CITY COUNCIL CITY OF NEW YORK -----Х TRANSCRIPT OF THE MINUTES Of the COMMITTEE ON ENVIRONMENTAL PROTECTION -----Х December 15, 2020 Start: 11:01 AM Recess: 12:18 PM HELD AT: REMOTE HEARING (VIRTUAL ROOM 2) B E F O R E: COSTA G. CONSTANTINIDES, CHAIR COUNCIL MEMBERS: Stephen T. Levin Carlos Menchaca Eric A. Ulrich Kalman Yeger Darma Diaz A P P E A R A N C E S (CONTINUED) World Wide Dictation 545 Saw Mill River Road - Suite 2C, Ardsley, NY 10502 Phone: 914-964-8500 * 800-442-5993 * Fax: 914-964-8470

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Mark Chambers, Director, Mayor's Office of Sustainability

Jainey Bavishi, Director of the Mayor's Office of Resiliency

1	COMMITTEE ON ENVIRONMENTAL PROTECTION
2	3 SERGEANT-AT-ARMS: Yes sir. Good morning and
3	welcome to today's New York City Council hearing of
4	the Committee on Environmental Protection. At this
5	time will all panelists please turn on your videos.
6	To minimize the disruption please place electronic
7	devices to vibrate or a silent mode. If you wish to
8	submit testimony you may do so at
9	testimony@council.nyc.gov. Again that is
10	testimony@council.nyc.gov Thank you for your
11	cooperation. You may begin, Chair.
12	CHAIR CONSTANTINIDES: Okay, great. Alright,
13	good morning and welcome. I am Council Member Costa
14	Constantinides Chair of the Environmental Protection
15	Committee, and today's oversight hearing is on
16	climate change and environmental quality, a public
17	health issue. We will also hear Intro 2149, a local
18	law to amend the Administrative Code of the City of
19	New York in relation to climate indicators, and
20	Resolution 1469 calling on nations around the world
21	to implement United States Senate to approve and the
22	President to ratify a fossil fuel non-proliferation
23	treaty. New York City is experiencing first hand
24	the devastating impacts of climate change and
25	climate disruption. We just concluded the tropical
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1	COMMITTEE ON ENVIRONMENTAL PROTECTION 4
2	storm season with a record breaking 30 main storms
3	and 12 lands falling storms in the Continental
4	United States. While the physicalthe official
5	hurricane season concludes on November 30th,
6	tropical storms may continue to develop past that
7	day. More than anything need efficient monitoring
8	and evaluation of climate indicators of climate
9	change. In order to undertake efficient monitoring
10	and evaluation, we need an organized and manageable
11	set of climate indicators, and resiliency practices
12	and measures. Currently, there have been more than
13	30 scientific organizations and agencies monitoring
14	climate and climate resiliency of the New York area.
15	These organizations range from the, range from the
16	Hudson River and environmental conditions of the
17	thermal system to the National Science Foundation's
18	Long-Term Ecological Research Network to Noah's
19	Atmospeheric and Administration Storefront Pology.
20	We have not integrated our water quality data from
21	DEP, DEC and USGS. We have developed biodiversity
22	indicators to support the global convention on
23	biodiversity that includes metrics of wild bird
24	populations has and the aerial extent of wetlands
25	and marine grasses. We need to integrate our remote

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 5
2	sensing data developed by New York City DOITT.
3	Finally, algorithms to standardize these set,
4	different sets, the data sets. Currently, these
5	and other agencies and organizations are undertaking
6	moderate water, but their streams are int
7	integrated, and, therefore, cannot consistently or
8	properly be funded or used for to predict impacts
9	upon the most vulnerable communities. Proposed Intro
10	2149 brings a climate resiliency indicator and
11	monitory working group to pull together that
12	starting data in a single location, and the creation
13	of two climate indicator pilots, one of which will
14	address equity and social vulnerability, and the
15	other will address climate resiliency indicators and
16	mattress (sic) According to the New York City Panel
17	on Climate Change existing indicators and monitoring
18	systems should be adapted to provide ardent
19	information on climate resiliency. We a
20	comprehensive, adequately funded, multi-
21	jurisdictional, just that multi-jurisdictional
22	indicator and monitoring assessment to enhance the
23	scope and resiliency of our climate efforts. We are
24	also going to hear Resolution 1469 calling on
25	nations around the world to implement, the United

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 6
2	State Senate to approve and the President to ratify
3	a fossil fuel non-proliferation treaty. According
4	to U.S. Energy Information Administration OPEC and
5	fossil fuel companies based declining fortunes for
6	fossil fuel companies despite continued growth. For
7	example OPEC concluded its members are within
8	600,000 and 2.2 million fewer barrels a day through
9	2021 that was though necessary just a few months ago
10	to beat global demand. While scientists insist the
11	world must reduce usage by 6% a year, every year
12	until 2030 to avoid catastrophic temperature
13	increases, a fossil fuel upgrading treaty has three
14	pillars and the expansion of new reserves of coal,
15	oil and natural gas with the carbon emissions, phase
16	out current stockpiles to keep carbon underground,
17	and out of the atmosphere, and lastly, promotes
18	economic diversification, renewable energy and other
19	low carbon solutions in a way that leaves no
20	workers, communities or countries behind. We have
21	no alternative but to get behind a sustainable
22	future with continue We have no alternative to
23	get to a sustainable future. This treaty can make a
24	great future (sic) for everyone. Before I begin, I
25	would like to thank my Committee staff our Committee

1 COMMITTEE ON ENVIRONMENTAL PROTECTION 7 Counsel Samara Swanston, Policy Analyst Nadia 2 3 Johnston and Mickie Chawa, Financial Analyst Jonathan Seltzer, my Legislative Director and 4 5 Legislative Counsel Nicholas Lozowski for all of their hard work and now we'll hear from the 6 7 Administration and Samara will administer the oath. 8 Thank you.

