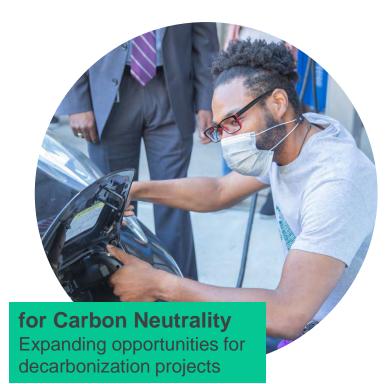
city of **yes** 

city of solar city of health city of energy city of carbon neutrality city of resilience





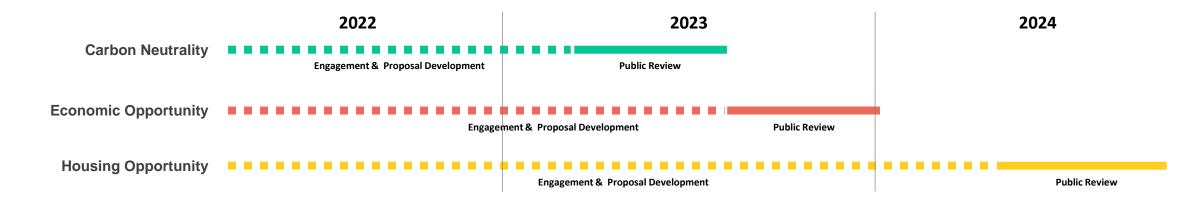




for Economic Opportunity Growing jobs and small businesses with more flexible zoning



**for Housing Opportunity** Ensuring all neighborhoods are meeting the need for housing opportunities









## Why carbon?

- We are in a **climate emergency**, caused by greenhouse gas emissions.
- Carbon dioxide (CO<sub>2</sub>) is the primary greenhouse gas (GHG) emitted through human activities -80% of US GHG emissions in 2019.
- CO<sub>2</sub> is largely produced through the **burning of fossil fuels**
- Paris Agreement aims to limit global warming to 2°C and avoid greater climate damage by curbing GHG

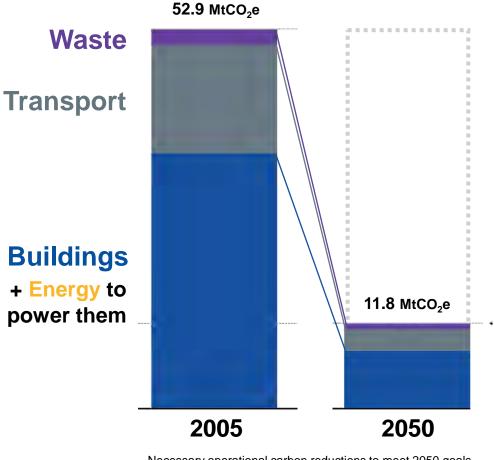




## What do we mean by a "carbon-neutral city"?

It's a city where we've...

- 1. Reduced our energy needs (retrofit buildings to be efficient)
- 2. Cleaned the grid (decarbonize the source of electricity)
- **3. Electrified buildings + vehicles** (all remaining energy needs are powered by the clean electric grid)



Necessary operational carbon reductions to meet 2050 goals, in millions of metric tons of carbon dioxide equivalent. *Source: NYC's Roadmap to 80x50* 

## What has New York City already done?



**2012:** Designed to support elective, progressive experiments with "green building features"

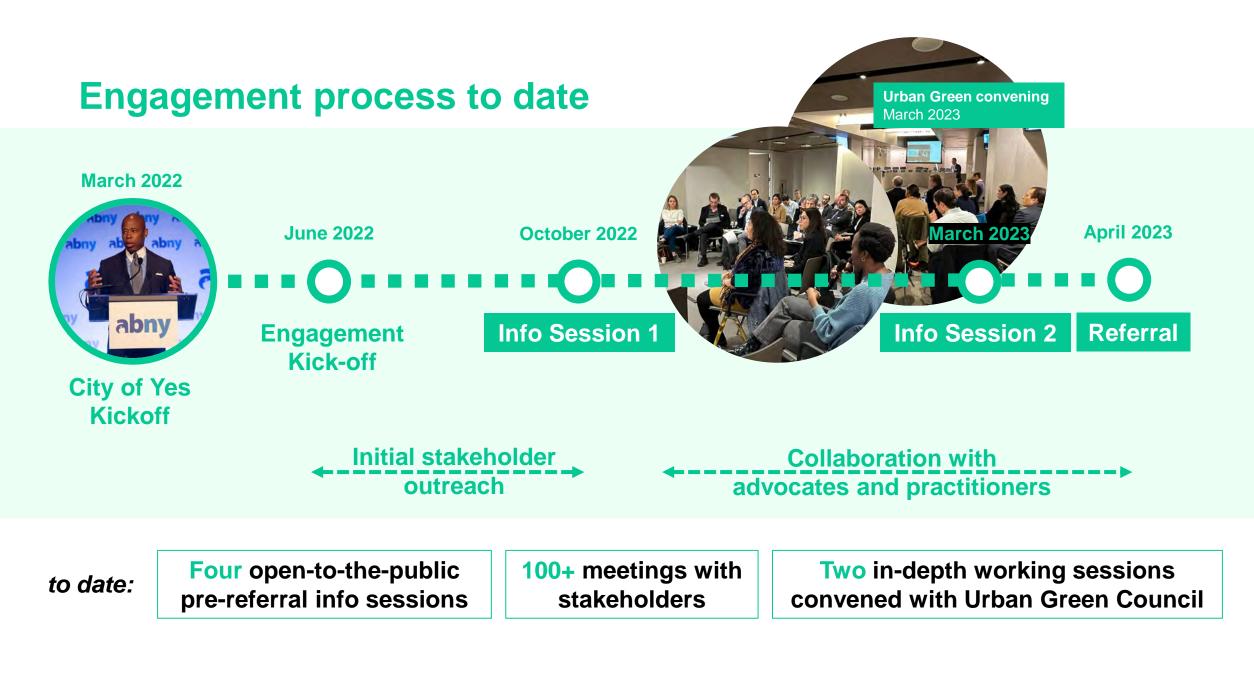
city of solar city of health city of energy city of carbon neutrality city of resilience

PLANNING

**2023:** Respond to the climate crisis by removing zoning impediments to urgent retrofitting work, solar, energy storage, and EVs







### city of **yes**



## Where do we need to go? How can zoning help?

Meeting the challenge of our climate crisis is a massive undertaking.

We've worked with our partner agencies, as well as dozens of non-profit and private-sector groups, to understand what they're working on – and how zoning can help support their efforts.



Inclusion here does not necessarily indicate endorsement.



## What we've learned: how zoning can support these efforts





### Goal 1: Decarbonize our energy grid

by broadly allowing for distributed generation (wind + solar) as well as critically needed energy storage.

### Goal 2: Decarbonize our building stock

by supporting the retrofitting of NYC's million-plus buildings to become energyefficient and electrified. TRANSPORTATION

### Goal 3: Decarbonize our vehicles

by supporting the growth of EV adoption, biking, and e-mobility, by removing limits on where infrastructure can be placed.



Goal 4: Decarbonize our waste streams

by supporting other City efforts to grow composting and rainwater collection





## **Summary of proposal**



- 1. Rooftop solar: removing zoning impediments.
- 2. Solar parking canopies: remove zoning impediments to allow.
- 3. Solar: ensure standalone generation is allowed
- 4. On-shore wind: add a new tool for the CPC to consider future applications
- 5. Energy storage (ESS): add new rules to allow gridsupporting ESS in a wide range of zoning districts



- 6. Electrification retrofits: expand rooftop and yard allowances to accommodate increased need for outdoor electrified equipment like heat pumps
- 7. Building exterior retrofits: fix rules to ensure that the widest range of exterior retrofits are allowed.
- 8. Fix Zone Green: update and improve this floor area exemption to ensure it continues to promote betterthan-code performance.



