

# Reducing Embodied Carbon in New York's Building Stock: Developing a Policy Approach for Scale

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## ABSTRACT

Embodied carbon represents almost 1/3 of global emissions from the buildings sector, yet existing programs focus primarily on operational carbon. In contrast to operational emissions that occur over the lifetime of the appliance and building, the majority of embodied carbon emissions occur at the time of manufacture and transport of the new material or product.

In New York, like in other states, the reporting requirements for use of public funds are still tied largely to energy savings. The shift to reporting carbon emissions is leading to different conclusions for use of limited project resources. Utilizing whole building lifecycle analysis, solutions like reusing existing buildings and deconstructing, rather than demolishing, are finally being recognized as the low-cost, impactful alternatives they are. Product substitutions for high-intensity materials like concrete and steel are available now, yet markets for mass timber and other carbon sequestering materials are still in their infancy. Agreement on methods, tools, reporting and disclosure, and limits on construction waste are needed to transform the market. This presentation will provide an overview of efforts at NYSERDA and in the state of New York to reduce embodied carbon from the buildings sector. It will provide highlights from the Climate Action Council Scoping Plan, State Executive Order 22, New York's low-carbon concrete legislation, and New York City ordinance for city agencies to reduce carbon in capital projects. It will also describe coordination with Federal Buy Clean coordination and innovation projects recently awarded for carbon reduction and carbon sequestering materials and business concepts.

## BIOGRAPHY

**Mikhail Haramati** is the Carbon Neutral Buildings Fellow at NYSERDA, where she leads policy development on embodied carbon. She has been with NYSERDA since 2020 where she has been part of the staff team for buildings supporting the NY Climate Action Council and Climate Act Scoping Plan and state buildings sector roadmaps. She has held positions with the CA CPUC, LBNL, and as a private consultant. Prior to joining NYSERDA, Mikhail led the Building Efficiency Research group at the CA Energy Commission, funding innovative technologies to reduce the energy use of buildings.