9 SAMARA SWANSTON: Thank you. Costa. To begin with as the Moderator, I have to remind everyone 10 11 that you're going to be on mute until you're called 12 on to testify when you will be unmuted. I'll be calling on panelists to testify. Be aware that 13 there could be a delay in muting and unmuting so 14 15 please be patient. Wait and listen for your name to 16 be called. I'll be periodically announcing who the 17 panelists will be. We'll begin with testimony from the Administration, which will be followed by 18 19 testimony from the members of the public. During the 20 hearing in Council Members would like to ask a question please use the Zoom Raise Hand function, 21 and I will call on you in order. We will be 2.2 23 limiting Council Member questions to five minutes including sponsors and (coughs) and now I'd like to 24 deliver the Oath of Administration and we will... 25

1 COMMITTEE ON ENVIRONMENTAL PROTECTION 8 the Administration will be represented by Mark 2 3 Chambers and Jaime Bavishi. So, Mark Chambers. I don't see him 4 5 MARK CHAMBERS: I'm here. Do you see me? SAMARA SWANSTON: Oh, okay. Sorry. Mark (coughs) 6 7 Do you affirm to tell the truth, the whole truth and nothing but the truth before this committee and to 8 9 respond honestly to Council Member questions. MARK CHAMBERS: I do. 10 11 SAMARA SWANSTON: And Jainey do you affirm to tell the truth, the whole truth and nothing but the 12 truth before this committee and respond honestly to 13 Council Member questions? 14 15 DIRECTOR JAINEY BAVISHI: I do. 16 SAMARA SWANSTON: Thank you. You may begin when 17 ready. Thank you. Hopefully everyone 18 MARK CHAMBERS: 19 can hear me well. Good morning Chair Constantinides and members of the Committee on Environmental 20 21 Protection. My name is Mark Chambers, and the Director of the Mayor's Office of Sustainability. 2.2 23 I'm joined today by my colleague Jainey Bavishi the Director of the Mayor's Office of Resiliency. Thank 24 you for the opportunity to provide testimony on the 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 9
2	urgent work of sustainability, climate, and our
3	public health, and the indicators that help us track
4	progress as addressed in Intro 2149. Climate change
5	is upon us and it is lethal. We know this. The
6	results of our addiction to fossil fuels continue to
7	be felt in both our natural world and our natural
8	bodies. We just exited the hottest November on
9	record in what will likely go down as the hottest
10	year on record, and it's not just the scorching heat
11	waves or larger coastal storms that threaten us, but
12	also the ways in which our urban systems and built
13	environments struggle to react to these changes.
14	Here's an example: Despite an overall downward
15	trend, in 2018 like many other cities and states New
16	York saw a troubling increase in our greenhouse gas
17	emissions as reported in our Annual Greenhouse Gas
18	Inventory. That year we saw an increase in the
19	number of extremely hot days or an increase in what
20	we call cooling degree days by 18%, which results in
21	an increased demand for electricity to power air
22	conditioning. Months later in the same year there
23	was an increase in the number of cold days, about a
24	13% increase in what we call heating degree days,
25	which is caused, which basically caused an increase
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1	COMMITTEE ON ENVIRONMENTAL PROTECTION 10
2	in energy demand for heating systems. So, what is
3	particularly concerning and I think is particularly
4	important for New Yorkers to understand is that the
5	time of year when we see these increases matters.
6	You know, many electric generating units switch to
7	fuel oil in in the winter to preserve our gas supply
8	for heating on these extremely cool days. That means
9	that the carbon intensity of the grid gets worse,
10	and in 2018, the time I'm describing it was 7% more
11	carbon intensive than it was the previous year, and
12	our air gets dirtier, too, as a result. Now, this
13	committee knows that the health of New Yorkers is
14	impacted by fossil fuel systems on which we
15	currently depend. We know that burning fossil fuels
16	in our building and in our cars and in our buses
17	increases air pollution and makes it harder for New
18	Yorkers to breathe. The link between exposure to
19	particulate matter, pollution for example, and the
20	increased risk of that due to Covid 19 is now well
21	established. That is why the de Blasio
22	Administration has been and remains committed to
23	addressing the underlying systemic social
24	inequalities and inequities and health disparities
25	exacerbated by climate change, and our work to do so
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1 COMMITTEE ON ENVIRONMENTAL PROTECTION 11 becomes more urgent every single day. Our office's 2 3 long-term climate planning and sustainability work to reach carbon neutrality by 2050 is critical to 4 5 the public health of New Yorkers. As we've shared with you before, we distributed 74,000 air 6 7 conditioners to low-income seniors this summer through the Get Cool NYC program, responding to the 8 9 need to protect our most vulnerable seniors from heat waves and from COVID-19. Our work to reduce 10 11 fossil fuels in buildings also generates air quality 12 and health benefits. In 2019, for the first time there was no reported sales of Fuel Oil No. 6 13 14 demonstrating complete phase out of this dirty fuel 15 for the first time due to the Clean Heat Program. 16 This change has resulted in a 95% decrease in sulfur 17 dioxide or SO2 levels in neighborhoods across the 18 city as measured by the Department of Health and 19 Mental Hygiene's Community Air Survey. As buildings work to meet the requirements of Local Law 97 and to 20 reduce their reliance on fossil fuels for heating, 21 air quality inside those buildings and outside those 2.2 23 buildings will continue to improve. Our agency partners continue to make good progress on 24 implementing these laws like Local Law 97, and we 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 12
2	are encouraged by last month's passage of Intro
3	1947, which will ensure that some more tenants in
4	some rent regulated buildings will be able to reap
5	the benefits of building retrofits. We still have a
6	lot of work to do to reach our carbon reduction
7	goals, and we are prioritizing this work with the
8	help of our most vulnerable communities Top of Mind.
9	We continue to need to connect offshore wind and
10	other large scale renewable resources directly into
11	New York City's power grid to allow us to reduce the
12	need for in-city fossil generation, and to make sure
13	our increasingly electrified buildings run on clean
14	electricity. As we transition our way from fossil
15	fuels for heating and power generation, utilities
16	will no longer be able to justify building new
17	fossil fuel infrastructure like National Grid's MRI
18	pipeline through New York City's neighborhoods. We
19	also need to continue our work on transportation
20	especially as New Yorkers' transportation patterns
21	change due to the pandemic. We must make sure that
22	our public transit system remains reliable,
23	accessible and clean and we need to ensure that
24	people can move around the city in safe low carbon
25	ways. We look forward to congestion pricing's