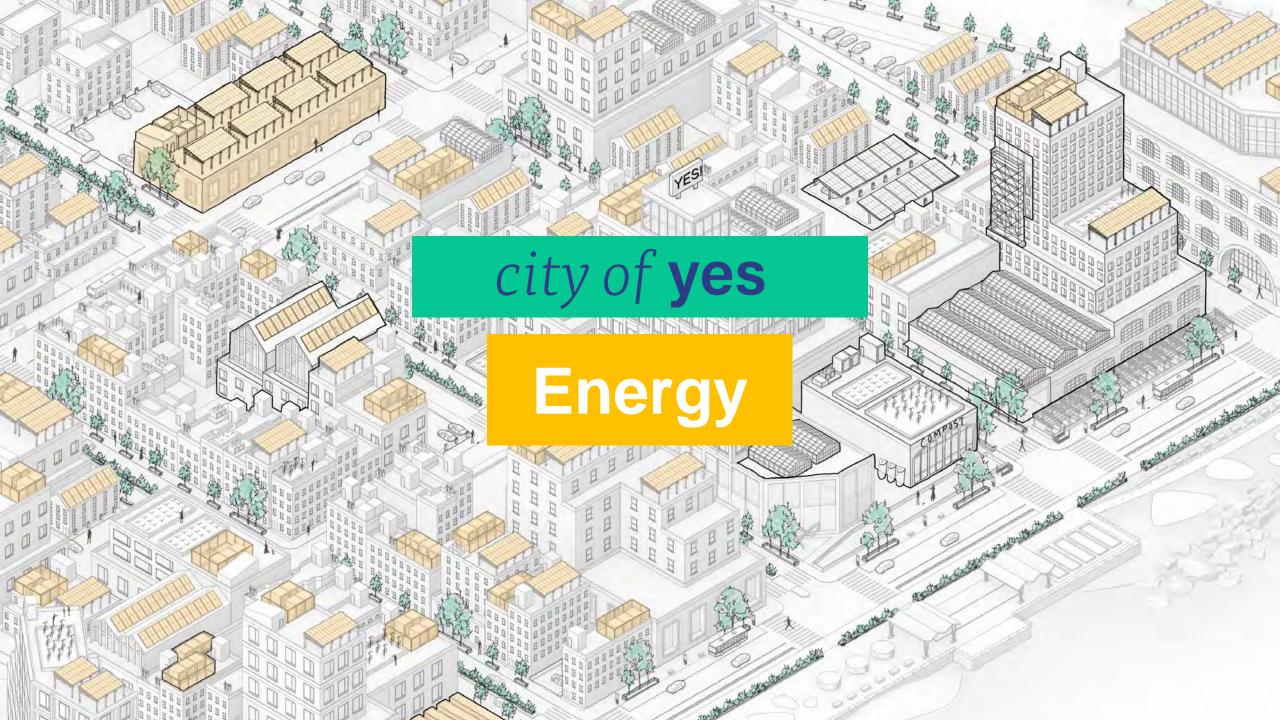
- 9. Vehicle charging: expand allowance to all Commercial Districts
- 10. Charge-sharing: allow a % of residential spaces to be shared w/ the public
- **11. Parking flex:** streamline car-sharing, car rental, and commercial parking rules
- 12. Automated parking: expand rules to encourage more automated facilities
- **13. Bike parking:** add rules for storage and charging



- 14. Porous paving: clarify language to ensure permeable paving is allowed.
- **15. Street Trees:** update rules to accommodate new raingarden prototypes
- **16. Organics:** add new use regulations clarifying when composting and recycling are allowed.
- **17. Rooftop greenhouses:** simplify the process to allow them as-of-right

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Goal 1

### Decarbonize our energy grid

By 2040, the New York energy grid must be 100% renewably-based

see: 2019 NYS CLCPA

The grid of the future will be less centralized with 'distributed resources' spread across the city

see: 2015 NYS Reforming the Energy Vision

To meet demand, we need to generate energy everywhere; we've set a goal of 1000 MW of rooftop solar by 2030.

see: 2016 Climate Week NYC

To store clean energy, and respond to demand, gigawatts of local energy storage will be crucial.

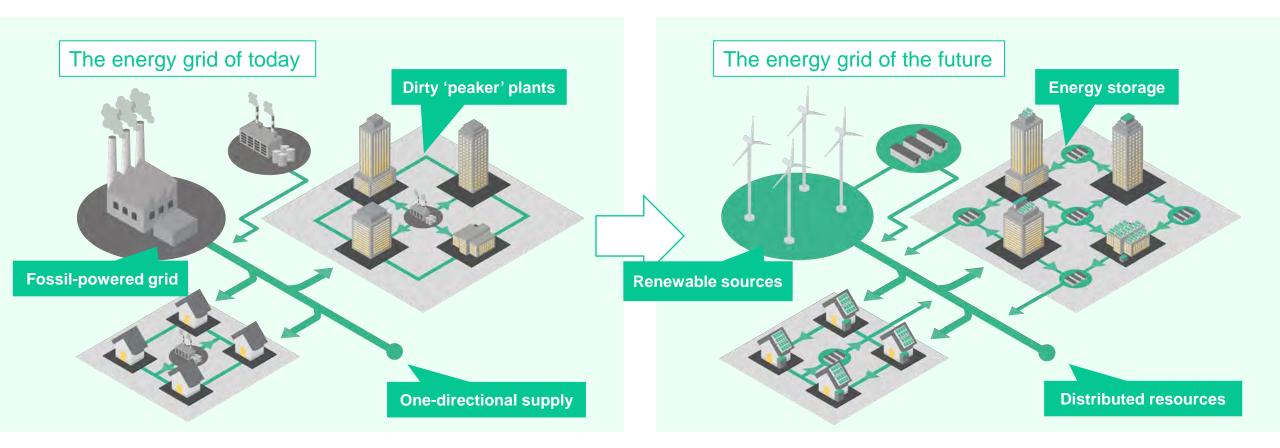
see: 2022 State of the State





Goal 1

## **Decarbonize our energy grid**





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## Solar on building rooftops (flat)

- Currently: Zoning allows solar panels to be added to flat roofs, above the height limit, up to 6' (R1-R5) or 15' (R6+, C, M). When elevated to these heights, a 25% maximum coverage, and 6' setback from the façade, also apply.
- Issue: These zoning rules curtail how much solar a home/building owner realistically can install, artificially limiting solar potential and making installations infeasible. (The 6' height in certain districts also conflicts with FDNY need for 9' of clear headroom.)
- **Proposal:** Remove coverage and setback requirements for rooftop solar, and apply a 15' maximum height limit to all flat-roof solar installations, regardless of district.

Currently Rooftop solar canopies are prohibited within 6' of the street wall, and cannot cover more than 25% of the roof





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- Issue: These zoning rules curtail how much solar a home/building owner realistically can install, artificially limiting solar potential and making installations infeasible. (The 6' height in certain districts also conflicts with FDNY need for 9' of clear headroom.)
- **Proposal:** Remove coverage and setback requirements for rooftop solar, and apply a 15' maximum height limit to all flat-roof solar installations, regardless of district.

Eliminating the setback on the upper roof allows the load of the canopy to sit directly on load-bearing walls, increasing cost effectiveness

> The proposal would not permit canopies on the setbacks.



**Proposal** 



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15



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- Proposal: Remove coverage and setback requirements for rooftop solar, and apply a 15' maximum height limit to all flat-roof solar installations, regardless of district.

LPC review would still be required in historic districts and for landmarked buildings.





## Solar on building rooftops (flat)

<b>Currently</b> for solar energy systems >4' in height, where above the zoning height limit:		<b>Proposal</b> for solar energy systems, where above the zoning height limit:	
Height limit	6' (R1-R5) 15' (R6+, C, M)	Height limit	15' (all districts)
Coverage cap	25%	Coverage cap	100%
Rooftop setback	6' from street wall	Rooftop setback	O' from street wall
Contextual setback	Not allowed	Contextual setback	Not allowed
		New BSA special permit to increase height	

