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COMMITTEE ON ENVIRONMENTAL PROTECTIONS

CITY COUNCIL  
CITY OF NEW YORK

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TRANSCRIPT OF THE MINUTES

Of the

COMMITTEE ON ENVIRONMENTAL PROTECTION

June 24, 2019  
Start: 1:06 p.m.  
Recess: 5:13 p.m.

HELD AT: Committee Room - City Hall

B E F O R E: COSTA G. CONSTANTINIDES  
Chairperson

COUNCIL MEMBERS:  
RAFAEL L. ESPINAL, JR.  
STEPHEN T. LEVIN  
CARLOS MENCHACA  
DONOVAN J. RICHARDS  
ERIC A. ULRICH  
KALMAN YEGER

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COMMITTEE ON ENVIRONMENTAL PROTECTION

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

Susanne DesRoches  
Deputy Director for Infrastructure and Energy at  
The Mayor's Office of Resiliency, MOR and the  
Mayor's Office of Sustainability, MOS

Christopher Diamond  
Director of the Sustainable Design Unit at the  
Department of Design and Construction, DDC

Anthony Fiore  
Deputy Commissioner and Chief Energy Management  
Officer for the Department of Citywide  
Administrative Services

Kyle Kimball  
Vice President of Governmental Relations at Con  
Edison

Chris Cavanagh  
Principal Program Manager in the Customer  
Innovation Group at National Grid

Bob Wyman  
Beneficial Electrification Advocate

John Breitbart  
Representing Self, Resident of New York City

Gaylord Olson  
Engineering Consultant, Member of the Industrial  
Advisory Committee

Benjamin Arana  
Business Representative for Local Union Number  
Three, International Brotherhood of Electrical  
Workers

Jonathan Minard  
Filmmaker, Resident of Greenpoint, Brooklyn,  
Extinction Rebellion

Jasmine Graham  
Resident of Brooklyn, Employee of Sustainable  
Westchester

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

3 Annel Hernandez  
4 Representing the New York City Environmental  
Justice Alliance, EJA

5 Richard Berkley  
6 Executive Director of the Public Utility Law  
Project of New York

7 Charlotte Binns  
8 New York City Resident, Supporter of Reso 0864  
0140, Board of North Brooklyn Neighbors

9 Michael Gersho  
10 Fellow at Green Building Worldwide

11 Jasmine Graham  
12 Outreach and Compliance Coordinator for  
Westchester Power

13 Margaret Klein Soloman  
14 Clinical Psychologist, Director of the Climate  
Mobilization

15 Amy Larkin  
16 Vice Chair of the World Economic Forum's Global  
Agenda Council on Climate Change

17 Mike Gordon  
18 Resident of New York City, Former Founding 1<sup>st</sup>  
Chair of Sustainable Westchester, Chief Executive  
Officer of Joule Assets

19 Xiye Bastida Patrick  
20 Student, People's Climate Movement, Fridays for  
Future

21 Christina See  
22 Representing Extinction Rebellion

23 Susan Shapiro  
24 Environmental Attorney, Indian Point Safe Energy  
Coalition, IPSEC

25 Rio Hito  
20 Year Old Resident of New York City

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

3 Olive Raymond  
4 Resident of North Brooklyn

5 Susan Rubin  
6 Extinction Rebellion

7 Ken Schles  
8 Father, Photographer, Writer, Resident of New  
9 York City

10 Wendy Brawer  
11 Director of Green Map System, Sustainability and  
12 Climate Change Design Professional

13 Ted Bogin  
14 Web Developer, Volunteer Wildlife Rehabber at New  
15 York City's Wild Bird Fund, Climate Activist with  
16 Sunrise Movement NYC

17 Guy McPherson  
18 Professor Emeritus of Conservation Biology at the  
19 University of Arizona

20 Elliana Pfeffer  
21 Resident of New York City, 18 year old

22 Rory Varrato  
23 Founding Member of the New York City Chapter of  
24 Extinction Rebellion

25 Richard McLachlan  
67 Year Old Resident of New York City, Extinction  
Rebellion

Becca Trabin  
Teacher in New York City

Gregory Schwedock  
Representing Zayne Cowie of Fridays for Future

Jilly Edgar  
20 Year Old Student Activist with the Sunrise  
Movement

Greg Waltman  
G1 Quantum Clean Energy Company

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

Robert Kremer  
Energy Services Senior Director at Smart Power  
Myanmar

Philip Chen  
Research Fellow from Green Building Worldwide

[gavel]

CHAIRPERSON CONSTANTINIDES: Good

afternoon, I am Costa Constantinides, Chair of the Environmental Protection Committee and today we're holding an oversight hearing on renewable energy and we're hearing eight renewable energy bills and a resolution declaring a climate emergency in the city of New York and calling on immediately, immediate emergency mobilization to restore a safe climate. The current energy system prioritizes short term economic revenues over all else even human health and the health of our planet. It is really time for us to move forward from both an economic and environmental perspective through green technology to alternative energy use. Renewables have less externalities associated with them, I mean the prices of fossil fuels are artificially low because they displace the cost associated with their production and consumption on to the rest of society. Renewable energy sources are clean, inexhaustible and increasingly competitive from an economic standpoint. They differ from fossil fuels in their diversity, abundance and the potential use anywhere on the planet but above all in that they produce neither greenhouse gases which cause climate

1 change nor polluting emissions. Their costs are also  
2 falling and are at a sustainable rate whereas the  
3 general cost trend for fossil fuels is in the  
4 opposite direction in spite of their present... their  
5 challenges. Today we will hear a series of bills and  
6 resolutions which focus our attention on the  
7 solutions to the... to climate change or we can still  
8 implement solutions. Battery storage is one of the  
9 key solutions for the misalignment between the supply  
10 and demand curves of solar energy. Geothermal heat  
11 pumps can provide heating and cooling in buildings in  
12 place of fossil fuels. More than 600,000 ground  
13 source heat pumps supply climate control in US homes  
14 and other buildings with new installations occurring  
15 at a rate at about 60,000 per year. While this sounds  
16 significant, it is still only a small fraction of US  
17 heating and cooling market and several barriers to  
18 greater penetration into the market remain. For  
19 example, despite their long-term savings, geothermal  
20 heat pumps have higher up-front costs. In order to  
21 achieve economies of scale renewable energy uses must  
22 be expanded. The legislation being heard today should  
23 advance that process in New York City. Intro 49 would  
24 require the Department of Citywide Administrative  
25

1 Services, DCAS to conduct a feasibility study on the  
2 installation of utility scale battery storage systems  
3 on city buildings, usually buildings that are more  
4 than 10,000 gross square feet and they're owned by  
5 the city or for which the city directly pays for all  
6 of the annual energy bills and to coordinate the  
7 installation of such systems on city buildings where  
8 deemed feasible. Intro 51 will require the Mayor's  
9 Office of Long-Term Planning and Sustainability in  
10 conjunction with DEP to establish and oversee a pilot  
11 program for district scale geothermal system. The  
12 project will be developed by a third-party developer  
13 selected through a request for proposal's process.  
14 The bill would establish criteria for choosing a site  
15 for the pilot district, would require a geothermal  
16 system to be constructed and maintained and require  
17 that geothermal energy be provided to participating,  
18 participating buildings through power purchase  
19 agreements with building owners. Intro 140 would  
20 require the DEP to conduct a feasibility study on the  
21 implementation of a community choice aggregation  
22 program for energy purchase, purchasing by March of  
23 2019. I think we're going to have to amend that date.  
24 If the DEP determines that the plan would be feasible  
25

1 the Department would be required to submit an  
2 implementation plan to the Mayor and the Speaker.  
3 Intro 269 would require that DCAS develop a  
4 residential renewable energy pilot which utilizes a  
5 solar thermal district heating system along with  
6 solar PV systems to supply all the energy for  
7 heating, hot water production, cooling and  
8 electricity for the development. The, the homes in  
9 the project are required to be affordable for the  
10 duration of the program. Intro 426 would require a  
11 feasibility study of the cost of installing  
12 geothermal... I mean solar, solar thermal energy  
13 systems in all buildings or structures owned by the  
14 city of New York at the agencies or departments and  
15 where they are cost effective mandate the  
16 installation of city owned solar, hot water systems  
17 or thermal energy generation systems on those city  
18 owned buildings where the feasibility study found  
19 such systems to cost effective. Intro 1076 would  
20 require the, the... an office or agency designated by  
21 the Mayor to take a study to ascertain areas most  
22 suitable for the facility... to facilitate construction  
23 of a geothermal mini grid or district heating and  
24 cooling applications in the city where... areas most  
25

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2 suitable for the installation of geothermal, mini  
3 grid or heating... district heating and cooling  
4 applications have been identified. The bill requires  
5 a creation of a plan for facilitating operation of a  
6 district scale geothermal systems. Intro 1375 would  
7 require that the database include a single place for  
8 geological logs for the city's geothermal boards and  
9 locations of geothermal energy systems installations.  
10 The database would also include locations of any and  
11 all water wells, including unused privately-owned  
12 wells and to be updated annually. Intro 864... oh,  
13 sorry, this is Resolution 864 would declare a climate  
14 emergency in the city of New York and calls for an  
15 immediate emergency mobilization to restore a safe  
16 climate. I want to thank our staff here today, our  
17 Counsel to the Committee Samara Swanston; our two  
18 great Policy Analysts Nadia Johnson and Ricky  
19 Chawla; we have here today Council Member Ulrich from  
20 Queens and it looks like we have another visitor,  
21 Lilly good to see you, welcome. She's having too much  
22 fun and now we have a guest to our Committee today,  
23 Council Member Ben Kallos who is the lead sponsor of  
24 Resolution 864 who will giving opening remarks. Thank  
25 you.

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2 COUNCIL MEMBER KALLOS: Good afternoon,  
3 I'm Council Member... [cross-talk]

4 [applause]

5 COUNCIL MEMBER KALLOS: It's okay, thank  
6 you, no clapping. We, we wave our hands like so and,  
7 and thank you and I want to start off with a huge  
8 thank you to our Environmental Protection Committee  
9 Chair Costa Constantinides. As many of you know and  
10 some of you may not know, I'm Council Member Ben  
11 Kallos, you can tweet me at Ben Kallos, b e n k a l l  
12 o s, you can tweet Costa at Costa for NY, we can use  
13 the hashtags climate change and hashtag climate  
14 emergency and before I get any further, this room  
15 holds 70, we only had about 15 people RSVP to testify  
16 meanwhile I think we had 90 people show up to our  
17 noon rally so there's a handful of folks outside but  
18 I want to just show the rest of the world how  
19 important this is and how there is standing room only  
20 so I'm just going to take a photo of just everyone  
21 who's come out today if that's okay, perfect, done.  
22 That's going to go out with those tweets so some of  
23 you may have already heard me say some of this but it  
24 does bear repeating so, Council Member Ben Kallos and  
25 I believe in climate change, I believe that climate

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2 change was caused by humans, I believe that we have a  
3 climate emergency, I believe that if we as humans  
4 must... that we as humans must activate across all  
5 sectors on every level that we haven't seen since  
6 World War II in order to prevent a sixth mass  
7 extinction. Today we're holding a hearing on  
8 Resolution 864 to join over 657 countries, cities,  
9 towns and villages worldwide that have already  
10 declared a climate emergency, the largest city to  
11 point that has passed this resolution is London, we  
12 are bigger than London so I say we be the biggest  
13 country... big, biggest city in the world to do so.  
14 Climate change is real, we see the effects of climate  
15 change everywhere. In India close to 40 people have  
16 died due to a 30-day heat wave in which temperatures  
17 have reached 118 degrees Fahrenheit. Here in the  
18 United States the Midwest has been experiencing major  
19 flooding since mid-March by some estimates causing  
20 over two billion dollars in property damage. Even  
21 closer to us here in New York we've been seeing big  
22 changes in our climate, New York is experiencing  
23 warmer winters, higher rainfall and more severe  
24 storms. We all recall damage from once in a century  
25 superstorm Sandy, these types of century storms will

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2 no longer come once in a century. In that void it's  
3 up to local governments to take up the mantle of  
4 action on climate change and, and yet still there are  
5 climate change deniers including the person in the  
6 White House who calls climate change a hoax and moved  
7 to withdraw the country from the Paris climate  
8 accord. In the face of climate deniers resolutions  
9 such as this one and others throughout our planet  
10 changed the narrative forcing deniers town by town,  
11 city by city and nation by nation to admit the... to  
12 the reality and finally do what it... must be done to  
13 save our planet. In that void it's up to local  
14 governments to take up the mantle of action on  
15 climate change. Costa has been fighting climate  
16 change for as long as I've known him, he served in  
17 the City Council for more than a decade, first staff  
18 and former environmental chair James DiNardo and now  
19 in his own right as the Chair since last term.  
20 Earlier this year I was proud to be a co-sponsor of  
21 the climate mobilization act authored by and  
22 championed by Council Member Costa Constantinides.  
23 The climate mobilization act requires that buildings  
24 cut emissions by 40 percent by 2030 and 80 percent by  
25 2050, establishes a sustainable energy loan program

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2 to help transition to renew, renewable energy  
3 technologies, replaces gas fired power plants with  
4 battery storage systems and supports bringing large  
5 wind turbines to our city and no Mr. Trump, wind  
6 turbines do not cause cancer, you can ask Don Kihota.

7 Thank you to Environmental Protection Chair Costa  
8 Constantinides for being the first sponsor on this

9 legislation and to scheduling a hearing within a  
10 month of introduction. I want to thank all of my

11 colleagues in the progressive caucus of which I am

12 Co-Chair, Brad Lander, Antonio Reynoso, Steve Levin,

13 Keith Powers, Margaret Chin, those are sponsors as

14 well as... in addition to colleagues who are not in the

15 progressive caucus but are champions in the Council,

16 Rafael Espinal and Karen Koslowitz. Last week New

17 York State legislature joined the fight and improved

18 a plan to virtually eliminate carbon emissions by

19 2050. Now it is time to for New York City, the

20 greatest city in the world to declare a climate

21 emergency. I'd like to thank many advocate

22 organizations who have worked to make this idea a

23 reality. Christina See of Climate of Extinction

24 Rebellion who I saw at the women's march in with whom

25 we've been working ever since and to the many

1                    COMMITTEE ON ENVIRONMENTAL PROTECTION  
2 organizations who are here today, 350 Brooklyn,  
3 Extinction Rebellion, Indivisible Nation, Brooklyn  
4 One, Queens Indivisible Rise and Resist, Sunrise NYC,  
5 Sunrise New York, Fridays For Future and many others  
6 that I may have omitted. I also want to note that the  
7 room's capacity is 70, there's at least 90 people  
8 just to testify on this Resolution. If you're  
9 testifying on the earlier legislation I'm going to  
10 ask if after you testify if you don't mind giving up  
11 your seat for folks who are waiting patiently  
12 outside, this is all recorded so you'll be able to  
13 see yourselves on TV later tonight and if you know  
14 folks who are interested but couldn't make it today  
15 if they go to Council dot NYC dot gov they can watch  
16 the livestream from home and on their phones. Thank  
17 you again to our Chair for making this happen.

18                    CHAIRPERSON CONSTANTINIDES: Alright,  
19 next up we have Council Member Donovan Richards who  
20 will have his opening, I want to recognize that we  
21 also have Council Member Yeger from Brooklyn here and  
22 in a minute we have... we'll hear from Council Member  
23 Levin who has... lead sponsor on another one of the  
24 bills. Thank you.

25

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2 COUNCIL MEMBER RICHARDS: Thank you Ben  
3 Kallos for that commercial. Thank you Mr. Chair for  
4 holding this important hearing, it's time to  
5 seriously invest in renewable energy systems and  
6 geothermal is a major, untapped resource that New  
7 York City has yet to fully embrace which is why I'm  
8 sponsoring Intro 1076 and 1375 to study and identify  
9 areas suitable for communities to take back control  
10 of their energy systems and most importantly their  
11 energy bills. Our communities already work in  
12 collaborative environments through community boards  
13 and civic associations teaming up to power their  
14 homes with renewable clean energy is the next  
15 frontier for homeowners. I also want to mention that  
16 we did a project in the Rockaways which is  
17 geothermal, one of the largest systems I think in  
18 affordable housing in the city. Intro 269 would  
19 require that the city develops a residential  
20 renewable energy pilot for land they acquire or  
21 dispose of for the purpose of using solar thermal  
22 district heating systems and solar systems to supply  
23 all of the energy for an affordable housing project.  
24 We are pushing building owners and developers to be a  
25 part of the climate solution more and more every day

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2 and incentivizing fully self-sustaining housing  
3 through requests for proposals should be the next  
4 step in this process. I'll end in saying that Council  
5 Member Ulrich and I both represent the Rockaways so  
6 we know firsthand the effects of climate change and  
7 we need to think of bold solutions that could really  
8 move the needle to ensure that communities like the  
9 Rockaways will be here in 2050 so we hope that you  
10 embrace our legislation today and look towards  
11 continuing to build out bold solutions for New York  
12 City. Thank you, Mr. Chair.

13 CHAIRPERSON CONSTANTINIDES: Thank you  
14 Council Member Richards, now Council Member Levin for  
15 his opening statement.

16 COUNCIL MEMBER LEVIN: Thank you very  
17 much Mr. Chair, I want to thank my colleagues who are  
18 here Council Members Ulrich, plural, thank you, good  
19 to see you all and Council Member Richards and Chair  
20 Constantinides. We are excited to, to have this  
21 hearing today on, on the legislation I'm proposing.  
22 New York City faces tremendous challenges in the  
23 coming years, climate change causes an imminent  
24 threat to our most vulnerable communities and the  
25 world at large. If we want to leave something behind

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2 for future generations to Council Member Ulrich's  
3 children and my children, Chair Constantinides'  
4 children, Council Member Richard's children,  
5 everybody's children here, one child, the status quo  
6 is simply unsustainable. As we know we need to act,  
7 New York City has already taken a historic step  
8 forward in enacting the climate, climate mobilization  
9 act spearheaded by my colleague, Chair... Council  
10 Member Constantinides. I am proud that New York City  
11 is committed to becoming a leader in sustainability  
12 especially in the face of the federal government's  
13 rejection of manmade climate change. Now is the time  
14 that we must use every tool at our disposal.

15 Community choice aggregation is one such tool, we  
16 have an opportunity at the local level to advance  
17 participation in the renewable energy future. My bill  
18 heard today, Intro 140 calls on New York City to  
19 study CCA and upon assessing the feasibility put  
20 forward a proposal for a, a pilot program in New York  
21 City. It is important that we study this because we  
22 need to do this right. I look forward to working with  
23 local community groups, agencies, experts, and  
24 elected officials on shaping the vision for what CCA  
25 can and should look like. There are three critical

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2 goals that we have... that have become apparent. First,  
3 we want to make sure that we emphasize the quote,  
4 community in community choice aggregation. Outreach  
5 with constituents in community groups is vital at all  
6 steps of the process so that we are building trust  
7 and effective enactment of the program. Secondly, we  
8 must be ambitious. We should prioritize local energy  
9 generation and distribution projects that  
10 meaningfully increase our local capacity and help us  
11 create a more resilient New York. lastly, we must use  
12 this as an opportunity to revitalize communities that  
13 have too often been left behind. We need to ensure  
14 future projects result in good jobs for local  
15 residents and put us on a track to a sustainable  
16 future. CCA offers innovative opportunities for a  
17 renewable future and represents a major step forward  
18 in securing our future. In New York City we have the  
19 ability to do this thoughtfully but... and must build  
20 any program on a foundation of consumer protection  
21 and equity. While we do not yet know the exact former  
22 shape that CCA could take in our city, I hope that  
23 today's hearing can start to surface these questions  
24 and considerations. I look forward to hearing from  
25 the administration and community members on best

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2 practices and ways to continue learning and  
3 collaborating in this process. And I want to thank my  
4 staff for working on this legislation, Elizabeth  
5 Adams, my Legislative Director and Edward Paulino who  
6 no longer works on my staff but had worked on this  
7 issue for a number of months so thanks to Ed as well.  
8 And I'll turn it back over to the Chair, thank you.

9 CHAIRPERSON CONSTANTINIDES: Thank you  
10 Council Member Levin. At this time, we have the  
11 representatives, the administration here ready to  
12 testify so I'm going to have Samara swear you in.

13 COMMITTEE CLERK: Could you please raise  
14 your right hands? Do you swear or affirm to tell the  
15 truth, the whole truth and nothing but the truth  
16 today?

17 CHRISTOPHER DIAMOND: Yes.

18 SUSANNE DESROCHES: Yes.

19 CHAIRPERSON CONSTANTINIDES: Alright.  
20 Great to see you guys.

21 SUSANNE DESROCHES: That's great, thank  
22 you.

23 CHAIRPERSON CONSTANTINIDES: Let's,  
24 let's, let's do it.

25

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2 SUSANNE DESROCHES: Good afternoon. My

3 name is Susanne DesRoches and I am the Deputy

4 Director for Infrastructure and Energy at both the

5 Mayor's Office of Resiliency and the Mayor's Office

6 of Sustainability. I am joined here today by

7 Christopher Diamond, the Director of the Sustainable

8 Design Unit at the Department of Design and

9 Construction. I would like to thank Chairperson

10 Constantinides and the members of this Committee for

11 the opportunity to speak on behalf of the De Blasio

12 Administration on a package of bills related to

13 renewable energy and geothermal technologies. As part

14 of our green new deal, Mayor De Blasio committed New

15 York City to 100 percent clean electricity by 2040

16 and carbon neutrality by 2050. This requires a shift

17 to renewable energy from many sources, from rooftop

18 solar energy generation and utility scale of

19 renewables to building and grid scale energy storage.

20 New York City has already experienced significant

21 growth in solar power. Since the beginning of 2014,

22 installed solar capacity has increased sevenfold, and

23 we now have enough solar installed across the city to

24 meet the needs of nearly 50,000 households.

25 Installation and equipment costs also continue to go

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2 down and have dropped by 25 percent since the start  
3 of 2014, thanks, in part, to the city's solar  
4 property tax abatement of up to 20 percent off system  
5 costs, making solar more affordable and more  
6 accessible than ever. Energy storage resources are  
7 also critical to renewable power generation and we  
8 want to have 500 megawatts of storage by 2050... 2025,  
9 excuse me. At present there are 16 operational  
10 battery storage projects in the city totaling 18,000  
11 kilowatt hours and another 26 projects totally 29,000  
12 kilowatt hours in the pipeline. And we expect growth  
13 in this sector to accelerate by a combination of the  
14 city's commitment to expediting permitting for small  
15 and medium lithium battery installations and also as  
16 part of the climate mobilization act, Local Laws 92  
17 and 94 of 2019, which are part of the climate... the  
18 landmark climate mobilization act and which mandates  
19 solar and green roofs on new buildings. The  
20 administration is focused on securing as much clean  
21 energy as possible for the city. While our solar  
22 goals are aggressive, solar in the city alone will  
23 not provide enough renewable power to meet the city's  
24 electricity needs. To meet our clean electricity goal  
25 of... including goals to electrify our buildings and

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2 transportation, it is clear that New York City will  
3 require significant amounts of renewable energy  
4 flowing from upstate to downstate as well as a  
5 substantial portion of the state's recently announced  
6 9,000 megawatts of offshore wind directly connecting  
7 into the city. New York State's existing transmission  
8 system does not enable enough renewable energy  
9 produced in the northern and western parts of the  
10 state to flow to the city. To clean up our grid, we  
11 must increase electricity transmission directly into  
12 the city and reduce our reliance on old, inefficient  
13 fossil... inefficient fossil fuel-based power plants  
14 located in New York City. Upstate New York has about  
15 75 percent carbon free electricity and in contrast,  
16 once Indian Point closes it is expected that only  
17 about ten percent of the energy generated in New York  
18 City will be carbon free. Without more transmission,  
19 the clean electricity generated upstate... by upstate  
20 renewables cannot flow into New York City. The city  
21 has been a strong advocate for new transmission, most  
22 recently through the public policy transmission needs  
23 process. Our energy modeling shows we need all types  
24 of bulk renewable power to green our grid. For  
25 example, even if New York City secures half of the

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2 9,000 megawatts of offshore wind and 1,000 megawatts  
3 of Canadian hydropower, installs 1,000 megawatts of  
4 solar and 500 megawatts of storage by 2030, our grid  
5 will only be 60 percent clean. This underscores the  
6 urgent need for both the administration and the  
7 Council to encourage our state partners in support of  
8 new transmission lines to bring these resources into  
9 New York City as quickly as possible. Today's  
10 introductory bills align with the administration's  
11 climate goals, so we are pleased to testify in  
12 general support of them. introduction 51. This bill  
13 would require the administration to establish and  
14 oversee a pilot program for district scale geothermal  
15 system. There are approximately 20 geothermal systems  
16 in operation today in New York City, which are a  
17 promising way to reduce emissions from buildings and  
18 tap into a cleaner future grid. In fact, MOS is  
19 currently working with the utilities to scope a pilot  
20 project to build district thermal... geothermal systems  
21 in lieu of gas infrastructure upgrades. While we  
22 support the intent of the bill, we believe the  
23 utilities, at present, are better placed to manage  
24 the implementation of a complex multi-owner district  
25 system as envisioned in the bill. Introduction 1076.

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2 This bill requires the city to study and identify  
3 locations for district scale geothermal systems and  
4 encourage installation and operations of these  
5 systems. We fully support this idea but again believe  
6 the utilities are better placed to drive this effort  
7 as part of New York State's reforming the energy  
8 vision process to support consumers to make more  
9 informed energy choices and develop new energy  
10 products and services. In fact, the administration is  
11 actively pursuing this through the Con Ed rate case  
12 currently underway at the New York State Public  
13 Service Commission. Introduction 1375. This bill  
14 requires the creation of a database of subsurface  
15 conditions to better support engineering of  
16 geothermal heat pumps. While the administration  
17 supports the intent of the Introduction 1376, we  
18 believe it duplicates the requirements of Local Law  
19 six of 2016, which directed MOS and DDC to develop a  
20 public... to develop a publicly available online  
21 screening tool, the geothermal pre-feasibility tool,  
22 that can be used to identify areas where the ground  
23 source... where ground source or geothermal heat pump  
24 systems may be an option as well as cost effective  
25 for a property. That said, we'd be happy to work with

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2 the Council on ways to improve the tool. Introduction  
3 140. This bill requires the city to conduct a  
4 feasibility study on the implementation of a  
5 community choice aggregation program for energy  
6 purchasing. The administration is supportive of  
7 studying the feasibility of CCAs in New York City.  
8 Such a study will ensure that the development and  
9 implementation of any New York City CCA is  
10 conditioned on the guaranteed bill savings to our  
11 residents, a measurable increase in renewable energy  
12 generated in the city and on a timeline that is  
13 faster than is... what is currently planned under the  
14 state's clean energy standard. Introduction 269. This  
15 bill requires the city to develop a residential  
16 renewable energy pilot for an affordable housing  
17 development that utilizes a solar thermal district  
18 heating system along with solar photovoltaic systems  
19 to supply all of the development's energy needs. The  
20 administration is fully supportive of these types of  
21 efforts and we are confident we can do this outside  
22 the legislative process. We would be happy to brief  
23 Council on these efforts. In conclusion, I would like  
24 to emphasize that as we move towards our goals of  
25 carbon neutrality and 100 percent clean electricity,

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2 we must ensure that the transition is fair and  
3 equitable in terms of the energy... in terms of the  
4 cost burden to people and communities and that we  
5 continue to create good paying jobs to support the  
6 economic vitality that enabled us to make... enables us  
7 to make our city strong and fair. Together we will  
8 have to act both inside our borders and at the state,  
9 regional, and federal levels. We look forward to  
10 working with Council on these bills and on the larger  
11 effort of enlisting all New Yorkers to participate in  
12 this ambitious, once in a generation commitment to  
13 ensure a livable climate and a better future. Thank  
14 you.

