

## Community Energy Knowledge and Action Partnership Case Study

# GUELPH INNOVATION DISTRICT – DEVELOPMENT OF A NET ZERO CARBON SECONDARY PLAN

Municipal name	City of Guelph
Municipal Status	Single tier
Land area	86.72 km <sup>2</sup>
Population (2006 census)	114,943
Population (2011 census)	121,688
Growth rate	5.9%
Population density per km <sup>2</sup>	1,395.4
Within Greater Golden Horseshoe	Yes
Updated 2031 Places to Grow Population Target	177,000

Project Name	Guelph Innovation District (GID)
Developer	Not available
Key dev. partners	Not available
Definition	Net Zero Carbon
Status	Secondary Plan
Site area	Approx. 436 hectares
Est. residential pop.	4400
Floor area	Not available
Min. gross residential & employment density target	90 persons and jobs combined per hectare
Market Price	Not available
Landscaped open space	Not available
Max. height	Ranges from 2 to 10 stories
Parking	Not available
Non-residential units	Land uses permit mixed-use (e.g. office, commercial, entertainment, research and development, institutional, educational and live-work)
Pre-development use	Former provincial correctional facility; Guelph Turfgrass Institute & agroforestry research
Certification	Not available
Sustainability framework	Not available
Key energy features	Not available
Key water features	Not available
Other sustainability features	Not available
Grants	Federation of Canadian Municipalities Green Municipal Fund





## DESCRIPTION OF MUNICIPALITY

The City of Guelph has a long commitment to the principles of sustainability. In November 1990, Guelph City Council approved the development of a green plan for the city. In April 1992, Guelph City Council officially delegated the task of community consultation to the Guelph Round Table on the Environment and Economy, a multi-stakeholder community association<sup>5</sup>. The Guelph Round Table also coordinated the writing of the document using multi-sectoral writing groups and an editor to produce the final document. The Guelph Green Plan was adopted by Guelph City Council in 1994. The plan included targets for the reduction of greenhouse gas (GHG) pollution. In 2001, the City of Guelph was recognized for its work in advancing sustainability through the implementation of the Guelph Green Plan by the Federation of Canadian Municipalities (FCM)<sup>6</sup>.

Today, the strategic goals in the municipality's Official Plan are focused on sustainability and support the quadruple bottom line – ecological, social, cultural and economic – in decision making<sup>7</sup>.

The Guelph community also has a long history of engagement in local decision making. For example, more than 1000 residents participated in the development of the Guelph Green Plan<sup>8</sup>. In 2003, over 1000 residents participated in the development of eight SmartGuelph principles to inform the sustainable growth and development of the community.

### Municipal Policy Framework

In 2004, several local civic leaders came together to lead the development of a community energy plan (CEP) to improve how energy was used and managed in Guelph. In May of 2005, Guelph City Council approved preliminary terms for a CEP and their participation in this community consortium to create a CEP<sup>9</sup>. Council also directed that the CEP be integrated into the municipal growth strategy. At the time, the municipality was anticipating the need to update its Official Plan to bring it into conformity with the Places to Grow Act (2005) and the Growth Plan for the Greater Golden Horseshoe (2006). The Guelph CEP was unanimously adopted by Guelph City Council in 2007<sup>10</sup>. The plan set an overall goal to reduce per capita energy consumption and greenhouse gas emissions by 50% and 60%, respectively over 25 years. These targets were incorporated into Guelph's Official Plan through Official Plan Amendment (OPA) 48<sup>11</sup>. The City of Guelph is currently undertaking a comprehensive 10-year review of the CEP.

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<sup>4</sup> <http://guelph.ca/2011/06/fcms-green-municipal-fund-supports-the-city-of-guelphs-creation-of-a-secondary-plan-for-the-guelph-innovation-district/>

<sup>5</sup> The Guelph Round Table on the Environment and Economy, "Towards a Sustainable Community: The 1996 Guelph Seminar Series on Sustainability" (1998) ISBN: 0-88955-488-9

<sup>6</sup> <http://www.fcm.ca/home/awards/fcm-sustainable-communities-awards/past-winners/2001-winners/2001-planning-co-winner-2.htm>

<sup>7</sup> City of Guelph, "Official Plan", 2013

<sup>8</sup> The Guelph round Table on the Environment and Economy, "Towards a Sustainable Community: The 1996 Guelph Seminar Series on Sustainability" (1998) ISBN: 0-88955-488-9

