

## ***Appendix B: Hamilton Region Decarbonization Hub Concept and Draft Proposed Governance Overview.***

### ***A new approach to speed progress to Net Zero***

#### **Introduction**

This appendix provides an overview of the Hamilton Region Decarbonization Hub (the “Hub”) model and draft governance framework. The Hub’s main goal is to align and coordinate currently disparate interests and sectors to take a cooperative Hamilton-based approach to create pathways to net zero emissions across the city by 2050 and help accelerate the pace of decarbonization.

#### **Background**

The Hub is a new model of national interest, where key industries, governments and stakeholders collaborate to develop investable opportunities on pathways to net zero and will be a first of its kind in Canada. The Hub will be designed and operated to give real-time insights and learnings to other areas across the country, including key industrial areas, so other regions can accelerate their progress on emissions reduction in ways that are compatible with the net zero, emissions elimination paradigm.

The Hub presents an evolution of the more limited Hub concept model that may focus solely on one decarbonization pathway (i.e. hydrogen only) into a full, regional Decarbonization Hub, centred on forms of low or zero carbon and their interconnections. The Transition Accelerator, in collaboration with key Hamilton stakeholder partners, proposes the challenge of decarbonizing Hamilton’s advanced manufacturing, buildings and transportation systems that can be strongly influenced and supported along a decarbonization pathway via opportunities demanded by the steel production and related support industries. The Steel industry – as a large economic engine - but also a large emitter, also creates an ideal anchor industry that has high potential to be reframed into a system-level change where solutions to decarbonize the steel sector can also help decarbonize other sectors and emissions sources such as transportation, buildings, and other industries (e.g. advanced manufacturing).

#### **Decarbonization Hubs**

Hubs are coordinated, synergistic, regional initiatives for economic development to create an economically viable value chain where clean energy is a fuel and/or a novel industrial feedstock, thereby achieving substantial reductions in greenhouse gas (GHG) emissions. The Hub is not a legal structure but a high-communication, high-trust, high-collaboration model. The level of collaboration within a Hub will depend on the nature of the outcomes, for example, the greater the complexity of the desired outcomes, the greater the level of collaboration required and expected. Actionable steps would be developed to capitalize on opportunities to resolve any identified barriers.

**Some Potential Barriers and Opportunities:**

<b>Barriers to Overcome</b>	<b>Opportunities to Resolve</b>
Energy cost of production and distribution	Cost decreases with the increased scale of use
Inefficient value chain	Transparent techno-economic analyses put into public domain in real-time, private sector empowered to find lasting solutions
Lack of system optimization: Incomplete understanding of the economic opportunity, among a full suite of actors	Broader suite of players informed on existing and future potential, leading to more competition to deliver better solutions cheaper
Lack of critical investment scale	Engage strategically with funders/financiers creating fundable projects. Enable private-public funding opportunities
Differing views by incumbents on preferred technologies slow public and private decision making	Single process engages players on full value chain, performs independent techno-economic analyses detailing pros/cons of different solutions, speeding better decision making, ensuring lasting solutions serve the public good
Regulatory barriers incompletely understood	Regulators get real-time, real-life input about what changes are needed and when to enable progress, while still fulfilling mandate

The following draft objectives and principles could be considered to guide the Hub operations. These objectives also align with the Government of Canada’s priorities of utilizing public funding for a forward-thinking un-siloed approach to reach net zero goals.

**Draft Objectives**

The accelerated, strategic deployment of public-private partnerships along the value chain that creates reliable domestic markets for low/zero carbon energy supplies as a fuel or industrial feedstock, and connects low-cost, low/zero carbon energy supply with the new markets. The key is the interconnections between energy subsystems into a single system and achieving scale required for economic viability. The Hub will focus on innovating business and supply/value chains as a priority versus new technology development – though technology innovation will be an organic outcome of the efforts.