15 ANTHONY FIORE: Good afternoon Chair  
16 Constantinides and members of the Committee on  
17 Environmental Protection. My name is Anthony Fiore  
18 and I'm Deputy Commissioner and Chief Energy  
19 Management Officer for the Department of Citywide  
20 Administrative Services. Thank you for the  
21 opportunity to testify today regarding the potential  
22 use of battery storage technologies and solar thermal  
23 systems on city buildings. As part of the one city  
24 built to last climate action plan, this  
25 administration set forth an ambitious goal for

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2 reducing citywide greenhouse gas emissions 80 percent  
3 of 2050, over a 2005 baseline known as 80 by 50. In  
4 addition, the most recent One NYC update when, when  
5 NYC 2050 extended this goal by committing to net zero  
6 greenhouse gas emissions citywide by 2050. This will  
7 require 100 percent clean energy and offsetting  
8 sources of irreducible emissions. Recognizing its own  
9 impact on greenhouse gas emissions, this  
10 administration is leading by example and with the  
11 passage of the climate mobilization act will reduce  
12 emissions 40 percent by 2025 and 50 percent by 2030  
13 from a 2006 baseline. I'd also like to acknowledge  
14 the tremendous partnership between the administration  
15 and this Committee, we have done a lot of great work  
16 over the years with more to come. A key component to  
17 reaching our greenhouse gas emissions reduction goals  
18 is the installation of clean energy technologies at  
19 our city facilities and we have a goal to install 100  
20 megawatts or more of solar PV power generation  
21 capacity on city owned properties by 2025. Public  
22 buildings and private buildings also have a goal to  
23 reach 100 megawatt hours of energy storage capacity  
24 by 2020. Today's introductions 49 and 426 not only  
25 align with the administration and Council's desire to

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2 create a more sustainable New York but are in sync  
3 with DCAS's values of equity, effectiveness and  
4 sustainability. This bill would require DCAS to  
5 conduct a feasibility study on the installation of  
6 utility scale battery storage systems on city  
7 buildings. DCAS has actively been assessing and  
8 installing alternate clean energy technologies  
9 including fuel cells, battery storage, building  
10 integrative photovoltaics, wind geothermal, and solar  
11 thermal. To date we have ten and a half megawatts of  
12 solar PV installed and another 34 megawatts in the  
13 process of being planned and installed. We have also  
14 installed 421 kilowatt hours of storage in the form  
15 of two projects at two city facilities with a plan to  
16 scale up by 430 kilowatt hours in the next two years.  
17 The energy landscape is undergoing a major  
18 transformation as more and more renewable energy  
19 mainly solar and wind are installed onto the grid but  
20 solar and wind are variable by nature making it  
21 necessary to have an at scale tailored solution to  
22 store the electricity they produce and use it when it  
23 is needed most. Batteries are a key part of that  
24 solution. Energy storage systems or ESS can have  
25 multiple benefits including resiliency, reliability

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2 and optimizing renewable integration. ESS can assist  
3 with maintaining a portion of a building's total  
4 power demand during times when grid power is not  
5 readily available. However, current battery  
6 technology for commercial building operations  
7 generally has a four-hour duration, this technology  
8 therefore offers limited short-term resiliency  
9 benefits in times of strains on the grid. Another  
10 potential benefit of battery storage is peak load  
11 shaving, when the demand on the grid is high because  
12 of greater power use. In such a situation battery  
13 storage can supply power and offset the need to draw  
14 power from the grid thereby allowing for a decreased  
15 demand from the grid. In such situations ESS helps  
16 preserve greater reliability and saves money.  
17 Further, given regulatory changes to pair back  
18 incentives for solar in many markets the idea of  
19 combining solar with storage to enable buildings to  
20 make and consume their own power on demand instead of  
21 exporting power to the grid will begin to be an  
22 attractive opportunity for customers as the cost of  
23 ESS continues to decline. While ESS can have multiple  
24 benefits because of cycle times that is the time it  
25 takes a battery to fully recharge after use, one must

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2 be careful on how they are operated so as not to  
3 obviate the primary purpose. For example, if an ESS  
4 is being used to shave peak load or as demand  
5 response then it may not be available to serve as  
6 backup power. In addition, the application of this  
7 technology in a dense urban environment such as New  
8 York City comes with additional challenges of  
9 availability of space, building capability to hold  
10 the weight of the installation and public safety  
11 challenges. These challenges can already be overcome  
12 from a technical perspective but the solution's  
13 increased economic challenges of deployment. For  
14 battery storage to become an at scale enabler for the  
15 storage and deployment of clean energy, it will be  
16 imperative to accelerate the innovation in and  
17 deployment of new technologies and their  
18 applications. It will also be important to foster the  
19 right regulatory and policy environments and  
20 procurement practices to drive down the cost of  
21 batteries at scale and to ensure financial  
22 arrangements that will create confidence in cost  
23 recovery for developers. It will also be essential to  
24 find ways to ensure sustainability in battery value  
25 chain, safe working conditions and environmentally

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2 responsible recycling. To catalyze energy storage  
3 deployment in the city, DCAS is taking several steps.  
4 First through DCAS's innovation program, IDEA, we  
5 have installed a 400-kilowatt vanadium flow redox  
6 battery at Jacobi Hospital. There are three  
7 additional innovative ESS projects being developed at  
8 Queens Hospital, 200 kilowatt hours; Boys and Girls  
9 High School, 475 kilowatt hours and Franklin Delano  
10 Roosevelt High School, 500 kilowatt hours. Secondly,  
11 we are actively pairing solar PV systems with battery  
12 storage, we expect to have 23 resilient solar  
13 installations with a total of 3,824 kilowatt hours in  
14 place over the next several years, 16 will be in  
15 climate vulnerable neighborhoods. Thirdly, we are  
16 requiring all future solicitations for solar PV to  
17 include an evaluation of integrating storage systems.  
18 Lastly, the city has successfully advocated for a  
19 storage tax abatement extension through 2021, it is  
20 valued at up to 10 percent of project costs with the  
21 maximum of 62,500 dollars and Con Ed is working with  
22 distribute energy resource partners throughout the  
23 state to aggregate stored energy from solar into a  
24 virtual power plant to alleviate peak demand in its  
25 service areas. Introduction 426, this bill requires

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2 DCAS to conduct a feasibility study of the cost of  
3 installing solar thermal energy systems on city  
4 facilities and where they are cost effective  
5 mandating the installation of city owned solar hot  
6 water systems or thermal energy generation systems.  
7 DCAS has installed five solar thermal projects since  
8 2013 with two more in the works to be completed  
9 within the next year. With respect to solar thermal  
10 installation they have their own set of unique  
11 challenges to installation and as I previously  
12 testified before this committee on the feasibility of  
13 solar thermal systems in February of 2017, I won't  
14 reiterate each of those challenges. Generally  
15 speaking, however these types of systems are best  
16 suited to buildings that have around the clock high  
17 hot water demands like large residential buildings  
18 and dormitories, the majority of the city's portfolio  
19 does not share these characteristics. In addition,  
20 studies by the city and others including leaders in  
21 real estate, architecture, engineering, construction,  
22 finance, affordable housing and environmental justice  
23 have concluded that electrification of heating  
24 systems combined with the renewable energy supply  
25 will be needed to obtain the levels of greenhouse gas

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2 emission reductions necessary to prevent catastrophic  
3 climate change impacts. Converting hot water systems  
4 to solar thermal could delay this transition. Despite  
5 these limitations DCAS has installed five of these  
6 systems and is working on another two over the next  
7 year. We continue to look for additional  
8 opportunities and there are several ways that we do  
9 this. First through our energy auditing program we  
10 assess all buildings over 50,000 square feet which  
11 comprises of approximately 92 percent of the total  
12 square footage. Secondly, through Local Law 24 of  
13 2016, every other year DCAS provides a report on roof  
14 suitability for solar PV and if not suitable for a PV  
15 system whether it is suitable for another alternative  
16 energy system. Thirdly, each year DCAS will assist  
17 proposals from each agency for energy efficiency and  
18 clean energy projects. Lastly, DCAS has begun a new  
19 high performance retrofit program that targets a 50  
20 percent or more reduction in building emissions  
21 through energy efficiency and clean energy generation  
22 interventions. To perform individual technology based  
23 assessments of more than 4,000 buildings without  
24 understanding how the sum of the parts all fit  
25 together is ineffective instead we should evaluate

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2 our portfolio through a whole building approach as is  
3 afforded of our programs and remain agnostic for the  
4 type of clean energy technologies to implement in  
5 city buildings. We believe the council and this  
6 committee share this approach as evidence by the  
7 recent passage of Local Law 92 and 94 of 2019 which  
8 were part of the landmark climate mobilization act.  
9 These bills which require sustainable roof design be  
10 incorporated into all new buildings and roof  
11 replacement projects allow the flexibility to choose  
12 the technology that best matches the characteristics  
13 of the individual buildings. We recognize energy  
14 storage systems and solar thermal systems can  
15 commutatively help in meeting our ambitious goals in  
16 the fight against climate change. We have a robust  
17 understanding of where these technologies make sense  
18 today and are deploying them in those circumstances.  
19 In addition, we continue to advocate for policy and  
20 regulatory reform that will expand their  
21 applicability and we have a firm grasp on the  
22 changing maturity of these technologies through our  
23 innovation program. We applaud this committee for its  
24 desire to advance the sustainability of government  
25 buildings and look forward to continue, continuing

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2 our uniformed march to mitigating climate change.

3 Thank you again for allowing us to testify and we'd

4 be happy to answer any of your questions.

5 CHAIRPERSON CONSTANTINIDES: Alright, so  
6 starting off, how many bat... how much battery storage  
7 has the administration installed so far on the city  
8 of New York?

9 ANTHONY FIORE: Okay, so as I just  
10 mentioned we have one system that's currently  
11 operating at Jacobi Hospital, its 400 kilowatt  
12 vanadium flow redox battery, we have three additional  
13 systems, innovative systems that are being installed,  
14 one at Queens Hospital and one Boys and Girls High  
15 School and one at Franklin Delano Roosevelt High  
16 School and then we have a 21 resilient solar projects  
17 that are paired with energy storage that will be  
18 completed over the next several years for a total of  
19 3,824 kilowatt hours.

20 CHAIRPERSON CONSTANTINIDES: So, we have  
21 a... what's the city's goal when it comes to megawatts  
22 for battery storage?

23 SUSANNE DESROCHES: So, in our recent  
24 update to One NYC we set the goal of 500 megawatts by  
25 2025.

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2 CHAIRPERSON CONSTANTINIDES: 500 mega...

3 [cross-talk]

4 SUSANNE DESROCHES: Citywide.

5 CHAIRPERSON CONSTANTINIDES: Citywide?

6 SUSANNE DESROCHES: Yes.

7 CHAIRPERSON CONSTANTINIDES: That's both  
8 private, private and public?

9 SUSANNE DESROCHES: Correct.

10 CHAIRPERSON CONSTANTINIDES: And how are  
11 we doing on that goal?

12 SUSANNE DESROCHES: So, currently we... the  
13 installed in the city is about 18,000 kilowatt hours  
14 so, you know we, we can come back to you with a  
15 conversion into megawatts but what I wanted to  
16 highlight is that there is a program that will be  
17 rolled out between now and 2023 where there will be  
18 300 megawatts of utility scale storage that's  
19 incentivized by the state and procured by Con Edison  
20 and so our 500 megawatts assumes sort of the 200 from  
21 city and, and private and the 300 through the Con Ed  
22 solicitation.

23 CHAIRPERSON CONSTANTINIDES: Okay and we...  
24 have we set any goals for ourselves as far as city

25

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2 owned battery storage on our buildings, have we done  
3 any of that at all or...

4 ANTHONY FIORE: Our, our goals are  
5 consistent with what Susanne DesRoches just mentioned  
6 so... [cross-talk]

7 CHAIRPERSON CONSTANTINIDES: Okay...  
8 [cross-talk]

9 ANTHONY FIORE: ...we're contributing to  
10 that overall goal.

11 CHAIRPERSON CONSTANTINIDES: Alright, so  
12 what are the... so, what is the criteria that we used  
13 to install those storage systems on those buildings  
14 you referenced on Queens Hospital, Jacobi Health  
15 Center, you said Boys and Girls High School?

16 ANTHONY FIORE: Yes.

17 CHAIRPERSON CONSTANTINIDES: Well what  
18 are the... what is the criteria that we used to  
19 implement those systems?

20 ANTHONY FIORE: Generally, three  
21 criteria, you know whether... if it has a resiliency  
22 impact, if it can reduce peak load or if it can be  
23 paired with a variable... a variable dispatched  
24 renewable resource to extend that renewable resource.

25

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2 CHAIRPERSON CONSTANTINIDES: Okay and so  
3 moving forward are we going to be using the same  
4 criteria for new projects, I mean I know that we are...  
5 we're having the... you know as part of the climate  
6 mobilization act the retrofit legislation, are, are  
7 we looking at city buildings that's... have a huge part  
8 in this, we have 600 million in this year's budget,  
9 what role is battery storage going to play in  
10 reducing our carbon footprint in city owned  
11 buildings?

12 ANTHONY FIORE: I think as more and more  
13 renewables come online energy storage is going to  
14 have a larger and larger role so, that, that will be,  
15 you know in lock step with how much more renewable  
16 comes online.

17 CHAIRPERSON CONSTANTINIDES: Alright, but  
18 we're, we're... you know we're putting solar on our  
19 buildings; we're doing... so, are we, you know pairing  
20 them together or are we do... we have plans for battery  
21 storage systems... [cross-talk]

22 ANTHONY FIORE: Yeah, so as I, I  
23 mentioned there's... we have 21 resilient solar sites  
24 that are, are in the works now so those will be PV,  
25 paired with energy storage and everyone of our new

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2 solicitations for solar PV will require an evaluation  
3 to couple it with energy storage.

4 CHAIRPERSON CONSTANTINIDES: Okay, so it,  
5 it would... that, that's going to be part of the  
6 process moving forward?

7 ANTHONY FIORE: Yes.

8 CHAIRPERSON CONSTANTINIDES: For every  
9 agency?

10 ANTHONY FIORE: Yes... [cross-talk]

11 CHAIRPERSON CONSTANTINIDES: Everything  
12 owned by DCAS in the city portfolio are going to be  
13 doing that?

14 ANTHONY FIORE: Yes.

15 CHAIRPERSON CONSTANTINIDES: Okay, that's  
16 good to know. What successes... I mean we've; we've  
17 talked a little bit about our successes but as we  
18 scale up what do we sort of see our opportunities and  
19 how would this legislation sort of... Intro 49 sort of  
20 fit into that?

21 ANTHONY FIORE: So, again you know we, we  
22 evaluate energy storage from the three criteria that  
23 I, I mentioned, we have it as part of our solar PV  
24 evaluations and so it's going to scale up over time.  
25 I think we; we try to take a very holistic approach

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2 when we look at a building to understand what  
3 interventions can be put in place to reduce emissions  
4 to the greatest extent possible.. [cross-talk]

5 CHAIRPERSON CONSTANTINIDES: Uh-huh..  
6 [cross-talk]

7 ANTHONY FIORE: ...so rather than looking  
8 at just energy storage by itself we look at it in  
9 relation to other interventions that we could  
10 implement including efficiency interventions such as,  
11 you know steam trap replacements and HVAC upgrades  
12 and better insulation and better windows and so forth  
13 as long.. along with solar PV installation so we, we  
14 try to take a very holistic approach with what  
15 interventions will get us the furthest.

16 CHAIRPERSON CONSTANTINIDES: Alright and  
17 sort of walk me through, is there a particular  
18 project that that's occurring on right now that we  
19 can sort of look to in the future, sort of walk me  
20 through how this actually works?

21 ANTHONY FIORE: Yeah, so a year and a  
22 half ago we released a solicitation to all city  
23 agencies in regard to, to deep energy retrofits so  
24 that's targeting a 50 percent or more reduction in  
25 energy use at a building.. [cross-talk]

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2 CHAIRPERSON CONSTANTINIDES: Uh-huh...

3 [cross-talk]

4 ANTHONY FIORE: ...and as part of that we  
5 have 11... right now 11 deep energy retrofits that are  
6 in the scoping phase that will look very holistically  
7 at the building and both from an efficiency and clean  
8 energy technology implementation.

9 CHAIRPERSON CONSTANTINIDES: So, we don't  
10 have anything yet that's sort of pairing... out,  
11 outside of these three projects we talked about we  
12 don't have one that's in the works that's already  
13 sort of signed, sealed and delivered, we're doing  
14 renewables and battery storage on site, we don't have  
15 that?

16 ANTHONY FIORE: There, there are 21 of  
17 those in progress.

18 CHAIRPERSON CONSTANTINIDES: In progress  
19 now, they're in progress, okay. Alright, to... I'm  
20 just... I'm just curious based on the conversations  
21 that we've had relating to various projects, right, I  
22 mean I, I think my all... my concern always is how do  
23 we make sure that when we're doing renewables and  
24 we're doing the retrofits, when we're building new

25

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2 buildings that we are getting everybody on the same  
3 page.

4 ANTHONY FIORE: Yeah...

5 CHAIRPERSON CONSTANTINIDES: And that,  
6 that's always my biggest concern... [cross-talk]

7 ANTHONY FIORE: Yeah, I think we, we  
8 share that concern and we're aligned in, in that  
9 approach.

10 CHAIRPERSON CONSTANTINIDES: And, you  
11 know what challenges have we been hearing from  
12 meeting our goals from Con Edison, from the state  
13 like what... you know what, what's our sort of  
14 conversations around all of that?

15 SUSANNE DESROCHES: So, I think what,  
16 what we have heard and what we're actively working on  
17 is streamlining the city's permitting process which I  
18 mentioned in my testimony is something that we have  
19 both a guidance document available to developers now  
20 on how to install lithium ion battery installation  
21 outdoors, the fire department recently issued a rule  
22 that's in draft form was available for comments on  
23 the same topic. So, we understand from the  
24 development community that permitting needs to be  
25 streamlined, again we're taking that quite seriously.

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2 At the same time, we do need to balance this.. the  
3 safety aspects of battery storage in, you know the  
4 dense urban environment that we operate in.

5 CHAIRPERSON CONSTANTINIDES: Alright and,  
6 and.. but we are moving forward, it's not going to be  
7 something that's going to be holding us up, correct,  
8 we feel confident that we're going to be able to get  
9 past these challenges?

10 SUSANNE DESROCHES: We're confident that  
11 we'll get past those challenges, correct.

12 CHAIRPERSON CONSTANTINIDES: And to what  
13 extent have we been coordinating with Con Edison and  
14 the state on the clean peak study and what role do  
15 you feel storage can play in us getting rid of our  
16 dirty Peaker plants in New York City limits?

17 SUSANNE DESROCHES: Right, so we  
18 testified earlier in the year and we are working on  
19 the long term energy plan that, that we've been  
20 discussing for, you know and, and scoping as part of  
21 this year so that will look at the role of utility  
22 scale storage as a way to green the grid, right, as  
23 I.. as I testified we need additional transmission  
24 both from offshore wind and also from upstate  
25 renewables but that's also going to need.. necessitate

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2 the need for additional utility scale storage so we  
3 see that as part of the long term plan and we're... and  
4 we're working on that.

5 CHAIRPERSON CONSTANTINIDES: Alright, so...  
6 I mean we, we... I think we have a shared priority here  
7 of getting rid of those Peaker's... [cross-talk]

8 SUSANNE DESROCHES: Absolutely... [cross-  
9 talk]

10 CHAIRPERSON CONSTANTINIDES: ...in  
11 communities that have been burdened by these Peaker...  
12 [cross-talk]

13 SUSANNE DESROCHES: Absolutely... [cross-  
14 talk]

15 CHAIRPERSON CONSTANTINIDES: ...plants for  
16 way too long. So, I guess the last questions I have  
17 relating to city buildings. So, let me use a school  
18 as an example, if we pro... if we put a, you know solar  
19 project battery storage on there it reduces, you know  
20 peak load by let's say 50 percent who, who... does the  
21 school pay the energy bill, does DCAS pay the energy  
22 bill, does it come out of the school budget, how does  
23 it work?

24 ANTHONY FIORE: Yeah, DCAS pays the  
25 utility bills. Each agency has, has an allotted

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2 amount for the utility bills but it's essentially  
3 paid and administered by DCAS.

4 CHAIRPERSON CONSTANTINIDES: So, it's not  
5 where it comes out of the school's budget, right now  
6 the energy usage?

7 ANTHONY FIORE: So, so, each agency gets  
8 an allotment, right but on the amount of energy that  
9 they're predicted to use so when we forecast the  
10 budget each year we forecast it for the city and then  
11 we forecast it for each agency and each agency then  
12 has an allocation of, of the total power supply.

13 CHAIRPERSON CONSTANTINIDES: So, in  
14 theory doing this is not only going to be good for  
15 the... good for the planet and good for us in fighting  
16 climate change but it's also going to be good for the  
17 bottom line, right, I mean we're also saving money  
18 for the city, correct?

19 ANTHONY FIORE: Yes, if we can shave peak  
20 load with, with the batteries we can save money. As  
21 you I believe mentioned in, in your opening  
22 statements, the upfront capital costs of, of these  
23 systems is still quite expensive but as those costs  
24 come down that, that economic case is going to become  
25 much better.

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2 CHAIRPERSON CONSTANTINIDES: Okay,  
3 alright, great. Council Member Richards, Council  
4 Member Kallos you have questions, okay, go ahead.

5 COUNCIL MEMBER RICHARDS: Okay, I just  
6 wanted to touch base on specifically Intros 1076 and  
7 1375 and 268, can you go through 1076, so it seems  
8 like in your testimony you spoke of the utilities  
9 having a better way of pursuing geothermal so can you  
10 just speak to... [cross-talk]

11 SUSANNE DESROCHES: Sure, so and, and  
12 Chris can, can supply some details here. We think  
13 that there is an opportunity here to, to collaborate  
14 with the utilities on where in the city we can  
15 utilize their existing gas infrastructure and  
16 potentially looking about in the future not replaced  
17 or in aspect of the gas infrastructure but in fact  
18 utilize that for district systems so that we don't  
19 spend additional money on a system that then in the  
20 future will be a stranded asset, right, so we think  
21 that the utilities are well positioned to see where  
22 in the city these districts could be done the soonest  
23 and could, could be prioritized. We know that  
24 National Grid is actively exploring this, I don't...  
25 not sure if... [cross-talk]

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2 COUNCIL MEMBER RICHARDS: You sure about  
3 that?

4 SUSANNE DESROCHES: ...they're here to  
5 testify today but if they are, they could... they could  
6 speak to that.

7 COUNCIL MEMBER RICHARDS: But National  
8 Grid is not doing much anymore since this pipeline  
9 issue but that's another story for another day and I  
10 don't mind saying that on the record. Let me... so,  
11 let's just... let's go back to that again. So, you're  
12 saying the state, we're going to depend on the state  
13 to look at systems... [cross-talk]

14 SUSANNE DESROCHES: So, what I mean by  
15 that is that there are two active rate cases underway  
16 right now with Con Edison and National Grid so the  
17 city has put forward a proposal within those rate  
18 cases which means that, you know New York City rate  
19 payers would ultimately would, would be, you know  
20 funding those, those pilots but that the utilities if  
21 we look at where they are spending money and their  
22 leak prone pipe in... currently, right, so they're  
23 spending billions of dollars replacing gas pipe, we'd  
24 like them to look at that and say where can we in  
25 fact not replace leak prone pipe but transition to

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2 more environmentally friendly heating and cooling  
3 systems. There are also issues around the right of  
4 way, that, that Chris can talk to that make it  
5 complicated for the city from a regulatory  
6 perspective to actually install district systems so I  
7 don't know if... Chris can you just... [cross-talk]

8 COUNCIL MEMBER RICHARDS: But I'm, I'm  
9 confused for a second so, my legislation requires the  
10 city to locate... [cross-talk]

11 SUSANNE DESROCHES: Uh-huh... [cross-talk]

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

14 SUSANNE DESROCHES: Right... [cross-talk]

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

17 SUSANNE DESROCHES: Uh-huh... [cross-talk]

18 COUNCIL MEMBER RICHARDS: ...I'm just  
19 confused at why we're talking about the state when my  
20 legislation is city, so I guess what I'm trying to  
21 get at is, is the administration just not supportive  
22 of looking at geothermal systems because I, I didn't  
23 understand... I don't understand why we're passing...  
24 [cross-talk]

25

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2 SUSANNE DESROCHES: Absolutely not...

3 [cross-talk]

4 COUNCIL MEMBER RICHARDS: ...the buck to  
5 the state... [cross-talk]

6 SUSANNE DESROCHES: ...so we're... [cross-  
7 talk]

8 COUNCIL MEMBER RICHARDS: ...I get the... I  
9 get the... [cross-talk]

10 SUSANNE DESROCHES: Uh-huh... [cross-talk]

11 COUNCIL MEMBER RICHARDS: ...concern about  
12 rates and all these other things but I'm just  
13 confused at why we're punting it to the state when we  
14 have the right to our roadways I'm assuming, and we  
15 could look at potential locations ourselves.

16 CHRISTOPHER DIAMOND: When, when a... when  
17 you start transmitting energy be it thermal or  
18 electrical or even stored and, and petroleum through  
19 public right of way then it starts to become a state  
20 issue and so... [cross-talk]

21 COUNCIL MEMBER RICHARDS: I get that...  
22 [cross-talk]

23 CHRISTOPHER DIAMOND: ...in general we  
24 could... [cross-talk]

25

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2 COUNCIL MEMBER RICHARDS: ...but my...

3 [cross-talk]

4 CHRISTOPHER DIAMOND: ...we could look on a  
5 block by block... [cross-talk]

6 COUNCIL MEMBER RICHARDS: Okay... [cross-  
7 talk]

8 CHRISTOPHER DIAMOND: ...basis but... [cross-  
9 talk]

10 COUNCIL MEMBER RICHARDS: Uh-huh... [cross-  
11 talk]

12 CHRISTOPHER DIAMOND: ...for these types of  
13 micro grids that I've studied in the past we've  
14 always looked to see if we could make them larger  
15 than one block and in order to do that then you start  
16 getting into an issue where it is a state issue...

17 COUNCIL MEMBER RICHARDS: It's a state  
18 issue when you have to assess... access... [cross-talk]

19 CHRISTOPHER DIAMOND: When... [cross-talk]

20 COUNCIL MEMBER RICHARDS: ...to put the  
21 system in, right?

22 CHRISTOPHER DIAMOND: When the system  
23 needs to cross the public right of way.

24 COUNCIL MEMBER RICHARDS: Right... [cross-  
25 talk]

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2 CHRISTOPHER DIAMOND: ...in general.

3 COUNCIL MEMBER RICHARDS: So, the  
4 question I'm asking is why couldn't the city find  
5 potential location and then work with the state, why  
6 are we saying it the other way around, I mean...  
7 [cross-talk]

8 SUSANNE DESROCHES: So, I, I, I hear what  
9 you're saying and, and I don't want to sound as if  
10 we're not supporting it, we're... [cross-talk]

11 COUNCIL MEMBER RICHARDS: Okay... [cross-  
12 talk]

13 SUSANNE DESROCHES: ...we're definitely  
14 support the idea of a district system... [cross-talk]

15 COUNCIL MEMBER RICHARDS: Uh-huh... [cross-  
16 talk]

17 SUSANNE DESROCHES: ...district geothermal  
18 system so what we're trying to do is solve multiple  
19 issues at the same time... [cross-talk]

20 COUNCIL MEMBER RICHARDS: Uh-huh... [cross-  
21 talk]

22 SUSANNE DESROCHES: ...right, so the, the  
23 utilities are spending billions of dollars replacing  
24 leak prone gas infrastructure today and so what we'd  
25 like to do is partner with the utilities on looking

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2 at where could we not do that and instead do  
3 geothermal... [cross-talk]

4 COUNCIL MEMBER RICHARDS: Okay, got it...  
5 [cross-talk]

6 SUSANNE DESROCHES: ...district... [cross-  
7 talk]

8 COUNCIL MEMBER RICHARDS: ...so, the...  
9 [cross-talk]

10 SUSANNE DESROCHES: ...systems, yeah...  
11 [cross-talk]

12 COUNCIL MEMBER RICHARDS: ...point I'm  
13 getting at is, is the administration supportive of  
14 partnering because it doesn't seem like that's  
15 happening now, are you supportive of... you're not  
16 doing this as of now, correct?

17 SUSANNE DESROCHES: We have put forward  
18 proposals in the rate case so yes, we are supportive  
19 of, of partnering with you... [cross-talk]

20 COUNCIL MEMBER RICHARDS: No, but I'm  
21 saying are there... are there any real conversations  
22 around geothermal systems, is, is there a real  
23 conversation with the state partners now on this?

24 SUSANNE DESROCHES: So, we have started  
25 those conversations... [cross-talk]

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2 COUNCIL MEMBER RICHARDS: Alright, start...

3 [cross-talk]

4 SUSANNE DESROCHES: ...with those  
5 utilities... [cross-talk]

6 COUNCIL MEMBER RICHARDS: ...what does  
7 start mean, I'm, I'm big on words so tell me what...  
8 [cross-talk]

9 SUSANNE DESROCHES: Yeah... [cross-talk]

10 COUNCIL MEMBER RICHARDS: ...start means?

11 SUSANNE DESROCHES: So, we have... again as  
12 part... we have discussed these proposals with the...  
13 with the utilities however, we're in a period of the  
14 rate case where I can't tell you any additional  
15 details because they're confidential but we have been  
16 putting it forward as part of the rate case process.

17 COUNCIL MEMBER RICHARDS: Right and then  
18 you said... do you... so, you started conversations with  
19 them, and you have not identified locations?

20 SUSANNE DESROCHES: We have not at this  
21 time, no.

22 COUNCIL MEMBER RICHARDS: Okay. Let's go  
23 to Intro 1375 now where you actually speak of Local  
24 Law six and that's, that's your reason for saying...  
25 okay, so this is pre-feasibility you're, you're

1 COMMITTEE ON ENVIRONMENTAL PROTECTION

2 talking about here, can you just go through some of  
3 the progress that's been made on that?

4 SUSANNE DESROCHES: Sure, Chris I'm going  
5 to turn it over to you...

6 CHRISTOPHER DIAMOND: So, for the  
7 geothermal screening tool...

8 COUNCIL MEMBER RICHARDS: Is your mic on?

9 CHRISTOPHER DIAMOND: Yes, it is.

10 COUNCIL MEMBER RICHARDS: Oh, it is,  
11 okay.

12 CHRISTOPHER DIAMOND: Can you hear me?

13 COUNCIL MEMBER RICHARDS: Yeah.

14 CHRISTOPHER DIAMOND: Okay, the  
15 geothermal screening tool that was prescribed by  
16 Local Law six of 2016 it is online on the DDC  
17 website, it can be found typically.. I have it  
18 bookmarked down... under the exact url but if you just  
19 did geothermal and DDC tool it would probably come  
20 up. The tool basically gives you information when you  
21 enter in an address or a borough block and lot  
22 number, it gives you information on that site in two  
23 levels, one is the, the geo technical feasibility of  
24 doing a geothermal system on that site looking at the  
25 three different common types of geothermal systems in

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2 the city and then secondly it looks at how the  
3 particular building could be adapted to using  
4 geothermal.

