

# Case Study: Energy Resiliency

**Who:** Brookfield Condominium Services, Property Manager, Bill Colucci

**What:** A 240kW “Combined Heat & emergency Power” (CHeP) System for both “Emergency Power” & “Sustained Occupancy Power” using MicroTurbines

**Where:** YCC 26 “The Grange”, 551 The West Mall, Toronto, M9C 1G7

**How:** 20 Year Energy Supply Agreement equal to electricity utility rates - cost neutral.

**How Much:** Zero Capital Cost to YCC 26, an **Avoided Cost Savings of \$1.5M.**



## Foreground:

Multi-Unit Residential Buildings (MURBs) are susceptible to ever-increasing power outages caused by extreme weather and an aging electrical infrastructure. After the 2013/14 Ice Storm, Toronto Hydro’s *Independent Review Panel* recommended that MURBs be mandated to install additional backup power with longer availability to power “sustained occupancy” systems (See following page for details). The City of Toronto has since introduced a *Voluntary Guideline* for “Sustained Occupancy”, providing longer term backup power for hot & cold water, the building’s heating system, sump pumps, security systems, common elements, elevators – the essentials to remain in the building or exit safely in the event of a long term power outage.

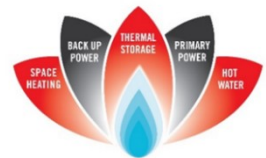
**Magnolia Generation** worked with **Brookfield Condominium Services** to design an offering that solved the *high capital cost dilemma* with a *zero capital cost solution*.



**Magnolia Generation**

[www.magnoliagen.ca](http://www.magnoliagen.ca)

**Long Term Energy, Long Term Security**



# Case Study: Energy Resiliency

## Background:

YCC 26, Managed by Bill Colucci of Brookfield Condominium Services, needed a backup generator, which had an estimated total project cost of \$900,000. Brookfield's Energy Manager, Rob Detta Colli approached Magnolia Generation with the idea to solve The Grange's need for backup power, and save energy through a "Combined Heat & Power" (CHP). Based on the high capital cost, Magnolia Generation worked with Brookfield's VP of Client Services, Murray Johnson, to design an offering that had zero capital cost and risk to the Condominium Board. By using a cost neutral, 20 year Energy Supply Agreement at prevailing market rates Magnolia and Brookfield created a win-win formula.



The following items have unlimited power for **"Emergency"** & **"Sustained Occupancy"** systems

### **Emergency Power** (As mandated by the Ontario Building Code, based on CSA-C282)

1. Two Elevators (power to all four elevators but only two at a time)
2. Hallway & Stairway lights + all hallway plugs,
3. Basement hallway & Garage lighting,
4. Fire Pumps & Compressors, etc.,
5. Key Infrastructure lighting, boiler room, elevator room, etc.,

### **Sustained Occupancy Power** (As defined by the City of Toronto's Multi-Residential Guidelines)

1. Domestic Hot Water & Space Heating System and pumps
2. Hot & Cold Water Pumps
3. Sump Pumps & Heat pump & glycol to Garage Ramps & Garage Doors
4. Full Power to Management Office
5. Full Power to Security Systems and Office
6. Full Power to Common Elements (Party Room, lounge, Day Care & Board Room)



**Magnolia Generation**

[www.magnoliagen.ca](http://www.magnoliagen.ca)

**Long Term Energy, Long Term Security**