city of **yes** 

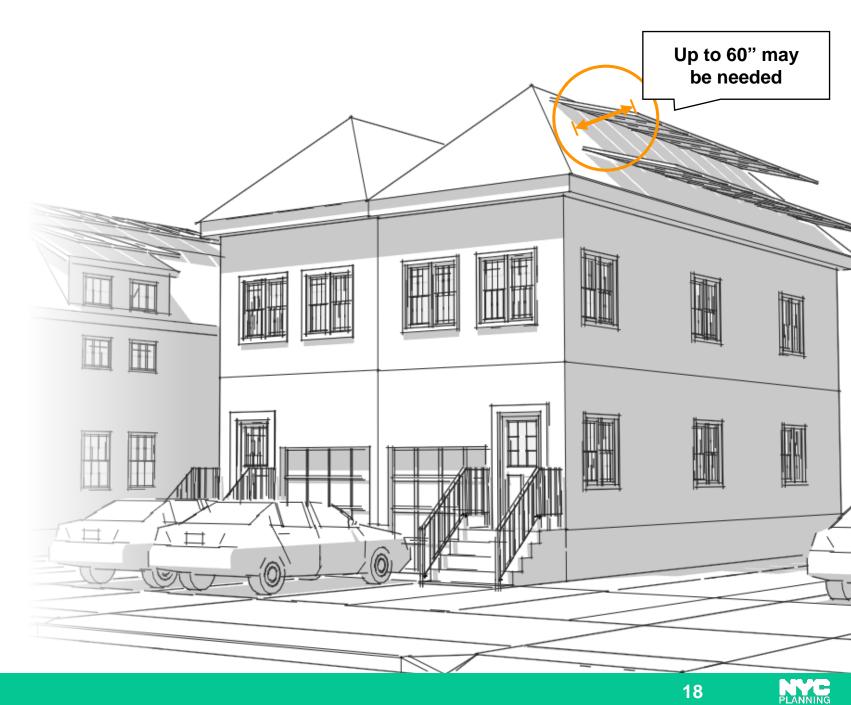
allowances if needed



in detail

## Solar on building rooftops (sloped)

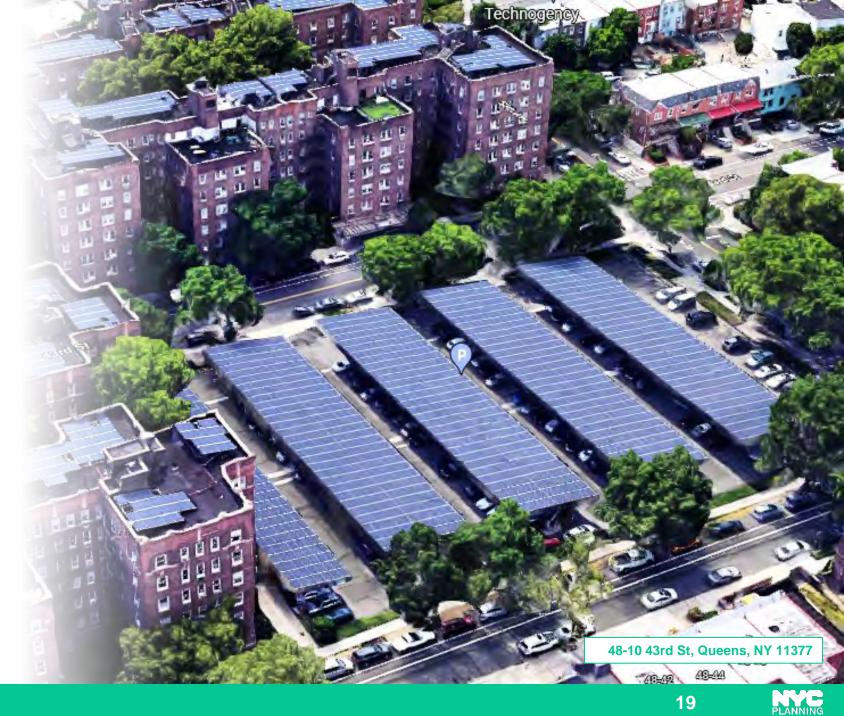
- Currently: Zoning allows solar panels to be added to sloped roofs, above the height limit, up to a maximum of 18 inches.
- Issue: This requires panels to hug the roof, even on roofs with poor solar orientations. Without the ability to "tilt" the installation to catch more sun, the installation is infeasible.
- Proposal: Provide greater flexibility for rooftop solar on pitched roofs, by expanding the 18" allowance to 60".





## Solar canopies over parking areas

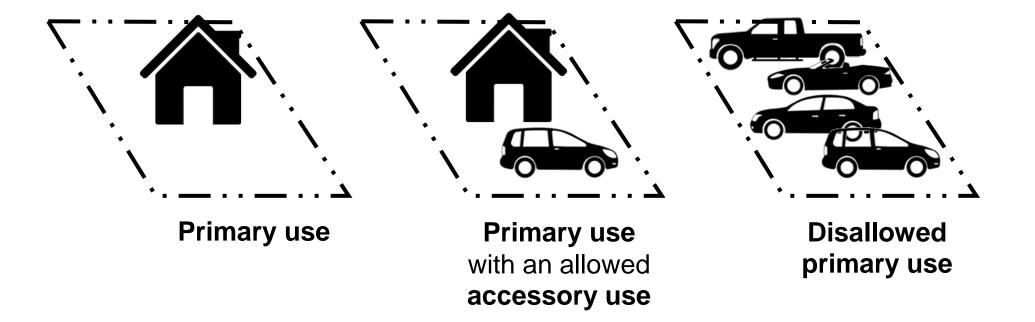
- Currently: Zoning allows "accessory off-street parking spaces, open or enclosed" to obstruct a number of required open spaces, required front yards, required rear yards, etc.
- Issue: "Solar awnings/canopies" are not always permitted in the same areas as parking, preventing their installation.
- Proposal: Allow solar awnings / canopies (pictured at right) to cover parking areas by adding them as 'permitted obstructions'





## Community solar + other renewable energy: Primary uses vs. accessory uses

Example: vehicle parking in a Residence District







## Community solar + other renewable energy

- **Currently:** The Zoning Resolution (ZR) currently classifies "non-accessory" solar generation as a commercial use.
- Issue: Large parts of the city are offlimits to crucially-needed, gridsupporting solar arrays. To locate here, solar and storage systems need to be kept small so that they can be considered "accessory" – precluding grid-supporting installations.
- Proposal: Reclassify this use as "energy infrastructure equipment (EIE)" and permit installations of <10,000 ft<sup>2</sup> in Residence Districts as-of-right.





## Community solar + other renewable energy

- **Currently:** The Zoning Resolution (ZR) currently classifies "non-accessory" solar generation as a commercial use.
- Issue: Large parts of the city are offlimits to crucially-needed, gridsupporting solar arrays. To locate here, solar and storage systems need to be kept small so that they can be considered "accessory" – precluding grid-supporting installations.
- Proposal: Reclassify this use as "energy infrastructure equipment (EIE)" and permit installations of <10,000 ft<sup>2</sup> in Residence Districts as-of-right.

**C / M Districts** Standalone solar permitted

**R Districts** Standalone solar not *currently* permitted







in detail

## **Energy storage systems (ESS)**

#### What is energy storage?

- Battery-based ESS are available with many different chemistries (e.g., Lead, LCO, LiFePO4)
- Battery-based systems are thoroughly reviewed, extremely safe, and are completely different from the systems found in common e-bike batteries.
- Each facility is essentially customdesigned and installed by specially-trained engineers and electricians.
- All installations must use UL-certified technologies pre-approved by FDNY
- All installations must be reviewed on a sitespecific basis by DOB
- All installations >250 kW are classified as "large" systems and also all must be reviewed in parallel by DOB and FDNY



PLANNING

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## **Energy storage systems (ESS)**

- Issue: The ZR currently does not have clear regulations governing energy storage. By interpretation, such uses can qualify as "electric utility substations" and thus must obtain a BSA special permit to locate in Residence Districts.
- Proposal: Create new uses within the ZR's Use Group 4 and Use Group 6 to accommodate grid-supporting "energy infrastructure equipment" (EIE):
- **Smaller installations**, with footprints smaller than 10,000 ft<sup>2</sup>, would be permitted as-of-right in Residence Districts.
- Larger installations, with footprints larger than 10,000 ft<sup>2</sup>, would still require BSA review before locating in Residence Districts. They would be allowed as-of-right in Commercial + Manufacturing Districts.

**C / M Districts** Standalone ESS currently permitted

**R Districts** ESS currently must be "accessory"





## **Energy storage systems (ESS)**

	R	C	M
	Districts	Districts	Districts
Accessory solar / wind	Permitted	Permitted	Permitted
Accessory ESS	AOR	AOR	AOR
Electric utility substation <10k sf	BSA permit	Permitted	Permitted
	needed	AOR	AOR
Electric utility substation 10k-40k sf	BSA permit	BSA permit	Permitted
	needed	needed	AOR
Electric utility substation >40k sf	<u>CPC</u> permit	<u>CPC</u> permit	Permitted
	needed	needed	AOR

	R	C	M
	Districts	Districts	Districts
Accessory solar / wind	Permitted	Permitted	Permitted
Accessory ESS	AOR	AOR	AOR
Energy infrastructure	<u>Permitted</u>	Permitted	Permitted
equipment <u>&lt;</u> 10k sf	<u>AOR</u>	AOR	AOR
Energy infrastructure	<u>BSA</u> permit	Permitted	Permitted
equipment >10k sf	needed	AOR	AOR
Electric utility substation regs will remain for actual substations	<u>n/a</u>	<u>n/a</u>	<u>n/a</u>

+ Clarifications that accessory energy storage + electrical equipment is included in "mechanical" floor area exemption

+ Clarifications allowing within rooftop mech. obstructions

\* ESS Installations will always require safety review by DOB, and for systems >250kW, FDNY as well.

