

August 5, 2022

General Issues Committee

City Council

City of Hamilton

RE: HCE Written Delegation to:

Hamilton's Climate Action Strategy

Implementation Resources and Governance Report - CM22016 /

PED22058(a) / HSC22030(a)

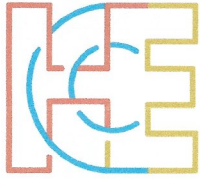
AND

Hamilton Regional Decarbonization Hub Report - CM22013 / JSC22046 / PED22176

HCE is pleased to support Hamilton's Climate Action Strategy and the Hamilton Regional Decarbonization Hub that is being presented to Hamilton City Council's General Issues Committee (GIC) on August 8, 2022.

The first report outlines Hamilton's Climate Action Strategy and proposed activities that stem from the Community Energy and Emissions Plan and the Climate Adaptation Plan. The second report offers an overview of a proposed Hamilton Region Decarbonization Hub, a new and inclusive approach to speed progress to Net-Zero at a systems level. These are *complementary initiatives* intended to link up with other collaborative efforts to deliver collective action on climate change. These two reports were informed by extensive community consultation, including many interactions with HCE and its partners. And in our view, they represent a unique opportunity for multiple stakeholders — public, private and not-for-profit — to *co-invest* 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 owned by the City of Hamilton and governed by an independent Board of Directors and has grown to become a utility solutions provider in the non-regulated 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.

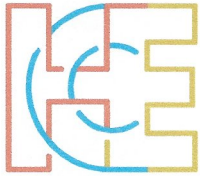
Since the June 1, 2022, GIC meeting when the Community Energy and Emissions Plan ("CEEP") was presented to Council, city staff have developed a Climate Strategy for Hamilton. This strategy encompasses the *CEEP*, the *Climate Adaptation Plan*, a new *Climate Change Office*, and the creation of a *Hamilton Regional Decarbonization Hub* focused on governance, administrative and resource requirements needed to move the community's transition to Net-Zero forward.

HCE believes the climate strategy is fair in assessing the climate crisis and intentional in proposing credible solutions. HCE applauds, for example, the recommendation to establish a centralized *Climate Change Office* within our municipal government responsible for coordinating climate actions across our whole community, monitoring progress, and reporting to the public. Establishing this office would demonstrate the importance of the climate strategy as a citywide priority and help ensure that resources from multiple departments are in place to get the job done. It is our understanding that other leading municipalities in Ontario have set up a local climate office, and Hamilton is encouraged to do the same.

Similarly, HCE supports the establishment of a *Community Advisory Committee* to facilitate the flow of information and ideas among stakeholders. HCE has offered to be part of this committee.

HCE appreciates that the strategy holistically approaches climate action with a twin focus on "mitigation" — the thrust of the *Community Energy and Emissions Plan* — and "adaptation" — the essence of the *Climate Impact Plan*. For example, HCE currently contributes on both fronts by lowering GHG emissions through decarbonizing building heating and reducing climate impacts through resiliency measures, such as providing reliable access to local energy and telecom services.

Well-defined low-carbon transformations to reach short- and long-term targets are a critical component of the strategy. HCE supports these transformations, including those HCE can lead and help drive, such as harvesting industrial residual heat to fuel an expanded district energy network and increasing the use of renewables.



HCE welcomes the ability to easily plug into components of a *comprehensive city strategy* and work alongside others with specialized skills and know-how. It is an effective way to engage partners in what they do best.

HCE also endorses and fully supports the formation of a *Hamilton Regional Decarbonization Hub*. The *Decarbonization Hub* — a collaborative with a significant presence of top manufacturers — is well suited to help lead transformative actions related primarily to industry but applicable to the broader community. HCE sees the *Decarbonization Hub* as a way to involve key players, including the steel industry, in opening new pathways to Net-Zero, including the adoption of hydrogen as an alternative fuel source and the use of residual thermal energy as a renewable resource for building heating. It is for this reason that HCE is a founding investor in the proposed hub.

