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# The Regional Municipality of Durham Report

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To: Community Growth and Economic Development Committee  
From: Commissioner of Community Growth and Economic Development  
Report: #2026-CG-10  
Date: April 7, 2026

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**Subject:**

Durham District Energy Strategy and Courtice Transit Oriented Community District Energy Update

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**Recommendation:**

That the Community Growth and Economic Development Committee recommends:

That this report be received for information

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**Report:**

**1. Purpose**

1.1 This report provides Council with an update on the Region's ongoing district energy initiatives, including:

- a) Development of a region-wide district energy strategy; and
- b) The Courtice Transit Oriented Community (CTOC) district energy project.

**2. Background**

2.1 Durham Region and local area municipalities have set targets to reduce greenhouse gas (GHG) emissions. To meet these targets, it is imperative that GHG emissions from heating and cooling both new and existing buildings are reduced. As of 2024, commercial, institutional and residential buildings together account for 33 per cent of the Region's GHG emissions.

- 2.2 To accelerate GHG reductions in new construction and existing buildings, both building energy performance and transformation to low-carbon energy systems must be considered in parallel. This report is presented alongside report #2026-CG-9 (Continuation of Durham Greener Buildings Program) to highlight the alignment in these efforts.
- 2.3 District energy is identified as one of the top five strategies for reducing community-wide GHG emissions in the Council-endorsed [Durham Community Energy Plan](#) (DCEP). Beyond emissions reductions, district energy systems can support simplified building operations and maintenance, fuel flexibility, and reduced lifecycle costs for building owners and occupants. District energy infrastructure can also support high-quality local employment and long-term economic development.
- 2.4 District energy systems are generally most cost-effective in high-density, mixed-use developments, where infrastructure costs can be shared among multiple users and where heating demand varies throughout the day. These systems are particularly well-suited to greenfield developments, where they can be planned, coordinated and implemented alongside other municipal and utility infrastructure.
- 2.5 Electricity system capacity constraints in the eastern Greater Toronto Area (GTA) further reinforce the relevance of diversified energy infrastructure such as district energy. Forecasts prepared by the Independent Electricity System Operator (IESO) indicate that electricity demand in the GTA East region could increase by 98 per cent in summer and 126 per cent in winter by 2044 ([Report #2025-CG-11](#)). These increases are driven by electrification trends across residential, commercial, and industrial sectors and exceed the projected increase in demand province-wide. District energy can reduce reliance on peak electrical loads by using alternative thermal energy sources, helping to manage long-term utility costs and deferring the need for major electrical system upgrades.
- 2.6 In June 2025 the Government of Ontario released an Integrated Energy Plan, [Energy for Generations](#), that recognized the electricity system value of district energy with implementation directives to the IESO and OEB:
- a) Directive to IESO: “With respect to the Government of Ontario’s objective of expanding district energy systems, the IESO shall identify opportunities within current and upcoming policies, programs, and procurements for new and existing district energy systems that support forecasted electricity system needs”

- b) Directive to the OEB: “Report back by Oct. 31 '26 on the scope, timing and resourcing considerations for potential expansion of the OEB’s mandate to reflect the evolving energy landscape. The report should consider the overall suitability and potential challenges of a mandate expansion that addresses the specific opportunities of: ...district energy”.
- 2.7 The [Royal Bank of Canada has identified district heating and shared thermal infrastructure](#) as a cost-effective solution for fiscally strained municipalities, noting the ability to leverage existing municipal assets, support long-term cost recovery through user rates, and reduce pressure on traditional municipal capital budgets. The analysis highlights district energy as an approach that can improve infrastructure efficiency while supporting economic activity in local energy and construction sectors.

### **3. Development of a Durham District Energy Strategy**

- 3.1 Regional staff advancing district energy opportunities through a district energy strategy that includes:
- a) region-wide opportunity analysis and prioritization across strategic growth areas,
  - b) detailed feasibility studies in identified priority areas,
  - c) developing an effective strategy to attract private sector investment, and
  - d) working with partners to develop a supportive policy framework.

#### **District Energy Opportunity Analysis and Prioritization**

- 3.2 The Regional Official Plan identifies Strategic Growth Areas where coordinated infrastructure delivery is required to support intensification and economic development. These include Durham Region’s Major Transit Station Areas (MTSAs) along the Lakeshore East GO corridor.
- 3.3 Over the course of 2026-2027 staff will advance a Region-wide district energy opportunity analysis across strategic growth areas to develop a clear prioritization of district energy opportunity areas. To support the development of this analysis staff applied for and successfully secured \$200,000 in grant funding through the Federation of Canadian Municipalities’ (FCM) Community Energy Systems stream to support technical analysis and development of the Plan.

