Natural Resources Canada | Ressources naturelles Canada

Renewable Energy District Energy (in Canada)

CLEAN ENERGY TECHNOLOGIES

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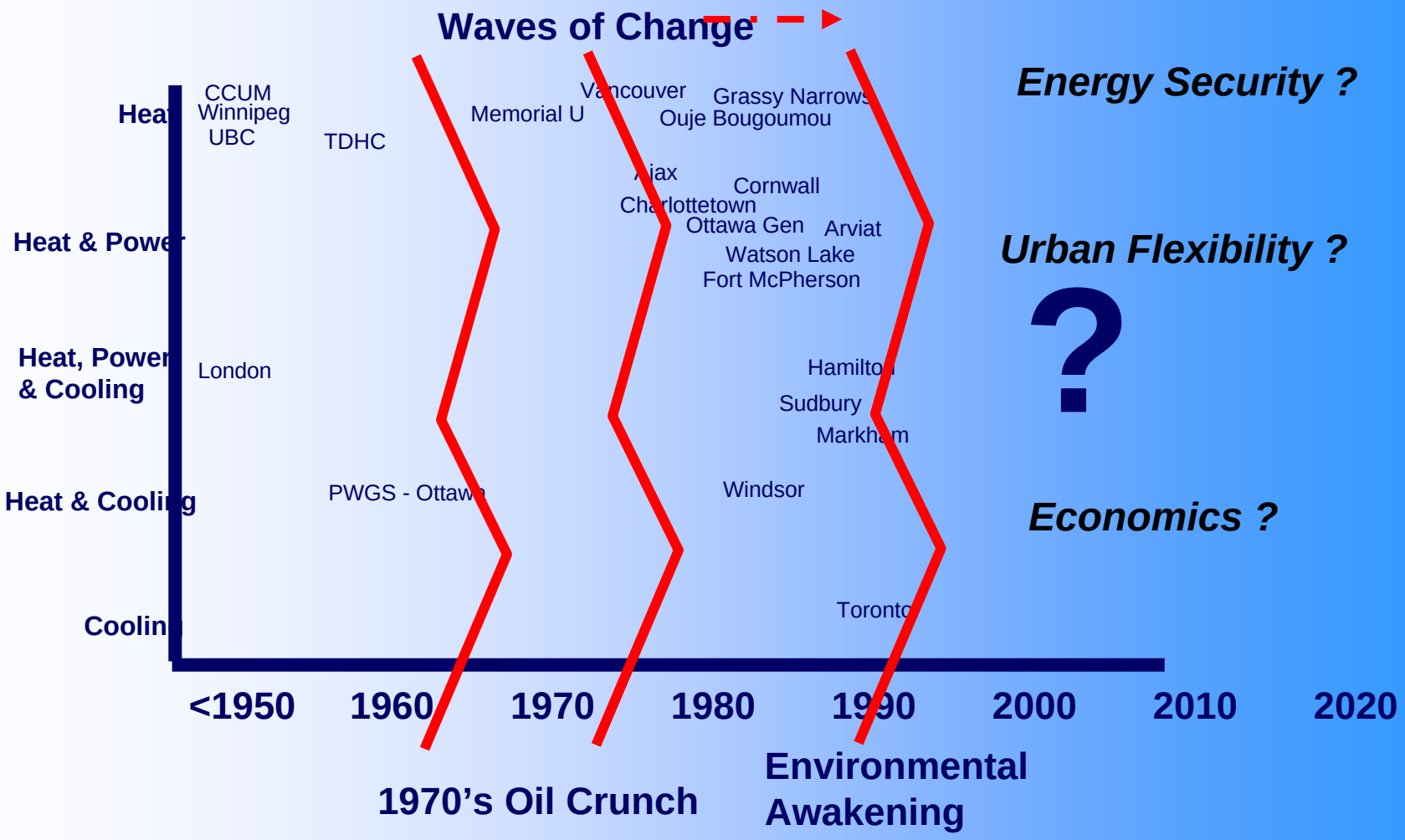
Canada

Origins


Public Works and Government Services Canada
Travaux publics et Services gouvernementaux Canada
CENTRAL HEAT DISTRICT ENERGY
Winnipeg
Embrace the Spirit • Vivez l'esprit
Scale / Échelle
200 0 200 400 600
km km

