

# A BERDO for Newton

## Discussion Session #5- August 24, 2022

Moderator: Liora Silkes. Liora is the City of Newton's Energy Coach and a member of the City's Climate and Sustainability Team.

- Background
- What is Boston BERDO & why is a Newton version being developed
- Boston Implementation details
- Proposed Timelines and Process
- Community input

Zoom Technician: Cat Kemmett is a Planning Associate with the Newton City Planning Department.

William Ferguson: City of Newton Co-Director of Sustainability and Project Manager for the Public Buildings Dept.

Michael Gevelber: Professor of Mechanical Engineering at Boston University and member of the Newton Citizens Commission on Energy.

# A BERDO for Newton (Building Emissions Reduction and Disclosure Ordinance)

- We are at the early stages of developing an ordinance for Newton based on Boston BERDO.
- BERDO is important for meeting Newton's Climate Goals.
- City Council passed a resolution in support of a BERDO. (4/19/22).
- The ordinance will require large buildings to reach net zero by 2050.
- This session will provide more information on implementation timelines.

# A BERDO for Newton (Building Emissions Reduction and Disclosure Ordinance)

- Will be based on Boston BERDO: which applies to buildings > 20,000 square feet or residential buildings with 15 or more units.
- In Newton there are 400 buildings that fit this description (205 owners).
- The City of Newton is the owner of 32 buildings on this list (and will comply with the standards).
- This is a continuation of a series of BERDO sessions that will be held throughout the year.

# Building Emissions Performance Standard

**A building performance standard sets carbon targets for existing large buildings that decrease over time.**

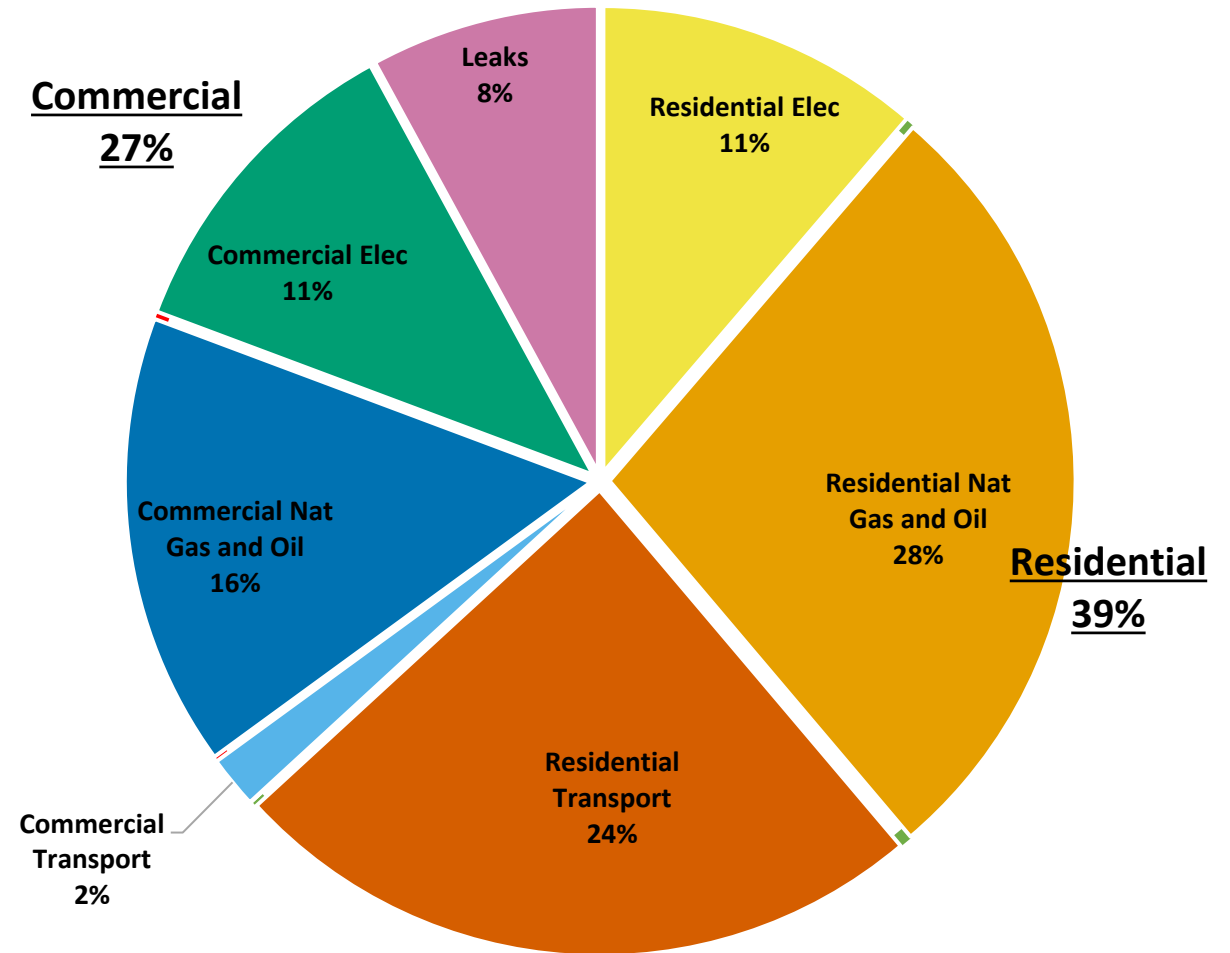
- Directly targets largest source of emissions;
- Sets long planning horizons;
- Provides flexibility in how buildings meet targets and when they make investments.



