

CITY COUNCIL
CITY OF NEW YORK

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TRANSCRIPT OF THE MINUTES

Of the

COMMITTEE ON TRANSPORTATION AND COMMITTEE ON HOUSING AND BUILDINGS

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HELD AT: 250 Broadway - Committee Rm,
14th Fl.

B E F O R E:
JAMES VACCA
Chairperson

COUNCIL MEMBERS:

GALE A. BREWER
DANIEL R. GARODNICK
DAVID G. GREENFIELD
VINCENT M. IGNIZIO
PETER A. KOO
G. OLIVER KOPPELL
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DEBORAH L. ROSE
ERIC A. ULRICH
JAMES G. VAN BRAMER

2 [gavel]

3 CHAIRPERSON VACCA: I'd like to welcome
4 you today to the joint hearing of The Committee of,
5 Committee on Transportation and The Committee on
6 Housing and Buildings. My name is James Vacca and
7 I'm chair of The Committee on Transportation and I
8 want to thank chair Dilan who will be arriving
9 shortly for holding this hearing with me. We're
10 here today to hear three bills relating to electric
11 vehicles. Council member Brewer introduced two
12 bills that would enhance infrastructure to bolster
13 the proliferation of electric vehicles. First is
14 Intro 843 which would require DOT to include
15 electric vehicle charging stands as an improvement
16 eligible for revocable consent. Intro 844 would
17 establish an electric vehicle charging stand pilot
18 program. Intro 1176 introduced by chair Dilan would
19 require new parking garages to accommodate an
20 electric vehicle charging stands. Electric vehicles
21 of all types have become more prevalent on our
22 roads in the last few years especially since our
23 city has one of the largest transportation
24 infrastructures in the world. Enabling New Yorkers
25 to use these vehicles is important for many

1 reasons. Anyone who drives a gas powered vehicle
2 knows that gas is expensive and the price per
3 gallon is extremely volatile. Additionally it is
4 common knowledge that many modes of transportation
5 contribute heavily to greenhouse gas emissions. We
6 need to do more to reduce our city's carbon
7 footprint and become less dependent on fossil
8 fuels.

10 There are several types of electric
11 vehicles all of which require much less gasoline
12 than a conventional car. One type, the battery
13 electric vehicle requires no gasoline at all. The
14 battery electric vehicle along with the plug in
15 hybrid electric vehicle requires access to an
16 external charging station. Public charging stations
17 are few and far between thus making it extremely
18 difficult for these types of vehicles to be more,
19 more wide spread in use and in ownership. Our city
20 needs adequate charging infrastructure to
21 accommodate electric vehicles and the bills we're
22 going to hear today are forward looking steps
23 toward enabling the proliferation of these
24 environmentally friendly vehicles.

2 A great way to start gathering data and
3 testing the feasibility of electric vehicle
4 infrastructure is to establish a citywide electric
5 vehicle pilot program. Intro 844 would require DOT
6 to do just that starting with at least ten charging
7 stands. Additionally other future infrastructure
8 would be most beneficial in public areas closest to
9 where city residents, employees, and tourists alike
10 park their cars, sidewalks and parking garages.

11 Intro 843 would allow the DOT to adopt
12 rules granting private operators the right to
13 install charging stations on public sidewalks while
14 Intro 1176 would require a minimum number of
15 parking spaces in parking garages to be fitted for
16 charging stations. I look forward to hearing
17 testimony from the mayor's office and under, and
18 other interested parties today concerning this
19 legislation. I'm joined by my colleagues council
20 member Vincent Ignizio, council member Dan
21 Garodnick, and we will call the panel, first panel.
22 We have Ari Kahn, New York mayor's office.

23 [pause]

24 CHAIRPERSON VACCA: Alright turn on your
25 microphone. The little button there. No, no down.

2 Oh you're, you're on okay. Okay great. Thank you.

3 Introduce yourself please for the record.

4 ADVISOR KAHN: Alright good afternoon
5 chairman Vacca and members of the housing and
6 buildings and transportation committees. My name is
7 Ari Kahn and I'm the Policy Advisor on Electric
8 Vehicles in the Mayor's Office of Long-Term
9 Planning and Sustainability. I'm pleased to have
10 the opportunity to testify today about Intro 1166
11 which if passed will provide vital basic
12 infrastructure for supporting electric vehicles,
13 otherwise known as EVs. Before I begin my testimony
14 I would like to thank the council for its
15 leadership on improving air quality and reducing
16 climate change through clean vehicle policy. The
17 council spearheaded the establishment of 2005's
18 local law 38 which improved the fuel efficiency of
19 New York City's fleet. Today that fleet has nearly
20 6,000 hybrids and electric vehicles. Just two
21 months ago the council administration worked
22 together to update that law with newer more
23 ambitious fuel efficiency standards. Like that
24 legislation, Intro 1176 will help improve New
25 York's air quality, reduce our alliance on oil, and

1 diesel soot. When Dwayne Reed recently replaced
2 nearly a quarter of its 60 truck fleet with
3 electric trucks the company took the equivalent of
4 over 1,000 cars off the road. The city's success
5 cleaning in city power plants help increase those
6 benefits. Since 2004 in city power plants have
7 reduced their NOx output by nearly two thirds
8 helping make, helping make the benefits of removing
9 vehicle tailpipes so pronounced. Finally EVs
10 increase our city's resilience. By increasing fuel
11 diversity we reduce our reliance on any one fuel.
12 In a moment of gas, of a gas shortage such as the
13 city experienced during hurricane Sandy, having
14 many electric cars and delivery trucks on hand
15 allows increased flexibility. Through, though our
16 grid is not invulnerable the city and Con Edison
17 are making efforts to harden it. Even in the case
18 of a large scale black out, quick chargers, capable
19 of providing electricity to many vehicles in a day
20 can still use back up power from batteries, solar,
21 or more likely natural gas.

22
23 Lastly the car's battery is conserved
24 as portable generators helping to provide backup
25 power to individual homes. Major auto makers like

1 Nissan and Mitsubishi provide accessories to
2 connect their cars to building's electrical
3 systems. Having just described the benefits of
4 vehicle electrification I'd now like to provide
5 some brief background on the current state of the
6 technology. Electric cars have been around for over
7 a hundred years but primitive batteries doomed EVs
8 in their competition with rapidly improving
9 internal combustion engine. Electric cars were
10 meant [phonetic] to historical foot note or oddity
11 until the introduction of GM's EV1 in 1996. Yet
12 while that car was a technical marvel it cost twice
13 as much as an average vehicle and had a range of
14 just 60 miles. So today's picture's very different.
15 Thanks to almost 20 years of technical,
16 technological advances today's vehicles cost less,
17 offer better range, more passenger room, and
18 greater variety. After tax rebate the Nissan Leaf
19 costs just over \$21,000, approximately the same as
20 an average new car and has a lower total cost of
21 ownership for most buyers. Consumers will also have
22 more options to choose from today than they did
23 before. Electric vehicles come in a range of sizes;
24 from a smart car that seats two, to sedans that can
25

1 seat up to seven. They also have different engine
2 types and battery sizes. Some like the leaf and
3 tesla use only batteries as chairman Vacca said.
4 Others like the Volt BMW I3 and Plug In Prius have
5 gas backups for when the battery's depleted. Every
6 major auto maker's producing an electric vehicle.
7 The Tesla Model S an admittedly inexpensive car at
8 \$60,000 after tax credits is the bestselling car in
9 its class outselling the likes of BMW and Mercedes.
10 Last month EVs were nearly one percent of new car
11 sales and finally the cost of batteries, the most
12 expensive part of the vehicle have dropped
13 precipitously over the last several years.
14 According to Navigant research in 2009 batteries
15 cost \$1,200 per kilowatt hour. Today they are \$500
16 and by 2015 Navigant expects them to fall to \$300
17 or less, an estimate that aligns with those by
18 McKinsey consulting and The Department of Energy.
19 In two years that reduction can eliminate nearly
20 \$6,000 of vehicle cost.

22 So in 2010 with the pending release of
23 the Nissan Leaf and Chevrolet Volt the office of
24 long term planning and sustainability authored a
25 study exploring electric vehicle adoption in New

1
2 York City. It found that New York City's
3 electricity grid can safely accommodate car
4 charging and quantify the environmental benefits
5 electric cars could create but identified several
6 barriers that can impede adoption. Those include a
7 lack of education, awareness, and access to
8 charging. 60 percent, seven percent of likely adopters
9 have limited knowledge of how EVs perform and 21
10 percent were more likely to buy an EV if they had
11 more information about charging, vehicle types, and
12 availability. So to address those obstacles New
13 York created a multi-pronged public outreach
14 campaign called Mission Electric. Over 500 people
15 attended the non-festival premier of the
16 documentary *Revenge of the Electric Car* in Central
17 Park. An additional online campaign included an
18 eTruck challenge collaboration with the drug store
19 chain Duane Reade. The company would serve only...
20 The company allowed New Yorkers to select which
21 Duane Reade stores the company would serve only
22 with electric trucks. The eTruck Challenge received
23 over 1,800 site visits, 300 votes, and reached a
24 social media audience of nearly 25,000 people. And
25 as mentioned earlier replacing standard trucks with

2 electric ones removed the pollution equivalent of
3 over 1,000 cars. To increase access to charging the
4 city addressed the challenges faced by two types of
5 drivers; those who use commercial garages and then
6 those who have their own private parking. For the
7 former the city worked with a private sector to
8 make charging more widely available. To increase
9 comfort with the technology the city hosted a
10 symposium for over 100 decision makers bringing
11 together the charging and garage industries. Today
12 they're over 140 charge points in the city,
13 primarily in off street parking garages. That gives
14 New York City one of the densest networks of public
15 charging. To further increase that network the city
16 has done two things. First, thanks to funding by
17 the New York Power Authority and The New York State
18 Energy Research and Development Authority the
19 Department of Transportation will install nearly 30
20 chargers in its public garages. Second, the city
21 reached out to non-Manhattan parking facilities to
22 offer at the very least charging from a
23 conventional wall outlet. Over a dozen parking
24 facilities now offer this service. To make charging
25 more consumer friendly the state worked with,

1 worked with The State Public Service Commission to
2 create new clear rules for both consumers and
3 charging providers. Until then charging providers
4 feared that they would break the law by charging by
5 the kilowatt hour even though that is the most
6 straightforward way to price for electricity. That
7 model ensures that a slow charging vehicle like the
8 Plug In Prius does not over pay compared to a
9 faster charging car like the Tesla Model S. New
10 Yorkers with their own dedicated driveways and
11 parking garages already started with an advantage
12 compared to much of the country. Thanks to the
13 Department of Building's electronic permit system,
14 an electrician can install a charger with a
15 provisional permit just as they would a large air
16 conditioner or other electrical appliance.

17 Additionally the city strongly supports a coned
18 pilot that makes accessing lower cost, lower grid
19 impact, off peak electricity cheaper and easier.

20 Another pilot that may be of interest to the
21 council is one that is allowing a food cart near
22 union square to plug into grid power. We estimate
23 that over the course of the year the pilot will
24 avoid almost 3,300 pounds of CO2. It also
25

2 eliminates generator noise that can otherwise be as
3 loud as a jackhammer. That effort is a partnership
4 between The Office of Long Term Planning and
5 Sustainability, The Department of Transportation,
6 The Vendor Rafiqui's, and The Local Startup Simply
7 Grid.

8 Finally thanks to the leadership of the
9 Department of Citywide Administrative Services and
10 the city's Fleet Managers New York has one of the
11 greenest fleets in the nation. The city operates
12 nearly 200 highway ready, plug in, electric
13 vehicles including 103 Chevrolet Volts and 37
14 Battery Only Leafs.

15 Intro 1176 compliments these existing
16 efforts by ensuring that parking built today can
17 accommodate the growing adoption of electric
18 vehicles. According to the city's most experienced
19 charger installers the majority of existing garages
20 can accommodate at most one charger without
21 expensive electrical upgrades and many do not have
22 the capacity for, for even that. According to the
23 city's market research study over 25 percent of
24 early adopters, parking garages, or off street lots
25 making this lack of infrastructure a major barrier

1 to large scale EV it option. Intro 1176 would make
2 new off-street parking charger ready by ensuring
3 that there's sufficient electrical conduit to the
4 parking facility. In a 130 spot, indoor garage this
5 could mean enlarging already planned conduit and
6 ensuring that there's space for an additional
7 electrical panel near the garage. We estimate that
8 this would add about \$4,000 to the total cost of
9 construction. For an outdoor parking field adding
10 charger readiness at the time of construction costs
11 just five percent of a retrofit and creates few
12 operational disruptions. Intro 1176 is also timely.
13 Over the past five years over 15,000 new off-street
14 parking spots have been permitted in New York City.
15 If passed this will create the capability at
16 minimal cost to charge thousands of electric
17 vehicles. Other municipalities have had similar
18 legislation in place for years. For example, since
19 2009 Vancouver and London have required charger
20 readiness. London not only has a similar charger,
21 has similar charger ready requirements. It also
22 mandates that 20 percent of residential and
23 workplace parking have actual chargers installed.
24 Las Angeles has built over 500 buildings charger
25

1 ready. And just last month an eight state coalition
2 that includes New York, California, Connecticut,
3 Maryland, Massachusetts, Oregon, Rhode Island, and
4 Vermont signed a memorandum of understanding for
5 increasing electric vehicle adoption. That MOU
6 identifies charging building codes as a key means
7 for aiding the EV market. Thanks to our work with
8 the garage and parking industries Intro 1176
9 provides maximum flexibility for parking operators.
10 For example this bill does not mandate specific
11 charger technology. Like vehicles charging also
12 comes in different types. A normal dedicated wall
13 outlet can fully charge a Volt or Plug In Prius
14 overnight. A 220 volt, level two charger can halve
15 that charging time and a quick charger, and the
16 quick chargers can fully charge most vehicles to 80
17 percent in 30 minutes or less.

