

CITY COUNCIL  
CITY OF NEW YORK

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TRANSCRIPT OF THE MINUTES

Of the

COMMITTEE ON HOUSING AND BUILDINGS

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HELD AT: Council Chambers - City Hall

B E F O R E:

JUMAANE D. WILLIAMS  
Chairperson

COUNCIL MEMBERS:

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ERIC A. ULRICH  
HELEN K. ROSENTHAL  
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## A P P E A R A N C E S (CONTINUED)

Nilda Mesa  
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Office of Sustainability

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Katrin Klingenberg  
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Chris Benedict  
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Chris Benedict, R.A.

David White  
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New York City

Elizabeth Zeldin  
Director of Public Policy  
New York Office of Enterprise Community Partners

## A P P E A R E N C E S (CONTINUED)

Paimaan Lodhi  
Vice President of Urban Planning  
Real Estate Board of New York

Rezwan Sharif  
Broker  
New York City

[gavel]

CHAIRPERSON WILLIAMS: Good morning everyone and thank you for coming. My name is Jumaane Williams. I chair the council's Committee on Housing and Buildings. I'm joined today by Council Member Richards. We are here today to discuss three bills that relate to energy efficiency in buildings as part of the 7<sup>th</sup> annual climate week in New York City. Yay!

[applause]

CHAIRPERSON WILLIAMS: We can excuse that one. We'll let that one go. With the United Nations currently discussing sustainable development goals here in New York City I'm glad to bring similar conversations into the chamber of City Hall as well. I want to mention that there is some concern that as drafted Intro 701A and Intro 721A would affect private affordable housing developments. That was not our intention and we're currently looking into the issue. The first bill, Intro 633 sponsored by Council Member Richards would require large buildings to file an energy efficiency report every five years rather than filing the report every 10 years. Our second bill;

1  
2 proposed intro number 701A, sponsored by the  
3 Speaker of the City Council Melissa Mark-Viverito  
4 would require that certain city capital projects be  
5 designed and constructed as low energy buildings. A  
6 subset of those projects... of these projects would  
7 be further required to satisfy a portion of their  
8 energy needs through onsite power generation. The  
9 bill would also require the mayor to produce an  
10 annual report with information about capital  
11 projects subject to this bill's design and  
12 construction requirements. The mayor would also be  
13 required to produce a triannual report containing  
14 recommended practices for designing and  
15 constructing low energy buildings. And our third  
16 bill; proposed intro number 721A, sponsored by  
17 myself would update local law 86 2007 which imposed  
18 green building standards for certain capital  
19 projects. I understand that Council Member Richards  
20 would like to make brief statements concerning his  
21 bill. So at this time I'd like to invite him to do  
22 so.

23 COUNCIL MEMBER RICHARDS: Thank you  
24 Chairman. And thank you for your leadership in  
25 Housing and Buildings Committee. Currently New York

1 City's building code requires that an energy  
2 efficiency report be filed for a building every 10  
3 years. As our city continues to commit to reducing  
4 its consumption of energy and cutting its emissions  
5 of greenhouse gases requiring an energy efficiency  
6 report to be filed every five years rather than in  
7 every decade with encourage closer monitoring for  
8 operators and increase the data driven knowledge of  
9 buildings throughout our city. If we call for  
10 energy efficiency reports to be submitted every  
11 five years rather than every 10 we would not be the  
12 first. San Francisco seems to think that it is  
13 reasonable to require reports every five years as a  
14 practical step towards meeting their goals or  
15 producing greenhouse gas emissions. The intent of  
16 this bill is not to be over burdensome to building  
17 owners or any of our governing agencies. The intent  
18 of this bill is to aggressively reduce and monitor  
19 the amount of energy our buildings are consuming.  
20 Waiting 10 years to find out if we are behind on  
21 our goals is entirely too long. Technology advances  
22 much faster in a year than it did decades before.  
23 Just think 10 years ago no one in this room had an  
24 iPhone. It was introduced in 2007. Today it's more  
25

1  
2 uncommon not to have one. If we want to be serious  
3 about new technology, innovation, and progress we  
4 should not slow it down by a lack of monitoring  
5 and... monitoring and accountability. I am certainly  
6 looking forward to hearing from the administration  
7 and other guests on what they have to say but I  
8 challenge you all to push this forward. I look  
9 forward to working with you and I want to thank the  
10 chairman once again for his leadership and look  
11 forward to hearing the comments. Thank you.

12 CHAIRPERSON WILLIAMS: And thank you  
13 Councilman Richards for your leadership on  
14 environmental issues. Thank you for providing also  
15 the additional background on your bill. I'd also  
16 like to thank my staff for the work they did to  
17 assemble this hearing including Nick Smith my  
18 Deputy Chief of Staff and Legislative Director,  
19 Jenna Wilcox and Melaka Juvalee [sp?] Counsels to  
20 the Committee, Guillermo Patino Jose Conde Policy  
21 Analyst to the Committee, and Sarah Gastelum the  
22 committee's Finance Analyst. As a reminder for  
23 those of you testifying today please be sure to  
24 fill out a card with the Sergeant. I know we have  
25 Ms. Nilda Mesar... is it Mesa, from the Mayor's

1  
2 Office of Sustainability. I'm going to have to ask  
3 you to excuse me for one second. I have to go vote  
4 in the committee room next door. And since I want  
5 to eagerly hear every word that you have to say I'm  
6 going to ask you if you can give me a couple  
7 minutes before you begin so I can vote. And I'll be  
8 right back.

9 DIRECTOR MESA: With pleasure.

10 CHAIRPERSON WILLIAMS: Thank you very  
11 much. That wasn't too bad. We've been joined by  
12 Council Member Garodnick, Mendez, Koslowitz, and  
13 briefly by Council Member Cornegy. Ms. Mesa if you  
14 can please raise your right hand. Do you affirm to  
15 tell the truth, the whole truth, and nothing but  
16 the truth in your testimony before this committee  
17 and to respond honestly to council member  
18 questions?

19 DIRECTOR MESA: I do.

20 CHAIRPERSON WILLIAMS: Then you can  
21 begin.

22 DIRECTOR MESA: Thank you. Good morning  
23 Chair Williams, Chair Richards, and members of the  
24 committee. I'm Nilda Mesa, Director of the Mayor's  
25 Office of Sustainability. Thank you for the



1  
2 opportunity this morning to testify on three  
3 proposed pieces of legislation namely Intro 633 in  
4 relation to requiring energy efficiency reports to  
5 be filed every five years, Intro 701 A in relation  
6 to low energy building requirements for certain  
7 capital projects, and Introduction 721A in relation  
8 to green building standards for certain capital  
9 projects. The Mayor and the Office of  
10 Sustainability applaud speaker Mark-Viverito,  
11 Council Member Williams, Council Member Richards,  
12 and the city council in general for addressing this  
13 important effort to address energy waste and  
14 establish standards for energy use in our buildings  
15 that will get us to our goal of reducing the city's  
16 carbon footprint 80 percent by the year 2050.  
17 Climate change is an existential threat to  
18 humanity. The impacts of our warming climate are  
19 being felt today as the earth's weather patterns  
20 are becoming more intense and sea levels are  
21 rising. The results include more violent storms and  
22 more severe droughts, extreme heat, widespread  
23 wildfires, and torrential floods displacement of  
24 societies and people and damage to property. As  
25 these impacts are felt more heavily the urgency and

1 precision with which we must act comes into clearer  
2 focus. On Earth Day this year Mayor Bill de Blasio  
3 set forth One New York, the plan for a strong and  
4 just city. Through this plan our building... our city  
5 is building upon our global leadership in growth,  
6 sustainability, and resiliency and embracing equity  
7 essential to that work. One NYC is a blueprint of  
8 the New York City we want our children to inherit.  
9 And the actions that we take now will ensure that  
10 we have a healthier environment, a dynamic  
11 inclusive economy, more affordable housing, an  
12 infrastructure that is reliable and resilient. The  
13 initiatives of the plan address every aspect of  
14 life in New York City; how we live, work, learn,  
15 and play. And achieving these goals need innovative  
16 solutions. The Mayor's Office of Sustainability has  
17 determined that nearly three quarters of citywide  
18 greenhouse gas emissions come from energy consumed  
19 in our buildings. While we look to bring renewable  
20 resources to New York City the greenest electron is  
21 still the one that's never used. Our office is  
22 working to reach the dual goal of reducing  
23 emissions from buildings 30 percent by 2025 and  
24 reducing citywide emissions 80 percent from 2005  
25

1 levels by 2050. In order to reach these goals, we  
2 have convened a technical working group made up of  
3 over 40 stakeholders from New York City's real  
4 estate industry including architects, engineers,  
5 labor unions, affordable housing experts, and  
6 environmental advocates. We have also hired  
7 engineering firm HDR to help us determine the  
8 impact that different policies and programs might  
9 have on reducing emissions. The recommendations of  
10 this work will build on the city's legacy of energy  
11 efficiency and green building policies like Local  
12 Law 86 and Local Law 87 which have been so  
13 important to our efforts. The Office of  
14 Sustainability is pleased to testify in general  
15 support of today's introduction of these bills.  
16 With council's engagement on climate change our  
17 city is in a strong position to address these  
18 challenges effectively. We believe there is room to  
19 work together to further strengthen each of these  
20 bills and we look forward to that process.  
21 Improving energy efficiency in the city's buildings  
22 will result in a greenhouse gas emissions  
23 reductions and decreased annual energy expenditure  
24 citywide. Reduced demand for energy will not only  
25