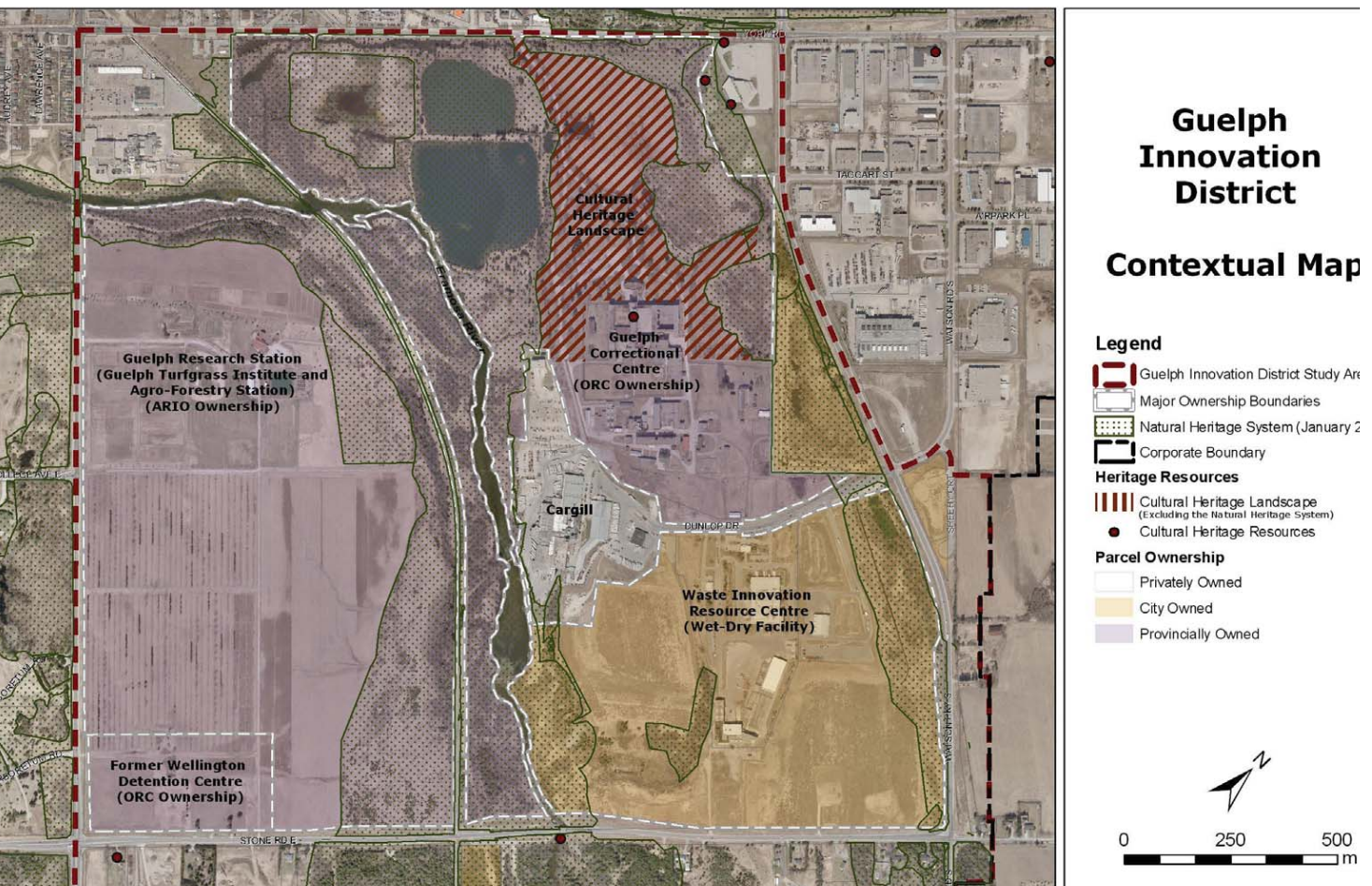
<sup>9</sup> City of Guelph (Planning, Environment and Transportation Committee Report), "Proposal for a Community Energy Plan", April 25, 2005.