18
19 As an aside quick charging seems like
20 the superior option and in some cases it is but
21 also requires more electricity, expensive hardware,
22 and can cost more to operate per kilowatt hour.
23 This bill also exempts retail parking and we're
24 open a language that would exempt housing that is
25 more than 50 percent affordable. This bill allows

1
2 the private sector flexibility to choose the
3 technology that works best for its customers and
4 its business model. That along with the
5 environmental benefits in green jobs potential is
6 why this bill is a support of so many groups that
7 have sent the speaker letters of support or
8 submitting testimony or are here with us today.
9 Electric vehicles provide environmental resiliency
10 and quality of life benefits that can make New York
11 a cleaner, quieter, healthier place to live. Intro
12 1176 helps address limited access to charging one
13 of the main barriers identified as impeding
14 electric vehicle adoption. As such we urge the
15 council to join us in supporting this measure. That
16 concludes my testimony. Thank you and I'd be happy
17 to answer any questions you may have.

18 CHAIRPERSON VACCA: Thank you. We've
19 been joined by council member James and council
20 member Brewer. Let me start off with a couple of
21 questions. My concern is the impact this would have
22 on affordable housing and what is the cost involved
23 in these installations or this availability for
24 electric cars? Can you go into what the cost will
25

1
2 be? I know you said you would exempt housing that's
3 fifty percent or more affordable.

4 ADVISOR KAHN: Yes, so... [interpose]

5 CHAIRPERSON VACCA: But my, but my
6 concern also is that we have much housing being
7 built in New York City that is market rate for
8 example and how will this drive the market rate
9 higher, even, even higher? What is the cost that
10 we're talking about?

11 ADVISOR KAHN: So the cost is pretty in
12 our opinion it's marginal. Because when you plan
13 for electric vehicle infrastructure all, you, you
14 don't really have to add new hardware. You have to
15 upsize some very narrow types of electrical wiring.
16 So for example expanding conduit. In an outdoor
17 garage this might mean expanding the conduit that
18 goes to a light pole and so you're increasing the
19 cost of those very limited conduit runs from seven
20 dollars a foot to 10 dollars a foot. So at 200
21 feet, you know even at 200 feet which would be a
22 large installation you know it's not a very large
23 additional cost increase. In, in that garage I
24 mentioned earlier that privet garage it's
25 increasing the size of a conduit, an already

2 existing conduit that's going from a building's
3 main electrical panel to the garage facility by I
4 believe an inch or so.

5 CHAIRPERSON VACCA: What do you consider
6 a garage? How many spaces? What, what is, what is
7 defined as a garage?

8 ADVISOR KAHN: It's, The Department of
9 Buildings I believe it's four or more parking
10 spots. And, so how this would work is in very small
11 garages they, you know so a four spot garage,
12 they're very well will likely be the additional
13 three kilolots[phonetic] in the electrical, in the
14 adjacent electrical panel that's necessary. In
15 those, and in those larger garages again all you
16 have to you know what's required is that the
17 conduit just be expanded in diameter. So there's
18 not, there's not expensive electrical
19 infrastructure that is required?

20 CHAIRPERSON VACCA: So we're saying
21 right now in my district I have a 14 family house
22 being built. He is required to have seven parking
23 spaces in his building. So that's considered a
24 garage and he would have to have one, one space or
25 two spaces for an electrical car availability?

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2 ADVISOR KAHN: So he would need two
3 circuits of electrical capacity in his garage which
4 is, so I'm an MBA not a, not an electrician but I
5 believe this is correct. So he would need about
6 forty amps of space in his electrical panel. So in
7 that case, and he very likely has that. If he
8 doesn't have it, it would just require that the
9 conduit, you know it might, it might require
10 increasing the gage of the wire, so the copper by a
11 very small amount from his main electrical panel to
12 the garage. And when you're doing this from the,
13 the time of construction you know that's dollars.

14 CHAIRPERSON VACCA: And this legislation
15 would not affect existing garages?

16 ADVISOR KAHN: There's a very narrow way
17 in which it might affect... So if you have an
18 existing garage and you are bringing in new
19 electrical service from Con Edison then, then we're
20 saying yes. Make sure that you bring in enough
21 electrical capacity to support electric vehicle
22 charging. So that is a, that would be a very rare
23 occurrence. An example might be a surface lot
24 that's installing big elevators and then needs new
25 electrical service. And the idea of including that

2 existing construction is just that you will benefit
3 from the same very small marginal cost of adding
4 that charger readiness then.

5 CHAIRPERSON VACCA: Okay. Do you, have
6 you consulted with affordable housing people?

7 ADVISOR KAHN: Yeah, so we've...
8 [crosstalk] Yeah we've, yes council member. We've
9 spoken to NYSAFA and again they are, they are
10 writing language that would exempt housing that is
11 more than 50 percent affordable which is to say 60
12 percent below median income and we're, we're open
13 to that language.

14 CHAIRPERSON VACCA: So they, they're,
15 they, they're, they may submit language to create a
16 carve out. Have you looked into the impact this
17 would have in a flood plain area where parking is
18 often below ground. Is there any consideration
19 there? Is there any, any issue we should be aware
20 of in those cases? If you build something new in
21 the rockaways or in Staten Island where you're in a
22 designated flood plain would this, is there
23 anything we should be aware of?

24 ADVISOR KAHN: So that's an excellent
25 question. I would presume, I presume that existing

1
2 electrical code and then the, the code changes that
3 are being proposed to make the city more resilient
4 for electrical devices in general will also cover
5 electric vehicle charging.

6 CHAIRPERSON VACCA: Okay I just need you
7 to get back to the committee about that.

8 ADVISOR KAHN: Okay. Excellent. I will
9 do that.

10 CHAIRPERSON VACCA: The enforcement
11 agent, the enforcement agency in this regard would
12 be the building's department. Would there be a fine
13 for those who don't comply. How would the buildings
14 department assure compliance? They just would not
15 give a C of O for the new property or would there
16 be an inspection?

17 ADVISOR KAHN: Well, so the way the
18 basically they, they have to see those plans before
19 they approve them so it, it would be at that point
20 when they get the plans that they would make sure
21 would comply with this law.

22 CHAIRPERSON VACCA: Just for the record
23 I, I do know the answer to this but tell me
24 approximately what does an electrical vehicle cost.

2 ADVISOR KAHN: So electric vehicles,
3 there's a wide range of cost, and I, I by the way
4 do the cost after the \$7,500 federal tax credit so
5 a Nissan Leaf costs less than \$22,000 so it's very
6 affordable. It, it has a range of about 70 miles
7 electric more if you're careful. Then, but then,
8 you know cost can go through the roof like any
9 vehicle. So the, the, Tesla Model S costs
10 approximately \$60,000. That's the high end and then
11 it can go up from there. That vehicle model can go
12 up from there. That's the high end of the market.

13 CHAIRPERSON VACCA: Okay any questions
14 my colleagues? Council member Brewer has introduced
15 two of the bills so of course I call upon council
16 member Brewer.

17 COUNCIL MEMBER BREWER: Thank you but
18 first I want to ask you about the food cart because
19 for the last ten years I've been asking Janette
20 Sadik-Khan why can't we plug in trucks to the grid?
21 And I love Janette Sadik-Kahn but every time she
22 told me no, no, no. So how did you manage to do it
23 here? That pisses me off actually.

24 ADVISOR KAHN: I think that there's a,
25 so, I apologize. The way this pilot came into being

1 was a nice confluence of an understanding of the,
2 this food cart market and then also technology that
3 this New York Start Up Simply grid was able to
4 provide. I know that DOT, that trucks are
5 complicated for Department of transportation
6 because setting aside curb space... [interpose]

8 COUNCIL MEMBER BREWER: Well just plug
9 it into the light fixture.

10 ADVISOR KAHN: And actually light
11 fixtures, so, so what we were able, yes, and it
12 works especially well with carts because they don't
13 need to, you don't need to set aside parking for
14 them. You know, they have somewhat established
15 locations.

16 COUNCIL MEMBER BREWER: Somewhat.

17 ADVISOR KAHN: Somewhat. And indeed we
18 do have to figure out how this pilot which has
19 provided excellent results so far can scale.

20 COUNCIL MEMBER BREWER: We didn't answer
21 my question. In other words what happens is we have
22 a lot of trucks. I have a staff person working half
23 time on just truck noise all day long. And so the
24 question would be, it's the generator from the
25 either the cart's generator or the refrigerator. I

1
2 am very up on trucks and noise. So my question is
3 what exactly is being plugged into here. What is
4 quieter and why can't it be done elsewhere.

5 ADVISOR KAHN: Okay. So what is being
6 plugged in with this food car pilot is there's this
7 food cart Rafiqi's that is on the sidewalk at 17th
8 street on the west side or union square. We have a
9 bollard attached siphoning power off of a light
10 pole that has technology that, that Simply Grid
11 pioneered that allows it to activated and
12 deactivated by a smartphone. So that's sort of the,
13 that's the innovation. You can't just walk up and
14 plug in which would provide sort of safety and
15 economic, create safety and economic implications.
16 The challenge is that, is that it, it's
17 operationally, creates operational issues to
18 actually have it on the light pole itself. That's
19 why it's on a bollard adjacent to it because DOT
20 needs to be able to remove those, service them.
21 We're able to put in more safety features in the
22 bollard. And then finally it was easier, it's, it's
23 more operationally straight forward to do a cart
24 because they don't require reserved curb space. I
25 think that the challenge if you're going to do a,

1
2 if you're doing a truck without a set aside curb
3 spaces that that charger, that expensive piece of
4 hardware won't necessarily be available to them.

5 COUNCIL MEMBER BREWER: Okay.

6 ADVISOR KAHN: So that's how we were
7 able to do this.

8 COUNCIL MEMBER BREWER: Alright so but
9 if we have carts, which we often do that have a
10 charger...

11 ADVISOR KAHN: Yeah.

12 COUNCIL MEMBER BREWER: I mean have a
13 generator. That's where the noise comes from.

14 ADVISOR KAHN: Yes.

15 COUNCIL MEMBER BREWER: Then this could
16 be something that could be replicated elsewhere? I
17 mean this bollard just happens to be there? Or is
18 it, was it made especially for that location? I'm a
19 little confused.

20 ADVISOR KAHN: I'm sorry. So we made it
21 special.

22 COUNCIL MEMBER BREWER: Okay.

23 ADVISOR KAHN: And thank you for helping
24 me clarify.

25 COUNCIL MEMBER BREWER: Okay.

2 ADVISOR KAHN: We made it especially for
3 this location. I think that it... [interpose]

4 COUNCIL MEMBER BREWER: So that bollard
5 fits, fits into the actual grid that is at that
6 location.

7 ADVISOR KAHN: Yes, it could be put
8 elsewhere you know either connecting to power...
9 [interpose]

10 COUNCIL MEMBER BREWER: A bollard in my
11 case is what's in front of any kind of a
12 institution that needs security. Is that what you
13 mean by a bollard?

14 ADVISOR KAHN: Yes it's, and I believe
15 Jeff Hoffman is here from Simply Grid and he may
16 speak later so he can, but yeah that's it, it's a
17 little bit girth-ier but yes.

18 COUNCIL MEMBER BREWER: Okay.

19 ADVISOR KAHN: I think that if, you know
20 there are issues if those were, they're about 3,000
21 food carts in the city, about 60 percent use
22 electricity.

23 COUNCIL MEMBER BREWER: They're all in
24 my district. Generators yes.

2 ADVISOR KAHN: The curse of this project
3 for me is now all I hear is generator noise.

4 COUNCIL MEMBER BREWER: That's all I
5 hear too just so you know.

6 ADVISOR KAHN: So the, I mean I think
7 there are challenges to get to a citywide scale.
8 There's some interesting new technologies that may
9 be better suited for New York. So for example
10 inductive charging or wireless charging which is
11 not unlike how an electric toothbrush charges has
12 the potential to be less obtrusive if this were to
13 scale.

14 COUNCIL MEMBER BREWER: Oh gosh. Okay.
15 Go ahead.

16 CHAIRPERSON VACCA: One thing council
17 member Brewer, before we go back to council member
18 Brewer what is a garage? I, I, I, I, what is a
19 garage? Is, is, is it one, is it, is it, if you
20 build a two family house and it's a two car garage
21 is that covered by this?

22 ADVISOR KAHN: No, it's, so a garage is
23 an indoor parking facility with four or more spots.
24 Those are what's permitted by Department of
25 Buildings as parking facilities.

1
2 CHAIRPERSON VACCA: So it would not
3 include fewer than four spots?

4 ADVISOR KAHN: It would not.

5 CHAIRPERSON VACCA: Okay. Alright.

6 ADVISOR KAHN: And it also excludes
7 mercantile so primarily retail parking as well.
8 Okay council member Brewer.

9 COUNCIL MEMBER BREWER: I want to ask
10 also about the garages because right now it's the
11 prime end of consumer affairs that licenses
12 garages. Does buildings already license garages or
13 this would be an additional agency that the garage
14 has to deal with?

