

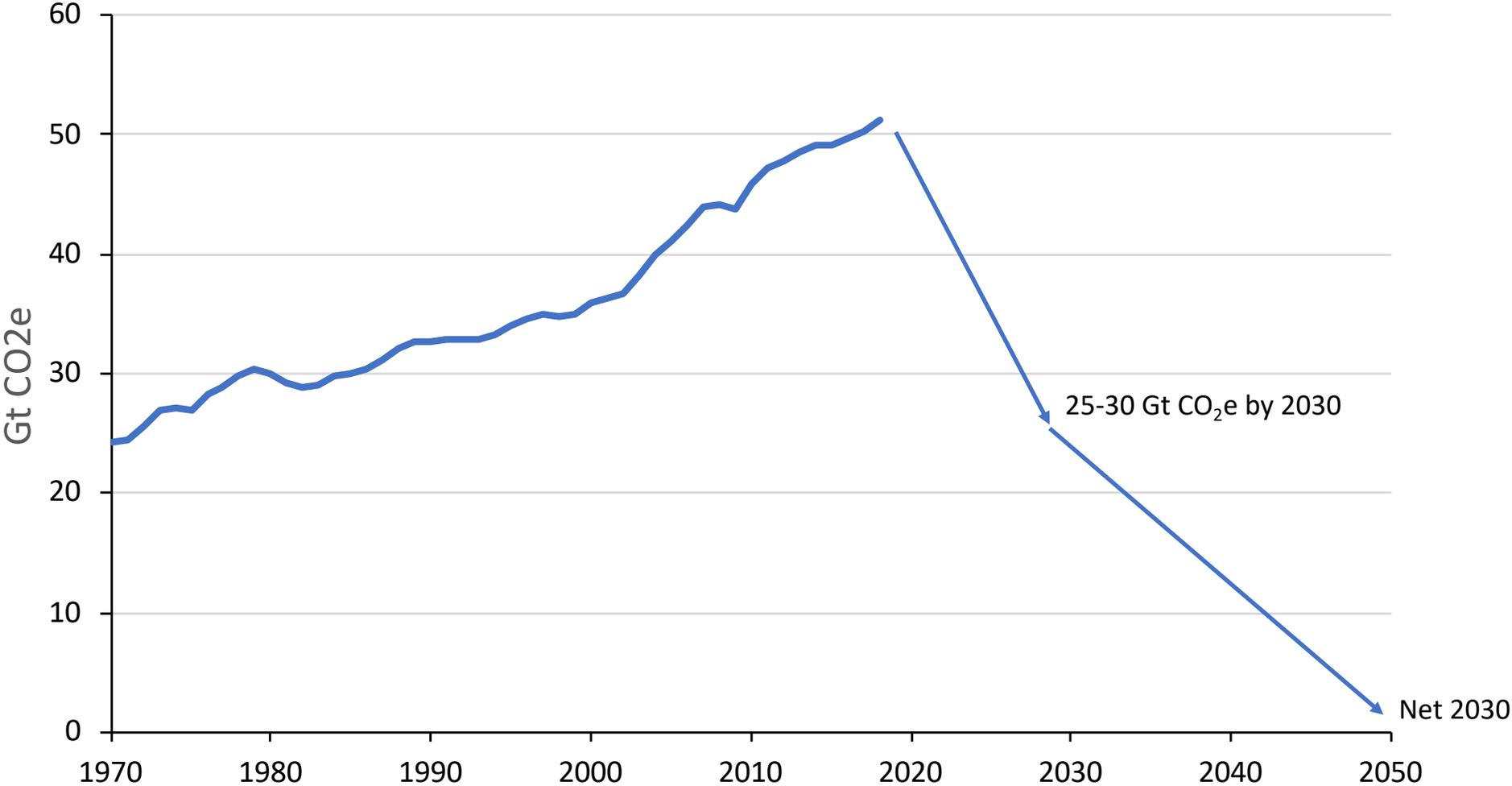


# COVID-19, Climate Change, and the Clean Energy Transition

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*Converge to Transform* Webinar Series  
Advanced Science Research Center at The Graduate Center of the City University of New York  
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# Are GHG Emissions on Track for a 1.5° World?



