

## **Fostering Collaboration for Climate Adaptation and Decarbonization in the Built Environment**

July 9, 2024 | Session Overview

### **Speakers**

Edgar Westerhof, Vice President, Arcadis

Ian Minnes, Practice Leader Net Zero Programs, Arcadis

Melissa Hew, Urban and Coastal Resilience Consultant, Arcadis

### **Moderator**

Bruce Risley, RA, CCM, Officer and Sr. Vice President, Arcadis, and  
Board Member, National Institute of Building Sciences

### **Fostering Collaboration for Climate Adaptation Overview**

In a time characterized by rising climate extremes, the Fostering Collaboration for Climate Adaptation and Decarbonization in the Built Environment webinar underscored the significance of bridging the gap between the public and private sectors to effectively prepare for climate challenges.

Led by experts from Arcadis, the session dove into two key aspects of climate action: climate mitigation, which focuses on energy conservation and sustainable operational practices, and climate adaptation, which emphasizes readiness for extreme weather. The evolving regulatory environment, exemplified by measures like Local Law 97 in New York, positions decarbonization of the built environment as a necessity rather than a choice.

On July 9, 2024, NIBS hosted this webinar with subject matter

experts Edgar Westerhof, Vice President, Arcadis; Ian Minnes, Practice Leader Net Zero Programs, Arcadis; and Melissa Hew, Urban and Coastal Resilience Consultant, Arcadis.

The speakers shared several case studies of successful responses to risks following extreme weather events over the past decade and long-term public initiatives. By demonstrating the long-term cost savings for private owners through reduced insurance claims and damages and to public cities/agencies by preventing or reducing future hazard response and recovery costs, the discussion underscored the benefits of public-private collaboration in working toward adapting to and mitigating the effects of climate change.

Bruce Risley, RA, CCM, Officer and Sr. Vice President, Arcadis, and Board Member, National Institute of Building Sciences, served as moderator for the webinar.

## Tactics to Achieve Deep Emission Reductions

Ian Minnes, Practice Leader Net Zero Programs, Arcadis, said over the next 30 years, the world will build the equivalent of a New York City every month.

“The more carbon you save upfront, the less carbon offsets are needed,” he said.

Minnes pointed to several measures of local regulation of energy and carbon from buildings. These include NYC Local Law 97, which says that buildings over 25,000 square feet will be required to meet new energy efficiency and greenhouse gas limits by 2024, with stricter limits coming into effect by 2030. The goal: Reduce the emissions produced by the city’s largest buildings 40 percent by 2030 and 80 percent by 2050.

Other local regulations in other jurisdictions and states include Clean Energy DC, Title 24 in California, and BERDO 2.0 – Carbon Neutral Boston 2050.

Tactics to achieve deep emissions reductions include minimizing the demand of energy, using onsite renewables or alternative fuels, and carbon offsets.

## Incorporating Higher Risk Standards to Drive Robust Adaptive Design

The Arcadis team presented several case studies, including Schouwburgplein (Theater Square) in Rotterdam that’s a testing ground for sustainable and climate-adaptive measures. It aims to be carbon neutral and climate resilient by 2030.

Another case study was for embodied and operational carbon management for Metrolinx on its Ontario Line Metro Development.

Melissa Hew, Urban and Coastal Resilience Consultant, Arcadis, emphasized the importance of combining multiple data sets to get an accurate picture of future climate risk. In alignment with the new Federal Flood Risk Management Standard (FFRMS), it is recommended that multiple data sets be combined to get an accurate picture of future climate risk.

“Much of the data used for traditional resilience planning

may be linear, we need to couple the historic linear data with what we are actually seeing,” she said, adding that data from various time horizons should be used including past, present, and future. This will ensure that adaptation is possible in the face of future uncertainties.

Some of the team’s conclusions:

- Understand the local climate risks through time, scale, and interdependencies.
- Work with high-mark climate projections.
- Systems approach is key to resilience planning.
- Plan and design long term with operation and maintenance in mind.
- Incorporate multiple lines of defense thinking in design.

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