In our view, Hamilton's Climate Action Strategy — and its component parts — offer our community two ingredients required for long-term success:

One — a *focussed approach* needed to accelerate immediate action on climate change; and,

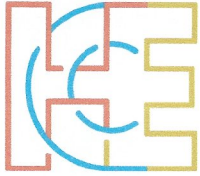
Two — a *united community* needed to secure additional funding from higher orders of government essential to move from ideas to implementation.

HCE believes it's all about minimizing the impact of climate change by maximizing the value 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 is a function of the massive GHG emissions associated with Hamilton's industry and, unfortunately, is not a result of better buildings. As Hamilton's industry 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 and be 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 tCO₂e/year through an expanded district energy system.

The study affirmed that key local stakeholders — including leading manufacturers, developers, and the municipality — are keen to explore this pathway to transform Hamilton's energy landscape, create a market for



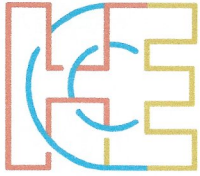
residual/waste heat, and significantly lower regional GHG emissions in Hamilton's building sector. Communities must harvest these large quantities of industrial residual/waste heat routinely released to the atmosphere and watersheds (studies show that upwards of 60% of industrial energy is "wasted," including energy produced by burning fossil fuels). Cities must use this heat to reduce GHGs as well as 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 the GTHA 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 Hamilton and beyond for building heating. This green thermal corridor will be a vital component of an innovative, next-generation Integrated Community Energy (ICE) network — *smart*, innovative, digitally-enabled, and efficient. This network, designed to scale up in multiple phases, will grow to serve existing and new buildings. It will offset the need for incremental electrical generation capacity and the associated electrical transmission and distribution upgrades that would otherwise be required to decarbonize space heating through electrification. It will also help ensure that the expansion of low-carbon district energy serves the building boom in Hamilton and other parts of the GTHA. 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. Best practices from Scandinavia and other regions will be incorporated to ensure the viability of large-scale district energy systems fueled by industrial residual/waste heat. Hamilton will become a lighthouse example of this sustainable approach to decarbonizing space heating and cooling in Canada.

HCE is working with the City of Hamilton, the Hamilton Chamber of Commerce, HIEA and BACCC, as well as many others, to determine the feasibility of a low-carbon thermal corridor with the potential to serve all parts of our city and beyond. In addition to its environmental benefits, the proposed "green thermal



corridor" would help attract and retain local businesses, boost building permits and starts, provide jobs, and generate tax revenues.

Seeing this game-changing opportunity featured in Hamilton's Climate Strategy is exciting and encouraging as it could bring low-carbon heating to more than 80 million square feet while creating a market for residual (waste) heat that would otherwise be expelled into our atmosphere and waterways.

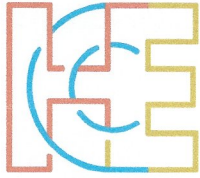
HCE will be a champion of Hamilton's Climate Strategy and will contribute in many ways, including:

- Existing and growing integrated thermal energy networks;
- Local, regional and global partnerships in thought leadership as well as best practices in Net-Zero and the integration of energy and data networks;
- Working arm in arm with manufacturers, the lifeblood of our local and regional economies, supporting their march toward a low-carbon future;
- Engaging multiple parties, including utility providers, to imagine and implement integrated energy systems designed to effectively meet tomorrow's energy needs without burning more fossil fuels;
- Leveraging Hamilton's existing renewable energy assets, including HCE's district energy systems, to encourage fuel switching and decarbonize space heating;
- Developing and promoting policies, standards and opportunities that support Net-Zero in the buildings sector, including options to connect to integrated thermal and data networks; and,
- Partnering with manufacturers to harvest their industrial residual (waste) heat as the backbone of a low-carbon thermal network designed to drive sustainable development and ensure energy resilience and security.

Again, HCE values the input of everyone who contributed to the two reports before GIC today.

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.

Adoption of these reports 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
Vice President – Engineering & Development
Hamilton Community Enterprises

Jeffrey Cowan
President and CEO
Hamilton Community Enterprises