**Principles for Success**

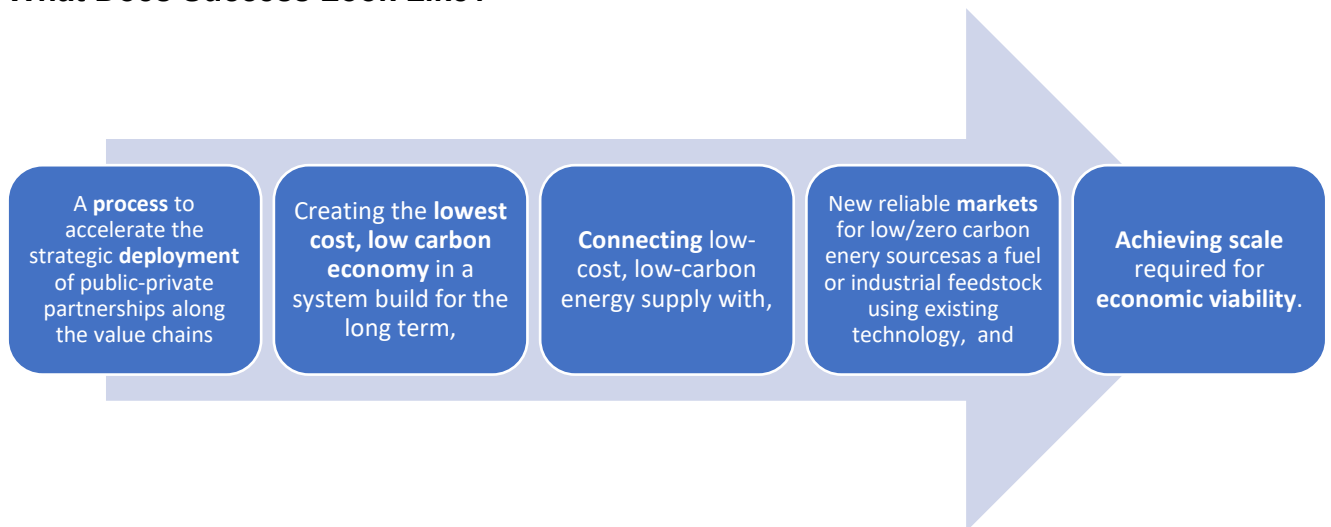
**Bold** Move assertively to seize the opportunity.

**Objective** Data and knowledge-driven, even if uncomfortable.

**Highly Leveraged** Good ideas and expertise will be embraced no matter where they come from.

- Inclusive** Co-designing and co-adjusting.
- Action** Action-orientated and nimble, doubling down on success, adjusting quickly if things do not work.
- Failure** Fail fast and fix preferred to paralysis by analysis.
- Outcome Focussed** Laser focussed on delivering outcomes in the real world; agnostic to which companies will benefit or not from hub activities so long as best solutions to challenges are advanced.
- Top down and bottom up** Embrace an approach that takes advantage of practical/tangible advice and progress, and theoretical/strategic advice and progress simultaneously.
- Public Good** A low-cost, low-carbon energy economy that maximizes the permanent economic, environmental, and social good is more important than the success of individual companies.
- Transparency** Team members from government, industry associations, economic development organizations, and Accelerator staff are expected to fully share all relevant intelligence with other Team members, subject to NDA limitations, and not share intelligence or insights gained via the Hub in ways that give preferential access to some stakeholders/members etc.

### What Does Success Look Like?



**Hubs are not structures, they are a series of strategic, integrated dialogues informed by independent analyses, among players along the full value chain.**

While Hubs have no decision-making or funding authority, they leverage collaborative decisions by sector (e.g. coordinating municipal fleet implementation, facilitating and securing of new low / zero carbon energy supplies, supporting the development of public-private partnerships to advance waste heat energy supply systems for building decarbonization).

Hubs create quantitative but generic future scenario descriptions and models that when integrated, describe potential transition pathways to economically viable decarbonization pathways. Analyses benefit from real-time, real-life input by stakeholders along the full value chains. Findings are put into the public domain quickly so individual players (companies, governments, others), and/or coalitions, can benefit from a systems-level analysis as they develop their projects and target their investments.

The objective of a Hub is to link low-cost energy supply with a very low or zero carbon footprint with new, reliable markets for associated energy sources and fuels in transport and buildings, or as a fuel in industrial feedstocks. Hubs consciously focus on technologies that are already de-risked for commercial deployment.

**How are Hubs Organized?**

Hubs are comprised of a Steering Committee, Action Teams, and an integrating secretariat, all of which are embedded in a larger Ecosystem to ensure the participation of any person or organization that has an interest in economic development and emissions reduction (See Figure 1). Initial Action Teams are presented in Figure 2. Additional Teams could be added based on learnings and progress. Existing bodies or organizations could fulfill the function of an Action Team rather than launching a new Team. In addition, economic development and philanthropic entities will be formed to support the Hub as part of a broader ecosystem. There will be regular two-way information exchange across all groups.

