but there is another impediment that I really wanted to point out, and it's like economics 101. It's just the expense of what is being put—I could do a residential job in Nassau and it would cost me $35,000, and I feel pained when I have friends that live in Queens and Brooklyn saying, hey, well, what about if I put it on my house? And I have to tell them, well, the first thing is about $15,000 that is going to go for administrative costs, and the administrative costs are driven by some of the things I wanted to point out in particular there is plenty of—as we would say in the business side—there is plenty of opportunities here to improve the efficiency of the service and to actually pull out these unwarranted costs. I think that they are holdovers from when solar was first initiated, and everyone decided well, what could possibly be included? It was, and there is a cost for each

one of those things. So it's my opinion that the reason—

CHAIRPERSON GENNARO: [interposing] Yes, I am certainly—you have got my attention on why - - system is 35,000 in Nassau and 50,000 in New York City, but please, proceed.

MICKEY BENNETT: I'll answer that directly. Basically, each organization that is involved—and I'm going to name them on the next page—but each of them is determined to make sure that they will inspect everything, so we have got - - for several different agencies in my opinion where there is clear overlap in what the functionality is and what the inspections that are being called for are, and there is wasted energy and effort in that, and on the consumer side, they are ultimately burying the cost of those additional wants and needs. The first—I know that Germany's eight days was mentioned before, but to give you an idea of what is involved in putting a solar project on a flat roof—and this could be a residence where typically it is 4.5 kilowatts; that is the state average, and that is the average around Con Ed. A typical commercial job is about

50 kilowatts. Now once we file a rebate request with NYSERDA, we can't order any materials because they have reserved the right to rescind and make changes on that rebate, so we can't start ordering materials or doing anything until we have actually got the rebate approved. When that happens, we can file an engineering request with Con Ed because that involves an expense and some money, so we want to know that we are able to go ahead first. Con Ed is totally off the map in terms of contributing any kind of tracking to this, having any kind of oversight, having any kind of interest in seeing this happen whether you are talking about an inspector who decides to delay weeks and weeks on end, and yet we can't close out the job until we have got their approval of our three line drawing, which quite honestly, I have never submitted a three line drawing that was approved the first time. There is a perfunctory step where they send out a letter saying that this is not agreeable, and if a one letter—if it said on one disconnect 89L, which is an internal term only used within Con Ed, another Con Ed engineer might say that they want to 89L at the bottom, where it

says DC disconnect 89L. Another one says, no, I want it to say 89L DC disconnect. So you can literally spend weeks waiting and going back through this engineer whom you are not allowed to speak to because their time is guarded by an inspector. The inspector has no technical knowledge of solar, so you have got technical experts speaking with non-technical experts that are acting as gatekeepers for the technical experts, so we could move this forward. It's not a good place for anyone to be, and frankly, after approximately 15 weeks of working with Con Ed, we finally did get an inspector out who was very nice, took his time and looked at everything, but the fact is the paperwork flow that drives everything is not tracked. We need to know, and NYSERDA went through some of these teething periods several years ago, and then Frank Mace took over the NYSERDA 2012 - - , which is the program that helps to subsidize this, and he brought impeccable order to it. I have nothing but good things to say to them whereas prior to him, it would have been the opposite, and so I want to point out that with nothing being tracked

in terms of its process flow, there is absolutely no reason for anyone on Con Ed's side to pay more attention to this than to avoid the phone calls or pick it up and say, oh, gee, I know. I've been meaning to get back to you. So you can see 20 weeks go by, and there is no recourse because it's Con Ed, and the crime to me is that Con Ed really should have the interest in how many amps are you going to potentially push back onto my part of the grid, and has been testified before, the grid has various age oriented quirks about it, and we can respect that In fact, before we actually put the paperwork into NYSERDA one of the things we have to do is ask Con Ed, are we good with this project? That could be a 15 week wait. So I just have nothing positive to say there because nobody has any kind of recourse or accountability, and there is no tracking.

CHAIRPERSON GENNARO: How does that work in LIPA? You are not experiencing that when you are - - ?

[crosstalk]

MICKEY BENNETT: - - Oh yeah because NYSERDA requires us to get materials on a

job and to start it—

CHAIRPERSON GENNARO: [interposing] But I'm saying that statewide everyone wants to do this is dealing with NYSERDA. Now the difference between New York City and Long Island would be Con Ed versus LIPA, which is not being characterized in the recent weeks as a model of efficiency, but they seem to move this along faster. That's what I'm understanding. Not that this is a hearing about what goes on in Nassau. I am just trying to understand your thoughts.

MICKEY BENNETT: I can enlighten you on that. Most projects are small—

CHAIRPERSON GENNARO: [interposing] And again, with regard to the portal, I am giving myself a little bit of latitude here, and that this is not really direct to the subject matter, but as someone who has got a couple of solar bills in the hopper, and you know, you are kind of helping us with those, I - - giving myself a little latitude to go beyond the topic, and I'd like to add that we have been joined by Council Member Crowley and pleasure to have her with us—member of the Committee. Pleasure to have her as

always. Please, Mickey, continue.

MICKEY BENNETT: With respect to the portal the reason I am including this as an issue that is possibly solvable, the portal represents an opportunity to provide information on how many were put in, - - attract, what is the lag time for them, and if we were to do it by size under 25 kilowatts and under, which goes through one track and over 25 kilowatts—this is really the high growth area for the city. This is because distributed generation is something you may be reading more about. It seems to be an industry accepted term for those 25 to 100 kilowatt jobs that represent potentially 80 percent of all the solar that is going to be installed in the city.

CHAIRPERSON GENNARO: Right. Okay. Please proceed.

MICKEY BENNETT: So it’s really more od pointing out that the solution of taking the covers off of what that throughput rate looks like will lead to appropriate pressure or appropriate laudatory comments towards those areas.

CHAIRPERSON GENNARO: Yeah, and I

think the gentleman from OLTPS—what's his name again? The gentleman—the guy back there. The gentleman all the way in the back - - . Jimmy. We'll just call him Jimmy. My name is Jimmy, so that is easy for me to remember. I appreciate you being here. I think what we need to do is just kind of a note to your office is that we've got your office, we've got the Council, we've got this portal thing we are trying to do. We are trying to push solar forward, and I think—and I'm going to - - direct my staff to have an interaction with the Office of Long Term Planning and Sustainability to just try to figure out what is going on, and I think we should weave this into this portal or otherwise try to figure out how we can get sort of a different posture on the part of Con Ed towards moving some of these things forward 'cause otherwise, what the heck are we doing? And so, just take that back. Okay, Jimmy? Okay. Please.