15 ADVISOR KAHN: It would be the time of
16 construction so it wouldn't, you know the
17 enforcement is making sure there's readiness when
18 the facility is built and then after that there's
19 you know that, that is where the enforcement ends.

20 COUNCIL MEMBER BREWER: So it wouldn't
21 be ongoing DOB harassment?

22 ADVISOR KAHN: No.

23 COUNCIL MEMBER BREWER: The other
24 question I have, I have a couple of bills as you
25 might, might know and I don't know if you had a

1 chance to look at them. One is, has to do with
2 literally placing the operational opportunities for
3 chargers on the streets. One is Intro 843 and the
4 concept here is that these bills would make a
5 commitment to the infrastructure by sort of
6 codifying a pilot program where the administration
7 would install a minimum of 10 electrical vehicle
8 chargers to be able to do a pilot program. And the
9 reason this came up was when we were in Israel
10 which JCRC literally they are everywhere and the
11 city of Tel Aviv in particular is quite healthy as
12 a result. And Baltimore and DC are both doing the
13 same thing as you probably know.

14
15 ADVISOR KAHN: Yep.

16 COUNCIL MEMBER BREWER: For some reason
17 the administration is not happy about it according
18 to submitted testimony from DOT. So I'm just
19 wondering if you could discuss why you think, at
20 least doing some kind of pilots, like you just done
21 with the food cart, wouldn't be possible to do as
22 an example of commitment. I just want to add in
23 terms of garages to go back because it, the two new
24 garages chairman in our district I mandated that
25 the charges go in and it does, it's an 80 20 so it

1
2 doesn't seem to be a problem. So what about my
3 bills?

4 ADVISOR KAHN: I would like to defer to
5 DOT's submitted testimony. You know they, they've
6 identified I think two, two, the primary reason is
7 because they've, they're moving full force ahead
8 with installing 30 chargers in their garages. And
9 want to first sort of understand the technology
10 there.

11 COUNCIL MEMBER BREWER: But those, but
12 cars may not go into the garage. Don't you have to
13 pay to go into the garage?

14 ADVISOR KAHN: Yes, they're, I mean
15 they're, they're reasonably priced but yes.

16 COUNCIL MEMBER BREWER: So say for
17 instance I don't want to go in a garage I'm quite
18 good at finding my own parking space on the street
19 of New York not wanting to go into a garage. So why
20 wouldn't we want to make it easier for people to
21 use a, a station that could in fact enable that car
22 to... I mean it does seem to me quite unfair to make
23 cars go into a garage.

24

25

1
2 ADVISOR KAHN: So you're right if you
3 look at our electric vehicle adoption study from
4 2010 a... [crosstalk]

5 COUNCIL MEMBER BREWER: ...have it here
6 yep.

7 ADVISOR KAHN: Okay, so then I'm going
8 to just say a large number instead of trying to
9 quote a percentage. A large number of potential or
10 electric vehicle adopters do park on the curb.
11 Some... [interpose]

12 COUNCIL MEMBER BREWER: Yes, but that's
13 exactly what it says in here.

14 ADVISOR KAHN: Yep.

15 COUNCIL MEMBER BREWER: Yep.

16 ADVISOR KAHN: Some cities have been
17 really successful with curbside charging so Oslo's
18 a good example and I'm not familiar with Tel Aviv,
19 it may be as well. Other cities haven't been, you
20 know the, the, the infrastructure's been installed
21 at considerable expenses you know. It can be ten
22 times more expensive to install on the curb than it
23 is inside a garage. And then infrastructure doesn't
24 get used. So I think the challenge is it's much
25 higher hanging fruit to serve, you know to serve

1
2 people on the curb. And I think it requires a long
3 time commitment. So if somebody is buying or
4 leasing a vehicle, an electric car, and, and parks
5 on the curb they need to have incredible confidence
6 of that charger will be around for a long time and
7 public outreach and education and also market
8 research to identify where those people are so. So
9 at this time we've had more success and ability to
10 serve the nearly 25 percent of potential early
11 adopters who park in garages.

12 COUNCIL MEMBER BREWER: So maybe you
13 mentioned this but how many parking garages
14 currently have? I know mine do on 77th street but
15 how many actually have electric opportunities
16 currently? Do we know?

17 ADVISOR KAHN: They're over 140 charge
18 spots in this city.

19 COUNCIL MEMBER BREWER: Mm-hmm.

20 ADVISOR KAHN: And I don't remember how
21 that divides into garages.

22 COUNCIL MEMBER BREWER: And do we know
23 how much they're used or we don't know. Is there
24 some kind of way of knowing that.

25

1
2 ADVISOR KAHN: So Colleen Quinn from
3 Charge Point who, which is the you know who's
4 chargers are the vast majority of those I mentioned
5 can, may be able to speak to that.

6 COUNCIL MEMBER BREWER: Okay, and do we
7 know if people would use electric vehicles? I
8 assume we want people to use electric vehicles
9 right? Is that a correct statement?

10 ADVISOR KAHN: Yes.

11 COUNCIL MEMBER BREWER: Okay so if we
12 want people to use them it would seem to me we
13 should mandate that they also pay to go into a
14 garage. I mean, I just, it doesn't make any sense
15 to me. I mean I can understand that you're worried
16 that somebody may not service the charger on the
17 street but I also feel like you know the fact of
18 the matter is that we're really... I don't know why
19 other cities can do this and we can't. Why, why is
20 it so easy, why is it been done elsewhere and the
21 country but not in New York at least on a pilot
22 basis?

23 ADVISOR KAHN: I think that... [interpose]

24 COUNCIL MEMBER BREWER: And, and why did
25 plaNYC suggest this?

1
2 ADVISOR KAHN: I don't recall... The
3 blueprint that I, that I follow, you know we first,
4 you know is to first saturate the garage market
5 because it's far more economical as I mentioned.
6 You know can cost up to ten times less to install a
7 charger. I mean you're point that they're many New
8 Yorkers who are not, who'd be interested in
9 electric vehicle if they could park on the street
10 and charge it on the street is a good one. We
11 haven't, I haven't operational models of charging
12 in other cities that, that we could financially do
13 here in New York. Doesn't mean it's not possible
14 but it requires, but I, I, I'm not sure all those
15 other cities have installed chargers have done it
16 successfully.

17 COUNCIL MEMBER BREWER: Another question
18 would be like we're always trying to support small
19 business, entrepreneurial ideas that are outside
20 the box, etcetera, so why couldn't a small business
21 have a charger and maintain it as opposed to a
22 expensive garage.

23 ADVISOR KAHN: So this is where I'd, so
24 DOT, and I think that relates to the revocable
25 consent... [interpose]

1 COUNCIL MEMBER BREWER: Yes.

2 ADVISOR KAHN: ...bill. [interpose]

3 COUNCIL MEMBER BREWER: Yes.

4 ADVISOR KAHN: I'm not, my understanding
5 of revocable consent is that, that you, that can't
6 be charged for, that you can't charge for the
7 service of what you offer unrevocable consent. So
8 that, so that would be a challenge to the business
9 model for many people if it costs upwards of 20 or
10 30 thousand dollars to install that charger. That
11 doesn't mean that some businesses, you know hotels
12 or very forward thinking ones, Tom Milokney
13 [phonetic] is here. He runs a business,
14 unfortunately not in New York, in New Jersey where
15 he offers charging wouldn't be willing to do it and
16 offer it as an amenity but that is a challenge. And
17 then the second issue is that same one. If you
18 don't reserve curb space for the electric vehicle
19 the odds of that charger being available for the
20 electric vehicle's low. And then if you do reserve
21 space you know you may have the unintended
22 consequence of increasing congestion and double
23 parking and such.

1
2 COUNCIL MEMBER BREWER: And you don't
3 think we have double parking now? I don't think
4 that any extra couple of spaces, I'm just saying
5 that is, that's a lame excuse. I can understand
6 that it might not be available because people might
7 have to wait. But you might have to wait in a
8 garage also. I'm just trying to say, it doesn't
9 seem fair that and the garages are usually
10 expensive and you know at least in my neighborhood
11 you can't get out for less than 20 dollars...

12 [interpose]

13 ADVISOR KAHN: Yep.

14 COUNCIL MEMBER BREWER: ...literally. So
15 maybe more overnight. It could be 45 dollars
16 overnight. So I just think that, you need to think
17 about those cars that may not want to go into a
18 garage and then you could find a way for them to
19 be, people to be more interested in using electric
20 vehicles. I just think that, no your business model
21 does not make sense.

22 ADVISOR KAHN: You know... [interpose]

23 COUNCIL MEMBER BREWER: I would like to
24 still continue thinking about these two pieces of
25 legislation on any kind of a pilot basis.

2 CHAIRPERSON VACCA: And let me say this
3 in all fairness. I respect that you're here and we
4 welcome the, your input but you're here to advocate
5 for a bill at the administration once and then when
6 it comes to DOT coming today they don't want the
7 bill so they don't come to the hearing. I mean this
8 is not a one way street here. We have a council
9 member that has sponsored two bills the agency
10 involved. DOT submits written testimony and doesn't
11 come to a hearing but by some, some coincidence
12 you're here because you, you want the bill, you
13 want a bill but it's the responsibility of the
14 administration to send people to these hearings
15 whether they want the bill or not and, and I, I, I
16 think that council member Brewer is correct. I
17 don't think that DOT's given appropriate
18 consideration toward a member has suggested. This,
19 this... I'm telling you as chair of the committee
20 that I'd like to move legislation but my job as
21 chair is to represent the members and that's where
22 I'm coming from here. So I just want you to know.

23 ADVISOR KAHN: I will, I will share that
24 with my colleagues at DOT.

2 COUNCIL MEMBER BREWER: Yeah, I mean, I
3 just, what I, thank you Mr. Chair. I think the
4 issue for us is, at least for me is that there are
5 other cities doing this. We are always trying to
6 push small business so it's a revocable consent is
7 not the right business model. There may be another
8 way of doing it but the fact of the matter is
9 you're just in my opinion you're just supporting
10 some of the large garage owners because that's
11 who's going to put this in and that's who's going
12 to make some money off of it. They look at
13 understandably as a business model. I don't know
14 that there are many entrepreneurial garages. I
15 could be wrong but I don't think there are many.
16 And I think this is a good example that it, that
17 the, the world would hear that New York City's open
18 to electric vehicles by having it more public and I
19 think it might be something that small businesses
20 might like to consider as part of the streetscape.
21 Again we have to think of not too much street
22 furniture. We could do something about those news
23 racks which DOT loves right Mr. Chair. 14 news
24 racks on a street. Do we need 14 news racks on the
25 street? We've been trying to get rid of some of

1
2 them for years. So instead of having 14 news racks
3 with empty garbage filled opportunities for people
4 you could put in something that's actually useful
5 in terms of an electric station. So I do think it
6 needs to be looked at completely differently. I
7 appreciate these bills. I think they're excellent.
8 And I, as I indicated my garages are already doing
9 it because they know it's a good business model.
10 They are huge garages in terms of ownership. This
11 is a multimillion dollar business, not an
12 entrepreneurial situation. So I think from two
13 counts. One saying that New York City's open for
14 business for electric cars and secondly give me
15 some opportunities to smaller business people who
16 want to be entrepreneurial. This could be some
17 place to make a dent. Thank you very much Mr.
18 Chair.

19 CHAIRPERSON VACCA: Thank you. What
20 we're hearing today is that the cost is so minimal
21 so the cost is very minimal for a private developer
22 but the cost is not minimal for the city. The city
23 will not do anything on their, on city streets
24 because they've decided not to do even a pilot
25 program but it's okay that the cost is endured by a

1 private person. That's not consistent and it's not
2 environmentally consistent either. If we truly want
3 to have an impact on the environment there has to
4 be a recognition. The people who have electric
5 vehicles have to be allowed to park somewhere on
6 city streets and have their cars charged somewhere
7 on city streets. So I'd like you take back that
8 we'd like to pass a package not just what the
9 administration would like us to pass or else these
10 bills may have to wait. We'll wait a little longer,
11 consider them a little longer. Okay we've been
12 joined by council member Lappin, council member
13 Greenfield, council member Ydanis Rodriguez. Okay
14 any further questions? Oh, oh, and we've been
15 joined by our chair council member Dilan, our co-
16 chair. Any questions from any members?

17
18 COUNCIL MEMBER GREENFIELD: [off mic]
19 ...question...

20 CHAIRPERSON VACCA: Council member
21 Greenfield.

22 COUNCIL MEMBER GREENFIELD: The cost
23 differential between a garage installing,
24 installing a electric vehicle charging stand versus
25 the city doing it. What's the cost difference?

1
2 ADVISOR KAHN: So thank you council
3 member. So in terms of the cost, the cost of
4 installing it in a new facility when you're
5 planning it from the beginning is far lower so with
6 a surface garage it's only five percent the cost
7 when you plan it and build it with new construction
8 as if you had to retrofit later. The city for its
9 part not only will also have to comply with this
10 law and it builds parking facilities as well, it's
11 also installing 30 chargers in the few remaining
12 public garages that it owns and operates.

13 COUNCIL MEMBER GREENFIELD: No, I
14 understand. Do you know the actual cost? What are
15 we talking about? Dollars and cents right?

16 ADVISOR KAHN: Sure.

17 COUNCIL MEMBER GREENFIELD: You, you
18 indicated that it is more expensive alright when
19 council member Brewer asked you specifically about
20 putting them on the public sidewalks you indicated
21 that it was significantly more expensive. So I'm
22 just curious as to what there's a cost is to the
23 city for us to be environmentally friendly.