Newton 2019 GHG Emissions: 717,500 MT

# Newton's GHG emissions & meeting climate objectives

- 66% of Newton's emissions come from buildings
- **400 large NRB and residential buildings account for 27% of Newton's emissions (205 owners)**



# Newton's Non-Residential (NRB) & Residential Buildings (RB): GHG Emissions by Size

<u>NRB by Size</u> (ksqft.)	<u>Number of</u> <u>bldgs.</u>	<u>% of Newton's</u> <u>total emissions</u>
>100	51	14.1%
50 -100	62	4.4%
20 – 50	166	5.9%

<u>RB by Size</u> (ksqft.)	<u>Number of</u> <u>bldgs.</u>	<u>% of Newton's</u> <u>total emissions</u>
>100	14	1.5%
50 -100	20	1.0%
20 – 50	86	1.6%

## Non-Residential Buildings:

- **24.4% of Newton's GHG emissions**
- **~42% of these GHG emissions from electricity** (easy to green)
- 167 unique NRB owners

## Residential buildings:

- **4.1% of Newton's GHG emissions**
- includes for-profit apts, dorms, senior (independent & assisted), low income
- 45 unique RB owners

\*NRB and RB have overlap of owners in both categories (given as 212 above). Total unique owners for both categories is 205.

\*\*NRB building totals do not include parking garages

# Proposed Newton's Declining Emissions Schedule

Based on Boston's BERDO  
Emission Standards: based on  
Synapse study of real building data,  
input from building owners, and MEP  
experts

Building type	Emissions threshold (kgCO <sub>2</sub> e/SF)					
	Period 1	Period 2	Period 3	Period 4	Period 5	Period 6
Assembly	7.8	4.6	3.3	2.1	1.1	0.0
College/University	10.2	5.3	3.8	2.5	1.2	0.0
Education	3.9	2.4	1.8	1.2	0.6	0.0
Food Sales & Service	17.4	10.9	8.0	5.4	2.7	0.0
Healthcare	15.4	10.0	7.4	4.9	2.4	0.0
Lodging	5.8	3.7	2.7	1.8	0.9	0.0
Manufacturing/Industrial	23.9	15.3	10.9	6.7	3.2	0.0
Multifamily housing	4.1	2.4	1.8	1.1	0.6	0.0
Office	5.3	3.2	2.4	1.6	0.8	0.0
Retail	7.1	3.4	2.4	1.5	0.7	0.0
Services	7.5	4.5	3.3	2.2	1.1	0.0
Storage	5.4	2.8	1.8	1.0	0.4	0.0
Technology/Science	19.2	11.1	7.8	5.1	2.5	0.0

\*Starting period as indicated in proposed timeline (varies by building size).

Boston BERDO:  
Pick compliance  
pathways that  
work best to  
meet your  
emission limits

Applies to single buildings or a portfolio of buildings.

Energy Efficiency Improvements: pays for itself.

Procurement of Renewable Energy Certificates (VPPA) or Newton Power Choice.