MICKEY BENNETT: There is also some issues with the New York City Department of Building. So far our experience with the New York City Department of Building electrical division

has been outstanding, and we have never had any problems with them. The New York City Department of Building requires a construction permit, and it requires an inspection afterwards, and it includes things like can we say what the drainage looks like on the roof and draw that in? These are—they seem like, oh well, drainage, why is solar accountable for the drainage on the roof, and the fact is, we wind up adding costs there. There has to be a building permit filed. It has to be coordinated with the electrical permit, and all of that is driven by New York City finance. It's a process of tax abatement, so the tax abatement—so the fact is there is a building permit when there is a building. There is no construction. These things sit on a roof. They are like tinker toy sets that are put together. They are very well engineered tinker toy sets, but they in fact are not being constructed out of steel beams and girders and things like this. When those are, certainly there is a much bigger project involved, but for your basic non-penetrating type of mounting system, it seems like overkill, and that again adds a price, and in particular on the

residential side if we could have more boundaries of throughput that represent like the 90 percent of commercial jobs or 90 percent of residential jobs instead of trying to cover 100 percent with this kind of overhead, it would help a lot, and with finance, the big issue there from cost standpoint is that everything has to be filed by an architect for a PE and that includes all the financial documentation, all the breakdowns of what the payments were and everything else, so if you imagine paying an architect for the hours of filling out forms, making sure that they are filed, making sure that they are appropriately tied back so this number matches that number, it's an added expense that just doesn't seem to be warranted, and it's all to make sure that as the people from the Finance department have said, it is so we can go after them and take away their license if they lie. Well, you know, we do many other self-certifying things in the city like plumbing and electric and the people that self-certify and aren't doing the work get caught, and I would suggest that here again overkill is driving costs, and we have got three or four items

that I have already talked about that add to that dollar cost that is different than Nassau. Even the New York City energy efficiency paperwork—we are filing energy efficiency paperwork, and we haven't changed the building. We haven't touched the envelope. We haven't done anything that would warrant these kinds of onerous additional incremental filings, so that is really the gist of it, and what I'd like to suggest is that when the portal is engineered to reduce costs, you know, NYSERDA has that now. I would advise anyone doing a portal like this to look at the clean energy portal from NYSERDA. There is also references from DSIRE, D-S-I-R-E dot org, which lists for every state including New York and New York City, what the available incentives are. Lastly I would suggest that the City Council can act as a steward of our environment best by lowering the cost of installing solar and publish tracking so that we can get a public accounting of how many systems are in process, how long are they in process, - - or throughput will act as a lower tax would. Systems would be installed at a lower cost and done faster. The actual implementation by the way

of a 25 kilowatt commercial job is about two weeks, so compare that to the overhead. But again, distributed generation is important too because it represents about 80 percent of the PV production--distributed generation being 25 to 100 kilowatt commercial jobs. I did an analysis of the database within NYSERDA, and I looked at commercial jobs that—commercial jobs and residential jobs within the state, and it's interesting that New York City actually has about 80 percent of all the commercial jobs that were done in the state where they received NYSERDA incentives, and there is a - - principle that comes out here, and it is that residential jobs involve 80 percent of the people, but only 20 people of the actual power that is going to be generated. Where distributive generation as we all know from any quick drive down the expressway into Manhattan, we are loaded to the gills with good warehouse and commercial spaces, and to tie those in and to take advantage of them, they will represent 80 percent of our eventual capacity and we only have to reach 20 percent of the people who do it, so if we could reduce those things, and

perhaps, with residential installs below ten kilowatts, maybe there is something that could be kept on file with the DOB. For instance, this is model one. This is model two.

CHAIRPERSON GENNARO: We need to conclude here.

MICKEY BENNETT: Oh yeah, that is it actually. I just wanted to—

CHAIRPERSON GENNARO: [interposing] Let me—before we get to the next witness, Mr. Bennett, this is a note to staff, has been trying to work with us to paint a picture of what it's like here, what it's like here in New York City, what it's like outside the city, and again, what we talked about now is the portal wasn't really kind of meant to make the city be more efficient in the way that it handles approvals and what not, but certainly that is a topic that has to be addressed, otherwise, people are going to use this portal and try to see what is available to them and then just drown in paperwork, and so, I made reference to the other solar bills that we have that are not in this committee directly, but I don't think either myself or Chairman Dilan of the

Housing and Buildings Committee wants to leave his tenure as chair of that committee with the level of bureaucracy that we have that is a real impediment to moving solar forward in New York City, so this kind of goes beyond what we want to talk about, but certainly is very important, and thank you, Mr. Bennett, for what you are doing and for giving up your time to be here. Now we are going to make a major move, like I said, at the outset of the hearing I don't want to say too much on the record about the complicated medical appointment that I have to participate in, but I have to do that, and so the remaining witnesses will be handled by Council Member Levin, who is not only smarter than I, but younger by quite a bit, and—

COUCIL MEMBER LEVIN: [interposing] The latter may be true, but the former is not.

CHAIRPERSON GENNARO: If I could ask Council Member Levin now as of this moment, Chairman Levin, to come forward, I will show him where we are here. Steve, just come forward. I'll just kind of walk through this a little bit.

[long pause]

CHAIRPERSON GENNARO: And I want to give my apologies to the witnesses that I can't be here, but Chairman Levin will carry on, and there you have it. Thanks for coming to our little hearing.

COUNCIL MEMBER LEVIN: Thank you very much. Again, I would never presume to be as knowledgeable or erudite as our good chairman, Chairman Gennaro, but I would like you to continue. I believe Ms. DiCaprio is next.

