EO 6: ESTABLISH MAXIMUM HEATING & MINIMUM COOLING TEMPERATURES

Summary

Issue:
The City Multiple Dwelling Law requires a minimum indoor temperature during the heating season. However, there is no maximum temperature, allowing for overheated buildings. In addition, there are no temperature regulations during the cooling season.

Recommendation:
Undertake a study on the feasibility of limiting heating in winter and cooling in summer from central systems.

Proposed Legislation, Rule or Study

The City of New York should undertake a study, to assess the practicality of establishing an upper temperature limit for heating in winter and lower temperature limit for cooling in summer. This study should be completed within a six-month period and should examine whether temperature limits are enforceable and feasible given the range in capacities of existing central systems. If the study determines the limits are enforceable and feasible, it should also propose a regulatory framework for implementing this proposal.

Supporting Information

Issue- Expanded
Many apartment buildings are overheated in winter and many office buildings are overcooled in summer. It is not uncommon for New Yorkers to leave a sweater at work in August or bring one when going to the movie theatre, or to see open apartment windows in the depth of winter. In addition to being wasteful, these practices increase the likelihood of summer brownouts and can affect worker health.

The Multiple Dwelling Law establishes minimum temperatures for multi-family residential buildings. However, neither this law nor any other establishes maximum heating temperatures or limits on summer cooling.

While limiting heating and cooling of central systems may seem like matter of simply changing the temperature on a thermostat, the reality of complex building systems means that regulation of temperatures may prove challenging. For instance, the top apartment in a building might require excessive heat due to poor roof insulation, leading to overheating on lower floors. Conversely, a strong “stack effect” may cause heat to rise rapidly in the building, overheating the top floors. In addition to these technical issues, it may be difficult to enforce such temperature limits. Nonetheless, the potential energy savings for doing so make this an issue for further investigation.

Environmental & Health Benefits
Reducing winter heating and summer cooling would save energy, improve air quality, and improve working and living environments. Reductions in summer electricity demand would also reduce the likelihood of brownouts. Since this proposal is for a study, there are no direct environmental or health impacts.

Cost & Savings
This proposal is for a study, which will have no direct impact on construction costs. However, this proposal was estimated to generate financial savings that will pay for the capital costs in less than three years depending on the building type.

Precedents
There are no known precise precedents for this proposal. The Multiple Dwelling Law provides precedent for regulating indoor temperatures during the heating season.

LEED
Implementation of temperature limits could help a project achieve LEED energy points under almost all of the various LEED rating systems.
Implementation & Market Availability
There are no implementation or market barriers to this proposal.