# Similarities Between COVID-19 and Climate Change

- Threats are global, dire, and invisible
- Preparedness is critical
- Impacts are inequitable
- Fundamentals are known



# Differences Between COVID-19 and Climate Change

- Speed
- Scale
- Reversibility



# Reducing Emissions: Four Mutually Reinforcing Strategies



Reduce demand for energy and maximize energy efficiency



Electrify all activity to maximum extent feasible

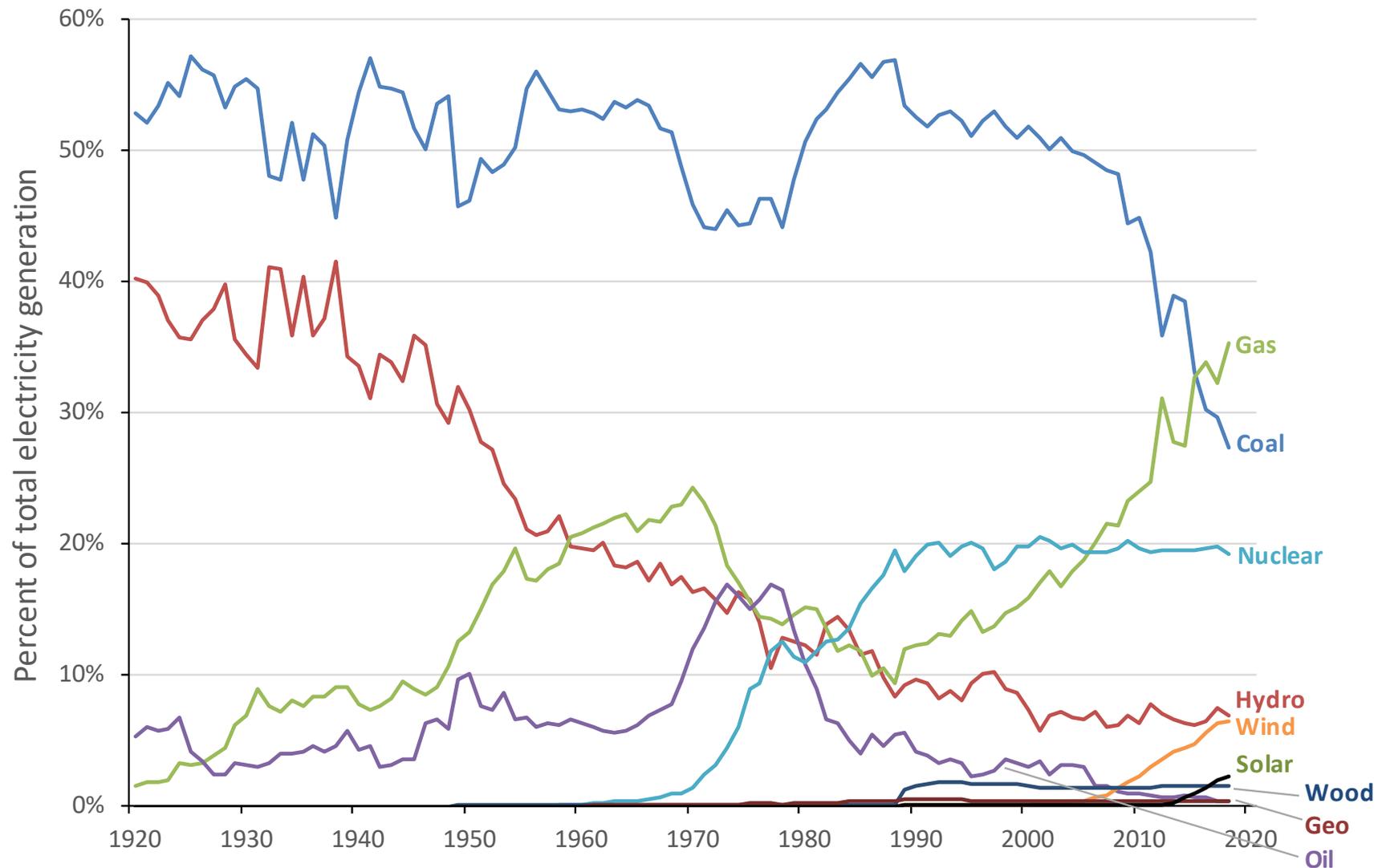


Use GHG-free fuels and electricity

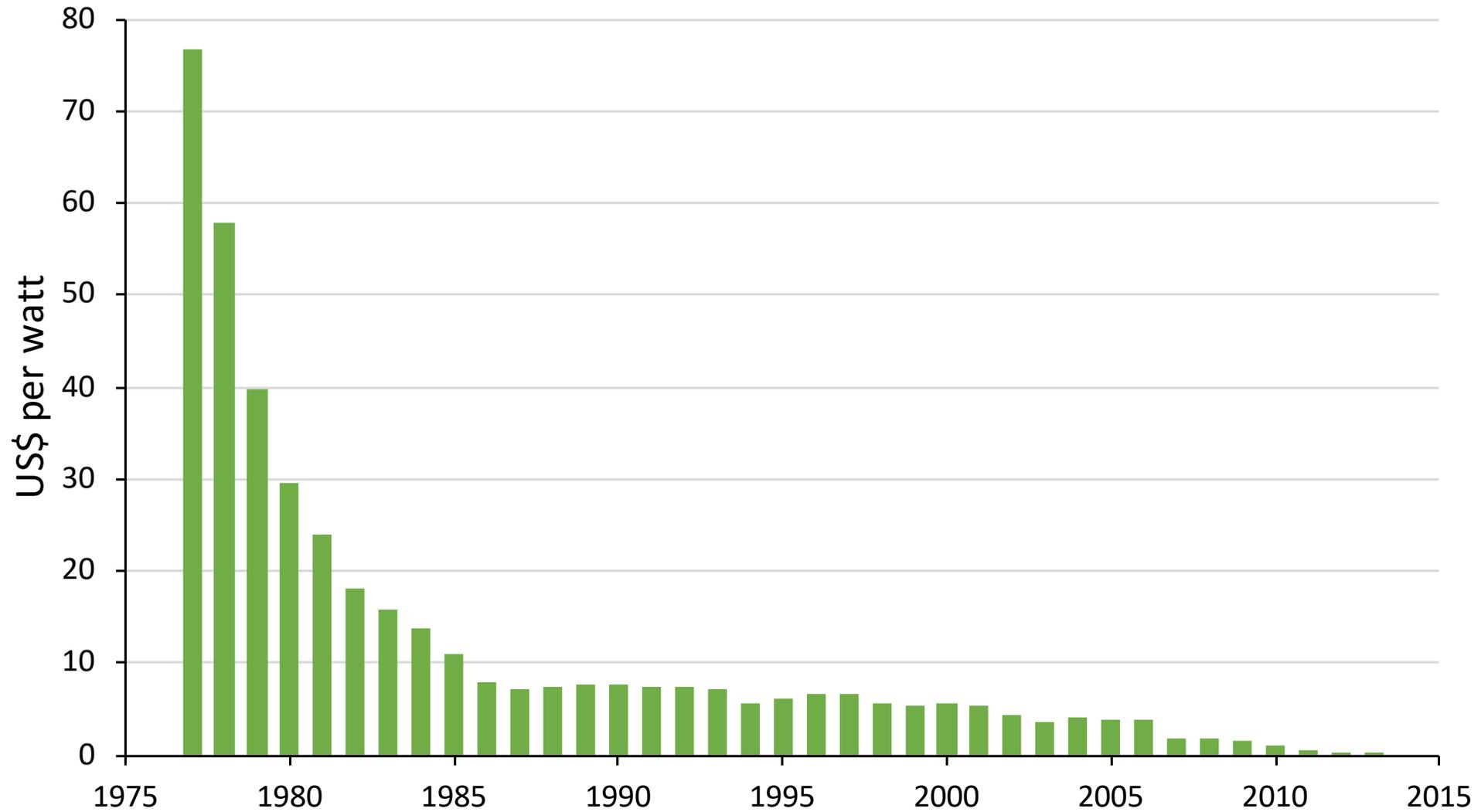


Improve social outcomes via intentional action

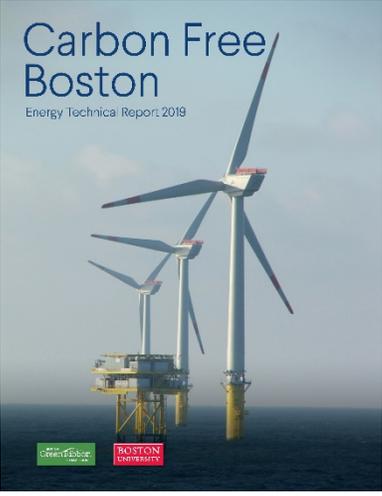
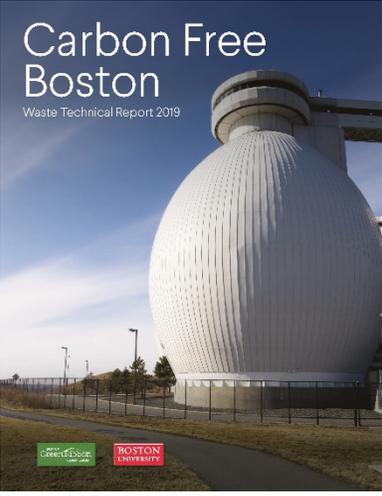
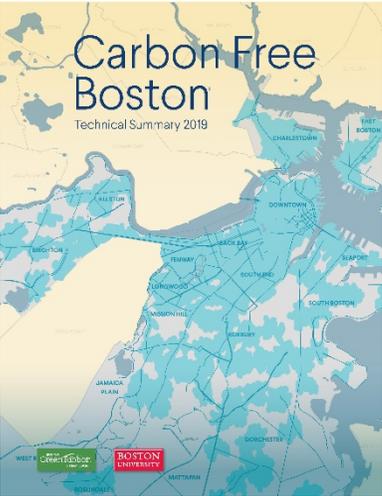
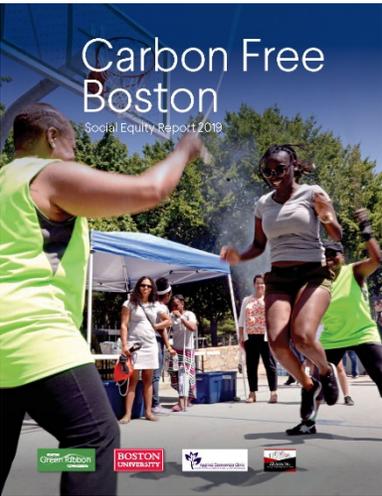
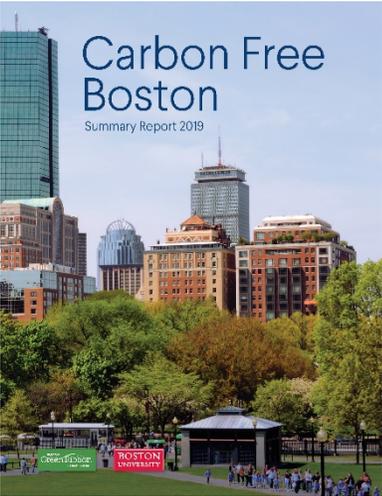
# U.S. Electricity Generation by Source, 1920-2018