3.4 Key elements of the opportunity analysis include:

- a) Region-wide spatial heat mapping to identify waste heat opportunities (including wastewater, municipal facilities, and commercial, institutional, and industrial sources);
- b) Assessment of current and future heat demand across growth areas; and
- c) Identification of priority heat planning areas where district energy may be most viable. These priority areas will inform an initial five-year implementation plan and guide where more detailed feasibility and business case work should be advanced.

3.5 The spatial heat mapping will focus on Strategic Growth Areas and urban centres identified in **Table 1**, where higher density development supports district energy viability. This analysis will focus on urban centres across area municipalities (Ajax, Whitby, Pickering, Oshawa, and Clarington) to help identify neighbourhoods with strong potential for district/thermal energy applications. Additional locations, including other Strategic Growth Areas, Major Transit Station Areas (MTSAs), Regional Centres, and redevelopment nodes such as Whitby GO and Bowmanville GO, will also be considered where strong district energy potential exists.

**Table 1 – Region’s Strategic Growth Areas**

<b>Area Municipality</b>	<b>Location/ Description</b>
Town of Ajax	Focused in the Ajax Downtown Regional Centre Area and the Ajax GO Station Secondary Plan Area
Municipality of Clarington	Focused in the Courtice Transit-Oriented Community Area and the Bowmanville West Urban Centre and Major Transit Station (GO Train) Area
City of Oshawa	Focused in Downtown Oshawa Urban Growth Centre
City of Pickering	Focused in Pickering City Centre Area and Employment Lands
Town of Whitby	Focused in Downtown Whitby Community Secondary Plan area and Whitby GO Station MTSA

- 3.6 Another key component of analysis is assessing the thermal energy potential of the Region's wastewater infrastructure. This involves deploying sensors at six locations across urban centres in Pickering, Ajax, Whitby, Oshawa, and Clarington to measure temperature and flow over a 12-month period.
- 3.7 The Durham Region District Energy Opportunity Analysis and Prioritization is anticipated to be completed in the first half of 2027. Once completed, the Region will have a strategic roadmap to guide future district energy infrastructure development. This feasibility analysis across all of the Region's strategic growth areas will help establish priority areas for implementation as well as a framework of policy and governance to enable strategic execution. Additionally, this initiative will support building capacity among local area municipalities, enhancing the ability to leverage low-carbon district energy and fostering an integrated planning approach that unites stakeholders and cross-departmental teams to achieve sustainable, low-carbon goals.

#### **4. Courtice District Energy System (DES) Project Update**

- 4.1 Regional staff have advanced a detailed feasibility study on the Courtice Transit Oriented Community (CTOC) MTSA, which was first presented to Council in 2024 through report [#2024-COW-1](#). CTOC was selected as the first area for a detailed feasibility study due to a confluence of factors including:
- a) The CTOC MTSA is a greenfield development area where new infrastructure is yet to be implemented (e.g. roads, water supply, sanitary sewer). This provides the opportunity to coordinate district energy implementation with overall site servicing to realize economies of scope and scale while minimizing future disruption;
  - b) The CTOC MTSA is strategically located within proximity to the Durham York Energy Centre (DYEC) which is governed by a [Host Community Agreement](#) between Durham Region and Clarington that commits to "strongly encourage and promote development within the Clarington Energy Park and other areas of Clarington to utilize district heating and cooling provided by the energy from waste facility"; and
  - c) The CTOC MTSA is projected to see significant new population density and commercial floor area over the coming decades.
- 4.2 This work identified a preferred low-carbon energy source and technology (i.e. heat recovery from the Durham York Energy Centre), infrastructure requirements, site service area and system phasing for business case development. This report found

strong potential for a district energy system serving high-density development in CTOC and directed staff to develop a recommended ownership and governance model in collaboration with the Municipality of Clarington.

- 4.3 In May 2025 Regional staff presented an update to Regional Council on the CTOC DES initiative through report [#2025-COW-19](#) which included recommendations for a joint municipal ownership model supported by a private sector delivery partner. Since the previous update, staff have maintained engagement with landowners within the Courtice Transit-Oriented Community (CTOC) and continued to refine the project's business case and delivery approach in collaboration with staff from the Municipality of Clarington. Key activities include the refinement of technical and financial assumptions, and the development of a comprehensive business case to support implementation through a Municipal Services Corporation (MSC).
- 4.4 In collaboration with the Municipality of Clarington, staff supported the inclusion of district energy supportive policy in the [CTOC Secondary Plan](#). The Secondary Plan has now been adopted by Clarington Council and includes policy direction to enable DES infrastructure within the CTOC Major Transit Station Area (MTSA). The Secondary Plan is currently under review by the Ontario Ministry of Municipal Affairs and Housing (MMAH).
- 4.5 Staff have also issued a Request for Expressions of Interest (RFEOI) to assess private-sector interest in collaboration to deliver DE infrastructure in CTOC. The RFEOI generated strong interest from the district energy market, including major Canadian operators and parties with construction, operational, and financing expertise. Feedback emphasized the importance of clearly defined governance, roles, and decision-making processes, and indicated openness to potential economic partnership opportunities.
- 4.6 The Courtice DES is closely tied to the delivery of the future Courtice GO Station and the surrounding transit-oriented development planned for the CTOC area. Staff continue to engage with landowners, developers, and Metrolinx to coordinate infrastructure planning and ensure that district energy development aligns with GO station delivery timelines and broader development phasing.
- 4.7 In parallel, staff are refining the technical and financial assumptions underpinning the business case, including reference case development, capital cost estimates, connection fee methodology, and rate-setting principles to support transparency, fairness, and long-term financial sustainability.