1 result in cost savings for New Yorkers but also  
2 result in reductions in the emissions of air  
3 pollutants from the burning of fossil fuels within  
4 buildings and at electrical power plants which  
5 yield.. which will yield a cleaner air and improved  
6 health. Indoor air quality and public health can  
7 also be improved through better construction  
8 materials and designs that encourage active  
9 lifestyles. The comments we are presenting today  
10 represent our initial thoughts about these  
11 introductory bills including some suggestions for  
12 areas in which we can work together to reach the  
13 most effective policy possible. We are looking  
14 forward to hearing the testimony of today's other  
15 witnesses to ensure that we fully understand the  
16 technical issues raised by each of them. Intro 633  
17 requiring energy efficiency reports to be filed  
18 every five years would amend local law 87 of 2009  
19 to require owners of buildings subject to that law  
20 to file an energy efficiency report for their  
21 covered building once each five years rather than  
22 once every 10 years as the law currently requires.  
23 Local Law 87 is a central tool to reducing  
24 greenhouse gas emissions from our buildings. Local  
25

1  
2 Law 87 has instituted emission reductions in  
3 buildings by mandating retrocommissioning. It has  
4 helped building owners understand the most  
5 appropriate energy efficiency retrofits available  
6 to them and the payback period associated with  
7 each. Local Law 87 has also provided an invaluable  
8 resource of data to this city which we are using to  
9 develop effective and practical energy efficiency  
10 policies. Local Law 87's energy efficiency report  
11 is made up of two components; the EER1 form and the  
12 EER2 form. The EER1 form records the recommended  
13 energy conservation measures or ECMs identified by  
14 the energy auditor and the corresponding payback  
15 periods for each. Example ECMs include replacing  
16 old windows with triple pane windows or converting  
17 your boiler from fuel oil to burn natural gas.  
18 While energy audit information can be very helpful  
19 to help building owners plan, to modify or purchase  
20 equipment, or to make envelope improvements they  
21 are not... building owners are not compelled to  
22 implement any of the ECMs identified under Local  
23 Law 87. The EER2 form logs the retrocommissioning  
24 measures that were identified during the energy  
25 audit. These measures include improvements to the

1 operating protocols, calibration, and sequencing of  
2 a building's energy equipment. They also include  
3 the cleaning and repair of existing building energy  
4 systems. Examples are retrocommissioning measures  
5 include ensuring that simultaneous heating and  
6 cooling does not occur unless intended or tuning  
7 boilers for optimal efficiency. Building owners  
8 under Local Law 87 are compelled to implement these  
9 retrocommissioning measures. While much of the cost  
10 from Local Law 87 reporting are paid back through  
11 savings on energy consumption the fee represents a  
12 significant upfront cost that building owners may  
13 find difficult to absorb. Cost for the energy audit  
14 portion of Local Law 87 can range from 15,000 to  
15 over 100,000 depending on the size and the  
16 complexity of the building. For retrocommissioning  
17 the range can be larger depending on the building's  
18 operation and maintenance practices. If a building  
19 maintains its equipment well its retrocommissioning  
20 cost can be in the area of 2,000 dollars. However,  
21 cost for a building that has been deferring its  
22 maintenance can become quite large. For example, if  
23 a 50 unit building with deferred maintenance needed  
24 to replace its steam traps in the radiators for  
25

1 each unit the cost could be in the range of 100 to  
2 150,000 dollars. Energy conservation measures from  
3 an energy audit can often involve purchases of new  
4 equipment or improvements to a building's envelope.  
5 Local Law 87's ten year reporting requirement was  
6 initially designed to coincide with a typical ten-  
7 year capital planning cycles for properties. The  
8 energy efficiency gains that come from  
9 retrocommissioning can be lost overtime when  
10 operations and maintenance personnel fail to manage  
11 their equipment appropriately. Conversely the  
12 findings of an energy audit do not change so  
13 frequently unless a property undergoes major  
14 changes. As a result, there is less added benefit  
15 of conducting an energy audit more frequently as  
16 the findings are not likely to change markedly  
17 within a five-year period barring major changes to  
18 the building's use. The administration would like  
19 to work with council to research the potential  
20 benefits of this proposal that can lead to improved  
21 operations and maintenance practices for energy  
22 efficiency. A proposal should encourage building  
23 owners to progress toward ongoing commissioning and  
24 proper operations and maintenance practices which  
25

1  
2 have clear benefits for energy efficiency and  
3 reducing greenhouse gas emissions while not  
4 incurring costs that would not lead to appreciable  
5 energy efficiency gains. We look forward to working  
6 with council to strike this balance. Intro 701A;  
7 low energy building requirements for certain  
8 capital projects, would establish categories of low  
9 energy buildings, net zero energy buildings, and  
10 on-site energy producing buildings for city owned  
11 and funded building projects. The bill would  
12 require all city building projects subject to the  
13 requirements of the city charter's green building  
14 standards to be constructed as low energy  
15 buildings. The bill would also require at least 20  
16 percent of the capital projects in each fiscal year  
17 that are subject to these requirements to be  
18 designed and constructed as on-site energy  
19 generating buildings and all projects three stories  
20 or lower in height to produce a study of the  
21 feasibility of designing and construction,  
22 constructing such a project as a net zero energy  
23 building. The Mayor's Office of Sustainability  
24 strongly supports establishing high performance  
25 building standards that will get the city to its 80



1 by 50 greenhouse gas emissions reductions goals.  
2  
3 However, in light of current high performance  
4 construction practices the bill's definition of  
5 what constitutes a low energy building as one whose  
6 energy use intensity is lower than that for at  
7 least 98 percent of buildings designed and  
8 constructed for similar uses according to  
9 benchmarking data etcetera would make compliance  
10 difficult based on the technology currently  
11 available. Achievable and effective criteria for  
12 low energy buildings needs to be determined and we  
13 look forward to working with city council to  
14 identify the requisite standards. Requiring a study  
15 of net zero energy for every project under four  
16 stories that is subject to this local law, both new  
17 buildings and substantial renovations would pose an  
18 additional cost for many projects. The city is  
19 already identifying pilot projects that readily  
20 lend themselves to net zero energy performance. And  
21 this process will lead to better determining the  
22 potential for net zero energy projects going  
23 forward. However, in general, our object...  
24 objectives here are shared. Requiring 20 percent of  
25 all projects to be on-site energy generating

1 projects may ness... may necessitate limiting such  
2 projects to older buildings without rooftop  
3 mechanical equipment or may necessitate additional  
4 expense for construction of space for mechanical  
5 equipment that is typically located on roof tops.  
6 Careful... we need to carefully consider how to  
7 identify and evaluate the impacts of adding on-site  
8 energy generation to certain building  
9 configurations. Again however in general we  
10 strongly support distributed generation and the  
11 integration of renewable energy into our overall  
12 systems. We support this important energy proposal  
13 with the understanding that details concerning  
14 appropriate performance metrics need to be  
15 resolved. In particular, our office is excited by  
16 this intro's focus on the building envelope as the  
17 basis of a low energy standard as has been  
18 demonstrated in a number of Passive House apartment  
19 buildings throughout the city. We agree that this  
20 is the basis of an approach to defining a low  
21 energy building standard. We also recognize that  
22 the Passive House standards were developed  
23 initially for climates with cold winters but  
24 without the hot summers that New York City  
25

1 receives. A low energy standard developed for New  
2 York City would need to consider these weather  
3 differences. We look forward to working with  
4 stakeholders, council, Department of Design and  
5 Construction, the Department of Citywide  
6 Administrative Services Education, and School  
7 Construction Authority on these refinements. Intro  
8 721A. Green building standards for certain capital  
9 projects would amend Local Law 86 to be based on  
10 leadership and energy and environmental design  
11 version four, cover all building occupancy classes,  
12 raise the certification level requirement for  
13 capital projects subject to lead.. to the lead  
14 provisions law to lead gold and require that all  
15 such projects apply for certification with the US  
16 Green Building Council. The intro also proposes  
17 that the existing reporting requirement of the law  
18 would become permanent. In addition, a new  
19 provision is included which would require each  
20 capital project with a modification of a site  
21 connection to the sewer system or with an impact of  
22 50 percent or more of the nonbuilding site area to  
23 reduce the storm water runoff volume. The Mayor's  
24 Office of Sustainability is generally in support of  
25

1 the intended goals of introduction 721A. While  
2 there is clear greenhouse gas benefit coming from  
3 the expansion to all building classes the impacts  
4 on building types may need to be examined further.  
5 And I was... in my original testimony I've got  
6 affordable housing specifically mentioned. And I  
7 appreciate Chairman William's statement that this  
8 is an area for us to work towards in the future. So  
9 I'll skip over that part. It's so similar the lead  
10 gold certification standards under lead version  
11 four for capital projects that are required... comply  
12 with lead green building standards may be difficult  
13 for certain projects to achieve. This is a known  
14 gap between... there is a known gap between previous  
15 versions of lead and version four. And we would  
16 like to help make any transition to lead version  
17 four a smooth one. The area of green building  
18 standards appears to be in a period of transition  
19 which makes this Intro particularly timely. We look  
20 forward to working with council and city agencies  
21 to find ways to achieve our mutual goals in a cost  
22 effective manner. We suggest conducting further  
23 research and conversations to fully understand the  
24 implications of the bill and develop a workable  
25

1 solution for all involved parties. As Intro 721A  
2 would make existing reporting requirements  
3 permanent we will work with city agencies and the  
4 council to update the reporting requirements and  
5 reporting process so that they're easier to fulfill  
6 and implement. Local Laws 86 and 87 are critical  
7 tools in the city's fight against climate change.  
8 We applaud the council's efforts to cut emissions  
9 further through these amendments. Working together  
10 I am confident that at the end of the day each of  
11 these bills will help us achieve... all of these  
12 bills will help us achieve our ultimate goal of  
13 cutting emissions 80 percent by 2050. It is  
14 critical that we continue to work with city council  
15 to get these policies and their implementation  
16 right. Our climate, economic, and societal goals  
17 rely upon this. Thank you for the opportunity to  
18 testify on this important set of legislation. I am  
19 happy to answer any questions that you may have at  
20 this time.

