



Toronto
Community
Housing



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Alex Teixeira, Manager
Community Planning, Toronto & East York District
City of Toronto
Toronto City Hall
18th fl. E., 100 Queen St. W.
Toronto ON M5H 2N2

Attention: Katherine Bailey, Senior Planner

Re: **Regent Park Phases 4 & 5, (591 Gerrard Street East/591 Dundas Street East) City of Toronto**
Zoning By-law Amendment Application – Environment and Climate Comments
City File No. 22 136063 STE 13 OZ

All buildings constructed in Phases 1, 2, and 3 of the Regent Park revitalization project are connected to the Regent Park district energy system (DES) that supplies heating, cooling, and domestic hot water. The system is owned by Regent Park Energy Inc. (RPEI), a for-profit company that is wholly owned by TCHC through the latter's subsidiary, Toronto Community Housing Enterprises Inc. (TCHEI).

The Existing District Energy System:

The Regent Park district energy plant is housed inside the 22-storey residential building located at 252 Sackville Street, and became operational in 2009. Heating is provided by nine natural gas-fired boilers (total capacity of about 35,000 kW); cooling is provided by nine electric centrifugal chillers (total capacity of about 4,600 tonnes). From there, a below-grade distribution piping system, constructed concurrently with new municipal infrastructure (roadways, sewers, water, etc.), carries hot and chilled water to each TCHC and private condominium building in Phases 1, 2, and 3.

When originally designed, the plant was sized to provide heating and cooling to all of the buildings originally planned for the entire Regent Park revitalization project. As the project progressed, each Phase was re-zoned to allow greater densities and by 2019 it became apparent that the existing plant's capacity was not sufficient to meet the energy demands of the last two buildings in Phase 3 or any of Phases 4 and 5, so TCHC and RPEI undertook construction of a Satellite Energy Plant (SEP) in Block 16 North (at Oak and Sumach Streets), currently under construction.

The District Energy System in Phases 4 & 5:

All new buildings to be constructed as part of Phases 4 and 5 are to be connected to the Regent Park district energy system.

The City's new and evolving TGS requirements will preclude connecting the Phases 4 and 5 buildings to the existing gas-fired district energy system (DES). TCHC and RPEI must therefore create a new energy (heating and cooling) system for the rest of the revitalization project that does not rely on natural gas. At the time of this writing, TCHC is evaluating proposals from qualified consultants to assist in developing a new long-term Net-Zero Emissions strategy for Regent Park. The successful proponent's scope of work will include delivering:

1. A detailed analysis of existing and committed RPEI energy delivery infrastructure, capacity, demand, and shortfalls/surpluses based on the existing and planned revitalization.
2. An analysis of potential approaches and technologies that could be deployed to meet the energy requirements for Phases 4 and 5, and any legacy requirements in Phases 1 to 3.
3. A detailed cost-benefit analysis that compares the various options from number 2 above and that evaluates the efficacy of a (1) fully integrated energy system, (2) a stand-alone phase 4 and 5 system, and (3) a building-by-building energy system.
4. Based on the above, a recommended energy service delivery strategy that optimizes key TCHC and RPEI sustainability, business, and operational objectives that:
 - a. meets or exceeds TGS requirements for each building in Phases 4 and 5;
 - b. reduces the overall carbon footprint of Regent Park by contributing to and/or offsetting existing district energy natural gas-powered equipment;
 - c. maximizes the long-term economic benefits to TCHC and RPEI; and
 - d. deploys systems and technologies that can be integrated into the existing RPEI district energy system.

5. Based on the recommended energy strategy (number 4 above), an outline design and specifications for an integrated energy delivery system for Phases 4 and 5 that takes into account:
 - a. the evolving TGS requirements for each building in the phased project;
 - b. connection to the DES infrastructure with the goal of improving the energy performance and reducing the carbon impact of the entire DES;
 - c. RPEI's business model and profitability; and
 - d. the relationship between TCHC and the condominium buildings as a part of the overall delivery of the project.

6. Building-specific energy system performance specifications for each of the Phases 4 and 5 buildings sufficient for mechanical and electrical design of each one.

The ultimate outcome of the consultant's work will be a full analysis and proposal for low-carbon heating and cooling in Regent Park. Given the time required to complete this work, which will run concurrently with the re-zoning application process, we propose reporting back to the Environment & Energy Division when the work is completed in late 2023.

In order to not unduly delay the re-zoning process and construction of new affordable housing, we also propose providing at this time a letter of undertaking from Tridel and TCHC confirming that all new buildings in Phases 4 and 5 will meet or exceed the TGS requirements in effect at the time of each application for Site Plan Approval.

Sincerely,

**Peter E.
Zimmerman**

Digitally signed by Peter E. Zimmerman
DN: cn=Peter E. Zimmerman,
o=Toronto Community Housing,
ou=Development Division,
email=peter.zimmerman@torontohous
ing.ca, c=CA
Date: 2023.03.10 14:21:08 -0500

Toronto Community Housing Corp.

Peter Zimmerman

Senior Development Director – Development