LISA DICAPRIO: Thank you. My name is Lisa DiCaprio. I am a professor of social sciences at NYU and a member of the NYU sustainability taskforce, but my comments are my own opinion. Thank you for the opportunity to submit this statement in support of the proposed local law 887 to create a single web based sustainability portal for all forms of renewable energy in New York City. As Hurricane Sandy has demonstrated New York City is increasingly at risk from extreme weather events, rising sea levels and the warming of the oceans. We must transition as quickly as possible from fossil fuels to renewable sources of energy. Currently there is a vast

discrepancy between New York City's renewable energy potential and the amount of electricity generate from renewable sources. For example, the New York City solar map identifies 650,000 New York City rooftops with potential for solar power, but only 560 solar systems have been installed to date in New York City. A sustainability portal accessible to non-professionals will eliminate one of the main causes of this discrepancy by providing a centralized source of information about the permitting process, tax credits and incentives. This portal as has been noted previously could provide links to information on third party purchasing agreements for solar photo voltag [phonetic] power. These agreements are facilitating solar installations throughout the United States by eliminating the upfront costs for solar installations and providing the owners of rooftops with reduced electricity rates. In addition to reducing greenhouse gas emissions, peak solar power generation corresponds with peak electricity use during the summer, and if wired to deliver power during a grid failure, solar photo voltag panels can also supply electricity during

blackouts and in the aftermath of storms. To reduce the amount of natural gas and oil used for heating buildings in New York City the sustainability portal could list resources for obtaining biodiesel. Information on biodiesel as a renewable source of energy is provided in many sources including the Harvard green campus initiative for which I provided the website in my submitted statement. The New York Port Authority and New York City Parks Department used by - - and diesel vehicles and generators and for heating Parks Department buildings. Finally, I recommend that the sustainability portal include information about the various waste purchase renewable energy. Even as we actualize our renewable potential, a large percentage of the energy consumed on a daily basis will need to be generated outside of New York City. For example, the solar map if all 650,000 rooftops had solar power arrays, this would provide 41 percent of peak electricity needs, but only 14 percent of New York City's overall electricity. Several options are now available for individuals, corporations, institutions, universities and even entire cities

to purchase renewable energy. These options include green power purchases through - - and the EPA green power partnership. For campaigns advocating for cities to achieve 100 percent renewable energy, websites are available for the future policy organization and go 100 percent dot org also provided in my written statement. By generating and purchasing all of our energy through renewable sources, New York City can join the growing list of cities worldwide that are making a commitment to becoming 100 percent renewable energy cities. With regard to education as I teach courses on sustainability at NYU, I would like to highlight the importance of public education programs about global warming and the reduction of greenhouse gas emissions. These programs are necessary for three main reasons: one, to create the general awareness required to address the two main challenges of our time, climate change and finite planetary resources; two, to provide information about the difference that individuals and institutions in New York City can make by reducing our energy consumption and installing renewable energy systems, and three, to

obtain support for the public policies and expenditures required to facilitate the transition from fossil fuels to renewable energy. If our current trajectory of greenhouse gas emissions continues, it is very likely that we will surpass a two Celsius degree rise in global temperature. How will we balance climate change mitigation and adaption? An enlightened citizenry is essential to guaranteeing New York City's future as a metropolis. Thank you.

COUNCIL MEMBER LEVIN: Thank you very much, Ms. DiCaprio. I appreciate your testimony. It was very helpful and please make sure to continue to keep in touch with this committee, with Chairman Gennaro and myself and continue to give us ideas and ways to improve and as the portal is implemented and after that to—we appreciate the feedback form both of you. - - possible. Thank you. Thank you very much for the testimony. Okay. Next we would like to call up former DEP Commissioner, Al Appleton, to testify.

AL APPLETON: Whenever you are ready, Mr. Chairman.

COUNCIL MEMBER LEVIN:

Commissioner, nice to see you. Thank you.

AL APPLETON: Thank you. Thank you for presiding over this hearing. Thank your Committee for this initiative. As we all know with Hurricane Sandy, the subject of energy sustainability is definitely come front and center. The preamble to your legislation, which talks about the need for renewable energy, the response to global warming is 100 percent on point. Some of the refinements of the portal I would recommend. It certainly makes sense what we heard from the prior speaker, but some of those refinements I think are best left to when we get the portal established and some kind of working group can be developed. I do think the portal will need to be interactive. I think will need if it is going to have its best effect, it is going to need to have a bulletin board for complaints, so that when people see obstacles they can flag them, that city government can use this as a troubleshooting tool, and basically speaking from my own experience in city government, city government is often times too slow to learn from what the world we serve has to tell us. Basically

in my experience most of the citizens who work with city government are just looking to do something, to have it function smoothly and to have it function with a reasonable amount of common sense. So to the extent that the portal can give those frustrations an ear, and can give some guidance to city government that they have got three duplicate forms here that they can substitute one for, and get it done. You know, that they could have the information that someone like the budget bureau could use to zero base budget process or value engineer the process. One of the things that we did when we were in the DEP is I had the construction process value engineered and discovered we had lots of things that were being doing sequentially that didn't need to be done sequentially. They could have all been done at the same time, but by doing them sequentially, you imposed an awful lot of delay. So I think the portal is an extremely food idea. What I'd like to kind of talk a little bit about is alternate energy in the larger context of city government. This is a city that because most of its energy comes out of buildings—I believe the numbers I

have seen from the city are something between 77 and 80 percent. Our building strategy is fundamental to any global warming strategy and any sustainability strategy, and the way we get at that quite frankly is to be ambitious. Fortunately or Unfortunately because of my work in the water shed, I was brought into the gas fracking [phonetic] issue, which is probably one of the most contentious political issues in recent years in city government, but the truth of the matter is one of the interesting debates about gas fracking is can we get green energy on time? You know, can we scale up green energy? There are many people in this country who have a vested interest in not seeing the potential green energy realized. Now the story I like to tell on this—I mean I could talk about going to the moon 'cause probably more of us remember that, but at the beginning of World War II in 1940, the United States had the 19th largest army in the world. We were behind Bulgaria, but it had a - - . We also had 10 percent unemployed, 10 percent underemployed. We were only using 75 percent of our industrial capacity. Now five years later, we

all know we had an army that essentially dwarfed everybody else. We were creating so much more material the Germans wouldn't keep records on it 'cause it was too depressing. We were able in short to ramp up that level of industrial strength effort with an economy that looks very similar to the economy we have got now in terms of its economic potentials and its economic needs. So we should give some serious thought to how we do that same kind of thing with green energy. There is no technical reason we cannot take the whole country to green energy. We know that we have got enough wind power in the Midwest. We know we have got enough solar power every place in the country to do this. We know we have a 30 percent savings potential for energy conservation. We know that any building that wants can use geothermal. There is a whole series of other technologies, some of which this Committee like its DEP hydropower initiative have sponsored. Oops sorry. There is absolutely no reason we can't pick this ball up and run with it, so I think the sustainability portal needs to be seen in that context. It needs to be seen in the context of a city government