22 CHAIRPERSON WILLIAMS: Thank you very  
23 much for the testimony. I'm going to ask a couple  
24 of questions about my bill in particular and then  
25 I'll pass it over to Council Member Richards. He

1  
2 has questions about his bill. And then we'll see if  
3 any other council members have questions. We've  
4 been joined by Council Member Torres. Can you just  
5 walk us through what is involved with meeting  
6 certain lead requirements? Also will the bill... you  
7 mentioned a little bit about the... the bill. Can you  
8 talk about it anymore? How many projects do you  
9 think will be affected by legislation?

10 DIRECTOR MESA: I mean the way the bill  
11 is written out would be essentially... virtually all  
12 city projects that you know come up every year. I  
13 don't have the exact number. But it's... it's a  
14 matter of like can we... you know how do we work it  
15 through so that we can make sure that this is  
16 something that accomplishes all of our goals at the  
17 end. So... and we're... you know lead version four has  
18 not yet been adapted by US Green Building Council.  
19 So it's... we're in a funny state of transition right  
20 now with this. So I think it's more a matter of you  
21 know making sure that we get like the Is dotted and  
22 the Ts crossed and so forth. There are going to be  
23 some issues most likely with design standards. And  
24 so that's something that I think the agencies will

1  
2 need to go back and review and they'll need to  
3 consider budgets as well on that.

4 CHAIRPERSON WILLIAMS: I think you  
5 mentioned in the testimony some costs of  
6 retrofitting. What will be the cost on average for  
7 a new building to comply with different lead  
8 levels?

9 DIRECTOR MESA: So in part it's a matter  
10 of... it's hard to put a number on it because in part  
11 it's a matter of how the building is designed from  
12 the beginning and what the purpose is of the  
13 building and what the uses are that are going to be  
14 in it. I mean generally you know if you design... if  
15 you design a building right from the start it's not  
16 a huge bump necessarily on energy and it's things  
17 that can be recouped at the end of the day. But it...  
18 a lot of it really is sort of case by case and  
19 depends on how... you know what the building's used  
20 for, how many people, how complicated the systems  
21 are. And that's partly why we really like the focus  
22 on the façade and... and you know that side of it.  
23 Because if you focus on having a... a well-made you  
24 know façade that's... that... that's very... it allows  
25 for a lot of efficiency then that means that you

1  
2 can downsize the systems that... that are within the  
3 building and then it also becomes easier to operate  
4 at the end of the day. But it's all... it's... the... the  
5 standards are changing as we speak I mean... And  
6 there are standards that haven't yet been developed  
7 and... and tried in New York City with this. So it's  
8 a matter of like we need to think this stuff  
9 through to get it right.

10 CHAIRPERSON WILLIAMS: How much would a  
11 building owner save long term?

12 DIRECTOR MESA: It depends on... I mean  
13 I'm sorry I don't... I don't mean to be you know  
14 vague but it's... it just depends on... on the building  
15 but you could potentially save a lot. I mean on  
16 some of the Passive House construction that has  
17 been done the energy costs have come down like 40  
18 percent 60 percent, something like that. So I mean  
19 it's pretty dramatic on some of these. But you know  
20 we don't... we don't quite have all of these... we  
21 don't have the designs yet. We don't have it set up  
22 yet. It's too... it's too new. But this is where we  
23 want to go.

24 CHAIRPERSON WILLIAMS: And you had some  
25 examples but can you walk through a little bit



1  
2 better... a little bit more what it takes to... to get  
3 to lead.

4 DIRECTOR MESA: The real important thing  
5 is to have a unified vision at the beginning of a  
6 process on lead. You know we're the... or whoever's  
7 the client and the... you know the architect and the...  
8 the engineers and so forth all understand that a  
9 building has to meet a certain kind of performance  
10 level, a certain set of criteria. And then that's  
11 how you get the cost to come down. If you don't  
12 have a process like that set up, then changes are  
13 made along the way and then that's when the... the  
14 costs go up. But there's any number of categories  
15 that come up under lead that are also like not  
16 having to do with energy, that have to do with  
17 things like percentage of recycled content in... that  
18 goes into you know the buildings. Sometimes it's a...  
19 sometimes some of the challenges are where the... you  
20 know that the markets aren't yet fully developed  
21 because the way that Lead has evolved has been as a  
22 way to spur market development in particular areas  
23 by setting the standard and thinking that you know  
24 if you set the standard a certain way then the  
25 markets will follow in there... and people will start

1  
2 providing the materials that are called for. So... so  
3 sometimes there are things that are available and  
4 it's... and it's great. And then other times there  
5 are things where it's just... they may be available  
6 but they're also really expensive to use in a  
7 building and they may or may not have the kind of...  
8 you know as important effects... so like if you're  
9 spending a chunk of change on a particular thing  
10 that's... that's not so easily available perhaps you  
11 could be using that money towards something else  
12 that would be you know that would get you more  
13 environmental benefits. So it's kind of a tradeoff  
14 in the design process and then you know the  
15 implementation of it.

16 CHAIRPERSON WILLIAMS: Thank you. Let me  
17 call on Council Member Richards now. See if he has  
18 any questions particular on his bill.

19 COUNCIL MEMBER RICHARDS: Thank you.  
20 Thank you Chairman. And thank you Nilda. Can we  
21 just go through a few things? So how many  
22 buildings... well first off let me... well I guess we  
23 should start this way. When was the last filing  
24 the... that we had here in the city?

25

1  
2 CHAIRPERSON WILLIAMS: For the... for the  
3 energy efficiency... [cross-talk]

4 COUNCIL MEMBER RICHARDS: Mm-hmm.

5 CHAIRPERSON WILLIAMS: ...reports. So  
6 they're... they're required to be done... well they're...  
7 they come... they basically come through annually.  
8 And it's been two years that this has been in  
9 operation. So while the original law was passed in  
10 2009 it's been since 2013 that these really you  
11 know have started coming through.

12 COUNCIL MEMBER RICHARDS: And how many  
13 filers did we have?

14 DIRECTOR MESA: Let's see... 2,000  
15 buildings report each year on 13 hundred tax lots.

16 COUNCIL MEMBER RICHARDS: So 2,000  
17 buildings and 13 hundred tax lots?

18 DIRECTOR MESA: Yeah.

19 COUNCIL MEMBER RICHARDS: Total?

20 DIRECTOR MESA: So it's over 20,000  
21 buildings.

22 COUNCIL MEMBER RICHARDS: Okay.

23 DIRECTOR MESA: Essentially. On 13,000  
24 tax lots.

1  
2 COUNCIL MEMBER RICHARDS: And did we  
3 have any delinquencies? Did everybody file? Or how  
4 many buildings were outstanding?

5 DIRECTOR MESA: My understanding is that  
6 there... there were a few but I don't have the exact  
7 number with me so... but I'm happy to get you that.

8 COUNCIL MEMBER RICHARDS: Sure. If you  
9 can...

10 DIRECTOR MESA: But it's... but it's  
11 pretty good.

12 COUNCIL MEMBER RICHARDS: Okay.

13 DIRECTOR MESA: It's a pretty high level  
14 of... [cross-talk]

15 COUNCIL MEMBER RICHARDS: Okay but...  
16 [cross-talk]

17 DIRECTOR MESA: ...compliance.

18 COUNCIL MEMBER RICHARDS: ...if we can get  
19 that that... [cross-talk]

20 DIRECTOR MESA: Yeah.

21 COUNCIL MEMBER RICHARDS: ...would be  
22 appreciated. Any reason that we are limiting in  
23 particular the... the filings to large buildings and  
24 not thinking of medium sized buildings or smaller  
25 buildings?

1  
2 DIRECTOR MESA: We would like to have  
3 medium sized and smaller buildings in there in  
4 fact.

5 COUNCIL MEMBER RICHARDS: Okay. That's  
6 good to hear. Can you just walk us through... so what  
7 does an energy efficiency audit look like?

8 DIRECTOR MESA: So there are two parts.

9 COUNCIL MEMBER RICHARDS: Mm-hmm.

10 DIRECTOR MESA: So one of them is an  
11 energy audit which looks at the whole building and  
12 the systems in the building and how a building  
13 performs in general and what its like energy use  
14 intensity is per square foot. And then the other  
15 component is the commissioning part of it or  
16 retrocommissioning which looks at the building  
17 system. So for example it would look at the heating  
18 and cooling systems. And it would look at how well  
19 those systems perform. So the second one.. anything  
20 that turns up in there the building owner is  
21 required to fix and required to improve. The first  
22 one, not necessarily. The first one they can say oh  
23 you know you should be installing windows, here's  
24 the payback period, and those are the kinds of  
25 things that would be... you know that... I... my

1  
2 understanding is that initially when the bill was  
3 passed the people thought that this would be part  
4 of an overall longer capital planning process or  
5 you know capital process for building owners.

