SRG IMPACT

SRG

CASE STUDY

SRG's Hybrid Heat Pump Retrofit for a Low-Carbon Future

THE PROJECT

10 HYBRID AIR SOURCE HEAT PUMPS
Markham, Ontario

Project Goals

Reduce Carbon Emissions: Achieve at least a 40% reduction in Scope 1 emissions.

Enhance Energy Efficiency: Optimize heating and cooling operations to lower overall energy consumption.

Demonstrate Leadership in Sustainability: Commit to low-carbon innovation and encourage other businesses to adopt similar HVAC solutions.

Challenges

- Capital Costs
- Changing Status Quo
- Commissioning

Introduction

At SRG, sustainability is at the core of our business. To reduce our carbon footprint and enhance energy efficiency, we replaced ten rooftop units (RTUs) with **hybrid air source heat pumps (ASHP)**. This decarbonization project is a significant step toward a lower-carbon future, and we take great pride in leading by example. We hope this case study serves as both a **call to action** and a **practical resource** for businesses looking to implement heat pumps in commercial buildings—an essential strategy for reducing emissions and advancing sustainable operations.

>40% REDUCTION IN SCOPE 1 EMISSIONS

electrification

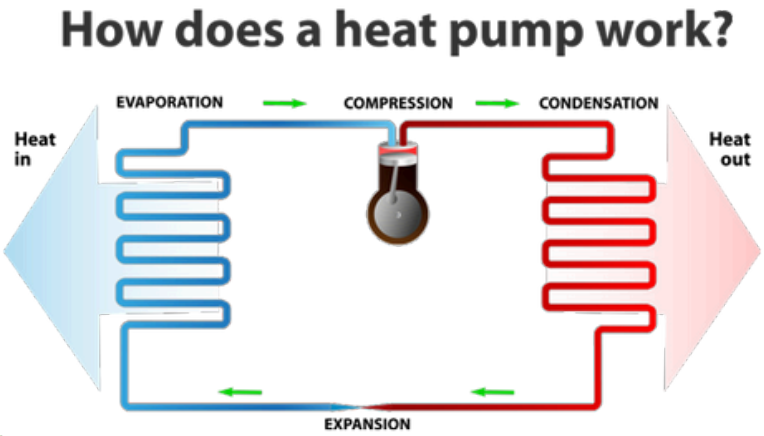
decarbonize

sustainability

What is a Heat Pump

A heat pump is like a two-way air conditioner. In the winter, it pulls heat from the air outside (even when it's cold) and brings it inside to warm the building. In the summer, it works in reverse, moving heat from inside to the outside to keep things cool (exactly like an air conditioner).

Instead of burning fuel like a furnace, a heat pump uses electricity to move heat, making it a more energy-efficient and eco-friendly way to heat and cool a building.



What is a Hybrid Heat Pump

A hybrid heat pump is the same as above, but it also has the option to use gas-powered heating. Most of the time, it will use electricity to heat and cool a space. But in extreme weather conditions (-35°C) it has gas as a back up power source since heat pumps are less efficient in extreme cold weather.

Why did SRG Choose Hybrid?

Even though this project is to eliminate/reduce fossil-fuel based heating, the gas backup is simply that: a backup option in extreme circumstances to reduce risk. The odds of -35°C days are fairly low but it’s there if needed.

Why are Heat Pumps a Sustainable Option?

Lower Carbon Emissions: They reduce or eliminate the need for gas heating, cutting Scope 1 emissions and decarbonizing operations.

Energy Efficient: Heat pumps can be 3 to 5 times more efficient than traditional heating systems, using less energy to provide the same comfort.

Works with Renewable Energy: When powered by solar, wind, or other renewables, heat pumps can provide 100% clean heating and cooling.

Bonus Benefit for SRG: Since our Canadian manufacturing facility is in Ontario, shifting from gas to electricity automatically lowers our carbon footprint. Ontario's electricity grid is one of the cleanest in North America, with 25% powered by hydroelectric energy and 50% nuclear.

Key Factors to Consider for HVAC Retrofits

- Timing Matters – The best time to upgrade is when HVAC equipment reaches the end of its life cycle. This ensures a smooth transition to energy-efficient and sustainable options without unnecessary downtime.

- Know Your Building – Before commissioning new equipment, assess your building's design. Many buildings are out of balance, leading to hot spots, cold spots, and poor air circulation, which increase energy consumption and operational costs.

- Work with the Right Partners – Not all HVAC installers are experienced with heat pumps and low-carbon solutions. Choose a knowledgeable partner who can optimize your system for efficiency, emissions reduction, and long-term savings.

- Optimize for the Future – Consider smart controls, demand-based ventilation, and hybrid systems to ensure flexibility and resilience in changing energy landscapes.

Decarbonizing with Heat Pumps: A Step-By-Step Process

ASSESS

Understand your building's design and heating/cooling needs.

OPTIMIZE

Ensure existing equipment is properly sized and controls are efficient.

COLLABORATE

Partner with an HVAC expert who prioritizes low-carbon solutions.

DESIGN

Choose equipment that aligns with your building's needs and sustainability goals.

INSTALL

Upgrade to high-efficiency, low-carbon HVAC systems.

MONITOR

Maintain, fine-tune controls, and maximize performance.