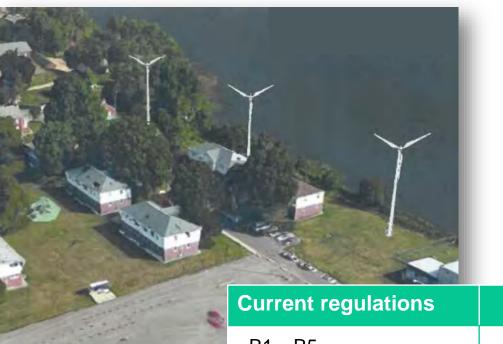




in detail

## New authorization for on-shore wind

- **Currently:** Along the waterfront, onshore wind turbines must comply with strict height limits (see table at right).
- Issue: Some installations may need greater height flexibility. However, there is no tool to allow the CPC to consider such applications.
- Proposal: Create a new authorization that will allow the CPC to consider future applications for height & setback relief to facilitate onshore wind. (This proposal itself will not change the height limits for onshore wind.)



Current regulations	on roof	on ground
R1 – R5 + C Overlays	n/a	35'
R6 – R10 + C Overlays + Most C Equivalents M Districts (excl. M1-1)	50% of bldg. height or <b>55'</b> whichever is less	35'
C4-1, C7, C8, M1-1	55'	85'

Not allowed in, or within 10' of, waterfront yards and/or WPAAs





# city of **yes**

YES!

4-04-4

# Buildings



### **Decarbonize our building stock**

Our buildings are NYC's biggest source of CO<sub>2</sub> emissions

see: 2019 NYS CLCPA

To decarbonize our building stock, virtually every one of our city's 1,000,000+ buildings will need to be retrofit.

2015 Roadmap to 80x50

Boilers and furnaces will need to be replaced with allelectric heat pumps

see: NYC 80x50

Windows and walls will need to be improved or replaced with new efficient ones.

see: NYC 80x50 🖌

Large buildings (> 25,000 sf) that fail to cut their  $CO_2$ emissions will face steep fines

2019 NYC Climate Mobilization Act (Local Law 97)

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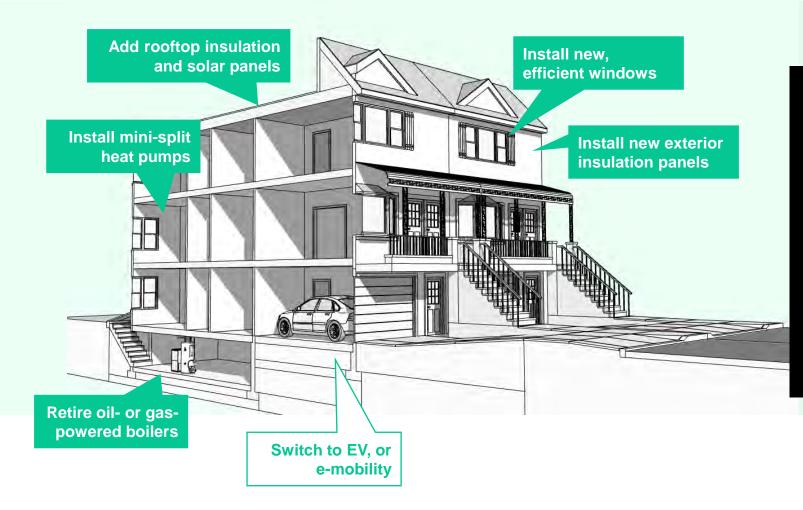
PLANNING

New buildings will be prohibited from installing fossil-fuel equipment Local Law 154

city of **yes** 

Goal 2

## **Decarbonize our building stock**





- A program of the MOCEJ (Mayor's Office of Climate and Environmental Justice)
- NYC Accelerator provides free expert guidance and trainings
- It also connects home- and buildingowners to service providers and financing opportunities
- accelerator.nyc

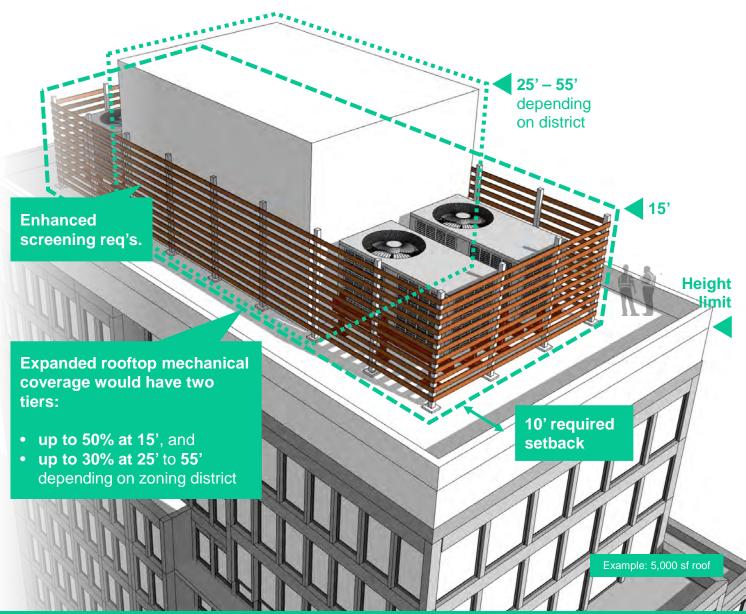




### Topic 6

## **Retrofitting mechanical** equipment for electrification

- Currently: Zoning regulates how much rooftop mechanical equipment is permitted above the zoning height limit. This takes the form of a coverage cap, and separate height limit, on the rooftop mechanical equipment.
- Issue: Buildings which are retrofitting to all-electric systems often need to replace boilers in their basement with heat pumps that are outdoors, typically on their roof – sometimes running into zoning limitations.
- Proposal: To provide greater flexibility for electric equipment like heat pumps, zoning allowances that currently apply only within the floodplain would be rolled out citywide.







### **Retrofitting mechanical equipment for electrification**

Height & setback	coverage	height	
R3-2, R4, R5	20%* (varies based on use and district)	+25' * (varies based on use and district)	
R6 – R10, C, M where permitted height < 120'	20%	+25'	I
R6 – R10, C, M where permitted height > 120'	20%	+40'	

#### Yards, Courts & Open Space

All accessory power systems are permitted obstructions up to 25% of area, up to 10'/15' high

Height & setback	coverage	height
R3-2, R4, R5	50%	at <b>+15</b> '
residential	up to 30%	at <b>+25</b> '
R3-2, R4, R5 community facilities	50%	at <b>+15'</b>
R6 – R10, C, M where permitted height < 120'	up to <b>30%</b>	at <b>+35'</b>
R6 – R10, C, M where permitted height > 120'	50%	at <b>+15'</b>
	up to <b>30%</b>	at <b>+55'</b>

#### Yards, Courts & Open Space

All <u>accessory mechanical equipment</u> (incl. power sys.) are permitted obstructions up to 25% of area, up to 10'/15' high



