

INDUSTRIAL WASTE HEAT RECOVERY PROJECT

Inaugural Advisory Panel Breakfast

October 30, 2019 at Royal Botanical Gardens

Attendee Feedback Organized by our Four Project Strategy Directions



Hamilton Chamber Policy Analyst Bianca Caramento shared an update on the project's progress

Background

The Hamilton Chamber of Commerce is spearheading a business-led project to advance waste heat recovery systems and technologies across Hamilton's Bayfront Industrial Area.

The Project Working Group, which includes representatives from HCE Energy Inc., Hamilton Oshawa Port Authority and the W Booth School of Engineering Practice and Technology at McMaster University, hosted a breakfast event with key advisors for the purpose of sharing our progress and gathering additional feedback. This document provides context and a summary of attendees' suggestions.

Project Impact Statement

By December 31, 2020, identify technically feasible and economically viable industrial waste heat diversion opportunities to drive competitiveness and reduce GHGs for businesses in Hamilton's Bayfront Area.

Desired Long-Term Outcomes

Use the project report to unlock support (funding, enabling policies, infrastructure, relationships) needed to advance select opportunities and related activities, including system implementation, education and training, research and development, etc. across the study area and beyond.

Breakfast Event Agenda

Opening Remarks ~ Keanin Loomis, Hamilton Chamber of Commerce

Project Progress Report ~ Richard Allen and Bianca Caramento, Hamilton Chamber of Commerce

Public Health Perspective ~ Trevor Imhoff, City of Hamilton

Land Use Planning Perspective ~ Tiffany Singh, City of Hamilton

Roundtable Discussion and Report Outs ~ All

Next Steps: Creating a Waste Heat Map, Dr. Chi Tang, W Booth School of Engineering Practice and Technology, McMaster University

Breakfast Attendees

Richard Allen, Hamilton Chamber of Commerce

Ian Borsuk, Environment Hamilton

Bianca Caramento, Hamilton Chamber of Commerce

Stewart Cramer, Next Generation Manufacturing Canada

Rafiq Dhanji, Sustainable Hamilton Burlington

Troy Hare, Hamilton Utilities Corporation

Trevor Imhoff, City of Hamilton ~ Public Health

David Inkley, HCE Energy Inc.

Nick Klip, Enbridge Gas Inc.

Richard Koroscil, Bay Area Climate Change Council

Karen Logan, Hamilton Industrial Environmental Association

Keanin Loomis, Hamilton Chamber of Commerce

Anthony Mantecon, Mantecon Partners Inc.

Nick Markettos, McMaster University

James Meers, Hamilton Chamber of Commerce

Ankur Mehrotra, HCE Energy Inc.

Avani Mehta, McMaster University ~ Faculty of Engineering (Grad Student)

Christine Newbold, City of Hamilton ~ Planning

Daniel Noce, Enbridge Gas Inc.

Alfonso Principato, City of Hamilton ~ Economic Development

Shelley Rogers, City of Hamilton ~ Public Works

Ian Shaw, ArcelorMittal Dofasco

Tiffany Singh, City of Hamilton ~ Planning

Nicole Smith, Kumon Group

Yaseen Syed, McMaster University, Faculty of Engineering (Grad Student)

Dr. Chi Tang, PhD, McMaster University ~ Faculty of Engineering

Jason Tillmanns, National Steel Car

Keith Whitely, ArcelorMittal Dofasco

Sara Yonson, Hamilton Oshawa Port Authority

ATTENDEE FEEDBACK

CONVENE and COLLABORATE

- Clarify the project's role given that many experts at the company level are already looking into waste heat recovery opportunities
- Need to think and work at a "systems level"
- Get people to collaborate — Hamilton Chamber can help with this
- Leverage the Bay Area Climate Change Council — present at a meeting, also explore Clean Air Hamilton's Upwind Downwind Conference
- Integrate with the City of Hamilton's Bayfront Industrial Strategy — place waste heat recovery into a broad and compelling narrative to retain and attract companies, and drive innovation and local employment
- Project can "connect the dots" among many existing initiatives



PRESENTER Tiffany Singh, City of Hamilton, offered a long-term, land use planning perspective



PRESENTER Dr. Chi Tang, PhD, W Booth School of Engineering Practice and Technology at McMaster, shared insights on the project's field-based research methodology

RESEARCH

- Addressing economic viability *is* the key — how can this project help remove/mitigate barriers to implementation? — add case studies of relevant success stories
- Tie to a reduction of Hamilton's GHG industrial emissions — act on this big opportunity to demonstrate regional impact
- Connect existing heat "sources" and "sinks" — we don't necessarily need to create new uses for waste heat
- Continue to explore disruptive thinking and novel uses (aquaponics, drainage, road heating, etc.)
- Conduct a deep assessment of waste heat — more than just quantity
- Fresh opportunities from new and emerging technologies — e.g., heat pumps
- Provincial reporting — leverage new requirements

ANALYZE

- Focus on ROI
- Seek opportunities to demonstrate a positive impact on Hamilton’s national image
- Opportunity: lower quality heat is now usable
- Link with city-wide “community energy plan” — city is also mapping energy-intensive areas (spatial mapping)
- Focus on financial hurdles, risk mitigation and predictability
- Need to show ROI at every stage in the process over long periods of time — induced economic activity
- Show local/regional economic impacts — a 3% energy efficiency gain by each company can add up to a collective impact



PRESENTER Trevor Imhoff, City of Hamilton, promoted the health benefits of increased waste heat recovery



McMASTER UNIVERSITY RESEARCH TEAM Avani Mehta, Dr. Chi Tang, PhD, Yaseen Syed

RECOMMEND and SUPPORT

- Balanced approach — economic, social and environmental
- Remain mindful that local companies need to compete globally
- Funding through Next Generation Manufacturing Canada and other sources
- Shared funding requests across Hamilton and Burlington
- Future joint venture partnerships (P3s)
- Leverage networks, go beyond Hamilton — focus on “scalability”
- Fight bad image, attract foreign direct investment, drive economic development
- Embed in a larger strategy for Hamilton’s waterfronts (harbour and lakeshore)
- Report through Energy Star regulations for industry

Immediate Next Step

Support the McMaster Research Team from the W Booth School of Engineering Practice and Technology in conducting its field work to develop a waste heat energy map for Hamilton's Bayfront Industrial Area.

Contacts

Richard Allen, Hamilton Chamber of Commerce
r.allen@hamiltonchamber.ca | 905-572-0363

Bianca Caramento, Hamilton Chamber of Commerce
b.caramento@hamiltonchamber.ca | 905-522-1151 x 230

Project Funding



Project Working Group Member Organizations