Existing and Proposed Systems

Changing themes

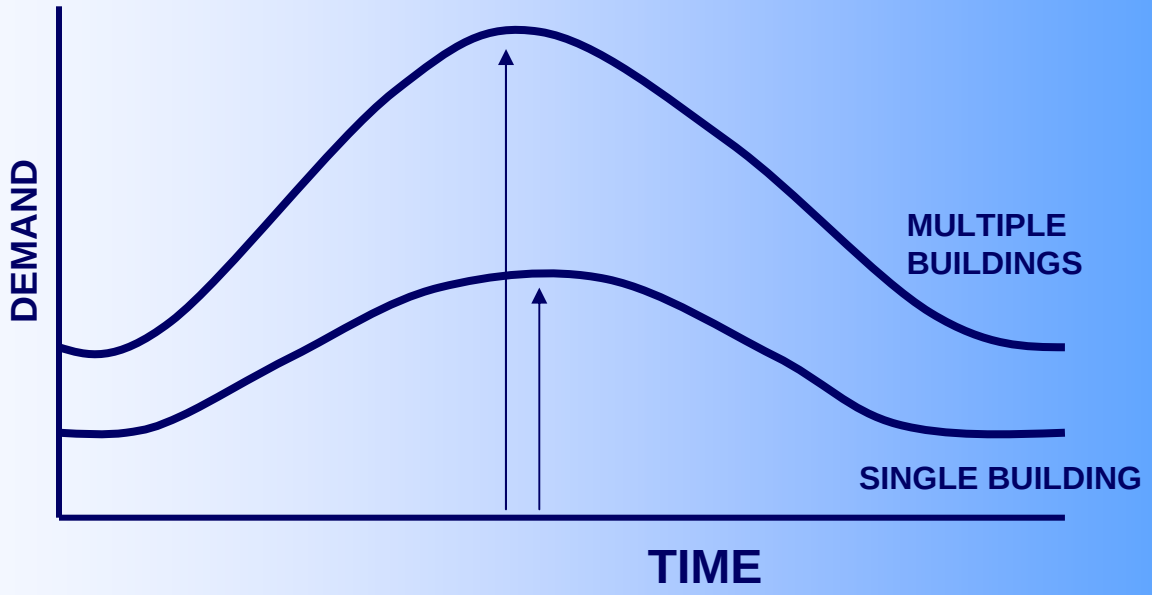


Basic Principles

Energy Management not Energy Generation

Energy Profiles are key to success

Multiple, identical profiles = headache



Basic Principles

Good Aggregation leads to improved efficiency

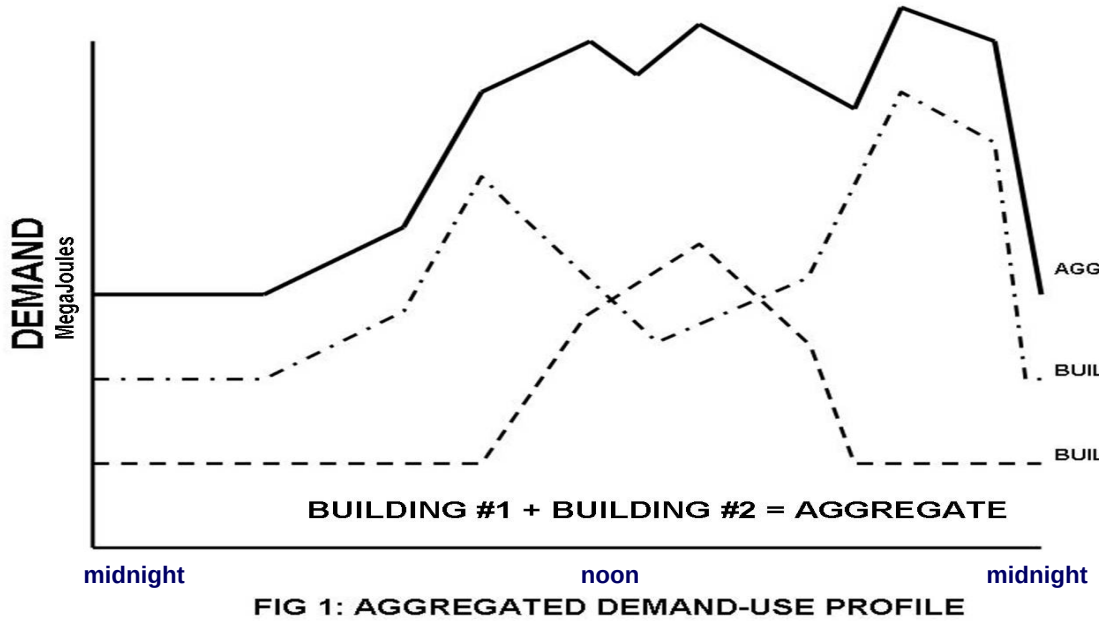


FIG 1: AGGREGATED DEMAND-USE PROFILE

Basic Principles

Integrate with building design

- ***Inlet Temperatures***
- ***Delta-Tees***
- ***Fan-Coil vs Radiant Floors***

Plan for growth – Program not Project

Energy Hierarchy

- ***Pollutant***
- ***Industrial waste heat***
- ***Renewable energy***
- ***Fossil fuel***

BEST

WORST

Feasibility of Storage is improving

Times - they are a Changing

Enwave - Gas

Vancouver – Heat Pump

Revelstoke – Wood Waste

Yellowknife – Mine Heat?

Okotoks - Solar

Conclusions

A movement away from fossil fuels

Flexible design of Community Energy Systems

Integrated into Building Design and into Community Planning for maximum effect

Thank You


Thanks !