# Cost of PV in the U.S.

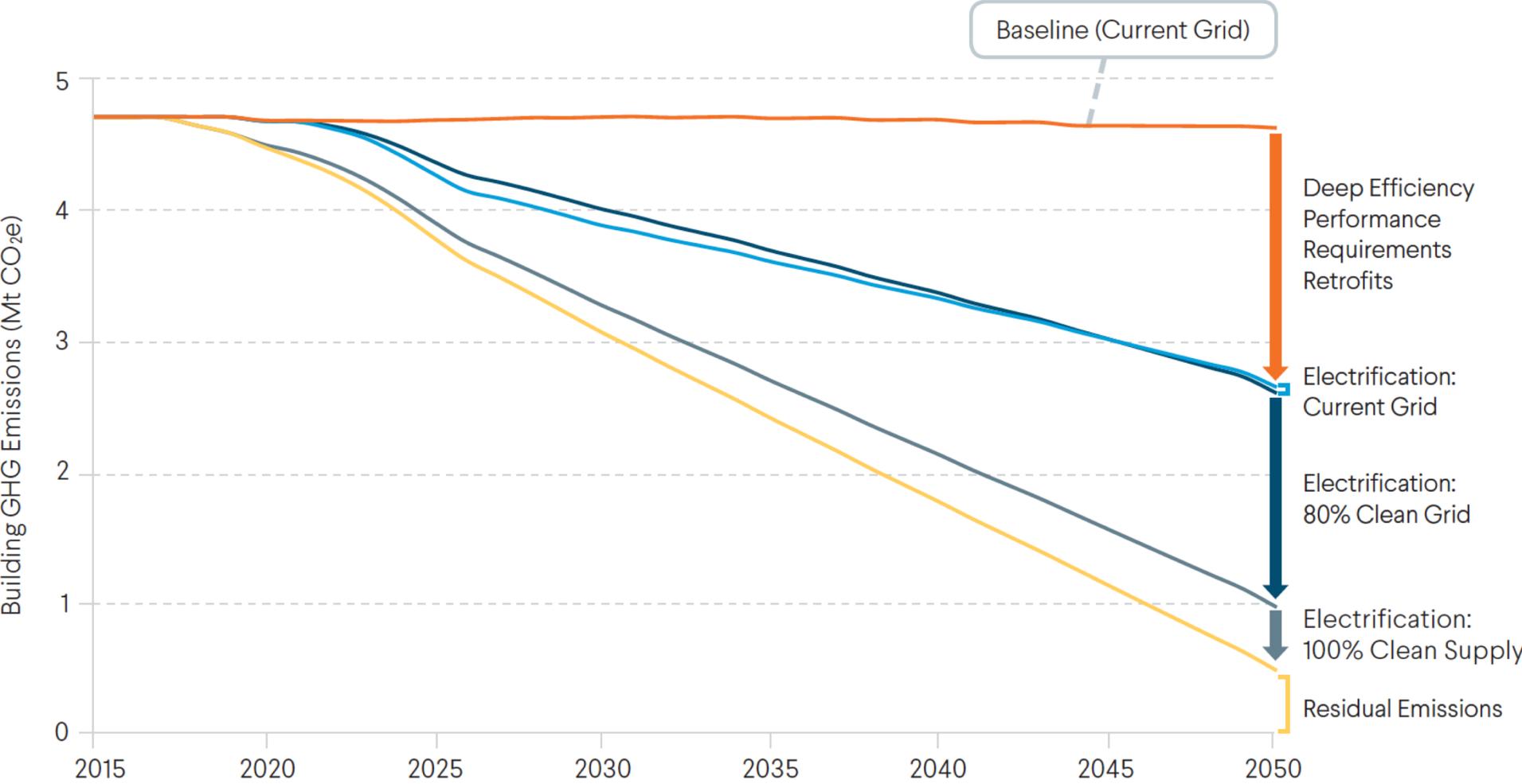


# Carbon Free Boston

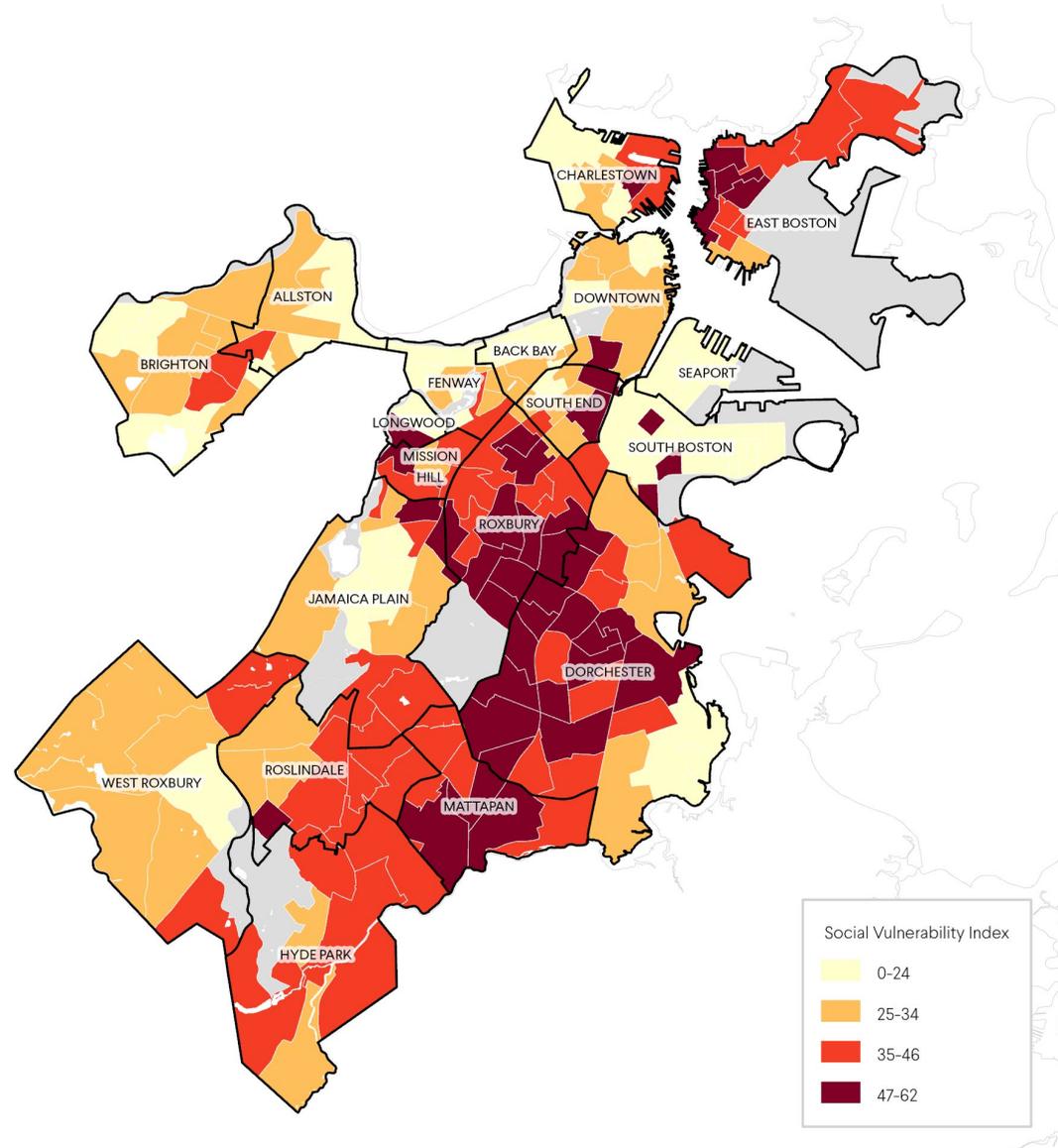


Available online: <http://sites.bu.edu/cfb/carbon-free-boston-report-released>