5 COUNCIL MEMBER RICHARDS: Uh-huh. So, let  
6 me ask you... just getting back to the question I asked  
7 before, so you said you had not identified specific  
8 locations that geothermal would be feasible because  
9 you're working with the state, right, is, is that  
10 what I heard before this?

11 SUSANNE DESROCHES: So, let me just  
12 clarify that and then you can jump in... [cross-talk]

13 COUNCIL MEMBER RICHARDS: And then...  
14 [cross-talk]

15 SUSANNE DESROCHES: Uh-huh... [cross-talk]

16 COUNCIL MEMBER RICHARDS: I would... let me  
17 finish my statement... [cross-talk]

18 SUSANNE DESROCHES: Yep... [cross-talk]

19 COUNCIL MEMBER RICHARDS: ...first if, if I  
20 may. So, you said that you could not identify  
21 locations as of now so I'm just interested in knowing  
22 since this system is available, you know there's been  
23 some pre-work done is there just not a way to  
24 coordinate some of the specific locations and data  
25 you have available now based on Local Law six to work

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2 with because I think as you pointed out in your  
3 testimony Local Law six of 2016 which directed MOCS  
4 and DDCs to develop a publicly available online  
5 screening tool for geothermal pre-feasibility, pre-  
6 feasibility that can be used to identify areas where  
7 ground source or geothermal heat pump systems may be  
8 an option as well as cost effective for a property.  
9 So, being that this tool is already available how are  
10 you coordinating with the utilities with this  
11 specific tool that is available now?

12 SUSANNE DESROCHES: Sure, so when I, I  
13 just want to clarify that I was talking about  
14 locations for district systems not locations for a  
15 property-based system.

16 COUNCIL MEMBER RICHARDS: Okay, got it...  
17 [cross-talk]

18 SUSANNE DESROCHES: Right... [cross-talk]

19 COUNCIL MEMBER RICHARDS: ...okay... [cross-  
20 talk]

21 SUSANNE DESROCHES: ...so, the tool is  
22 meant for... [cross-talk]

23 COUNCIL MEMBER RICHARDS: ...so, these are...  
24 [cross-talk]

25

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2 SUSANNE DESROCHES: ...main individual  
3 building... [cross-talk]

4 COUNCIL MEMBER RICHARDS: ...for property  
5 based, okay... [cross-talk]

6 SUSANNE DESROCHES: ...owner, correct.

7 COUNCIL MEMBER RICHARDS: Let's go to  
8 Intro 269 and, and can you just speak to the.. I got  
9 one question left, okay. Well the Chair has to tell  
10 me that. Oh, sure, give me one second. But can you  
11 speak to, is the administration... have you done  
12 geothermal anywhere in the city, could you speak to  
13 any policies or any initiatives that you have going  
14 on geothermal already in existing housing or existing  
15 properties?

16 CHRISTOPHER DIAMOND: So, to date the  
17 Department of Design and Construction has worked on  
18 about ten systems and they've been installed, some of  
19 them are just coming online now... [cross-talk]

20 COUNCIL MEMBER RICHARDS: Okay... [cross-  
21 talk]

22 CHRISTOPHER DIAMOND: ...and they vary in  
23 the different types, standing column wells versus  
24 open loops versus closed loops... [cross-talk]

25

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2 COUNCIL MEMBER RICHARDS: Uh-huh... [cross-  
3 talk]

4 CHRISTOPHER DIAMOND: ...and so we have  
5 these... we have these systems in place. As soon as  
6 Local Law six was, was passed even before the tool  
7 came online we started doing an in house sort of by  
8 hand analysis of projects as they come in to see  
9 whether geothermal is suitable for that project or  
10 not and then... and then... first you're looking at  
11 technical suitability as in whether you can actually  
12 do it on that... [cross-talk]

13 COUNCIL MEMBER RICHARDS: Uh-huh... [cross-  
14 talk]

15 CHRISTOPHER DIAMOND: ...site and then we  
16 start to look at whether it's more feasible and then  
17 we can do a prescreen and then there's a deeper dive  
18 that needs to be done and when you do the deeper dive  
19 you often find that it is not cost effective even  
20 including the, the... [cross-talk]

21 COUNCIL MEMBER RICHARDS: So, what I'm  
22 getting at is... does the administration support  
23 geothermal, are you looking at ramping up in the  
24 future, is this a technology, what are the pros that

25

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2 you found in doing it, what are some of the  
3 challenges?

4 CHRISTOPHER DIAMOND: Well Local, Local  
5 law 178 of last year actually has us... that allows us  
6 to go forward with a study looking at about half of  
7 these systems in a very comprehensive way  
8 retroactively to see what has worked and what hasn't  
9 and so that's what we would like to really... we'd  
10 really like to focus on what is working and what  
11 isn't working and how, how many mistakes have we  
12 made, how many lessons can we learn from those  
13 mistakes and so that we can make sure that as we roll  
14 these, these projects out in the future they go much  
15 more smoothly and more cost effectively and they just  
16 work better... [cross-talk]

17 COUNCIL MEMBER RICHARDS: And with the  
18 ten locations that are online now what have we found?

19 CHRISTOPHER DIAMOND: We found that some  
20 systems work very, very well, some systems have been  
21 extremely problematic to bring online and once  
22 they're online they... the, the results we don't really  
23 know because we don't have a real base case to  
24 compare it to and that's why we need to do this  
25 analysis so that we can look at a, a modeled building

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2 that if it was using a more conventional system how  
3 this system would be working. Some of these open loop  
4 systems have been quite problematic but the.. [cross-  
5 talk]

6 COUNCIL MEMBER RICHARDS: Closed loop has  
7 been... [cross-talk]

8 CHRISTOPHER DIAMOND: ...but the closed  
9 loop systems... [cross-talk]

10 COUNCIL MEMBER RICHARDS: ...okay... [cross-  
11 talk]

12 CHRISTOPHER DIAMOND: ...have been very,  
13 very effective and so we... [cross-talk]

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

16 CHRISTOPHER DIAMOND: ...really want to  
17 understand how can we push those forward, closed loop  
18 systems have a much higher up-front cost.

19 COUNCIL MEMBER RICHARDS: And can you  
20 just speak to Intro 269 on the renewable energy pilot  
21 for affordable housing developments and.. [cross-talk]

22 SUSANNE DESROCHES: Sure, so... [cross-  
23 talk]

24 COUNCIL MEMBER RICHARDS: ...and, and I  
25 think in your testimony you spoke of you'll be happy

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2 to work outside of the legislative process so..

3 [cross-talk]

4 SUSANNE DESROCHES: Yeah... [cross-talk]

5 COUNCIL MEMBER RICHARDS: ...can you speak  
6 to what that means?

7 SUSANNE DESROCHES: Sure, so again we're,  
8 we're supportive of this type of effort where it  
9 utilizes both the solar thermal district heating  
10 system as well as PV affordable housing, we're... we'd  
11 be happy to discuss details about that post hearing  
12 but again we, we're not sure that we need to  
13 legislate that, we think that there are ways through  
14 HPD that we can... you know that we can work through  
15 these goals together.

16 COUNCIL MEMBER RICHARDS: How much of  
17 this has HPD done?

18 SUSANNE DESROCHES: So, I don't have...  
19 [cross-talk]

20 COUNCIL MEMBER RICHARDS: If they're  
21 here, I don't know if they're here... [cross-talk]

22 SUSANNE DESROCHES: ...that information  
23 with me but I am happy to get back to you about that.

24

25

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2 COUNCIL MEMBER RICHARDS: Do you want to  
3 speak on that, no, okay, I thought you were... yeah, go  
4 ahead, yes sir.

5 COUNCIL MEMBER KALLOS: Do you believe in  
6 climate change?

7 SUSANNE DESROCHES: Yes.

8 COUNCIL MEMBER KALLOS: Is this the  
9 position of the Mayor in the city of New York?

10 SUSANNE DESROCHES: Yes, it is.

11 COUNCIL MEMBER KALLOS: Is there a  
12 climate emergency?

13 SUSANNE DESROCHES: So, we believe that  
14 there is a climate crisis and we have been working  
15 very closely with Council on a number of bills  
16 including the climate mobilization act, so we are  
17 moving as fast as possible to try to solve the  
18 climate crisis we have today.

19 COUNCIL MEMBER KALLOS: Thank you, back  
20 to Donovan Richards.

21 COUNCIL MEMBER RICHARDS: That was more  
22 than one question. I, I mean I'm going to close off  
23 because I, I just wanted to, to, to get to this  
24 point, I appreciate... I don't want to downplay the  
25 efforts the administration has made to move the, the

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2 needle on climate change especially with the work the  
3 Chairman has done, actually I want to give more  
4 credit to the Chairman for pushing that issue than  
5 the admin but what I do want to say is that, you know  
6 we have to start to look towards new solutions. I'm  
7 happy to give you a tour of the Rockaways where a  
8 geothermal system actually is in existence already,  
9 I'm not necessarily buying the argument today that we  
10 have to wait for utilities to, to, to move forward in  
11 looking at geothermal systems so I mean my colleague  
12 raised all the questions and points that I, I  
13 probably want to make, I think we have to be bold, we  
14 have to think outside of the box and also from an  
15 affordable housing perspective, you know as we are  
16 crunched in where we're seeing rising rents, you know  
17 geothermal has largely in a development in the  
18 Rockaways that we did kept costs very low for these  
19 residents, for low income residents so we should be  
20 looking at them both in tandem on a way to preserving  
21 affordability but also ensuring that, you know we can  
22 address climate change which do go hand in hand  
23 because there are no communities that are more  
24 effected than communities of color and I also say  
25 Southeast Queens has a lot of opportunity for this as

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well and, and I'm just not seeing the urgency in looking at newer technologies such as geothermal so I'm hoping as we... I hope we pass these bills still but as we negotiate and talk with you offline that we could come to a middle ground on ensuring that geothermal is a part of the conversation and I'll just end on Samara Swanston took me on my first tour to Weeksville Heritage Center when I was the Chair prior... Chair of the Committee, I think two years ago where we got to witness how fantastic geothermal was working, right in Brooklyn so we're not talking anything foreign but I think we're missing a little bit of good will in getting this done. Thank you Chair.

CHAIRPERSON CONSTANTINIDES: Thank you

Council Member Richards, believe it or not it's four years ago, time goes fast brother, it goes fast man. Anyway, but thank you for all of your questions. So, you alluded to in your testimony just now to Council Member Richards, so there are about ten systems that have been installed, geothermal, is that pursuant to Local Law number six, I know the bill numbers I never know the Local Laws but is that pursuant to the

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2 legislation that we passed relating to geothermal  
3 systems?

4 CHRISTOPHER DIAMOND: All of these  
5 systems are before Local Law six...

6 CHAIRPERSON CONSTANTINIDES: So, so how  
7 many are we installing post Local Law six?

8 CHRISTOPHER DIAMOND: Well right now we  
9 have two projects that... on the books that look where  
10 they are... where it's feasible and we're probably  
11 going to actually go through with them, but every  
12 project has been analyzed for it.

13 CHAIRPERSON CONSTANTINIDES: And in... and  
14 in... do we have a report of which... what the cost  
15 benefit analysis looked like for each of them, the  
16 social cost of carbon analysis that's... that this  
17 legislation... is that publicly available, how do we...  
18 how do we take a look at that?

19 CHRISTOPHER DIAMOND: Most of... most of  
20 the projects were deemed not feasible in the... via,  
21 via the tool or rather quickly thereafter due to  
22 limitations on space and so... [cross-talk]

23 CHAIRPERSON CONSTANTINIDES: Okay...  
24 [cross-talk]

25

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2 CHRISTOPHER DIAMOND: As, as Council  
3 Member Richards alluded to, you know they have  
4 geothermal at Weeksville and also in the Rockaways,  
5 those will be closed loop systems and closed loop  
6 systems require a much larger number of wells in  
7 order... and so that means you need a lot more space  
8 available.

9 CHAIRPERSON CONSTANTINIDES: Right, but  
10 there's ways of doing it where it minimizes, right,  
11 underground, there's, there's ways to do it, right?

12 CHRISTOPHER DIAMOND: It's all  
13 underground and... [cross-talk]

14 CHAIRPERSON CONSTANTINIDES: It's on the  
15 ground... [cross-talk]

16 CHRISTOPHER DIAMOND: Yeah.

17 CHAIRPERSON CONSTANTINIDES: Okay, but I  
18 mean that's, that's my challenge... [cross-talk]

19 CHRISTOPHER DIAMOND: We, we avoid  
20 putting wells underneath a building.

21 CHAIRPERSON CONSTANTINIDES: Right, okay.  
22 Alright, looking at... I think Council Member Richards  
23 raised an interesting point, for Intro 51 I, I share  
24 his concern that why are we... why do we feel that the

25

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2 utilities are better off telling us where... [cross-  
3 talk]

4 SUSANNE DESROCHES: So, again... [cross-  
5 talk]

6 CHAIRPERSON CONSTANTINIDES: ...to put  
7 these systems, I'm, I'm very concerned about that?

8 SUSANNE DESROCHES: Sorry to interrupt  
9 there... [cross-talk]

10 CHAIRPERSON CONSTANTINIDES: No, no  
11 that's okay... [cross-talk]

12 SUSANNE DESROCHES: So, again I, I want  
13 to be clear that what, what I mean by that is when  
14 we're talking about a district scale system... [cross-  
15 talk]

16 CHAIRPERSON CONSTANTINIDES: Uh-huh...  
17 [cross-talk]

18 SUSANNE DESROCHES: ...not individual  
19 buildings or even campus style, the tool and, and  
20 what Chris has described in terms of buildings that  
21 the... that the city is doing geothermal we are 100  
22 percent supportive and that has been moving forward,  
23 where it gets complicated is when we're talking about  
24 multi block, you know big scale district systems  
25 that's where we think that we need to have a better

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2 partnership with the utilities in order to really  
3 change like a, a neighborhood's energy consumption.

4 CHAIRPERSON CONSTANTINIDES: But not a  
5 partnership where the utilities are telling us where  
6 and when, right, more of where we're kind of working  
7 with them and saying this more of a back and forth,  
8 as Council Member Richards talked about where we're  
9 kind of leading that.

10 COUNCIL MEMBER RICHARDS: I, I just... can  
11 I add to that?

12 CHAIRPERSON CONSTANTINIDES: Yeah, yeah...  
13 [cross-talk]

14 COUNCIL MEMBER RICHARDS: ...real quick  
15 because you know we got a lot of money being spent by  
16 DEP right now and I'm sure that they coordinate with  
17 the utilities so I, I... so, I'm... you know I'm hearing  
18 the argument but I'm just not understanding why  
19 we're... you know there's already a relationship...  
20 [cross-talk]

21 SUSANNE DESROCHES: Sure... [cross-talk]

22 COUNCIL MEMBER RICHARDS: Thank, thank  
23 you to the... [cross-talk]

24 SUSANNE DESROCHES: Sure... [cross-talk]

25

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2 COUNCIL MEMBER RICHARDS: ...Mayor for  
3 spending 2.2 billion, I know more than what I should  
4 know on infrastructure in my community but... [cross-  
5 talk]

6 SUSANNE DESROCHES: Understood,  
7 understood... [cross-talk]

8 COUNCIL MEMBER RICHARDS: ...but it...  
9 [cross-talk]

10 SUSANNE DESROCHES: ...again I, I... [cross-  
11 talk]

12 COUNCIL MEMBER RICHARDS: ...shouldn't be  
13 that difficult to move... [cross-talk]

14 SUSANNE DESROCHES: We look forward to  
15 working with you on the bill... [cross-talk]

16 COUNCIL MEMBER RICHARDS: Right, okay.

17 CHAIRPERSON CONSTANTINIDES: Alright, so  
18 at this time I'll turn it over to Council Member  
19 Levin for questions as well.

20 COUNCIL MEMBER LEVIN: Thank you very  
21 much Chair. I want to thank, thank the panel for your  
22 testimony. On the CCA bill I wanted to get a sense  
23 from you all how potentially you could envision CCA  
24 playing out in New York City and where are there test  
25

1 COMMITTEE ON ENVIRONMENTAL PROTECTION

2 cases that you're looking to and what are the lessons  
3 that you're learning from them?

4 SUSANNE DESROCHES: So, I think in, in  
5 your opening statement we have a lot of shared goals  
6 for CCA, we are supportive of continuing to do... to...  
7 that the bill wants to do a feasibility study, we  
8 think that that's necessary... [cross-talk]

9 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
10 talk]

11 SUSANNE DESROCHES: ...a CCA that could  
12 bring renewable power directly into New York City's  
13 grid that can also power down existing fossil fuel  
14 power plants is a... is a top priority, we also think  
15 that a CCA should ensure guaranteed cost savings to  
16 lower resident's energy cost burden and we think that  
17 a CCA... a successful CCA would be moving faster than,  
18 than the state's plan. So, again we share your  
19 overarching goals, I think you also talked about  
20 those items as well; equity being a... being a strong  
21 goal that CCA would need to solve for.

22 COUNCIL MEMBER LEVIN: How can you ensure  
23 cost savings; how would we be able to do that  
24 especially if we're going with cleaner options and  
25 so...

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2 SUSANNE DESROCHES: So, that's one of the  
3 big challenges, right, so a CCA would basically be a  
4 municipal energy procurement model that requires an,  
5 an opt... an opt out, right, it's not an opt in, it's  
6 an opt out model as you know and so we're concerned  
7 about doing a... doing a citywide CCA that would  
8 actually increase people's energy bills, right, so  
9 the feasibility study is really critical to ensuring  
10 that if we went that direction that a CCA model for  
11 New York City would in fact hit all three of those  
12 citywide goals.

13 COUNCIL MEMBER LEVIN: Yeah. Have you  
14 given any thought to what a... what an aggregate unit  
15 would look like in terms of New York City like how...  
16 what would be the... [cross-talk]

17 SUSANNE DESROCHES: Uh-huh, so, again I  
18 think that the study would need to look at the  
19 optimum size and whether or not legally at this point  
20 we can do a sub city wide CCA under the current  
21 construct of... at the public service commission. So,  
22 we fully support doing a study, we think that it  
23 would... it would tell us, is it a neighborhood scale,  
24 is it a borough scale, is it a citywide scale and  
25 does a CCA actually bring renewable power into the

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2 city and not rely on renewable energy credits from  
3 some... [cross-talk]

4 COUNCIL MEMBER LEVIN: Right... [cross-  
5 talk]

6 SUSANNE DESROCHES: ...other part of the  
7 state or country.

8 COUNCIL MEMBER LEVIN: And is it the... do  
9 you have an opinion about whether that is... whether  
10 credits is in any way effective or in line with our  
11 objectives or have you made any determination off the  
12 bat that that is probably not the way we'd want to  
13 go?

14 SUSANNE DESROCHES: So, we are really  
15 interested in bringing renewable power into the grid,  
16 we've... [cross-talk]

17 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
18 talk]

19 SUSANNE DESROCHES: ...talked a lot about  
20 how do we bring... how do we dial back and close the in  
21 city fossil fuel power plants, we need renewable  
22 power injected right into the city's boundaries in  
23 order to be able to do that so that's a first  
24 priority goal... [cross-talk]

25

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2 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
3 talk]

4 SUSANNE DESROCHES: ...using our purchasing  
5 power as city residents to buy renewable power  
6 elsewhere in the state doesn't get us to that goal,  
7 it keeps that... [cross-talk]

8 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
9 talk]

10 SUSANNE DESROCHES: ...fossil plant fully  
11 going and... [cross-talk]

12 COUNCIL MEMBER LEVIN: Yeah... [cross-talk]

13 SUSANNE DESROCHES: ...and closed IPAC, the  
14 city's grid is going to be 90 percent fossil, so we  
15 have a pretty big hurdle and we don't want to  
16 necessarily relinquish that pot... that purchasing  
17 power that... [cross-talk]

18 COUNCIL MEMBER LEVIN: Yeah... [cross-talk]

19 SUSANNE DESROCHES: ... we could be  
20 bringing to New York City residents.

21 COUNCIL MEMBER LEVIN: Right, right. Do  
22 you see this as a... as a catalyst and a... or  
23 potentially having the result of being a catalyst to,  
24 to incentivizing the, the production of new... of new  
25 renewable energy sources?

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2 SUSANNE DESROCHES: So, we don't know  
3 until we do the study and I think that that's why  
4 we're so supportive of the bill, we want to make sure  
5 that the CCA is actually the right tool to be able to  
6 incentivize that level of renewable power coming into  
7 the city.

8 COUNCIL MEMBER LEVIN: Do you see CCAs as  
9 potentially having the result of, of producing  
10 reinvestment in communities and have you kind of  
11 thought about how... what that might look like?

12 SUSANNE DESROCHES: So, again I think  
13 that, you know we haven't looked specifically at  
14 that, we have many other levers that we're trying to  
15 use in order to incentivize renewable power being  
16 built within city limits... [cross-talk]

17 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
18 talk]

19 SUSANNE DESROCHES: ...so, you know that  
20 would be definitely a top criterion, the clean jobs  
21 and to have that localized distributed generation you  
22 talked about, resiliency also factoring into why we  
23 want that kind of power source in New York City.

24 COUNCIL MEMBER LEVIN: And then when it  
25 comes to consumer protection... [cross-talk]

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2 SUSANNE DESROCHES: Uh-huh... [cross-talk]

3 COUNCIL MEMBER LEVIN: ...I mean the, the...  
4 all along I've kept in mind, you know a grandmother  
5 who is not necessarily tech savvy, doesn't... isn't,  
6 you know too up to date on, on all of the renewable  
7 energy... on the energy... renewable energy front and...  
8 you know or don't... or doesn't really have time to,  
9 to, to explore all of this stuff, how do we ensure  
10 that the, the customer who doesn't want to... doesn't...  
11 you know doesn't want to participate in any extensive  
12 research is not going to be harmed with a higher  
13 energy bill as a result of a CCA?

14 SUSANNE DESROCHES: We share that  
15 concern, it's one of our main concerns about an opt  
16 out style program is that how do you ensure that each  
17 and every person that's going to be effected  
18 understands the parameters of, of what that... what  
19 they're signing up for, what they are being signed up  
20 for which is... [cross-talk]

21 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
22 talk]

23 SUSANNE DESROCHES: ...different than if  
24 you opt in where, you know you would if... [cross-talk]

25

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2 COUNCIL MEMBER LEVIN: Sure, informed...

3 [cross-talk]

4 SUSANNE DESROCHES: ...have those so...

5 [cross-talk]

6 COUNCIL MEMBER LEVIN: Right... [cross-

7 talk]

8 SUSANNE DESROCHES: ...again, you know if,  
9 if we were to embark on a CCA there would need to be  
10 a very extensive campaign, we know we're, we're also  
11 sensitive to some predatory practices by Escos that  
12 have been in the news over the past few years,  
13 there's been a... you know a state case on that and  
14 certainly wouldn't want to have this sort of effect  
15 our residents in a... in a negative way so again one of  
16 our, our top screening criteria for the CCA study  
17 will be... [cross-talk]

18 COUNCIL MEMBER LEVIN: Right... [cross-

19 talk]

20 SUSANNE DESROCHES: ...you know how you  
21 would... how would you implement something like this.

22 COUNCIL MEMBER LEVIN: And honestly even  
23 ten cents a month in, increase in an energy bill  
24 could severely hamper the credibility of any CCA  
25 program so... [cross-talk]

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2 SUSANNE DESROCHES: Absolutely... [cross-  
3 talk]

4 COUNCIL MEMBER LEVIN: ...I think it's,  
5 it's a... it's an essential component so... with that I  
6 will turn it back over to the Chair, thank you very  
7 much for your time.

8 CHAIRPERSON CONSTANTINIDES: Alright, so  
9 at this time I look forward to working with you guys  
10 further and I'll, I'll let this panel go and thank  
11 you very much... [cross-talk]

12 SUSANNE DESROCHES: Thank you.

13 CHAIRPERSON CONSTANTINIDES: Alright, so,  
14 so Christopher Cavanagh from National Grid; Kyle  
15 Kimball from Con Edison; I think we have... okay, so  
16 then we have Gaylord Olson in, in... for... representing  
17 himself and Bob Wyman representing himself as well.

18 [off mic dialogue]

19 CHAIRPERSON CONSTANTINIDES: So, let's  
20 start with Con Edison and National, National Grid  
21 first and then we'll go from there.

22 KYLE KIMBALL: Good morning Mr. Chairman  
23 and members of the Committee, thanks for the  
24 opportunity to provide comments today. My name is  
25 Kyle Kimball, I'm the Vice President of Government

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2 Relations at Con Edison and I'm joined today by Matt  
3 Ketschke who's our Senior Vice President of Customer  
4 Energy Solutions at Con Edison and Mike Porto, who's  
5 our Director of City Government Relations. Our  
6 comments today are focused on how we can work  
7 together to achieve our shared clean energy goals.  
8 Con Edison has been a leader in transforming the New  
9 York City energy grid, the most complex in the world,  
10 to a resilient grid that will facilitate an orderly  
11 transition to a clean and affordable energy future  
12 for our customers. Our customers are clear; they want  
13 access to more renewables, energy efficiency, demand  
14 response, storage and the information to help them  
15 manage their energy usage and bills. We're taking  
16 advantage of technology and innovation to provide  
17 customers with the tools to help them save money and  
18 help us keep our electric, gas and steam service  
19 safe, affordable, and reliable. Our commitment to  
20 clean energy is real. Through our clean energy  
21 subsidiaries, we are one of the largest solar  
22 providers in North America and with 2,600 megawatts  
23 of renewable assets across 17 states, Con Edison  
24 assets avoid 5.4 million tons of carbon dioxide  
25 emissions, the equivalent of taking 1.2 million cars

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2 off the road. Our steam system here in New York City  
3 saves nearly one million metric tons in New York City  
4 alone. Since 2001, we have helped customers connect  
5 to more than... more... we, we have helped customers  
6 connect to more than 26,000 solar projects that  
7 produce 250 megawatts of clean, renewable power. And  
8 our customers aren't done yet. We have another 3,300  
9 applications for customer sited solar generations in  
10 the queue. Those projects would produce an additional  
11 100 megawatts of generation. We have work to do to  
12 get to a cleaner and affordable energy future. Con  
13 Edison continues to ask the Council for your strong  
14 support and collaboration from the following  
15 prerequisite strategies, programs and investments to  
16 get our... to our clean energy future. First on  
17 renewables, we ask for your continued support of our  
18 recently launched shared solar program that will  
19 install solar panels on, on our facilities, including  
20 in Astoria, and use the resulting credits to give  
21 monthly discount to low income customers, so that our  
22 clean energy future is accessible to everyone.  
23 utility ownership of large-scale renewables and  
24 renewable generation to take advantage of low-cost  
25 capital and other business strategies is the second

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2 request. Third, the development of the necessary  
3 transmission infrastructure as the city noted to  
4 deliver that renewable energy to New York City. Also,  
5 on the technology side we need to make sure that  
6 customers have the technologies to empower smart  
7 energy choices. First, making energy, energy  
8 efficiency programs, non-wire solutions, and non-  
9 pipeline solutions a growing and important part of  
10 our core business. Two, smart meter technologies and  
11 implementation to give customers the data that they  
12 need to make smart choices. Third, investments in  
13 programs to accelerate the adoption of electric  
14 vehicles and fourth finally we ask for your support  
15 to ensure that the, the battery storage which  
16 improves the grid resiliency and reliability, is  
17 permitted by the FDNY and Department of Buildings and  
18 becomes an integral part of our energy  
19 infrastructure. Going back to the issue of utilities  
20 owning large scale renewable assets; for New York  
21 State and the city to meet their short and long term  
22 carbon reduction goals, recently codified and  
23 expanded with the passage of the climate leadership  
24 and community protection act, we need a major  
25 increase in large scale renewable energy and that's

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2 really not lost on anyone here. We think that it  
3 makes sense to let customers own and operate these  
4 large-scale renewable resources through their  
5 utilities. They can be constructed by private  
6 developers, but the financing and operating costs  
7 would be cheaper for our customers if utilities owned  
8 them over the long term. This is because utility  
9 ownership means a guaranteed source of renewable  
10 energy, lowering costs and increasing union jobs. To  
11 achieve society's ambitious environmental goals, we  
12 will have to make progress on heating and cooling  
13 technologies as well as our buildings are our  
14 greatest emitters of, of carbon. The enactment of  
15 Local Law 97, or the remissions limits bill, promotes  
16 renewable technologies and clean energy solutions  
17 that present both challenges and tremendous  
18 opportunity. As a key player in this equation between  
19 the building and its energy use, and the larger  
20 effect on the electric grid, we are seeking to be on  
21 the advisory board established by Local Law 97.  
22 Providing customers with more choices, like the  
23 ability to adopt geothermal and air source heat pumps  
24 to heat and cool their homes and businesses, is an  
25 opportunity for us and our customers. Incentivizing

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2 our customers to adopt heat pumps for space cooling  
3 and heating is one of our key demand side solutions.  
4 High efficiency heat pumps have the potential to  
5 reduce customer usage on the coldest winter days and  
6 throughout the heating season. During the summer  
7 months, the heat pumps provide the high efficiency  
8 cooling, reducing electric usage and further adding  
9 to the environmental benefit. And Con Edison has been  
10 incentivizing air source heat pump technologies for  
11 more than three years and expects to incentivize more  
12 than 5,000 units in 2019, the more... majority of which  
13 will be in cold climate air source heat pumps and  
14 thus capable of both of heating and cooling. In early  
15 2019, the company announced a partnership with  
16 Dandelion, which is a ground source heat pump  
17 company, and began providing 5,000 dollars per home  
18 to incentivize adoption in Westchester. As part of  
19 the state's latest energy efficiency order we plan to  
20 significantly ramp up our offering to facilitate heat  
21 pump adoption throughout our service territory. We  
22 plan to provide more than 200 million to our  
23 customers for heat pumps in the next six years and  
24 expect heat pumps, air and ground source to be key  
25 part of our renewable solutions to heat and cool

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2 buildings in the future. Ground source heat pumps are  
3 highly efficient but there are some limitations to  
4 wide scale deployment in a dense urban setting such  
5 as New York City. We consider geothermal as one part  
6 of a larger toolkit for low carbon buildings. This  
7 year has been transformational for the state and the  
8 city's climate legislation agenda. Local Law 97 and  
9 now the CLCPA will fundamentally accelerate the  
10 transition to a low carbon future. We support these  
11 efforts and are already working toward achieving  
12 these targets while still providing safe, reliable  
13 energy for all New Yorkers. We understand the urgency  
14 in reaching society's carbon reduction goals and its  
15 important to engineer a smooth transition that is  
16 affordable and accessible to our customers. Con  
17 Edison has an obligation to provide New Yorkers with  
18 the energy they need today to keep their homes and  
19 businesses energized and we look forward to working  
20 with you and other policymakers in the city to ensure  
21 an orderly transition to a clean energy future. Thank  
22 you once again for the opportunity to join you here  
23 today and we'd be happy to... happy to answer any  
24 questions.