6 COUNCIL MEMBER RICHARDS: So on the  
7 second one they would be required to fix it so...  
8 [cross-talk]

9 DIRECTOR MESA: Correct.

10 COUNCIL MEMBER RICHARDS: ...heating  
11 system was... [cross-talk]

12 DIRECTOR MESA: The second one is the  
13 one that can... that... the second one is the one that  
14 can show like the real... that can have like real  
15 paybacks right away. You know if they find stuff  
16 that's you know broken for example or... you know  
17 sometimes what may happen is that you know a  
18 heating and cooling system may get installed and  
19 somebody messed up somewhere on the installation  
20 and so it's actually not performing the way that  
21 it's supposed to perform. It's a good thing for a  
22 building owner to you know go back and take a look  
23 and see. Or it could be that something's broken  
24 along the way you know well after it's been  
25 installed. And... and the building owner through

1 retrocommissioning can see you know what it is that  
2 you know really could be fixed or improved or  
3 tweaked or you know anything like that. So it's  
4 pretty useful tool.  
5

6 COUNCIL MEMBER RICHARDS: So the... they  
7 would report this to the Department of Buildings...  
8 [cross-talk]

9 DIRECTOR MESA: Yeah.

10 COUNCIL MEMBER RICHARDS: ...of course  
11 through... through the filing so...

12 DIRECTOR MESA: Yeah.

13 COUNCIL MEMBER RICHARDS: ...they would  
14 show if they fixed whatever the problem was. They  
15 would... that would have... [cross-talk]

16 DIRECTOR MESA: That's a good question.  
17 I have to go back and... and double check and make  
18 sure that there's a way to... that they do that. But  
19 that's a... so okay I'm being told yes they do have  
20 to fix it and that that is enforced.

21 COUNCIL MEMBER RICHARDS: Okay. So let's  
22 just go through cost pretty quick. Can you just go  
23 through because I... I saw in your testimony you said  
24 it can range from 15,000 to over 100,000 dollars  
25 depending on the size of the building and the

1  
2 complexity. But you also said that as we all know  
3 that you know by making your building more energy  
4 efficient you obviously would generate savings  
5 which are probably pay these things off in  
6 particular depending on the building. So can you  
7 just go through cost a little bit? I know you can't  
8 give us... [cross-talk]

9 DIRECTOR MESA: Yeah it's hard to do...  
10 [cross-talk] because they're so... it's hard to do  
11 because it's... it really... it's like so one off you  
12 know with buildings. But...

13 COUNCIL MEMBER RICHARDS: Well just give  
14 us an example if you can.

15 DIRECTOR MESA: I mean I'm just thinking  
16 about... you mean overall on the... on like the  
17 heating... I mean... it just depends on the size of the  
18 building and the complexity of the system and the  
19 age of the building and the age of the system. So  
20 for example you could have a building that's not  
21 really ever been well maintained that has you know  
22 a boiler that's gotten way out of calibration. And  
23 at the same time it has air conditioning that kicks  
24 in you know when the temperature gets at above you  
25 know a certain point. And so you can have both of



1 things conceivably. And I've seen this in buildings  
2 you know that you have both of these systems  
3 running at the same time. Whatever season of the  
4 year. And if you have something like  
5 retrocommissioning you can... you know you can fix  
6 that. But it can be... but you can also have systems  
7 that you know say somebody buys a building that has  
8 not been well maintained for many years and these  
9 systems are incredibly old and it can just cost a  
10 lot to you know fix this stuff. And the payback  
11 periods are going to be different depending on the  
12 use of the building and the number of tenants and  
13 so forth and the... you know whether it's commercial,  
14 whether it's... how the... and how the energy bills are  
15 calculated. So some cases you're going to get a  
16 really quick payback period and other cases it's  
17 going to be you know much much longer.

18  
19 COUNCIL MEMBER RICHARDS: So how much  
20 would an energy audit cost on average?

21 DIRECTOR MESA: 25 to 50 cents a square  
22 foot.

23 COUNCIL MEMBER RICHARDS: Okay so 25...  
24 50... And you... that that is too much of a hardship on  
25

1  
2 buildings to be able... building owners to be able to  
3 do an energy audit every five years?

4 DIRECTOR MESA: The... on the energy  
5 audit. It depends on the building.

6 COUNCIL MEMBER RICHARDS: Okay.

7 DIRECTOR MESA: It's just... these are...  
8 these are more like possibilities. These are more...  
9 this is like as a... as a you know an effort to say  
10 like you know this is... these are areas where we can  
11 maybe tweak things and then you know improve stuff  
12 or whatever and address some of the stuff.

13 COUNCIL MEMBER RICHARDS: And... so would  
14 you say that ten years is sufficient at this  
15 moment. And I... I guess I'm saying that because the  
16 pope has said today that you know we should move in  
17 a very aggressive state when we're looking to  
18 address climate change and we know that buildings  
19 are obviously the number one emitter for... for  
20 carbon emissions...

21 DIRECTOR MESA: Right.

22 COUNCIL MEMBER RICHARDS: ...in the city.  
23 So is 10 years... would you say when I have more gray  
24 hair in ten years is that adequate... enough time...



1  
2 DIRECTOR MESA: And which is why I say  
3 like the retrocommissioning is... that's pretty  
4 useful information for building owners to have and  
5 they're required to do it. You know whereas the  
6 energy audits as they're building wide they may be...  
7 they may have different payback periods for  
8 different strategies that are... you know are in  
9 there.

10 COUNCIL MEMBER RICHARDS: Mm-hmm. I'm  
11 going to wrap up in a second. Can we just speak  
12 about the Department of Buildings for a second? So  
13 do you foresee any strain on the Department of  
14 Buildings if we were to... to move towards five  
15 years? Do you see more strain? And would DOB need  
16 any additional resources obviously if there is a  
17 strain to ensure that these filings are... are... are  
18 occurring?

19 DIRECTOR MESA: I'd say yes to both.

20 COUNCIL MEMBER RICHARDS: Okay. And how  
21 much? Do we have a cost estimate or...

22 DIRECTOR MESA: We can get you that.

23 COUNCIL MEMBER RICHARDS: And do we know  
24 how many people actually are in... in particular the  
25

1  
2 audit division I'm sure doing this sort of work or  
3 tracking it now? Do we have a particular number?

4 DIRECTOR MESA: I... I know it's not  
5 enough.

6 COUNCIL MEMBER RICHARDS: Okay. It's not  
7 enough. Okay. Alrighty. And then I just... just... just  
8 my last question. So would... would the  
9 administration be open to obviously looking at... in  
10 particular new constructions coming up and... and...  
11 and obviously as we move forward pushing them  
12 towards a... a five year filing rather than a 10. And  
13 it... would that be something you're open to?

14 DIRECTOR MESA: Maybe.

15 COUNCIL MEMBER RICHARDS: Okay.

16 Alrighty well... [cross-talk]

17 DIRECTOR MESA: I mean generally it's a...  
18 you know we really like the direction you know that  
19 these are going. And we really appreciate your  
20 partnership on this because it's going to be  
21 critical for us to get the city you know even more  
22 quickly on these paths. So it's... it's terrific that  
23 you've come up with these and we really look  
24 forward to working with you to get it going.

1  
2 COUNCIL MEMBER RICHARDS: Thank you  
3 Nilda. Thank you Mr. Chairman.

4 CHAIRPERSON WILLIAMS: Thank you. We  
5 have a... one person sign up for questions. Council  
6 Member Torres are you ready? And then I'll have  
7 some follow-up questions and then that'll be it. We  
8 been... we were joined by Council Member Wills  
9 briefly and we're also joined by Council Member  
10 Levine.

11 COUNCIL MEMBER TORRES: How are you  
12 Commissioner?

13 DIRECTOR MESA: I am well. How are you  
14 Councilman... [cross-talk]

15 COUNCIL MEMBER TORRES: So I just want  
16 you to elaborate on... on what you see as the... what  
17 could be the unintended consequences of Intro 721A.  
18 So do you have... has the administration have some  
19 sense of what kind of impact it would have on  
20 affordable housing development?

21 DIRECTOR MESA: Well right now there's  
22 a... there's a separate and I believe there's going  
23 to be testimony you know later on... [cross-talk]

24 COUNCIL MEMBER TORRES: Yes.  
25

1  
2 DIRECTOR MESA: ...this. But there is a... a  
3 system that's been developed that's focused on  
4 affordable housing and is meant to provide  
5 environmental benefits along with being cost  
6 effective. So because that's... that's sort of at the  
7 nub of the construction you know a lot of  
8 affordable housing. So I will leave it to them and  
9 also to Chair Williams about...

10 [pause]

11 COUNCIL MEMBER TORRES: Okay. Thank you.

12 DIRECTOR MESA: Yeah.

13 CHAIRPERSON WILLIAMS: Thank you. Just a  
14 couple of more questions. The first in your  
15 testimony... I believe it was on 701 you... you may...  
16 you mentioned that making compliance would be very  
17 difficult based on the technology currently  
18 available. We were trying to figure out if it's  
19 difficult why are at least two percent of the  
20 buildings doing it.

21 DIRECTOR MESA: I don't know that  
22 they're using that technology to measure it. I  
23 think it's sort of like a happy coincidence you  
24 know that as it turns out that you know they're at  
25 that point. But there are... so some of this is... is

1 work that's now being studied by our technical  
2 working group. And you know we... we've got the  
3 engineering firm that's you know really helping us  
4 trying to work through all of these building  
5 typologies. And you know some of it's a matter of  
6 we don't quite have all the data that we need yet  
7 on this. But you know that's the work of this  
8 group.