24 ADVISOR KAHN: Other cities have quoted
25 costs of installing on the curb with chargers of

1
2 upwards of 50 thousand dollars per one to two
3 chargers. And that doesn't include the, the you
4 know higher cost of maintenance that, and, and
5 issues around vandalism that those are more likely
6 to have.

7 COUNCIL MEMBER GREENFIELD: So just to
8 be clear for half a million dollars we could
9 actually pass council member Gale Brewer's
10 legislation and introduce a pilot program in the
11 city of New York for electric vehicle charging
12 stations and that's something that the
13 administration finds to cost prohibitive? Really?

14 ADVISOR KAHN: So I'm not... [interpose]

15 COUNCIL MEMBER GREENFIELD: Are you
16 familiar with the size of our New York City Budget?

17 ADVISOR KAHN: So when I say cost
18 prohibitive I'm, I'm not referring necessarily, you
19 know I'm referring to sort of providing charging
20 for the curb at scale. I think the DOT, so I'm
21 going to defer to DOT's testimony on, on council
22 member Brewer's introductions respectfully. They,
23 you know DOT's position, you know as they say in
24 their testimony, you know we are installing 30
25

1
2 chargers in our garages you know shortly so they
3 think that meets those needs.

4 COUNCIL MEMBER GREENFIELD: No, no I
5 read the testimony I'm just specifically referring
6 to council member Brewer's legislation which would
7 install them on sidewalks right? So to do that
8 would cost approximately a half a million dollars
9 and the City of New York is balking at the cost of
10 a half a million dollars of introducing a pilot
11 program that has the potential to spur and
12 encourage individuals to drive these vehicles that
13 have all sorts of environmental advantages. So is
14 that basically the position of the city? 500
15 thousand dollars is too much to support New York
16 City's environment?

17 ADVISOR KAHN: I think that their issues
18 beyond even just the upfront capital costs. And
19 again that the you know the city is putting the,
20 its full electric vehicle effort behind...

21 [interpose]

22 COUNCIL MEMBER GREENFIELD: I've heard
23 they're going to be in those public stations. I got
24 you there. I'm not talking about the public
25 stations. I'm talking about council member Brewer's

1 bill as far as the sidewalk electrical vehicle
2 charging stands. And the city has actually
3 installed them at different locations. We have them
4 in the city hall parking lot as well right?
5

6 ADVISOR KAHN: Yes we installed two
7 recently I believe.

8 COUNCIL MEMBER GREENFIELD: Yeah so what
9 was the purpose of doing that?

10 ADVISOR KAHN: The city has you know a
11 fairly large electric vehicle fleet and it's
12 dedicated parking that you know that conserve those
13 vehicles. It's off-street so it's you know it's
14 akin to charging those, putting them in those
15 parking fields or garages.

16 COUNCIL MEMBER GREENFIELD: Got it.

17 COUNCIL MEMBER BREWER: It's like the
18 pilot in Union Square for the food carts that we
19 can't get anywhere else Mr. Greenfield.

20 CHAIRPERSON VACCA: Alright well listen
21 I think you understand our frustration here Sir. It
22 just seems a little bit silly honestly that we
23 spend billions of dollars and hundreds of millions
24 of dollars on behalf of the environment and we've
25 got these plans quite frankly just authoring the

1 city's plans of the environmental future cost
2 millions of dollars and that the city would take a
3 very bizarre position that the to expend 500
4 thousand dollars to have a forward thinking piece
5 of legislation where you have 10 charging stations
6 at different locations around the city as a pilot
7 that somehow, that you find to be too expensive, to
8 me, just seems honestly, a little bit absurd. But I
9 certainly appreciate your commitment and I
10 understand that you're stuck in a little bit of a
11 box. And I understand that your colleagues at the
12 DOT are interviewing for other positions so they
13 couldn't be here today and I thank you for your
14 testimony. Is there any provision for city
15 municipal lots to have these electric station
16 availabilities?

18 ADVISOR KAHN: So we're, so we're
19 installing the nearly 30 chargers in those, so are
20 you talking about public facilities, those that the
21 city... [interpose]

22 CHAIRPERSON VACCA: Yeah, the outdoor,
23 we have a lot of outdoor municipal lots that the
24 DOT operates.

1
2 ADVISOR KAHN: The city operates, owns
3 and operates I think about ten open parking
4 facilities. We are installing them in, we're
5 installing 30. There's a challenge because of many
6 of those facilities are old so again when you're
7 doing new build you A, not only is the cost of
8 construction lower but you don't have to worry
9 about potential hazards so waste and such. So I
10 think they're a challenge with some of those
11 parking facilities. Is it they're old and that,
12 that opening up the cement for conduit may create
13 sort of large liabilities. So we're installing them
14 in as many, you know in ones that we think are safe
15 now and we'd be open to installing them in more as
16 well. But they're, but they're some challenges with
17 parking facilities that are that old.

18 CHAIRPERSON VACCA: That are what?

19 ADVISOR KAHN: That are that old.

20 CHAIRPERSON VACCA: Outdoor facilities?

21 ADVISOR KAHN: Yep, even. Because if you
22 trench into the asphalt you have the potential of
23 uncovering toxins.

24

25

2 CHAIRPERSON VACCA: Toxins? I don't
3 understand that. Do we have municipal lots that are
4 on toxic material? Can you explain that to me?

5 ADVISOR KAHN: I think it's asphalt you
6 just don't know. I think that there's things that
7 are under asphalt that are sort of contained that
8 when you, you know it's like you know when you have
9 to drill a hole through a wall. If it's in the wall
10 it's not an environmental hazard but if you have to
11 open up that wall you risk creating new exposure.
12 So I think the challenge with old facilities you
13 know public or private is you know is making sure
14 that you know you don't create new you know create
15 new potential hazards.

16 CHAIRPERSON VACCA: Well I think...
17 [interpose]

18 ADVISOR KAHN: That's been our
19 experience in trying to sight chargers.

20 CHAIRPERSON VACCA: I think that we have
21 a challenge here and that is how do we encourage
22 availability for electric car charging on public
23 streets. I think that's the challenge. Council
24 member Brewer's bills present. I tried to broach it
25 from the aspect of municipal lots but I think that

1 we have a challenge here. If we truly want to
2 encourage these cars there has to be more than just
3 saying there are garages private people build there
4 must be availability. So I think when we look at
5 this legislation and we work with the
6 administration I wanted you to keep that in mind.
7 Are there any further questions? Council member
8 Dilan.
9

10 CHAIRPERSON DILAN: Yeah thank you Mr.
11 Chairman I just want to take a shift from the
12 current line of questioning to talk about the
13 future a little bit and you know I, I, you know
14 whether you, whether the administration agrees with
15 council member Brewer's bills or not I think first
16 I find it disrespectful that the Department of
17 Transportation could not attend. I think the merits
18 of what you're doing and what you're trying to
19 accomplish are worthwhile not only for this
20 administration to have it as a, a matter of this
21 administration's legacy but for the overall health
22 of the city and for the overall enhancement of a
23 potential new industry. For those reasons alone the
24 administrations should have been here. But shifting
25 for a second, let's just say, what have, what has

2 the administration and its private discussions or
3 thoughts has done to set up a potential new
4 industry for these charging stations to be done by
5 the private sector or private industry. Has there
6 been any discussions about how this new potential
7 market could come, come into business in this city?

8 ADVISOR KAHN: Thank you chairman Dilan
9 for the feedback and question. So in terms of, just
10 to clarify, you know I think it's, is the question
11 you know how does this potentially create jobs for
12 New Yorkers?

13 CHAIRPERSON DILAN: No, no. I'm not
14 worried about how jobs are created. I'm worried
15 about if, if this administration wants to push
16 electric cars which I think is worthy even though
17 they may be cost prohibitive right now. Potentially
18 on a wide scale they going to have to get power
19 from somewhere. And government as we've heard all
20 my colleagues have said that government should have
21 some sort of answer but maybe government can't be
22 every answer to charging electric cars. We don't
23 provide gas for every vehicle on the street so what
24 are we doing to enable the private sector to fill
25 this infrastructure gap?

2 ADVISOR KAHN: So I think what, so our
3 policy is to allow the private sector to be able to
4 efficiently and affordably offer power and for
5 consumers to exercise as much choice as possible in
6 getting it. So they're use to, there were some
7 existing regulations around how electricity was
8 sold that made it very complicated for let's say a
9 garage owner or a small business owner to provide
10 electricity for an electric vehicle. You can only
11 charge by time instead of by the actual amount of
12 energy consumed. So we worked with the State Public
13 Service Commission to, to make those rules a lot
14 more straight forward and lot clearer so in fact
15 now you can charge for what you, you can charge,
16 you can pay for what you're getting visa vitro.

17 CHAIRPERSON DILAN: Okay so just help me
18 understand sort of how these charger stations work.
19 I have a general idea through our private briefings
20 and a general idea from reading out of the briefing
21 reports but basically there are three types.
22 There's one that charges pretty rapidly, one that
23 charges in six to eight hours, and one that uses a
24 basic household plug that takes forever. Now let's,
25 let's, how, how do you see and I'm again

1 futuristically you may not have the answer but how
2 do you see this market setting up? Do you see
3 electronic charging stations competing with regular
4 gas stations to fuel vehicles in, in, in the short
5 to near future? And if so are we considering easing
6 codes whether they be building, transportation,
7 environmental, or otherwise to allow for this new
8 technology.

10 ADVISOR KAHN: I think that in, some
11 charging may happen like gas stations but because
12 it's much less sort of intrusive, charging is less
13 intrusive even you, you know you actually got the
14 categories of charging exactly right. It's those
15 three; level one, level two, and quick charging.
16 Even a quick charger you know is not much bigger
17 than a phone booth and you know it obviously it
18 doesn't any noxious, create noxious gasses or
19 anything like that.

20 CHAIRPERSON DILAN: But it takes about
21 20 minutes. I mean... [interpose]

22 ADVISOR KAHN: It does take about 20
23 minutes.

24 CHAIRPERSON DILAN: I don't think
25 anybody wants to be stuck for 20 minutes so how do

1 we, how do we roll out this infrastructure and how
2 do we allow for the private sector to roll out this
3 infrastructure because I agree. You know if you, if
4 you want to say I disagree with council member
5 Brewer's bill anyway and I, I, you know I don't
6 want to go point for point for her because I think
7 she's trying. How do we incentivize the private
8 market to do this so that the city doesn't have to
9 worry about the cost?

11 ADVISOR KAHN: So we're trying, we're,
12 we're very attuned to ways to reduce the barriers
13 to make it easier for people to access and provide
14 charging. And so summon, and so, and I don't, I
15 think we're at the beginning of that journey not
16 the end. But some things that we've done in that
17 direction are again make it easier to price for
18 electricity. We promote a map called PlugShare on
19 our city website that shows a map of chargers and
20 then also allows crowd sourcing so people can say
21 oh that charger doesn't work or that charger's
22 great. They were so friendly there at that 7/11. So
23 you know that's one way of creating feedback. We've
24 created GreenLife's, GreenLife's is the New York
25 City environmental mascot. We've created new

1
2 signage for garages to make it more visible to New
3 Yorkers that there is charging available. You know
4 I don't think most New Yorkers realize there are
5 over 140 charge points in the city.

6 CHAIRPERSON DILAN: No, I didn't realize
7 'till last week's briefing. The only thing that I
8 would say is that I think that not only New York
9 City but the other municipalities and states that
10 are beginning to lay out the infrastructure here
11 are onto something. I think that you know more
12 thought and planning needs to go into how we roll
13 our the infrastructure and this administration and
14 this council may not be able to put the mechanisms
15 in place in a month and a half to do that but I
16 certainly think as a city we should continue the
17 work that was started here. So with that I'll, I'll
18 end my questioning and reiterate again that it
19 would have been great for the Department of
20 Transportation to come here. Because even if they
21 disagreed with everything in council member
22 Brewer's bill the back and forth conversation could
23 have led to something greater. So I'm disappointed
24 with that part. Thank you Mr. Chairman.

2 CHAIRPERSON VACCA: Thank you. They're
3 no, they're no further questions I don't think from
4 council members. Do we have another panel? Yes we
5 do. Thank you. Our next panel is Colleen Quinn,
6 ChargePoint Incorporated, Luke Tonachel, Natural
7 Resource Defense Council, Tom Moloughney, Plug In
8 America, and Humberto Restrepo, Joint Industry
9 Board of the Electrical Industry.