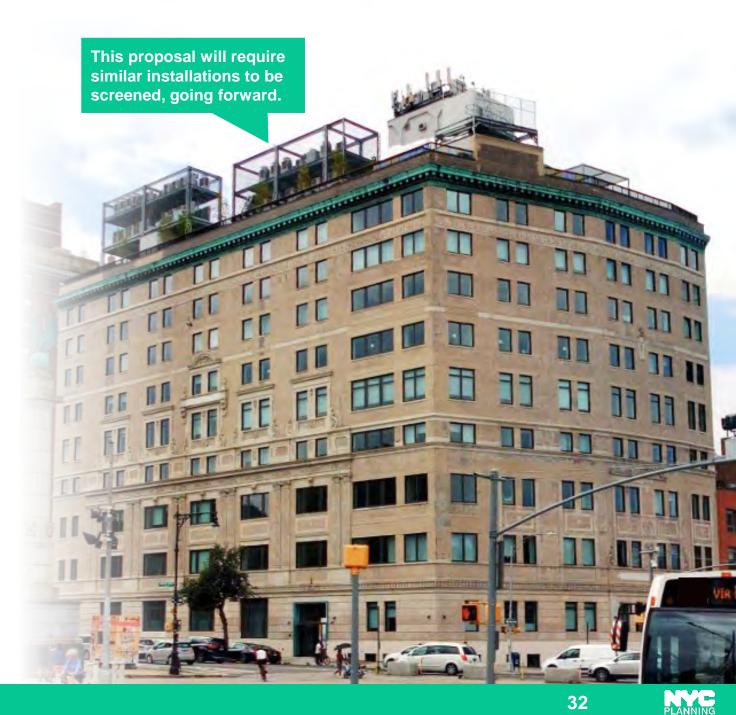


in detail

### Topic 6

# Retrofitting mechanical equipment: screening

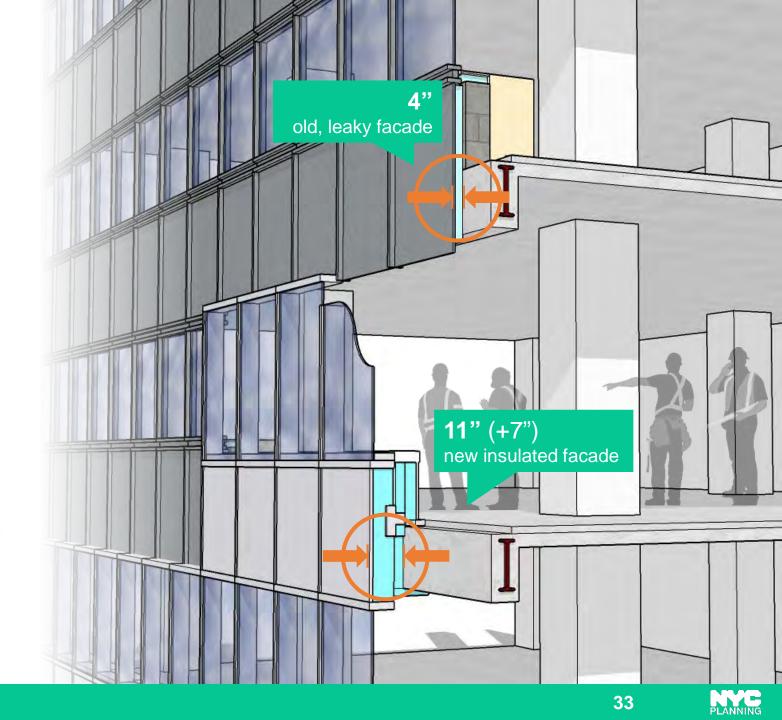
- Currently: Zoning currently requires accessory mechanical equipment that is a "permitted obstruction" above zoning height and setback requirements to be screened.
- Issue: Rooftop mechanical equipment that is not a "permitted obstruction" because it is below the zoning height limit has no applicable requirement.
- Proposal: We will be expanding our screening requirements to ensure better screening of permitted obstructions, as well as, for the first time ever, require other rooftop mechanical equipment which is not a permitted obstruction to be screened as well.





## Allowing envelope retrofits to meet code

- Currently: Zoning considers wall thickness as "floor area" – this counts against your FAR, or the amount you are allowed to build.
- Issue: When trying to completely replace a thin (4") façade with a thicker (11") façade, those additional 7" count as new floor area – and are not allowed to be added. This makes this façade replacement project impossible.
- **Proposal:** To ensure that a recladding is allowed, create a new allowance for additional wall thickness, provided the new wall complies with the latest thermal barrier requirements in the NYC Energy Code.



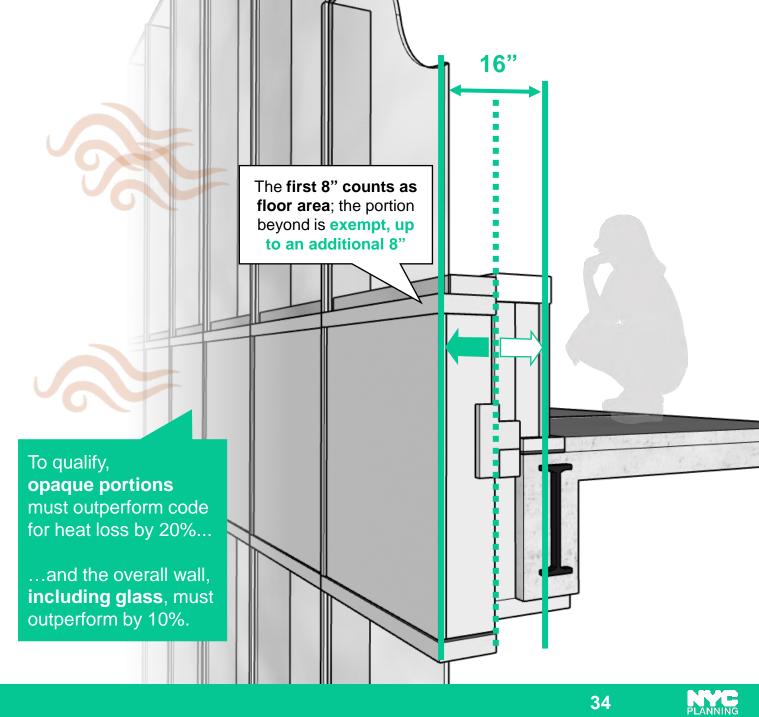


# Promoting envelopes that perform <u>better-than-code</u>

**Currently:** Zoning allows a 'wall thickness floor area exemption' (the "Zone Green bonus") for portions of walls that <u>exceed</u> Energy Code.

#### **Issues:**

- The current exemption focuses on the **heat transmission (u-factor)** of a wall. This misses other key criteria, such as air leakage.
- Code's "u-factor" has been heavily revised since Zone Green. It is very difficult to outperform today's u-factor, and **nearly** impossible to outperform future u-factors.
- Administering this "up to 8 inch" wall exemption is **complex + prone to issues**.
- It is impractical for **existing buildings** to take advantage of this exemption.





# Promoting buildings that perform better-than-code

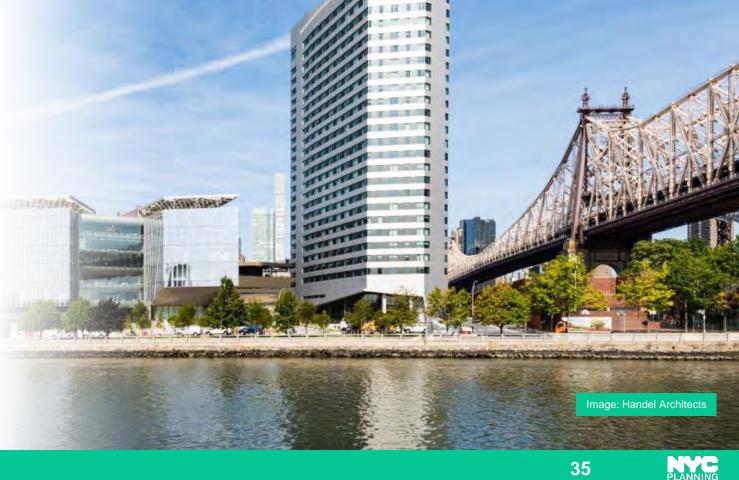
#### **Proposal:**

Simplify the deduction from "up to 8in. beyond the first 8in. of wall thickness" into a **flat 5% exemption** from total FAR.

Align the exemption with Local Law 97 by promoting newer performance criteria:

- **existing buildings** which retrofit to become "fully electrified buildings" would be eligible for the exemption
- new buildings, which are already required to be fully electric (LL 154) would be eligible for the exemption if they design to "ultra-low-energy" usage building design standards.