10 CHAIRPERSON WILLIAMS: Also on 701 for  
11 new buildings will this get us where we need to get  
12 to for 80 by 50?

13 DIRECTOR MESA: Not entirely, no it  
14 wouldn't. But it's a... it would be an important... you  
15 know this... these kinds of approaches are important  
16 steps to get there.

17 CHAIRPERSON WILLIAMS: And a similar  
18 question for 721 would it help the city make its  
19 goal by 80 50?

20 DIRECTOR MESA: Yeah it would certainly  
21 help us get there but it's not... you know every...  
22 everything has a role to play but there's no silver  
23 bullet when it comes to reaching 80 by 50. So...  
24 which is why we included you know solid waste. And  
25 when we came out with One NYC we included solid



1  
2 waste and transportation and the electric grid... or  
3 I should say the... the energy system really in all  
4 of that. Because it's going to take all of these  
5 sectors together to get us to 80 by 50.

6 CHAIRPERSON WILLIAMS: Alright well  
7 that's all the questions for me. So I want to thank  
8 you so much for coming... taking our questions and  
9 for your testimony and for your partnership.

10 DIRECTOR MESA: Thank you very much. And  
11 look forward to working with you.

12 CHAIRPERSON WILLIAMS: Same here. The  
13 next panel we have up Laurie Kerr from Urban Green  
14 Council and Mr. or Mrs. Parikh from NYSERDA. Okay.  
15 You're... you're... oh... yeah. And the panel after this  
16 will be Stas Zakurtz... Zukurtski... Zakrzewski, sorry,  
17 from NYPH, Ken Levenson from NYPH New York Passive  
18 House, and Buck Moorhead from New York Passive  
19 House will be on the panel following this one.  
20 Thank you. Can you both raise your right hand  
21 please. Do you affirm to tell the truth, the whole  
22 truth, and nothing but the truth in your testimony  
23 before this committee and to respond honestly to  
24 Council Member questions? We'll put when he gets a  
25

1 chance three minutes on the clock for your  
2 testimony. And you can begin at your convenience.

3  
4 LAURIE KERR: Good morning Chairperson  
5 Williams and members of the committee. I am Laurie  
6 Kerr, the Director of Policy for the Urban Green  
7 Council. And I am testifying in favors of Intros  
8 701A and 721A. Regarding Intro 701A; to achieve 80  
9 by 50 our calculations indicate that new buildings  
10 in the city of New York will need to use roughly 65  
11 percent less energy than similar buildings do now.  
12 To achieve this large scale transformation, we need  
13 much more experience creating low energy buildings.  
14 With that in mind we offer four ideas for  
15 improvement of this bill. We would anchor the  
16 definition of low energy building to measured  
17 energy use starting by cutting energy use in half  
18 and stepping that up to a 65 percent reduction. To  
19 give some alternative pathways for our complex  
20 buildings we would define a low inner building...  
21 energy building as either using half as much energy  
22 as the current average for the type, using 60  
23 percent less energy than a similar building modeled  
24 by..., or to be certified Passive House. An Urban  
25 Green analysis indicates that the two metrics.. the

1  
2 98<sup>th</sup> percentile metric currently in the 50 percent  
3 energy reduction would create pretty similar  
4 targets but we think that the 50 percent definition  
5 is more statistically robust when making a clearer  
6 connection to 80 by 50 goals. Two, we propose  
7 Passive House pilots. Passive House has not been  
8 systematically refined for the complex range of  
9 building types that the city builds and no city  
10 buildings and no city buildings have yet been built  
11 to that standard. We need to learn whether the  
12 city's buildings could meet that standard and what  
13 issues might arise in terms of cost, schedule,  
14 availability of materials, procurement, labor, or  
15 design therefore we recommend a pilot program of  
16 four to five Passive House projects each year, each  
17 of different building type. Three, we would expand  
18 the reporting requirements regarding the low energy  
19 program in Section 5. Since the main benefit of  
20 having the city lead by example is to help the New  
21 York City community learn from the experience.  
22 Therefore, the reporting should include data about  
23 cost and performance, analysis of issues  
24 encountered, and policy recommendations for the  
25 city government and private sector. Four, we do not

1 think there need to be additional requirements for  
2 on-site energy generating buildings. On-site  
3 generation should be one of the strategies used to  
4 achieve the low energy targets preferentially  
5 requiring this strategy or any other specific  
6 strategy would increase cost without clear  
7 benefits. Regarding Intro 721A we fully support the  
8 numerous improvements to Local Law 86 in this  
9 intro. We think however that the law could be  
10 streamlined to make it easier and less costly  
11 without losing any impact. If low energy buildings  
12 are required as per 701-A meaning that buildings  
13 use 50 percent less energy there's no need to  
14 require B2I which require 20 percent improvements  
15 in the analysis of 25 percent improvements.  
16 Reconciling such complexities might argue for  
17 combining the two bills. Finally, the reporting  
18 requirements should be tied more directly to lead  
19 and any other information the city needs in order  
20 to decrease the time spent on unnecessary  
21 paperwork. Thank you. And I invite any questions.

22 ASIT PARIKH: Hi. How are you. My name  
23 is Asit Parikh. I jotted down my background. Let me  
24 just elucidate you quickly. I am a NYSERDA partner  
25

1  
2 for the Multi-Founded Performance Program with  
3 engineering architecture firm. I am the first  
4 engineering firm to be on the list since the  
5 program's inception since 2007. And I'm also a  
6 provider for the Local 84 and 87 program. I've  
7 retrofitted myself personally over 150 million  
8 square feet in New York City which by the way we  
9 charge five to seven cents per square foot, not 25  
10 cents per square foot for the audit. One of the  
11 most critical components of the energy audit which  
12 wasn't mentioned earlier was a analysis of the  
13 utility bills. We start by looking at what the  
14 building is consuming. Then you go into the  
15 building and look for what those problem areas are.  
16 To add to my background, the firm I work with was  
17 A, started by my father who was at HPD for 28 years  
18 and retired as Assistant Commissioner under Ed  
19 Koch. And we also are the only... the designers of  
20 the only net zero energy affordable housing in the  
21 world which exists in New Orleans after hurricane  
22 Katrina in the lower 9<sup>th</sup> ward [sp?]. I am also a  
23 Passive House designer and experienced builder  
24 which is to say I put money in my own pocket and  
25 built my own Passive House out of my own savings.

1  
2 And I also get monthly at a bill... I'm sorry a  
3 check, not a bill, from the electric company. It is  
4 a positive energy Passive House that was a retrofit  
5 new construction located right here in the New York  
6 City area. Folks there's a lot of bad buildings out  
7 there and there's a lot of buildings that are  
8 touted as green buildings, lead buildings, which  
9 are very very bad with energy performance. One  
10 example, One Bryant Park. It's tout... it's a lead  
11 platinum building. It literally uses more energy  
12 per square foot than the 80-year-old empire state  
13 building. There's a divergence here that needs to  
14 made a distinction between a prescriptive standard  
15 like Lead which ends up creating a lot of  
16 complexity in the building, a lot of extra things  
17 that cost a lot of money but don't really deliver  
18 the goods. And there's a performance base standard  
19 like Passive House which I advocate strongly in  
20 favor of. It is not a complexity. It's as complex  
21 as a root cellar that was used generations ago to  
22 keep vegetables cool. It's as complex as the green  
23 house on the south side of your elementary school  
24 growing up. It's as complex as 4,000-year-old  
25 concrete structures in Asia that somehow in 110-

1  
2 degree heat stay cool on the inside and they have  
3 natural ventilations. That's the complexity of  
4 Passive House. There is no risk in it. In fact,  
5 from working with NYSERTA and Con Edison there's a  
6 network, there's an army of contractors out there  
7 that are really good at air sealing and insulating  
8 and the types of low technical abilities required  
9 to achieve this performance standard. It's  
10 achievable. The contractors are out there today.  
11 And the health benefits are really available from  
12 the moment the construction is complete. We don't  
13 need to wait ten years for Councilman Richard's  
14 hair to get white. Passive Houses can be built in  
15 the same time and for the same money as regular  
16 construction. Thank you.

17 CHAIRPERSON WILLIAMS: Thank you for  
18 your testimony. I don't know if you'll be white in  
19 ten years. I hope not. I'm trying to hold on myself  
20 so...

21 COUNCIL MEMBER RICHARDS: I just want to  
22 thank you...

23 ASIT PARIKH: Your welcome.  
24  
25

1  
2 COUNCIL MEMBER RICHARDS: ...for your  
3 testimony. We're actually building the first  
4 Passive House building in the Rockaways actually.