10 [pause]

11 COLLEEN QUINN: Oh, oh, oh, yes I do,
12 just what I'm thinking. 20 copies. Thank you.

13 [pause]

14 CHAIRPERSON VACCA: Would you like to
15 lead off? Okay.

16 COLLEEN QUINN: Surely. Good morning.
17 Good morning chairman Dillon, Dilan, excuse me
18 Vacca and members of the building and
19 transportation committee. My name is Colleen Quinn
20 and I am the Vice President for Government
21 Relations and Public Policy for ChargePoint Inc.
22 ChargePoint supports proposal 1176 because it
23 promotes EV adoption by lowering costs,
24 installation costs, addresses a major challenge for
25 tenants and co-op owners to own EVs and will create

1 local jobs. ChargePoint is, is the world's largest
2 network of independently owned charging stations
3 with more than 12,000 charging spots. We are the
4 leading provider of EV charging services in New
5 York State. We have 80 percent of the market. The
6 New York City fleet as an example, operates 150 of
7 our stations. But ChargePoint is not an electric
8 vehicle service provider. By definition or business
9 model we sell Orange stations and network services
10 to customers and hosts such as municipalities,
11 universities, parking garages, EVSPs, commercial
12 establishments. Our customers set their own prices
13 and operate our charging systems. Currently close
14 to 2,000 organizations provide charging via the
15 ChargePoint network. New York has the potential to
16 be one of the largest markets for electric vehicles
17 in the world. Through policies such as Charge New
18 York as well as programs and funding from the
19 Department of Energy, NYSERDA, NYPA, and tax
20 credits recently approved by New York State
21 legislature New York is leading the way for EV
22 adoption. New York City has an important market
23 with an already growing demand. In New York City
24 and regions surrounding there are currently close
25

2 to 3,000 electric vehicles. On the 270 ChargePoint
3 stations deployed in New York City we see increased
4 utilization in parking garages and facilities that
5 will be impacted by this legislation. Numbers range
6 from 48 to 85 percent utilization in October and
7 councilwoman I have provided in my testimony more
8 detail actually pinpointing where the locations are
9 through maps, as well as where the locations of the
10 drivers are, the ChargePoint drivers and I would be
11 happy to you know delve into more detail on the
12 utilization as well because our stations are
13 networked. Which means we have the ability to know
14 and understand exactly how much energy is being
15 consumed and saved as well what times of day that
16 the stations are being used, for how long, and you
17 know to what degree, which I think is something
18 that you indicated an interest in.

19 COUNCIL MEMBER BREWER: They're smart.

20 COLLEEN QUINN: Thank you. Boy I
21 appreciate that coming from you. Thank you. And the
22 market by the way is expected to grow phenomenally.
23 As recently as October 21st, 4th excuse me, Governor
24 Cuomo signed an MDU with seven governors and agreed
25 to collect, to a collective target of having at

1 least 3.3 million zero emission vehicles on the
2 road in all these states by 2025 and to work
3 together to establish fueling infrastructure to
4 support the vehicles. The governor set a goal for
5 New York State of 30,000 electric vehicles by 2018.
6 To meet this number 10,000 ports are needed. This
7 proposal if adopted will lower installation costs
8 and support these numbers. Based on information we
9 have collected from installing thousands of
10 stations in the US and hundreds in New York State a
11 resolution such as this will improve economic
12 efficiency for installations. This could lower
13 costs by 60 percent. Again in my testimony I give
14 exact you know numbers for installation costs and
15 how this will make a huge difference. If they're
16 included in New Construction as the proposal
17 provides being EV ready is also going to be
18 increasingly a valued amenity for building owners.
19 That is especially important for multi dwelling
20 units. Tax credits including 30 percent federal and
21 50 percent from New York State will be available in
22 2013. These installations will also provide lead
23 points. So New York City in conclusion has the
24 opportunity to become a national leader in EV
25

1
2 adoption with these actions. We therefore urge
3 approval of this proposal. Thank you. Any
4 questions?

5 CHAIRPERSON VACCA: We'll take the whole
6 panel.

7 COLLEEN QUINN: Oh okay.

8 CHAIRPERSON VACCA: And then questions
9 later. Just identify yourself for the record before
10 you begin your testimony.

11 LUKE TONACHEL: Good morning chairman
12 Vacca, chairman Dilan, and members of the
13 committees. My name is Luke Tonachel and I'm a
14 senior analyst with the Natural Resources Defense
15 Council or NRDC. I work in NRDC's New York City
16 office as an advocate for policies that will result
17 in cleaner vehicles and fuels and I appreciate the
18 opportunity to testify before you today. I'm here
19 today to express NRDC support for bill number 1176
20 to make New York City parking lots and garages
21 ready for electric vehicle charging. The foundation
22 of our support is our strong belief that
23 electrification of vehicles is an important and
24 necessary strategy to combat local air pollution
25 and climate change. Vehicles driving on electricity

1 in New York City are estimated to achieve
2 greenhouse gas reductions of nearly 75 percent
3 relative to average conventional vehicles on the
4 road today. NRDC projects that for New York and the
5 United States to meet its long term carbon
6 pollution reduction targets of 80 percent by 2050
7 the automobile fleet must become primarily electric
8 drive. The transition from oil fueled internal
9 combustion engine vehicles to cars propelled by
10 electrons has begun. In the United States sales of
11 full battery electric and plug in hybrid electric
12 vehicles have tripled from 2011 to 2012 and on
13 track, and they are on track to grow another 70
14 percent in 2013. To meet climate stabilization
15 targets the adoption of plug in electric vehicles
16 will need to continue to expand rapidly. Therefore
17 it is critical that city, state, and federal
18 governments look for ways to break down barriers to
19 widespread vehicle electrification as the council
20 is doing now. NRDC supports bill number 1176
21 because it helps make fueling a car with
22 electricity easier. While electricity is ubiquitous
23 throughout the city, it is not often configured for
24 vehicle charging. Bill 70, 1176 will ensure that
25

1 parking lots and garages are constructed in a
2 manner that allows charging stations to be
3 installed quickly and efficiently. The charger
4 readiness bill will help parking providers avoid
5 the high cost of post construction installations
6 and more readily offer charging services. This
7 enhanced electric charger readiness will also send
8 an important signal to the growing electric vehicle
9 market helping to propel it forward with more
10 charging stations. Growing the number of electric
11 vehicle ready charging spots in New York City will
12 result in numerous benefits. The greater
13 availability of charging encourage, encourages
14 drivers to shift from petroleum to electricity
15 enabling more electrical miles especially for plug
16 in hybrid electric vehicle owners and more
17 emissions reductions. Maximizing electric vehicle
18 miles accelerates the payback for electric vehicles
19 which have a higher up front cost but lower
20 operating costs compared to their gasoline
21 counterparts making them more attractive for, as a
22 vehicle own. An electric vehicle charging offers
23 parking facility owners a new opportunity to
24 generate revenue and grow their businesses.
25

1
2 In summary NRDC believes that adding
3 charger ready, charging ready parking spots can
4 fuel a positive feedback cycle of growing
5 infrastructure that helps accelerate vehicle
6 vehicle, electric vehicle adoption. As vehicle
7 electrification grows the city gets closer to
8 meeting its air quality and climate change goals.
9 For these reasons we respectfully urge the council
10 to pass bill 1176. NRDC also recognizes that bills
11 843 and 844 regarding revocable consent and a pilot
12 program for curbside electric vehicle charging
13 stations can also serve to promote the availability
14 of charging infrastructure and help promote the
15 electric vehicle adoption. NRDC recommends that the
16 council consider these bills as complimentary to
17 bill 1176. This concludes my testimony. Thank you
18 for your attention.

19 TOM MOLOUGHNEY: Good afternoon. My name
20 is Tom Moloughney. I live in Chester, New Jersey.
21 I'm here today representing Plug In America, the
22 largest electric vehicle advocacy in the country. I
23 also own and operate a restaurant in Montclair, New
24 Jersey and own and manage commercial real estate. I
25 strongly support the passing of Intro 1176 and

1 believe that New York City needs this kind of
2 legislation to accommodate the electrification of
3 personal transportation for its residents and
4 visitors. Every mainstream automobile manufacturer
5 has plug in electric or plug in hybrid vehicles
6 available today or in their upcoming product
7 lineup. In 2010 less than a thousand electric
8 vehicles were sold in the US. In 2011 that number
9 increased to 17,000. In 2012 more than 52,000 were
10 sold and this year we're on the pace for over a
11 hundred thousand plug in electric vehicles sold in
12 the US. This isn't a passing fad. Plug in electric
13 vehicles are here to stay and will eventually be
14 the dominant form of personal mobility especially
15 in large cities like New York in the not too
16 distant future. I've been driving electric for over
17 four years now and I've driven over 120 thousand
18 zero emission miles. I come to the city often for
19 business meetings, to shop, dine, and for
20 entertainment, and finding available chargers in
21 the city personally has been a daunting task. There
22 are so few of them it's very difficult to find one
23 that's available, that's working, that's not
24 blocked by gas cars. In fact I took my gas car here
25

1
2 today because I couldn't be sure I'd be able to
3 find a public charger to be able to charge and get
4 back home. I believe I'm particularly qualified to
5 testify in front of you here today because I have
6 personally installed public charging stations in
7 the parking lot of my shopping plaza in Montclair,
8 New Jersey. Since I didn't have the foresight to
9 install the conduit when I developed the property
10 back in 1998 the installation cost me many
11 thousands of dollars more than it would have had
12 the raceways been installed when I was doing the
13 initial construction. I only wished there was a
14 requirement like this proposed bill back then. The
15 chargers on my property in Montclair get used every
16 day and many of the people plugging in are electric
17 vehicles from New Jersey who are on their way to
18 New York City or returning from a trip here. They
19 stop at my property because they couldn't find
20 charging in New York and didn't want to risk going,
21 or didn't want to risk going there and not being
22 able to plug in. What does that mean to New York?
23 Well I have a customer while their car is charging.
24 During that time they eat at my restaurant and that
25 money could have been spent in an eatery or a café

1 in New York. If only they could have charged their
2 car here while they were in the city. The bottom
3 line is there's a real economic cost for not being
4 an EV friendly city today and it's going to get
5 much worse as electric vehicle adoption increases.
6 If New York doesn't dramatically increase the
7 amount of public charge points available people
8 will choose not to visit New York to shop, to dine,
9 to spend their entertainment dollars here, and many
10 will choose not even to live here if they can't
11 easily find a place to plug in their car. The
12 evolution to electric vehicles is happening. Now is
13 the time for New York to start preparing for the
14 infrastructure that will be needed to support the
15 thousands and then hundreds of thousands of plug in
16 electric vehicles that will reside in and visit the
17 city every day. Thank you.

18
19 CHAIRPERSON VACCA: I have no questions.
20 Any questions? Council member Dilan?

21 CHAIRPERSON DILAN: Yeah just some
22 questions. I forget your name again Sir.

23 TOM MOLOUGHNEY: Tom Moloughney.

24 CHAIRPERSON DILAN: Mologhney could you
25 tell us a little bit about your installation at

1
2 your private facility. How did, well I guess I
3 could imagine what was the impedance to do it, you
4 drive a car yourself, you sound pretty
5 environmentally friendly but based on your
6 testimony but how does it work on a day to day
7 basis. You install the unit. I would guess that
8 people who drive electric cars have to figure it
9 out because in preparation for this hearing I went
10 on my iPhone and went on Google and tried to find
11 charger stations. Seri didn't know what I was
12 talking about and Google didn't have much better
13 results. So I would imagine that even with the
14 advanced technology that we have today on
15 smartphones, how do people find you and when they
16 do find you what type of service do you provide
17 them and do you provide it free of charge or do you
18 charge it for a profit?

19 TOM MOLOUGHNEY: That's a very good
20 question. You couldn't find me because you don't
21 own an electric car. If you owned an electric car
22 you'd be able to find the charging stations because
23 you'd know where to look. You'd know that there is..
24 [interpose]

25

1
2 CHAIRPERSON DILAN: So, so, so it has
3 the technology within the car?

4 TOM MOLOUGHNEY: The, most of the cars
5 themselves built into their navigation systems will
6 show you where there's charging stations. That's
7 number one but number two it, it, you would have,
8 you would know what smartphone applications to
9 download on your phone so that... [interpose]

10 CHAIRPERSON DILAN: Yeah, I bet I would.

11 TOM MOLOUGHNEY: ...so, so, if you had an
12 electric car we were spoke of, I already brought up
13 PlugShare before which is available. That's one of
14 the smartphone applications that you could go to
15 and it shows you where all the charging stations
16 are. You can even through some of the smart phone
17 applications like the ChargePoint application you
18 can reserve a charger. Like you can say well I'm
19 coming to the city like... [crosstalk]

20 CHAIRPERSON DILAN: Like getting a
21 haircut?

22 COLLEEN QUINN: Yeah.

23 TOM MOLOUGHNEY: Exactly. You can make,
24 you can say well I'm going to eat at this
25 restaurant, oh there's a charger right next to it.

1
2 I'm going to reserve that for 6:00 because I'm
3 going to get, get here at 6:00 and I'm going to
4 have, I have 6:30 dinner reservations so if, if you
5 had an electric vehicle you would very easily be
6 able to find where, where, where they are. So a
7 little bit about the installation cost and what I
8 talked a little bit about in my testimony was the
9 fact that the reason why I really support this
10 intro 1176. I support curbside charging. I support
11 all the charging you want to install. But one of
12 the great things about this bill is it's a, it's a
13 very low cost and I know that, I was already asked
14 some questions about what's it going to cost. It's,
15 it's, it's pennies to do this in, in the, in the
16 initial construction phase. We're talking about
17 just increasing the capacity of the electric
18 service and the conduit. This isn't an onerous
19 expense for the people that are building these
20 garages but, but it's, it's, if, if I were to do
21 this when I built my, 'cause I built this property,
22 it's a shopping plaza. If I would have done it when
23 I built the shopping plaza the conduit and the
24 capacity stuff would have cost me maybe a thousand
25 dollars, maybe. It cost me 15,000 dollars later on

1 just, just to, cause I had to trench. I had to put
2 in larger piping. You know all that stuff is very
3 expensive later on and if the people don't do it
4 now these electric cars are coming whether you're
5 ready for them or not. They're going to have a
6 greater expense down the road. It's going to be a
7 greater economic hardship on these properties later
8 on because they're going to have to rip out what
9 they're installing now and put in larger later.
10 It's much, if you're, if you're concerned about
11 making people spend money, you know the economic
12 hardship. You're doing them a favor by passing this
13 and having them get charger ready now because
14 they're going to have to rip it out in five, 10
15 years from now when people go, live in the
16 buildings and say look you know if, for me to
17 continue living here you have to provide a charger.