Figure 1.0 Draft Hub Governance Model

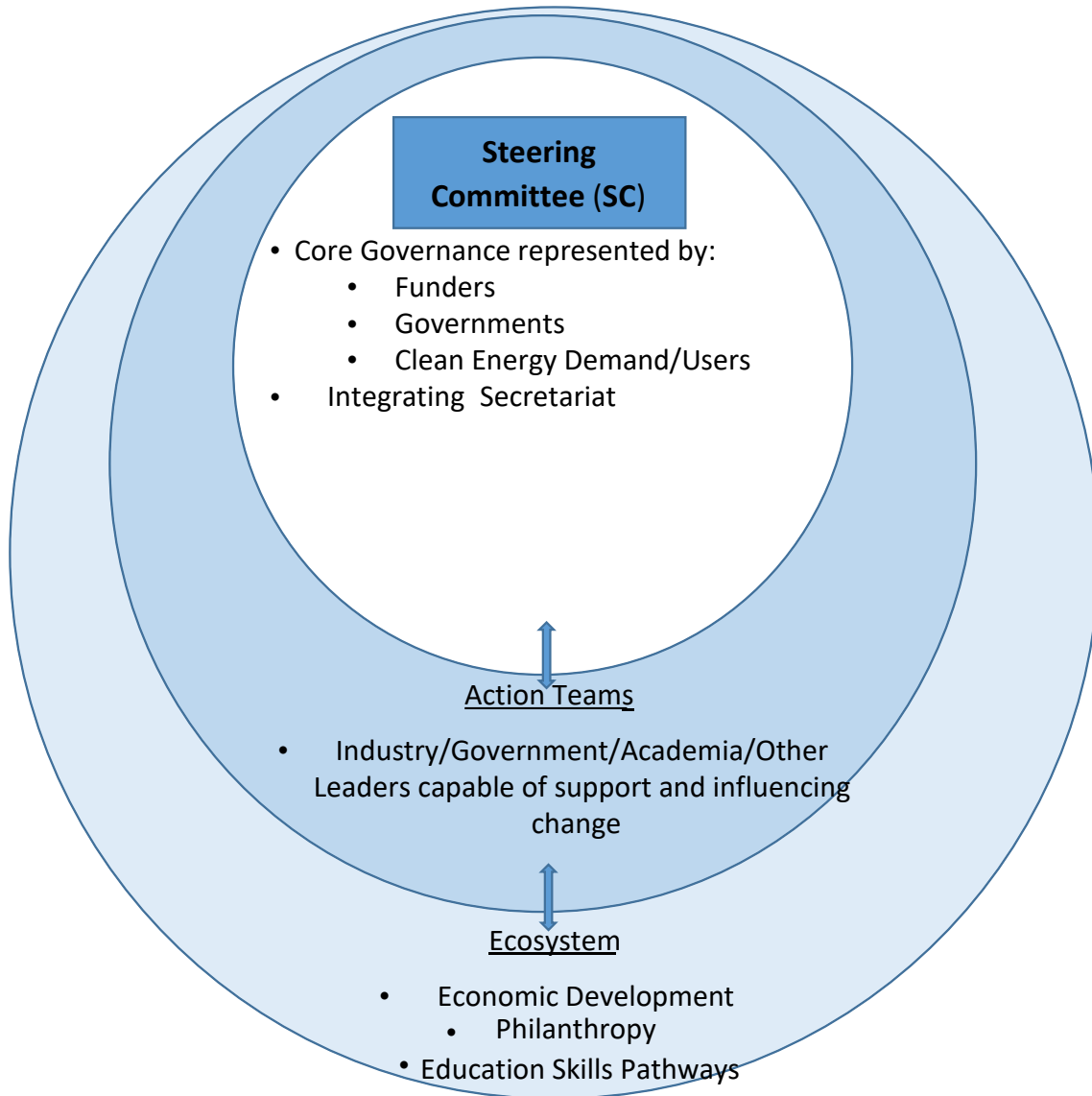
