

Manitoba's Electricity Exports

David Cormie P. Eng.
Manitoba Hydro
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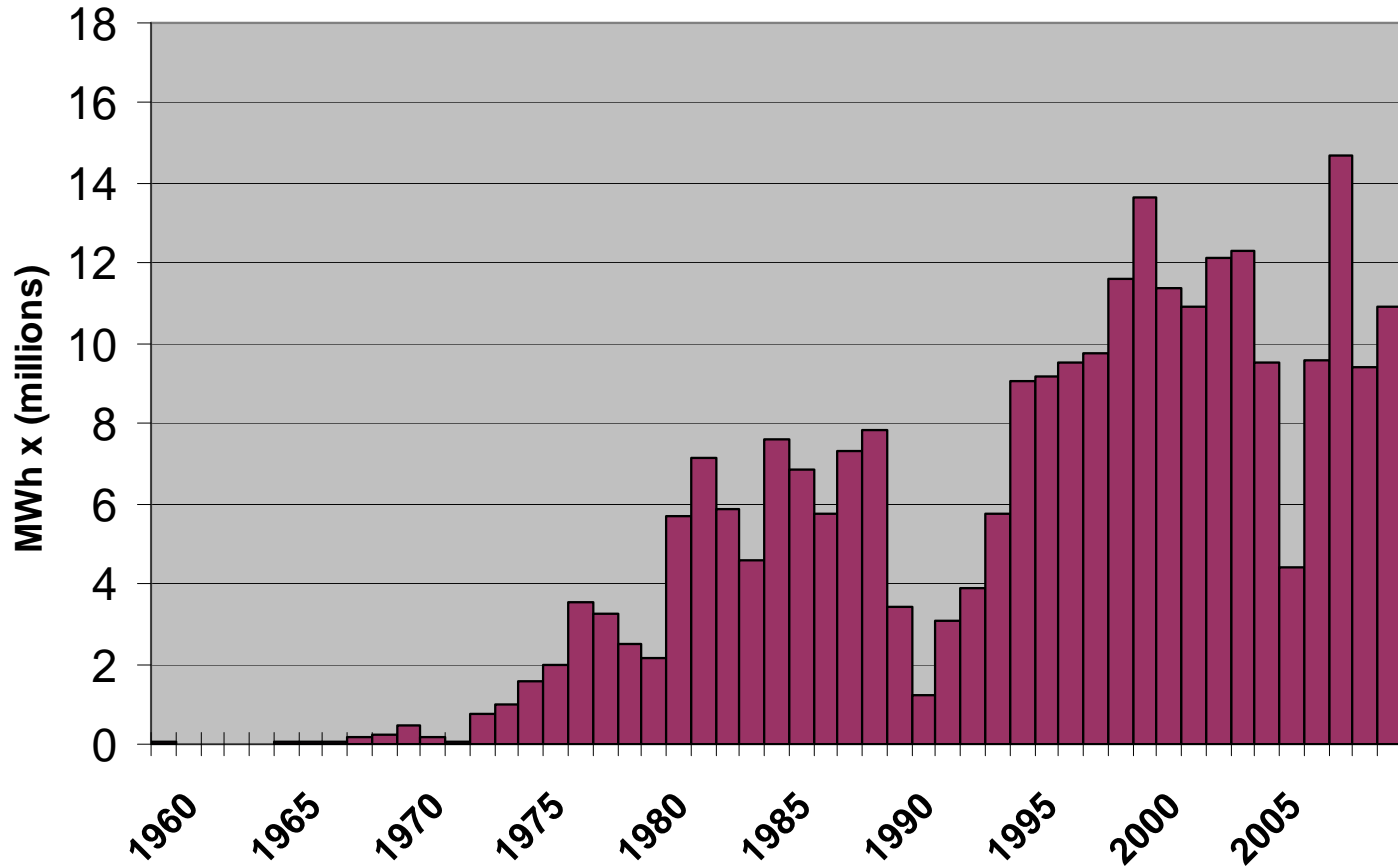
Manitoba Hydro

- Natural gas and electric utility
- \$2.3B in annual revenues
- \$12B in assets
- 5,575 MW in generating capacity
 - hydro, gas, wind, coal
 - 98% energy from hydro
- 12 major interconnections
 - Over 50% of generating capability
 - First exports in 1958 to Ontario