The House at Cornell Tech, one of the few new buildings in NYC complying with ultra-low-energy standards





# Promoting buildings that perform better-than-code

Today Wall thickness deduction	Proposed Pathway A Promoting Code outperformance	Proposed Pathway B Supporting LL97 compliance	
Primarily for <b>new buildings</b>	Available to <b>new</b> buildings	Available to <b>existing buildings</b>	
up to 8" of wall thickness	flat 5% FAR exemption		
Promote <b>higher u-factor</b> than required by Energy Code	Promote <b>ultra-low-energy</b> buildings which exceed today's requirements	Support compliance with LL97 by awarding floor area to <b>#fully electrified buildings#</b>	
<ul> <li>Focused on envelope heat transmission based on prescriptive Code requirements (u-factor) which are very hard to meet for opaque walls</li> <li>Hard for practitioners as well as DOB to evaluate and enforce</li> <li>Leads to contrived wall designs to unlock maximum 8" beyond 8" deduction.</li> </ul>	<ul> <li>Flat FAR exemption eliminates complexity/issues</li> <li>Assumes a fully electrified building</li> <li>Building must demonstrate specific at time of plan review that they will be either a "net zero" building or achieve "ultra low energy" consumption: <ul> <li>a source energy use intensity (EUI) of 38 kBTU per square foot per year</li> <li>or, 50% outperformance of comparable building which comply with code</li> <li>will require testing to verify performance</li> </ul> </li> </ul>	<ul> <li>Flat FAR exemption eliminates complexity/issues</li> <li>New construction will be required to be fully electric by 2024/2027 per LL 154</li> <li>Existing buildings have no incentive other than fines that may be levied under LL97 (if applicable to that building)</li> </ul>	









## Transportation

### **Decarbonize our vehicles**

Less than 1% of the 2,000,000 cars registered in NYC are zero-emission.

see: NYS DMV, 2021

city of **yes** 

Charging an E∖

One of the biggest hurdles to achieving EV adoption is finding a place to charge overnight.

see: The New York Times

By 2035, all vehicles sold in NYS must be EV; demand for charging will rapidly increase

see: NYS Adv. Clean Cars II



A one-to-one transition to EVs is not the solution. We also need to promote greater use of bicycles, e-mobility, and mass transit.

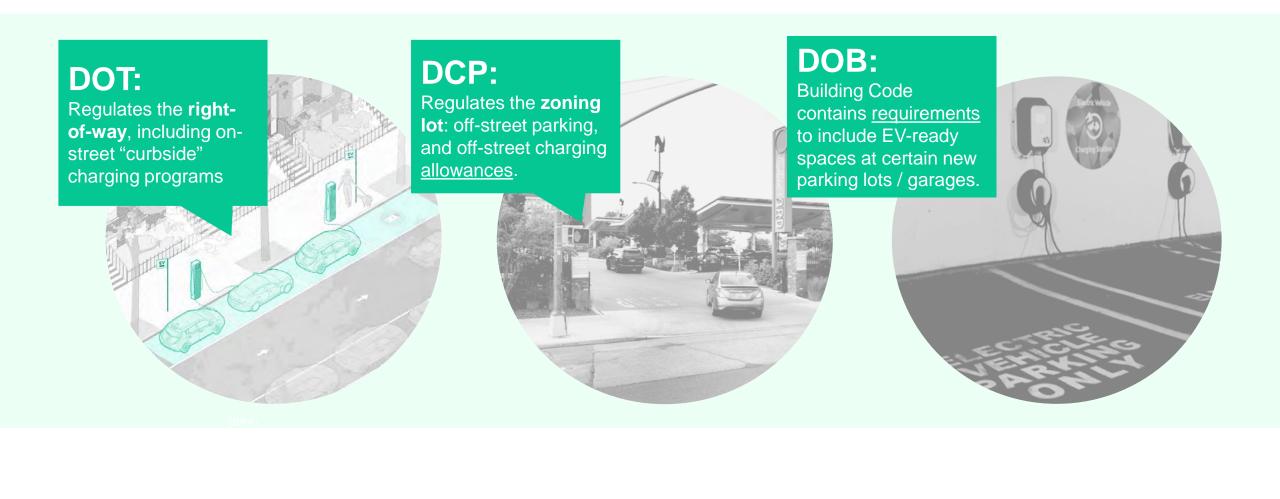
see: 2016 PlaNYC

PLANNING

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### **Decarbonize our vehicles**







PLANNING

### **Open-to-the-public EV charging facilities**

- **Currently:** Zoning considers opento-the-public EV charging facilities as "Use Group 7" commercial uses.
- Issue: These facilities aren't allowed in many C Districts commonly mapped closest to where people live.
- Proposal: Reclassify these facilities as Use Group 6 uses that are permitted in all Commercial Districts, more than doubling the commercial land area available for EV charging facilities.



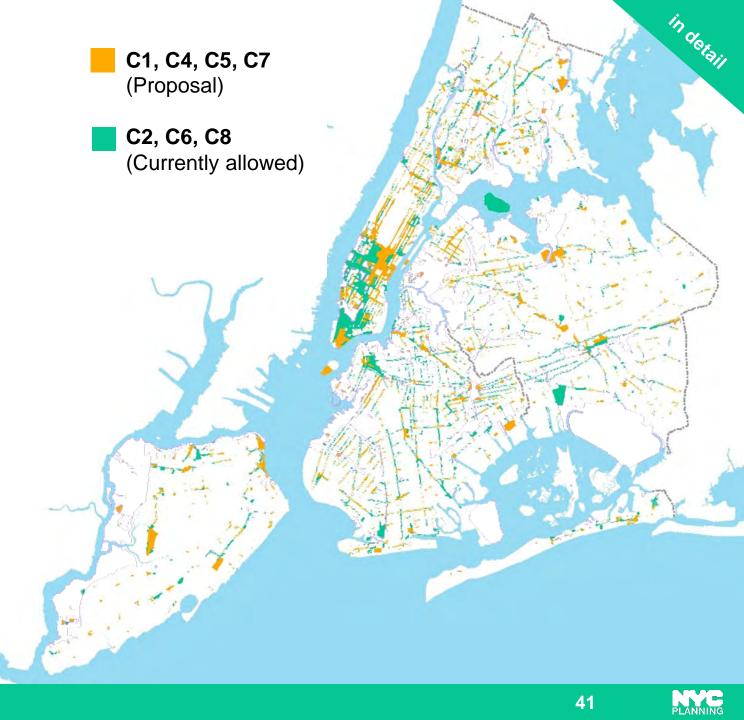






## **Open-to-the-public EV charging facilities**

	Currently	Proposed		
C1, C4, C5, C7	Νο	Yes		
C2, C6, C8	Yes	Yes		
All <b>M Districts</b>	Yes	Yes		
All R Districts	Νο	Limited*		
	* See next proposal			





## **Open-to-the-public EV charging facilities**

	Currently	Proposed		
C1, C4, C5, C7	Νο	Yes		
C2, C6, C8	Yes	Yes		
All <b>M Districts</b>	Yes	Yes		
All R Districts	Νο	Limited*		
	* Se	e next proposal		

**C1, C4, C5, C7** (Proposal)

C2, C6, C8 (Currently allowed)

M Districts (Currently allowed)





in detail

### Expanding car sharing: public EV charger sharing

- Currently: Zoning generally requires parking spaces serving uses, such as retail stores, or apartment buildings. Accessory charging is permitted in all of these spaces. Some of these spaces are permitted to be occupied by commercial car share program vehicles.
- **Issue:** EV chargers installed in accessory spaces are not available to the public, per zoning rules.
- Proposal: Expand existing car share rules to allow property owners to designate up to 20% of their spaces (or 5, whichever is greater) for flexible, public EV 'chargersharing', or car sharing, or any combination thereof.





## Expanding car sharing: public EV charger sharing

	Current	Proposed		
	Car Sharing	Car Sharing + EVCS Sharing		
R1, R2, R4-1, R4A, R4B, R5A	Not allowed	Not allowed		
R3-2, R4	<b>10%</b> in facilities w/ 20+ spaces	20% Or 5 spaces whichever is greater		
R5 – R10	20% Or 5 spaces whichever is greater	20% Or 5 spaces whichever is greater		
Non-residential uses	20% Or 5 spaces whichever is greater	20% Or 5 spaces whichever is greater		

**C / M Districts** Would allow public EV charging facilities

### **R Districts** Would allow public EV charger sharing





in defail

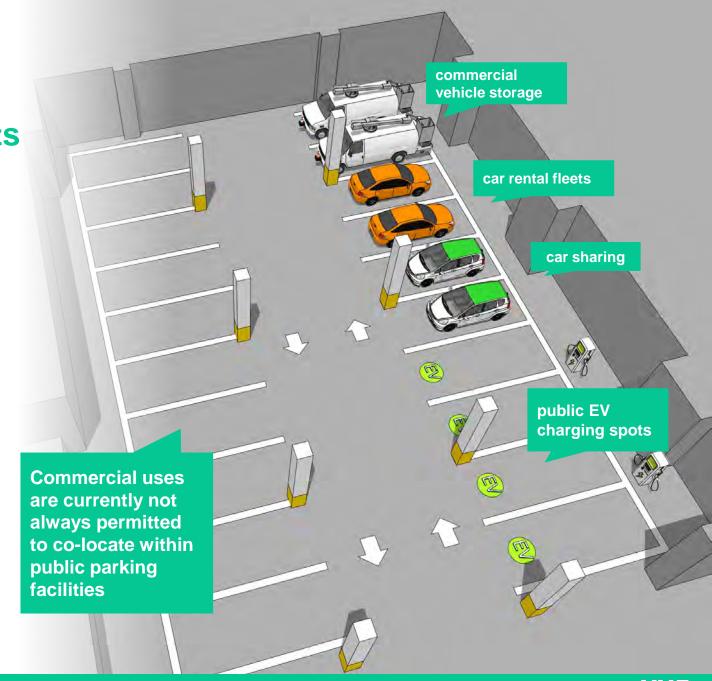
## Flex parking: commercial vehicles in non-residential districts

### **Currently:**

Zoning separately regulates the use of parking spaces for (1) car sharing services, (2) car rental services, and (3) commercial vehicle storage.