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2 CHAIRPERSON CONSTANTINIDES: Do you have  
3 any positions on any of the bills today?

4 KYLE KIMBALL: No direct opposition or to  
5 any of the bills today, yeah... [cross-talk]

6 CHAIRPERSON CONSTANTINIDES: Okay, so  
7 you're just here just to... [cross-talk]

8 KYLE KIMBALL: Be, be supportive of your...  
9 of your agenda, yep.

10 CHAIRPERSON CONSTANTINIDES: Okay, thank  
11 you. Next. Yeah, National Grid you're up, uh-huh.

12 CHRIS CAVANAGH: Good afternoon Mr.  
13 Chairman and members of the Committee... I'll start  
14 over, oh, there we go, that's it, thank you. You  
15 turned it off on me. Alright, good afternoon Mr.  
16 Chairman and members of the Committee. My name is  
17 Chris Cavanagh, I'm a principal program manager in  
18 the Customer Innovation Group at National Grid. Thank  
19 you for the opportunity for us to present our support  
20 for the objectives of these energy proposals. We here  
21 all agree that climate change is the greatest  
22 challenge that humanity faces and at the same time  
23 it's the greatest challenge the energy industry... for  
24 the energy industry as well. National Grid believes  
25 in the science of climate change and has a blueprint

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2 for drastically reducing greenhouse gas emissions 80  
3 percent below 1990 levels by 2050 called our  
4 northeast 80 by 50 pathway. Alright, our approach  
5 aligns with the city of New York, New York State and  
6 the Northeast clean energy transition policies to  
7 help reduce greenhouse gas emissions. We are a strong  
8 advocate for policy and regulatory approaches that  
9 provide resilient solutions to help achieve emissions  
10 targets in a reliable and affordable way on behalf of  
11 our customers. And we look forward to the opportunity  
12 to collaborate with the city on many of these ideas.  
13 For National Grid, climate change isn't a political  
14 question, but scientific fact and we believe that  
15 innovation and a diverse set of stakeholders at the  
16 table will enable us to reach the clean energy future  
17 we all want. We are happy to join with the New York  
18 City Council in pursuit... in pursuit to help combat  
19 climate change and are pleased to support these  
20 proposed Local Laws. These proposals cover four  
21 areas; community choice aggregation, geothermal  
22 heating and cooling, solar power and solar thermal  
23 systems, battery energy storage. On community choice  
24 aggregation, Intro 140 proposes a study to be  
25 performed to determine the feasibility of

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2 implementing in the city one or more community choice  
3 aggregation opt out programs. National Grid supports  
4 the non-utility market for energy use supply  
5 including for sourcing renewable energy. As the  
6 proposal states, such programs are the subject of  
7 extensive ongoing evaluations by the New York Public  
8 Service Commission and there are several  
9 implementation issues to carefully consider,  
10 especially relating to the access and use of customer  
11 data. It is recommended that experiences of other  
12 regional municipalities and utilizes should be  
13 considered in the feasibility study. Geothermal, so  
14 Intros 51, 1076 and 1375 would support the expansion  
15 of the use of geothermal heating and cooling in New  
16 York City especially in district systems. National  
17 Grid has already identified the customer.. the  
18 customer, utility system and environmental benefits  
19 of ground source heat pumps. National Grid is near  
20 completion of a two-year demonstration of a district  
21 geothermal system at a retirement community in  
22 Riverhead, New York. this has been a highly  
23 successful demonstration in terms of energy  
24 performance and customer satisfaction. It has led to  
25 the proposal that we have now before the Public

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2 Service Commission to allow National Grid to  
3 demonstrate utility ownership of the ground loop  
4 portion of ground source heat pump systems, both on  
5 Long Island and here in New York City, in order to  
6 support the growth of the geothermal market. The  
7 proposed local laws would support similar systems and  
8 the proposed database of subservice commissions...  
9 condition is a great idea that would reduce the  
10 financial risk of initiating such projects...  
11 proposals. Solar power and solar thermal. So, Intros  
12 269 and 426 propose pilot programs in which a  
13 district scale solar thermal system is used in  
14 conjunction with solar photovoltaic systems to  
15 provide all the heating, hot water, cooling and  
16 electricity needs for covered buildings participating  
17 in such a program. The program also considers thermal  
18 energy storage. It is well known that the use... that...  
19 it is well known, sorry that the use of solar  
20 photovoltaic systems has grown rapidly in recent  
21 years and has resulted in significant reductions in  
22 unit costs. We were pleased to recently provide  
23 funding for the solar power system at the Arverne  
24 Church of God facility in Far Rockaway that was used  
25 to serve the residents during superstorm Sandy, to

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2 both add resiliency and to save energy costs. So too,  
3 there is a similar potential for solar thermal  
4 technologies and thermal... and thermal storage  
5 technologies but we would recommend that such  
6 policies do not fail to recognize the value of the  
7 broader community renewables such as remote... more  
8 remote solar and renewable gas. National Grid has  
9 sponsored research at the Gas Technology Institute  
10 into evacuated tube solar collectors which heats  
11 water from 60 degrees Fahrenheit to more than 140  
12 degrees Fahrenheit even in the winter and results so  
13 far are pretty impressive but costs do remain high to  
14 be... to meet a cost of... you know to be cost effective  
15 but it is improving. Likewise, there are significant  
16 potential benefits and value to thermal energy  
17 storage and new companies are developing a variety of  
18 techniques beyond the simple water tanks that could  
19 potentially supported by a program... that could  
20 potentially supported by the proposed expansion of  
21 our non-pipeline alternatives initiatives now... also  
22 now before the Public Service Commission. Energy  
23 storage, Intro 49 will require a feasibility study  
24 regarding the use of utility scale battery storage  
25 systems at city owned buildings. Energy storage

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2 systems are an enabling technology for the next  
3 generation of any kind of renewable energy. National  
4 Grid with Tesla is, is showing... with Tesla is showing  
5 the environmental and economic benefits of battery  
6 storage in terms of avoided electric infrastructure  
7 on Nantucket Island in part with offshore wind power.  
8 National Grid encourages this study but also  
9 recommends that the renewable energy storage not be  
10 considered, not be limited to electro chemical  
11 batteries. For example, the New York Power Authority  
12 studied compressed air energy storage under New York  
13 City in the 80s. Today, National Grid is evaluating  
14 the storage of renewably produced hydrogen as an  
15 effective energy storage medium for electricity  
16 converted back to electricity with fuel cells or for  
17 the production of synthetic gas injected into the  
18 district... gas distribution system, called the power  
19 to gas concept. So, at National Grid we've already  
20 taken concrete steps to move toward a clean energy  
21 future. Modernizing our infrastructure to meet 21<sup>st</sup>  
22 century demands and connecting customers to  
23 distributed generation and renewable energy, such as  
24 our partnership for renewable gas at the Newtown  
25 Creek wastewater treatment plant, will help us

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2 towards... will help us toward a future of an  
3 integrated, decarbonized energy system that includes  
4 renewable energy for all modes of transportation. We  
5 are also setting the groundwork with a clean energy  
6 presence... in the present... [cross-talk]

7 CHAIRPERSON CONSTANTINIDES: If you could  
8 wrap up that would be great.

9 CHRIS CAVANAGH: Sorry?

10 CHAIRPERSON CONSTANTINIDES: You can wrap  
11 up that'd be great...

12 CHRIS CAVANAGH: Okay, that's it... [cross-  
13 talk]

14 CHAIRPERSON CONSTANTINIDES: Summarize  
15 please.

16 CHRIS CAVANAGH: Yeah, including dramatic  
17 reductions in the quantity of small leaks. We'll talk  
18 about the success of the, the clean heat program in  
19 the past and the 20 million dollars we've basically  
20 spent in energy efficiency and we are committed to  
21 doing more to help our customers make more informed  
22 choices and develop new energy products and services.  
23 National Grid looks forward to working with the city  
24 to develop plans and programs to apply our array of  
25 energy solutions to help New York City achieve our

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2 shared and aggressive greenhouse gas targets. Thank  
3 you, Mr. Chairman.

4 CHAIRPERSON CONSTANTINIDES: Alright,  
5 thank you.

6 [off mic dialogue]

7 SERGEANT AT ARMS: Quite down please sir.

8 CHAIRPERSON CONSTANTINIDES: Mr. Wyman,  
9 yep.

10 BOB WYMAN: Okay, good afternoon, my name  
11 is Bob Wyman. I'd like to... before making general  
12 comments I'd like to just make technical comments on  
13 Intro 51 which by the way I support in general the,  
14 the... all of the bills that are being presented today,  
15 technical... Intro 51 has a, I think a technical issue,  
16 two issues in it. One is the, the bill requires that  
17 the property shall vest to the owner... the, the  
18 geothermal equipment should vest to the owner of the  
19 property at the conclusion of the PPA. It's important  
20 to understand that under federal tax law if that is  
21 the case the property would no longer... with... for tax  
22 purposes the property would be considered to be owned  
23 by the property owner not by the person who paid for  
24 it, the installer and thus all the tax benefits and  
25 things would go to the property owner that means that

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2 the installer won't be able to use the traditional  
3 methods of tax equity financing and such and the  
4 costs would go up. The other concern I have with  
5 Intro 51 is that it requires that no PPA shall be  
6 allowed to extend beyond seven years and given a  
7 situation in which we're assuming that the... there  
8 would be shared savings between the, the installers  
9 and the property owners that just guarantees that  
10 nobody is willing to offer such a PPA. I suggest that  
11 you very seriously looking... look at extending the  
12 allowed length of PPAs but the most important thing  
13 I'd like to say to you today is in general about the  
14 importance of all of these bills to, together and I  
15 want us to look back to Intro... Local Law 66 2014 that  
16 established the current carbon emission reductions  
17 for the city, the 30 by 30 and the 80 by 50. It's  
18 important to note that we've made good progress I  
19 think in the last few years in, in achieving those  
20 goals, citywide emissions have already gone down by  
21 about 17 percent, in fact emissions from buildings  
22 have gone down 21 percent since 2005. However, its  
23 important to understand that while that has been  
24 going on emissions from natural gas used in buildings  
25 have been continuously growing. In fact, they're

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2 growing to the point where today natural gas  
3 emissions in buildings are now at level, at least in  
4 2017, the most recently reported date of 144 percent  
5 of the total citywide all sources limit on carbon  
6 emissions in 2050. What that means is that although  
7 all the other sources of emissions in buildings have  
8 been reduced, natural gas has been going up and it's  
9 on a continuous trend, it shows no, no indications of  
10 slowing down. In fact, we have the utilities all  
11 proposing that we dramatically increase the use of  
12 natural gas in the future through gas expansion  
13 through the Williams pipeline through other such  
14 mechanisms. It's important to understand that if  
15 natural gas emissions are already at 155 percent of  
16 the limits that we've established for ourselves 30  
17 years from now in the future, okay, the only thing  
18 that we should be doing right now is focusing on  
19 understanding how do we reduce natural gas emissions  
20 because even if the... everything else goes to zero as  
21 for instance we know because of the bill that was  
22 passed last year in the state... last week in the state  
23 electricity will become completely carbon free in  
24 2040 even so, okay, because in New York City natural  
25 gas emissions are 144 percent of the 2050 limit we

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2 cannot meet the, the goals that have been... have been  
3 established by this City Council. I think it's  
4 important for us to understand that at the moment the  
5 utilities are essentially thumbing their nose at the  
6 City Council and at the government of the city so is  
7 the PSE and the state government, they are  
8 consistently proposing more natural... more gas  
9 expansion within the city, they are proposing longer  
10 depreciation terms for the equipment essentially  
11 saying that the equipment they're installing today is  
12 going to last 65, 85, or more years in the future  
13 completely ignoring the fact that the city has very  
14 clearly set limits, a 30 year limit in fact on the  
15 lifetime of natural gas in this city. We should be  
16 pursuing beneficial electrification, we should be  
17 pursuing heat pumps, we should not be installing more  
18 natural gas in this city. The people in the past have  
19 said..

20 [applause]

21 BOB WYMAN: Yeah, sorry. People in the  
22 past have said it's good to do oil and gas  
23 conversions because that reduces the amount of carbon  
24 that's emitted and it does, okay. One can argue..  
25 let's ignore methane that's a whole another subject

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2 but it only does so in the short term. People claim  
3 it's a bridge but it's a bridge too far. As we've  
4 discussed in the past in testimony natural gas  
5 infrastructure is, is paid for over a 65 to 85-year  
6 period, okay. It doesn't do us any good to reduce  
7 carbon emissions over the next five to ten to 15  
8 years, okay if our goal is to have a reduction of, of  
9 an additional 30 to 35 percent by, by 2050 in order  
10 simply to meet our existing goals. We must stop gas  
11 expansion now, the numbers are very clear on this,  
12 city law is very clear on this, I suggest that  
13 anybody who is proposing gas expansion is in essence  
14 thumbing their nose Costa at you, at the City  
15 Council, they're ignoring the law, they're ignoring  
16 the requirements that we have set, we must get  
17 natural gas from 144 percent of the 2050 limit for  
18 all emissions to something significantly below 100  
19 percent of all the city emissions by 2050.

20 [applause]

21 CHAIRPERSON CONSTANTINIDES: Alright, so  
22 I'm going to be very brief with this panel because I  
23 have a lot of other panels to hear from today. Mr.  
24 Olson I'm going to call you as part of the next panel  
25 because right now we've got like a full house here so

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2 I'm just... I'm going to call you as part of the next  
3 panel if that's okay because there's just not enough  
4 seats, if it were any other chamber, I'd have six,  
5 but I don't have that here. So, I had asked for data  
6 last time around that I still haven't received, do  
7 you know when that's going to be coming to me?

8 KYLE KIMBALL: Who is the question  
9 directed at?

10 CHAIRPERSON CONSTANTINIDES: Yeah...

11 KYLE KIMBALL: At Con Edison?

12 CHAIRPERSON CONSTANTINIDES: No, it's not  
13 National, National Grid, I had asked for data  
14 relating to why the Williams Pipeline was so  
15 necessary and I was told I was going to get it and I  
16 never got it so is that data coming to me still or  
17 we're not going... I still have to rely on your saying  
18 that, that it was necessary.

19 CHRIS CAVANAGH: I'm not personally  
20 responsible for the question but I will certainly  
21 take it back and get the information... and you'll get  
22 the information requested.

23 CHAIRPERSON CONSTANTINIDES: You're not  
24 the person responsible?

25

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2 CHRIS CAVANAGH: No, I'm not personally...  
3 familiar, familiar with the data that you're talking  
4 about or the request.

5 CHAIRPERSON CONSTANTINIDES: Yes, yes,  
6 yes... [cross-talk]

7 CHRIS CAVANAGH: ...but I'll make sure I'll  
8 get it to the person immediately... [cross-talk]

9 CHAIRPERSON CONSTANTINIDES: Yeah because  
10 it, it... to have you hear today when you still haven't  
11 complied with my request from... that's more than two  
12 months old is a little disingenuous and I'm trying to  
13 be kind.

14 CHRIS CAVANAGH: Understood.

15 CHAIRPERSON CONSTANTINIDES: Understood?

16 CHRIS CAVANAGH: Yes, sir.

17 CHAIRPERSON CONSTANTINIDES: Great, is  
18 the city working with you on these geothermal,  
19 geothermal projects that they discussed today?

20 CHRIS CAVANAGH: Not yet because the...  
21 right now we're, we're still in the proposal stage  
22 with the public... we're still waiting for Public  
23 Service Commissioner approval.

24 CHAIRPERSON CONSTANTINIDES: You're still  
25 waiting... [cross-talk]

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2 CHRIS CAVANAGH: We currently... [cross-  
3 talk]

4 CHAIRPERSON CONSTANTINIDES: ...for Public...  
5 [cross-talk]

6 CHRIS CAVANAGH: ...we currently have a, a...  
7 an active petition with the Public Service Commission  
8 with... [cross-talk]

9 CHAIRPERSON CONSTANTINIDES: For an  
10 increase, correct?

11 CHRIS CAVANAGH: Sorry?

12 CHAIRPERSON CONSTANTINIDES: For an  
13 increase with the, the... [cross-talk]

14 CHRIS CAVANAGH: Its part of the current  
15 rate case proposal before the state.

16 CHAIRPERSON CONSTANTINIDES: Which is an  
17 increase to the rate payers... [cross-talk]

18 CHRIS CAVANAGH: Yes... [cross-talk]

19 CHAIRPERSON CONSTANTINIDES: Correct?

20 CHRIS CAVANAGH: Yes, it is.

21 CHAIRPERSON CONSTANTINIDES: Okay, but in  
22 the meantime, we can't figure out how to do more  
23 renewable energy and geothermal, we have to wait till  
24 the... there's an increase to the rate payers to do  
25 that?

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2 CHRIS CAVANAGH: Well we don't have a...  
3 it's, it's more than just about funding obviously a  
4 funding source is requires but we also don't have the  
5 authority right now to build geothermal systems, we  
6 need state and... we need franchise and state Public  
7 Service Commissioner it's already on the PSL 66.

8 CHAIRPERSON CONSTANTINIDES: Okay.  
9 Alright, great. Thank you very much.

10 CHRIS CAVANAGH: You're welcome.

11 CHAIRPERSON CONSTANTINIDES: Appreciate  
12 your testimony today, thank you. Alright, so Philip  
13 Chen from Green Building Worldwide; Zayne Cowie for  
14 Fridays for your Future; Ben Arana from Local three;  
15 John Breitbart and Mr. Olson. Okay and then Jonathan  
16 Minard from Extinction Rebellion. He had to leave, I  
17 did the best I... alright, great, so let's start on  
18 this side of the table. Alright, go ahead.

19 JOHN BREITBART: Hello, my name is John  
20 Breitbart, I'm here speaking for myself on these  
21 questions. Before I forget I tried to make notes but  
22 something new occurred to me so I'm going to start  
23 with this. I didn't see among any of the bills being  
24 considered today mention of actually rehabbing  
25 buildings so that they use less energy, I assume this

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2 is being addressed elsewhere if not I feel there must  
3 be a form of insanity in place. Our buildings in New  
4 York are not up to code by 80 percent in terms of the  
5 energy they use compared to other countries where  
6 things like passive house architecture have been  
7 developed so I certainly hope that's being addressed  
8 elsewhere. Okay, I would like to say my main point  
9 will be about the urgency and whether... and that the  
10 importance of this resolution about the energy  
11 emergency provides a new element to consider in terms  
12 of the decarbonization. Other words our industrial  
13 civilization has built a house made of asbestos and  
14 then covered with lead paint. This resolution on  
15 climate emergency is important because it provides  
16 the urgency needed to power all of the New York City  
17 and other legislation that addresses the climate  
18 crisis. Cost cannot be a consideration in this  
19 process only urgency. Think of the mobilization that  
20 was needed for world war II, no one asked how much  
21 this would cost, whatever financing was needed was  
22 procured and as needed at the federal level of money  
23 was printed. Also every bill that initiates programs  
24 or regulations needed to include a climate crisis  
25 impact need to include a climate crisis impact

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2 statement that indicates how many gigatons of carbon  
3 equivalent per New York City citizen per year it  
4 prevents and whether the speed of its impact meets  
5 the need determined by the urgency dictated by the  
6 climate crisis. There needs to be kept a tally of how  
7 much each bill contributes towards meeting the  
8 specific deadline of carbon neutrality by reasonable  
9 years such as 2030. Lastly, we need to indicate...  
10 understand that landlords and others who will lose  
11 profit through the legislation to meet the climate  
12 challenge will scream loudly to express their pain at  
13 the loss of profit. We need to respond appropriately  
14 to such protestations and fairly. Since the beginning  
15 of the fossil fuel age massive profits have been made  
16 by ignoring the future consequences of the carbon  
17 that has been used. It is now critical that all  
18 carbon energy used be based on the actual cost  
19 including the destruction of earth in so far as its  
20 ecological devastation includes mass death and  
21 suffering. Thank you.

22 CHAIRPERSON CONSTANTINIDES: Thank you.  
23 Go ahead Mr. Olson.

24 GAYLORD OLSON: Hello, thank you for the  
25 invitation to speak today. My name is Gaylord Olson

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2 and I'm here with my associate Jim Thomas from Thomas  
3 Geothermal Engineering. He and I and a few others are  
4 working on what we believe is something a little bit  
5 beyond standard geothermal or ground source heat  
6 pumps. We believe that even though right now people  
7 are forced to choose between air source heat pumps or  
8 ground source slash geothermal heat pumps. We believe  
9 in the future there will be something better and  
10 when, when I say better what I mean is lower cost to  
11 install and lower cost to use, lower electricity  
12 bills. Our, our goal is to have a 25 percent  
13 reduction in the cost to, to install a system with a  
14 heat pump compared to standard geothermal and also  
15 have 25 percent lower electricity bills for that  
16 system. So, we, we believe it's time for people in  
17 this country to look into this if they're interested  
18 in the, the, the future benefits of electrification  
19 of heating and cooling. Do you all have the handout  
20 that... I know Samara does have it and if, if you don't  
21 have it, I did bring 20 of them and I'd be happy to  
22 go into more detail whenever anybody wants. Samara  
23 has my contact information correct so... and I didn't  
24 put it on here, but we do have a website which is www  
25 dot S S T U S A dot net and I'd be happy to go into a

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2 lot more detail. How much time do I have from right  
3 now?

4 CHAIRPERSON CONSTANTINIDES: 220.

5 GAYLORD OLSON: About two minutes?

6 CHAIRPERSON CONSTANTINIDES: About two  
7 minutes, yes sir.

8 GAYLORD OLSON: Okay, I'll try to go  
9 through these slides really quick, I'd be happy to  
10 answer questions also. If people talk about a hybrid  
11 heat pump system right now, they're probably talking  
12 about the page two in my handout that is an  
13 evaporative cooling tower that combines with a water  
14 source heat pump or multiple heat pumps. That second  
15 page shows three heat pumps and if you go to England  
16 right now and you use the phrase hybrid heat pump,  
17 they're probably going to think you mean natural gas  
18 with a boiler which is on the right-hand side of that  
19 page. So, we're aiming at no more natural gas, total  
20 electric and it's going to be a combination of air,  
21 air source mode and ground source mode and another  
22 mode that we're calling preconditioning where you use  
23 a water pump to either heat up the ground loop on a  
24 warm sunny afternoon or cool off the ground loop if  
25 you live in Florida and it's three o'clock in the

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2 morning and the orange groves are freezing. Now of  
3 course we live in, in New York, I live in New Jersey  
4 but we have... for the smaller buildings we have a need  
5 for both heating and cooling so going to page three  
6 in my handout we have a pretty simple concept  
7 showing, shown there which is no more than pretty  
8 much standard plumbing of pipes, water in the pipes,  
9 you know, a water source heat pump. We have a ground  
10 loop and we have one other item which could be called  
11 a dry cooler but really cooler is the wrong name for  
12 it, it's really an air to liquid heat exchanger just  
13 like the radiator in your car, it's got a fan, you  
14 can pump water through it and it'll either heat up or  
15 cool down whoever you need at the time, it's pretty  
16 simple and basic, low cost. The, the principle point  
17 here is that the, the dry cooler cost per ton is  
18 about one tenth the cost of a ground loop where we  
19 live, cost per ton of heating and cooling, that's a  
20 significant benefit so we have... oh my time is up. I  
21 just got started, sorry about that.

22 CHAIRPERSON CONSTANTINIDES: It's quite  
23 okay, sorry, sorry that we can't go for longer, we  
24 have a lot... we have about 40 people left to testify  
25 so... [cross-talk]

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2 GAYLORD OLSON: Okay... [cross-talk]

3 CHAIRPERSON CONSTANTINIDES: ...I apologize  
4 for that. Thank you.

5 BENJAMIN ARANA: Good afternoon Chair  
6 Constantinides and distinguished committee members.  
7 Thank you for the opportunity to testify at today's  
8 hearing. My name is Benjamin Arana, I am a Business  
9 Representative for Local Union Number Three,  
10 International Brotherhood of Electrical Workers and  
11 I'm responsible for the solar PV Program in our  
12 industry. I want to start by stating that Local Union  
13 Number Three is in support of T2019-4470, everything  
14 that we're here for today. Local Three and its  
15 affiliated electrical contractors are proud of its  
16 long history of construction and maintaining the  
17 electrical grid infrastructure that powers New York  
18 City's vibrant economy. Our skilled tradesmen and  
19 women continue to be ready and able to meet the new  
20 challenges brought about by technology advances...  
21 technological advances through continued training and  
22 the latest renewable energy installation methods at  
23 our state-of-the-art training facility. Our trained  
24 electricians worked on the installation of the  
25 geothermal system at Saint Patrick's Cathedral as

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2 well as the first net zero school built in Staten  
3 Island. Additionally, they have installed numerous  
4 photovoltaic systems throughout the five boroughs.  
5 Our advanced green jobs program and solar, wind  
6 turbine and other renewable technologies enable us to  
7 continue providing the expert and professional  
8 services that our valued customers have grown  
9 accustomed to receiving. While we support the  
10 objectives outlined today we urge you to include  
11 principles that will create good local jobs in order  
12 to set weight standards that enable new entrance into  
13 the industry, an opportunity to earn a good living  
14 wage as well as receive safety and training through a  
15 qualified pre-apprenticeship and New York State  
16 certified apprenticeship programs. I respectfully ask  
17 that the New York City agency project labor  
18 agreements be used for future solar installation and  
19 all future retrofit work associated with reducing the  
20 carbon emissions. PLAs already have language for  
21 local hire and minority participation in place. In  
22 regard to Intro 0049 and Intro 0269 and Intro 426 we  
23 need to move them forward so we can get this work on  
24 the way. The clock is ticking, and we have ambitious  
25 deadlines to meet by 2030. I stated above, as these

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2 work opportunities become available to our  
3 contractors we can increase our membership from the  
4 communities that these projects are in through the  
5 programs that are already in place such as  
6 construction skills, P2A which stands for pathways  
7 into apprenticeships, NYCHA which has direct entry to  
8 other construction trades, nontraditional employment  
9 for women better known as NEW and helmets to  
10 hardhats. Local Union Number Three supports  
11 Resolution 864, our business manager, Christopher  
12 Erickson addressed the membership of Local Three and  
13 expressed the importance of supporting the climate  
14 march in 2014, Mr. Erickson was a key note speaker at  
15 the 2014 climate march where he stated we need to  
16 leave the planet better than we found it for our  
17 children and grandchildren. Climate change is not a  
18 hoax but a real and present danger that needs to be  
19 addressed with the urgency and action that is.. that  
20 it merits. In closing with the... with the support of  
21 the New York City Council and key environmental  
22 stakeholders, Local Union Number Three will continue  
23 to play a pivotal role in advancing a climate change  
24 agenda toward a cleaner and more environmentally

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2 sustainable planet. Thank you for your time and  
3 consideration regarding these important issues.