# Path to Carbon-Neutrality in Boston's Buildings

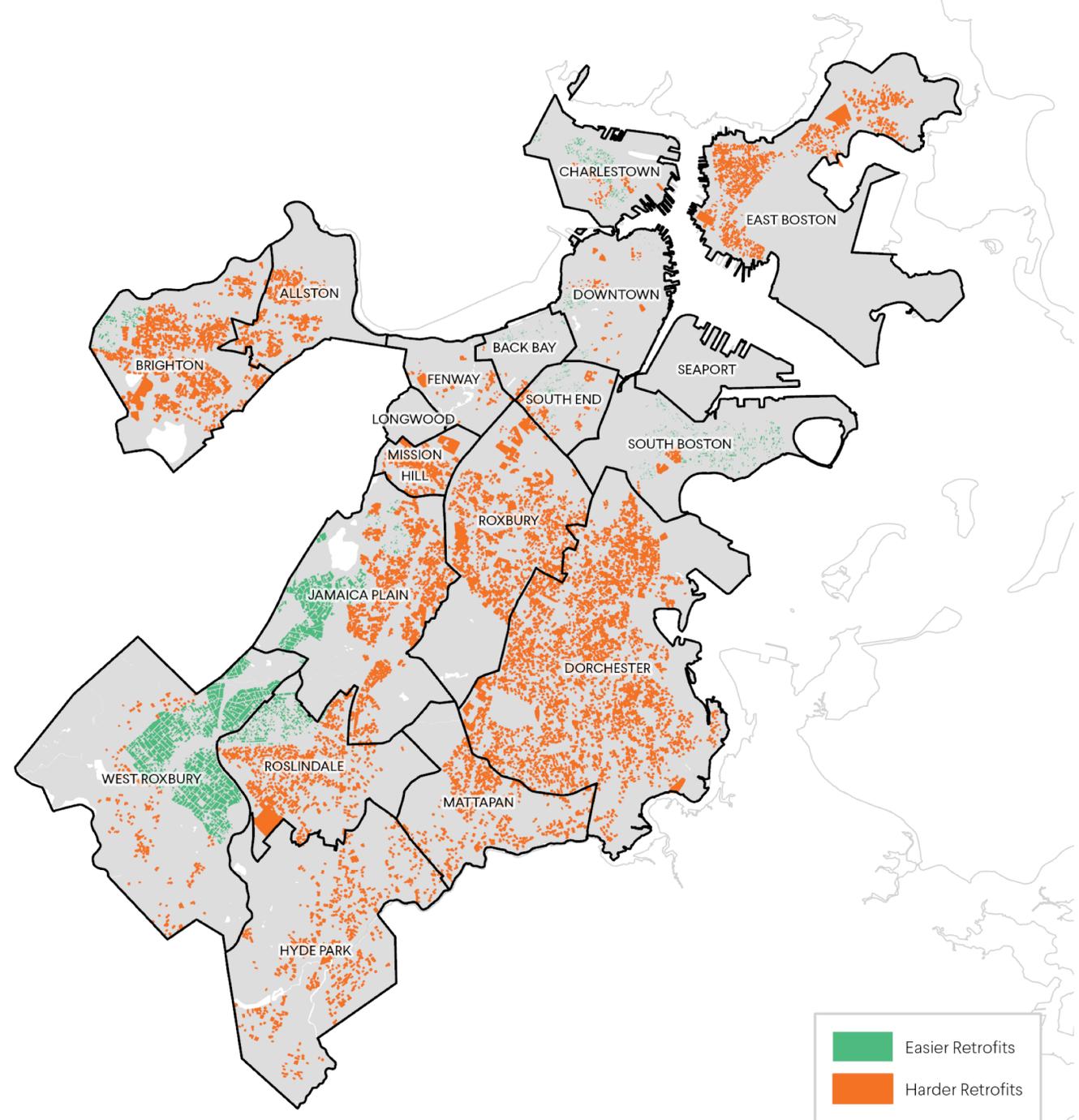


# Boston's Socially Vulnerable Communities



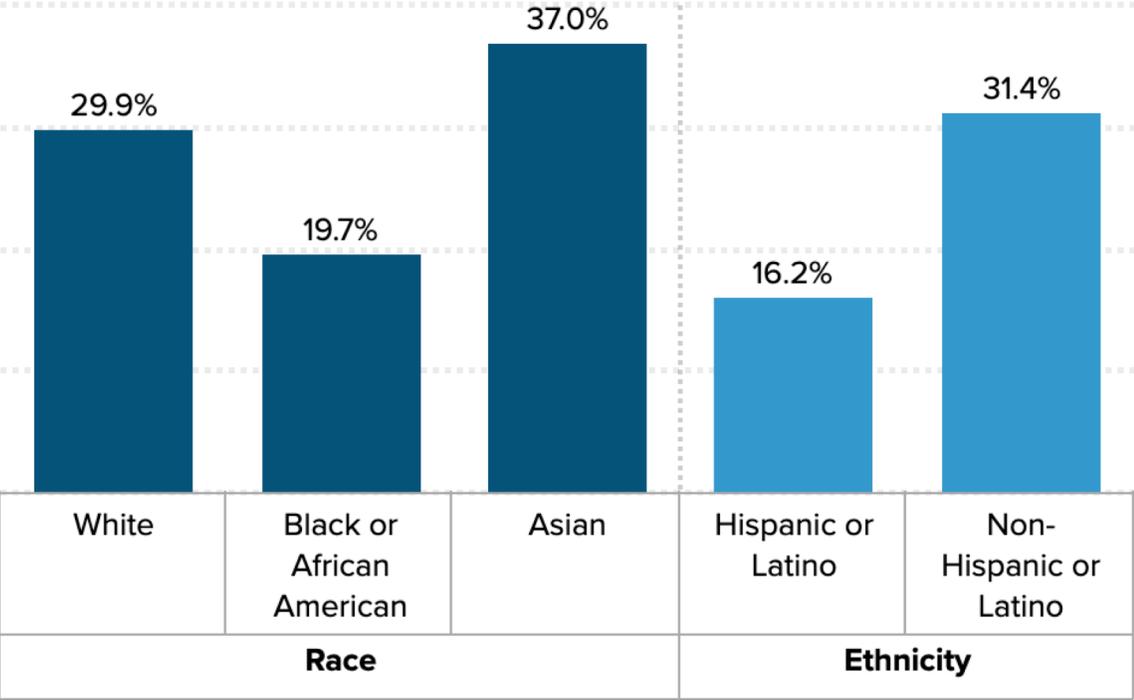