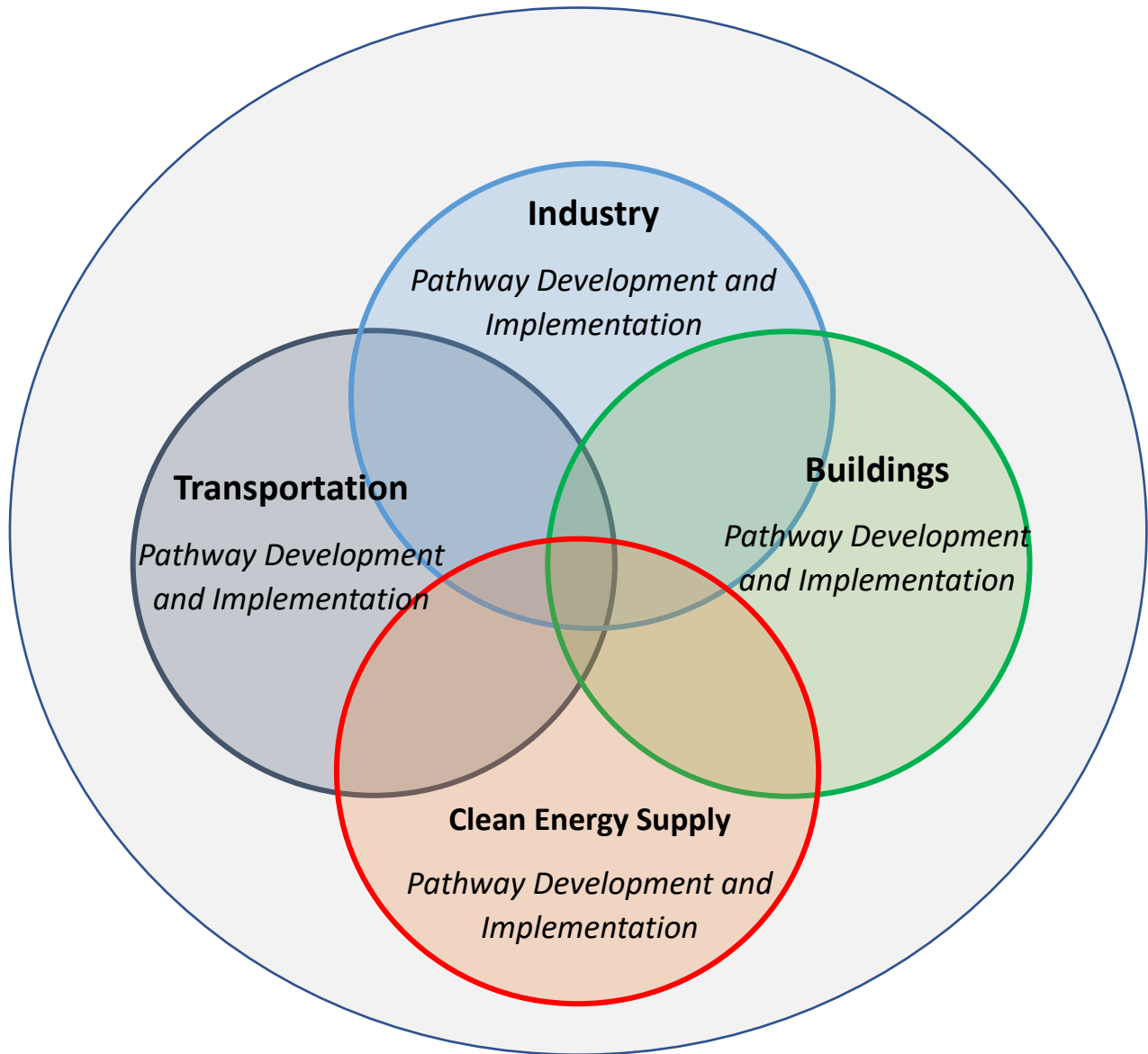