that makes a commitment to basically make New York City kind of the green energy capital of the world over the next decade. This is not an undoable thing. We are talking—we have looked at Hurricane Sandy. We are talking about barriers across the sound. We should be talking about burying all of our power lines. We can do these things at scale. We need to do them at scale, and I think the sustainability portal should just be the first kind of step towards an integrated city government strategy to do this. There are other reasons why we as a city want to go to alternate energy. You are going to hear some witnesses today that are talking about an exciting new technology to monitor gas leaks from natural gas pipes. These results are quite dramatic. Now fugitive methane as it's technically called is a greenhouse gas that according to EPA is 20 times as powerful as CO2 over the 100 year life over the next 100 years, and it is figurative methane that is rising faster than CO2 even though the CO2 numbers are depressing enough, but the methane numbers are even worse, and there is huge scientific worry about the growth of methane in the atmosphere, and

particularly it is the ability to kick off a self-supporting cycle of warming that could make what we have seen so far look very tame. So the reason I bring this is up is there has been a tendency particularly in segments of the utility industry and segments of the fossil fuel industry that for obvious reasons cannot contemplate a future without mining and selling fossil fuel to kind of promote shale gas as the alternative. It's not the purpose of this hearing to redo the arguments against shale gas. This committee has been a stalwart champion of the city's best interests in this issue, and I do not want to repeat it; nevertheless, one of the costs of shale gas of using natural gas we are just beginning to realize are these fugitive methane emissions, but once you crank them into the equations where you are comparing say for example coal or any fossil fuel with natural gas, it doesn't work. Green energy is the way to deal with these problems, and in championing this legislation, we urge this committee to be a champion for a larger application of green energy. The other issue with substituting green energy for natural gas and I

want to make clear that while I regret the city's initiative on natural gas, I don't blame them. It was done with the best intentions. Much of the information we have come - - with the consequences of natural gas have been flushed out by the fracking debate, which has only come to - - in the last several years. No one can complain with the city's goals in trying to promote the substitution of natural gas for oil in building boilers with respect to the public health consequences. These are all commendable purposes, but we have all been in government enough to know that sometimes commendable purposes if pursued in the wrong way can have very nasty and un-commendable consequences. The consequence I am referring to here of the city is something called radon gas. Currently our apartments when they burn radon gas in the gas stoves that are familiar for New York essentially have a background level of anywhere from 1 ½ to 3 picocuries. The natural gas that would come into the city from the promotion of natural gas and the drawing upon the supplies of the Marcellus shale to feed the new pipelines that are proposed would produce a radon level if you

take the latest USGS figures - - 20 times as high. I don't really believe that the way to preserve the respiratory health of the average New Yorker is to provide them with a radon level 20 times higher. Now, do I want that number put on? No. Why? Because that number is basically a calculation based on very incomplete data. The potential scandal here is not the radon itself. The potential scandal has been the failure of our governmental agencies to seriously look at what are the implications for the public health of New Yorkers of bringing Marcellus shale gas into our pipelines and promoting its use as an environmentally sound measure. We need a systematic comprehensive look at what will be the radon levels of the natural gas brought into the city? What will be the radon levels that will result in the apartments? What can do to mitigate that? The importance of this portal is by promoting the effective deployment of green energy we eliminate this issue. We achieve all the health objectives of the city's natural gas initiative. At the same time, we do not create new potential health threats, and the nasty thing

about radon is there is no safe level, but we do know—I can't tell you if we had a 20 times increase in the radon level or a 10 times increase—even a 5 times increase, and I venture to predict that if you ask the average New Yorker if they would accept a five times level increase in the radon gas in their apartment, I don't any of us have any difficulty in predicting what that answer would be. We have a planning challenge here. We have a public education challenge here. The importance of your portal legislation is it will give us a tool to solve this problem, and it still achieves the goals of this initiative. So I want to commend this committee for taking forward this initiative. As I say, you are going to hear some technical things. I think the comments made by the last speaker about the difficulties of ramping up solar are important. I hope that the Council and the city administration will take this legislation as a first down payment on a broader city commitment to green energy that we need to make. Thank you.

COUNCIL MEMBER LEVIN: Thank you, Commissioner, and I would encourage all of the

candidates for incoming mayor to look at your testimony today, and to engage on what I believe should be an ambitious capital plan. Aside from the efforts that this committee is doing in terms of this portal and efforts throughout the city on new innovative ideas, we need a real capital investment that leverages—that uses city dollars and leverages state and federal dollars and private dollars.

AL APPLETON: I think that is very wise, and I would actually suggest that there are many concerns in public finance over meeting the pension obligations in the future that if the city were to think about investing some of those pension dollars in a green energy portfolio that would have a certain built in rate of return it could deal with much of the concerns about projected earnings in terms of investment. So I think if you take your idea even a step farther that would be even more exciting.

COUNCIL MEMBER LEVIN: Candidates from comptroller as well need to - - .

AL APPLETON: Sounds good.

COUNCIL MEMBER LEVIN: Thank you

very much, Commissioner. I appreciate your testimony. Thank you. So I want to call up Todd Sacks and Richard Gibson from ClimateMaster, and I would like Martha Cameron, Ruth Hardinger and Ken Gale to remain on standby. You will be the next panel. You can go ahead and start whenever you are ready, but I would ask you to identify yourself for the record. Actually before you testify, I am going to observe the precedent in this committee, which is to be sworn in by the counsel of the committee, which I'm glad to take the opportunity to do. We don't do that in every committee, so…

COUNSEL: Gentlemen, would you please raise your right hands? Do you swear or affirm to tell the truth, the whole truth and nothing but the truth today?

MULTIPLE VOICES: I do.

COUNCIL MEMBER LEVIN: Thank you.

RICHARD GIBSON: My name is Richard Gibson. I am with ClimateMaster. I brought along a business partner.

TODD SACKS: Hi, My name is Todd Sacks. I am the CEO of a technology firm outside

of Washington D.C.

RICHARD GIBSON: We thank you for the opportunity today to address you. We appreciate the opportunity to come back on the first opportunity. My partner is from ClimateMaster addressing just the need of the whole effort that you are in. I wanted to present just a few things today. - - we are going to approach this more from the educational standpoint of why we feel the portal is a good initiative. All of these terms are very familiar to us now. They are very hot topics if you will on a global basis driving energy efficiency, energy conservation, climate change, all of these things are obviously very forefront on the majority of America's mind. This slide shows one of the reasons we feel that it is important for this initiative to take place is that when we are looking at whether it be our carbon footprint or our energy management both of which are dominant topics today that we need to address, our buildings as was mentioned earlier in testimony are the biggest drivers of energy usages, and obviously New York City fairs well in building