# Challenges to Equitable, Carbon-Neutral Housing

1. Boston has a shortage of affordable housing
2. Socially vulnerable households experience high levels of energy insecurity
3. Socially vulnerable neighborhoods have more harder-to-retrofit buildings
4. Retrofits and rooftop solar can accelerate gentrification and displacement



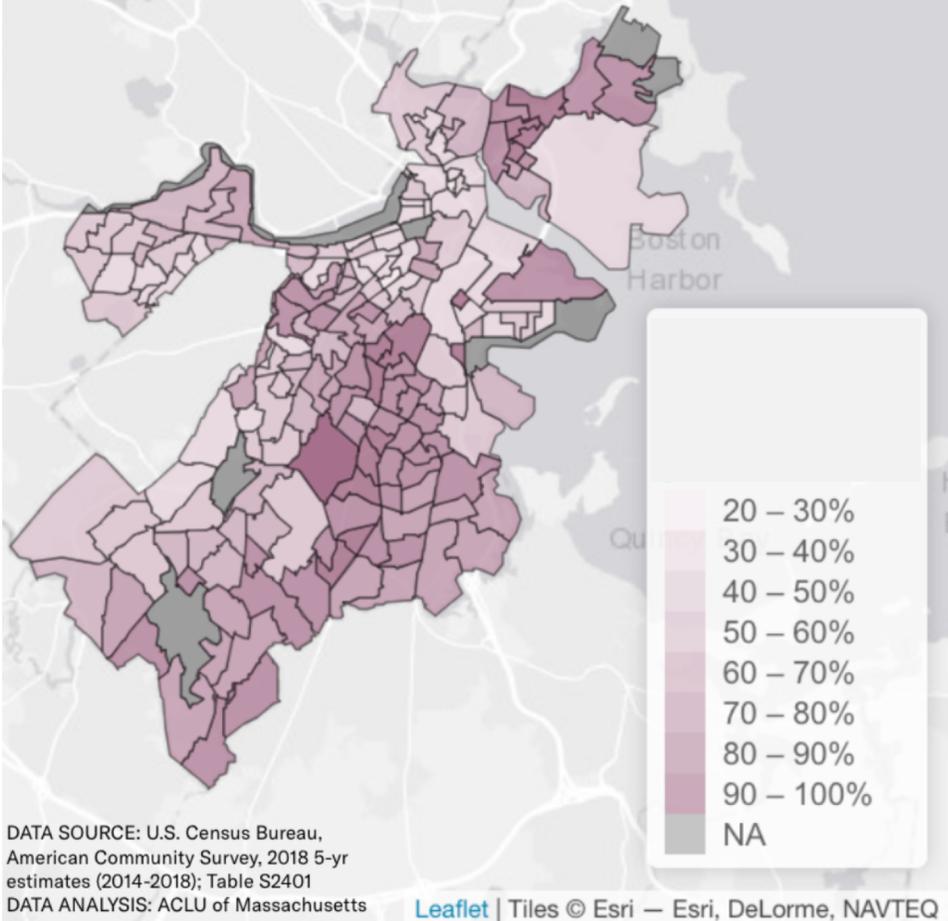
# COVID-19 Reveals Additional Inequities