4 CHAIRPERSON CONSTANTINIDES: Right on the  
5 clock, that was pretty good.

6 BENJAMIN ARANA: I timed it, I worked on  
7 that. Thank you.

8 CHAIRPERSON CONSTANTINIDES: Next up.

9 JONATHAN MINARD: Good afternoon Chairman  
10 Constantinides and Committee members. Thank you for  
11 welcoming us here today and listening. My name is  
12 Jonathon Minard, I'm a filmmaker, resident of  
13 Greenpoint, Brooklyn with Extinction Rebellion. We  
14 are facing an ecological crisis of apocalyptic  
15 proportions with rising temperatures rendering the  
16 planet uninhabitable to all life. We don't want to be  
17 the generation who witnessed the death of a million  
18 species and did nothing about it. We need to be a  
19 voice for the voiceless animals and plant, plants on  
20 the brink of extinction and we need to protect the  
21 biospheres for our children and grandchildren will  
22 have a safe place to live. In terms of biomass,  
23 people make up just .01 percent of life on earth and  
24 yet in our brief history as the dominant life form  
25 human civilization has degraded 75 percent of the

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2 worlds land, displaced 83 percent of the wildlife  
3 population and wiped out over 680 vertebra species  
4 and the die off rate is accelerating. According to  
5 the United Nations 2019 IPBS report, that's the  
6 Intergovernmental Science Policy Platform on  
7 biodiversity and ecosystem services, 145  
8 international experts concluded that in the coming  
9 decades we could see a quarter of all mammals, over a  
10 third of amphibians and a quarter of plant species  
11 annihilated, gone forever and we are next. We're in  
12 the middle of a mass extinction event on a scale not  
13 seen since the day the dinosaurs died but this time,  
14 we are the asteroid. Scientists have traced the  
15 principle causes of biodiversity loss to human  
16 activities; agriculture, deforestation, overfishing,  
17 pollution and climate change. No single person is to  
18 blame but we are all responsible. We don't want to  
19 live in a world without natural habitats, we don't  
20 want to live in a world without wild animals. In  
21 fact, we can't survive without them, if they go we go  
22 because our existence vitally depends on healthy  
23 self-sustaining ecosystems. This ecological crisis  
24 fueled by greenhouse gases is the deadliest  
25 catastrophe in history and if we ignore it, it will

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2 end human history. Its imperative that we face this  
3 global emergency head on with total honesty,  
4 unwavering commitment and immediate action because we  
5 are running out of time. In New York City and the  
6 United States there's a groundswell of concerned  
7 citizens peacefully demanding that our government  
8 treat the planetary crisis with the urgency necessary  
9 to tackle the existential threat. We are the cause of  
10 the problem, but we are also the solution. Putting  
11 out this fire will require cities, states, and  
12 federal governments around the world passing  
13 legislation, mobilizing resources and working with  
14 communities to avert the worst-case scenario. In 1979  
15 a report by the United... US National Academy of  
16 Sciences declared that the doubling of CO2 in the  
17 atmosphere would drive global temperatures up by 1.5  
18 to 4.5 degrees Celsius. In the 40 years since this  
19 dire forecast, the federal government has  
20 consistently failed to take action and neglected its  
21 responsibilities leaving our future and that of the  
22 other 99.99 percent of life on earth in profound  
23 peril. Today the evidence of this ecological crisis  
24 is undeniable and irrefutable. Faced with these hard  
25 truths we have a duty to act, we need to commit to a

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2 timeline of net zero greenhouse gas emissions in the  
3 next ten years or less and we need participatory  
4 democracy to address these complex challenges. In the  
5 year 2030 when you're asked where were you when your  
6 constituents sounded the alarm, where were you when  
7 there was still time, what will you say? Help us make  
8 2019 the year that everything changes, we need New  
9 York City to take the lead and declare a climate  
10 emergency, our survival depends on this resolution.

11 CHAIRPERSON CONSTANTINIDES: Here, here...

12 [applause]

13 CHAIRPERSON CONSTANTINIDES: Guys we, we  
14 really need to... we really need to do this, we can't  
15 stop for applause after every speaker, so... we have 40  
16 of you guys so let's, let's just keep it like this,  
17 okay, thank you.

18 PHILIP CHEN: Good afternoon, I would  
19 like to thank the Chair, Council Member Costa  
20 Constantinides and the Committee for holding this  
21 event and convening this public hearing. My name is  
22 Philip Chen, I'm a fellow... research fellow from Green  
23 Building Worldwide, a firm that provides strategic  
24 research, environmental advisory and legislative  
25 counseling. I would like to speak on Intros 49-2019

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2 regarding the installation of utility scale battery  
3 storage systems into city buildings and conducting a  
4 feasibility study on the installation of such systems  
5 throughout the city and 51-2018 regarding the  
6 creation of a pilot program for a district scale  
7 geothermal system. First on Intro 49-2019 mandating  
8 that a feasibility study be conducted, and batteries  
9 be installed in city owned buildings where it is cost  
10 effective. This is a great idea, making New York City  
11 greener than before. However, there is not much... many  
12 details on the implementation of this system and how  
13 the batteries will be utilized which leaves much up  
14 for debate. In my research there is a pilot program  
15 installed in Marcus Garvey apartments in Brooklyn  
16 where batteries were installed and assisted with  
17 electric distribution within the building during peak  
18 hours. Tenants experienced lower electricity bills, a  
19 more reliable grid and now had emergency backup  
20 power. These are all amazing results, but I believe  
21 that more can be done where not just an individual  
22 building benefit. I suggest that we take on  
23 additional measures on top of the feasibility model  
24 to improve the program like a pilot program currently  
25 in use in Sweden. They started a second life battery

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2 program where retired electric bus batteries are  
3 repurposed and still have 80 percent of original  
4 capacity, they are then connected and parallel and  
5 stored in their own power warehouses, power warehouse  
6 buildings around the city to assist the grid during  
7 on and off peak hours. It was shown that the battery  
8 packs improved the energy and electricity quality of  
9 the systems by balancing generation and demand. This  
10 is the best way to proceed because with the current  
11 count of 1,700 hybrid and 10 electric buses in New  
12 York City and the plans for the remaining 5,700 of a  
13 fleet to become electrified by 2040 those batteries  
14 will be eventually spent. However, if refurbished  
15 they can be repurposed for another system where all  
16 buildings can benefit including the ones without  
17 batteries installed. Second, we have Intro 51-2018  
18 mandating the implementation of geothermal and  
19 electrical systems on city owned buildings. This is a  
20 very promising green energy source that functions  
21 through underground pipe systems that are either  
22 heated or cooled by the earth's natural temperature  
23 already implemented in residential areas and proven  
24 to be very effective. Residents are benefiting from  
25 this clean energy, a resident Rhonda Kaufman of New

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2 York was spending 1,600 on just oil to heat her  
3 house, after spending 50,000 dollars on the system  
4 and installation her bill was reduced to 300 dollars  
5 for all heating, cooling and electricity needs.

6 Installed in 2007, she was able to recuperate the  
7 startup costs in seven years. Now after many years  
8 geothermal systems have improved in efficiency, as  
9 much as 46 percent, the time it would take to  
10 recuperate such costs would only be reduced as more  
11 electricity is available for its host to use. As well  
12 as residential implementations, commercial scale  
13 adaptations are, are current too, the largest such  
14 systems in New York is the Saint Patrick's Cathedral  
15 completed in 2017 it heats and cools the 76,000  
16 square foot cathedral and the neighboring campus  
17 completely from the system. Estimated to be 30  
18 percent more efficient than the previous system it  
19 saves over 200,000 pounds of carbon dioxide from  
20 being released in the atmosphere which is equivalent  
21 to the CO2 emissions of burning 293 barrels of oil.

22 It was praised so highly in 2018 Saint Patrick's  
23 Cathedral received an honor from the American Council  
24 of Engineering Companies. Both bills focus on  
25 reducing carbon emissions and an overall greener New

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2 York City, this aligns with the climate mobilization  
3 act also known as the COUNCIL MEMBERA which is a  
4 packet of bills that help New York City reduce its  
5 emissions in different ways many of which relate to  
6 the bills I previously mentioned. And Intro 1253-c  
7 does exactly this by mandating that the highest  
8 emitting buildings reduce their emissions by a  
9 certain year. Installing batteries in buildings as  
10 well as geothermal systems will assist in this  
11 endeavor making it easier to reach the lowered  
12 emission limits. However, these systems are very  
13 costly and that is where Intro 1252-a, a bill that  
14 establishes the properly assessed clean energy  
15 program. I guess that's my time.

16 CHAIRPERSON CONSTANTINIDES: Is it?  
17 Alright, so with that I, I will say this I appreciate  
18 everyone's time here today because I know that this  
19 is a... you know we're two hours in and you're still  
20 here and there are lots of other people here as well  
21 so I appreciate your time and being here and your  
22 testimony. Thank you very much.

23 PHILIP CHEN: Thank you.

24 CHAIRPERSON CONSTANTINIDES: Next up I  
25 want to call Annel Hernandez from New York City EJA;

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2 Jasmine Graham from Sustainable Westchester; Richard  
3 Berkley from the Public Utility Law Project;  
4 Charlotte Binns, Burns, I'm, I'm sorry I can't read  
5 it, I apologize and then Michael Gersho from Green  
6 Building Worldwide. Alright, great let's start on  
7 this side of the table.

8 JASMINE GRAHAM: Hello. Hi, thank you for  
9 having me here today. My name is Jasmine Graham, I'm  
10 here in two capacities one as an employee of  
11 Sustainable Westchester, the organization that  
12 administered the pilot CCA program in New York State  
13 and also, I'm here as a resident of Brooklyn.  
14 Westchester Power CCA started in April 2016 with 20  
15 municipalities and about 95,000 residents. Today  
16 we're up to 27 municipalities and about 120,000  
17 residents and small businesses. Every single  
18 municipality who joined the program the first time  
19 signed back on in the second round of the contracts.  
20 The CCA is unique because it's a vetted municipal  
21 program which allows residents to participate in the  
22 energy system under certain consumer protections. In  
23 our program unlike Escos there are no sudden price  
24 hikes, no cancellation fees, no shady tactics, we've  
25 become a consumer energy advocate through our

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2 outreach. The Public Service Commission mandates that  
3 we have at least two months of outreach before a new  
4 community joins on and through that we're able to  
5 educate residents and teach them not only about what  
6 the CCA does but about the energy system which many  
7 people don't know about. Also, because the CCA is an  
8 opt out program every resident receives a  
9 notification letter and those notification letters  
10 and the subsequent calls to our office have also  
11 become an immense tool to teach residents about the  
12 energy system. But importantly the CCA has allowed us  
13 to further pursue New York State REV goals. We have  
14 used the CCA as a platform to administer more  
15 programs that allow us to further our resilience in  
16 economically efficient ways. These programs include  
17 solarized campaigns, community solar, micro grid and  
18 battery storage, geothermal and air source heat pumps  
19 and electric vehicle programs. As it stands right now  
20 the CCA does not guarantee savings, but it does  
21 provide protection against the volatility of the  
22 market. I do believe that proper planning and  
23 sufficient competition between the Escos bidding to  
24 supply the CCA positions residents to see savings. In  
25 the first round of CCA contracts we saved millions of

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2 dollars in the aggregate compared to the utility. I  
3 also believe that educating residents is the most  
4 significant challenge to the CCA but Sustainable  
5 Westchester three years into the program has learned  
6 a lot about what works. For example, working with  
7 community-based organizations and sustainability  
8 committee, engaging in diverse types of outreach and  
9 ensuring multilingual marketing materials. We would  
10 be happy to work with the city to share our best  
11 practices. As a Brooklyn resident I would love to see  
12 the city of New York begin the feasibility study on  
13 an opt out community choice aggregation program so we  
14 can leverage the massive buying power that we have  
15 and prove that we are taking our commitment to  
16 resiliency seriously. That's all I have but I'd be  
17 happy to answer any questions.

18 CHAIRPERSON CONSTANTINIDES: Thank you,  
19 thank you very much. Good to see you...

20 ANNEL HERNANDEZ: Hi, good afternoon  
21 Chairperson Constantinides, Samara Swanston and other  
22 members of the City Council here today. My name is  
23 Annel Hernandez and I'm here to testify on behalf of  
24 the New York City Environmental Justice Alliance  
25 regarding the renewable energy oversight and in

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2 support of Intro 0140 and Intro 49. NYCEJA is a  
3 citywide membership network linking grass roots  
4 organizations from low income neighborhoods and of  
5 communities of color in their struggle for  
6 environmental justice. Because a number of our  
7 members come from communities overburdened by  
8 greenhouse gas emissions and co-pollutants from power  
9 plants clustered in their neighborhoods our  
10 organization is a key advocate of clean and renewable  
11 energy targets rooted in a just transition. While New  
12 York City has made various commitments to reduce  
13 greenhouse gas emissions and increase investments in  
14 climate resiliency progress so far has been slow to  
15 reach frontline communities. Those communities also  
16 face obstacles to participating in the clean  
17 renewable energy economy as utility rate payers,  
18 members of these communities have financially  
19 contributed to existing energy efficiency and  
20 renewable energy programs only to encounter barriers  
21 to their own participations in programs that  
22 ultimately fail at systemically addressing the root  
23 causes of energy insecurity and energy poverty. The  
24 massive systems change required to stave off  
25 dangerous climate change impacts requires a

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2 consideration of the unique vulnerabilities facing  
3 environmental justice communities. Community choice  
4 aggregation provides a potential avenue to shift the  
5 decision-making power to the consumer but without an  
6 equitable and accessible model the future of CCAs may  
7 fall short of their intended goals. CCAs can be an  
8 empowering tool for transformative change in the way  
9 that consumers connect to and purchase their energy  
10 as well as into... as well as tap into other values  
11 they seek to realize through their energy choices.

12 However, these lofty goals cannot be reached without  
13 strategies to improve barriers to entry particularly  
14 for lower income households and safeguards for energy  
15 burdened households that have been the target of  
16 previous predatory practices related to their energy  
17 bills and services. It is also critical that any CCA  
18 model developed by the city of New York taps into the  
19 synergies of current and existing efforts to expand  
20 distributed energy resources and community  
21 distributed generation as part of the broader REV  
22 framework. Finally, CCAs if structured properly can  
23 provide a meaningful opportunity to advance goals of  
24 New York City community-based organizations involved  
25 in energy affordability, climate equity,

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2 environmental justice, economic justice and community  
3 resiliency. A study is critical to understanding the  
4 benefits and pitfalls of implementing CCAs in New  
5 York City as proposed by the Intro here today.

6 Climate justice is based on the principle that  
7 frontline communities are most vulnerable to climate  
8 change and therefore must play an integral role in  
9 planning for this renewable and regenerative energy  
10 economy. These communities where climate

11 vulnerabilities intersect with historic patterns of  
12 environmental burdens many of which could be  
13 ameliorated through equitable energy policies and

14 strategic investments. As many of you know New York  
15 City is home to 16 Peaker plants, many with multiple  
16 generating units both publicly and privately owned.

17 Four Peaker units operate in the South Bronx and  
18 three giant Peaker units operate in Sunset Park, both  
19 neighborhoods where the majority of residents are low  
20 income and working-class people of color. Energy

21 storage technology is a key component needed to  
22 unlock the emission free renewable energy future that  
23 New York City and other metropolitan areas across the  
24 country have recognized as critical to averting the  
25 worst of climate change impact. Renewables are

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2 already cost competitive with and often cheaper than  
3 fossil fuels, but they suffer from intermittency  
4 issues leading to reliability concerns for utilities  
5 and grid operators. Battery storage changes that  
6 narrative adding the flexibility and control to  
7 transform solar and wind into reliable energy.  
8 Because periods of high demand are infrequent and  
9 often short duration events, Peaker power plants  
10 represent the most near-term opportunity for battery  
11 storage and renewables to cost effectively replace  
12 fossil fuels. Renewable and resilient energy systems  
13 will advance energy democracy, reduce energy cost  
14 burdens and strengthen resiliency of their  
15 communities. We need to make sure that we're  
16 capturing these benefits and delivering the benefits  
17 to the community so again in support of the  
18 feasibility study and the installation of utility  
19 scale battery storage in city buildings and other  
20 buildings. And I know... I know my time is out but I  
21 have to mention, I want to make sure that the city  
22 continues to hold DCAS accountable for their slow  
23 implementation of the 100 megawatts on public  
24 buildings, right now there are... they are at about ten  
25 megawatts and they have about six years to meet their

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2 target and their delayed implementation is just  
3 unacceptable. Moreover Mayor De Blasio's flawed green  
4 new deal amount... announcement has got it wrong, New  
5 York City cannot depend on Canadian hydro power  
6 renewable energy credits to meet our climate goals  
7 when we can instead invest and build renewable energy  
8 here in the five boroughs of renewables paired with  
9 energy storage can provide resiliency and reliability  
10 and can create new local jobs in the renewable energy  
11 industry and community solar can help create the  
12 ownership in frontline communities to help lower  
13 utilities bills. As we take bolder steps to deal with  
14 climate change, we have to make sure that we're doing  
15 it equitably and I'll stop there, thank you.

16 CHAIRPERSON CONSTANTINIDES: Thank you,  
17 thank you very much for your testimony, next up.

18 RICHARD BERKLEY: Thank you Mr. Chairman  
19 and thank you members of the Committee and members of  
20 the audience. My name is Richard Berkley, I'm the  
21 Executive Director of the Public Utility Law Project  
22 of New York, we're a 40-year-old public interest not  
23 for profit law firm with the mission of advocating on  
24 behalf of low, fixed and moderate-income utility  
25 consumers. As a result, we get involved in all of the

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2 state's energy issues and in... for example, the  
3 National Grid and Con Edison rate cases that are  
4 currently active in the city of New York. I'm here  
5 today to talk about 0410 and I will mention overall  
6 that before starting to talk about that bill that I  
7 wish to say thank you to the Council for its  
8 leadership on the issue of climate change. There are  
9 other parts of the state and other parts of the  
10 country where I speak before groups and before  
11 elected officials and they're not taking it as  
12 seriously as New York City and so thank you, you're  
13 doing the right thing at the right time and it's  
14 something we all appreciate. If the city wishes to  
15 meet its very aggressive goals in the same way as the  
16 state and the way that they used to say it a few  
17 years ago, all of the above is what the city needs to  
18 do to meet those goals. Doing a community choice  
19 aggregation in the right way is a possible major  
20 piece of meeting the city's goals for greenhouse gas  
21 reduction but also two other important goals that I  
22 want to put on the table. One goal is a goal that  
23 goes to the, the people for whom I work which is a  
24 goal of affordability. There's a crisis of  
25 affordability in New York and particularly New York

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2 City. One of the other goals that a CCA can bring the  
3 city towards is equity. As my colleague from EJA  
4 said, environmental justice is a... is a long-term  
5 problem in New York City that goes back over a  
6 century and still needs to be addressed in a  
7 meaningful way. And for a number of reasons that is  
8 incredibly valued if only for the public health  
9 problems that those frontline communities suffer  
10 from. To begin with it's very important to start with  
11 consumer outreach and education. The citizens need to  
12 be told very clearly if there will be fees, if the  
13 cost of energy will go up or if the... if the focus of  
14 the program, the CCA is to lower the cost of energy  
15 in the city of New York. People need to be told  
16 whether or not they will save money and if they're  
17 not going to save money why. I'd like to say that  
18 people in many neighborhoods in New York City and  
19 many neighborhoods in New York State can vote through  
20 values with their wallet, we don't care and some  
21 people can afford to pay more to show that they care  
22 about this problem of climate change, many others, 40  
23 percent or more cannot. Another question that needs  
24 to be spoken about in great detail before the CCA  
25 gets underway and during this period of the study is,

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2 what is the goal with regard to green energy, is the  
3 goal solely to source for as much renewable energy...  
4 as much green energy as possible or is it to, to come  
5 up with a mix that meets the city's goals but also  
6 meets the goals again of affordability and also of  
7 equity and then resilience and reliability are part  
8 of that too. So, I have a number of suggestions that  
9 I could make for that process but I assume there will  
10 more chance to talk during the study so I will... I  
11 will hold onto most of those for the time being. The  
12 idea of a CCA in general and I... and I want to go back  
13 to sort of the larger questions is that you can  
14 leverage the buying power of New York City's three  
15 million households, eight million residents to tell  
16 suppliers of energy we will only pay this much, the  
17 idea of that level of bargaining power is incredibly  
18 valuable and it's something that you need to  
19 explicitly put on the table because there are many  
20 parts of the United States that are attempting, CCA,  
21 where the energy comes out more expensive. Most  
22 suppliers want it to be an opt out program but I urge  
23 the council to protect the most vulnerable households  
24 as much as it can because there are huge numbers of  
25 New York City residents who will not be able to pay

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2 increased prices and for that matter will also be  
3 harmed by the movement of so many people into the CCA  
4 because the cost that they pay for the upkeep of the  
5 infrastructure will be increased.

6 CHAIRPERSON CONSTANTINIDES: Okay..

7 RICHARD BERKLEY: I have a lot more that  
8 I could say but let me... let me say that I'd like to  
9 take questions if possible.

10 CHAIRPERSON CONSTANTINIDES: Okay, I'm,  
11 I'm going to go on to the next panelist, I'll take..  
12 I'll ask questions at the end, unfortunately is... in  
13 the situation that I'm in I'm... I could be here all  
14 day with you guys, there's so many things to learn,  
15 so many things that I want to hear from but I also  
16 have, you know 30 people sitting behind you waiting  
17 to testify so it sort of limits my ability to ask too  
18 many questions. Go ahead.

19 CHARLOTTE BINNS: Hi, my name is  
20 Charlotte Binns, I'm here to testify in support of  
21 Resolution 0864 to declare a climate emergency and my  
22 area of focus Intro 0140 for community choice  
23 aggregation or CCA. Seven years ago, I made a  
24 decision to commit my life to climate change  
25 mitigation and I began with my neighborhood which is

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2 how I came to be on the board of the Local  
3 Environmental Justice Nonprofit, North Brooklyn  
4 Neighbors. It is also how in 2016 I came to introduce  
5 Council Member Stephen Levin to CCA as an extremely  
6 high impact policy tool for the reduction of carbon  
7 emissions. CCA enables municipalities to take local  
8 control of their energy supply and buy electricity on  
9 behalf of their communities at sufficient scale to  
10 secure favorable terms, it's like a buying club, it  
11 gives them the leverage normally only enjoyed by big  
12 institutions to negotiate effectively with energy  
13 service companies. Indeed, CCA was originally created  
14 to protect residents precisely from those predatory  
15 Escos securing competitive prices. CCAs don't need to  
16 happen if they don't secure competitive prices you  
17 just stipulate that as a requirement in the contract  
18 and fixed rates for electricity. It has evolved into  
19 a tool to enable tens of thousands of people or  
20 hundreds of thousands of people at a time to secure  
21 100 percent renewable energy without raising rates.  
22 This is achievable precisely because CCA is an opt  
23 out program meaning if residents do not opt out, they  
24 will be enrolled and typically this constitutes at  
25 least 80 percent of the population which allows for

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2 the negotiation club. To those who would have CCA be  
3 an opt out program please understand that this would  
4 completely undermine the unique strength of this  
5 policy tool. CCA allows anyone to opt out of the  
6 program at any time without any penalty so it is  
7 essential that CCA is an opt out program in New York  
8 City just as it is everywhere else in the United  
9 States. It is also important that this bill require  
10 New York City CCA, CCAs to secure New York certified  
11 renewable energy such as wind, hydro and solar. In  
12 July 31 municipalities will launch CCA programs  
13 across the state on behalf of approximately 200,000  
14 households. Seven of these communities are sourced  
15 for... are sourcing from renewables the rest are  
16 effectively blocking progress towards carbon emission  
17 reduction for the term of the contract. If they did a  
18 mix that would be different though, that would be  
19 interesting. CCA solves the financial risk of off  
20 tick for investors in renewable development with a  
21 single contract. CCA contracts with Escos for example  
22 mis stipulate that local renewable energy be included  
23 as it becomes available. In this way the demand for  
24 CCAs... from CCAs dramatically impacts the supply and  
25 generation of additional local renewable energy.

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2 While there is not enough for the city at the stage  
3 we begin with a few communities and use the proof of  
4 concept to accelerate the development of further  
5 renewables including ultimately offshore wind. I  
6 recommend that the New York CCA bill be amended to  
7 include a pilot program which Stephen Levin mentioned  
8 for volunteering communities or else more years are  
9 sure to be wasted, its already been three, in  
10 deliberation and inaction. The pilot program would  
11 make the study meaningful with real data and could  
12 solve the challenge of geographic designation. CCAs  
13 are meant to empower the localist form of government.  
14 In New York City that could be by community board  
15 district or City Council district or even a building  
16 class across boroughs. I recommend at this time to  
17 not be prescriptive and instead allow communities of  
18 their own description within defined parameters to  
19 step forward. New York's aggressive clean energy  
20 standard goals of 70 percent renewable supplied by  
21 2030 depends on the development of community scale  
22 renewables. NYSERDA count CCA is one of the top ten  
23 high impact actions for climate smart communities. To  
24 date more than 96 municipalities have passed local  
25 CCA laws in New York in what is clearly a growing

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2 trend. Let's not let New York City be left behind.

3 Thank you.

4 CHAIRPERSON CONSTANTINIDES: Thank you.

5 Next up.

6 MICHAEL GERSHO: Thank you members of the  
7 Council for giving me the opportunity to speak today.  
8 My name is Michael Gersho, I'm a Fellow at Green  
9 Building Worldwide, an organization dedicated to  
10 promoting sustainable practices and development,  
11 we're known for our ability to unite minority and  
12 women owned business enterprises with the city's  
13 largest players to ensure that all are aware and have  
14 equal understanding of development, sustainability  
15 and resiliency initiatives. I would like to comment  
16 on initiative 0140, the community choice aggregation  
17 programs abbreviated as CCAs. CCAs are an essential  
18 tool for the modernization of the energy economy and  
19 promotion of clean energy sources. By allowing the  
20 government or government entity to purchase energy  
21 for communities, a mix of energy can be provided to  
22 consumers that comes from a broad range of sources  
23 including renewables this could encourage the  
24 adoption of renewable energy which is... which is a  
25 necessity in a world where greenhouse gas emissions

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2 are causing the existential threat of climate change.

3 Promoting renewables in any capacity will help the  
4 state to meet its targets for forming the energy  
5 vision, 50 percent renewable energy and a 40 percent  
6 reduction in 1990 emissions by the year 2030.

7 Existing community choice aggregation programs have  
8 been a resounding success in eight states thus far  
9 and a similar program in New York City would likely  
10 be no exception. In 2017 over 750 CCAs provided 42  
11 million megawatt hours of energy to an estimated five  
12 million consumers. CCAs are required to meet the same  
13 energy standards that apply to traditional utilities  
14 so a CCA in New York would be bound to the clean  
15 energy standard to procure a certain portion of the  
16 portfolio for renewables but many CCAs choose to go  
17 above and beyond this minimum renewable portfolio  
18 requirement. Over 100 CCAs procured a combined 8.9  
19 million megawatts of voluntary renewable energy in  
20 2017. CCAs are a proven concept already in New York  
21 State, over the half, half of the energy supplied by  
22 the Westchester, Westchester Paris CCA is voluntary  
23 and the program has saved over ten million dollars  
24 for over 100,000 county residents and businesses.

25 With around eight million people in New York City

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2 compared to slightly under one million in Westchester  
3 County there's a massive potential for increased  
4 renewable energy consumption. Community choice  
5 aggregators in New York City could also help the city  
6 comply with the newly minted climate mobilization  
7 act. The mobilization act sets emissions, intensity  
8 limits for buildings over 25,000 square feet. Under  
9 the act property owners have the ability to deduct  
10 from their annual emissions to the purchase of  
11 renewable energy credits however any renewable energy  
12 credits used for reductions need to be generated and  
13 are directly deliverable to the zone J load zone of  
14 New York City. Currently little to no energy sources  
15 meet this set of criteria exist, however this will  
16 likely change in the near future as two projects are  
17 being planned to directly deliver renewables to the  
18 city via direct HVDC cables. Community choice  
19 aggregators can choose where the energy mix, they  
20 supply comes from, giving them, them the potential to  
21 acquire renewable energy certificates from sources  
22 deliverable to New York City. If these energy  
23 transmission projects come to fruition, then CCAs  
24 could help building owners meet emissions reduction  
25 targets mandated under bill 1253-c of the climate

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2 mobilization act. However, it needs to be noted that  
3 the fact that the proposed program is opt out means  
4 certain precautions need to be taken. Having an opt  
5 out program allows people and businesses to choose  
6 not to participate in such a program rather than  
7 choosing to participate in the program. Opt out  
8 programs typically get significantly more  
9 participation than opt in programs due to the simple  
10 fact that you have to take an action to join the  
11 program rather than having to take an action to  
12 leave. This does raise concerns of taking advantage  
13 of the misinformed as some people may not understand  
14 the implications of a community choice aggregation or  
15 they may simply be too busy with the goings on of  
16 their daily lives to fully understand what they are  
17 being signed up for. Extensive interviews with  
18 participants in CCAs have shown that many people are  
19 completely unaware that a change in their electricity  
20 supplier has occurred after the CCA is implemented.  
21 This is significant because there's a very real  
22 possibility that some CCA rates can occasionally dip  
23 above higher than standard utility rates. People  
24 should not have to bear the costs of higher rates  
25 without being properly informed of these

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2 possibilities. The proposed feasibility study should  
3 take care to examine the best ways to make sure  
4 participants understand what aggregation is, what the  
5 potential implications are for their energy bills.  
6 Additionally, the city should make sure any program  
7 that could result from this study gives participants  
8 ample time and warnings for consumers to opt out.  
9 Because community choice aggregation are focused on  
10 community, the feasibility study should hold  
11 stakeholder meetings to address concerns and take  
12 into account the needs of communities that may be  
13 participating in these new programs. Thank you.

14 CHAIRPERSON CONSTANTINIDES: No problem,  
15 I'm passing at this time to Council Member Levin who  
16 does have questions.

17 COUNCIL MEMBER LEVIN: Thank you very  
18 much Mr. Chair, I want to thank this panel and I  
19 apologize for not being here for the entire panel's  
20 testimony, I'll make sure to go back and, and, and  
21 watch it on, online and.. later this evening. I, I  
22 wanted to ask a little bit about what lessons we've  
23 learned so far in existing examples of CCA so  
24 Westchester or, or elsewhere and anyone can take this  
25 positive, negative just things that are instructive

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2 as we were... if, if we're going to be moving forward  
3 with a, a study here, what's worked, what hasn't  
4 worked?