### **Issue:**

These rules are varied, confusing, and limited. They should be expanded to promote car rental/sharing services (as an alternative to personal car ownership) and provide more locations for overnight truck parking and charging.



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### **Commercial Fleet EV Charging in both Accessory and Public Parking Lots + Garages**

Proposal: In most Commercial, and all Manufacturing Districts, allow up to 20% of accessory spaces to be occupied by:
1. car share vehicles, 2. car rental vehicles, 3. public EV charging spaces, 4. commercial vehicle (<20') storage</li>

or any co	mbination	thereof.
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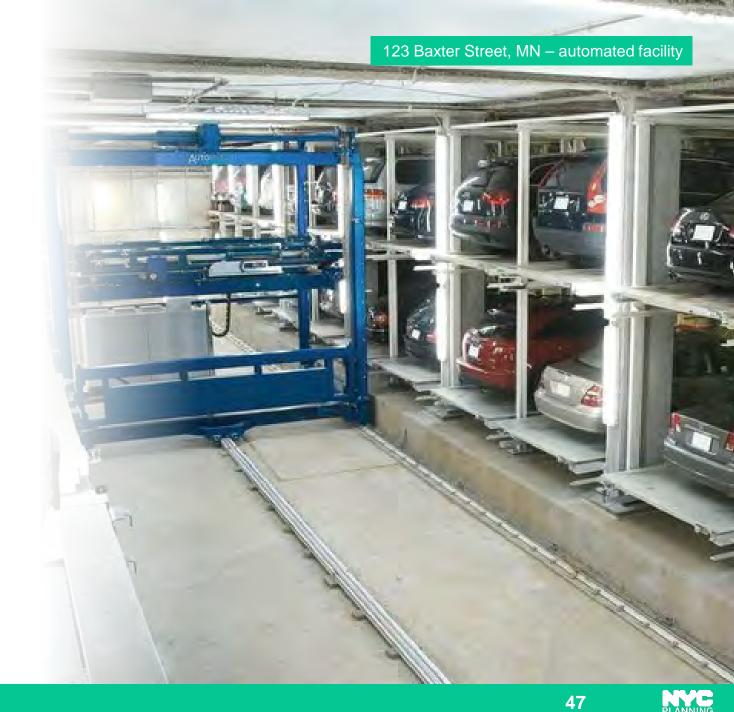
	R Districts		C Districts			M Districts				
	Accessory	Public Lots / Garages	Accessory		Public Lots / Garages		Accessory	Public Lots / Garages		
	R3-2+ MF	N/A	C1, C2 mapped in R3-2+	C4, C5, C6, C7, C8	C1, C2	C4, C5, C6, C7, C8	M1, M2, N3	where permitted		
<b>Publicly-accessible EV charging</b> (not inclusive of any EVCS for below uses)	20% of total spaces, or 5 spaces, whichever is	N/A	20% of total spaces, or 5 spaces, whichever is	20% of total spaces, or 5 spaces,	100% of total spaces	100% of total spaces	20% of total spaces, or 5 spaces,	100% of total spaces		
Car share services	greater	N/A	greater			whichever is	50% of total	EON/ of total	whichever is	
Automobile rental services	N/A	N/A		greater	spaces 50% of total	greater	50% of total			
Commercial vehicle storage (< 20 feet)	N/A	N/A	N/A		N/A	spaces		spaces		





## Expansion of automated parking regulations

- Currently: In limited areas, the ZR provides special allowances to "automated parking facilities" that are tailored to their unique operational needs versus a typical parking facility. For example, the minimum size requirements for a parking space are reduced to reflect the unique 'tray-andrack' system used to store cars.
- Issue: These allowances don't apply outside of the Manhattan Core and a few other areas, limiting the feasibility of such facilities citywide.





## Expansion of automated parking regulations

**Proposal:** To support the growth of automated facilities, this proposal would proactively expand the allowance and associated lower maneuvering requirements due to their high efficiency, on a citywide basis.

Typically	Current zoning- mandated size
Standard parking space	300 ft <sup>2</sup>
Attended or alternate maneuverability space	200 ft <sup>2</sup>
Automated rules	Current size set forth in zoning
Automated parking tray (in designated areas only)	153 ft <sup>2</sup>

Automated rules Available in Manhattan Core, LIC Area, Downtown Brooklyn SD, and Gowanus SD.

No automated rules Other districts permitting group parking facilities





in detail

## **Bicycle and e-mobility: storage & charging uses**

- **Currently:** Zoning provides use regulations for automobile parking and charging.
- Issue: Zoning doesn't provide any similar regulations for bicycles and other e-mobility. This creates regulatory uncertainty around where bike / micromobility parking facilities are permitted.
- Proposal: Create a new commercial use for public bicycle and micromobility parking. New rules would also provide for secure outdoor bike storage lockers as permitted obstructions in yards & open spaces.





# city of **yes**

## Waste & Water

Goal 4

### **Decarbonize our waste streams**

Our waste stream only accounts for 4% of our City's greenhouse gas footprint – but there are some **clear steps** to take.

80x50

Reducing stormwater runoff also reduces the need for energyintensive stormwater treatment

Newtown

Wastewater Treatment Pla (DEP)

80x50

Organics Drop-off (GrowNYC)

Sustainability Center

By diverting organic material from the waste stream, we can reduce our solid waste by **45%** 

80x50

Supporting local food systems can also play a role in reducing  $CO_2$  associated with food.

80x50



The Greenhous



## Expand the use of permeable paving

- **Currently:** Zoning is supposed to allow any paving area to be paved with permeable paving.
- Issue: The text, as drafted, requires the Department of Buildings to investigate each proposed installation to deem it appropriate. Ambiguity about how to do so has complicated the process of using permeable paving in NYC.
- **Proposal:** Revise this language to make it clear that permeable paving is always allowed.

Standard ZR language regarding paving:

"asphaltic or Portland cement concrete, or other hard-surfaced dustless material [...] However, permeable paving materials may be used in open parking areas where the Commissioner of Buildings determines that such materials are appropriate."



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### Allow for highperformance street beds

- **Currently:** Zoning requires street trees to be installed alongside new developments and enlargements.
- **Issue:** As drafted, the zoning text precludes the use of newer, more inventive prototypes such as "connected tree beds" and "raingardens" that have been designed and approved by DOT.
- **Proposal:** Add flexibility to the street tree requirements to allow location of required trees within connected tree beds or raingardens, as well allow as substitution of one required street tree with a DEP-compliant raingarden.