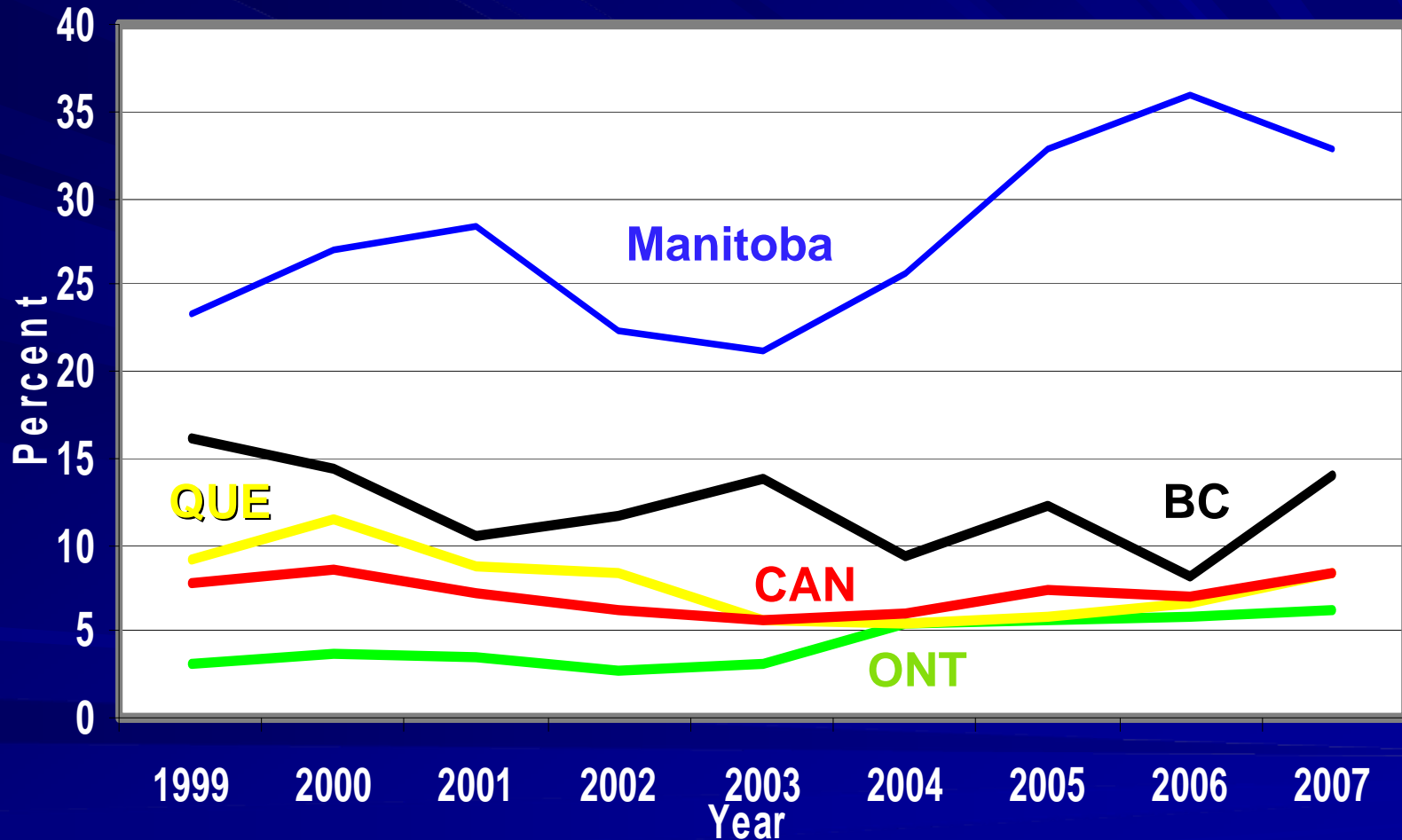
Manitoba Electricity Exports

(1958 – 2008)



Canadian Electricity Exports

(percent of generation)