5 JASMINE GRAHAM: Hi, Jasmine Graham,  
6 outreach and compliance coordinator for Westchester  
7 Power. So, I'd say that the biggest challenge but  
8 also one of the biggest benefits is consumer  
9 education, everyone else here is correct in saying  
10 that there are some real challenges in making sure  
11 that everyone is aware of the program and making sure  
12 that we reach the most vulnerable populations. In  
13 Westchester Power we produce marketing materials in  
14 both English and Spanish, we have wide array of types  
15 of outreach that we do whether it be speaking at City  
16 Council meetings, tabling at events, meeting with  
17 sustainability committees but what we've learned is  
18 really important is working with community groups,  
19 working with people that are already on the ground  
20 that know the... you know the key players and that are  
21 trusted but in Westchester because sustainable  
22 Westchester is an organization that's owned by these  
23 municipal governments we really are a trusted source  
24 and so people know that this is vetted municipal  
25 program and we've become energy advocates but I would

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2 say that the biggest challenge is really making sure  
3 that people are informed about the program but with  
4 enough outreach, you know that, that is possible to  
5 have everyone informed.

6 RICHARD BERKLEY: Yeah, I'd like to  
7 concur with, with Jasmine that community outreach is  
8 extremely important up front for among other reasons  
9 if the cost of energy does go up as a result of the  
10 CCA people should be warned that A they've been  
11 changed into a CCA; B, that that might happen  
12 depending upon the choices for how its set up but  
13 then also why, why it's valuable for them to be a  
14 part of the CCA or why they want to be able to get  
15 out. Second, opt out is something that my  
16 organization disfavors because it has the like  
17 negative option contracts generally, it has the  
18 effect of people being put into a business  
19 relationship that they haven't asked for and  
20 therefore one of the things that came up in Brookline  
21 and in some of the California experiments is that  
22 it's very important to leave an ability for people to  
23 come out of the CCA without being charged because of  
24 the business of people's lives, its very likely they  
25 might not notice or particularly in New York City,

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2 you know we speak more than two languages, we speak  
3 more than eight languages so there are some people  
4 who may have trouble understanding what the process  
5 is coming forward.

6 JASMINE GRAHAM: And I'd just like to add  
7 that in, in the CCA there are no penalties to leave  
8 the program, you can... you can leave at any point,  
9 there are no fees, you will never have a price hike,  
10 there are... you know there... its... we're fully  
11 transparent and, and we know that we need to be but I  
12 just wanted to, to make that clear that there aren't  
13 termination fees like Escos and in fact a lot of  
14 consumers who call because people get the  
15 notification letter and you know they have 30 days to  
16 opt out of the program before their enrollment would  
17 be sent to the utility and many people give us a call  
18 and they... you know they want to know and now we have  
19 the opportunity to have a 30 minute conversation with  
20 someone not just to talk about the CCA but to talk  
21 about renewable energy, climate, you know anything  
22 that... within that sphere and, and its provided a real  
23 benefit. The problem with opt in is that people don't  
24 opt in for the same reason why people don't have time  
25 to opt out, they don't have time to opt in. The

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2 program has proven to not work in other states when  
3 they tried to make it an opt in program so I think  
4 that our best option is to make sure that we have a  
5 robust consumer education plan in place well before  
6 the CCA would go into effect.

7 COUNCIL MEMBER LEVIN: Right, it's like  
8 there's no in between, between an opt in and an opt  
9 out, right, maybe there is I don't know but it does...  
10 its, its... if we're choosing one or the other, they  
11 both have drawbacks.

12 CHARLOTTE BINNS: I'll just add to what  
13 Jasmine said, we're doing an opt out phase in Hudson  
14 Valley now and it actually becomes precisely the most  
15 profound engagement opportunity because every single  
16 person gets a letter in their post about the program  
17 and gets an opportunity to learn about it, to call,  
18 to email, to engage at office hours and find out a  
19 bit more about where their energy is coming from and  
20 how these contracts work so that's one thought. The  
21 other is that I think contract sophistication has  
22 come a long way, I mean in Westchester there were  
23 something like 17 municipal attorneys who poured over  
24 the contract until it was satisfactory to all  
25 involved and there are all kinds of fantastic

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2 mechanisms in there like being able to switch out  
3 whatever the supply that is being secured with Escos  
4 is with local renewable energy as it comes online so  
5 that you... even if it's not available at the time that  
6 you go into the contract, if new local renewable  
7 generation becomes available in New York City you can  
8 always add it in at a later date and of course being  
9 able to say we won't move forward unless these rates  
10 are met so looking back historically, say the last 12  
11 months the average price, you have to beat that price  
12 or you don't proceed at all so you can start out of  
13 the gate knowing that you're saving money compared to  
14 historical, you can never guarantee going forward  
15 because you don't know what the market is going to do  
16 from month to month but you can say compared to the  
17 last 12 months this is a very good price. Does that  
18 make sense?

19 COUNCIL MEMBER LEVIN: Sure.

20 CHARLOTTE BINNS: Yeah.

21 COUNCIL MEMBER LEVIN: Okay, is, is... so  
22 the mechanism then to... I mean and, and from a  
23 consumer protection perspective the, the most  
24 appropriate mechanism to ensure that nobody's paying  
25 more after a CCA arrangement or agreement or contract

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2 then prior is through... if we... you know if you can't...  
3 if you can't dictate... [cross-talk]

4 CHARLOTTE BINNS: What the market...  
5 [cross-talk]

6 COUNCIL MEMBER LEVIN: ...the market...  
7 [cross-talk]

8 CHARLOTTE BINNS: ...is going to do...

9 COUNCIL MEMBER LEVIN: Right, then how  
10 are you going to... how do you then effectively...  
11 [cross-talk]

12 CHARLOTTE BINNS: You cannot guarantee  
13 savings going forward, you can only guarantee a good  
14 price compared to historic averages, historical... you  
15 know the last 12 months, the last 15 months, whatever  
16 is most favorable.

17 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
18 talk]

19 CHARLOTTE BINNS: But you don't know  
20 what's going to happen going forward, but anybody can  
21 opt out at any time without penalty as we said, go  
22 ahead.

23 JASMINE GRAHAM: So, for example for the  
24 Westchester Power CCA for our second contract we

25

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2 looked at the previous 24-month weighted average of  
3 the utility so, we're able to... [cross-talk]

4 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
5 talk]

6 JASMINE GRAHAM: ...look at that and that  
7 is the price to beat, so all the Escos who are  
8 bidding for our supply and basically you know you're  
9 able to say hey we've got 100,000 customers what's  
10 the best price we can get... [cross-talk]

11 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
12 talk]

13 JASMINE GRAHAM: ...they're blindly bidding  
14 against each other trying to get the lowest possible  
15 rate so we're able to use that cap and say you have  
16 to like point blank, we will not do the program  
17 unless you come in under this rate and then what we  
18 found every single time is that they come in  
19 significantly below even what the previous 24 month  
20 average was but then... [cross-talk]

21 COUNCIL MEMBER LEVIN: And that's... and  
22 that's... and then they're bound to that throughout  
23 the, the length of the contract?

24 JASMINE GRAHAM: Yes.

25 COUNCIL MEMBER LEVIN: Okay... [cross-talk]

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2 JASMINE GRAHAM: And it's a fixed rate..  
3 you know and, and the CCA is just a foundation, it is  
4 the platform for a lot of other great energy  
5 efficiency measures. For example, through the CCA,  
6 through our outreach, through our education, through  
7 the funds that we've got we've been able to now work  
8 on increasing community solar projects.. [cross-talk]

9 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
10 talk]

11 JASMINE GRAHAM: ...so now we're not  
12 offering community solar as an opt out but it's an  
13 opt in so in addition to having a fixed rate on your  
14 electricity supply you can also subscribe to a local  
15 community solar project which does guarantee savings..  
16 [cross-talk]

17 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
18 talk]

19 JASMINE GRAHAM: ...which does... it... you  
20 know most of them are structured as a ten percent  
21 discount on the entirety of your electricity bill so  
22 you can be in the CCA and be in one of our community  
23 solar projects.. [cross-talk]

24 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
25 talk]

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2 JASMINE GRAHAM: So, it really is a  
3 platform to... for a lot of other amazing environmental  
4 projects to be started.

5 COUNCIL MEMBER LEVIN: Is there an  
6 opportunity... oh, sorry, go ahead.

7 RICHARD BERKLEY: I was going to say just  
8 to briefly go back to your question about whether  
9 from a consumer protection standpoint you can make  
10 sure that the citizens are taken care of. There are a  
11 number of things that can be done up front, the first  
12 is that there are only eight of the 213 Escos in  
13 business in the state of New York that have gone  
14 through the process at the state's public service  
15 commission, the energy regulator... [cross-talk]

16 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
17 talk]

18 RICHARD BERKLEY: ...to ensure that they  
19 will charge less than the utility so if lower prices  
20 are the goal you can just go to those eight  
21 companies... [cross-talk]

22 COUNCIL MEMBER LEVIN: And make that a  
23 requirement that they have to be... that they have to  
24 be certified through the... [cross-talk]

25

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2 RICHARD BERKLEY: ...they're certified as  
3 being able to beat the cost of the default utility by  
4 the PSE, that could be one of the contract terms as  
5 the city goes forward... [cross-talk]

6 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
7 talk]

8 RICHARD BERKLEY: ...another thing that the  
9 city could do in the process of doing the negotiation  
10 is simply to say that any Esco that has been... had an  
11 action brought against it by the regulator and the  
12 state of New York in the last five to ten years...  
13 [cross-talk]

14 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
15 talk]

16 RICHARD BERKLEY: ...or in any of the other  
17 14 states that have Escos would not be eligible to  
18 compete... [cross-talk]

19 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
20 talk]

21 RICHARD BERKLEY: ...for the contract.

22 COUNCIL MEMBER LEVIN: Right...

23 RICHARD BERKLEY: I would also suggest,  
24 there is one not for profit Esco in the state of New  
25 York and there are other ways for municipalities to

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2 buy energy such as through DCAS or OGS or through  
3 mega, one of the... one of the state level municipal  
4 combinations for buying energy.

5 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
6 talk]

7 RICHARD BERKLEY: So, while the state  
8 made the mistake and I'm very clear about the fact  
9 that it's a mistake to use Escos in this process and  
10 the bill that I drafted when I worked for the senate  
11 wouldn't have required that... [cross-talk]

12 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
13 talk]

14 RICHARD BERKLEY: ...the city should,  
15 should do what it thinks it needs to do to protect  
16 its citizens... [cross-talk]

17 COUNCIL MEMBER LEVIN: Yeah... [cross-talk]

18 RICHARD BERKLEY: ...and if that requires  
19 the state to change the law then the city should do  
20 that.

21 COUNCIL MEMBER LEVIN: Interesting. Okay...  
22 [cross-talk]

23 ANNEL HERNANDEZ: I just want to add...  
24 [cross-talk]

25 CHARLOTTE BINNS: I just... [cross-talk]

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2 ANNEL HERNANDEZ: ...one quick thing...

3 COUNCIL MEMBER LEVIN: Oh, go ahead,  
4 yeah.

5 ANNEL HERNANDEZ: I just wanted to add  
6 that, you know community choice aggregation is just a  
7 tool, the... [cross-talk]

8 COUNCIL MEMBER LEVIN: Right... [cross-  
9 talk]

10 ANNEL HERNANDEZ: ...goal here is to get  
11 community solar online, to get offshore wind online  
12 and without that CCAs are not really getting to where  
13 we need to get... [cross-talk]

14 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
15 talk]

16 ANNEL HERNANDEZ: ...and I just need to  
17 stress that because the current CCAs have a very high  
18 mix of, you know fossil fuel energy in them, and we  
19 need to be really careful with that because that's  
20 not achieving our goals. On top of... [cross-talk]

21 COUNCIL MEMBER LEVIN: Right... [cross-  
22 talk]

23 ANNEL HERNANDEZ: ...that even if there is  
24 renewable energy it might be being sourced from other  
25 places and what we need to be doing is sourcing that

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2 locally in New York State and New York City where we  
3 can and the city should be supporting community  
4 distributed generation projects that can provide that  
5 specific... [cross-talk]

6 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
7 talk]

8 ANNEL HERNANDEZ: ...ten percent reduction  
9 and that could be one of the things that it does in  
10 the interim.

11 COUNCIL MEMBER LEVIN: Can, can... oh, go  
12 ahead, sure...

13 CHARLOTTE BINNS: And just a very last  
14 thought, I'd say... adding on what both of you guys are  
15 saying, community distributed generation is now  
16 available and accessible in CCA like community solar  
17 on an opt out basis with guaranteed ten percent  
18 savings on your bill where community solar is  
19 available, there's not that much in New York City  
20 but... [cross-talk]

21 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
22 talk]

23 CHARLOTTE BINNS: ...where it is available  
24 it does offer guaranteed savings... [cross-talk]

25

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2 COUNCIL MEMBER LEVIN: We have a lot of  
3 roof... we have a lot of rooftop space. One... my last  
4 question here is, is does... do you all see CCA as an...  
5 as an opportunity to finance or more effectively  
6 finance sustainability measures like, like solar or...  
7 I don't know wind is, is not quite as scalable but,  
8 but solar for sure or other types of sustainability;  
9 green roofs, things that can reduce weatherization,  
10 things that can reduce energy use, is it possible  
11 that... and in... another word that this can be a... this  
12 can be a tool to, to help facilitate those types of  
13 endeavors?

14 ANNEL HERNANDEZ: I think it can be and  
15 that's something that we should include in the... in  
16 the feasibility study, California has, has done some  
17 projects like that, the revenue that they use they  
18 invest in some community priorities... [cross-talk]

19 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
20 talk]

21 ANNEL HERNANDEZ: ...but I think that we're  
22 a long way from there for New York City, I think it's  
23 hard to compare some of the smaller municipalities to  
24 what it would take to do something like this in the  
25 five boroughs... [cross-talk]

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2 COUNCIL MEMBER LEVIN: Uh-huh... [cross-  
3 talk]

4 ANNEL HERNANDEZ: ...but in terms of  
5 supporting financing one thing that we've been  
6 advocating is for the city of New York to use their  
7 purchasing power to help catalyze offshore wind and  
8 other large-scale community solar projects and now  
9 also energy storage projects.

10 COUNCIL MEMBER LEVIN: Yeah, yeah...

11 RICHARD BERKLEY: And I would concur, I  
12 think it's possible because the, the council and the  
13 city have the ability to define the contract as you  
14 go forward and to, to say what the goals of... [cross-  
15 talk]

16 COUNCIL MEMBER LEVIN: Yeah... [cross-talk]

17 RICHARD BERKLEY: ...a CCA would be that  
18 you can build into a CCA that the city is  
19 contemplating up front, but you want to take any  
20 excess funds and invest them in all of the priorities  
21 that the city has. One of the ways to ensure that  
22 there are excess funds is to avoid using Escos...

23 COUNCIL MEMBER LEVIN: Yeah...

24 RICHARD BERKLEY: ...our experience is that  
25 they overcharge plain and simple.

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2 COUNCIL MEMBER LEVIN: Okay, thank you  
3 all. This is very interesting and very complicated  
4 stuff, I, I look forward to having all of these  
5 voices around the table as we move forward, thank  
6 you.

7 JASMINE GRAHAM: Thank you, thank you...

8 CHARLOTTE BINNS: Thank you.

9 CHAIRPERSON CONSTANTINIDES: Thank you.

10 Next up we have Christina See; Margaret Klein  
11 Soloman; Amy Larkin; Xiye Bastida Patrick and Michael  
12 Gordon.

13 COUNCIL MEMBER KALLOS: I want to thank  
14 all of our advocates for joining us, staying with us.  
15 We have five panels of four over the course of the  
16 rest of the afternoon, I know a lot of folks got here  
17 at noon or earlier for our rally and we want to  
18 appreciate everyone for waiting outside to get in, I  
19 know that we hit the capacity on this room so I want  
20 to thank all of you for your patience. There will be  
21 a time clock of four minutes, I'm going to be holding  
22 questions if that is okay in the interest of time so  
23 that you can go, ultimately it is an honor system as  
24 you've seen so there is I believe 22 of you who have  
25 signed up to testify so take the time you wish,

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2 we're, we're requesting four minutes out of  
3 considerations for one another but it is up to you  
4 and again I want to thank our Chair Costa  
5 Constantinides as we had chaired, this is added on to  
6 a larger, much larger hearing so this has already  
7 been about two hours and 45 minutes and I want to  
8 thank our Chair Costa for all the great work and for  
9 everyone else for being so patient. You may begin in  
10 whatever order you wish.

11 CHAIRPERSON CONSTANTINIDES: Let's start  
12 on this side, Christina's corner going that way so  
13 you're up first.

14 COUNCIL MEMBER KALLOS: Make sure the red  
15 dot is... the red light is on, turn it on.

16 MARGARET KLEIN SOLOMAN: Hi, I'm Margaret  
17 Klein Soloman, I am a Clinical Psychologist and the  
18 Director of the Climate Mobilization, an organization  
19 that advocates for World War II scale climate  
20 mobilization to protect humanity and the natural  
21 world. I want to thank you all and Extinction  
22 Rebellion and the New York City Council for  
23 considering this declaration of climate emergency. I  
24 want to talk a little bit from my perspective as a  
25 clinical psychologist about the importance of telling

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2 the truth, it's... the fossil fuel industry has  
3 launched a multi-billion dollar misinformation  
4 campaign to lie to the American people about the  
5 extent of the climate crisis and through these  
6 declarations of climate emergency, right, which more  
7 than 620 local governments have passed, most recently  
8 Sydney, Australia declared a climate emergency  
9 yesterday so this... and, and this is moving up to  
10 state level and national governments through these  
11 declarations of climate emergency, it is a chance for  
12 the people speaking through their elected  
13 representatives to tell the truth and set the record  
14 straight. This is not a problem that requires a multi  
15 decade reduction in greenhouse gases, this is an  
16 emergency that requires drastic action right now. We  
17 need all hands-on deck; we need to pull every lever  
18 to eliminate not reduce greenhouse gas emissions and  
19 draw down excess CO2 until a safe climate is  
20 restored. I too... for far too long we have felt like  
21 we could try to treat climate change like a normal  
22 problem and... like through normal politics so through  
23 compromise and gradual solutions and win, win  
24 solutions but by declaring a climate emergency we put  
25 this crisis into a whole different category that we

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2 understand that this is a threat to me and you and my  
3 family and your family and that we are all in danger  
4 until we take action on the scale of the crisis. So,  
5 I really appreciate the leadership that you all are  
6 showing, Council Members are showing in introducing  
7 this and championing this, I think it's a chance for  
8 New York City to both join a global campaign that's  
9 already successful and through having a very strong  
10 declaration of climate emergency lead the charge  
11 globally. So, I... yeah, thank you very much. Tell,  
12 telling the truth is critically important at this  
13 time.

14 CHAIRPERSON CONSTANTINIDES: Yep.

15 AMY LARKIN: Okay. Hello, my name is Amy  
16 Larkin and I have been fighting for climate action  
17 for decades. I'm here in support of the climate  
18 declaration, emergency declaration and also, I do  
19 think that CCA is probably the only way to meet our  
20 clean energy goals so also Intro 0140. I led the  
21 public private, private partnership that transformed  
22 refrigeration, eliminated HFCs and will lower  
23 greenhouse gas emissions by one and a half percent  
24 and I was recently the Vice Chair of the World  
25 Economic Forum's Global Agenda Council on Climate

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2 Change. I'm currently working on a plastic solution.

3 Our 20<sup>th</sup> century systems, technologies and, and

4 culture have nearly broken the back of nature.

5 Without a healthy natural world, we suffer and

6 perish. As with everything else, the poor suffer

7 most. Our economic life has been decoupled from

8 nature and we seem to not notice that we are paying

9 for this folly both financially and environmentally.

10 The first rule of business, I think the prime govern...

11 the prime directive of government, should be no

12 nature, no future. I therefor urge you to pass

13 Resolution 864 and declare a climate emergency in New

14 York City. Whether you declare it or not, there is an

15 emergency. Wouldn't it serve all of us to have the

16 wherewithal to address what's coming, what's already

17 here? Because this emergency will be costly and

18 painful. The state of our climate will only give us

19 difficult choices. As our political leaders, it is

20 your duty to lead the public discourse, so we are

21 ready to make these difficult choices, and actually

22 have vetted plans developed and on hand. superstorm

23 Sandy cost New York City a minimum of 20 billion

24 dollars and we went ahead and rebuilt most areas

25 almost exactly as they were beforehand. What happens

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2 when the national flood insurance program goes  
3 bankrupt? Oh, sorry, it already is, and congress is  
4 already trying to figure out how to figure it out. I  
5 was raised in Rockaway and was dismayed that my  
6 beloved beach community was rebuilt with only tiny  
7 improvements. I'd call this stupid money. Where was  
8 the smart money to build bicycle and carpool only  
9 highways, distributed energy systems, raised  
10 buildings and roads, community gardens, seaway  
11 openings, managed retreat from the shoreline and  
12 compost infrastructure? Where are these plans? We  
13 still don't have them, yet we're certain that New  
14 York City will flood again and another moment for  
15 transformative change will be upon us and wasted. I  
16 urge you to view the city budget differently. Budget  
17 items, items that save greenhouse gas emissions will  
18 save money in the future. New York City already does  
19 some of this. The tax benefits and finance packages  
20 for solar installation or retrofitting is smart money  
21 spent. Congestion pricing on cars is smart money  
22 made. But those are the easy choices, there are  
23 dozens of difficult choices ahead that may have to be  
24 taken, form seizing space from vehicles for transit,  
25 pedestrians and bicycles, or taxing take out

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2 containers and toxic and overly packaged foods and  
3 goods, not allowing rebuilding after storms and just  
4 as taxi drivers are suffering now, parking garage  
5 owners and, and workers will lose big. There are no  
6 easy choices. All of your budgets, capital and, and  
7 infrastructure expenditures must integrate the  
8 climate emergency as a first principle and begin to  
9 imagine systemic solutions. Declaring a climate... I'll  
10 just stop. I just want to say we are not stronger  
11 than the storms, that's the most important thing,  
12 that is a bunch of who... you know... you know what said  
13 by you know who and declaring a climate emergency is  
14 a good first step. Thank you.

15 CHAIRPERSON CONSTANTINIDES: Thank you,  
16 next up.

17 MIKE GORDON: Hi, I'm Mike Gordon and I  
18 want to thank the, the Chair and the Committee for,  
19 for listening and as well I want to thank the  
20 articulate voices around the climate emergency  
21 resolution to date, thank you, it's important stuff.  
22 I'm going to speak instead to 0140 and let me  
23 credential myself with respect to Community Choice  
24 Aggregation. I was the founding Chair, the first  
25 Chair of Sustainable Westchester and implemented the

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2 pilot with Westchester Power throughout 2015 and in  
3 early 2016. I am no longer associated with  
4 Sustainable Westchester, we currently... I am currently  
5 Chief Executive Officer of Joule Assets and we run  
6 100 percent renewable community choice aggregations  
7 throughout New York State, we are rapidly expanding,  
8 and we are happy to support the city in your  
9 endeavors going forward. So, let me do a brief  
10 description of community choice aggregation because  
11 you've heard about its benefits, I don't think you've  
12 gotten a simple description and basically this is not  
13 implementing a new opt out program. Currently your  
14 electricity bill is actually two bills, it's your  
15 poles and wire bill and then separately your  
16 electrons bill. Poles and wires remains precisely the  
17 same but the state currently designates who your  
18 default electricity supplier will be that is  
19 currently opt out designated by the state, all that  
20 community choice aggregation does is it changes that  
21 authority from the state to the local municipality,  
22 that's the only change. So, thereby it is a tool and  
23 it isn't a tool that's good and bad... good or bad in  
24 and of itself however it can be used as a quite  
25 effective tool and let me talk about some of what,

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2 what can be accomplished with that tool, a couple of  
3 facts. That tool has been available since April 21<sup>st</sup>,  
4 2016 statewide, we did our pilot in 2015, it was  
5 introduced in April 2016, it has been open to anyone  
6 in the state. In March, March 15<sup>th</sup>, 2016 the public  
7 service commission extended the opportunity for that  
8 tool to be extended to local distributed generation,  
9 community distributed generation, that as well can be  
10 deployed in an opt out manner as of March 15<sup>th</sup>, 2016.  
11 We met with the city on March 16<sup>th</sup>, 2016 and we noted  
12 that the public service commission decision would  
13 open up and inspire the buildout of roughly two  
14 billion dollars of distributed renewable generation,  
15 the city told us accurately at that time that, that  
16 the city could not take advantage of it, the city  
17 couldn't take advantage of it because you had not  
18 passed a local law so that was within your... within  
19 your can to be able to do that. So, there are a  
20 couple of specific things about this bill, guaranteed  
21 savings going forward, that is simply not consistent  
22 with the idea of long term contracting with renewable  
23 generation, however, long term contracting with  
24 renewable generation with free access to people to  
25 get out at no choice... at no... at no cost is absolutely

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consistent with community... with CCA. I can tell you that there are components that can be guaranteed. I'll quickly wrap up, peak demand reduction savings can absolutely be guaranteed, community distributed generation savings can absolutely be guaranteed and let me close with one critical piece, it's... when you talk about the, the savings power of three million accounts, it's our experience that anything over 80,000 accounts doesn't get you anything. So, for you to allow local determination and local empowerment with the ability of localities or building classes to be able to do community choice aggregation will create leadership in this city that will demonstrate through pilots that then will be replicated and those pilots will create 40 million dollars of local economic development, 18 million dollars of guaranteed savings a year and self-determination, that is possible and we can quantify that with, with specific numbers.

CHAIRPERSON CONSTANTINIDES: Thank you

very much. Go ahead.

XIYE BASTIDA PATRICK: Good morning Chair

and Committee, thanks for having me today. My name is

Xiye Bastida Patrick, I am a 17 year old climate

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2 justice activist, I work with people's climate  
3 movement in the city, I'm also part of Fridays for  
4 Future which is an international youth led movement  
5 that aims to strike from school every Friday until  
6 the climate crisis is reversed. On March 15<sup>th</sup> our  
7 climate strike consisted of 1.5 million students  
8 worldwide. In May 24<sup>th</sup> it consisted of 1.8 million  
9 students worldwide, however, we recognize that  
10 striking from school is not going to reverse the  
11 climate crisis, we know that we need to speak to our  
12 respective representatives and the people who  
13 represent us. Today I am here for two reasons, my  
14 present and my future. As of 2015, 17 percent of  
15 adults in the Bronx suffered from asthma which is ten  
16 percent more than the national average. The total  
17 damage of hurricane Sandy was around 32 billion  
18 dollars including the inundation of subway stations  
19 and the power outage for more than 2.2 million  
20 residents on November 1<sup>st</sup>. I am sure that most of you  
21 are aware of these facts and statistics but something  
22 that you seem to forget is that the government is  
23 supposed to represent and is supposed to address our  
24 best interests. It's supposed to protect us and our  
25 best interest. Right now, the same as always that

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2 interest is a healthy and livable planet. I have not  
3 used the word climate change to talk about this issue  
4 and that is because it is an outdated term that  
5 cannot possibly encompass the catastrophe that we are  
6 living, climate crisis, climate emergency, climate  
7 breakdown those are the terms we need to use. Another  
8 big effect of climate.. of the climate crisis is the  
9 creation of climate refugees, they come in many  
10 shapes and ways. I, in fact, consider myself a  
11 climate refugee, I was displaced from Mexico because  
12 of the effects that droughts and flooding had in  
13 production. When I got to New York City three years  
14 ago I saw the effects that Sandy had had in the  
15 community and I concluded that the climate crisis has  
16 a thousand different shapes but it ultimately effects  
17 everyone everywhere. This is why I'm here today, to  
18 demand that you act on behalf of the crisis, to  
19 demand that you protect the people of color that are  
20 suffering in this city, to demand that you protect  
21 the youth that are growing up in this city, to demand  
22 that you protect the water and the air that sustains  
23 life, to demand that you address both climate change  
24 and social justice because we are on earth to take  
25 care of life not to take over. We need to declare a

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2 climate emergency in New York City because the  
3 climate crisis encompasses health, ecological,  
4 racial, laborer, generational and many more issues  
5 that you as people in a position of power have the  
6 responsibility to address. I assure you that the  
7 youth of New York City want the declaration of a  
8 climate emergency, we have 11 years to radically  
9 change our way of living if we want a livable future.  
10 New York as a model city needs to take the lead in  
11 addressing the climate crisis. Thank you.

12 CHAIRPERSON CONSTANTINIDES: Thank you.

13 CHRISTINA SEE: My name is Christina See  
14 and I am representing Extinction Rebellion. We're  
15 facing unfathomable and unprecedented events related  
16 to the climate and ecological crisis. These are  
17 issues that will exponentially increase as the planet  
18 warms. There are systemic issues that will touch  
19 every aspect of our society; food systems,  
20 transportation, and infrastructure are just a few.  
21 Whole populations will be affected by this. Our food  
22 system is already being affected both by the climate  
23 crisis and because our agricultural systems are not  
24 built to be resilient in the face of the changing  
25 climate and extreme weather that comes with it.