18
19 CHAIRPERSON DILAN: Well, I, I, I agree
20 that the cars are coming but how fast or how slow
21 they come depends upon the infrastructure.

22 TOM MOLOUGHNEY: Sure.

23 CHAIRPERSON DILAN: And you know catching,
24 capturing cars that are in residential facilities
25 that have garages within their building is just a

1 small part of the New York City motor vehicle market.
2 It's not going to be able to, from an infrastructure
3 standpoint support the amount of cars that I envision
4 on the streets.
5

6 TOM MOLOUGHNEY: Sure.

7 CHAIRPERSON DILAN: So there has to be
8 some sort of other infrastructure impedes that is put
9 in place in the city and throughout the country for
10 that matter to, to allow for this industry to grow.
11 And then you'll see the prices come down.

12 TOM MOLOUGHNEY: I wholeheartedly agree
13 but this is a good start.

14 CHAIRPERSON DILAN: Well yeah.

15 TOM MOLOUGHNEY: It's a very good start.

16 CHAIRPERSON DILAN: Okay and I, and, and I
17 guess, did you do it on a, on a, on a for profit
18 basis, the installation or, or, did you do...

19 [interpose]

20 TOM MOLOUGHNEY: No what I do is as...

21 [interpose]

22 CHAIRPERSON DILAN: ...or you got the
23 incidental... [interpose]

24 TOM MOLOUGHNEY: ...as, as, as a private
25 property owner... [interpose]

2 CHAIRPERSON DILAN: ...business?

3 TOM MOLOUGHNEY: Yeah. I offer free
4 charging while you're at my restaurant. I have a
5 swipe car where if you, if you come into my
6 restaurant, you say I have an electric car I just
7 pulled in. I'll give you the card, you swipe it, it's
8 free. If you're going to swipe your card and leave my
9 property and walk somewhere else then you pay like a
10 dollar 50 an hour. Electricity is very inexpensive.
11 So it only costs me less than a dollar an hour to let
12 somebody charge. So to give them some free energy to
13 get them to come into my business it makes all the
14 sense in the world.

15 CHAIRPERSON DILAN: Well there's also from
16 a governmental perspective revenue implications by
17 putting this in place too quickly. So how receptive
18 was, because I don't see Con Edison here and I don't
19 see Con Edison set up to testify. How receptive was
20 your local energy provider and who were they?

21 TOM MOLOUGHNEY: In New Jersey I deal with
22 public PSENG and also JCPNL. They've both reached out
23 and, and, and had been very helpful and they actually
24 want to know where the electric cars are coming now.
25 They're asking us to fill out surveys or even tell

1
2 your, when you, when you, when you buy an electric
3 car they want you to call them up and say hey look I
4 just moved, I just bought an electric car I live
5 here. Because they want to start gathering the data
6 to know where the cars are going to be clustered,
7 where they might need to increase you know
8 transformers and things like that. I know they're in
9 New Jersey, they've started to become proactive I
10 wish I could testify on behalf of Con Ed. here I, I,
11 but I can't. I, that's... [interpose]

12 CHAIRPERSON DILAN: Well I'm sure they'd,
13 they'd like the business. I mean they're pretty big
14 but they all like the business.

15 TOM MOLOUGHNEY: I don't know why they
16 wouldn't. They're, they're, they're make, selling
17 more product.

18 CHAIRPERSON DILAN: Thank you. I just have
19 one question for Ms., Ms. Quinn. And you talked about
20 what ChargePoint does and how you're like maybe the
21 franchisee or the, the, the, the entity that inches
22 in, issues the franchise to many people who may
23 decide to take this on as a business. You gave us
24 numbers for New York City, how about New York State

1 as a whole. How many locations have you, exists that
2 either you or a competitor may have.
3

4 COLLEEN QUINN: Sure.

5 CHAIRPERSON DILAN: So.

6 COLLEEN QUINN: Well we, first of all it's
7 not really a franchise model in that yeah..
8 [interpose]

9 CHAIRPERSON DILAN: Yeah, I know I just
10 threw it out there like that.

11 COLLEEN QUINN: ...it's, or a, because there
12 are different business models and I think that's one
13 thing that you know the, and, and we've, we're
14 supportive of a competitive market so you know that
15 lot of different business models are out there and
16 trying to survive. Ours is not a subscription model
17 but it's a model where we sell the station and the
18 services I said. And the operator, the business owner
19 decides do I want to charge or not? How much do I
20 want to charge etcetera. And currently in New York we
21 have, New York State we have over 450 charging
22 stations and I will say too that I think one thought
23 kind of picking up on councilwomen's, Brewer's idea
24 of, of getting a pilot program going in New York
25 City. I think number one, it's a, it's a, it is a

1
2 good idea to have complimentary again opportunities
3 for people to charge. The challenge has been as
4 already mentioned in these cities like and we, by the
5 way we do, we have curbside parking that we provide
6 in San Francisco, in the city of San Francisco.

7 Challenge there is the cost. It just costs so much
8 more. The other challenge, but it could be looked at
9 in this pilot is the opportunity for the private
10 businesses to recover their costs. And the other, and
11 again pilots look at things like that. How often will
12 people come. The other I think idea to, to compliment
13 a pilot program is really the need in New York City
14 for a taskforce. For a taskforce comprised of
15 industry, environmental organizations, drivers, auto
16 manufacturers, utilities, to come to some
17 recommendation if you will on the sighting, on
18 education, the need for education on other kinds of
19 information. I'm lucky enough to sit on many of these
20 taskforces. I sit on one for the state of Maryland. I
21 sit on one in the state of Massachusetts. I'm very
22 active even in one in California. These organization,
23 these taskforce because it's the whole, it's an
24 ecosystem to get electric vehicles sighted. The work
25 that the, some of the city policies that Ari's

1 already talked about. That open pricing policy was a
2 huge you know addressing a huge barrier. The fast
3 permitting, another really important barrier that
4 local government has addressed here. These, these
5 building code changes are going to bring cost savings
6 which is also going to propel more EV adoption but I
7 think to really get a holistic view of charging and
8 what where the best locations might be and promote
9 education and information for example for building
10 owners. There's a huge amount of material that's
11 being developed now in a lot of these task forces
12 that ought to be, that ought to given out more
13 effectively. So again I think that it's, it's a
14 distribution model. Charging, EV charging is a
15 distribution model. It's not a gas station park and
16 charge model. People charge where they live, where
17 they work, where they shop, it's a very different
18 model so all of these kinds of ideas and, and, and
19 thoughts probably should be shared collectively and
20 informed, and the council should have the opportunity
21 to have that kind of information to inform you know
22 your approach.
23

24 CHAIRPERSON DILAN: Being unfamiliar with
25 the, the electric car industry until this hearing I

1
2 program or ongoing curbside. And the reason I say
3 that is just as the chairs indicated in New York a
4 lot of people don't live in a building that has
5 parking. Obviously if you're in the suburbs you go to
6 your home and you plug in. And we heard a lot about
7 that in the early days of this discussion because
8 like I said I went to Israel and it was a constant,
9 much more suburban model and then Tel Aviv has gotten
10 involved. But we're in New York City we do not live
11 in the suburbs and so the question would me being in
12 parts of the more suburban aspects of the five
13 boroughs that would be possible. It's something we
14 should have as part of this taskforce. How do you
15 handle it for your own building where you live or for
16 the many people in other parts of the city. They
17 don't live, they do participate in curbside parking
18 and they spend a great deal of time doing that and I
19 think people coming into the city, if they, they may
20 not want to go to a parking garage which can cars,
21 you know cost you hundreds of dollars just to go in
22 it. So how do you envision some kind of curbside, if
23 you think that makes sense model. And then I'm also a
24 pig proponent we're all talking about entrepreneurial
25 spirits you know for people, you know our

1 communities. Somebody mentioned 7/11. Do not mention
 2 7/11 to me. That is like an anathema of New York
 3 City; it's like [gagging noise]. So the question
 4 would be how can you be more entrepreneurial about it
 5 than having a conglomerate like 7/11 be in charge of
 6 all of our charging stations please? So I just, those
 7 are my two questions. Entrepreneurial, how could this
 8 fit into an entrepreneurial model and maybe a
 9 business improvement district model or maybe you know
 10 the taskforce. How could you envision some other
 11 models besides 7/11? And I'm sorry if you have 7/11
 12 at your shopping market. I apologize.

14 [background comments]

15 COLLEEN QUINN: Well I, I think that it's
 16 really... First of all I think that in order to, in
 17 order to facilitate and support the number of
 18 electric vehicles that are coming, coming and
 19 expected to be and frankly going to be in the city
 20 and in the region. We have to think about a model
 21 that does encourage private investment. There is no
 22 way, and I put it in my testimony how much money is
 23 going to be needed if we ever thought about financing
 24 EV infrastructure through the public dollars. It
 25 will, I believe it'll, it will not happen. So you

1
2 have to think about absolutely a way to encourage
3 private investment. I do think also that at the very
4 beginning of a market pilot programs that are cost
5 shared, possibly looking at funding from NYSERDA and,
6 and other kind of public private partnerships to get
7 this going is probably a very good idea. And that
8 would be a way to then you know incent some of the
9 business owners that probably maybe wouldn't have
10 done it if they didn't think about... And then you know
11 again study and look and see what it would cost for
12 them to charge for charging etcetera. So I think the
13 idea of pilots, I think public private partnerships,
14 I think you know stakeholder engagement whether it's
15 the bids, other kinds of public private agencies
16 could be a place where this kind of pilot program
17 could live. So I think there are very good
18 opportunities to do it.

19 COUNCIL MEMBER BREWER: Anybody else want
20 to add anything.

21 TOM MOLOUGHNEY: I, I agree pretty much
22 with everything she said especially along the lines
23 of pilot programs but the long term viability of
24 curbside charging has a lot of challenges. It really
25 does. It costs so much more to install and maintain

2 the curbside charging and electric cars cost so
3 little to refuel that it's very difficult to
4 recapture enough money to pay for the installation,
5 the maintenance ongoing because one of the great
6 things about electric cars it only costs you about
7 three or four dollars to charge to go about 100 miles
8 you know and, and once you start saying well we have
9 to charge 10 or 15 dollars to recoup our costs it, it
10 becomes not viable so that that there's a very very
11 little curbside charging in the United States. Yeah,
12 I mean I don't know what the percentage is but it's
13 probably less than one percent of all the public, of
14 all the chargers that are in the US. San Francisco
15 she mentioned has a few. I don't know of any other
16 city if it... [interpose]

17 COUNCIL MEMBER BREWER: Baltimore and DC
18 are doing it.

19 TOM MOLOUGHNEY: ...but, but not many of
20 them. I think a dozen or so they're going to install
21 which, which is a good start but these are small
22 pilot programs. You, you referenced Israel. All of
23 those chargers were installed by Better Place, a
24 privet company.

25 COUNCIL MEMBER BREWER: We visited them.

2 TOM MOLOUGHNEY: Yeah so and I'm very
3 familiar with the, with the, with well the people
4 that had run the company before it bankrupt. And so
5 you know that, that, you almost can't use that as a,
6 as a, as you know as a comparison. You could use
7 Oslo. They've done it successfully and, and you know
8 I don't know, I, I suppose the majority of those
9 funds was all public funds that, that was put into
10 that. But for the private sector to, to, get involved
11 with, with you know curbside charging per say it's,
12 it's a tough sell. You really have to use the angle
13 that I came at it and I'm an electric vehicle
14 advocate so that's the angle I came at. That well
15 it's going to bring people to my business and that's
16 why I'll, I'll pay for this because they're going to
17 say this business supports electric charging and I
18 want to support them.

19 COUNCIL MEMBER BREWER: Well that's why
20 I'm suggesting places like the business improvement
21 districts right? In other words that would be a
22 grouping and then you would get a ticket so to speak
23 like to go to the restaurant in the neighborhood. And
24 if you didn't you know that kind of public private
25 relationship. Because I don't, it's just such a, we

1 don't have shopping well. I don't know I'm only...

2 [interpose]

3 TOM MOLOUGHNEY: Right.

4 COUNCIL MEMBER BREWER: ...from Manhattan.

5 TOM MOLOUGHNEY: Sure.

6 COUNCIL MEMBER BREWER: We don't have
7 shopping. We don't have places to go shopping. I've
8 never been to a shopping center. I hate to tell you.

9 TOM MOLOUGHNEY: Yeah.

10 COUNCIL MEMBER BREWER: I don't go.

11 TOM MOLOUGHNEY: Right.

12 COUNCIL MEMBER BREWER: So, you know and
13 also rental cars. I mean that's another place that we
14 should be looking for electric because a lot of
15 people in the city rent.

16 CHAIRPERSON VACCA: A car sharing service.

17 COLLEEN QUINN: Another... Yeah I was just
18 going to say.

19 CHAIRPERSON VACCA: Yeah.

20 COUNCIL MEMBER BREWER: Car sharing and
21 rentals yes.

22 COLLEEN QUINN: Car... [interpose]

23 CHAIRPERSON VACCA: They're going to have
24 electric cars.
25

1

COUNCIL MEMBER BREWER: Yeah.

