



TCHC Seniors' Apartment Building, 423 Yonge Street

The City of Toronto has expressed a commitment to improving the living conditions of the residents of Toronto Community Housing Corporation within a sustainable business model. In response Magnolia Generation has developed a win-win solution that has been extensively reviewed and finalized with TCHC. The project was undertaken with the knowledge of the Mayor's office, starting April 2015 through meetings with Chris Phibbs. The project is a TCHC Seniors' Apartment building at 423 Yonge Street, which houses a vulnerable population. A recent change by Toronto Hydro, however, has put the project in jeopardy.

The Relevant Background

- In March 2017, after a preliminary approval from Toronto Hydro and 14 months of due diligence by TCHC's board and staff, a 20-year Energy Supply Agreement was signed with Magnolia Generation to design, build, own, operate and maintain a 240kW Combined Heat & emergency Power "CHeP" plant in its buildings. *(More information about Magnolia Generation and its plan to build similar facilities throughout Toronto is below).*
- TCHC's management determined that its seniors' apartment building at 423 Yonge Street is the priority: the existing back-up power system is at the end of life and plagued with reliability problems - a consistent problem throughout TCHC's buildings.
- TCH will save \$1.5-Million in capital expenditure because Magnolia's installations are financed through a long-term energy supply agreement that mirrors the prevailing energy costs.
- TCHC has identified over \$150M in capital savings with Magnolia's offer to retrofit a number of its buildings as part of a TCHC mandate to allow tenants to stay in their homes during power outages. This mandate was in response to the 2013 ice storm, which brought to wide attention generator failures and lack of fuel. The problem is now even more critical due to end of life infrastructure – TCHC's and Toronto Hydro's.
- Magnolia's system is in step with the City's policy to make its infrastructure more resilient, as outlined in the Transform TO document that is before this Council.
(<http://www1.toronto.ca/wps/portal/contentonly?vgnextoid=ba07f60f4adaf410VgnVCM1000071d60f89RCRD>)
- Each Magnolia Generation CHeP Plant reduces greenhouse gases by 4.5 tonnes annually.

Magnolia Generation www.magnoliagenerationinc.ca.
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Toronto Hydro

TCHC's Seniors' Apartment Building at 423 Yonge is on an old "Toronto Hydro Network" with an associated Network Protector – a legacy system that's in need of upgrade in the older parts of the city - ironically where resiliency is most important. Magnolia's CHeP plant has the utility-grade reverse power relay specified by Toronto Hydro that will satisfy the Network Protector's requirements, but the city owned LDC is reluctant, despite giving Magnolia an initial approval. In response to the 2013 Ice Storm, the Toronto Hydro Independent Review Panel identified the need for multi-unit residential buildings to have additional backup power using natural gas.

Toronto Resiliency

The City recognized long before the 2013 ice storm that embedded CHeP is a key piece of the future energy and resiliency needs. Jim Baxter, Director of Toronto's Environment & Energy Division had been promoting the "Energy Crunch in the City" that connected Toronto's growth and pressure on infrastructure, extreme weather, intensification, and Toronto Hydro's outdated grid a recipe for disaster. In response to the ice storm, the city of Toronto's Environment & Energy Division and Toronto Hydro signed the "Resilient City Letter of Cooperation". (<http://www.toronto.ca/legdocs/mmis/2014/pe/bgrd/backgroundfile-70623.pdf>). As part of the resilient city initiative, a voluntary Guideline on "Minimum Power Requirements for Multi-Unit Residential Buildings" was a key component.

Magnolia Generation

Magnolia Generation is a distributed generation utility that builds, owns, operates and maintains Combined Heat & emergency Power plants (CHeP) onto Multi-Unit Residential Buildings for emergency and sustained occupancy power, thus meeting the city's guideline. The core CHeP technology has operated in Ontario for 20 years, is approved nationally in the US for utility interconnection, and has global installations. More importantly, it allows tenants to remain in their units indefinitely during a long-term power outage with full use of elevators, running water and heat plus other essential building systems. The technology is more robust than traditional diesel stand-by generators, and because Magnolia is a utility operating on 20 year supply agreements, it has a vested interest in maintaining overall reliability and performance. Magnolia Generation has just commissioned an identical system at The Grange Condominium, located at 551 The West Mall, a Brookfield managed property. Magnolia Generation is licensed by the Ontario Energy Board.

Brookfield Condominium Services

Brookfield's Murray Johnson identified this need for increased resiliency and provided guidance to Magnolia in designing the 20-year offering to ensure it is risk-free to condominiums. Additionally, he provided to TCHC, at no charge, all of Brookfield's in-depth due diligence on Magnolia and options in the market to demonstrate Brookfield as a responsible corporate citizen.