5 ASIT PARIKH: Right... [cross-talk]

6 COUNCIL MEMBER RICHARDS: Affordable  
7 housing complex. So I want to certainly thank you  
8 for your leadership on that. Can you just speak a  
9 little bit more on... on the energy audit stuff that  
10 you... [cross-talk]

11 ASIT PARIKH: Sure.

12 COUNCIL MEMBER RICHARDS: ...think...  
13 [cross-talk]

14 ASIT PARIKH: Have a lot experience.

15 COUNCIL MEMBER RICHARDS: ...that this is  
16 feasible or...

17 ASIT PARIKH: Okay so with regards to  
18 audits it was mentioned quite nicely earlier that  
19 there are many types of buildings out there. And  
20 the lower hanging fruits... like redundant systems,  
21 older equipment... through the NYCERTA program... and  
22 buildings were in fact incentivized to approach me  
23 on a market based basis and go in there as an  
24 auditor, come up with ECMs energy conservation  
25 measures, follow those measures through 'till the



1 end, and after the program's complete to go back  
2 one year and benchmark. Now on retrofits of old New  
3 York City housing stock; I'm talking Sheepshead  
4 Bay, Brooklyn, Queens, East Harlem, West Harlem,  
5 Upper West Side, West Village... these are projects I  
6 have on the boards right now. The average retrofit  
7 savings... retrofit we're... we're getting is 25 to 35  
8 percent base energy savings. Passive House retrofit  
9 and expansion... the one I've been involved in  
10 there's been 110 percent savings which is to say we  
11 get money back from the electric company. Passive  
12 House new construction on average will be at least  
13 a 90 percent savings, closer to 95 percent over the  
14 average construction being done today.  
15

16 COUNCIL MEMBER RICHARDS: Alright thank..

17 ASIT PARIKH: Did I answer your  
18 question? Okay.

19 COUNCIL MEMBER RICHARDS: Yes, thank  
20 you.

21 CHAIRPERSON WILLIAMS: Thank you very  
22 much for your testimony. Ms.... Ms. Kerr I was trying  
23 to figure out... So you're basically supportive of  
24 the bills, just think that we need to make some  
25 changes and adjustments?

1  
2           LAURIE KERR: Yes, yes I am on the  
3 whole. I think that the definition for a low energy  
4 building at this point needs some refinement. I  
5 also think that a Passive... a pilot program for  
6 Passive House should be added to the bill so that  
7 we get experience with that. And then in addition I  
8 think we need more reporting requirements. And we  
9 don't need low... the on-site energy generating  
10 building component. So those would be the  
11 modifications. But yes in general we're in favor of  
12 both bills.

13           CHAIRPERSON WILLIAMS: You're in favor  
14 of three bills or you're talking about if we  
15 combined the two?

16           LAURIE KERR: I think it would... might be  
17 easier to combine the two.

18           CHAIRPERSON WILLIAMS: Alright.

19           LAURIE KERR: Logically. Because right  
20 now there are some conflicts and duplicative  
21 efforts.

22           CHAIRPERSON WILLIAMS: Mr.... is it  
23 Parikh? What was your official opinions on the... on  
24 the bills?

25

1  
2 ASIT PARIKH: I'm in favor of it  
3 strongly.

4 CHAIRPERSON WILLIAMS: Okay.

5 ASIT PARIKH: Thank you.

6 CHAIRPERSON WILLIAMS: Thank you. Thank  
7 you very much for your testimony. Appreciate it.

8 LAURIE KERR: Your welcome.

9 CHAIRPERSON WILLIAMS: Okay. So I... I  
10 apologize we have a bunch of hearings here today so  
11 I'm going to have to cut back testimony time to  
12 2:00 and then hopefully any questions that we have  
13 we'll get to get through the rest of what you need  
14 to say. We have Stas Zakrzefski... Zakrzewski, Ken  
15 Levenson, Buck Moorhead. And after that we'll have  
16 Chris Benedict, David White, and Katrin Klin...  
17 Klingen... Klingenberg, sorry thank you. Can everyone  
18 please raise their right hand? Do you affirm to  
19 tell the truth, the whole truth, and nothing but  
20 the truth in your testimony before this committee  
21 and to respond honestly to council member  
22 questions? You can begin at the order of your  
23 preference. Thanks.

24 BUCK MOORHEAD: Hi. My name is Buck  
25 Morehead. I'm speaking on behalf of New York

1  
2 Passive House. New York Passive House is a not-for-  
3 profit with 180 professional members since 2010 as  
4 it affiliated with a Passive House Institute. I  
5 also speak for Damascus Citizens for Sustainability  
6 and NYH20. It is understood that about 80 percent  
7 of New York City's carbon emissions are related to  
8 its buildings. It is essential therefore to reduce  
9 building energy use to reach our 80 by 50 goal. As  
10 cited in one city built to last the... building  
11 energy... energy conservation strategies and  
12 protocols embedded in Passive House represent an  
13 essential tool to reduce overall building energy  
14 use. It is important to clearly understand that we  
15 must substantially reduce our overall energy  
16 requirements, particularly heating and cooling  
17 energy requirements through high performance  
18 building envelope design as developed through  
19 Passive House. Only once we have substantially  
20 reduced our energy requirements can we then use  
21 renewable energy options to provide for a much  
22 lower energy that the building then requires. This  
23 was clearly understood by the speaker and city  
24 council members in the original drafting of 701A  
25 that mandated New York City capital projects meet

1  
2 Passive House standards. The language of the  
3 version under consideration today includes a  
4 definition for a low energy building. We understand  
5 and strongly support that it is the intent and  
6 expectation of the city council that this  
7 definition will mandate and produce Passive House  
8 or near Passive House level projects. It is  
9 important to confirm that this will indeed be the  
10 outcome. New York Passive House strongly supports  
11 that the definition of low energy building  
12 establishes a Passive House level result. This  
13 definition does not need to be branded as Passive  
14 House institute. In fact, it is stronger if it is  
15 unbranded. What is critical is that a building's  
16 energy performance be predictable and measurable  
17 and that the quality of outcome can be assured  
18 through the process. We feel that this is  
19 challenging but readily achievable standard for New  
20 York City capital projects. This Passive House low  
21 level low energy building should be phased in over  
22 five years allowing New York City to choose those  
23 projects to begin with where the... where it is  
24 thought that this low energy building standard can  
25 be met. One potential scenario do 20 percent of New

1  
2 York City capital projects to this new Passive  
3 House level low energy standard the first year  
4 scale up each succeeding year to 100 percent by the  
5 fifth year. Let me finish by saying that Mayor de  
6 Blasio in one city built to last has made it clear  
7 that he wants New York City to be a global leader  
8 by its example. Most of us in this room I imagine  
9 want the same thing. To lead we must build Passive  
10 House level low energy buildings. We applaud the  
11 speaker, the city council, and the mayor's office  
12 for showing the way.

13 KEN LEVENSON: Thank you Chairman and  
14 council members. I want to reiterate my colleague's  
15 sentiments that we strongly support the intent of  
16 this bill in mandating near Passive House building  
17 efficiency and performance. Earlier versions of the  
18 bill provided... [cross-talk]

19 CHAIRPERSON WILLIAMS: Can you please  
20 just state your name for the record?

21 KEN LEVENSON: Oh I'm sorry. Ken  
22 Levenson, President of New York Passive House.  
23 Earlier versions of the bill provided for explicit  
24 branded Passive House certification. While we  
25 believe that Passive House certification offers the



1 mediocre and performance becomes unpredictable.  
2 Systems can't be optimized. Cost saving  
3 opportunities are unrealized. The results are much  
4 more unreliable. Passive House is one of the  
5 world's most powerful tools... is... is one of the most  
6 powerful tools at New York City's disposal and we  
7 should use it. We look forward to working with you.  
8 Thank you.  
9

10 STAS ZAKRZEWSKI: Hi, my name is Stas  
11 Zakrzewski. I'm an architect and a New York Passive  
12 House board member. Thank you to the speaker and  
13 many other city council members for pursuing this  
14 legislation. There are over 25 thousand Passive  
15 House buildings in Europe. If we take a look at  
16 Belgium, a country that in 2001 had the worst  
17 levels of thermal insulation of all of Europe, all  
18 of the European countries. In 2004 the region of  
19 Brussels instituted an exemplary building program  
20 and chose to target similar metrics to Passive  
21 House for old or new... new and renovated buildings.  
22 Every year the program encouraged and showcased  
23 projects that were the best in their class in  
24 regards to energy efficiency. The city provided  
25 small grants and knowledge centers so that advice



1 could be given to owners, architects, and  
2 contractors on how best to achieve Passive, or near  
3 Passive House levels. In 2010 all new public  
4 buildings had to be designed and built to this  
5 standard. As a result, between 2007 and 2012 5.1  
6 million square feet of sustainable construction had  
7 been built. And of that 3.2 million square feet met  
8 the Passive House standard. In that same period  
9 Brussels achieved 20 percent decrease in greenhouse  
10 gas emissions. And we're talking about the same  
11 building types of typology that we have here in New  
12 York City. The program was so successful that as of  
13 January 1<sup>st</sup>, 2015 Passive House standard is  
14 mandated for all new and substantial renovation for  
15 housing, schools, and offices in Brussels. It's  
16 exciting to witness this movement growing rapidly  
17 in the US. The Pennsylvania Housing Finance  
18 Authority recently added Passive House  
19 certification as an incentive to developers when  
20 submitting applications to receive low income  
21 housing tax credits. This year 30 percent of PHFA  
22 finance projects are expected to be built to this  
23 standard. So we're looking back in New York. We're  
24 on a great... we are in a great situation. Here. We  
25

1  
2 already have dozens of Passive House buildings  
3 built and many more in the process of getting  
4 built. We happen to have the US City with the most  
5 certified Passive House professionals. To meet one  
6 mayor's... one city... our mayor's one city built to  
7 last 80 by 50 goal let's specify a standard that is  
8 equal to the Passive House standard. And let's  
9 start with the easiest buildings. Finally, if the  
10 private sector is able to design the world's  
11 tallest Passive House, a 26 story dormitory  
12 building on Roosevelt Island then we should ask  
13 ourselves why can't we build smaller scale office  
14 buildings, libraries, and schools to this standard.  
15 The answer is we can and we should. Thank you.