2

3

CHAIRPERSON VACCA: A lot of them are going to be electric.

4

5

COUNCIL MEMBER BREWER: Right.

6

COLLEEN QUINN: Hertz is doing a car sharing. Also BMW has a very exciting car sharer program in San Francisco. Again the challenge there is actually getting the parking places reserved. San Diego has a electric car sharer. Car To Go has a major car sharer opportunity. But they've been able to work with the city and get the designated parking spaces and those are electric so they have curbside there. And they also have them in apartment buildings.

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COUNCIL MEMBER BREWER: Yeah I mean I think we could do that. We have taxi stands. You know there's lots of places that we reserve for certain uses.

17

18

19

20

COLLEEN QUINN: Right.

21

COUNCIL MEMBER BREWER: And if it was done in a, you know people are willing to wait a little while or there are ways of doing it but I think the model is that you have to have some places that you don't have to go to a garage. Garages are excellent

22

23

24

25

1 ideas but they are expensive. So you would, you talk
2 about a dollar 50, you'd be paying you know 40
3 dollars by the time you're done if you're actually
4 going to go into that garage. I mean if it's in your
5 own building that's fine but for the coming and going
6 people. I mean the number one issue in New York is
7 finding a parking space for free. And then people
8 will spend their whole life doing it and they're not
9 going to go into a garage so therefore I think
10 they're not going to be excited about getting an
11 electric car if they are coming in, if they have to
12 pay for that garage also.

14 COLLEEN QUINN: Well, and other cities
15 have you know incented people to bring electric
16 vehicles by providing free parking. London I think
17 started that idea.

18 COUNCIL MEMBER BREWER: If you think
19 that's going to happen here think again. Thank you
20 very much and I appreciate the fact that you're
21 interested in thinking about the curbside and
22 thinking of a way of being innovative and
23 entrepreneurial which is equally important.

24 COLLEEN QUINN: Thank you.

25 CHAIRPERSON VACCA: Okay we thank you.

1
2 COLLEEN QUINN: Thank you.

3 CHAIRPERSON VACCA: I want to mention we
4 were joined by council member Jackson and we were
5 joined by council member Viverito. Our next panel
6 Michael Dabrowski, is Simply Grid Incorporated,
7 Joseph Turquie, Car Charging Group, Eliot Hecht,
8 local three and Humberto Restrepo, Joint Industry
9 Board of the Electrical Industry.

10 [pause]

11 CHAIRPERSON VACCA: Okay who would like,
12 who would like to lead off. I'm sorry. Sir, identify
13 yourself for the record first.

14 MICHAEL DABROWSKI: So my name's Michael
15 Dabrowski. I work for Simply Grid. We're the company
16 behind the food cart pilot that was mentioned
17 earlier. So essentially I think the lot of the
18 problems that were brought up with curbside charging
19 are completely true. So it's more expensive than
20 garage. There's a big problem of actual use. So
21 basically whoever makes the investment and it's
22 nebulous who it's benefitting. So in the sense that
23 perhaps a business investment district could see a
24 payback from that but an individual business may not.
25 But there is, basically what you really have to look

1 at is can we make this viable in a real business,
2 business way and that's what we've done. We've looked
3 at what's the real demand for electricity on the curb
4 and it's out there. It's not electric vehicles per
5 say, not traditional personal electric vehicles but
6 there's actual real demand on the curb for
7 electricity which can be used to jumpstart curbside
8 charging and that's food carts, food trucks, and
9 loading zones. So we've actually, we recently got
10 contacted by the fire department of New York because
11 they have ambulances idling at many locations,
12 curbside locations in the city, and they all need
13 charging as well. Basically they can shut off their
14 engines if they can get a plug in. They have lots of
15 equipment on board to refrigerate medicine etcetera.
16 So essentially the way I see it is that the low
17 hanging fruit isn't, so pilots are nice but if you
18 want to get to scale the low hanging fruit is
19 actually in finding locations on the curb where
20 people already need power. And there is thousands of
21 locations like this where we can privately fund
22 installations and then that can also service electric
23 cars. That makes a lot more sense to us and we see it
24 as a real business. Like we're not, we don't see it
25

2 as something where the city has to put out money to
3 do this. We see it as more if the city can work with
4 us we're, we'd see the opportunity and we'd like to
5 take advantage of it.

6 CHAIRPERSON VACCA: Sir.

7 JOSEPH TURQUIE: Oh my name's Joseph
8 Turquie. I'm with Car Charging Group. I do believe
9 that it is a, it will be a big problem for the city
10 to deploy charging stations on the curb. Car Charging
11 has deployed about 14,000 charging stations in the
12 country. Most of them are in public spaces but to
13 deploy them in the city, there's a lot of issues that
14 come with it on the curbside. I, I would say one of
15 the issues being if somebody's parking at the station
16 how do you get that person to move once their car is
17 fully charged? So that spot could be taken for a day
18 or two easily without it being used again by another
19 person. Maintenance is another issue. Who is going to
20 maintain these charging stations on the street and
21 damage. So even a pilot program you may put 30 in but
22 after six months, a year, how many of these stations
23 are going to be functioning and who's going to be
24 overseeing them? So I do believe dollars wise it's
25 much more credible and more better utilized to deploy

1 stations in garages. That's from my you know
2 experience and I've deployed about 200 charging
3 stations myself.
4

5 CHAIRPERSON VACCA: Thank you. Sir.

6 HUMBERTO RESTREPO: Thank you and good
7 morning chairs James Vacca and Chair Martin Dilan and
8 distinguished committee members. Thank you for the
9 opportunity to testify at this hearing on behalf of
10 the Joint Industry Board of the Electrical Industry.
11 My name is Humberto Restrepo. I am the political
12 affairs liaison for the Joint Industry Board of the
13 Electrical Industry. The Joint Industry Board is a
14 labor management organization founded in 1943. The
15 union pawn is local. Union number three of
16 International Brotherhood of Electrical Workers. The
17 management partners are the New York chapter of the
18 National Electrical Contract Association and the
19 Association of Electrical Contractors Inc. The Joint
20 Industry Board is the at risk administrator for
21 Family of Multi-employee benefit plans serving local
22 union number three and its affiliated contractors in
23 the greater New York City area. Local three has over
24 28,000 members of which 12,000 workers, electricians
25 for over 300 employees. Since its founding in 1943

1 the Joint Industry Board has provided thousands of
2 New York City residents the opportunity to develop
3 the skills needed to become New York state's
4 certified electricians. The Joint Industry Board is
5 pleased to support Intro 1176. We applaud the mayor's
6 continued effort to reduce greenhouse gasses by
7 encouraging more electric vehicles in the city. The,
8 the recommended 20 percent of newly created parking
9 stalls require pre-installed conduit and electrical
10 capacity to add electric vehicle supply equipment
11 will be a small but significant step in setting a new
12 building standard for parking garages and open
13 parking lots. This common sense approach will help
14 promote electric vehicle usage by making electrical
15 vehicle charging station installations more cost
16 effective resulting in more readily available
17 charging stations than are, then are currently in use
18 throughout the city. Thank you very much.

19
20 CHAIRPERSON VACCA: Thank you. Would you
21 like to be next. Okay thank you. Introduce yourself
22 please.

23 CHRISTINE RANGEL: Good morning chair
24 Vacca... [interpose]

2 CHAIRPERSON VACCA: Excuse me if I could
3 just mention we've been joined by council member
4 Ulrich.

5 CHRISTINE RANGEL: ...and good morning chair
6 Dilan and distinguished committee members. My name is
7 Christine Rangel and today I speak on behalf to,
8 behalf of the New York City chapter of the National
9 Electrical Contractors Association. We're the largest
10 chapter of the National Electrical Contractors in the
11 United States. I'm the voice of unionized electrical
12 construction industry in New York City, Westchester,
13 and Fairfield's Connecticut counties. We are
14 comprised of 200 unionized member firms employing
15 over 15,000 men and women contributing to over 20
16 million man hours of work per year. Our association
17 supports Intro 1176, the charger ready bill which
18 would require 20 percent of new off street parking to
19 be built charger ready. We already know the
20 environmental benefits of such measures from reducing
21 carbon dioxide in our atmosphere to reducing the
22 asthma rates of our residents. In a city that's
23 expected to balloon with another one million
24 residents by 2030 proactive environmental initiatives
25 like this one are vital for allowing sustainable

1 population growth while improving the city's air
2 quality. In an article recently in October 6th of
3 this year in the Wall Street Journal it was noted
4 that "...boosting the growth of electric car
5 industries, a major goal of environmentalists and
6 government agencies seeking to reduce pollution but
7 many consumers are wary about buying electric
8 vehicles because of the limited number of charging
9 stations..." and that really says it all. If we are
10 going to drive the EV market or at the very least
11 provide an environment in which it can grow we must
12 provide the necessary infrastructure. From Ford to
13 BMW to Cadillac more electric vehicles are coming to
14 market. We've heard about it today already. According
15 to several major automakers the New York metropolitan
16 area is considered one of the top potential electric
17 vehicle markets. Our cities must develop action plans
18 to ensure these vehicles are a viable solution for
19 citizens. Infrastructure development and permitting
20 solutions are just the beginning. Existing garages
21 have limited electrical capacity. In Manhattan the
22 maximum number of charger ready spots are estimated
23 to be as little as 2,000. That is less than one
24 percent of the borough's total licensed parking
25

1 spots. By adding less than a fraction of a percent to
2 garage's total cost charger readiness is an
3 affordable environmental measure for building owners.
4 Cities such as L.A., Vancouver, and London have all
5 incorporated charger readiness into their building
6 codes putting the necessary infrastructure in place
7 now is more cost effective than doing so in the
8 future and by that point we are simply playing catch
9 up. So we are glad to support Intro 1176 as we know
10 that such a law will increase New York City's ability
11 to cut house green emissions, allow its people to
12 breathe clean air and in keeping with the plaNYC
13 initiative we believe that it will assist in
14 achieving their mission to strengthen our economy,
15 enhance the quality of life for all New Yorkers, and
16 deal with climate change. Thank you.

18 CHAIRPERSON VACCA: Sir.

19 ELLIOT HECHT: Good morning co-chairs
20 Vacca and Dilan and distinguished members of the
21 committee. My name is Eliot Hacked. I'm a business
22 representative of local union number three,
23 International Brotherhood of Electrical Workers.
24 Local three is a 28,000 member local union in our
25 city. I'm here this morning to voice support of Intro

1
2 1176. This legislation is forward thinking and will
3 meet the needs of technology that consumers are eager
4 to see become commonplace. The citizens and elected
5 officials of New York City for some years now have
6 made excellent decisions to help improve the health
7 and quality of life of its residents. New York City
8 is a world class city. Technology like time is
9 constantly moving forward and we cannot allow our
10 great city to fall behind. Electric cars are here and
11 the technology of electric cars continues to improve.
12 Greater availability of electric cars will probably
13 occur sooner than later. The air pollution caused by
14 car, by carbon monoxide emissions from gasoline
15 powered engines is a serious problem contributing to
16 lung disease and other life threatening issues. The
17 sight of idling cars in traffic waiting for lights as
18 pedestrians, bikers, and runners are breathing in
19 these cars' benzene, nitrogen oxide, and other
20 pollutants and not doing anything about it is wrong.
21 Drivers in our city would be much more inclined to
22 drive electric cars because not only are they better
23 for the environment, reducing the city's pollute,
24 reducing the city's production of greenhouse gasses,
25 but also because they are cheaper to run. Providing

2 motorists with more readily available charging
3 stations will eliminate a large obstacle and concern
4 as to their, as to their dependability. Local three
5 IBW is prepared, looking forward to, and we're proud
6 to continue to do what we do best installation of
7 electrical equipment for both existing technologies
8 and emerging technologies all of which would provide
9 convenience, comfort, safety, and quality of life to
10 the businesses and residents of New York City. The
11 availability of these services for electric car
12 drivers will increase the number of electric cars,
13 will aid in mobility, will improve the air quality in
14 our city, and provide employment. Intros 1176
15 recommending 20 percent of the newly created parking
16 stalls to have preinstalled conduit and electrical
17 capacity to add electric vehicle supply equipment is
18 a most cost effective win win for the city and its
19 residents. Thank you for this opportunity for local
20 three to express our support for Intro 1176.

