

PROJECT PROFILE

350 Bay Street

In 2022, the City of Toronto put out a challenge to building owners across the city. 350 Bay joined the effort.

The Project

The climate is changing. In Toronto, buildings are the largest source of greenhouse gas emissions today. To support the City's Net Zero Strategy, the Deep Retrofit Challenge (DRC) was created to support and showcase replicable, cost-effective deep energy retrofits.

Dream Unlimited has a number of retrofit projects planned across their portfolio — and though most of these are residential projects, Dream took this opportunity to expand the scope of their search to include their commercial assets as well. In doing so, they zeroed in on 350 Bay Street, a 13-storey office building in Toronto's downtown core.

For Dream, 350 Bay seemed like a great fit to support the DRC's goals, by showcasing a deep retrofit of a key building archetype in Toronto.

Despite its potential, 350 Bay was unable to cross the finish line, and was one of two successful applicants who ultimately withdrew from the DRC.

We spoke to Nick Gaudio, Associate Vice President of Technical Services at Dream about driving their portfolio towards a greener future, and the challenges that led to 350 Bay's exit from the DRC.

Project Goals:



Reduce energy use intensity (EUI)



Reduce air pollution (GHG emissions)



Reduce utility costs



Create a first case project and expand across portfolio

Building owner:
Dream Unlimited

Energy consultant:
Footprint

Building type:
Commercial office

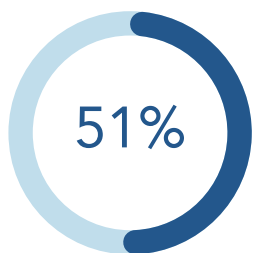
Number of storeys:
13

**Typical office floor
area (m²):**
381

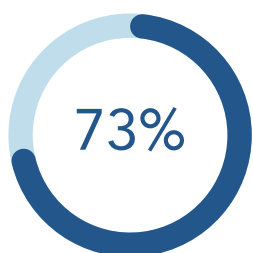
Gross floor area (m²):
5,784

Year built:
1928

Energy Use Reduction*



GHG Emissions Reduction*



* Projected values

The Process

Dream's retrofit plan for 350 Bay was focused mainly on reducing GHG emissions, which meant assessing the building for improved envelope performance, heat recovery opportunities, low-flow water fixtures, lighting improvements, demand control ventilation, and, most importantly, fuel switching from fossil gas to electric alternatives.

The primary measure that Dream settled on was **air-source VRF heat pumps** for space conditioning of the office floors. Along with retrofitting the make-up air unit and making controls improvements, energy modelling showed that these measures were expected to reduce GHG emissions by 73% and energy usage by 51%.



Dream moved through the design stage of the DRC in the spring of 2023, working closely with their in-house team and the City of Toronto to find the best path forward for the building. As they refined their design and assembled benchmark pricing, they started to uncover reasons to pause and re-evaluate.

Following completion of the integrated design process workshop — held to identify opportunities to further build on the measures included in their initial design — Nick's team felt the time had come to reconsider. The workshop helped illuminate financial limitations and a degree of uncertainty that Dream felt could not be overcome, both internally and within the DRC program requirements.

"We made the decision before we created a really big sunk cost," Nick told us. "Before we dove into the design and committed with a designer, before we committed to a contractor."

Unlike their other projects at 723 Bloor and 177 St. George, Dream concluded that the business case for the deep retrofit of 350 Bay was not strong enough to proceed to the implementation phase at this time.

Measures

Considered:

- VRF heat pump system for space conditioning
- Energy recovery ventilation from central exhaust
- Retrofit gas-fired MAU with air-source heat pump
- Recalibrate demand control ventilation for MAU
- Install BAS and implement controls improvements



Project Budget*

\$2,408,000



Estimated Payback*

17 years

* Projected values

Lessons Learned

At the end of the day, the decision to press pause on the deep energy retrofit came down to dollars and cents, logistics, and timelines that make sense for Dream.

“Constructing in an office asset remains a challenge. High interest rates, and increased construction and material costs really swayed the decision on whether 350 Bay remained a feasible venture,” Nick told us. “Strategically, we unfortunately decided to pull that asset out of the Deep Retrofit Challenge.”

Although Dream was not able to complete the deep retrofit the way they originally intended, the battle is not over for the team. Nick has a lot of hope for the future of the building: “We are still working day-to-day to decarbonize and reduce our overall footprint within the building — just not at the same magnitude, or within the timelines that the DRC program required.”

As Dream looks to future-proof their buildings, Nick believes that programs like the DRC, and the incentives they offer, are crucial — allowing building owners to create a strong business case and an opportunity for financial wins, as well as environmental ones.



“The future is still bright for all our assets. Our plans are still there and our intention is still there.”

Nick Gaudio

Associate Vice President of Technical Services for Dream Unlimited



Learn more about the participating buildings' proposed emissions reductions and deep retrofit measures [here](#)



For more information on the Deep Retrofit Challenge, please contact drc@toronto.ca