energy if you will. So you can see through this slide here indicates how much energy and carbon emissions come from buildings—43 percent of carbon emissions on a U.S. basis comes from the buildings, 71 percent of the utility, electric that is used in America goes through buildings, 53 percent of the natural gas, and it's evenly distributed between the residential and the commercial market. Obviously with New York, it would be more commercial in the city if you will than residential, but this slide just points to where it's at on a global basis or on the U.S. footprint. When you look at—and this you are probably aware of as far as BTUs, trillium BTUs, New York ranks number eight in the top ten of the most BTUs used in the nation, and so how can we best address that type of issue, reduce that, and then be mindful of what we need to do in the future for our children and future generations with our energy in that, and what we have found is that we feel that education is a key. Through public policy and education are two key drivers to better understating of sustainable energy options for both the current and the future generations,

and we feel that a portal of which you are proposing is just the optimum educational portal for that to happen. We will present a few brief facts on why we feel that electronic portal is something that is definitely needed. We can look at our European partners though and see that they have taken to not only geothermal, which is what my company produces on a global basis, but also other renewable energies, and when you look at those footprints you can see that Sweden basically on the geothermal scale has 44 percent of their installed base as geothermal. You can see also that Germany is 17 percent, France is 15 percent, and as the slide indicates that by 2020 close to 2.6 million units in Europe is what is projected to do there. The reason for this is they understand that energy management needs to look at sustainable products, those of which are not even though our company would to limit it to geothermal on a broad base it takes all types of renewable energies for a healthy portfolio going forward in this. This slide is just simply indicating that even though as go about in a manufacturing sector or the different renewable energy sectors, often

we segment ourselves out and we do not want to talk about the other renewable energies; however, they partner quite well when you are in this environment. And this was just to indicate that all different types of renewable energies can be utilized together in helping people understand how do we create a sustainable Earth for our future generations and also for our generations now. I think it is quite apropos that Bill Gates said that the Internet is becoming the town square for the global village of tomorrow, and to fail to take advantage of the Internet and its capabilities and its outreach to me would be a shame. When you look at the global world the latest statistics show that in the United States there is 274 million Internet users—over 80 percent of the United States, which I'm surprised it's even that low, use the Internet, but there are a few people—not very many—that are not using the Internet. This slide just indicates the importance of a portal because a consumer or our constituents in New York City and all across America are looking at making decisions on all types of product purchases, whether it be—it

doesn't matter what it is. They are looking to manufacturers to retailers to search engines, shopping comparisons, all types of things. It just shows the dramatic increase in this last decade if you will of electronic education and intelligence that is going on. I'll let Todd talk for just a moment on these next few slides.

TODD SACKS: Part of what I do every day is I get—

COUNCIL MEMBER LEVIN: [interposing] Please identify yourself for the record.

TODD SACKS: Todd Sacks. Dot Studio outside of Washington D.C. Part of what we do is we take information and team it up with the recipients of the information, the users, so when you are looking at—first, I would like to commend you on your idea of having a portal attached to your website or whether it is an entire website in itself, I think that it is important that renewable energy becomes part of our now and our future, and I think that we are a nation of good people, and when we are told and educated the right thing to do that we step up and do it, so I

think that it is great that you are doing this or that you are proposing to do this, but I would like to come with one caveat. We are an information society, yes, but we are also an over communicated society, so it's very important the method that we communicate to your consumers or your residents that number one, that they are willing to receive it; number two, that it even shows up. There is so much information, especially manufacturers and companies that are out for their own gain obviously to compete in this Internet space, so if you are going to take this type of action or initiative, it's really important that you have the commitment to optimize the site, and that will take probably an outside firm, such as ours—I'm not here for that—but just to say that it will be almost impossible to optimize this site by just merely putting information on it and expecting it to do that on its own. You need to work on it continuously. You do need to make it very interactive as we heard earlier. But just go over some of the statistics education is important. There is 10,000 plus inquiries per month on geothermal

green energy and solar power. This is just in the last 30 days. There were over 2,000 related phrases typed on the major search engines with the term geothermal. Over 673,000 users or unique IP addresses typed about geothermal, so this is showing you that people are interested in being educated on renewable energy. That is just geothermal. 250,000 typed the exact phrase about geothermal energy, so they were looking for information. This gives you a little bit of a larger scale. Solar energy, there was 1.5 million queries last month alone just on solar energy where people are going to the search engines and typing in whether it is about or cost of, just information. Next in line is wind energy with about 820,000 queries; oil heat, 110,000; gas, 165,000 and geothermal heat, 135,000. So you can see that where the trends are going with consumers or residents in general just looking for information on renewable energy. Similar phrases—solar energy, there was over 2,000 variations of users typing in about solar energy; wind energy, 1400; oil heat, 302; gas heat, 365 and geothermal heat, over 2,000 different types of queries typed

into the search engines. One of the things that we would propose—this was just a mock up if you will, but we do need an industry neutral if you will site that is very interactive, very user friendly for the constituents out here of New York City to be able to get on and have a portal through which they can educate themselves about renewable energy. It is not something that they are going to the library and pick up a lot of books. It is not being written about a lot in the press. It would be something where this is a portal to where all of us in the industry across all boards, we have tried to be neutral here in our presentation and not skew it only towards geothermal. All of the renewable energies are very, very attractive to the consumers today. Everyone is quite aware that we need to do something to change policy today, and the problem is is that even though there is a ton of information on the website on the Internet if you will, it is not all accurate, and it's not all easily obtained, and so you do have an effort even on the website to talk a little bit about renewable energy, but how can we make that larger,

make it more user friendly, and I think that this is—I want to commend you on your effort to do this. I look forward to partnering with you and the other industries in putting that together, and I think that you will be very pleased with what will happen for your policy and your energy and the savings that is going to happen in your state once you have an educated society. We thank you for your time today, and have a good day.

COUNCIL MEMBER LEVIN: Thank you both very much. I very much appreciate the insight and the testimony. Thank you. Final panel we will be calling up—Martha Cameron, Ruth Hardinger and Ken Gale. Absolutely, however you please. We are going to ask the counsel to the committee to swear you in.

COUNSEL: Please raise your right hands. Do you swear or affirm to tell the truth, the whole truth and nothing but the truth today?

COUNCIL MEMBER LEVIN: Very good. Whoever would like to go first, go ahead. And identify yourself for the record please.