<sup>10</sup> [http://guelph.ca/wp-content/uploads/report\\_communityEnergyInitiative.pdf](http://guelph.ca/wp-content/uploads/report_communityEnergyInitiative.pdf)

<sup>11</sup> <http://guelph.ca/wp-content/uploads/finalOPA48-withdecision1.pdf>







## DESCRIPTION OF PROJECT

The Guelph Innovation District (GID) area comprises 436 hectares straddling the Eramosa River in the east-side of the municipality. Most the lands are owned by the Province of Ontario who is positioning the lands for disposition by Infrastructure Ontario. Historically, the lands were the used as a provincial correctional institute. The jail was closed in 2001 and the lands have been largely unused since then. Most of the original buildings on the jail site remain and the property is a brownfield. The Wellington Detention Centre, which was also located on provincially-owned lands, was demolished in 2007. Some of the provincially-owned lands have been leased to the Guelph Turfgrass Institute and the University of Guelph for research purposes in recent years.

The GID area falls within the built boundary of the Growth Plan for the Greater Golden Horse-shoe and was identified as an important redevelopment opportunity for the municipality to meet its population and employment targets without annexing new lands into the municipality.

Planning work began as early as 2005 and culminated in a secondary plan (Official Plan Amendment 54) in 2014. OPA 54 has been appealed to the Ontario Municipal Board and awaits final approval. A Board order was issued on March 6, 2015 approving portions of OPA 54<sup>12</sup>. The appeal is unrelated to the net-zero carbon vision for the lands.

OPA 54 calls for a compact, mixed-use community. Once built, it is expected that the district will be home to close to 6,650 people and 8,650 jobs by 2031. Residents will be housed in

primarily medium and high density (townhouses, apartments), mixed use and a limited supply of low density (single and semi-detached housing forms). The GID will serve predominately as the home of innovative, sustainable employment uses with an adjacent urban village connecting residential and compatible employment uses. Considerable parts of the lands are to be protected as natural and cultural heritage.

Once built, it is expected that the district will be home to close to **6,650** people and **8,650** jobs by 2031.

### Rationale for selecting as a case study

Guelph is an example of a municipality that has integrated climate change and energy policies into their Official Plan providing a supportive municipal policy environment for net zero carbon community building. The GID was also identified as a potential mixed-use scale project for the development of an integrated energy master plan to advance the goals and objectives of the Guelph CEP. The objectives and policies in the GID Secondary Plan reflect this policy recommendation and establishes a net zero carbon vision for the redevelopment of these lands.

### Existing policy/tools at time of planning application

There currently isn't an active development application for the GID. However, the Province of Ontario, as the majority landowner has begun the process to declare the lands surplus to their needs and to place them on the open market. The following policies, however, will inform a future development application.

### Community Energy Plan<sup>13</sup>

The CEP recommends identifying mixed-use scale projects for integrated energy master plans to advance the goals and objectives of the CEP. The GID was identified as a potential scale project in the CEP. The Guelph CEP goes beyond end-use energy conservation and efficiency (e.g. homes, buildings, industry and transport) and the uptake of renewable energy (e.g. solar PV). The plan also proposes to improve the overall efficiency of the energy system, by promoting community energy (e.g. district energy, and combined heat and power), as well as the city, by promoting sustainable urban design.

### District Energy Strategic Plan<sup>14</sup>

A District Energy Strategic Plan was developed as an enabling strategy for the CEP. It identified the GID as a potential candidate for district energy especially given its proximity to the University of Guelph's district energy system.

### Official Plan<sup>15</sup>

Energy and climate change objectives and policies were integrated into the municipality's Official Plan through OPA 48 (see Appendix 1). These include the targets for energy consumption and greenhouse gas emissions established in the CEP. The Official Plan includes objectives to reduce energy use in the City, encourage local generation through renewable and alternative energy systems and facilitate district energy.

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<sup>12</sup> <http://guelph.ca/plans-and-strategies/guelph-innovation-district-york-district-lands/>

<sup>13</sup> [http://guelph.ca/wp-content/uploads/report\\_communityEnergyInitiative.pdf](http://guelph.ca/wp-content/uploads/report_communityEnergyInitiative.pdf)

<sup>14</sup> [http://www.envida.ca/en/developingSustainableEnergy/resources/DISTRICT\\_ENERGY/District\\_Energy\\_Strategic\\_Plan\\_for\\_the\\_City\\_of\\_Guelph\\_-\\_Website.pdf](http://www.envida.ca/en/developingSustainableEnergy/resources/DISTRICT_ENERGY/District_Energy_Strategic_Plan_for_the_City_of_Guelph_-_Website.pdf)

<sup>15</sup> <http://guelph.ca/wp-content/uploads/finalOPA48-withdecision1.pdf>

<sup>16</sup> [http://guelph.ca/wp-content/uploads/14\\_24\\_Attachment-2-GID-Amendment-OPA-54-Final.pdf](http://guelph.ca/wp-content/uploads/14_24_Attachment-2-GID-Amendment-OPA-54-Final.pdf)



### Policy amendments precipitated by the planning application

A planning application has not been submitted for this district. However, new planning tools were included in OPA 48 to support energy and climate policy goals. These tools will also support the net zero carbon vision for the GID. These tools include the ability to require a Sustainability Checklist, District Energy Feasibility Study, Renewable Energy Feasibility Study, Water Conservation Efficiency Study, and/or Energy Conservation Efficiency Study as part of a development application.

