



District Energy and Community Planning

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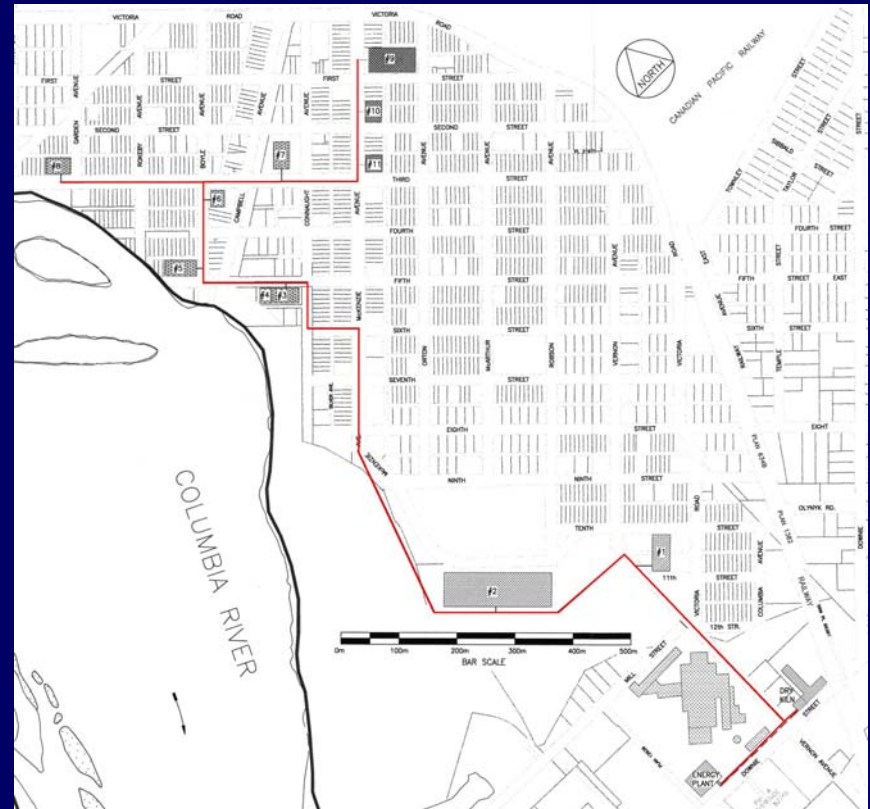
Presented to:

Renewable District Energy in Cities

February 28, 2008

Integrating Community Planning with District Energy

- Density
- Mixed use
- Load balance
- Infrastructure requirements
- Bylaws and policies



Revelstoke DH System

Density

- Higher loads over shorter distances
- Longer distances = higher capital costs + increased pumping
- Max 200 – 300 m between buildings
- Plan for higher density in new developments, infill in existing



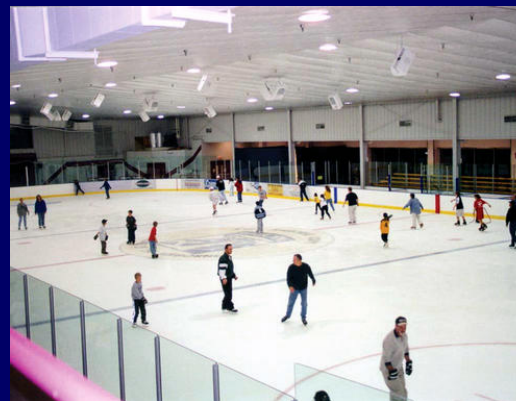
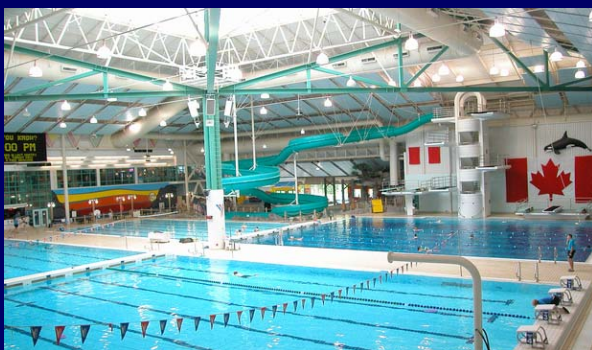
Mixed Use

- Diversity important to DE systems
- Keeps peaks down and load factor high
- Residential profile quite different from commercial