- 4.8 Staff have also begun engagement with potential financing partners, including infrastructure lenders and funding agencies, to explore financing structures and grant opportunities that could support implementation of the Courtice DES. These discussions will help inform the financial strategy for the project as the business case is further refined.
- 4.9 Staff are continuing engagement with the Mississaugas of Scugog Island First Nation (MSIFN) and its economic development corporation, Minogi Corp., to explore collaborative opportunities related to the Courtice DES. These discussions include potential economic partnership opportunities and identifying funding or investment opportunities, as several federal programs prioritize Indigenous-led or Indigenous-partnered clean energy projects.
- 4.10 Collectively, these activities position the Courtice DES for continued advancement toward a Council decision on implementation, subject to completion of the business case and further reporting. Previous reporting anticipated returning to Council in early 2026 with a finalized business case for the Courtice DES. However, additional time has been required to further refine the business case and ensure alignment with several external factors influencing the project. These include slower-than-anticipated development activity in the current market environment, evolving timelines related to the delivery of the future Courtice GO Station and associated transit-oriented development, and the need to continue engagement with key partners. Ensuring alignment is important to support the long-term viability and successful implementation of the system.
- 4.11 The following activities are underway or planned to advance the Courtice District Energy System for future Council decision in Q1 2027:
- a) Continued engagement with landowners and stakeholders within CTOC to support system alignment and phasing;
  - b) Ongoing refinement of the Courtice DES business case, including governance, financial, operational, implementation, and risk components;
  - c) Further development of the Municipal Services Corporation (MSC) business plan to support Council consideration;
  - d) Continued discussions with potential financing partners and funding agencies regarding financing structures and grant opportunities; and
  - e) Preparation of future reporting to Council upon completion of the refined business case.

## 5. Previous Reports and Decisions

- 5.1 The Courtice DES Recommended Business Model and Governance Framework [Report #2025-COW-19](#) was approved by Regional Council. The report sought Council endorsement to undertake next steps in implementing the district energy system, issue a RFEOI, explore financing partnerships, refine business case, and develop the MSC business plan.
- 5.2 The district energy strategy received FCM funding of \$200,000 after Regional Council's adoption of the recommendations outlined in [Report #2024-COW-49](#). The Plan supports the assessment and prioritization of district energy and waste heat recovery opportunities across the Region's Strategic Growth Areas.

## 6. Conclusion

- 6.1 Regional Staff will continue to advance both the region-wide district energy strategy and the detailed technical and financial analysis focused on the CTOC DES opportunity area. The broader strategy will result in a prioritization of district energy opportunity areas beyond CTOC, and an implementation roadmap, while the focused CTOC DES work is expected to lead to DE infrastructure delivery in time for the high-density development planned around the future Courtice GO Station.
- 6.2 Together, these initiatives support:
- more efficient use of regional and municipal infrastructure assets;
  - reduced lifecycle costs for building occupants and local utilities;
  - diversification and security of energy supply;
  - improved resilience to utility capacity constraints; and
  - support for local clean energy and construction sectors.
- 6.3 These outcomes align with Council's priorities related to infrastructure planning, economic development, environmental sustainability and risk management.

## 7. Relationship to Strategic Plan

- 7.1 This report aligns with/addresses the following Strategic Direction(s) and Pathway(s) in Durham Region's 2025-2035 Strategic Plan:
- a) Environmental Sustainability and Climate Action
- E1. Reduce corporate greenhouse gas emissions to meet established targets.

- E2. Collaborate with partners on the low-carbon transition to reduce community greenhouse gas emissions across Durham Region.
  - E3. Prepare for and respond to severe weather impacts.
  - E4. Lead the transition to sustainable living through waste management, diversion, and the circular economy.
- b) Resilient Local Economies
- R1. Attract and retain quality employers that strengthen key economic sectors, including energy and technology.
  - R3. Develop, attract, and support a skilled and qualified workforce, including youth and newcomers.
- c) Strong Relationships
- S3. Collaborate across local area municipalities, with agencies, non-profits, and community partners to deliver co-ordinated and efficient services.

Respectfully submitted,

Original signed by

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Commissioner of Community Growth and  
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Recommended for Presentation to Committee

Original signed by

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