Climate Change, Energy, and Energy Insecurity in New York City - Summary

This chapter provides an overview of energy trends in New York City and New York State, the challenges and barriers to a clean energy transition, and the implications for human health and wellbeing. We define energy insecurity as the inability to meet energy needs essential for health and wellbeing, as well as the stresses involved in trying to meet those needs. Being unable to perform essential activities (e.g., cooking, lighting a home, keeping comfortable temperatures) leads to negative health impacts for all ages (e.g., respiratory problems, arthritis, and rheumatism).

The chapter provides an overview of existing energy systems and trends in New York City followed by an overview of the concept of energy insecurity and the need for a careful approach to energy transition.

Highlights from this chapter include:

1. **Progress towards energy and emissions reductions should address the issues of energy insecurity and health.** Transitioning energy systems in response to climate change without careful equity considerations may have impacts on energy access, affordability, and reliability. Therefore, equitable implementation of the energy transition is critical.

2. **Energy insecurity results in harm to human health and wellbeing due to high energy costs and frequent energy outages.** Energy insecurity is connected to public health, transportation, energy, and housing– all compounded by climate change as a threat multiplier.

3. **Energy insecurity harms public health due to structural pressures on individuals, households and community-wide institutions.** Low-income households, renters, victims of structural racism, and people with underlying health conditions, disabilities or a dependence on electric powered medical equipment are particularly vulnerable to energy insecurity. Without adequate support, ensuring energy security can compromise other essential needs, like paying for food or healthcare.

4. **Climate change mitigation efforts will result in changes to energy infrastructure.** Any potential energy insecurity or rate increases resulting from maladaptation will disproportionately impact those already marginalized.

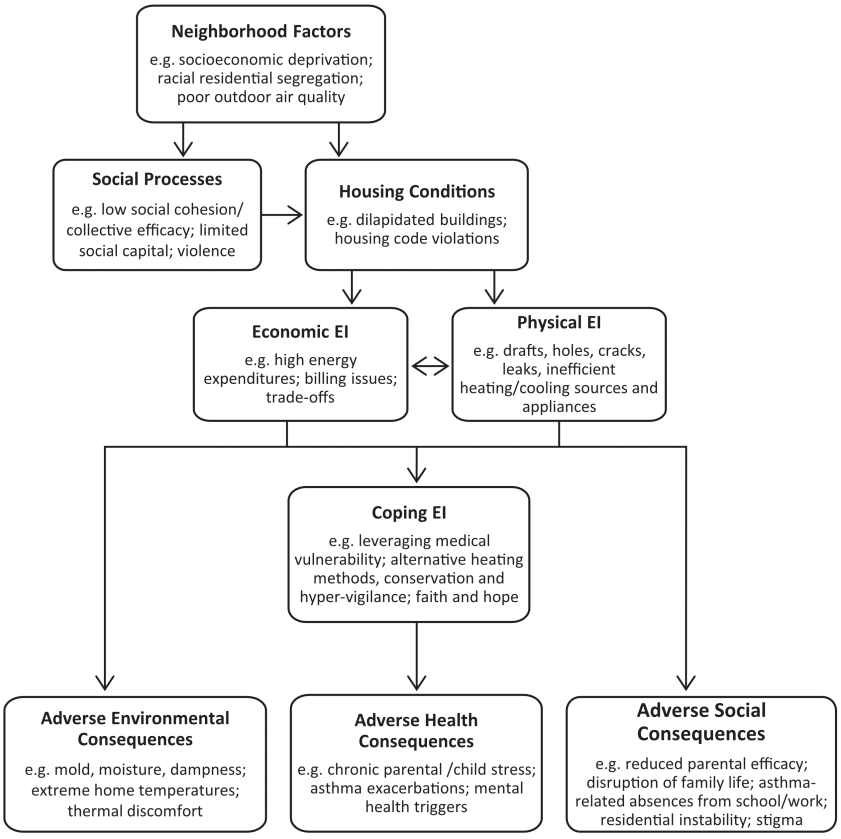
Summary

Climate Change, Energy, and Energy Insecurity in New York City describes how energy insecurity disproportionately affects those marginalized by poverty, discrimination, and structural neglect due to histories of segregation and redlining. Black New Yorkers are significantly more likely to experience utility disconnections and be forced to choose between paying energy bills and spending on essential food and medicine.