21 CHAIRPERSON VACCA: I thank you and for
22 your support for 1176. I'm just thinking out loud if
23 there's a way to do some kind of pilot program as per
24 council member Brewer's bill and I was thinking of
25 starting off at locations where we have city owned

1 buildings or court houses or municipal buildings or
2 whatever. I, I think, I think I want to have some
3 place where we could do it so I, but I know cost is
4 an issue so all of you are saying. I think the first
5 gentleman, your remarks were basically around cost;
6 the cost of outdoor spaces is more, is prohibitive or
7 very expensive. Can you elaborate.
8

9 MICHAEL DABROWSKI: Yeah, so essentially
10 what I would, what I would say in answer to it, to
11 what you're suggesting, I think the model of let's
12 slap the electric cart charger in front of the city
13 hall or court house is actually, this is what, it's
14 the, probably the easiest route and it's good PR but
15 the reality is that there, so there's already a lot
16 of on street curbside demand for electricity that's
17 not personal electric cars but you can combine the
18 two. So essentially you go to a location where
19 there's an ambulance that stands for 12 hours a day
20 waiting for a call and they use about as much power
21 as a charging electric car. So you put enough
22 infrastructure there to power the ambulance which is
23 going to save a gallon of diesel every hour and it's
24 going to save on the maintenance of its engine and
25 depreciation. That money can be used to pay the

1 company that puts up the charger, Simply Grid for
2 example and then we can also provide a cable for an
3 electric car which could park in the adjacent parking
4 spot. That's how we see it. So basically there are
5 thousands of locations where we can, we can start
6 with a pilot or if there's permitting I mean we would
7 go out, raise you know 20 30 million dollars and do
8 as many of these as we could but basically there's
9 thousands of locations where there's existing demand.
10 So a food, several food carts, each one of them runs
11 a two kilowatt generator. That's gas diesel generator
12 two cycle gasoline engine producing much worse fumes
13 than a regular car. There's no Cadillac converter,
14 nothing. That's shooting right into the air. Have you
15 ever stood in front of a food cart? It's like, it's
16 insanity. So basically what we do, that, that's a
17 real business model. The food cart is spending 6,000
18 dollars a year running that generator. That's you
19 know, that's the numbers from the pilot where we
20 replaced their generator with a plug in. So by
21 combining these two things you take today's demand
22 and you enable people to actually buy electric cars,
23 park next to places where we're powering these other
24 use, these users of, it's mostly, it's diesel, it's

1 all generator so there's, whether it's something
2 running a refrigeration unit in a fresh direct
3 delivery truck which is standing for ten hours you
4 know running a huge diesel refrigeration unit. That
5 should be plugged in and there's an opportunity for
6 electric cars there too. And the environmental
7 benefit is actually much greater because you can you
8 know put out PR about a charger in front of city hall
9 but literally when you shut off a generator or a
10 reefer unit on a refrigerated truck that's a real
11 instant gain. You know the air gets better directly
12 at that moment. So that's, that's really the way we
13 see it. I think the expense is definitely greater on
14 curbside and there's a myriad of issues. I mean there
15 were getting the pilot was very difficult. There was
16 a lot of pieces that we had to put together working
17 with DOT, Con Ed., everybody. But basically it's
18 doable but I think it's much more doable with
19 existing demand. And when you get, when you go after
20 existing demand the results are better because a lot
21 of chargers that get put in with government money
22 later just stand there. I mean nobody's using them
23 because if there's no existing demand you don't
24 really know where it's, let's say in five years there
25

1 will be electric cars but we don't know where they're
2 really going to, we really don't know where they're
3 going to park. So the best thing we can do is go
4 after what's out there and provide opportunities for
5 electric cars and hope for the best. That's I think
6 that's the most sustainable thing to do.

8 CHAIRPERSON VACCA: Any questions from
9 committee members? Council member Dilan?

10 CHAIRPERSON DILAN: I just want to ask the
11 contractors in local three, how, how many jobs do you
12 anticipate will come out of this legislation.

13 ELLIOT HECHT: Well I would say that in,
14 when we look at sustainable energy we have done much
15 work with the photovoltaic and depending upon how
16 fast this goes forward and how it would increase that
17 would all depend upon how much work is available. You
18 know and how much work we got.

19 CHAIRPERSON DILAN: So you, you, in other
20 words you don't have a clear estimate as to how much
21 work will come out of it? Is... [interpose]

22 HUMBERTO RESTREPO: No.

23 ELLIOT HECHT: No, I don't. No.

24 HUMBERTO RESTREPO: We don't, you know, we
25 don't think initially when they're doing the

1
2 infrastructure as was noted earlier you know the
3 increase in conduit size. It's not really going to
4 add more instillation tours. It's just going to be a
5 bigger sized conduit to accommodate future demand. I
6 think our, our potential work opportunity will, will
7 be at some future date when you actually require that
8 this electric charging stations be installed. But
9 during the, the construction phase under 1176 I don't
10 see there's going to create that much more work.

11 CHAIRPERSON DILAN: Well, if, if this
12 turns out to be a success and I know this only
13 applies to new garages but if this turns out to be a
14 success you would imagine that the existing garages
15 would have to keep up with the competition and
16 install their own garages so maybe that's a further
17 benefit for you down the road.

18 ELLIOT HECHT: If I, if I might add as
19 Humberto said it's the secondary part. These garages
20 probably would most likely not be required to do
21 anything. They would be wanting to do what they have
22 to do to meet the demand of charging the cars that we
23 know are going to come, they're already here. It's
24 just, when you, as you all know when you start with
25 technology it just snowballs, it flies.

2 CHAIRPERSON DILAN: Okay, thank you very
3 much.

4 CHAIRPERSON VACCA: There be no further
5 questions. Oh, oh council member Brewer I'm sorry.

6 COUNCIL MEMBER BREWER: I want to thank
7 Mr. Dabrowski for suggesting that what I would say
8 leering idea, well your leering one on top of the
9 other. And to be honest I don't, I'm not picking on
10 you but I am picking on DOT 'cause I have fresh
11 direct. I have carts. I have constituents. Literally
12 as I said earlier half of our staff timed is dealing
13 with carts, noise, generators, and refrigeration. And
14 so we spend, we move the trucks around. We move the
15 ambulance around. The only thing that saved the
16 ambulance from not being in front of my district
17 office with people upstairs complaining was the bike
18 lane Mr. Chair just so you know. Once the bike lane
19 came in then the ambulance couldn't fit and had to go
20 across the street. Yay. So the noise factor is huge
21 for particularly you know where there's a lot of
22 pedestrian market share etcetera for all of these
23 entrepreneurial enterprises. So to cut the noise
24 would be a phenomenal difference in terms of quality
25 of life and believe me 311 calls, number one, noise,

1
2 number one in the whole city. So it would make, it
3 would just make, I haven't suggesting what I call
4 plug into the street lamp which I know is not
5 correct. In the 1980s when we, we used to do that
6 with our TVs. We used to plug them in and they worked
7 fine and everybody on the street did that. Now we
8 can't do that anymore. So I guess what I want to
9 understand is a little bit more what you are
10 envisioning. So if you have a, a piece of furniture
11 which is a bollard as I understand it. I'm going to
12 go to union square to see that. And then what else do
13 you envision there that would complement what you're
14 talking about; it's not, it's ambulances, it's the
15 Fresh Direct, it's the BLT truck, it's the food cart,
16 and I'm sure there's other people probably as in
17 addition to electric vehicle who could take advantage
18 of this. How, how do you see the visual and what
19 would be involved in terms of installation.

20 MICHAEL DABROWSKI: So I, it's similar to
21 what would happen for electric vehicle chargers.
22 We're looking at, so I think it's scale. It's the
23 best thing you can do is have the smallest possible
24 form factor, the least impact on space. Where we're
25 looking at now is possibly, we're, a few different

1 options but either wireless charging or possibly
2 rising bollards so like the short security bollards
3 that... DC has a lot of them. They come out of the
4 ground so essentially the way our system... [interpose]

5
6 COUNCIL MEMBER BREWER: We have them here
7 too.

8 MICHAEL DABROWSKI: ...works, essentially
9 the way, I, I haven't seen them in New York but sure.
10 Essentially the system, the way the system works
11 currently is a text message is sent and then the
12 outlet is activated. We collect all the telemetrics
13 so meter data, any kind of malfunctions or anything
14 like that and that comes back to the central
15 management system so we would connect that to the
16 function of, you know the rising bollard. So
17 essentially an ambulance would pull up, something,
18 they would send in a message, the bollard would come
19 out of the ground and they'd be able to use the
20 retractable cord. That's what we're working on for
21 the, for the ambulance guys now and probably
22 something similar for, for food carts and trucks. And
23 really I think, the, the big issue is installation so
24 the final piece of hardware is usually no the large
25 part of the cost. And possibly one way, so one way to

1 decrease installation is basically to work with Con
2 Edison and figure out where the power is coming from.
3 We've actually also talked to DOT where they have a
4 lot of extra room in the conduit that leads to the
5 lamp post. So basically power can be run through the
6 existing lamppost conduit and then from the lamp post
7 to the actual pedestal which is a shorter distance
8 than from the pedestal to the, to the Con Ed., the
9 Con Ed. manhole. And that's basically what happened
10 for this current pilot. This current pilot actually
11 pulls power from the existing wiring in the lamppost
12 but it could just as easily have pulled power from
13 new wiring that went through the same conduit. The
14 real, it's similar to the parking garage legislation
15 which is if you already have conduit it's a lot
16 cheaper to do it. So utilizing the existing conduit
17 that leads to the lamppost is a big deal.

19 COUNCIL MEMBER BREWER: I'm glad I was on
20 target with my lamppost. Ten years ago I've been
21 talking about this. And also there's a franchise you
22 may not be aware being discussed for all of the
23 payphones in the city of New York because you know
24 Verizon it doesn't want payphones anymore so they
25 have sold them to different companies. So are you

1
2 aware? Would that be something also to look at. Again
3 trying to minimize what I call street furniture but
4 also utilize the vast opportunities. Is that
5 something that you've looked at the payphone
6 franchise?

7 MICHAEL DABROWSKI: We've looked at it
8 briefly. The issues, payphones do have some power
9 leading to them. It might be enough for a small food
10 cart, possibly overnight charging for an electric
11 car, slow charging, like in residential neighborhoods
12 but the problem with payphones is that they're, I
13 mean they're static so you, you're stuck with the
14 location where they are. So some percentage of the
15 payphones may be useful for this but I think if you
16 want to go citywide basically... It's, it's not cost
17 prohibitive to do this. It's just a matter of going
18 after the existing demand. It's cost prohibitive to
19 go after electric cars that you know are, don't quite
20 exist yet. But it's not cost prohibitive to go after
21 you know ambulances, Fresh Direct trucks, food carts.
22 That's, some locations will be cost prohibitive but
23 certainly not the ones that are the worst where
24 there's multiple polluters. So six food carts you can
25

1 set that up into you know two electric car parking
2 spaces. The food... [interpose]

3
4 COUNCIL MEMBER BREWER: You're not going
5 to put six food carts in one location. You'll have a,
6 you'll have people murdering... [interpose]

7 MICHAEL DABROWSKI: Look at Columbus
8 Circle. There's, there's locations like that...
9 [interpose]

10 COUNCIL MEMBER BREWER: Yeah, yeah.

11 MICHAEL DABROWSKI: Where there is...
12 [interpose]

13 COUNCIL MEMBER BREWER: I know but...

14 [interpose]

15 MICHAEL DABROWSKI: ...you know just a...

16 COUNCIL MEMBER BREWER: They're getting
17 moved soon. I hate to tell you.

18 MICHAEL DABROWSKI: Well... [interpose]

19 COUNCIL MEMBER BREWER: It's my district.
20 Yeah I got some inside information.

21 MICHAEL DABROWSKI: The point being that
22 when there, especially when there is multiple users
23 which probably to, you know, we can find places where
24 there's two food carts for example which are, which
25 are common. But even, even just blocks that have
multiple users because when you're doing installation

1
2 you're tearing up the sidewalk. It's, you can get
3 cost savings that way, are great for us. Another
4 thing that hasn't been fully discussed but basically
5 when the city's already doing maintenance on road
6 there might be an opportunity to put in conduit the
7 same way that they're looking at the parking garages
8 when the roads are being torn up for a different
9 reason. There might be opportunity to put in conduit
10 leading to strategic spaces on the, on the sidewalk.
11 And again there's ways to set it up that it's not as
12 intrusive as the current form factor that a lot of
13 the charging stations take like whether you take
14 ChargePoint, blank, what we up. Pretty much all of
15 them are you know a pedestal... [interpose]

16 COUNCIL MEMBER BREWER: Static. Yeah.

17 MICHAEL DABROWSKI: Yeah it's a pedestal
18 like a parking meter but there's ways to avoid that
19 whether you're wireless charging isn't quite there
20 yet but even just rising bollards are, make a lot of
21 sense to us and we're working on that right now. So I
22 think it's, a scale would be for the business it's
23 better because no vandalism, less liability,
24 etcetera. But it's also better for the city because
25 it, it decreases... [interpose]

2 COUNCIL MEMBER BREWER: And who in, in
3 your vision, who would maintain these? Would that be
4 one company? Would it be more entrepreneurial I
5 suggested, etcetera?

6 MICHAEL DABROWSKI: I, in terms of the
7 process for getting, getting on to the... [interpose]

8 COUNCIL MEMBER BREWER: The food carts and
9 the Fresh Direct... [interpose]

10 MICHAEL DABROWSKI: Yeah getting onto the
11 sidewalk. The best thing for us would be if there was
12 just a straight forward permitting structure where
13 anybody could apply to put something out on the
14 street that would sell power to eligible, eligible
15 customers and essentially... I mean we could go through
16 an RFP but that's in terms of what would get us there
17 fastest and easiest would be just a competitive
18 permitting structure so anyone can apply and if they
19 meet the criteria you can apply for you know a
20 hundred locations or a thousand and get approved and
21 then put them up piecemeal. That's actually, San
22 Francisco has a similar legislative model where they
23 have a permitting process like that for on street
24 charging.

2 COUNCIL MEMBER BREWER: Thank you very
3 much.

4 CHAIRPERSON VACCA: Thank you. Thank you
5 all. And I do not know if I mentioned but we were
6 joined before by council member Comrie. I'd like to
7 thank you all for coming and for your testimonies.
8 It's been a very enlightening hearing and without
9 further questions this hearing of the Housing and
10 Buildings Committee and the Transportation Committee
11 is hereby adjourned. It is 12, noon.

12 [gavel]

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