Figure 2.0 Proposed Action Teams



### **Roles and Responsibilities/Terms of Reference (Draft)**

The proposed roles and responsibilities are adopted from existing Hub models but will be augmented to fit the Hamilton Hub needs:

#### **Leadership Team (For consideration as an additional layer if deemed required):**

- Membership: Provincial and Municipal officials, private sector leader(s) at CEO level (potentially retired to avoid conflicts), other(s) (e.g. Indigenous)
  - Co-Chairs: To-be-determined if a Leadership Team is required.

- Role: Publicly support and validate the Hub process; Coordinate high-level Hub Communication functions; Manage effective relationships with other orders of government.
- Responsibilities: Task and empower the Steering Committee, and secure resources.

### **Steering Committee**

- Membership: Senior Provincial and Municipal government officials, other funding entities, senior Transition Accelerator staff
  - Co-chair: Municipal or Provincial official
- Role: Drive the process forward through intensive collaboration; Create and communicate an open, supportive attitude towards suggestions for improvement wherever they come from; Coordinate and delegate responsibilities; Ensure agility and resilience by managing transformational change effectively.
- Responsibilities: Resource, task and coordinate Action Teams; Engage all levels of government and private sector to align resources and other initiatives; Develop and ensure execution of a hub communications plan using participating organization resources; Support Leadership Team members that lead their organization; Effectively build an innovation-driven culture to facilitate transformational change management.

### **Integrating Secretariat**

- Membership: Transition Accelerator (staff or secondees)
- Role: Manage the day-to-day activities and help drive progress through intensive collaboration across multiple sectors concurrently.
- Responsibilities: Management support for Steering Committee, techno-economic support for Action Teams, logistical support for Action Teams (convening, coordination, communications support), liaising between management and sub-teams

### **Action Teams**

- Executive Membership: Government, industry, industry associations, Indigenous and regulators (where applicable) (6-8 members); open participation on the Team by all appropriate stakeholders/partners
  - Chair: Municipal/Government and Transition Accelerator
- Role: Detailed planning, project funding identification, identify required additional techno-economic analyses
- Responsibilities: Guide de-risking techno-economic analyses performed by the secretariat, solicit feedback on analyses from players interested in the work of the Action Team, identify regulatory barriers and solutions and infrastructure requirements to ensure an economically sustainable low carbon economy emerges quickly, develop project criteria if requested by the government, convene and ensure two-way communication with potential private and public project funders

- Team Member applicable skills sets and/or experience:
  - Senior managers that lead the Action Team area in their organization, authority to represent and make decisions for their organization, timely access to other resources in their organization necessary for the success of the Team, formal support from their home organization to be able to allocate sufficient time to ensure Team success
  - Ability to:
    - Manage finances and continuously monitor financial decisions in achieving defined goals
    - Manage information and knowledge by providing stakeholders with the right information at the right time and empowering them to use their gained knowledge
    - Manage technology – to support the strategic and operational goals of the Node

## **Launch and Operations**

Soft launch of Teams could proceed immediately to retain momentum as funding is secured. The overall communication and implementation plan of the Hub could be announced publicly as soon as practical and begin recruitment of the Hub staffing complement.

Action Teams will ensure their work benefits from a broad array of perspectives and competencies by engaging the broader community of stakeholders in the Team dialogue using structures and processes appropriate for their area of activity. Techniques could include public release of DRAFT documents/discussion papers and solicitation of comments, workshops, virtual presentations and Q&A sessions, wikis etc. Existing organizations (industry associations, organizations with convening capabilities) will be leveraged when possible.

## **Key Outcomes**

### **General**

- Coordinate and build low /zero carbon energy demand to support private sector development of the most competitive supply at scale.
- Expand reputation and image (environmental, social, economic) to attract investment and a broad range of economic development.
- Improve relations across industries, public organizations, and the community at large.



## Tactics

- Greater familiarization of the benefits of system-level decarbonization among a greater number of players along full value chains
- Improved relationships among current largely disparate players, leading to systems-level thinking, quicker and more strategic actions
- Quicker and more strategic project development and funding
- Attraction of more investment from more sources
- Jurisdictions recognized as able to react quickly to changing strategic conditions, capitalizing on new thinking and models of organization to drive progress.
- Permanent jobs in new energy systems compatible with global trends in emissions reductions

## Specific

- Support the identification of key barriers and potential solutions in implementing the Hub
- In conjunction with key partners, development, and refinement of the Hub’s methodology to strategically engage players along the value chains to de-risk public and private investment decisions.
- The methodology will be designed to be replicable, and easily applied to multiple strategic locations across Canada with the objective of sharing all knowledge and lessons learned from the Hub in order to evaluate and/or mobilize strategies to decarbonize.
- Effective public and private sector decision-making by creating and publicly publishing valuable, standardized aggregate infrastructure and market data including:
  - Identifying, assessing, and reporting on market opportunities for various parts of the value chain for the Hub,
  - Assisting the Hub with feasibility analysis and/or evaluation of different sub-regional options and opportunities, and
  - Ensuring information is in the public domain, allowing the private sector to develop solutions and compete to deliver efficient, low-cost production and distribution.