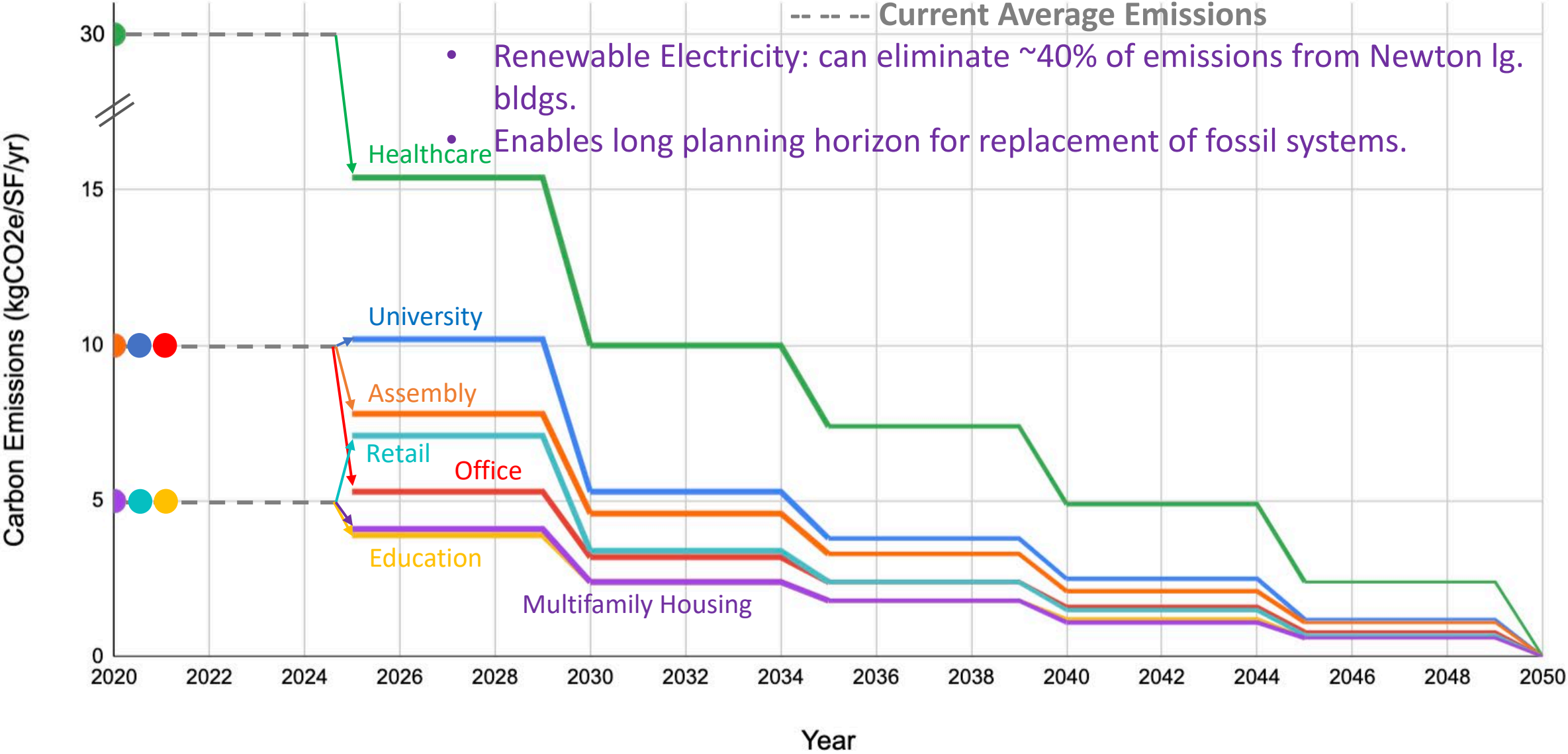
Renewable energy on site.

Electrification of heating.

Alternative compliance payments: \$234/metric ton of CO2 above standard.



# Boston's Current Emissions and Scheduled Compliance Standards under BERDO 2.0



# Boston BERDO: Flexibility-Individual Plans

- Building owner needs an alternative schedule to reduce emissions.
- Must be reviewed and approved by the City.

# Proposed Timelines for Newton BERDO



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## **February 2023**

Ordinance passed by City Council

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## **Summer 2024**

First energy use and GHG emissions report due from the largest building owners for Calendar Year 2023.

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## **Summer 2027**

First report due from the largest building owners under the emissions standards for calendar year 2026.

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Timelines vary by building size and type.

**TIMELINE PROPOSAL**

Tier	Bldg Type	Size (kft <sup>2</sup> )	# of Buildings	Total Area (Mft <sup>2</sup> )	% of Newton's GHG Emissions	# of Unique Owners for Each Category	Calendar Year							
							2023	2024	2025	2026	2027	2028	2029	2030
1	NRB (Non-Residential Building)	>50	113	13.9	18.5%	65	Collect energy use data	Submit 1st energy and emissions report - Sept.2024		Comply with the first emission standard	Submit 1st emissions compliance report - Sept.2027			
2	NRB	35-50	55	2.3	2.5%	48	Collect energy use data	Submit 1st energy and emissions report - Sept.2024			Comply with the first emission standard	Submit 1st emissions compliance report - Sept.2028		
	RB (Residential Building)	>50	34	3.5	2.5%	18	Collect energy use data	Submit 1st energy and emissions report - Sept.2024			Comply with the first emission standard	Submit 1st emissions compliance report - Sept.2028		
3	NRB	20-35	111	3.0	3.4%	92	Collect energy use data		Submit 1st energy and emissions report - Sept.2025			Comply with the first emission standard	Submit 1st emissions compliance report - Sept.2029	
4	RB	20-50	86	2.3	1.7%	38	Collect energy use data		Submit 1st energy and emissions report - Sept.2025			Comply with the first emission standard	Submit 1st emissions compliance report - Sept.2030	

# Proposed Process for Newton BERDO



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Discussion Sessions sponsored by City -  
monthly

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Updates on City website:  
[Newtonma.gov/NewtonBERDO](http://Newtonma.gov/NewtonBERDO)

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Advisory Groups

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Special topic information sessions from  
utilities, vendors, building owners

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Email address:  
[NewtonBERDO@newtonma.gov](mailto:NewtonBERDO@newtonma.gov)

Support-

If BERDO  
passes

Help Line

Training on EPA PM

Community leaders



# EPA Portfolio Manager Link

- <https://www.energystar.gov/buildings/benchmark>
- Benchmarking tool
- Training

Newton  
BERDO  
website

[Newtonma.gov/NewtonBERDO](https://newtonma.gov/NewtonBERDO)



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