Maximizing Savings with HVAC Rebates and Incentives

When upgrading to energy-efficient HVAC systems, rebates and incentives can significantly reduce upfront costs. There are often local, federal, and utility-based programs offering financial support for businesses investing in low-carbon solutions like heat pumps. Additionally, some corporate sustainability initiatives provide funding or incentives to encourage emissions reductions.

Exploring these opportunities can make HVAC retrofits more affordable while accelerating the transition to a greener, more efficient building.

Future-Proofing with Heat Pumps

Heat pumps are not a "new" technology, but with the growing push for electrification and decarbonization, their adoption has significantly increased, making them a staple of low-carbon building retrofits.

Unsurprisingly, Europe has made huge progress with heat pumps. According to the European Heat Pump Association (EHPA), "industrial heat pumps have the potential to cut 25% of EU manufacturing emissions." This is especially significant, as over 60% of the energy consumed by European industry is used for heat in manufacturing processes. These substantial greenhouse gas reductions can be achieved with relatively simple equipment upgrades.

Our Partners

This project would not have been possible without the invaluable support of our trusted technical advisors and installers. We extend our sincere gratitude to MET Digitized for their expertise in analyzing our building's design, providing us with the critical insights needed to make cost-effective decisions. A special thank you also goes to DBS Mechanical, our dedicated installer, for their collaboration and commitment to implementing low-carbon solutions.

DBS would like to express our gratitude to SRG for this opportunity. We are committed to delivering top-quality electrical, mechanical, and controls installation services, while consistently implementing energy-efficient and sustainable solutions tailored to meet the unique needs of our clients.

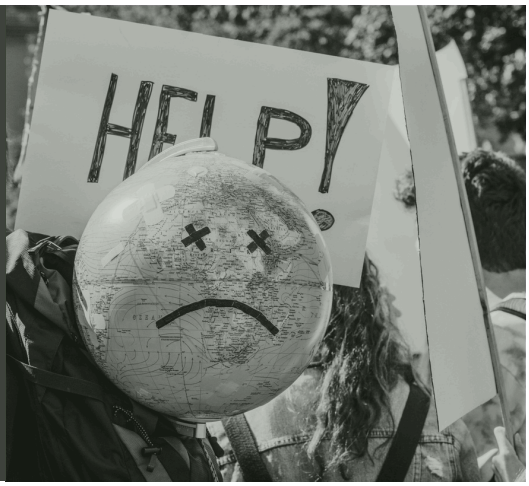
www.dbsair.com

BORP by MetDigitized was designed to help building owners and operators accelerate their decarbonization strategies. Through advanced 3D imaging and building mapping, BORP empowers you to digitize, organize, analyze—and decarbonize. It was a pleasure collaborating with SRG, and we look forward to building a more sustainable future together.

www.metdigitized.ca

CALL TO ACTION

Implement Low-Carbon Operations to Reduce the Promotional Products' Industries Impact on the Environment



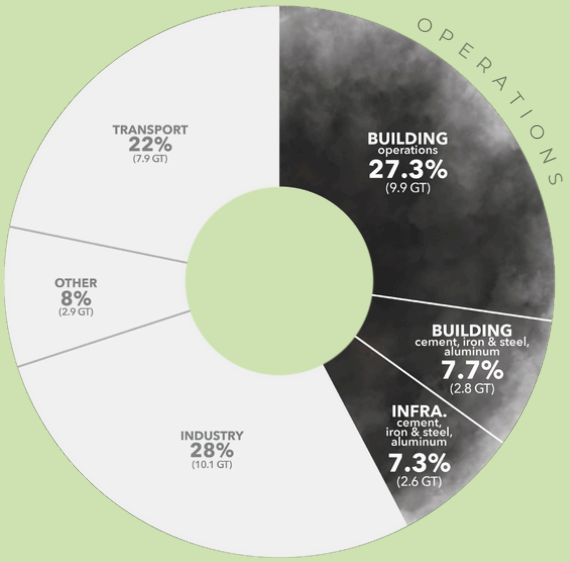
The promotional products industry has many opportunities to reduce its environmental impact, from using recycled materials and sustainable packaging to minimizing travel emissions. However, one of the most effective ways to make meaningful progress is by focusing on direct emissions—those within your immediate control. Prioritizing these emissions offers a straightforward path to meeting sustainability targets and driving real change in the fight against climate change.

The built environment accounts for approximately 42% of global CO_2 emissions annually. As suppliers, vendors, and distributors operating facilities, reducing Scope 1 emissions is one of the most direct actions we can take. Decarbonizing operations isn't just a commitment to sustainability—it's a necessary step toward a low-carbon future.

"Companies should be making progress on decarbonizing their Scope 1 and 2 emissions before they are expected to tackle the more difficult Scope 3...Companies could make more progress on Scope 1 if they were able to simplify and focus their attention."

- Lucas Joppa & Elizabeth Willmott
www.Nature.com

TOTAL ANNUAL GLOBAL CO2 EMISSIONS



SUSTAINABILITY AT SRG

This project is just one step in SRG's larger sustainability journey. As we continue to invest in low-carbon solutions and renewable energy, we remain committed to minimizing our environmental impact while delivering high-quality products and services.

We hope this case study not only demonstrates that commitment but also serves as a resource and inspiration for others in the promotional products industry to take action. Decarbonizing operations comes with challenges and successes, but every step forward delivers real and immediate benefits—both for business and for the planet.

10 AIR SOURCE HEAT PUMPS

>40% REDUCTION IN SCOPE 1 EMISSIONS BY 2027

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Contact us to learn more about sustainability at SRG:

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