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2 Entire swaths of our critical agricultural  
3 infrastructure have been destroyed due to flooding in  
4 the Midwest that will undoubtedly effect availability  
5 and crisis for those crops, this is just one example  
6 of the effects of the climate crisis. This city is  
7 surrounded by water, what happens when the next  
8 hurricane Sandy hits? The economic impact of  
9 continuing to pretend that these things aren't  
10 happening will be a much higher cost than putting in  
11 the systems to mitigate and adapt. We need systemic  
12 change, we need lower consumption, we need to stop  
13 using single use everything, we need to change how we  
14 think about convenience, we need to realize how we  
15 have become accustomed to having fresh strawberries  
16 flown in from the other side of the world so we can  
17 enjoy them in the middle, middle of winter and think  
18 about what resources that takes to put them on our  
19 table. We need to realize the strain we're putting on  
20 the world, the animals we're killing just by virtue  
21 of living the way we do and extracting resources from  
22 the planet. I've submitted the United Nations  
23 Intergovernmental Panel on Climate Change, the IPCC  
24 report and the UN IPES report as part of my  
25 testimony. The IPCC report is often said to be too

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2 conservative, that there's things that will happen  
3 and we can't even foresee and that they will have  
4 compounding effects on what we are already dealing  
5 with. Solutions and actions must be proportional to  
6 the issues at hand, these are systemic issues that  
7 need inclusive, holistic, systemic solutions. We need  
8 to be acting as if this is an emergency because it  
9 is. We need to state a much more ambitious timeline  
10 for 100 percent net zero greenhouse gas emissions. We  
11 need legally binding legislation to get us there. We  
12 need to create mechanisms for real preceptory  
13 democracy, this is an issue that effects everyone and  
14 every system and the voices of everyone need to be  
15 heard including the people who will be  
16 disproportionately affected by the climate crisis as  
17 well as experts dealing with these issues every day.  
18 We need to take responsibility for the health of the  
19 planet and realize that our choices matter. This  
20 isn't going to be easy, it, it's not going to be... it  
21 will be uncomfortable, but we must be willing to  
22 accept the necessary actions that need to be taken if  
23 we want to change the trajectory of where we're  
24 headed. The climate and ecological crisis will come  
25 to our door no matter what, we can pretend it's not

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2 happening, wait for the destruction or we can face  
3 this head on, mitigate and adapt for the coming  
4 changes. We are New York City, we must... we can and  
5 must lead the way. Thank you.

6 CHAIRPERSON CONSTANTINIDES: First I'll  
7 say when I was 17, I wasn't able to testify at a City  
8 Council hearing, so I am... I'm beyond impressed and I  
9 think everyone in this room shares how impressed we  
10 are with your ability to speak and speak so well  
11 today so thank you for being here and when it comes  
12 to speaking the truth, over the weekend I took my son  
13 to see Toy Story four and API had an ad right before  
14 the movie and they're... you know it was talking about  
15 our clean energy revolution in our country and all  
16 about fracked gas and how fracked gas was making a  
17 difference so speaking the truth to what fracked gas  
18 is that is a bridge to nowhere, it is extremely  
19 important so I, I appreciate your bringing up  
20 needing... the need to speak the truth because even in  
21 a kid's movie they're trying to indoctrinate  
22 ourselves into this sort of fossil fuel way of  
23 thinking. Ben do you have anything that you wanted to  
24 add before I... [cross-talk]

25

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2 COUNCIL MEMBER KALLOS: I just wanted to,  
3 to plus one and thank you for everyone's advocacy. I  
4 just wanted to ask one question... two, two questions  
5 which is if somebody felt compelled by your testimony  
6 and wants to join your movement what organizations  
7 are you affiliated with and what is your URL that may  
8 be the question I arrived at for each panel?

9 CHRISTINA SEE: I'm with Extinction  
10 Rebellion New York City, our website is XRR dot NYC.

11 XIYE BASTIDA PATRICK: I'm with People's  
12 Climate Movement and Fridays for Future, the website  
13 is Fridays for Future dot org.

14 COUNCIL MEMBER KALLOS: And when is your  
15 next action?

16 CHRISTINA SEE: Our next action or your...

17 XIYE BASTIDA PATRICK: My next act... oh,  
18 my next action is September 20<sup>th</sup>, global strike,  
19 student strike where we're asking adults to join us  
20 in striking that day, we're expecting millions of  
21 people around the world and Greta Thunberg is coming  
22 to New York City in September for the UN, Greta  
23 Thunberg, yeah, she's coming to the UN.. [cross-talk]

24 COUNCIL MEMBER KALLOS: Your co-panelists  
25 were asking you to identify her for folks who may

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2 have just tuned in, how old is she, what country is  
3 she in and what did she do?

4 XIYE BASTIDA PATRICK: Greta Thunberg is  
5 a 16-year-old climate activist in Sweden, she started  
6 the Fridays for Future movement and started student  
7 strikes all around the world.

8 MIKE GORDON: briefly Joule Assets dot  
9 com, we focus on the renewable development and  
10 community choice aggregation.

11 AMY LARKIN: I don't have an organization  
12 that I work with but I'm with them, pretty clearly.

13 MARGARET KLEIN SOLOMAN: I'm with the  
14 Climate Mobilization and we're a national  
15 organization and one of our current projects is we're  
16 calling on congress to declare a climate emergency  
17 working with Extinction Rebellion and other groups so  
18 you can... you can ask your congress person to declare  
19 a climate emergency at climate emergency dot U.S.

20 AMY LARKIN: And actually this morning I  
21 met with the founder of the Future Coalition which is  
22 all of the youth organizations in one and she was  
23 just like you she was 19, the most extraordinary  
24 young person I've ever met and they're it, so I'm  
25 just with them.

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2 COUNCIL MEMBER KALLOS: Thank you to this  
3 panel.

4 CHAIRPERSON CONSTANTINIDES: Thank you.  
5 Next up we have Doctor Susan Rubin; Susan Shapiro;  
6 Rio Hito; Lisa Bloodgood and Olive Raymond. Alright,  
7 we're missing someone, she had to leave? Alright, so  
8 let me call Ken Schles, sorry about that, I get... with  
9 a name like Constantinides I do my best. Yeah, the,  
10 the Sergeant at Arms will come by and take it from  
11 you sir, if you can... want to grab a seat. Alright.  
12 Okay, alright, great, just let me know when you're  
13 ready. Okay, everyone ready back there? Alright, lets  
14 go ahead if one... I guess we'll start on this side,  
15 this, this go around.

16 SUSAN SHAPIRO: Sure, thank you for  
17 hearing my testimony today. I'm Susan Shapiro, an  
18 Environmental Attorney and I represent the Indian  
19 Point Safe Energy Coalition, IPSEC, grassroots  
20 environmental education, legal environmental advocacy  
21 fund, LEAF, promoting health and sustainable energy  
22 phase and the radiation public health project. First,  
23 I want to thank you for your Resolution 864 and  
24 strongly support your declaration of calling for work  
25 on the climate emergency and we also support your

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2 resolutions discussing geothermal today and  
3 implementing it as rapidly as possible in New York...  
4 New York City. However, whatever legislation or  
5 resolutions you introduce I strongly and vehemently  
6 and respectfully ask that you clearly define the  
7 terminology net zero energy to exclude both fossil  
8 fuels and nuclear energy. Supporting either fossil  
9 fuels or nuclear energy prevents and blocks a rapid  
10 transition to a renewable sustainable clean energy  
11 future. The nuclear lobby similar to toy story has  
12 been spending billions of dollars to mislead elected  
13 officials and environmental advocates by promoting  
14 and advertising the false concept that nuclear energy  
15 is zero emissions and carbon free. This is an attempt  
16 to green wash nuclear in order to take away money  
17 from renewables. Based on this fraud the public... the  
18 New York State Public Service Commission has created...  
19 has subsidized nuclear energy to the tune of 7.6  
20 billion dollars in the clean energy standard, it took  
21 the money away from renewables and gave it to  
22 nuclear. That is one of the questions of who's going  
23 to fund your geothermal research, is, is... it should  
24 be New York State has the funding in the clean energy  
25 standard, but they gave it to, to renew... to... I'm

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2 sorry, to nuclear on the claim that it's zero  
3 emissions, it's not and therefore I'm asking you to  
4 clearly define that in whatever resolution you pass.  
5 What they did was they gave 7.6 billion dollars to  
6 nuclear and only one billion dollars to all  
7 renewables in the state, that clearly is an uneven  
8 playing field and prevents renewables from coming  
9 online, it blocks renewables from coming online  
10 because the baseline will never be there for  
11 renewables to fill in so in ten years they're going  
12 to come back with their hands out again and say see,  
13 you haven't created a renewable energy... enough  
14 renewable energy in New York State so you have to  
15 keep funding nuclear and fossil fuels so the only way  
16 to transition to really get rid of fossil fuels and  
17 nuclear is to prevent the funding of nuclear and  
18 fossil fuels as well but they didn't give any money  
19 to that. Nuclear power does not fit into a 21<sup>st</sup>  
20 century energy system, it's not economic in the short  
21 term... short term, its even less economic in the long  
22 term and it's not zero emissions or carbon free, its  
23 dirtier than all other... than, than renewables, it  
24 crowds out and delays the deployment of alternatives  
25 and impedes development of jobs and local growth of

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2 the economy. It is dangerous and a grossly false  
3 misstatement of fact to call nuclear energy zero  
4 emissions or carbon free. Every nuclear reactor  
5 without exception produces carbon emissions and a  
6 variety of other radioactive greenhouse gases as well  
7 as emitting large quantities of thermal pollution and  
8 toxic radioisotopes. These emissions accelerate  
9 climate change and are carcinogenic. It is unrefuted..  
10 there is irrefutable scientific proof that during  
11 operations of nuclear reactors a large variety of  
12 radioactive carbon based greenhouse gases,  
13 radioactive carbon 14, radioactive methane,  
14 radioactive CFC gases, radioactive steam and  
15 radioactive krypton 85 are all produced and an  
16 impact... they are climate change accelerators, simply.  
17 Also, the nuclear fuel cycle from mining, processing,  
18 transportation, safe storage has a very large carbon  
19 footprint. I'm going to quickly.. [cross-talk]

20 CHAIRPERSON CONSTANTINIDES: If you can  
21 wrap up, yes.

22 SUSAN SHAPIRO: The thermal emissions of,  
23 of a nuclear plant can be seen in this picture, this  
24 is the heat coming out of Indian Point every single  
25 day, this is the amount of heat the.. that more than

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2 one bomb, a Hiroshima bomb would create every single  
3 day from every single nuclear reactor. This is  
4 directly heating the planet, this heat has a large  
5 impact, it creates algae blooms and obviously  
6 influences climate change and increases the frequency  
7 of cyclones, typhoons and hurricanes. Also, as we  
8 know... [cross-talk]

9 CHAIRPERSON CONSTANTINIDES: If, if you  
10 could please wrap it... [cross-talk]

11 SUSAN SHAPIRO: ...the reactors... [cross-  
12 talk]

13 CHAIRPERSON CONSTANTINIDES: ...if you  
14 could please wrap up... [cross-talk]

15 SUSAN SHAPIRO: ...and at large quantities...  
16 what?

17 CHAIRPERSON CONSTANTINIDES: If you could  
18 please wrap up.

19 SUSAN SHAPIRO: Okay, I am... [cross-talk]

20 CHAIRPERSON CONSTANTINIDES: Thank you...  
21 [cross-talk]

22 SUSAN SHAPIRO: ...wrapping up, create  
23 large quantities of carcinogenic therefore we ask you  
24 today to adopt your... the bill that's before you, the  
25 resolution 864 and we also ask you to call on the

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2 Public Service Commission to revoke tier three of the  
3 clean energy standard and provide that money to New  
4 York City to create a clean energy future.

5 CHAIRPERSON CONSTANTINIDES: Thank you...

6 SUSAN SHAPIRO: Thank you.

7 RIO HITO: Hello, thank you for your  
8 time. My name is Rio, I'm 20 years old and I am a  
9 resident of New York City. I've come here today as a  
10 concerned citizen. My testimony may be redundant, but  
11 I would like it to be on the record. In World War II  
12 we mobilized the country developing new technology  
13 and moving industries working together in a  
14 collective mission, putting together technology and  
15 resources on a scale never thought possible before.  
16 People collected cans and rubber to support the war  
17 effort, we focused our economy, our will completely  
18 to overcome the dangers in front of us. The war  
19 effort was in the forefront of the nation's mind. And  
20 in 1962 John F. Kennedy said we were going to put a  
21 man on the moon, seven years later we accomplished an  
22 unimaginable feat made possible through a strategic  
23 and immense allocation of resources. Today we are  
24 confronted with the greatest threat society has ever  
25 faced, people and politicians alike shrug off this

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2 notion, yet the simple fact is we are doomed, we are  
3 doomed if we do not mobilize every resource we have  
4 to prevent what is already happening. PH levels in  
5 the world's oceans have already increased to a  
6 critical point that if untouched by the end of the  
7 century they may no longer be able to support many of  
8 the species we know today. Arctic summer sea ice is  
9 gone, there has been heat waves inside the earth and  
10 Alaska and coastal Louisiana are preparing themselves  
11 to move their entire communities because their towns  
12 and villages are literally falling into the ocean.  
13 New York City is located on a brackish river with  
14 only four feet elevation change from here to Albany,  
15 we will soon follow. Billions of dollars every year  
16 are lost due to climate crisis, we've led the planet  
17 into this mess so it should be our responsibility to  
18 lead them out. While individual action are overall  
19 beneficial to the environment, they certainly aren't  
20 enough to stop the reverse... to stop and reverse  
21 climate change thus it's a task that can no longer be  
22 accomplished by small deeds. The climate crisis is a  
23 massive systematic problem that can only be changed  
24 through a massive systematic change. You can no  
25 longer deny what is monstrous the most pressing issue

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2 of our time so today we not only ask for you to call  
3 a climate emergency and pass Resolution 864, we  
4 demand the state to confront what now has become a  
5 fight for our lives. So, we implore you to implement  
6 truly renewable energy that's carbon free and nuclear  
7 free. Thank you.

8 CHAIRPERSON CONSTANTINIDES: Next up.  
9 Make sure you hit the button.

10 OLIVE RAYMOND: My name is Olive Raymond,  
11 I'm a resident of North Brooklyn and I'm here in  
12 support of Resolution number 864. Me and my friends  
13 talk about our futures in a rather optimistic way, we  
14 all talk about the colleges we want to go to and the  
15 families we might have and of all of the  
16 possibilities for our careers and I find myself  
17 talking about this a lot because honestly it's  
18 exciting to think about and its very easy to be  
19 optimistic but it's also easy to forget. I have to  
20 remind myself that my future will likely be ruled by  
21 climate change and that clouds my thoughts. Its hard  
22 to face the inevitable because I know that in the  
23 future, I won't have the luxury to close my eyes,  
24 none of us will and at this point it's too late to  
25 sit idly by. Me and my generation do not have the

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2 option to ignore climate change, looking into my  
3 future and that of countless others I see not the  
4 potential of what we could become but a reality  
5 defined by the downfall of our earth. It is hard for  
6 me to deal with this fact when I see little change in  
7 regard to policy. I'm only 15 years old and though  
8 its hard to come to terms with it, I am relatively  
9 powerless. The one power that I do have is my voice,  
10 I can use my voice to push legislators like you to  
11 pay attention to these issues to declare a climate  
12 emergency because climate change is holding my  
13 generation back and we don't yet have the power to  
14 change the laws but you do. climate change is the one  
15 issue that effects every single human and living  
16 being on this planet and it needs to be taken  
17 seriously, it does and will devastate so many people  
18 and it will continue to devastate people more and  
19 more unless something is done now. For many it is  
20 more than a career or future tarnished which may be  
21 the case for me, it will ruin their health, their  
22 wellbeing, their homes, their families, and their  
23 lives especially within low income communities and  
24 communities of color where people are at high risk  
25 and have less resources. You have seen the proof and

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2 it is irresponsible and unacceptable to cast that  
3 off, it is unacceptable to deny millions of people  
4 their futures for reasons that are trivial in the big  
5 picture. It is unacceptable to not take this  
6 seriously. New York City must declare a climate  
7 emergency by not doing so you are denying the youth a  
8 safe and prosperous future, we are relying on you.

9 CHAIRPERSON CONSTANTINIDES: Thank you.

10 SUSAN RUBIN: I don't know how one  
11 follows that. So, I'm, I'm actually here to read  
12 somebody else's, I didn't prepare a statement today.  
13 So, I was going to read somebody else's testimony who  
14 had to leave early, all the people in this room, the  
15 ones who aren't paid to be here are... you know people...  
16 individuals taking time out from their lives to take  
17 part in nonviolent direct actions to put groups  
18 together to fight for what they know is right and  
19 fight for this and we're sitting here with two young  
20 people who, who's futures are going to be impacted in  
21 a way that we can't even imagine and this all  
22 happened on our watch, it all happened in my lifetime  
23 that the, the, the impacts that we're seeing now are,  
24 are the result of emissions that we put out since I  
25 was born. Since 1970 we've lost 60 percent of our

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2 wildlife populations. One of the... one of the figures  
3 that really... you know because we band... we band aid  
4 around these, these numbers, 60 percent, 10 percent,  
5 nine... 85 percent, we're going to... that... if, if, if we  
6 had lost 60 percent of the human population it would  
7 be the equivalent of losing all the human population  
8 in North America, South America, Africa, Europe,  
9 China and Oceania that's what we've lost in the  
10 wildlife population and we can't see it because we're  
11 in this like little bubble that we've made but we...  
12 the least this City Council can do, the least is  
13 declare a climate emergency because what we need to  
14 do is start right now changing everything we do and  
15 these... and, and, and we're doing it for them because  
16 we've had our lives, right, we've, we've, we've lived  
17 off the resources of this planet in, in ways no, no  
18 generation before us has done. This is the least we  
19 can do to declare this emergency and then we... and  
20 then we need to get on with the work. So, I thank you  
21 all for... Chairman and all of you who've sponsored  
22 this bill for, for bringing this forward. This is...  
23 this isn't an issue, this is... this is our... this is  
24 life and death and, and, and these are the ones we're  
25 fighting for.

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2 KEN SCHLES: Hi, my name is Ken Schles.

3 I'm a father of two, a photographer and a writer who  
4 has lived in New York City for nearly all of my 58  
5 years, I've also been an activist with Sunrise  
6 Movement, Food and Water Watch, 350 BK, New York  
7 Renews and Extinction Rebellion. In October of 2016 I  
8 had a heart attack while cycling in Prospect Park,  
9 Brooklyn. I'm fit, don't smoke, have low cholesterol,  
10 exercise regularly and live a vegan lifestyle. It's  
11 well documented that burning fossil fuel creates  
12 small particulate matter that infiltrates vascular  
13 walls and causes plaque formation. It damages lung  
14 tissue and exacerbates asthma which kills 11 people a  
15 day in the U.S. Increasing heat waves magnify both  
16 the frequency and severity of heart disease, stroke  
17 and asthma leading to higher morbidity and mortality  
18 rates. According to the World Health Organization 4.2  
19 million people die prematurely from ambient air  
20 pollution per year or 7.6 percent of all annual  
21 deaths. But we're just beginning to feel the effects  
22 of climate change. It will take thousands of years  
23 for the effects of increased atmospheric carbon to  
24 fully materialize. They call the climate crisis a  
25 hyper object because its magnitude is impossible to

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2 conceptualize. True, but because of my health scare,  
3 I recognize the climate crisis is something that  
4 effects individuals intimately as lost potential,  
5 diminished lives and broken families. New Yorkers are  
6 hobbled with increased health care costs and lost  
7 wages, increased tax burdens to fund the hospitals,  
8 increased costs to harden infrastructure and provide  
9 storm damage remediation. Climate change risks not  
10 only life and limb, but also destroys our cultural  
11 heritage. I have photographic work in the collections  
12 of metropolitan Museum of Art, the Museum of Modern  
13 Art and the Museum of the city of New York as well as  
14 in cultural institutions throughout the world. Last  
15 year work of mine in a collection bound for the  
16 Museum of Fine Arts in Houston was destroyed along  
17 with 36,000 other objects in the Woolsey fire that  
18 ravaged Malibu, California. Nearly 300,000 people  
19 were evacuated. The fire caused 1.6 billion dollars  
20 in damages. Another piece of mine, in the collection  
21 of the U.S. State Department, was destroyed in the  
22 U.S. Embassy in Yemen, a minor casualty of a war that  
23 precipitated one of the greatest humanitarian  
24 disasters of this century and is the result,  
25 arguably, like the war in Syria, a war initiated by

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2 water scarcity due to climate change. A 2018 study by  
3 the world wildlife fund notes the world's wildlife  
4 population is down by 60 percent on average since  
5 1970. We are living through what the New York Times  
6 dubbed the insect apocalypse. The Pulitzer Prize  
7 winning author Elizabeth Kolbert described our era as  
8 the sixth extinction, a time when species demise is  
9 between 1,000 and 10,000 times the normal background  
10 rate. Last year the IPCC report gave us 12 years to  
11 reduce our greenhouse gas output but even in the few  
12 months since the report's publication, scientists  
13 have made some surprising findings; the oceans are  
14 warming faster than previously thought, they are  
15 becoming hypoxic, rife with dead zones. According to  
16 NASA, the West Antarctic ice sheet is contributing to  
17 sea level rise faster... at a faster pace while it  
18 signals a rapid decay. The Greenland ice sheet, which  
19 contains enough water to raise global sea levels by  
20 23 feet is melting at a rate 44 percent faster than  
21 in the 20<sup>th</sup> century. And since that report was  
22 published Greenland is experiencing record ice melts  
23 that are further disrupting weather patterns. It is  
24 expected that 80, 80 million people will be put at  
25 risk due to coastal flooding by 2040 and include New

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2 York City residents in that number, a significant  
3 fraction of the world's population will experience  
4 chronic or absolute water scarcity. At our present  
5 trajectory climate modeling shows by 2050 a climate,  
6 climate equivalent to the Eocene, last experienced 50  
7 million years ago. Extend that out another 200 years  
8 and we see a planet uninhabited by humans. According  
9 to NOAA... I'll, I'll skip this part and just finish  
10 up. Since some of us here will, will lose our lives  
11 to climate change, some, like myself have already had  
12 life altering near death experiences. To take no  
13 action is immoral. To act in behalf... in half  
14 measures, is a false compromise that does not take  
15 into account the immutable, unyielding facts of  
16 science. We risk loss not only to our cultural  
17 heritage and the viability of our species; we risk  
18 the genetic legacy and biodiversity of our planet. We  
19 demand our elected officials to lead, for it is their  
20 moral obligation to do so. Call this climate  
21 emergency for what it is. Align New York City 625  
22 local governments in 14 countries. Let people know  
23 this is no longer a debate of fact. Declare a climate  
24 emergency to give credence to and form a basis for  
25 further legal and legislative action.

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2 CHAIRPERSON CONSTANTINIDES: Thank you  
3 very much, thank you all for being here today and I  
4 invite you all to come back to other hearings as well  
5 and be part of the continued conversations so thank  
6 you very much for being here. Rory Varrato, Climate  
7 Rebellion... Extinction Rebellion; Elliana Pfeffer; Ted  
8 Bogin; Gregory Schwedock, are you all here? One, two...  
9 okay, so Guy McPherson, I'm sorry if I'm pronouncing  
10 the name wrong. Okay and Wendy Brawer, okay Wendy,  
11 great. Starting here on the right side this time.

12 WENDY BRAWER: I support the declaration  
13 of the climate emergency for New York City. I'm Wendy  
14 Brawer, I'm the Director of Green Map System and a  
15 sustainability and climate change design professional  
16 with 30 years of experience. My nonprofit's 2006  
17 energy themed green map included many of the same  
18 climate issues we're grappling with now. I've been  
19 named an LES community hero, a TED resident and  
20 received service certificates from multiple NYC  
21 Mayors. I'm a zero-waste advocate and everyday  
22 cyclist and I'm co-developer of New York City's first  
23 certified Net Zero Passive House building. Our city  
24 is most vulnerable not only from climate change but  
25 from the breakdown in social cohesion that becomes

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2 more evident each day. Some of the divisions in our  
3 community could be bridged with stewardship greening  
4 and preparedness programs. These would also build  
5 capacity, trust and social resilience and help us  
6 both mitigate and adapt to climate change. This is  
7 the miss... critical missing link. As we learned in  
8 Sandy, a sense of interdependency is key to our  
9 common future, let's include everyone in addressing  
10 the climate emergency. I included social resilience  
11 in a recent letter to Council Member Rivera, who has  
12 stated that the East Side Coastal Resilience Project  
13 does not need to comply with the state law on  
14 alienation when it comes to adding a flood barrier to  
15 East River Park. This means, rather than having  
16 professional oversight on this complicated project  
17 and the city's antiquated approach, she's welcome,  
18 well... recommending a community advisory group to do  
19 this work. While we need to come a yes on this  
20 emblematic 1.5-billion-dollar project and protect  
21 local residents, the destructions of natural systems  
22 and disregard of state law should not be considered  
23 as of right. I support Intro 1399, an NYC Department  
24 of Sustainability and Climate Change, it will go hand  
25 in hand with declaring a climate emergency and will

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2 help all future planning including the difficult  
3 decisions we have ahead about crosscut... about the  
4 cross-cutting emergency we fear most. Tell the truth  
5 is the Extinction Rebellion's number one point. The  
6 city must be forthright and start engaging with us on  
7 a daily basis, using all means to help citizens,  
8 businesses, agencies and schools all see ourselves as  
9 part of the solution. Call out the true cost of  
10 flying, motor vehicles and over consumption and keep  
11 us in the loop on every measure. I also support Intro  
12 bill 14... one... 0140 for community choice aggregation  
13 and recommend the following that we have an opt out  
14 program, it must be for 100 percent truly renewable  
15 energy and must include a pilot program for willing  
16 communities that meet defined criteria. New York City  
17 Council let's move on this, while we still can. Thank  
18 you.

19 TED BOGIN: Council Members thank you for  
20 allowing me to testify on Resolution 864 for New York  
21 City to declare a climate emergency. My name is Ted  
22 Bogin, I'm a web developer, a volunteer wildlife  
23 rehabber at New York City's Wild Bird Fund and  
24 climate activist with Sunrise Movement NYC. Since  
25 October when we learned we had 12 years to cut

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2 emissions in half to avoid catastrophic global  
3 heating I've wondered about how we could avoid such  
4 disaster in that of course I'm not alone. As stated  
5 in the resolution the only appropriate response to  
6 our present state of climate breakdown is full  
7 mobilization of society to address it. Avoiding the  
8 worst means historic collective action but before  
9 that becomes possible people need to pay attention in  
10 a way they currently are not. In New York City in my  
11 personal and professional lives I've noticed two  
12 conflicting attitudes people have toward climate  
13 breakdown. When people are thinking about the crisis,  
14 they're desire to be mobilized to do anything to help  
15 is strong but for many its still far too easy to  
16 quickly forget what's looming around the corner.  
17 Breaking that complacency is why a climate emergency  
18 declaration is invaluable. Declaring that New York  
19 City is in a state of climate of emergency would  
20 impress upon New Yorkers the magnitude of the  
21 situation as little else would. That is why it's  
22 imperative to pass Resolution 864, please don't pull  
23 punches, New Yorkers deserve the truth about climate  
24 change and an emergency framework on how to respond  
25 in kind. Thank you.

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2 CHAIRPERSON CONSTANTINIDES: Thank you.