RUTH HARDINGER: Is it on? Okay. Great. How is that? Hi. My name is Ruth

Hardinger, and I am a member of Damascus Citizens for Sustainability, which is a non-profit organization working to protect the watersheds, and Damascus Citizens is a group that actually just has initiated this effort to do a methane pipeline leaking in Manhattan, and I have some information about that, and Al Appleton has already began to talk about that. What I am going to start reading is a brief description of methane's contribution to climate change, and the reason I am bringing this up here is that this whole issue is a very important issue and is a reason to accelerate our efforts in going toward renewables and to have your website, so we definitely support that effort. The article here is written by Bryce Payne, who is a PhD and a soil scientist and one of the two people on gas safety. In a nutshell what he says is that leaked gas causes much greater impact on greenhouse gas levels than has been appreciated in the past. Additionally, we consumers pay for this leakage. Hence there is a substantial cost that is borne on our shoulders. Methane is a potent greenhouse gas. The accepted minimum relative greenhouse gas

strength of methane is 20 times greater than that of carbon dioxide. We can restate that methane as a greenhouse gas is 20 times stronger than the carbon dioxide by stating that it only takes 1/20th of 5 percent as much methane to cause as much atmospheric warming as the quantity of carbon dioxide. So if the gas that makes it to the extended destination and is burned, it will form carbon dioxide when its original form does not matter since it is now carbon dioxide; however, if only 5 percent of natural gas escapes as it moves within the Earth through the production and delivery system, that 5 percent will have as much greenhouse gas impact as the other 95 percent burned as fuel. In fact, it would have an even more disproportionate impact because a substantial portion of the energy from burning methane is due to the hydrogen present in the methane. So methane being burned at the end of the delivery system will actually produce less carbon dioxide than the simple approach suggests with the consequence that leakage of five percent of the gas caused more greenhouse gas impact than all the gas that is not leaked and is burned by the

consumer. So what? This suggests that the role of leakage from natural gas systems has a more substantial role in climate change than has been predicted. Apparently present provisions in the utility regulations allow gas companies to charge their customers for up to two percent of their handled gas volume as lost and accounted for gas. Presumably this applies to each sector in the gas system separately. That is, the gas production companies can lose two percent and charge the customers for that loss, as can the gas pipeline and the gas utility companies. These chargebacks allow gas companies to disregard in fact the profit from losing up to two percent of the gas they handle. Adding up the production, transport and distribution sectors presumably up to two percent plus two percent plus two percent equals six percent of gas that could be lost by the gas companies and they still collect all the related costs and profits for that lost gas while it contributes more to global climate change than the gas these companies actually ultimately deliver to their customers. So this regulatory system actually promotes greenhouse gas releases

potentially more than twice the rate due to burning of the delivered gas, allows gas companies to collect revenues for the gas causing the additional climate effects, and has no provisions by which the cost for the climate impacts can be collected from the gas companies. That is, those costs will be paid as an additional indirect cost by gas users and non-users alike. This seems to bring the object and effectiveness of current gas utility regulations into considerable doubt. Gas safety has just—and I'm sorry. I only got this report this morning—this is an initial report that is subject to revision and will be developed in the next few weeks, and I don't have a CD to show you this, but I can pass these around. These are gas leaks in Manhattan that were discovered about two weeks ago. This is called a piccaro [phonetic]. It's a device that you can literally put in the back of the car, drive down the road and it will measure the methane that is on the surface, and these are going to be passed around. They are available to see there, and you can see, these are various stretches in Manhattan where the methane releases are about 1.8 to 1.9 parts per

million. They go up to about 2.5 parts per million, but there are sections here where the gas leaks are up to 90 parts per million, and so this is—I brought in copies of this. You can look at that. These are various sections of Manhattan, and this shows the amount of methane leakage and then put that together with climate change. They have copies. Focus regarding the 887 bill—focus should be on true sustainability and renewable fuels and how to minimize the city's impact on the global environment. I am speaking here as a representative of Damascus Citizens for Sustainability—based on Delaware River Basin the place where most of your water comes from, your wonderful clean water comes from, the conflux of fossil fuel energy sourcing, water and air also has been shown repeatedly to yield local environmental damage and global impacts--local impacts to water, air, land use, to global impacts from the carbon released. Where will New York City be when the sea level rises to the places where Hurricane Sandy's levels were? This will happen unless a radical course change is made. I am not talking change. I am talking real change.

The questions are: why are we not looking at the total impact before we embark on a massive building project to welcome additional fuels to the city? If we don't look, do the cumulative impacts disappear? How long will the current relatively low subsidized price of natural gas last? What happens when it goes way up again? Can you only consider the market price? What is the total price? Adding all the damage where the drilling is taking place to water sources, to the values of homes, businesses, roads and the people's lives, what are they worth? And where will clean water come from in the future? And food? Plants don't grow in chaotic weather. What are you going to eat? How do the current structures function—the pipelines, meters, et cetera, that are within the city? Are they leaking? How much? Damascus Citizens, a tiny environmental group, did what no large group or Con Ed has done. We looked. And we have a report showing the pattern of generalized leakage resulting in overall elevated baseline in Manhattan of the main component of natural gas. This component, methane, which is at least 20

times the greenhouse gas heating potential of CO2 is coming out of vented manholes—much less explosive that way, but a big pollution component. Is this a sustainable way to go? What should we be doing instead of encouraging the investment of millions of dollars to bring more of an economically fragile and dangerous supply of explosive fossil fuel to New York City? Why is the city not encouraging the switch to renewables? Through all the tools it has, including persuasion of it being the right thing to do, can this be done—completely running on renewables by 2030? But only if we start and don't just dig ourselves in deeper. The final question, are we willing to pay the full future price for this cheap gas fuel? I have another attachment from—it's called the Jacobson Delucchi study that by 2013, the world can run on renewables. I am just attaching this so you can look that up. Just on a personal level, I want to say that I am a New York City resident. I have been here a long time. After Sandy we had no electricity for a week, which certainly wasn't the biggest problem that happened in Manhattan, but we started thinking about how to

get off the grid in my co-op. How can we do this and this panel is providing a lot of really good important information.

COUNCIL MEMBER LEVIN: Thank you very much. Could I ask you a quick question? Could you just briefly explain your methodology for tracing the methane on the map here and how you produced the map?

RUTH HARDINGER: It's a little difficult for me to do because I'm not a scientist, but there is a device and it's called the piccaro, and it's a huge instrument. It's an expensive instrument, and it sits in the back of the car, and there is a little device at the bottom that hangs out the back of the car, and actually registers the amount of methane that comes up really rapidly. I believe that paper actually says something about the number of data points it picks up, and it's huge. This is a very effective method of measuring the kind of gas leaks that are happening, and apparently, in the past the other ways of doing it had to do with sticking some sort of stick in the pipelines, and it was called some sort of pig [phonetic],

pipeline indicator gauge I guess. This is all on a computer, and as we are actually seeing it happen, it gets registered on a computer and you can actually see the picture of it. You can see the intensity of it.