ANDSCAPE: TREE BEDS Connected Tree Bed A series of tree beds connected with a continuous trench in order to provide increased rooting area and stormwate detention. This is a standard treatment that will be installed and maintained by the city





appropriate plants are use

streets and/or sidewalks

necessan



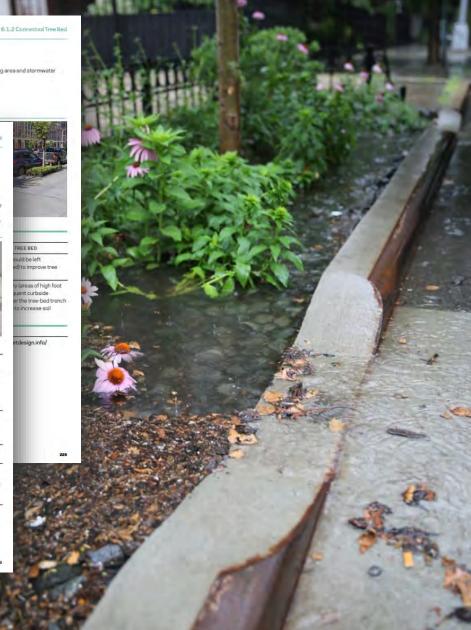
reas of high for curbside the tree-bed tren nerease coil

esian.info

Refer to DEP's latest Procedure Governing Limited Geotechnical Investigation for Green Infrastructure See LANDSCAPE: BENEFITS OF PLANTINGS IN THE ROY Practices available at www.nvc.gov/html/den/ndf/oreer Reduced stormwater entering sewers during storms infrastructure/ogi-geotech-procedure.pdf. Coordinate with DEP on geotechnical results to ensure that Can help to improve water guality in local waterways stormwater control practices are appropriate for the Healthier plants and greater survival rates whe proposed location Retrofitting existing plantings may be feasible if there is Can improve street drainage and may reduce ponding on imited grade change and in situ soils are appropriate; special care must be given to tree roots; existing species must be able to tolerate higher levels of water ants should tolerate salts, sediment, contamination, and See LANDSCAPE: GENERAL GUIDELINES highly variable levels of water availability

Designers should perform environmental due diligence to Due to existing grading and/or the crown of the road ensure green infrastructure installations will not stormwater installations along the gutter are ideal for exacerbate preexisting subsurface contamination stormwater capture, while installations in the center of th including, but not limited to, researching current and past road will not capture significant volumes of water unless uses of the site, and reviewing publicly available local, the road can be regraded state, and federal databases; additional environmental analysis, and potentially site remediation, may be

Avoid in areas adjacent to retaining structures, structure foundations, critical infrastructure, or on roadways elevated atop a retaining wall structure; cannot be sited within 25 feet of above or below-ground MTA structures







city of **ves** 

## Clarify regulations for composting & recycling

- **Currently:** Zoning doesn't mention "composting" or "recycling" at all.
- Issue: This creates confusion about where composting and recycling are allowed to occur. (DSNY's only compost facility is classified as a "dump" and located in a heavy M3 District on Staten Island.)
- **Proposal: 1.** Clarify that small-scale composting can be considered an "accessory use", **2.** that neighborhood-focused recycling facilities can locate in commercial storefronts, and **3.** that large-scale facilities should continue to locate in Manufacturing Districts.



Community garden, Manhattan (C1/R7A)



Community garden, Brooklyn (M1)

450 West Service Road, Staten Island, NY 10314

Sanitatio



54

DSNY Facility, Staten Island (M3)



### Facilitate rooftop food production

- Currently: Zoning allows rooftop greenhouses to be added atop non-residential buildings, beyond maximum FAR and height limits.
- Issue: Even though there are a few straightforward requirements, all applicants are required to obtain a CPC certification that they've followed the rules – increasing the cost and process, and discouraging projects.
- **Proposal:** Change the rooftop certification to an as-of-right allowance. (Proposals would still be evaluated for compliance by DOB.)

#### 75-01 Certification for Rooftop Greenhouses

LAST AMENDED 4/30/2012 D HISTORY

A rooftop greenhouse shall be excluded from the definition of *floor area* and may exceed *building* height limits, upon certification by the Chairperson of the Commission that such rooftop greenhouse:

- (a) is located on the roof of a *building* that does not contain *res* sleeping accommodations;
- (b) will only be used for cultivation of plants, or primarily for c accessory to a community facility use;
- (c) is no more than 25 feet in height;
- (d) has roofs and walls consisting of at least 70 percent transpar permitted pursuant to paragraph (f)(3) of this Section;
- (e) where exceeding *building* height limits, is set back from the story immediately below by at least six feet on all sides; and
- (f) has been represented in plans showing:
  - the area and dimensions of the proposed greenhouse, the le existing or proposed *building* upon which the greenhouse and access to and from the *building* to the greenhouse;
  - (2) that the design of the greenhouse incorporates a rainwater reuse system; and
  - (3) any portions of the greenhouse dedicated to office or storage to the greenhouse, which shall be limited to 20 percent of the greenhouse, and shall be exempt from the transparency requirement in paragraph (d) of this Section.

Whole Foods, BK

hole Foods Mark







## **Summary of proposal**



- 1. Rooftop solar: removing zoning impediments.
- 2. Solar parking canopies: remove zoning impediments to allow.
- 3. Solar: ensure standalone generation is allowed
- 4. On-shore wind: add a new tool for the CPC to consider future applications
- 5. Energy storage (ESS): add new rules to allow gridsupporting ESS in a wide range of zoning districts



- 6. Electrification retrofits: expand rooftop and yard allowances to accommodate increased need for outdoor electrified equipment like heat pumps
- 7. Building exterior retrofits: fix rules to ensure that the widest range of exterior retrofits are allowed.
- 8. Fix Zone Green: update and improve this floor area exemption to ensure it continues to promote betterthan-code performance.



- 9. Vehicle charging: expand allowance to all Commercial Districts
- 10. Charge-sharing: allow a % of residential spaces to be shared w/ the public
- **11.** Parking flex: streamline car-sharing, car rental, and commercial parking rules
- 12. Automated parking: expand rules to encourage more automated facilities
- **13. Bike parking:** add rules for storage and charging



- 14. Porous paving: clarify language to ensure permeable paving is allowed.
- **15. Street Trees:** update rules to accommodate new raingarden prototypes
- **16. Organics:** add new use regulations clarifying when composting and recycling are allowed.
- **17. Rooftop greenhouses:** simplify the process to allow them as-of-right





## **Racial equity report**

As a zoning text amendment affecting more than 5 community districts, this proposal is subject to the racial equity reporting requirement.

The proposal serves as an important step to meet the City's climate goals by alleviating regulatory burdens and allowing for the creation of a more sustainable, more resilient and more equitable city.

Due to the nature of this proposal, no increases in residential space, non-residential space, or other development activity are anticipated. Therefore, analysis of residential affordability, employment, or construction jobs is not applicable.

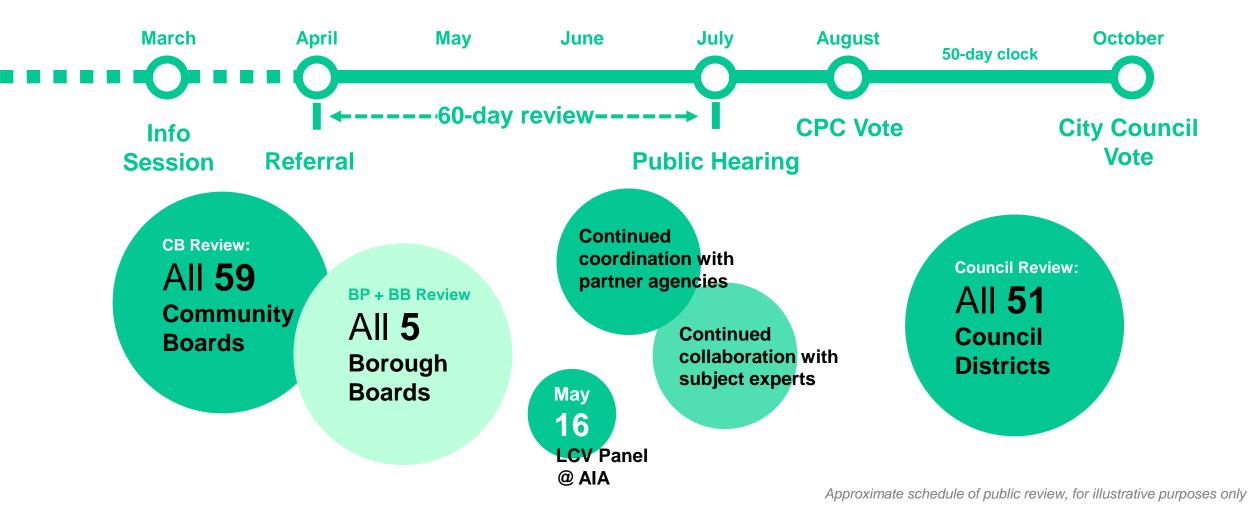


A 'peaker' plant – among the dirtiest forms of energy production in NYC. Source: Gotham Gazette, "Peaker Plants Harm Communities of Color; It's Time for New York City to Replace Them" (2020) by Rachel Spector (NYLPI), Elizabeth Yeampierre (UPROSE) & Dariella Rodriguez (The Point CDC)





## **Beginning the public review process**







PLANNING

## Thank you!

the states