Energy insecurity also has indirect health impacts. Using gas stoves, space heaters or candles for heat and light raises fire risk and increases indoor air pollution.

Power outages also have severe health impacts (e.g., people who rely on electrical medical equipment, heat related illness, carbon monoxide poisoning, increased respiratory and cardiovascular illness, or death).

New York City's energy transition should continue to consider the potential impacts to reliability and inequitable access, focus on improving energy efficiency and lowering emissions intensity (e.g., Local Law 97), and address how the energy transition may impact energy insecurity among city residents.



Energy Insecurity: a pathway to disease and disadvantage.
Source: Diana Hernandez (2016)

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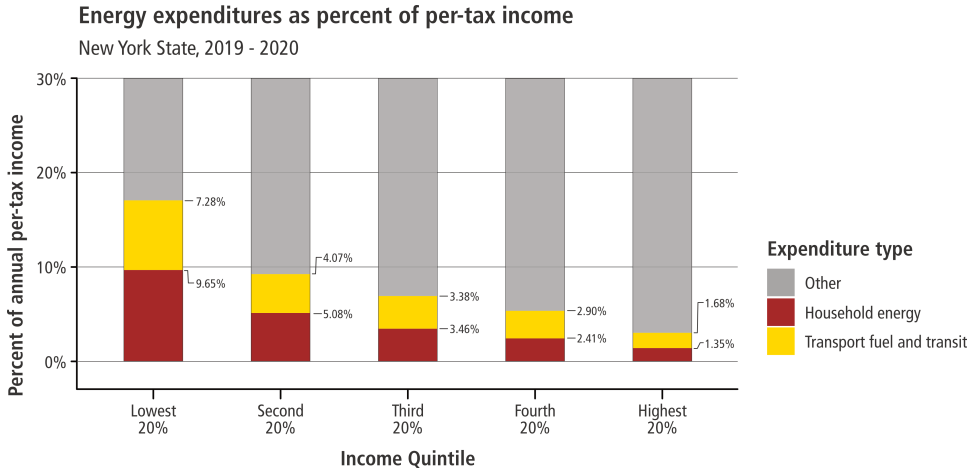
Existing New York City policies protect New Yorkers from utility disconnections during dangerously hot or cold weather, set minimum indoor temperatures between October and May, provide energy subsidies, support energy efficiency and weatherization upgrades in homes, and work to reduce energy prices and forgive debts. The clean energy transition offers additional opportunities to address energy insecurity and protect public health for marginalized populations (e.g., community clean energy ownership, construction of resilient clean energy infrastructure, and discontinuing the use of polluting fossil fuel combustion).

However, more research is needed to better understand how people use energy within their homes, health and safety concerns from energy improvements, the impacts of public transit expansion (in areas like eastern Queens) on employment rates, education, local economic growth, overall community development, and energy cost burdens created by energy transitions.



Energy expenditures as a percent of pretax household income by quintile, New York State. 2019-2020. Figure by the authors using data from the U.S. Bureau of Labor Statistics.

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Acknowledgments:
The Risk Communication Research Group at Cornell University developed initial drafts of this summary. Many thanks to Dr. Catherine Lambert, Lecturer, Dept. of Communication, for leading this chapter summary. Also, thanks to Dr. Katherine McComas, Professor, Dept. of Communication, Dr. Dominic Balog-Way, Research Associate, Dept. of Communication, Alisius Leong, PhD candidate, Dept. of Communication, Rebekah Wicke, PhD student, Dept. of Communication, and Dr. Josephine Martell, Associate Dean of Academics, Graduate School.

Recommended Citation:
Yoon, L., Ventrella, J., Marcotullio, P., Matte, T., Lane, K., Tipaldo, J., Jessel, S., Schmid, K., Casagrande, J., & Elszasz, H. (2024). NPCC4: Climate Change, Energy, and Energy Insecurity in New York City: Summary. www.climateassessment.nyc

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