

# Sub-metering @ Humber College

# The problem

- Humber North is \$1.5 million sqft, 30+ buildings
- Only one Utility electrical meter
- Bills sometimes > \$200,000 / month
- Impossible to track efficiency savings
- No power quality info

# Sub metering system design

- Shadow meters @ each transformer (6)
- Dedicated meters for some areas
  - Computer Room (power quality)
  - Residences
  - New Buildings

# Provincial System (RTOS)

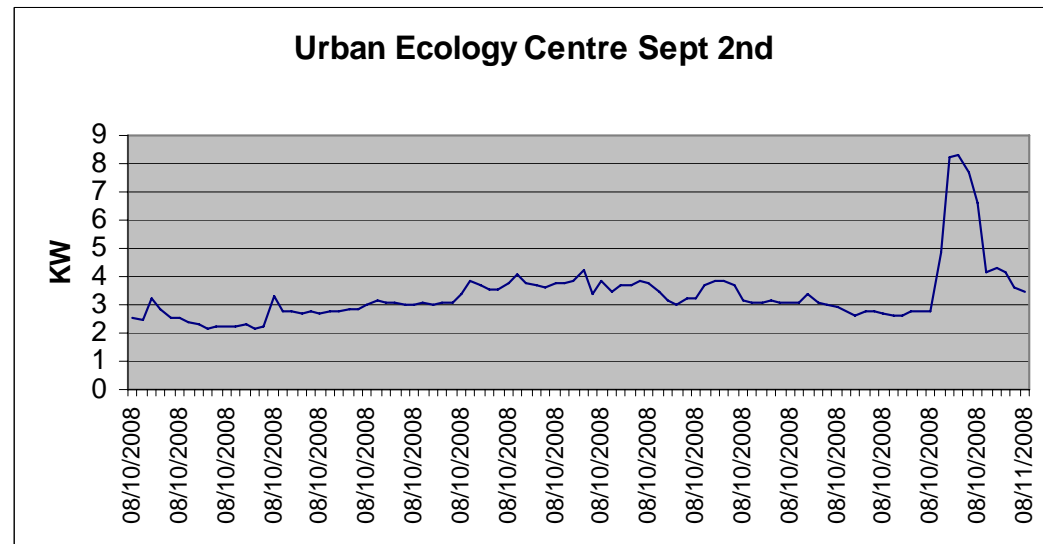
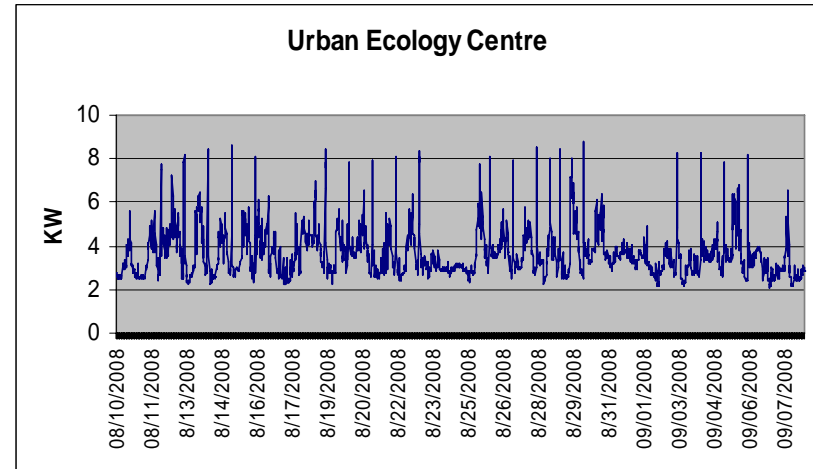
- Real Time Operating System (RTOS)
- Funding from Ontario Buys to link metering from 26 Colleges across Ontario together.
- Schnieder's Enterprise successful
- Real time data, weather, hourly price
- 2 College's online so far, more coming
- Will aggregate load + give powerful analytical tools.

# Benefits

- Track energy savings (justify funding)
- Compare shadow meter with utility
- Procurement
- Can compare price paid to price if on HOEP
- Better understand energy use
- Benchmarking

# Actual Data

- LEED GOLD Building recently opened
- M&V revealed demand spikes
- Tracked to cleaners



# Future

- Submeter all Restaurants, Bookstore etc
- Add meters to all new buildings
- Tie in gas and water
- Load shedding
- Link to BAS
- Energy Conservation Leadership Act reporting