16 CHAIRPERSON WILLIAMS: Thank you very  
17 much for your testimony, taking the time today. I  
18 don't think any of my colleagues signed up for any  
19 questions which means you answered them all in your  
20 excellent testimonies. So thank you very much. I  
21 appreciate your time. And thanks for the support.  
22 Next up we have Chris Benedict, David White, Katrin  
23 Klingenberg from Passive House. After that we have...  
24 we have just one more after Ms. Elizabeth Shorehan  
25 [phonetic] and Paimaan Lodhi from REBNY. So Mr.

1 Lodhi and Ms. Shorehan will be the next panel.  
2  
3 Right now we have Chris, David, and Katrin. If you  
4 can please all each raise your right hand. Do you  
5 affirm to tell the truth, the whole truth, and  
6 nothing but the truth in your testimony before this  
7 committee and to respond honestly to council member  
8 questions? You can begin at your convenience. And  
9 when one finishes the next one can just begin. Also  
10 we were joined by Council Member Rodriguez earlier  
11 and we're joined also by Council Member Ulrich.

12 KATRIN KLINGENBERG: My name is Katrin  
13 Klingenberg. Thank you for the opportunity to  
14 testify today. I'm the Executive Director of the  
15 Passive House Institute US, the leading Passive  
16 building research institute in alliance a national  
17 501C3 non-profit. ...trained 400 professionals in New  
18 York state since 2008 certified pre-certified 30  
19 projects, over 30 projects with many more in  
20 progress. And that includes the 101-unit project  
21 currently underway in the Rockaways. We thank you  
22 for the invitation to testify on the current draft  
23 of the proposal... proposed legislation. Our comments  
24 generally relate to topics in the legislation  
25 namely the removal of any reference to Passive

1 building standards and principles and the removal  
2 of provisions specifying minimum requirements for  
3 certifying organizations. Passive building  
4 standards are design guidelines for low energy,  
5 zero energy buildings. They assure that  
6 conservation efficiency of equipment of renewables  
7 are employed in that order to achieve the most cost  
8 effective and resource efficient low energy  
9 solutions possible. Such standards are generally  
10 characterized by two types of energy use intensity  
11 NDCs that have to be met first during the design  
12 process before renewables are employed to zero out  
13 of the remaining energy needs. Currently the market  
14 uses either site or source EUIs to describe levels  
15 of efficiency in buildings neither by itself as  
16 sufficient to guide and optimize the level of  
17 conservation measures first. Passive building  
18 standards use the more granular approach of two  
19 different types of EUIs, first to guide the  
20 designer to dial in the envelope and Passive design  
21 until renewables become more cost effective to get  
22 to zero energy. Then the source energy EUI that has  
23 to be met as well. Without this two-step process  
24 below or zero energy building solution it's likely  
25

1  
2 to have wasted investment and resources in too much  
3 insulation or have less cost effective savings to  
4 conservation and Passive design on the table. We  
5 recognize that the legislation does not attempt to  
6 set a specific Passive building standard. We  
7 therefore suggest that the legislation could  
8 provide design guidelines for cost optimized energy  
9 efficiency levels of the envelope in addition to  
10 the source energy use.. intensity by requiring  
11 buildings to meet certain specific space  
12 conditioning EUIs for heating and cooling demands.  
13 And we are very happy to help with that.. to  
14 determine these.. specific standards for the city of  
15 New York if that is desired. Thank you.

16 CHRIS BENEDICT: This is an important  
17 day. And I want to thank the city council for  
18 bringing us to where we are because those of us..  
19 [cross-talk]

20 UNIDENTIFIED FEMALE: I'm sorry can you  
21 just give your name for the record.

22 CHRIS BENEDICT: Oh I'm sorry. Chris  
23 Benedict, I'm an architect in New York. Those of us  
24 in the Passive House world thought that this would  
25 be happening a few years from now so we are so

1  
2 excited and thank you for bringing us here for this  
3 conversation. I have some comments about the retro  
4 commissioning but I... I'll keep them fairly short.  
5 The retro commissioning is low hanging fruit in a  
6 building and doesn't address actually severe issues  
7 with designs of mechanical systems throughout the  
8 building. And so the job is way bigger than retro  
9 commissioning. And I'd be happy to talk with you  
10 about that. But just as an example you have a steam  
11 system that is retro commissioned and working. It's  
12 still a steam system. It still has its problems. So  
13 there's... it's a much more complex issue. But really  
14 what I want to talk about here is the Passive House  
15 bill which sadly to a lot of us in the Passive  
16 House community had Passive House removed from it.  
17 I have been a... a practitioner and Passive House  
18 pioneer here in the city of New York for a number  
19 of years. And I have two really great things to  
20 report. The first one is that we can deliver  
21 Passive Houses for the same price as typical  
22 construction. So the... the problem that has been  
23 stated about it being additional cost is one that  
24 can be solved by well-trained designers. The second  
25 is in affordable housing what my clients have

1  
2 discovered is that the money that they can save on  
3 their energy bills can help them pay their debt  
4 service which enables them to make more affordable  
5 housing. And this is really good news because of  
6 that. So again we are sad that Passive House was  
7 removed from this bill. We would love to see it put  
8 back in. But if there is a criteria set up in the  
9 bill I think we have to be very careful about what  
10 that criteria is if it's not Passive House. My  
11 suggestion would be to look to something that we've  
12 been calling as a working title the Perfect Energy  
13 Code. And the Perfect Energy Code would be a code  
14 that would talk... that would look at the size of a  
15 mechanical system in a building, the size of the  
16 heating and the cooling and divide it by the square  
17 footage of the building. And we can bring those  
18 numbers to close or to the Passive House standard  
19 as it would be played out in New York so that we  
20 would get that level of efficiency into the  
21 building and of course we would love to have it be  
22 Passive House but this would be another way to  
23 bring it in. So thank you again for bringing us  
24 here. And we look forward to working with you in  
25 any way we possibly can.

1  
2           DAVID WHITE: My name is David White. I  
3 do the engineering work energy efficient homes in  
4 New York City. Thank you Chair Williams. Thank you  
5 Chair Richards for inviting these comments. My  
6 comments are also on 107-A. And it is regarding  
7 choosing a metric or describing the metric in a way  
8 that ensures compliance. I... I agree with Chris  
9 Benedict about the importance of setting a metric  
10 in a way that ensures compliance. And by that I  
11 mean with our current energy code there are two  
12 problems. One it is so complex that it's very  
13 common in my experience and I believe I speak for  
14 all building professionals here that non-compliant  
15 buildings get built. Two, even compliant buildings  
16 have severe problems with energy performance from  
17 thermal bridging, to enclosure leakage, to duct  
18 leakage, to all manner of mechanical system design  
19 and construction errors that cannot and certainly  
20 are not codified in our code. The fact of the  
21 matter is the difficulty of making an energy  
22 efficient building from design form to fenestration  
23 to detailing to being on site to catch construction  
24 errors, and learning how to work with construction  
25 professionals is too complex to enforce or even



1  
2 codify. What we need the code to do is set a  
3 number... set a requirement that is so easy to  
4 enforce that nobody can get away from it and that  
5 is so binding that the design team is then required  
6 to use their professional expertise to make that  
7 building work. If the code does nothing other than  
8 set a limit on the size of heating and cooling  
9 equipment the design team will then either have to  
10 make an energy efficient building or they'll make  
11 an uncomfortable building and they will have to  
12 deal with those consequences. To me this is the  
13 best way for us to make great buildings because it  
14 harnesses the talents of a design professionals.  
15 The code makes sure that our buildings are energy  
16 efficient and our design professionals figure out  
17 how. Thank you.

18 COUNCIL MEMBER RICHARDS: Thank you.

19 CHAIRPERSON WILLIAMS: Thank you very  
20 much for your testimony. I don't think myself or  
21 colleagues have any questions at this time. We  
22 really appreciate you taking the time out to come  
23 down. Thank you. And we have our last panel;  
24 Paimaan Lodhi from REBNY... Strohan from Enterprise  
25 Rezwan Sharif from Compast [phonetic] Inc. Can you

1  
2 please all raise your right hand? Do you affirm to  
3 tell the truth, the whole truth, and nothing but  
4 the truth in your testimony before this committee  
5 and to respond honestly to Council Member  
6 questions? And you can begin in the order of your  
7 preference. We were also joined by Council Member  
8 Espinal.

9 ELIZABETH ZELDIN: Good morning. Happy  
10 Climate Week. My name is Elizabeth Zeldin. I'm the  
11 Director of Public Policy for the New York Office  
12 of Enterprise Community Partners. We are a large  
13 non-profit affordable housing organization. We've  
14 created or preserved more than 50 thousand safe,  
15 quality, affordable homes in New York City over the  
16 last 30 years. So I really appreciate the council's  
17 commitment to climate change action and also your  
18 consideration of affordable housing in these bills  
19 today and also going forward. But I still want to  
20 proceed with my comments today because I want to  
21 make clear what is already happening in the  
22 affordable housing industry in relation to green.  
23 We're actually doing a lot. New York City is really  
24 changing... really leading the way in terms of the  
25 whole country. So Enterprise Green Community's

1  
2 criteria was created more than ten years ago  
3 because we wanted to prove that it was possible to  
4 bring the benefits of green to low income families  
5 and we've been doing so ever since that time. We  
6 work closely with HPD to implement their green  
7 policy for affordable housing which incorporates  
8 the Enterprise green community's criteria. This is  
9 the nationally recognized standard for green and  
10 healthy affordable housing. Right now all new  
11 construction and substantial rehabilitation of  
12 affordable housing projects receiving HPD funding  
13 require projects to comply with a virgin of...  
14 version of the green community's criteria  
15 specifically made for the New York City affordable  
16 housing market called the HPD overlay. So again all  
17 new construction and substantial rehabilitation  
18 projects do that. We think it's important now and  
19 going forward that the green community's criteria  
20 be the standard for affordable housing as opposed  
21 to Lead. We estimated that the cost of compliance  
22 for Lead versus Enterprise Green Community's  
23 criteria is 15,000 dollars more just in compliance  
24 alone. So that's public subsidy dollars that take  
25 away from other affordable housing goals such as

1  
2 more units or deeper levels of affordability.  
3 Additionally, the green community's criteria which  
4 I have copies of today you can have if you'd like  
5 are specifically made too for preservation whereas  
6 Lead is for new construction this is appropriate  
7 for preservation. I see that my time's up but I'll  
8 take questions afterwards. Okay thanks.

