



# HYDRONIC SHELL TECHNOLOGIES

## Upcycling Buildings for Better Living

Millions of old multifamily homes in cold climates must be converted to electric heat pumps by 2050 to reach net-zero emissions targets. However, addressing their leaky and uninsulated facades is necessary to reduce heating loads, thereby avoiding major upgrades to existing electrical infrastructure and reducing customer utility bills. That's where Hydronic Shell comes in, providing a scalable retrofit solution that includes a high-performance building enclosure with integrated hydronic distribution from central electric heat pumps. The pre-fabricated modular system is installed over the existing façade from the exterior with minimal disruption to residents, drastically reducing the cost and complexity of electrification retrofits. The Hydronic Shell is a new affordable way to decarbonize, modernize and upcycle existing buildings for better living.

### Our Team:



David Goldstein, PE

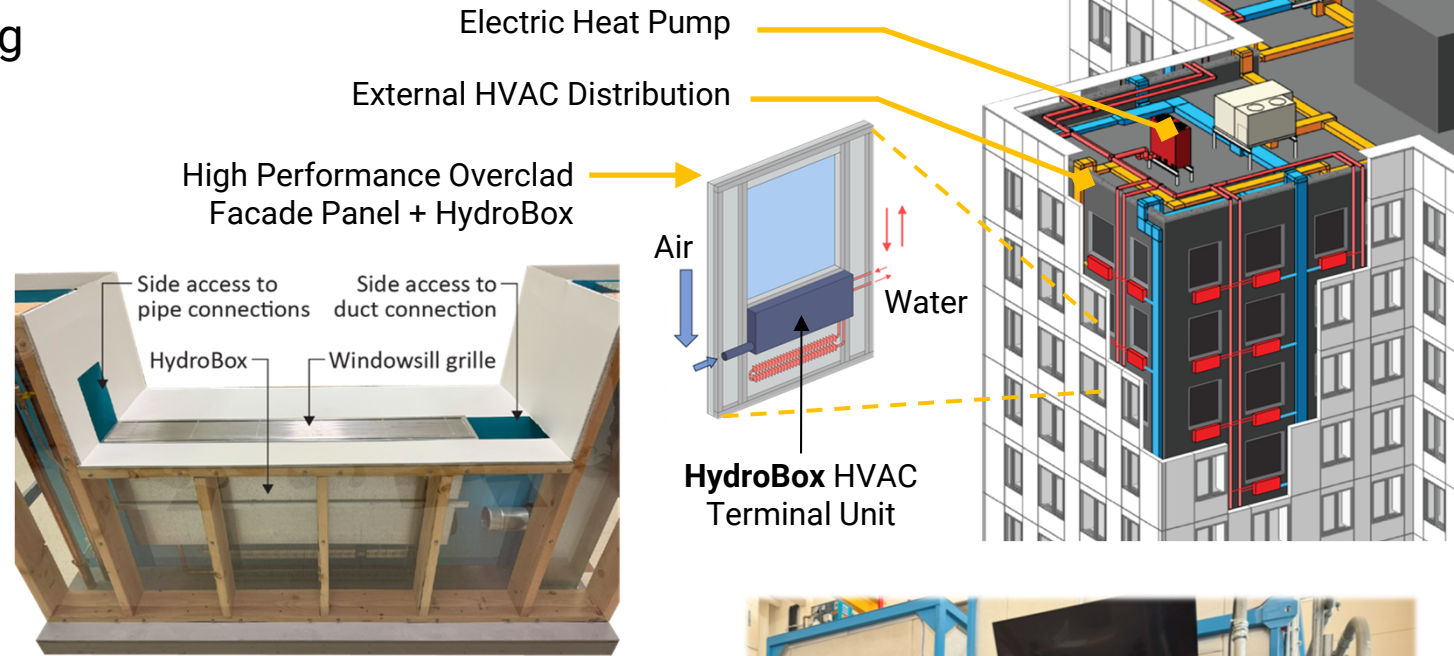


Rajeev Agarwal, MBA

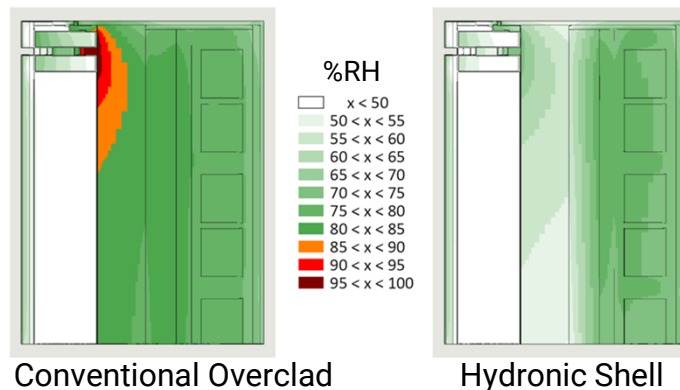


Ben Silverman

### Our Demonstration Partners:



**Serviceability Mock-up: All tasks completed in <15 mins and full replacement in <60 mins**



**2D Hygrothermal Analysis shows eliminated risk of condensation and mold**



**Environmental Chamber Performance Testing**