1 COMMITTEE ON ENVIRONMENTAL PROTECTION 13 implementation to continue to support the MTA. Our 2 3 office has prioritized the expansion of charging 4 infrastructure to support electric vehicles and 5 buses, but we will need to work with all of our partners across the city, state and federal 6 7 government to truly build the infrastructure we need. Our office is also in the process of 8 9 completing several studies to inform the work on carbon reductions in ways that prioritize public 10 11 health. In collaboration with our local utilities, 12 we are nearing the completion of a first of its kind 13 study to determine pathways to decarbonize New York 14 City's electricity grid, and we look forward to 15 sharing the outcomes of those studies with the Council in 2021. We will continue to center health 16 17 outcomes especially in our most historically 18 burdened communities as we plan to prioritize future 19 policies and programs. Our office looks forward with continued work together with Council to meet this 20 crisis head on with innovative solutions, data 21 driver action and fierce urgency to provide a 2.2 23 livable future for all New Yorkers, and with that, I will now turn to my colleague Dr. Bavishi who will 24 provide testimony on Intro 2149. Thank you. 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 14
2	DIRECTOR BAVISHI: Thank you Mark. Good morning.
3	I'm Janey Bavishi, Director of the Mayor's Office of
4	Resiliency. I would like to thank Chair
5	Constantinides and Council Members Ulrich, Levin,
6	Mechaca and Yeger for the opportunity to testify
7	today. As we adopt New York City to the impacts of
8	the climate crisis we strive to track our actions
9	and transparently communicate climate impacts and
10	our progress to local stakeholders and the public at
11	large. Increasing the resiliency of such a dense
12	populace and geographically is a herculean task
13	that will take decades. These resiliency efforts
14	are critical to safeguarding public health,
15	supporting life and livelihoods and protecting
16	critical infrastructure, housing and our natural
17	environment. As you may know, the city already
18	monitors many key metrics such as the acreage of
19	restored wetlands, the square footage of rooftops
20	that have been coated through the Cool NYC Program
21	and the number of small businesses that have
22	increased the resiliency of their facilities and
23	operations with the help of Post-Sandy programs like
24	Business Back. Additionally, we constantly monitor
25	the progress of our many ongoing resiliency projects
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1	COMMITTEE ON ENVIRONMENTAL PROTECTION 15
2	from massive efforts like the six-mile long
3	Rockaway's Atlantic Shore project to small but not
4	less important projects like installing thousands of
5	curbside lane gardens. This information is sourced
6	from all across the city government with nearly
7	every city agency's involvement in climate
8	adaptation to some degree. Other key resiliency
9	metrics are tracked by external parties in New York
10	City to just Con-Edison as well as federal agencies
11	like the National Oceanic Atmospheric and
12	Atmospheric Administration, and the Federal
13	Emergency Management Agency. I would also like to
14	highlight how the city has taken significant steps
15	recently to uplift science and increase the public's
16	understanding of climate hazards and the risks we
17	face, we will face into the future. Earlier this
18	year we proudly announced the fourth New York City
19	Panel on Climate Change, which is the most diverse
20	credentialed and multi-disciplinary panel yet. To
21	support their work and strengthen our commitment to
22	the science based, to science-based policy making,
23	we also recently hired our first in-house climate
24	science advisor to develop a climate science and
25	risk communications program. Right now, our Climate