Share of Workers Who Can Telecommute in U.S., 2018



Source: Bureau of Labor Statistics

Percent of Workers in COVID-19 Essential Occupations in Boston, 2018



# Can We Retain Climate and Health Changes?

- Cleaner air
- More biking/walking and safer streets
- Open space
- Telecommuting
- Food



Himalayas seen from Jalandhar, India



Slow Streets pilot in Arlington, MA

# Can We Reverse the Losses?

- Green Economic Stimulus
- Public Transportation
- Density

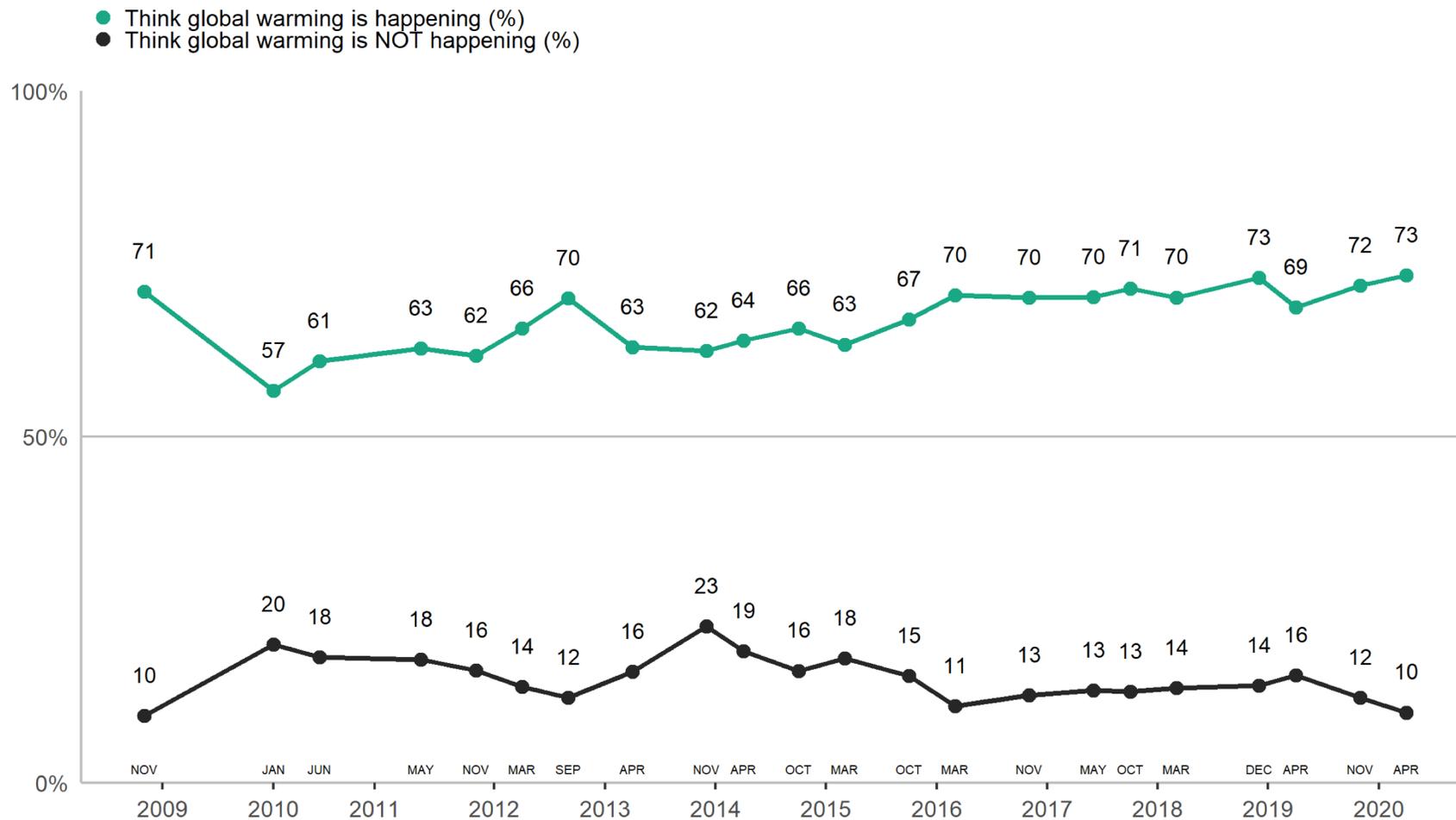


Deep Energy Retrofit in Boston



Disinfection in NYC Subway

# Most Americans Think Global Warming is Happening



Do you think global warming is happening?

April 2020



# Final Thoughts

- Preparedness
- Multiple benefits of clean energy and energy efficiency
- Benefits and costs should be equitably shared



Climate Resiliency for Lower Manhattan



Community PV in Nashville