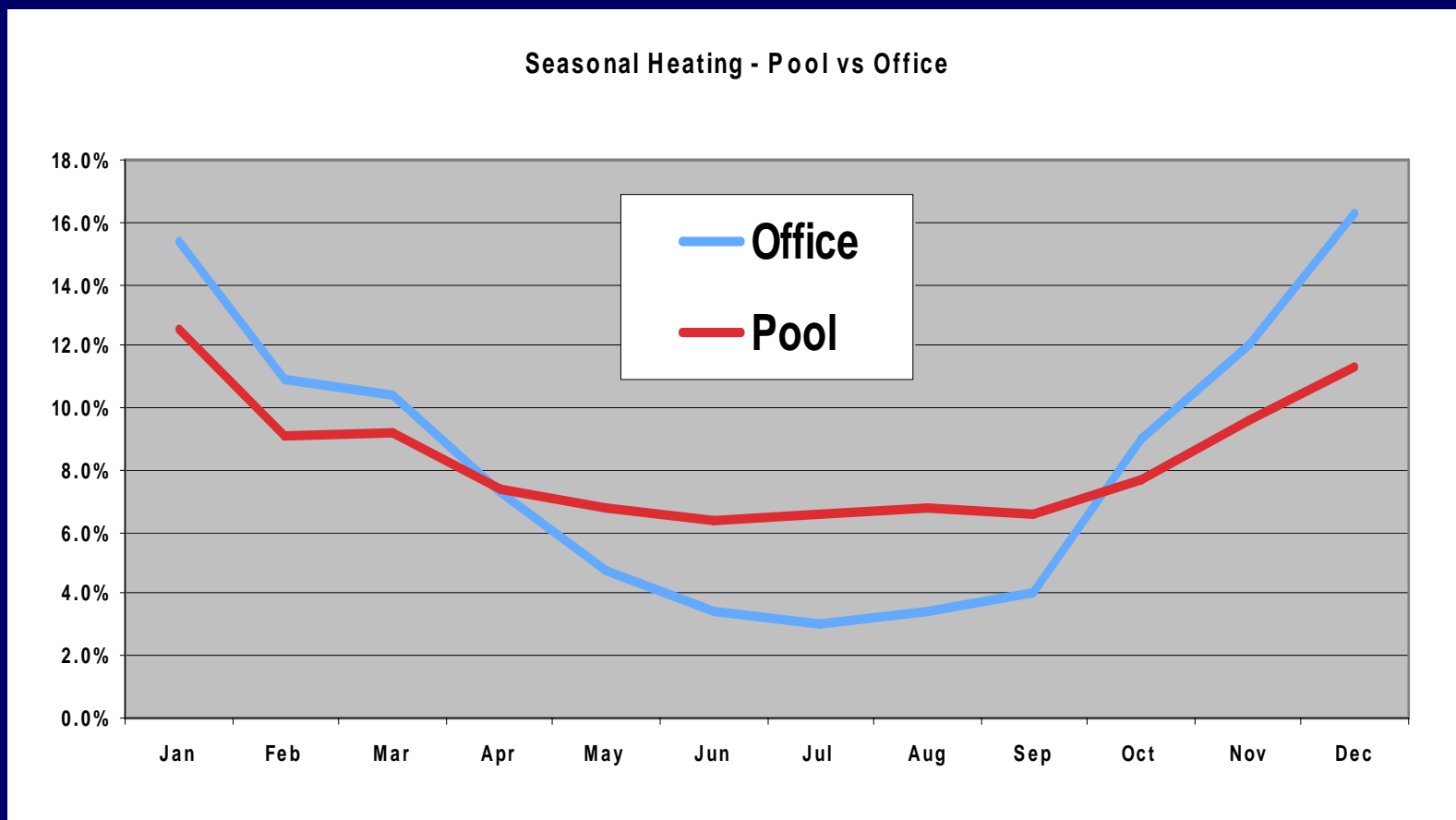


Load Balance

- Avoid peaks and build load factor
- Buildings with summer heating and winter cooling – pools and ice rinks
- Waste heat sources – wastewater treatment, data centres



Seasonal Profile – Pool vs Office



Infrastructure Requirements

- Piping right-of-ways
- Land or space for central plants
- Coordination with other infrastructure
- Location of parks



Bylaws & Policies

- Official Community Plan
- Service areas
- Permit area guidelines
- Height restrictions
- Zoning regulations



Community Energy Association

Helping Communities Benefit From Energy Opportunities



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