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 16
2	Science and Risk Communications team is working with
3	the NCC City Agency's external partners and
4	community-based organizations to perform a
5	comprehensive assessment of climate knowledge gaps
6	and community needs. This comprehensive input will
7	form the basis of the city's first ever climate
8	research agenda and shape the plan for MPCC fourth
9	assessment cycle. Even as we develop this formal
10	climate research agenda, our office has been
11	strategically pursuing opportunities to fund data
12	collection. In July, MOR and the Office of the
13	Chief Technology Officer won a \$90,000 grant to co-
14	develop a real time flood center monitoring system
15	in Gowans, Hamilton Beach and Howard Beach. This
16	built on our work Developing Flood Watch a 70-day, a
17	7-day flood program to monitor chronic local
18	flooding with our community and agency partners. We
19	agree that more can and should be done to monitoring
20	the city's progress as it relates to climate
21	adaptation and resilience. Likewise, we agree that
22	monitoring and evaluation related to climate change
23	impacts must be communicated to the public in a
24	clear, regular and transparent way with an emphasis
25	on public health, environment justice and social
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1 COMMITTEE ON ENVIRONMENTAL PROTECTION 17 vulnerability. For these reasons the Mayor's Office 2 3 supports the intention of Intro 2149. We look forward to working with Council in a cost-effective 4 way to pursue these objectives and look forward to 5 directly providing feedback and recommendations. In 6 7 conclusion, I would like to thank the committee on Environmental Protection for allowing the 8 9 Administration to testify here today. We look forward to your questions. 10

CHAIR CONSTANTINIDES: Well, I surely thank you 11 both for your testimonies. Good to see you both even 12 if it's virtual. I want to make sure that I 13 14 recognize two of my colleagues who have joined this 15 committee hearing today, Council Member Menchaca and Council Member Yeger both from Brooklyn, and with 16 17 that, I'm going to begin my questions. What New 18 York City educational institutions are monitoring 19 climate currently?

20 MARK CHAMBERS: (pause) There we go. I did a 21 little bit to unmute there. Thank you for your 22 question. So, there are definitely multiple entities 23 in academia that are constantly kind of working with 24 the city to monitor. I think NYU and CUNY are two 25 very significant institutions that are working 1 COMMITTEE ON ENVIRONMENTAL PROTECTION 18 2 significantly with the city on this, but I will also 3 pass this to my colleague Director Bavishi who may 4 want to kind of talk more specifically around the 5 monitoring questions and Intro 2149.

DIRECTOR BAVISHI: Sure. I'm happy to. 6 So, 7 Chair, thank you for the, for the question. You know, as I mentioned in my testimony we work with 8 9 the New York City Panel on Climate Change and the panel represents a range of academic institutions 10 11 both inside the city and in the metropolitan area you know that works to monitor climate in different 12 13 ways and, and provide important research in science 14 that really serves as a foundation for the 15 Resiliency Program. Just a sampling of some of the 16 institutions that are involved on the panel are 17 Compton University, the New School, Rutgers and the 18 list goes on. You know, I should also say that 19 monitoring climate can mean penning many different things. We're working beyond our partners in 20 academia, and really working with community to also 21 monitor climate impacts. I mentioned the Flood 2.2 23 Watch Program in my testimony. This is a great example of how we're really influencing community 24 science, resident science to understand the impacts 25

1COMMITTEE ON ENVIRONMENTAL PROTECTION192of sunny day flooding in communities. So, you know,3our work to monitor climate involves many partners.4It involves city agencies, it involves academia, it5involves federal agencies, our private sector6partners like Con-Ed as well as our communities.

7 CHAIR CONSTANTINIDES: So, I'll come back to 8 that in a minute. So, how are we currently 9 monitoring biodiversity?

MARK CHAMBERS: I'm on the... there you go. So, 10 11 biodiversity again relates in a lot of different, 12 different components that tie directly to a lot of work that's happening both within our offices as 13 14 well as the Parks Department as well as Planning as 15 well as the Department of Environmental Protection. What we try to do is to be able to look at the, the 16 17 holistic impact of biodiversity across all the 18 spectrum of all agencies. So, a Tree Canopy is the 19 perfect example of this. Parks is a great example 20 of being able to analyze where exactly that those tree canopy components are being monitored and using 21 geo-tracking to be able to display that information 2.2 23 to the, um, to residents in the city. DEP also monitors the water quality associated with 24 biodiversity. So, there's a handful of different 25

1 COMMITTEE ON ENVIRONMENTAL PROTECTION 20 places in which those are tracked. All of those 2 3 contribute towards the, um, the information that 4 goes to the residents as well as to city partners 5 around various forms of biodiversity. CHAIR CONSTANTINIDES: Are any of the 6 7 biodiversity indicators that developed into part of the Global Convention on Biological Diversity or 8 9 assist with any other biological (sic) principles? MARK CHAMBERS: Unmute? 10 CHAIR CONSTANTINIDES: Yes. 11 12 MARK CHAMBERS: It's your answer 13 CHAIR CONSTANTINIDES: (laughs) Okay. How are we 14 monitoring social vulnerability current? 15 MARK CHAMBERS: Sure. So, actually, we'll actually turn this to Director Bavishi to talk about 16 17 the social vulnerability, but one thing that we will 18 also want to highlight is how that relates to our 19 heat vulnerability, and that I think is a very good 20 example of that. 21 DIRECTOR BAVISHI: Absolutely. The heat vulnerability and that is a great example of how 2.2 23 we're monitoring social vulnerability, and how we're taking social vulnerability indicators into our 24 count in our heat resiliency work. So, the index, 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 21
2	which was developed in partnership between Columbia
3	and the Department of Health and the City Department
4	of Health really overlays physical indicators of
5	heat risk means light density in communities and the
6	lack of education or green space and with social
7	indicators of heat risk. You know things like race
8	and poverty and we, we, um, have overlaid those,
9	those different layers to really understand which
10	populations in the city are the most vulnerable to
11	the impacts of extreme heat in the city, and that
12	data really draws and informs where our investments
13	are made in terms of supporting communities to build
14	resiliency to extreme heat.
15	CHAIR CONSTANTINIDES: So, then let me see if I