9           PAIMAAN LODHI: Good morning Chairman  
10 Williams and members of the Committee on Housing  
11 and Buildings. My name is Paimaan Lodhi Vice  
12 President of Urban Planning for the Real Estate  
13 Board of New York. Thank you for the opportunity  
14 today to comment on Intro 633. REBNY is deeply  
15 committed to a more sustainable city. Our members  
16 sit at the forefront of the sustainability movement  
17 building and managing many of the most energy  
18 efficient buildings in the world. And we thank the  
19 council for their steadfast advocacy on this topic.  
20 The city and the council have many worthy goals to  
21 improve our building stock. In addition to  
22 sustainability we're all working to improve  
23 affordability, public safety, accessibility, and  
24 resiliency. Therefore, it's important that any  
25 proposal account for associated cost as it will



1 rules. Further the city's 80 by 50 technical  
2 working group which features city representatives,  
3 builders, environmentalists, and reporting  
4 professionals was assembled to investigate the  
5 universe of possible energy efficiency solutions.  
6 Everyone on the... on the working group is in  
7 agreement that the current submission process is  
8 inadequate and should be revamped. Through  
9 conversations with our membership and other  
10 sustainability professionals it became clear that  
11 the city should prioritize quality over frequency.  
12 We believe the city council could be very helpful  
13 in advancing this effort. For instance, the council  
14 could require and help fund the DOB to license the  
15 professionals, conduct audits, and retro  
16 commissioning and manage continuing education as  
17 necessary. REBNY is actively involved in the city's  
18 80 by 50 working group aimed to drastically cut  
19 greenhouse gas emissions and we are anxious to  
20 talk... [cross-talk]

22 CHAIRPERSON WILLIAMS: Going to have to  
23 ask you to wrap up.

24 PAIMAAN LODHI: ...about numerous  
25 sustainability measures. For the aforementioned

1 reasons we do not support the proposal to reduce  
2 the reporting period from ten years to five years.  
3 We believe that effective legislation can be  
4 crafted to achieve the council's goals while  
5 addressing the concerns listed above. Thank you.

6  
7 REZWAN SHARIF: Good morning. Thank you  
8 council Members and the Chairman for this  
9 opportunity to testify. My name is Rezwan Sharif. I  
10 am an entrepreneur as well as a Real Estate Broker.  
11 I'm... I'm here to testify in favor of 701-A. What I  
12 like to speak to briefly is about the consumer  
13 sentiment... private sector view on Passive Houses.  
14 Mainly because as an investor and developer we're  
15 building a six-unit Passive House certified  
16 building in... in Harlem. And I'd like to second what  
17 Chris Benedict earlier stated that you know we are  
18 not seeing that... that to build the Passive House  
19 standard it's costing us more. In fact, we're able  
20 to build this new building to the cost that we  
21 would have... whether it was certified or not.  
22 There's a lot of fat that we are trying to trim in  
23 terms of knowledge base but that's what Chris  
24 mentioned earlier on that... that with well design we  
25 can achieve that. So I'm just here reporting that

1  
2 from a private sector if you ask do they care from  
3 the consumer side I want to address that as well.  
4 From the private sector there is interest. And from  
5 the consumer side to be honest if you ask if people  
6 care... as a Broker when I'm out there meeting owners  
7 on the street and do they care about a Passive  
8 House to be honest you can't care about something  
9 you don't know much about. And I applaud NYPH's  
10 efforts in promoting that. But those who know about  
11 it really do care. I can testify that a few of my  
12 clients who bought and own and live in Passive  
13 Houses they... the... in addition to the energy savings  
14 the part that I want to emphasize is there's strong  
15 human and health benefit of a Passive House. Many  
16 of my clients have reported their asthmas have come  
17 down. They have a better air quality in their house  
18 and their child's are happier. So one of the things  
19 I want to leave us with is that we have this  
20 opportunity to include these... the requirements that  
21 would not only enable our city to have a smaller  
22 carbon footprint, have a more energy efficient  
23 buildings but we're going to have a healthier city  
24 and healthier children. And I... I would want to  
25 leave that with that... with you because that is very



1  
2 important part of an ancillary benefit we... we're  
3 getting from having Passive House standards. So  
4 that's my only two comments. I'm happy to answer  
5 any questions about what you think the consumers  
6 like or would like or are interested in. And... and  
7 very excited about your initiative.

8 CHAIRPERSON WILLIAMS: Thank you so much  
9 all for your testimony. Unfortunately, I have to go  
10 next door for another vote. Council Member Richards  
11 is going to take over for the small remainder. But  
12 I did want to say thank you Mr. Sharif. It sounded  
13 like you were supportive of the bills. Ms. Zeldin  
14 we're aware of some possible unintended affects  
15 that we're going to work on as well just... just so  
16 you're aware of... And Mr. Lodhi thank you for your  
17 testimony. Definitely we'll try to take it into  
18 consideration. It is Council Member Richard's bill  
19 so I'm sure he has some additional questions about  
20 what the cost and balancing out the savings would  
21 be. So thank you very much and I now... I'll be right  
22 back.

23 COUNCIL MEMBER RICHARDS: Who's  
24 representing REBNY? Okay great, you're great. Can  
25 you just go through how many building owners are

1  
2 you aware of that filed for hardship because that  
3 is an option in the current legislation...

4 PAIMAAN LODHI: Yeah I don't have that  
5 number off hand but I can get back to you with  
6 that.

7 COUNCIL MEMBER RICHARDS: Okay that  
8 would be very helpful. Because when we say that  
9 obviously you know it's... it's... it's burdensome. And  
10 we... we obviously want to be sensitive and... and...  
11 and... and be... and... and work in tandem with people to  
12 achieve obviously more energy efficient buildings.  
13 But you know we also are not looking to make you  
14 know peoples' lives hard. So can you just go  
15 through... I... I noticed in your testimony you spoke  
16 of the city should prioritize quality of reporting  
17 over frequency. Can you go through some of the  
18 things building owners are currently enduring?

19 PAIMAAN LODHI: I think it's... it's more  
20 just about making the... the DOB process more user  
21 friendly and less cumbersome. And include... and... and  
22 improving the quality of that submission process.  
23 You know we... we serve on the city's 80 by 50  
24 technical working group and everyone is in  
25 consensus that that needs to be revamped. And one

1 way that that could be improved is if DOB was  
2 either required or had the funds to license audit...  
3 auditing professionals to do so including  
4 continuing education so that DOB could get better  
5 applications in, so more complete, so looking for  
6 what they're actually determining.  
7

8 COUNCIL MEMBER RICHARDS: Actually  
9 licensing individuals doing the audit... auditing  
10 you're saying so that the quality is better if I'm  
11 hearing you correct.

12 PAIMAAN LODHI: Right so... so getting the  
13 auditing professionals then to help building owners  
14 understand exactly what is being required and what  
15 needs to be submitted to the DOB.

16 COUNCIL MEMBER RICHARDS: Mm-hmm. And  
17 can you just go through when you said more user  
18 friendly? Can you give us an example of...

19 PAIMAAN LODHI: You know... say this  
20 nicely...

21 COUNCIL MEMBER RICHARDS: So do you... you  
22 have to submit these things online is that... or... or  
23 in person?

24 PAIMAAN LODHI: Yeah I think a website...

25 COUNCIL MEMBER RICHARDS: Okay.

1  
2           PAIMAAN LODHI: ...it was more user... user  
3 friendly would be...

4           COUNCIL MEMBER RICHARDS: Okay.

5           PAIMAAN LODHI: ...would be appropriate  
6 instead of a spreadsheet that's I guess clunky and  
7 hard to... hard to manage.

8           COUNCIL MEMBER RICHARDS: Alrighty.  
9 Great. I think that's my only question. I thank you  
10 obviously for these recommendations...

11          PAIMAAN LODHI: Thank you.

12          COUNCIL MEMBER RICHARDS: I think that  
13 they definitely are helpful and... and we should... we  
14 should certainly look at these things. Alrighty if  
15 that's it I'll... Thank you for testifying. We'll  
16 move on to the next panel. Oh this is it? Oh. I had  
17 a easy job. Alrighty. Well thank you all for coming  
18 out to this hearing and I... and I thank our Chair  
19 Council Member Williams for certainly holding this  
20 on this occasion as the Pope is here and speaking  
21 about climate change and we're in city hall  
22 speaking about it. So thank you all for coming out.

23                   [gavel]

24

25

C E R T I F I C A T E

World Wide Dictation certifies that the foregoing transcript is a true and accurate record of the proceedings. We further certify that there is no relation to any of the parties to this action by blood or marriage, and that there is interest in the outcome of this matter.



Date October 2, 2015