COUNCIL MEMBER LEVIN: I am imaging that the reason why - - kind of between it looks like Delancey Street and Central Park West why it's much of that on the first map is just that that area was not covered during the testing?

RUTH HARDINGER: No, apparently New York has about 4,320 miles of gas pipeline underground. This test ran through just a small part of the city, and this was just to say, look, there is more work that we need to do here. This is major, and it's producing information that in fact—where's my little report here? Excuse me, let me just grab this, and I can read one more little paragraph. We prepared this data survey to provide a visualization of the potential relative importance of methane leakage from the gas system in Manhattan as a regional atmospheric scale. Further work is needed to determine whether approximate amounts of the methane being released

in the atmosphere can be developed from the data generated and then for the initial report for the following table it represents the brief comparison of two randomly selected one hour datasets in Manhattan and an open country drive, so what we are seeing is there is a whole lot more methane in Manhattan than there is in a country drive, and if you go further down that is the last page of this. You go further down it says this work is planned for further analysis and interpretation of the data produced during this preliminary investigation. This report reveals the need—this is our intention. The report reveals the need and provides a foundation for additional work to better evaluate the apparently substantial amounts of methane being released into the atmosphere from pipeline leaks in New York City.

COUNCIL MEMBER LEVIN: Thank you, and I encourage you to continue with your research and developing this study and make sure that it gets to folks at city hall other than the people in this committee, but on the mayor's side and DEP and the Office of Long Term Planning and Sustainability and that it catches their attention

‘cause it certainly catches our attention.

RUTH HARDINGER: Great. Thank you very much.

OCUNCIL MEMBER LEVIN: Thank you very much. Appreciate it. Please identify yourself for the record, sir.

KEN GALE: My name is Ken Gale. I am the host and producer of Ecologic, an environmental radio show on WBAIFM. Our studios are 120 Wall Street and we transmit from the Empire State Building at 99.5 FM, and I have been doing this show for over ten years. I want to thank you for giving me the opportunity to speak here. In that ten years, I have seen that anything can be made poisonous. Anything can be done badly. Anything can be done stupidly. You can make anything benign into something poisonous, and it’s done all the time, and I hope that as you do this portal your eyes are wide open to that. I also hope your eyes are wide open to green washing [phonetic] because there is a lot of corporations out there who have access to decision makers who will do one green thing, and to try to cover up the thousands of polluting things that they do,

and I hope that the portal will not emphasize something like that when there is a lot of for example, small businesses doing solar installations. You have a large business that wants to put - - in instead of renewable energy income, and I would not want to put all things being equal because in - - Germany and all of Western Europe has grown solar is not the same thing, and I would not want to see Wall Street take a cut of the money that individuals can get from their solar panels for example. I wouldn't want to see for example electric cars—I was at a panel not long ago covering it for my show. Electric cars are seen as a way for having another market for fracked gas, so I went in there thinking an electric car—that's kind of cool, but it's not. Con Edison explained what it would do to the grid, so thinking of it in that direction - - a lot of details on every individual thing, such as the term electric cars. Sustainability and renewable energy are becoming popular phrases, and I don't want them to be treated as a marketing device. I don't want to see them treated as just a catchphrase or a fad because as Hurricane Sandy

and many other hurricanes and typhoons have shown it is an absolute necessity to consider these things. It is not a fad or a catchphrase or a marketing device. Passive [phonetic] houses were mentioned earlier, and I want to emphasize those. Passive houses were developed in Illinois, ignored in the United States and embraced by Germany. A passive house can use a fraction of the amount of energy. You can take a home in Illinois or in Germany—southern Germany has the same latitude as northern New York state, so we are not talking about a warm climate, and you can make a house that is heated by the appliances and the people in that house if you build a house that well, and thousands of these homes have been done in Europe. Hundreds have been done in the United States. It can be done. In New York City, I want to point to the work of architect, Chris Benedict and her building designer, Henry Gifford. LEEDs standards I understand is in this portal. LEED is done by a point system and you get LEED points for a bike rack. You get no points whatsoever for insulation. That is effed up. Insulation has to be considered. Buildings are built to code and no

better. Energy is not in the code. It's not in any code in this country I should say. It's not in any code. In Europe, it is in the codes now because they want to get energy independence, and they know that exporting jobs to the Mideast and Texas is not a good way to build an economy, and in countries that embrace renewable energy have grown their economies. They have grown their workforces. You can't install solar panels from overseas. It has got to be a local guy, and that is one of the strengths of this. When Chris Benedict and Henry Gifford started building their buildings in their way in '96, for the same budget as a conventional building—we are talking multi-family dwellings in New York City, their buildings used half the energy. They have gotten better and better and better as the years have gone by. Their latest building in Brooklyn uses 1/10th the energy of a conventional building.

COUNCIL MEMBER LEVIN: What are their names again?

KEN GALE: Chris Benedict is the architect. Chris Benedict, and her building guy is Henry Gifford. Henry is quite an outspoken

critic of the green building concern for not including energy, but for people who are decision makers across the country going on the assumption that they do, and they don't, and when green buildings become laws as they are in many states in this country, a lot of these buildings use more energy than conventional buildings. That is unsustainable. It is again making something that sounds really good into something that is stupid, and we shouldn't be stupid. That is what I emphasize. I don't want to see green washing. I don't want to see stupid. New York City can be the leader in sustainability, and if we lead, the whole world will follow. When hurricanes hit other places, nowhere got near as much publicity as when a hurricane hits New York City, so when New York City becomes sustainable, it will get a lot more publicity than if other places become sustainable, so let's go for it.

COUNCIL MEMBER LEVIN: Thank you. Thank you very much for the spirited testimony and a good call to arms. I look forward to working with you. Again, there are opportunities to influence the current administration, but I think

a great opportunity to influence the future administration, the next administration coming into city hall.

KEN GALE: I have tens of thousands of listeners, and I would love to give them good news about New York City.

COUNCIL MEMBER LEVIN: Thank you.

MARTHA CAMERON: Is this on? Yes. My name is Martha Cameron. I hadn't come here planning to testify. I came here to take notes for the two organizations that I am affiliated with. One is the Coalition Against the Rockaway Pipeline and the other is Climate Action Committee of Brooklyn for Peace, but I decided to testify. I own solar panels. I have solar panels on my roof, and so I think this portal is probably going to be very, very valuable. I don't know if Mr. Bennett is still here—

COUNCIL MEMBER LEVIN: No.