15 can give an example. I know when we've been doing 17 white roofs for a number of years throughout the 18 city. How is the city monitoring the process of that 19 program?

20 DIRECTOR BAVISHI: I am so glad you asked that 21 question. That's a great example of how we're 22 making sure the environmental benefits that we're 23 developing through our resiliency investments are 24 actually going to the places that are most 25 vulnerable. So, you know, we've coated over ten

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 22
2	million square feet of rooftops over the last ten
3	years. Since we've had this program for the last
4	several years, we have really been trying to target
5	those roof coatings in the most chief vulnerable
6	areas and so we continue to use that data to drive
7	where we are delivering these environmental
8	benefits, and want to make sure that we're taking
9	good social risks as well as physical risks into
10	account.
11	MARK CHAMBERS: And I would also like to add
12	that it
13	CHAIR CONSTANTINIDES: Mark can also add.
14	MARK CHAMBERS: It, sure it, it builds upon
15	that right, and so the important thing is to notice
16	is that there are consistent layers that go on top
17	of that that can allow for us to target these same
18	areas with additional benefits. We're, you know,
19	we're currently working on green roof tax abatement
20	that would allow for areas that use similar social
21	vulnerability as well as heat vulnerability and
22	components to be able to benefit from increased tax
23	abatements for installing green roofs. So, those
24	would have a positive impact on the localized heat
25	island, have a positive impact on the storm water
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1 COMMITTEE ON ENVIRONMENTAL PROTECTION 23 retention, and would also be able contribute towards 2 3 these health indicators, which we're also tracking. 4 So, I want to just make sure the point is clear that each of these things is not a standalone. Part of 5 the work that is important is for our office is that 6 7 a constant building and overlap and overlaying of different initiatives and efforts that allow for the 8 9 most benefit for the most New Yorkers. CHAIR CONSTANTINIDES: You also were... 10 11 DIRECTOR BAVISHI: I might even do it one time because I think this really underscores how MOI NOS 12 coordinates to deliver these benefits. So, I, so I, 13 so in addition to what Mark said, in addition to 14 15 cool roof, we are also targeting street tree planting into these same neighborhoods, and we're 16 17 also pairing these retrofits over physical 18 environment with, um, with programmatic investments. 19 Things like investments in community-based 20 organizations in these same areas to advance the Via 21 Body Program, which pairs volunteers with the most vulnerable residents of these communities so that 2.2 23 we're checking in on them. It's just based on a basis tenet or neighbors helping neighbors. So, 24 we're checking in on them on extremely hot days and 25

1 COMMITTEE ON ENVIRONMENTAL PROTECTION 24 checking in on them during other disruptive events 2 3 like the pandemic. We've are also training home 4 health aids to check in on their, um, their patients as they're making their regular rounds so that 5 they're detecting early signs of heat illness. It 6 7 really goes to show, you know, that we need invest in our physical environment, but also pair those 8 9 investments with programmatic interventions that can, that can help to keep people safe. 10

11 CHAIR CONSTANTINIDES: Just some. So, you guys have built on these questions. So, I'm going to ask 12 the questions that builds on that, right? Do we have 13 14 some sort of map that shows the public, right, where 15 we're making these investments, where these plans 16 are happening, where we've taken those light rules, 17 where we say there seem to be more as we put 18 together some sort of publicly available document 19 that, you know the Council can see and we put on 20 line and say: Look, these are all the work that 21 we've done so far on light rules, and on street tree 2.2 planning, the rain gardens. Here is how we've put 23 then together. Here's the opportunities. Do we have that data so to keep it in that neighborhood 24

1 COMMITTEE ON ENVIRONMENTAL PROTECTION 25
2 especially for people DJ communities who are very
3 vulnerable?

The...I think one of the 4 MARK CHAMBERS: Yes. ways in which we constantly are providing that 5 information to the public is through our Annualized 6 7 One NYC Progress Reports, which shows the layering of some of the questions you've asked. Now, I also 8 9 want to point out that there are also specific tools that have been developed that tail specifically to a 10 11 lot of the questions that you're asking. You know, 12 there are tools available that showcase the city's geothermal potential for example where any New 13 14 Yorker can look at any block where they live and 15 find out whether or not that area is well suited for 16 geothermal. There are tools available for New 17 Yorkers to look and see whether or not their 18 neighborhood is well suited for different types of 19 renewable energy. It's called a Community Energy 20 Planning Tool, and a lot of this has come out of the work that we've done with Council Local Law 64 and 21 So, yes, they're available. I 2.2 several others. 23 think there's always room to create better tools and better products for people to be able to understand 24

1 COMMITTEE ON ENVIRONMENTAL PROTECTION 26 2 and digest the information more clearly and have 3 them collocated in one place.