3 GUY MCPHERSON: Thank you for the  
4 opportunity to address the Council's Committee. The  
5 topic under discussion is the most important in the  
6 history of our species. We face a stunningly severe  
7 existential risk that is routinely ignored or  
8 downplayed by government, corporate media and paid  
9 climate scientists. I'm Guy McPherson, Professor  
10 Emeritus of Conservation Biology at the University of  
11 Arizona. I began my tenure at that university in  
12 1989, I was granted tenure and promoted to Associate  
13 Professor and then promoted to a full Professor  
14 earlier than is customary. I'm one of the relatively  
15 few people in history to achieve the status of full  
16 professor before turning 40 years of age. My lengthy  
17 resume is replete with scholarly publications  
18 including dozens of peer reviewed journal articles;  
19 the Gold Standard by which the process of science  
20 creates reliable knowledge. I received the highest  
21 awards given by each of the two transdisciplinary  
22 colleges at the University of Arizona and I was  
23 granted the honor of the Emeritus status upon  
24 declining further paychecks from the University at  
25 the young age of 49 years. To stave off boredom

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2 during these two decades I also served as a faculty  
3 member at the University of California Berkeley,  
4 Southern Utah University and the tiny Liberal Arts  
5 school, Cornell College but this is, isn't about me.  
6 We are meeting here to discuss the most important  
7 topic in human history. I left active service in the  
8 academy more than a decade ago to set an example, I  
9 stepped away from the monetary system which I knew  
10 was driving anthropogenic climate change and also the  
11 worst of the mass extinction event on earth. I hoped  
12 that many people would follow my lead as I lived off  
13 grid in straw bale house, secured my water supply  
14 with two solar pumps and a hand pump, grew a vast  
15 majority of my food, defecated in a bucket and  
16 contributed to the creation of a decent human  
17 community. These actions seemed like great sacrifices  
18 at the individual level, they did not produce the  
19 desired outcome in part because the sacrifices did  
20 not scale up to the level of society. We are in the  
21 midst of abrupt irreversible climate change. We are  
22 in the midst of the sixth mass extinction on earth.  
23 As a result of these two ongoing phenomena we are  
24 faced with near term human extinction. Earth is  
25 currently at the highest global average temperature

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2 experienced by homo sapiens. There is no known  
3 technology to reduce the global average temperature,  
4 we seem intent upon raising the global average  
5 temperature until all habitat is gone for humans and  
6 many other species. There are several paths by which  
7 we could abruptly lose habitat for humans throughout  
8 the world, habitat loss is already driving refugee  
9 crisis in the middle east, northern Africa, the south  
10 Pacific, Central America and even within the United  
11 States. The refugees attempting to cross the southern  
12 border of this country are not seeking a vacation at  
13 Disney Land rather they are seeking a means of  
14 survival for themselves and their families. How  
15 should we act in the face of the greatest existential  
16 threat our species has ever encountered, the approach  
17 effort by Extinction Rebellion is to declare a  
18 climate emergency. This approach has been adopted by  
19 several governments around the world, it is a fine  
20 starting point. If declaring a planetary scale  
21 emergency is a starting point, what follows? Where do  
22 we go from here? If we are all going to die, and we  
23 are then how should we proceed as a society? If our  
24 species is, is going extinct in the near future and  
25 it is then how will we... shall we proceed as a

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2 community? These are the two critical questions I  
3 pose to you today. These are the important questions  
4 I would like the Council and all of us to ponder  
5 during the coming days and weeks. How we respond to  
6 these questions defines our humanity, is there a  
7 better measure of our character than how we face our  
8 individual death and the demise of our society? I'm  
9 here to ask these questions unlike Socrates I'm here  
10 to do more than ask difficult questions, I will also  
11 propose a response. Before I reveal my response I  
12 would like to read a short passage from Viktor  
13 Frankl's 1946 book, Man's Search for Meaning written  
14 shortly after Frankl was a prisoner of war in Nazi  
15 Germany, Man's Search for Meaning was published, it  
16 has inspired millions of people including me. So...  
17 [cross-talk]

18 CHAIRPERSON CONSTANTINIDES: So, if you  
19 can just wrap up.

20 GUY MCPHERSON: Thank you. Between a  
21 stimulus and a response there is a space, in that  
22 space is the power to choose our response, in our  
23 response lies our growth and our freedom, the last of  
24 human freedoms is to choose one's attitude in any  
25 sort of circumstances, end quote. I would only add

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2 that we can choose not only our attitude but also our  
3 actions. Each of us was born into a set of living  
4 arrangements over which we have no control, the  
5 scorched earth policies we have adopted and  
6 implemented during the last two centuries have led to  
7 the expected response, a scorched earth. The time for  
8 blame has long passed. The time for shaming others  
9 has long passed. No blame, no shame. At the age of  
10 extinction only love remains. Let's pursue planetary  
11 hospice as one expression of our love. Thank you.

12 CHAIRPERSON CONSTANTINIDES: Thank you,  
13 next up.

14 ELLIANA PFEFFER: Thank you so much for  
15 the opportunity to testify. My name is Elliana  
16 Pfeffer, I'm 18 years old and I'm testifying in  
17 support of the Resolution to declare a climate  
18 emergency. So, the last two months of high school for  
19 me, I just graduated, I was skipping school every  
20 Friday as part of the Fridays for Future Movement  
21 inspired by activists like Greta Thunberg in Europe  
22 and all around the world. Two weeks ago, I joined the  
23 class of zero movement and used my graduation speech  
24 stage as a platform to demand radical climate action.  
25 Usually when graduations... usually graduations are

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2 times when recent grads are counseled to take our  
3 time and figure out who we want to be and what we  
4 want to do in the future, but we don't have that  
5 option, we have zero time left. Climate change has  
6 already impacted the way I think about my life and my  
7 future, when I'm asked what do you want to be when  
8 you get older, I'm not faced with the same freedom  
9 with which older generations might have approached  
10 the question. I must devote myself to staving off the  
11 existential threat of climate... of the climate crisis.  
12 When I'm asked do you want to have a child of your  
13 own one day, I worry about whether it makes sense to  
14 bring a child into this world. I am urging you to  
15 declare a climate emergency because you have the  
16 power to act now. Declaring a climate emergency is  
17 igniting the ideological shift necessary to combat  
18 the existential threat of climate change. It creates  
19 the political mindset needed to get to net zero  
20 emissions. A climate emergency is a radical call to  
21 action, it is my generation's hope for a more  
22 sustainable and equitable future. Climate change is  
23 an incredible, incredibly dire crisis but it is also  
24 an opportunity. It is an opportunity to center issues  
25 of justice and equity in our vital acts to reshape

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2 our economy, our lifestyles and our politics. It is  
3 an opportunity to center equity for people of color,  
4 low income people, climate migrants and more. Thank  
5 you so much for your leadership on this issue and I  
6 urge everybody to declare a climate emergency now.  
7 Thank you.

8 [applause]

9 CHAIRPERSON CONSTANTINIDES: Thank you,  
10 thank you for testifying today, next up.

11 RORY VARRATO: Hi, my name is Rory  
12 Varrato. I'm here to speak in support of Resolution  
13 864, I'm a founding member of the New York City  
14 Chapter of Extinction Rebellion, I'm also a PhD  
15 student in Philosophy and Education at Teachers  
16 College Columbia University with prior degrees in  
17 political theory and American history. So, as a  
18 philosopher I've dedicated myself to the pursuit of  
19 wisdom though I am myself in no way wise, however,  
20 one thing I have learned during my studies is that  
21 people think only or maybe primarily in images, we  
22 imagine things and the things that we imagine become  
23 action guiding ideals that direct our activity  
24 towards our goals, we envision them and so I want to  
25 spend the three or so minutes that I have exploring a

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2 metaphor in the series of three images and that  
3 metaphor is the metaphor of a ship. So, the first  
4 image comes from Buckminster Fuller who popularized  
5 the idea of space ship earth in the 1960s. And this  
6 was the idea... yeah, this was the idea that all humans  
7 are united on a single vessel, the earth floating  
8 through space and as a result we are part of a single  
9 community and Fuller said there are no passengers on  
10 space ship earth only crew, well what does this mean?  
11 This means that each of us is required to perform  
12 certain activities in order to sustain and, and  
13 improve our, our shared spaceship. In Fuller's hope  
14 and others who agreed with this image was that this  
15 would lead to something like the development of a  
16 planetary or world centric or cosmopolitan  
17 consciousness, unification of humanity, post  
18 nationalist, post racial, etcetera. Whether that has  
19 exceeded... succeeded today is open to question but I  
20 give you that image first before moving into the  
21 second which is the ship of state analogy. This is  
22 Plato's image from the republic that he used to help  
23 us conceptualize any political community not unlike  
24 Fuller's spaceship earth. The state of ship is meant  
25 to represent a single community working together

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2 primarily crew members, officers, etcetera who  
3 perform their activities and the... in each of their  
4 specialized roles and so they're focused on their  
5 sort of mundane activities; cleaning the deck,  
6 whatever it may be and they're also concerned with  
7 competing, rising up to higher levels in the  
8 hierarchy but there's one person Plato tells us on  
9 the ship who behaves differently and this is the  
10 person to whom the, the rest of the crew believes is  
11 worthless, the navigator, the star gazer, the person  
12 that tells and informs the rest of the crew where  
13 they're going, where they've been, where they are,  
14 etcetera. Navigator seems useless but he or she knows  
15 where the ship is headed. The third and final image  
16 is simply the ship itself, imagine literally that  
17 we're on a ship and that that ship.. that ship has  
18 been headed towards rough waters for some time,  
19 navigators have been informing us that that ship has  
20 been headed towards dangerous passage. Now the ship  
21 is no longer headed towards rough waters, towards  
22 let's say an iceberg maybe the last iceberg, it  
23 struck the iceberg, the iceberg has been struck, the  
24 ship is sinking, there is no more avoiding it, okay  
25 and so what this means is that we now have to

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2 completely reconceptualize our activity. Yes, we are  
3 crew members, we were former navigators, etcetera on  
4 the ship, now the ship has sunk or is sinking, we're  
5 clinging to driftwood, etcetera. And so, what is our  
6 response, we're declaring emergency, we're... very  
7 quickly... [cross-talk]

8 CHAIRPERSON CONSTANTINIDES: If you, you  
9 can wrap up very quickly, yes... [cross-talk]

10 RORY VARRATO: ...we're declaring emergency  
11 in a sense that is often thought of as being forward  
12 looking, the emergency is now as many others have  
13 said and I'll end with this quotation from Thoreau  
14 who said and think of ourselves as clinging to the  
15 driftwood of this ship. Thoreau wrote in Civil  
16 Disobedience that if I have rested, if I have  
17 unjustly arrested, arrested a plank from a drowning  
18 man I must restore it to him though I die myself,  
19 this is inconvenient he says but he who would save  
20 his life in such a case shall lose it and I think we  
21 would do well to remember that, that imperative from  
22 Thoreau. Thank you.

23 CHAIRPERSON CONSTANTINIDES: Thank you,  
24 thank you all for your testimony today, thank you.  
25 The next panel is Linda Novenski; Richard McLachan;

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2 Becca Trabin; Greg Waltman and William Beckler. We  
3 got one more, one more. Gregory Schwedock, are you  
4 here?

5 GREGORY SCHWEDOCK: Yes.

6 CHAIRPERSON CONSTANTINIDES: Okay, so  
7 you're here, alright. Anyone else that I called  
8 that's... that I have called and has not come forward?  
9 Jilly Edgar, yep, if you can grab a seat right there.  
10 Okay and, and the last one is Robert Kremer, there's...  
11 here... yeah, he's here so we put him on the end,  
12 alright, so that's, that's our last panel. That's our  
13 last panel. Yeah, put him... if you can put him right  
14 there on the end. Okay. Alright. Okay, so let's,  
15 let's start right here. We have to... speak into the  
16 mic for open... yeah.

17 RICHARD MCLACHLAN: Thank you for your  
18 attention so late in the day. My name is Richard  
19 McLachlan, I'm 67 years old, I spent years as a  
20 senior civil servant in New Zealand, so I understand  
21 the importance of the details of analysis and the  
22 implementation that are being presented here earlier  
23 today. But my relevant credentials really are my five  
24 grandchildren, their lives are going to be so much  
25 more grim and painful than mine or most of yours ever

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2 were and we have to act. There's very little new to  
3 the people in this room about what I'm going to say  
4 but outside of this building the truth is not getting  
5 out on the streets and in the subways. That is why we  
6 need the declaration to show leadership and support  
7 our efforts with Extinction Rebellion which I'm  
8 associated with out on the streets. For the proposals  
9 presented here to work you need a broad basis of  
10 support among the population and you don't yet have  
11 that. This climate crisis that we're in the middle of  
12 right now, the impact on us all fills me with deep  
13 sadness. Sometimes the grief just stops me in my  
14 tracks. What I'm about to say here to you progressive  
15 counselors I want you to view as a statement of  
16 support. I was arrested on Saturday and I will  
17 continue to be arrested until things change, you can  
18 expect to see massive civic disruption and arrests in  
19 New York City until this issue is clearly placed on  
20 the table. This is a rebellion, an Extinction  
21 Rebellion that's underway at the moment and it's not  
22 going to stop but I want you as I say to see that as  
23 an active support for what you're doing here in the  
24 council. Here's the truths that I try to tell in the  
25 subways in New York City, I stand up in the subway

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2 car and I just start talking and this is what I'm  
3 trying to convey to people. Carbon dioxide released  
4 by burning fossil fuels and by cutting down forest's  
5 traps heat in our atmosphere, the levels of CO2 now  
6 are higher than at any point in the last 800,000  
7 years. Such concentrations have caused mass  
8 extinctions in the past. Global warming is about much  
9 more than hotter summers, it's about tender dry  
10 undergrowth causing fires in California that were  
11 more intense than firefighters had ever witnessed  
12 before, an entire city burned to the ground. It's  
13 about massive and prolonged flooding in the Midwest,  
14 it's about droughts and food crops unable to handle  
15 the heat. We're going to have trouble feeding  
16 ourselves. The oceans are heating and expanding,  
17 water is invading Louisiana, Florida, Alaska,  
18 Bangladesh, New York City, the polar ice is melting,  
19 glaciers are retreating, and the water supplies  
20 needed to feed millions of people in Asia are  
21 threatened. I never thought I'd find myself standing  
22 in a subway car saying the end of the world is nigh  
23 but if we don't act now that's exactly where it's at.  
24 It's an extinction event right now, the massive loss  
25 of insects, birds and mammals may one day include our

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2 species. These are all scientific facts and only a  
3 small part of a big picture of catastrophic events.  
4 We need to acknowledge that it's happening, we really  
5 do, not look the other way. There's so little  
6 coverage of this issue, you could almost say there's  
7 a media blackout on the apocalypse. It's an  
8 extraordinary thing, you know. Around the rest of the  
9 world events in America and New York City are covered  
10 but they're not covered here, almost none. We cannot  
11 rely at all on our federal government, we depend on  
12 a... states and cities and on a fragile coalition of  
13 your legislative power and our activism, you must  
14 please declare a climate emergency now. Thank you  
15 very much.

16 BECCA TRABIN: Hi, thank you guys for  
17 taking the time to hear all of us, I know everyone  
18 has been sitting all day and they want to go get some  
19 lunch. My name is Becca Trabin, I'm a teacher in New  
20 York and I'm here to urge you to pass Resolution 864  
21 to demand net zero greenhouse gas emissions by 2025  
22 and 100 percent renewable, clean, safe energy and a  
23 participatory democracy. I'm here to submit  
24 trajectories of the earth's system and the  
25 Anthropocene, a science report that I stumbled across

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2 last year, I'm not a science buff and it read me to  
3 lead many other science reports since then, pretty  
4 much nonstop. The climate emergency is an  
5 embarrassment of cosmic proportions. It is farcical  
6 and disturbing on the very deepest cellular level of  
7 being that NASA and James Hansen testified in 1988  
8 about this and are now marginalized censored  
9 activists, that is absurd. And I get it, we all  
10 procrastinate, okay, I'm constantly late and blaming  
11 the trains, I wait until April 15<sup>th</sup> to file my taxes  
12 every year but do you know what, what in the name of  
13 everything, everything sacred on this earth are our  
14 tax dollars going towards when we do not even declare  
15 a state of emergency for an existential threat, we  
16 don't even formally acknowledge it let alone take any  
17 meaningful action towards facing it. Where are the  
18 adults, I would love to know? The term genocide I  
19 don't even think is appropriate for the scale of  
20 consequences in this report. I would argue, I would  
21 submit that the term mega genocidal better describes  
22 the tower club sandwich of genocide that are laid out  
23 here projected to take place if we are doing nothing  
24 about this issue and as a teacher I'm also a mandated  
25 reporter and I would like to go on record as saying

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2 that I have reasonable cause to suspect that harm or  
3 abuse is taking place not just to one of my student,  
4 not just to every single one of my students but to  
5 all children and I would like to go on the record and  
6 submit that I think the entire fossil fuel industry,  
7 the agricultural industry, all of these people are  
8 guilty of what time will probably show us to be as  
9 genocidal child abuse. And holocaust survivors say  
10 that when evil happens around you and you do nothing  
11 you are part of a family of perpetrators and here we  
12 are in New York City at City Council and we are all,  
13 the city is part of a family of perpetrators in our  
14 inaction and in our complicity to deal with this  
15 clear, looming existential threat. So, I'm here to  
16 urge everyone who hears my message to make it their  
17 number one priority at the front of their minds to  
18 work together and help dislodge people's heads out of  
19 the coke brothers assholes so that life on earth may  
20 continue and yes, I'm using strong language because  
21 sometimes stakes are really high and you really got  
22 to get your point across and the stakes have never  
23 been higher than they are on this particular issue.  
24 So, thank you for your time and I submit this peer  
25 reviewed.. peer reviewed paper to you, thank you.

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2 CHAIRPERSON CONSTANTINIDES: Thank you.

3 GREGORY SCHWEDOCK: Alright, thank you,  
4 that was amazing. My name is Gregory Schwedock, I was  
5 here on June 12<sup>th</sup> testifying with... for the Climate  
6 Mobilization here, I'll testify.. well representing  
7 more of an Extinction Rebellion and the Climate  
8 Mobilization but really here to read Zayne Cowie's  
9 testimony, he was here for a number of hours but he  
10 found that he couldn't spend another minute in this  
11 very boring room, he's nine years old.

12 CHAIRPERSON CONSTANTINIDES: I have a  
13 ten-year-old, I know.

14 GREGORY SCHWEDOCK: Yeah, so I hope you  
15 don't mind that Zayne if, if you... passing it on if  
16 when you watch this later but yeah, I, I also want to  
17 thank you, I... as I said last week or two weeks ago  
18 that I'm a product of New York City's school, public  
19 education and.. K through 12 and I also want to thank  
20 you for about 76 hours this, this year I've spent  
21 courtesy with room and board from New York City at  
22 central booking and one police plaza and although it  
23 was quite, quite cold, it was about 60 degrees in the  
24 Tombs last night with... or the other night with... and  
25 with... men with t-shirts and shorts and the lights on

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2 full blast. So, if there's anything to be done with  
3 that it's maybe a form of torture in itself but today  
4 we have the climate emergency crisis to deal with and  
5 confront. So, this is Zayne's testimony, again he's  
6 nine years old and been striking every day since  
7 December at this City Hall. The climate emergency  
8 should be declared because this is a real issue and  
9 it should be treated like a real emergency and not  
10 something where you can just go back to making money.  
11 I think politicians should be the people to clean up  
12 this mess not the youth. The youth didn't spend lots  
13 of money lobbying... lots of money lobbying lives like  
14 Exxon did since the 80s. I declared my own climate  
15 emergency back in December when I started to strike  
16 outside City Hall every Friday. People have come up  
17 to me and thanked me, but I don't want thanks instead  
18 I want you, you with the power to do something that  
19 makes a difference, to do something to let me have a  
20 future. I don't have the ability to vote, the only  
21 thing I can do is call you out, call you up and tell  
22 you to clean up your own mess much like a parent  
23 would tell their kid to clean up their own room, not  
24 have the parent clean up for them. The people are  
25 striking, the parent... the parent, the people who

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aren't doing anything are the kids. The people who sit in the house watching TV with air conditioners on max, the people who drive their dirty cars around town just because, people who are flying around the world, those are not the people who we should be looking up to, those are not the people we, we should want to be like and that's why I think the climate emergency should be declared and when you do it don't just say we're doing it and not actually do anything, you have to stick to what you said, you, you do... you do no matter what. Thank you. With... yes, so that, that was Zayne Cowie with Fridays for Future, climate striker and if you don't mind me just adding that this is the first step and needs to happen and this, this team here is a team that is, is showing leadership but this is also... and this bill is the first step but it is not strong enough still, 80 percent reductions by 2050 will not cut it, that is not an emergency, that is not a mobilization so I urge Constantinides, thank you and Kallos thank you for your leadership but we need to go further, faster and stronger. Thank you.

CHAIRPERSON CONSTANTINIDES: Next up.

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2 JILLY EDGAR: Thank you for listening. My  
3 name is Jilly Edgar, I'm 20 years old and I'm a  
4 student climate activist with the Sunrise Movement  
5 and I'm here testifying in favor of Resolution 864.  
6 This is supposed to be the beginning for me, only  
7 halfway through my undergraduate education I'm at a  
8 special time in life where my decisions should be  
9 wrought with idealism and the courage to begin  
10 shaping the life that I've always dreamt of. But what  
11 happens when a teenager looks at their life and  
12 begins to understand that the world is not open to  
13 explore but is instead dying right before their eyes?  
14 This is what people mean when they refer to climate  
15 change as an existential crisis. For a long time, my  
16 hope was diminished entirely as I searched for ways  
17 to use my energy to alleviate the crisis and found  
18 little opportunity. Every decision that I made came  
19 down to two options, either the world is on a  
20 trajectory so far beyond human repair that I might as  
21 well soak up as much life as I can before humanity  
22 becomes one of the almost one million species facing  
23 extinction or I can hang on to my idealism forbid  
24 myself from giving up and fight for the global  
25 transformation necessary to combat climate change,

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2 the climate crisis. I say global transformation  
3 because as Resolution 864 states climate change is a  
4 global emergency, it is an emergency that threatens  
5 all aspects of life on the planet human and non-human  
6 alike and is already apparent around the world.

7 Unlike other emergencies it is no sudden accident, an  
8 emergency of this scale has been compared to a world  
9 war but the difference in this instance is that human  
10 society has had the foresight to prevent the worst of  
11 it for over 40 years. We have had time to study the  
12 complexity of the issue's roots and recognize that a  
13 transformation of our entire economic, social and  
14 political system is the only way to avoid the worst  
15 of this catastrophe. This is more true now than ever,  
16 after decades of failure to act. I did not consider  
17 any such transformation when I was first learning  
18 about climate change, the world around me has always  
19 been so engrained with the status quo that without  
20 imagining a transformation of this nature of course I  
21 lost all hope but now I recognize what the  
22 possibilities truly are and I recognize that the  
23 first step to realizing these possibilities is  
24 acknowledging that we are facing an emergency and  
25 acting accordingly. The existential threat of climate

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2 change cannot snuff the idealism so special in people  
3 my age whose futures are all threatened because our  
4 survival depends on it. Holding onto it has ignited  
5 in me the courage to fight so today all I ask is that  
6 those who have more power than me find it in  
7 themselves to join the fight with courage and address  
8 this as the emergency that it is. Thank you.

9 CHAIRPERSON CONSTANTINIDES: Thank you.

10 GREG WALTMAN: Good afternoon Chair  
11 Constantinides, Chair Kallos, general Council. My  
12 name is Greg Waltman, here representing G1 Quantum  
13 Clean Energy Company, you know aside from the  
14 heartfelt testimony from my colleagues and people,  
15 you know really trying to push climate change  
16 awareness and the initiative, there are solutions  
17 that have come to light such as solar wall  
18 applications that are real time solutions that can be  
19 applied to not only address some of these issues but  
20 offset fiscal and budgetary concerns here in the City  
21 Council. And what I mean by that... and I mean well  
22 superior bids have already been submitted about the  
23 border wall, I, I mean... I don't know how you feel  
24 about the border wall, it could go either way, you  
25 might want it gone but if it's going to be there for

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2 100 years and be there for another 100 years you  
3 might as well put solar panels on it and if you do  
4 that on the southern side at ten feet you can create  
5 some 242 trillion kilowatt hours of energy per year  
6 which is around 291 billion dollars a year in energy  
7 at 12 cents per kilowatt hour. Now that's for the  
8 full 2,000 miles so maybe a pilot program could,  
9 could be possible but, but regardless... but, but  
10 regardless of the... of the issues you have a value  
11 media type of agenda to hyper-pretentiously exclude  
12 solutions of that type of capability from taking  
13 market share are being executed. So, so what I mean  
14 by that is that you have a green new deal interest  
15 that all of a sudden somewhat took up some of the  
16 oxygen of climate change, right but how did it do  
17 that. Well Amazon wanted to bring its company here  
18 and, and through the type of green new deal Cuomo  
19 contortionism all of the sudden we have a green new  
20 deal initiative spawned from a failed Amazon business  
21 initiative. So, when, when money is changing hands to  
22 suck up the oxygen in the room and to parse out the  
23 solutions like I've just described which have been  
24 submitted to the federal budget office and obviously  
25 now with the administration presidential

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2 administration declaring state of national emergency  
3 to address border wall concerns and admits the types  
4 of budgetary gaps and deficits that New York City has  
5 and just the other... in the other room dealing with  
6 medallions you, you know if the contracts are  
7 originated from New York it can go a long way in  
8 resolving these issues and, and, and when I say 12  
9 cents per kilowatt hour and, and we're talking about  
10 these figures these are, you know... you know I know  
11 it's 291 billion dollars is a lot, you know for... to  
12 kind of, you know throw out there but as you build  
13 upon a pilot program and then expand out you can  
14 actually attack these problems with real time  
15 solutions and achieve all the type of common outcomes  
16 that you're looking for. So, I, I... as I echo this and  
17 have echoed this and parsed this into different types  
18 of issues fiscal, budgetary concerns here at the City  
19 Council I again agree with my colleagues on this  
20 initiative and I commend the Council for addressing  
21 it and, and it's just that, you know when we begin to  
22 address it we have to be very aware of the value  
23 mainstream media's agenda in pushing broader types of  
24 concepts like the green new deal, etcetera when there  
25 isn't any substance behind it and when the substance

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2 exists like I've just described it, it, it should get  
3 the type of audience necessary to be able to address...  
4 you know address these issues in its finality. So,  
5 thank you for your time.

6 CHAIRPERSON CONSTANTINIDES: Thank you,  
7 next up.

8 ROBERT KREMER: Chairman, committee I  
9 want to thank you very much for giving us time to, to  
10 give this testimony. My name is Robert Kremer, I've  
11 been in the energy business for about 35 years and I,  
12 I really have to commend this committee because in  
13 all my time that I know is the first time that this...  
14 there's something happening in New York City that  
15 anything that has been passed that we had something  
16 to do with energy, something constructive has been  
17 done. A lot of people here are giving all kinds of  
18 good criticism but it's not very easy to criticize,  
19 you got to go and do something about it just  
20 criticism isn't doing anything and your, your panels  
21 on that wall wouldn't last overnight in Mexican wall...

22 GREG WALTMAN: Do I... do I get a response  
23 to that?

24 ROBERT KREMER: No, just... [cross-talk]  
25

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2 GREG WALTMAN: You know I mean because  
3 these are... these are important issues and if you want  
4 to... [cross-talk]

5 ROBERT KREMER: No, I under... [cross-talk]

6 GREG WALTMAN: ...if you want to throw... try  
7 to throw my initiative under the bus... [cross-talk]

8 ROBERT KREMER: No, no... [cross-talk]

9 GREG WALTMAN: ...I feel like I'm entitled  
10 to take comment... [cross-talk]

11 ROBERT KREMER: No problem... [cross-talk]

12 CHAIRPERSON CONSTANTINIDES: Alright,  
13 wait, wait this is not a debate, everyone gets their  
14 testimony and that's it...

15 GREG WALTMAN: 291 billion dollars and  
16 you want to sit here and... [cross-talk]

17 ROBERT KREMER: I understand... [cross-  
18 talk]

19 GREG WALTMAN: ...hypocritically counter...  
20 you... [cross-talk]

21 ROBERT KREMER: No... [cross-talk]

22 CHAIRPERSON CONSTANTINIDES: Alright,  
23 guys, guys, guys... [cross-talk]

24 ROBERT KREMER: I am gladly... [cross-talk]

25

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2 CHAIRPERSON CONSTANTINIDES: ...guys, guys...

3 [cross-talk]

4 ROBERT KREMER: I, I'll meet you... [cross-  
5 talk]

6 CHAIRPERSON CONSTANTINIDES: ...if you... if  
7 you want to do it outside that's, that's... [cross-  
8 talk]

9 ROBERT KREMER: I'll gladly meet you  
10 after that and discuss it... [cross-talk]

11 GREG WALTMAN: We don't have any  
12 solutions.

13 [off mic dialogue]

14 CHAIRPERSON CONSTANTINIDES: Alright...  
15 come on let's testify and then... you want to have a  
16 discussion offline that's perfectly your right and  
17 your ability to do so, thank you.

18 ROBERT KREMER: Anyway, again I, I really  
19 believe it's amazing that you were able to pass so  
20 many different bills to help this city and I, I do  
21 hope... I want to see... is the most amazing thing that  
22 I've seen because through all these years we haven't  
23 had anything that was constructive and, and new most  
24 of the... no technology has been implemented in our  
25 energy system in New York City. Our, our heating and

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2 infrastructure is about 150 years old, the same way  
3 like the Con Edison district heating system is a one  
4 way district heating system, it uses 800, 800 and  
5 something million dollars a year and it's a one way  
6 system to heat 10 million pounds an hour are being  
7 dumped into the sewer and that includes good potable  
8 water and just trying to save some of the sanity is  
9 at least a half a billion dollars a year. We need a  
10 major infrastructure system to provide resiliency.  
11 Right now the system that we have, the infrastructure  
12 system for district heating is heating some of our  
13 major buildings, our hospitals and our schools and  
14 institutions and those are unable, unable to be  
15 sustained in case something happens to our district  
16 heating system, that's a very major emergency that  
17 could happen to the city of New York. Our company has  
18 the technology that would definitely help implement  
19 some of these new technologies and to use maximal  
20 energy. We even have a program without that it would  
21 be self-sustaining and paying for itself and we offer  
22 this to New York City. New York City has done a, a  
23 pilot and it has worked quite well, what I would like  
24 to ask the Committee is to suggest a program under  
25 which that if there's some technologies that save

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2 energy and are able to instituted in the city that  
3 they shouldn't be facing a wall because to get some  
4 of this implementation of the energy is impossible  
5 because it's very difficult and we have technology  
6 that is lower costing and some other ones that are  
7 being, I would like to be able to... be able to offer  
8 it, that's all, thank you...

9 CHAIRPERSON CONSTANTINIDES: Alright,  
10 thank you. Thank you, thank you everybody for  
11 testifying today, I appreciate your time, thank you  
12 all for being here today. And I want to thank my  
13 colleague who was a great leader on the environment,  
14 Ben Kallos for all of his good work on the  
15 environment and all that he does for the people of  
16 the city of New York, thank you sir, thank you all  
17 for being here today, thank you Samara Swanston,  
18 Ricky Chawla and Nadia Johnson, Nick Wazowski,  
19 Terrance Cohen and I want to thank the Sergeant at  
20 Arms for keeping things in an orderly way and with  
21 that I will gavel this Committee hearing of the  
22 Environmental Protection Committee... you want to go on  
23 the record Ben, closed, thank you.

24 [gavel]

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

July 7, 2019