### Emerging policy/tools precipitated by the development

The Province of Ontario has initiated the process to dispose of some or all the lands they own within the GID. The objective of Infrastructure Ontario is to dispose of the lands to the highest bidder, subject to acceptable terms and conditions, and at fair market value. Guelph City Council is advocating that the Province of Ontario proceed with a Request for Proposals (RFP) process as it would better result in achieving joint City/Provincial growth, environmental and economic development goals while still maintaining a competitive bid process<sup>17</sup>.

### Enabling Federal and/or Provincial interventions

Guelph Hydro Inc. participated in a community energy planning mission in 2003, organized by Natural Resource Canada and FCM, that was instrumental in catalyzing local interest in community energy planning. Funding from the FCM Green Municipal Fund supported both the development of the Guelph CEP and the GID secondary plan. Higher densities promoted in the Growth Plan for the Greater Golden Horseshoe are more conducive to supporting CEP strategies for district thermal.



## STAKEHOLDER PERSPECTIVES

### Municipal perspectives

#### *Strategic Leadership*

Strategic municipal leadership, both political and administrative, was identified as an important success factor to achieve a net zero carbon vision for the GID in the absence of provincial legislation. However, the lack of a provincial and/or private-sector champions is a concern moving forward. Frequent turnover of key contacts at the provincial level has made maintaining momentum for the redevelopment of these lands as a net zero carbon community challenging for the municipality.

#### *Stakeholder and Community Engagement*

There has been extensive stakeholder and community engagement by the municipality and the province which has helped build strong support for the vision for the GID.

#### *Policy Integration*

In an ideal world, a municipality would include climate change and energy policy objectives in their Official Plan as a first step. These policies would then inform the development of Secondary Plans. The development of Master Plans, that define policy implementation, would follow - e.g., Community Energy Plan (CEP), Climate Change Strategy, Integrated Energy Master Plan. However, planning practice is iterative in nature and it is important to maintain documents in

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<sup>17</sup> CON-2016.69 Guelph Innovation District Implementation Update [http://guelph.ca/wp-content/uploads/council\\_agenda\\_121916.pdf](http://guelph.ca/wp-content/uploads/council_agenda_121916.pdf)





alignment with updates occurring in a logical sequence so that they can inform each other as appropriate.

As one of the first communities to embrace a municipal role in local energy planning, Guelph developed their CEP first and then began the task to integrate energy policies into their Official Plan. This work was done as they brought their local growth strategy into compliance with the Growth Plan for the Greater Golden Horseshoe. The GID Secondary Plan was also developed while this Official Plan update was underway which made the work of municipal planners more challenging and time-consuming.

In 2014, the Provincial Policy Statement (PPS) was updated to include several new energy and climate policies<sup>18</sup>. Guelph had strategically joined a municipal coalition to advocate for these changes to build a more enabling provincial policy framework.

Integration in Guelph also meant more than including CEP policies into the Official Plan. It also meant understanding the connections between growth, energy and economic development.

The Province of Ontario was very supportive for most of the GID Secondary Plan work, including the GID vision in an early Expression of Interest to the private sector. A Memorandum of Understanding was also developed between the City of Guelph and the Province of Ontario to support the vision.

In **2014** the Provincial Policy Statement (PPS) was updated to include several new energy and climate policies

Per respondents, the City of Guelph has been less successful in engaging the Province on how the lands will be sold. The City would like to see the lands sold by issuing a Request for Proposals that includes conditions to achieve multiple objectives for climate change, job creation and innovation. An RFP process may be more attractive to industry innovators who can bring environmental, economic and social value as well as dollars. However, Infrastructure Ontario's usual practice is to proceed to the market with a closed bid auction. Industry innovators may be less likely to participate and/or be successful in a closed bid auction given the inherent risks associated with building a net zero carbon community.

#### *Municipal Energy Resources*

The creation of a position to implement the CEP (i.e. Manager, Community Energy Strategy) meant that energy issues were represented during the policy planning process.