4 CHAIR CONSTANTINIDES: And how are we integrating like Local Law 97 implementation into 5 this? Right how are we on our green rooms, our 6 7 retrofits for buildings, city-owned buildings in particular. How are we then, you know, sort of 8 9 layering that on top of the work that we've already 10 done in those same communities to help alleviate 11 these, these challenges in those neighborhoods?

12 MARK CHAMBERS: Absolutely. So, there, there's a lot of great data stories to kind of tell that help 13 us to kind of do that and I think that as we start 14 15 to unpack and plan out in the, in the process which 16 Local Law 97 has laid out, we are, we are investing in coming up with different ways in which we're 17 18 going to communicate that. One of the tasks that 19 the Local Law 97 support and the kind of community 20 supporting this has undertaken is to find out some 21 of the best ways to communicate some of that 2.2 information. As we are going to start to get data 23 in from, from buildings that are in compliance, we absolutely want that information to be readily 24 available and to make sure that New Yorkers can 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 27
2	really see what they need to do to next based on
3	their compliance. We already provided tools that
4	give an estimate of any particular building in the
5	city and what they would likely need to do to
6	comply, and we can provide those resources, but I,
7	like I said before wewe want to increase that,
8	and I think one of the outputs is, that we're
9	looking to tools that allow for anyone to be able to
10	have a better estimate of not only where they can
11	receive resources to help them do the retrofits, but
12	what kind of retrofits are best suited for their
13	particular program, and one other point that I'll
14	make on that is that's also the rationale behind the
15	expansion of the New York City Accelerator. The
16	Accelerator is a, is a significant effort undertaken
17	by our office to provide free technical assistance
18	to building owners. The Mayor has tripled it in
19	size to meet the kind of moment and challenge of
20	Local Law 97, and as it stands right now, New
21	Yorkers that are looking for help in compliance can
22	go to the New York City Accelerator and ask
23	questions. They will kind of come to resources, kind
24	of come to financing opportunities, hand-hold them,
25	meet them where they are to be able to start this
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 work as necessary, but again, more will come and I
 think better tools for everyone, digital tools will
 be to see if they can help in that.

5 CHAIR CONSTANTINIDES: I just want to hear some from you. I don't want to make this into a Local Law 6 7 97 compliance hearing. So, I will, I just want to hear what we're doing on sort of our end. Because 8 9 city housing is a very ambitious goal that we have to meet, but I'm concerned that, you know, we only 10 11 have four more years to comply, and, you know, 12 where's the financial constraints of Covid, I want 13 to make sure that we're still going to hit our 14 goals. So, I'm not going to, I'm not going to 15 belabor this point, but I do still put that on 16 record that we...I definitely want to hear more 17 about how we're going to meet these challenges based 18 on the financial challenges that we're in. Just 19 quickly before I... I don't know if any of my 20 colleagues have any questions, but I'll just ask: You know, what, if any, climate resiliency 21 indicators has the Administration already posed? 2.2 23 DIRECTOR BAVISHI: I hear they haven't been so 24 qood.

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MARK CHAMBERS: Haven't been so good.

1 COMMITTEE ON ENVIRONMENTAL PROTECTION

2 CHAIR CONSTANTINIDES: And before anyone wants to 3 add on this officially, for those that they have 4 been proposed, have they been subjected to public 5 input?

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DIRECTOR BAVISHI: So, we are monitoring various 6 7 indicators both from a vulnerability perspective as well as well as a resiliency perspective. So, let me 8 9 just talk a bit about both. You know, first of all, I just want to say that climate change is extremely 10 11 cost-cutting. So, data sources are collected by a diverse range of organizations, as I've been... As I 12 said in my testimony and to a previous risk 13 14 medical... in response to a previous question. So, we 15 are working with federal agencies like NOAH, USGS to 16 you collected all related to weather and coastal 17 flooding. We are also as I mentioned working with academic institutions as well as communities who 18 19 also understand weather related impacts especially 20 on sunny (sic) day, sunny day flooding, and I will also say that related to heat we have set up a 21 monitoring network both indoors and outdoors to 2.2 23 track heat related, just trends in temperature especially over the summer and again, in the most 24 heat vulnerable neighborhoods as determined by our 25

1 COMMITTEE ON ENVIRONMENTAL PROTECTION 30 heat vulnerability index. And we're also working 2 3 with organizations like Con-Ed to collect data 4 related to the electric grid, and then I will say that we're also tracking many, many indicators on 5 the progress of our resiliency solutions and 6 7 interventions. So, you know, things like cool 8 roofs, things like business prop where progress on 9 our Coastal Resiliency Projects. We are tracking those indicators and those are reported as Mark said 10 11 previously in the One NYC Progress Report. 12 MARK CHAMBERS: And I'll just add a few more 13 pieces to what is reporting again. I mentioned 14 before the greenhouse gas inventory the electricity 15 grid kind of monitoring and the energy mix, electric vehicle share of kind of new motor vehicles, trips 16 17 that New Yorkers make, walking, biking, mass 18 transit, single modes of transit, City Pension fund 19 I think Janey might have mentioned investments. 20 like our flood insurance policies, curbside waste diversion rates. There's a full gamut of and a lot 21 of those are reported in One NYC regularly, and 2.2 23 others are reported in other data portals.

