



Canadian Apartment Investment Conference – September 16, 2008

Dan Predojevic, P. Eng.
Program Manager, Business Markets
Enbridge Gas Distribution

Agenda

- Enbridge background
- Review case studies



Background

- OEB approached gas utilities in '94
- Assist customers with energy cost/emission reduction goals
- Over 3 billion m3 saved
- Offer over 40 programs
- Visit us at www.enbridge.com for details

ENBRIDGE

Multi-Residential Incentive Summary 2008

How Enbridge Can Help

Program Conditions

Retrofit Incentives

Condensing Boilers

Water Conservation

Audit Incentives

GasWISE

ENBRIDGE

3

Case Study # 1



- **Palace Place Condominium**
- 504 suite luxury condo built early 1990's
- Annual energy costs before retrofit of over \$1 million (and increasing)
- **Problem:**
- Over-dependence on electricity
- Rising electricity costs
- Inefficient lighting
- Limited space in boiler room
- Limited time to complete the conversion
- **Analysis:**
- Heating system included electric make-up air systems, fan coils and baseboard heaters
- Electric equipment was only 6 years old, but natural gas conversion made business sense

Case Study # 1



- **Solution:**
- Condo board selected Full Circle Energy Systems to provide turn-key design/build services as well as all performance contracting and financing
- Enbridge provided technical gas distribution and supply side expertise
- Replaced 6 electric boilers with Weil McLain high efficiency units
- Replaced electric domestic water heating equipment with natural gas
- Converted 3 electric make-up air systems
- Variable frequency drives installed on two largest air handlers
- Lighting retrofit in garage and corridors; LED exit signs
- **Result:**
- Project cost = \$795,000
- Guaranteed annual energy cost savings = \$318,000 (first year savings were \$425,000)
- Payback = 2.5 years



5

Case Study # 2



- **Canadian Apartment Properties**
- Real Estate Investment Trust
- 5 buildings, 27 - 30 years old, 1055 suites, 4900 tenants:
- - 4000 Lawrence Ave. E. (144 suites)
- - 4010 Lawrence Ave. E. (200 suites)
- - 1050 Markham Road (294 suites)
- - 370 McCowan Road (207 suites)
- - 10 Tuxedo Court (210 suites)
- **Problem:**
- Large tenant population exceeding capabilities of domestic water heating systems
- Frequent equipment break-downs
- Numerous tenant complaints about insufficient water at peak times and low water temperatures
- Poor heat control and distribution
- **Analysis:**
- Zone control valves were defective, heat controllers were old and worn out
- Energy was being wasted because heating systems were operating at higher overall temperatures than would otherwise be required
- Many tenants were opening windows in an attempt to moderate over-heating



6

Case Study # 2



- **Solution:**

- CAP-REIT approved a comprehensive replacement and upgrade program
- Heating and domestic water heating boilers replaced with high efficiency Viessmann equipment and controls
- Centralized controller incorporated set-back programming

- **Result:**

- - 4000 Lawrence Ave. E. - 42,402 m3
- - 4010 Lawrence Ave. E. - 70,426 m3
- - 1050 Markham Rd. - 45,650 m3
- - 370 McCowan Rd. - 167,767 m3
- - 10 Tuxedo Court - 89,766 m3

- Total annual energy savings = 416,000 m3, \$62,500