#### *Business as Usual*

The GID Secondary Plan includes the aspiration to “showcase a new approach to planning, designing and developing urban spaces”. This has meant challenging business as usual (BAU) practices. Resistance has been met from some stakeholders, both inside and outside local government.

As the primary property owner within the GID, Infrastructure Ontario (IO), on behalf of the provincial government, pushed back against the proposed residential density, and the energy and environmental performance objectives for the lands. With respect to residential density, they felt a lower density would be more marketable despite being counter to Places to Grow. Regarding the energy and environmental goals, they believed a premium would be

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<sup>18</sup>The PPS is the statement of the government's policies on land use planning. It applies province-wide and provides clear policy direction on land use planning to promote strong communities, a strong economy, and a clean and healthy environment.



associated with them in the market place. Overall, they expressed concern that the GID Secondary Plan would be viewed as a liability by the private sector and the sale of the provincial lands would not be maximized. During the public consultation, some traditional suburban developers expressed similar concerns regarding the market acceptability of the proposed energy and environment performance objectives.

Local political support, as well as that of senior municipal administrators, was essential to hold the net zero carbon vision for the district. However, language was softened in the final document to appease IO and recognize limited provincial legislation to enforce the energy performance objectives e.g. district energy was encouraged but not required in the Secondary Plan.

Per respondents, recent market testing suggests there is a willingness to build on the site in accordance with the Secondary Plan. However, there continues to be a lack of alignment between the Province's Long-term Infrastructure Plan, specifically the process to dispose of surplus lands, and the Climate Change Action Plan. The City of Guelph has proposed that IO issue a Request for Proposal (RFP), rather than a Closed Bid Auction, to sell the GID lands. An RFP would include conditions to support the implementation of the Secondary Plan. The perceived risks associated with a Closed Bid Auction include a successful bidder: 1) speculating on the land and not proceeding with redevelopment, or 2) undermining the GID Secondary Plan through planning amendments and appeals to the Ontario Municipal Board (OMB). An RFP process has a better opportunity to attract innovators in the development industry.

Initially, some alternative development standards, to achieve certain policy objectives (e.g. more non-automotive standards such green, walkable spaces and decreased automotive-friendly standards such as large roadways), were not a priority for municipal engineers and consequently could not be included in the Secondary Plan. However, this engineering view is changing as new approaches become more mainstream.

#### *Mainstreaming of climate change and community energy planning in land use planning*

Guelph municipal planners led the mainstreaming climate change and energy policies into land use planning in Guelph. Ongoing work is required to operationalize these policies throughout the development approvals process.

Meanwhile, the lack of compliance tools to assess applications on their energy performance remains a concern to achieving the GID Secondary Plan. This makes the job of municipal planners more challenging without triggering an OMB challenge by the applicant. In the absence of compliance tools, planners must rely on encouragement, good will and innovators.

#### *Local energy infrastructure*

District heat and district electricity (i.e. microgrid) systems will support net zero carbon as they facilitate of energy within the community. However, several unresolved governance issues challenge implementation (e.g. who pays, who owns, who operates). Municipalities are well-equipped to fulfill their traditional role in preparing land for development, like building roads, laying sewers and putting up street lights, but they lack the necessary standards and financing tools (e.g. Development Charges) to support the development of alternative local energy infrastructure. Industrial partners and/or provincial infrastructure funding is considered necessary. The province can play an important role in reducing the risk for private-sector innovators.





### Lessons learned and replicability

- Political and administrative champions are key to promoting low carbon communities particularly in the absence of enabling provincial legislation.
- Stakeholder and community engagement is important to building broad-based support.
- The provincial government should consider policy changes that would mandate Infrastructure Ontario to dispose of surplus assets using an RFP process based on criteria that are consistent with local planning policies, where those local planning policies are more progressive on climate change goals than provincial policies.
- Municipal energy resources are important to ensure energy and climate change issues are represented.
- Further mainstreaming of climate change into provincial planning legislation will make it easier for more municipalities to embrace low carbon community building.
- Municipalities need additional tools (e.g. regulatory, financial and business tools) and standards (e.g. compliance) to support the implementation of climate change and energy policies and successfully defend energy performance objectives at the OMB.
- Communities need new business models for district energy – both district electricity – i.e., microgrids, and district heat – i.e., thermal utilities.
- Low carbon community building represents a considerable departure from business as usual and will require considerable collaboration, both within and outside local government, for success.



*In partnership with:*