CHAIR CONSTANTINIDES: At this time, I'm going toask to see if any of my colleagues have any

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 31
2	questions? (pause) Alright, so I guess I'll
3	continue then with, um, with my questions then. WE
4	did talk a little bit about green roofs earlier.
5	So, I just so quickly want us to justto back
6	that up, and I'll let the Administration. Oh, and I
7	want to make sure I acknowledge Council Member Steve
8	Levin from Brooklyn who is here today as well. Thank
9	you, Council Member Levin for being here. So, just
10	quickly wrapping up onto the green infrastructure.
11	Does the Administration have a policy procedure of
12	protesting the City Green Infrastructure Resiliency
13	Project? For example, the Bioswale Program? And if
14	so, are they making it available, the publicly data
15	available? If not, would you consider integrating
16	this data into the Resiliency Indicator Database?
17	MARK CHAMBERS: So, yes to your question about
18	there being standards for judging the efficacy of
19	different green kind of infrastructure particularly
20	as it relates to kind of storm water management to
21	the Department of Environmental Protection? But I
22	definitely think that there is improvement to your
23	point that could be made to make sure that we are
24	constantly improving and making sure that this data
25	is really clearly articulated to New Yorkers so they

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 32
2	can understand how to view different green
3	infrastructure that's put in place in their
4	neighborhoods and understand whether or not they are
5	performing well and have a consistent metric to
6	review against that. So, we were happy to consider
7	that, you know, improving the levels in which we
8	report and also look at how those are guided.
9	CHAIR CONSTANTINIDES: With not seeing any of my
10	colleagues Steve, you Steve has a question. I
11	see his hand raised. So, I'll pass it over to
12	Council Member Steve Levin.
13	COUNCIL MEMBER LEVIN: I'm glad you saw.
14	CHAIR CONSTANTINIDES: Largely not on schedule.
15	My apologies.
16	CLERK: The time starts now.
17	COUNCIL MEMBER LEVIN: Thank you, Chair. I just
18	want to ask about green roofs and, and howwhat's
19	our progress been in recent years on advancing the
20	Green Roof Program and how? How is it comparing
21	to other cities? I know I was part of a panel going
22	back a few years now maybe five years, you know with
23	representatives from DC and Toronto and Philadelphia
24	(Child heard speaking in the background) And you
25	know, their program washad a, had a much higher

1 COMMITTEE ON ENVIRONMENTAL PROTECTION 33 2 uptake in terms of the Green Roof Program's tax 3 incentives or, you know, you know, that is set at 4 different dates. Can you speak a little bit about 5 how, how are we looking at that and what we can be 6 doing better really exploring adopting other 7 mechanisms that they're using in other cities.

8 MARK CHAMBERS: Absolutely. Good morning to 9 you Council Member Levin. You know, so, first again, I, you know the... thanks for your question. Also, 10 11 thank you for referencing the work that was done in D.C. As many know, I, um, brought the Energy and 12 Sustainability in D.C. before I came here, and so I 13 had a lot of work in investing in that program. 14 15 There are, you know, there's a lot of work that's 16 happening in different cities that take advantage of their particular dynamics around stormwater 17 18 management as well as around increasing the, the 19 benefits that come along, the thermal benefits that come along from green roofs. Also, the green roof 20 technologies increased over the last few years where 21 you can have kind of thinner high performing green 2.2 23 roofs which is great for the industry to expand. Here in New York City we have taken kind of two kind 24 of components or tactics to be able to expand it 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 34
2	rapidly. Well, with this, one of the first things
3	is the, the expansion and kind of passing of Local
4	92 and or last year with Council's guidance and help
5	to be able to mandate that new construction, new
6	roofs in New York City have to have either vegetated
7	or solar as the component or both as the component
8	of their structure. That dramatically increasing
9	the amount of permits that are being sought through
10	DOB to be able to increase the amount of green roofs
11	and we expect to have some reporting coming out in
12	the next year once we're about a year past when that
13	law went into, into effect because we, we are
14	anticipating there being a significant uptick that
15	will also give us some more indications
16	geographically around the city as to where there's
17	been an uptick. But, there's a lot of desire for
18	additional vegetation and a lot of benefits that
19	come from that. The second thing as I mentioned
20	previously is that we are working to implement the
21	Green Roof Tax Abatement, which is something that
22	was passed in the State, which will basically
23	increase the amount of tax abatement you can get for
24	installing a green roof in prioritized areas of the
25	city. So, that will allow for us to create

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1	COMMITTEE ON ENVIRONMENTAL PROTECTION 35
2	additional incentive to be able to expand the amount
3	of green roofs that are already going in. All and
4	all the city is well suited for additional
5	vegetative rooftop space to be utilized and we're
6	kind of excited to be able to support both through
7	technical education as well as through kind of
8	financial opportunities for people to expand and do
9	much more vegetative rooftop space. (child heard
10	talking)
11	CHAIRPERSON LEVIN: Thank you. What was
12	the, the, um, tax abatement or what wasit was at
13	\$5.00 a square foot before. What is it now?
14	MARK CHAMBERS: Right, so, so for, um, so the
15	\$5.00 a square foot still stays and then the, um,
16	the additional green roof tax abatement, there's a
17	it's almost like an amplifier that will be in
18	prioritized area throughout the city, (child
19	talking) and if memory serves me correctly, I could
20	check the data. I think it's somewhere in the
21	neighborhood of like \$13.00 to \$15.00 a square foot.
22	That being the additional zones we'll be able to
23	add.
24	CHAIRPERSON LEVIN: Why only a few zones going a
25	around the city? (child talking)

