

May 3, 2023

General Issues Committee  
City Council  
City of Hamilton

**RE: HCE Written Delegation to: Hamilton Regional Decarbonization Hub Report - CM22013(a) / JSC22046(a) / PED22176(a) / HSC22046(a)**

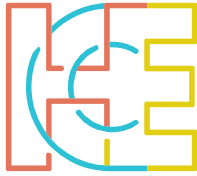
HCE is pleased to support the finalization of the City funding and the formation of the Hamilton Regional Decarbonization Hub (HRDH) that is being presented to Hamilton City Council's General Issues Committee (GIC) on May 3, 2023.

The reports offer an overview of the HRDH, a new and inclusive approach to speed progress to Net-Zero at a systems level. The HRDH is a complementary initiative to Hamilton's Community Energy and Emissions Plan - ReCharge Hamilton and is intended to work with other collaborative efforts and initiatives to deliver collective action on climate change. In our view, the HRDH represents a unique opportunity for multiple stakeholders — public, private and not-for-profit — to co-invest and act in creating a low-carbon society that will play out everywhere in Hamilton.

HCE was founded in the early 2000s with the deregulation of Ontario's electricity sector with a mandate to reduce Green House Gas emissions (GHGs). HCE is wholly owned by the City of Hamilton, governed by an independent Board of Directors and has grown to become a utility solutions provider in the nonregulated energy and telecommunications markets. HCE designs, builds, operates and maintains critical community infrastructure, including district energy networks, renewable energy systems, and internet and metro area fibre networks.

HCE has become an expert in delivering kilowatts, kilojoules, and kilobytes — the currency needed to power our lives in the digital age and is well-placed to play an increasingly active role in climate change mitigation and adaptation.

For example, HCE currently contributes to lowering GHG emissions through decarbonizing building heating and reducing climate impacts by providing reliable access to local energy and telecom services. HCE is also leading a diverse group to develop the local business case for using industrial residual (waste) heat as a renewable resource to



decarbonize building heating. This massive resource in Hamilton has been proven globally but has never been commercialized and adopted in North America.

HCE endorses and fully supports the formation of the HRDH - a collaborative that is well suited to help lead transformative actions applicable to not only industry but the broader community. HCE sees the HRDH as a way to involve key players, including industry, in opening new pathways to Net-Zero, adopting hydrogen as an alternative fuel source, and using residual thermal energy as a renewable resource for building heating. This is why HCE is a founding investor in the HRDH.

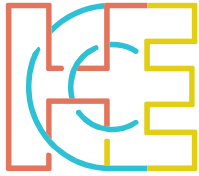
In our view, HRDH and ReCharge Hamilton offer our community two ingredients required for long-term success:

- One — a focussed approach needed to accelerate immediate action on climate change; and,
- Two — a united community needed to secure additional funding from higher orders of government essential to move from ideas to implementation.

HCE believes minimizing the impact of climate change is all about maximizing the utilization of every unit of energy, and this is only made possible through collaboration and connectivity.

Presently, GHGs attributable to buildings account for 28% of Hamilton's emissions profile. This comparatively low value for the GTHA is a function of the massive carbon emissions associated with Hamilton's industry and, unfortunately, is not the result of better buildings. As Hamilton's manufacturing base decarbonizes (as it is committed to doing), if nothing is done to address building-related emissions, GHGs attributable to buildings in Hamilton will grow to roughly 45%, typical of other GTHA cities. Buildings will become the single largest source of GHGs. Building heating in Hamilton and elsewhere must be decarbonized to meet Canada's climate action goals.

A study performed by the Hamilton Chamber of Commerce released in 2021 identified enough residual/waste thermal energy from Hamilton's industrial bayfront to reduce Hamilton's building sector carbon footprint by 200,000 tCO<sub>2</sub>e/year. The study affirmed that critical local stakeholders are keen to explore this pathway to transform Hamilton's energy landscape, create a residual/waste heat market, and significantly lower regional carbon emissions in Hamilton's building sector.



HCE is now leading the next step in implementing this valued renewable residual/waste heat resource. Communities must harvest these large quantities of industrial residual/waste heat routinely released to the atmosphere and watersheds (studies show that upwards of 60% of industrial energy is "wasted," including energy produced by burning fossil fuels). Cities must use this heat to not only reduce GHGs but, as importantly, reduce the added burden on electrical generation, local and regional power grids and distribution systems as markets "electrify."

While the shift to decarbonization will create many challenges, it will also provide opportunities, especially on two related fronts:

- Building smart, low-carbon integrated energy networks needed to support mass electrification destined to transform Hamilton and beyond; and,
- Harvesting industrial residual/waste energy so we can put it to use heating homes, businesses and institutions.

HCE has a vision that by 2050, Hamilton and other parts of the GTHA will have a low-carbon green thermal corridor that transports industrial residual/waste heat harvested across Hamilton's Bayfront Industrial Area to densely populated demand nodes in our city and beyond for building heating. This green thermal corridor will be vital to an innovative, next-generation Integrated Community Energy (ICE) network —smart, innovative, digitally-enabled, and efficient. This ICE network, designed to scale up in multiple phases, will grow to serve existing and new buildings. It will offset the need for incremental grid electrical generation capacity with the associated electrical transmission and distribution upgrades that would otherwise be required to decarbonize space heating through electrification. This initiative will create a market for industrial residual/waste heat, an enduring by-product of steelmaking and other manufacturing processes in the industrial zone and be a factor in anchoring the industrial base in Hamilton. Best practices from Scandinavia and around the globe will be incorporated to ensure the viability of large-scale district energy systems fueled by renewable industrial residual/waste heat. Hamilton will become a lighthouse example of this sustainable approach to decarbonizing space heating and cooling in Canada. In addition to its environmental benefits, the proposed "green thermal corridor" will help attract and retain local businesses, boost building starts, provide jobs, and generate tax revenues.



Hamilton has tremendous potential on the path to a decarbonized world - The Hamilton Advantage. This advantage will allow Hamilton to compete and win as a prosperous Net-Zero community with:

- An engaged and supportive council and citizenry that understands the need to act on a growing climate emergency;
- A diversified economy led in large part by a manufacturing cluster committed to decarbonization;
- Ownership of a non-regulated Integrated Utility (HCE) dedicated to the decarbonization of building heating in Hamilton;
- A vast industrial residual (waste) heat renewable resource; and
- A growth trajectory that will create a viable energy innovation and investment market.

We encourage councillors to accept the recommendations offered by city staff and move forward with the HRDH. Moving forward will signal Hamilton's commitment to be a leader in decarbonization and climate resiliency, and most importantly, it will set the stage for immediate tangible action.

Sincerely

David Inkley  
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Hamilton Community Enterprises

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