MARTHA CAMERON: Unfortunately he is gone, but everything he said is absolutely true in spades. I cannot tell you what kind of a nightmare it is to install solar panels in this city. Mine went online in December of 2010 within

days of the window that would have lost me a considerable amount in rebates, and I think that there is one little thing I'd like to add to what Mr. Bennett was saying, which is you also have to allow for the extra time that is involved when the owner of the solar panels has to be on deck for the repeated and repeated and repeated inspections, inspections, inspections. Also listening to the telephone calls and the meetings with the architect and the solar installer as they tear out their hair because the plans have been lost again or because the FDNY has just changed its rules or because the building inspector has never done an inspection of a solar installation and hasn't a clue what he is doing. So fix that part of it. Please. Also, having had solar panels now for a couple of years, I know that they really do save a lot of money, and I tell people about them all the time, and people will say to me, yes, but solar doesn't work, and I say yes, but I am living with it, and solar does work, and so it is very hard to convince people. Other people have said about the mass media need the need for education. You have got to get this

through. You have got to get people who will stand up and say, I have solar panels, and they work, and it's lovely having them. Mine were installed immediately before a tornado hit Park Slope, and they have been through a couple of hurricanes since.

COUNCIL MEMBER LEVIN: And the snow storm that year?

MARTHA CAMERON: And the snow storm. Yes. And the snow storm. I forgot about it. A few things that could be fixed if the grid goes down it would be nice if there was some kind of battery operation because if the grid goes down, I go down, and so anybody who can do something about storage I am all in favor of that. That was also mentioned. The Con Ed bills are simply baffling. I have no idea what goes on with Con Edison, and they don't either. If you call them up, they can't explain then. So Con Ed is not in the business of facilitating renewables. It is in the business of selling energy, and I think the energy that it wants to sell is basically fossil fuels. I notice a lot of places when people are in some of the write ups I have

seen, there is an emphasis on carbon emissions, and that seems to mean CO2, and I know a lot of people have spoken to this already. Everything that Ruth was saying, everything that Al Appleton was saying, methane is going to kill us. It has a shorter lifespan than CO2. It's up there for 12 years, but we have basically got about 4 years if we don't turn this around. The reference to World War II was so apt. We need a Manhattan Project for real because we need to go renewable. We are desperate. I have seven grandchildren. I don't want them to live in the world that we are creating right now. I also want somehow or rather you have got to address the issue that this is a city of multiple dwellings. When you install solar panels on your rooftop, it goes into a single meter, and then if you have got—my solar installer actually is in the process of installing solar for a 14 unit co-op, and it's very, very complicated because it goes into the single meter, but then they have got to do sub metering for 14 units. Surely, there is some way to simplify that. And since everybody is talking about things other than portals, I just want to say as a member

of the Coalition Against the Rockaway Pipeline, National Grid is planning to start construction on this 26 inch high pressure pipeline that is coming in through the Rockaways that has just had a major impact from Hurricane Sandy. They are going to start construction in February. The purpose of this pipeline is to bring in fracked gas from the Marcellus. Its justification in Congress--it was brought in on a bipartisan bill introduced by a Republican Michael Grimm, who took $3,000 from the company that is doing the installation, Williams Transco. The justification that has been pushed by Mayor Bloomberg is we need the gas, we need the gas, we need the gas. We don't need the gas. We need the energy. It's different. Energy is not gas, and furthermore, gas is not clean. As Mr. Appleton has told you, the carbon footprint of fracked gas is horrendous, and now we are talking with glorious editorials in the New York Times and Saudi [phonetic] Albany in the magazine section, we are pushing LNG [phonetic]. This is totally, totally, totally insane. We do not need LNG. We do need to be sending this stuff all over the world just so the gas companies can make 4 times,

8 times, 16 times the money that they are making in their losing propositions digging up upstate New York and Pennsylvania. But the pipeline construction has to stop because the pipelines are creating - - on the ground. You get a pipeline down there and then people say, but we have got a pipeline; we have to use it. It's like you build a highway so that you can accommodate more and more and more cars. So we have to stop these pipelines. I don't know how we are going to stop Rockaway because the President signed the bill on the 27th of November, ignoring the hurricane, and I don't know what recourse we have. We have to go through - - now. We have no money. We have $265 in our bank account, and we have to go through the - - process with no lawyers and a regulatory process that is totally rigged in favor of gas and oil. So I am imagining that probably the pipeline will go through. The metering and regulating station that accompanies this project will be located in Floyd Bennett Field. This is all national parkland. This is the people's land that is being handed over to Williams Transco. The metering station will be in Floyd Bennett Field,

which is 16 feet above sea level. The height of the surge in Hurricane Sandy was 14 feet, so we are going to look at flooding of a metering and regulating station in some future event. Undersea pipelines are not immune to the effects of major hurricanes and weather events. There is a considerable amount of evidence that undersea pipelines are subject to mudslides. They crack. They leak. And this is going in two miles from the Jamaica Bay Wildlife Refuge in the area where we have at least two endangered sea turtles among other endangered species. Just one quick final note, I'd like to say—two quick final notes. Tomorrow is the cutoff date for the production tax credit at the federal level. If this production tax credit is not renewed by Congress tomorrow, we are in danger of losing 37,000 jobs in wind energy. Now Congress is busy talking all the time about jobs, jobs, jobs, but they seem to be paying absolutely no attention to the loss of 37,000 jobs in renewable energy. It's okay if it's gas or oil. Then we are all up in arms about it. And finally, I would like to say looking at everything that I have been listening to for the last several

months, and this is my second hearing that I have sat in on, we need a people's energy policy. We need not a gas energy policy or an oil energy policy. We need a people's energy policy that includes true public control over our energy future and not just putting it in the hands of utilities and gas companies and politicians that can be bought off for cheap like Grimm. That's it.

COUNCIL MEMBER LEVIN: Thank you very much. I very much appreciate how you illustrated how very tied in everything is. It's very much cause and effect. By establishing a pipeline in the Rockaways, it negatively impacts the Rockaways in more ways than one. I thank you all very much for your testimony. I want to thank everyone for staying and listening to all the testimony for your testimony before. I want to thank counsel to the committee, - - , and Chairman Gennaro and all members of the Committee for attending this important hearing. We will be taking your testimony and your comments and your ideas and suggestions into account as this legislation moves forward, and so I greatly

appreciate all of your suggestions and we look forward to working with you all for the implementation of this portal and the monitoring of it and ensuring that it is successful and that it gets a great deal of use and moves our collective causes three, four, five, ten steps ahead.

C E R T I F I C A T E

I, Kimberley Uhlig 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 Kimberley Uhlig

Date 1/2/13