1 0	COMMITTEE ON ENVIRONMENTAL PROTECTION 36
2	MARK CHAMBERS: So, the, the way in which the
3	state law was passed it wanted to be able to take
4	advantage and say that there are certain areas that
5	can benefit. Just to Council Member's Diaz's point
6	earlier, there are certain areas that can benefit
7	more greatly that are particularly vulnerable in the
8	city through social indicators and as well as areas
9	that are particularly suited for benefits due to
10	the, the CSO the Combined Sewer Overflow. So,
11	basically, some parts of the city if water retention
12	happens it's better for the city at large. So, those
13	areas should also be prioritized to help with water
14	quality. So, those are the two state factors that
15	kind of contribute to this, and so that's why the
16	analysis has been done to design prioritized cells.
17	(sic)

COUNCIL MEMBER LEVIN: Okay. So, prioritized. 18 19 Why...if I may Chair, just why, why would it need to 20 be, why would there need to be a prioritized zone? Like why not just have the whole city be a 21 prioritized zone? Like in other words like I 22 23 realized that there's, there's some personnel, you know, in kind of for lack of a better word 24 bureaucratic time and energy that has to go into 25

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 37
2	doing this, and so if they're processing
3	applications, but, um, and so I can understand there,
4	you know, in that sense prioritizing certain areas,
5	but the difference between 5 and 15 isI mean when
6	I talked, I forget the name of the gentleman that I
7	was on this panel with from BC, but, um, you know, he
8	spoke very convincingly of the fact that the DC
9	abatement was \$15.00 I think, which prescript like
10	which makes a huge difference. It makes it a viable
11	thing to do.
12	MARK CHAMBERS: Absolutely. I think that
13	there is definitely increase. So, one to keep in
14	mind is that there is an ultimately limited pool
15	presently of the total Revasc (sic) that are, that
16	are applicable. So, the desire from the State
17	Legislation
18	COUNCIL MEMBER LEVIN: I agree
19	MARK CHAMBERS: is we make sure that
20	those go to prioritized areas. I think if we expand
21	that pool then I think yeah you're right, you want to
22	expand the geography as well.
23	COUNCIL MEMBER LEVIN: Okay, I agree with and
24	it's a limited pool of rebate. (sic) Okay.
25	MARK CHAMBERS: Yes

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 38
2	CHAIRPERSON LEVIN: Okay, so I would, you know I
3	would implore out state colleagues to expand the
4	pool of rebate. I realize that there's a plus. It
5	ends up costing money to the state, but you get a
6	moneyYou know, you get a huge return on
7	investment with, with these green roofs.
8	MARK CHAMBERS: Absolutely.
9	CHAIRPERSON LEVIN: Just in terms of its impact
10	on, on, um, on our carbon footprint as a city. So,
11	okay. I would love to talk with you more. I mean I
12	know in one way that they did it in I think in
13	Toronto where they mandated or if you don't,
14	basically, if you don't do some type of green roof
15	you have to pay into a fund as an alternative. So
16	there it doesn't necessarily come out of our tax
17	dollars, but is actually, the onus is then put on
18	the developer.
19	MARK CHAMBERS: Right. I mean one of the points
20	to kind of keep in mind that I also feel like as we
21	start to see the implications of Local 1994 with a
22	dramatic increase in a lot of the installed green
23	roof square footage, we may also see significant
24	impacts on the market that would bring costs down.

So, hopefully that will also allow for there to be

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 39
2	like much more, much more consistency across the
3	market and as well as like a larger breadth of
4	coverage that would be great for the city to see.
5	CHAIRPERSON LEVIN: Awesome. Okay, let'sI
6	would like to have follow-up conversation with you
7	if that's okay?
8	MARK CHAMBERS: Happy to do so.
9	CHAIRPERSON LEVIN: Great, awesome. Okay, thanks.
10	Thank you, Chair.
11	CHAIR CONSTANTINIDES: Thank you, Council Member
12	Levin. Alright, so with that, I will end
13	questioning. Do any of my colleagues have any other
14	questions? Council Member Menchaca or Yeger?
15	Alright. So, with that I'll end my questioning of
16	the Administration. I want to thank you for your-all
17	the work that you do. I hope that you and your
18	families stay safe, and I wish you all a very happy
19	holiday season, and again, you know, I'm hoping that
20	we'll end 2020 in a much better way than 2020 has
21	gone. So, I wish you all the safety as well as
22	everyone else. (sic) Thank you.
23	MARK CHAMBERS: Same to you and thank you for
24	having us and wish you the best this season.
25	CHAIR CONSTANTINIDES: Thank you.

1	COMMITTEE ON ENVIRONMENTAL PROTECTION 40
2	DIRECTOR BAVISHI: Thank you, and now we'll
3	turn our public testimony. I'd like to remind
4	everyone that unlike our, unlike our typical
5	Council hearings we'll be calling individuals one
6	by one
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CERTIFICATE

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 January 3, 2021