Benefits of Interconnections

■ Outlet for Surplus Energy

- Profitable

 - \$7 billion in revenues since 1992

 - up to 40% of electric revenues

- Environmental Benefits

 - Energy otherwise spilled

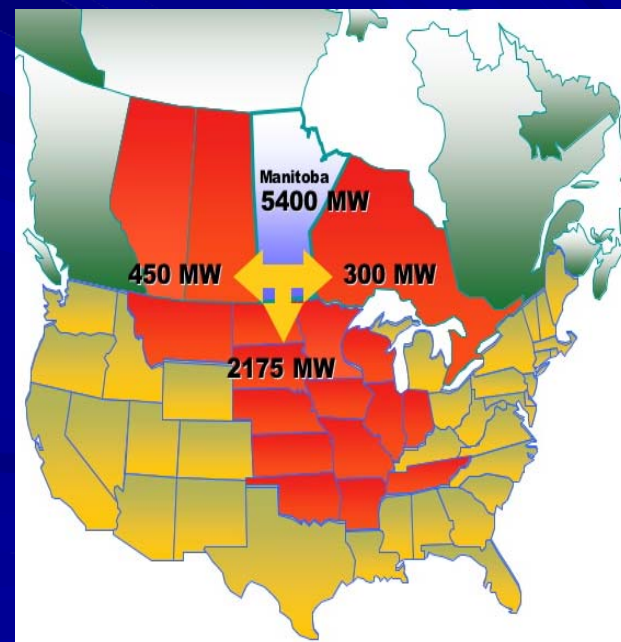
■ Reliability/Security

- Emergencies

- Drought

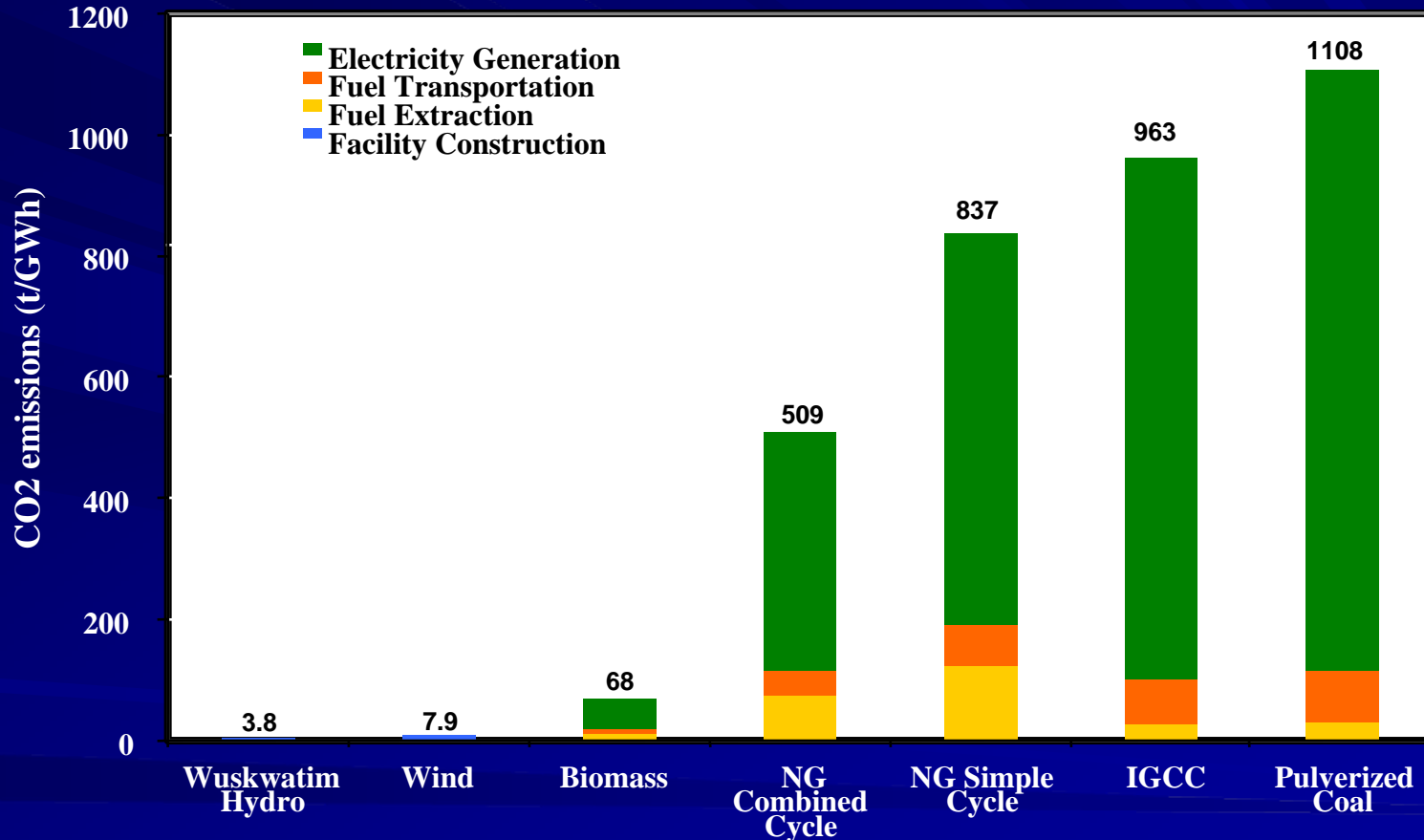
■ Efficient Use of Capital

- Load Diversity



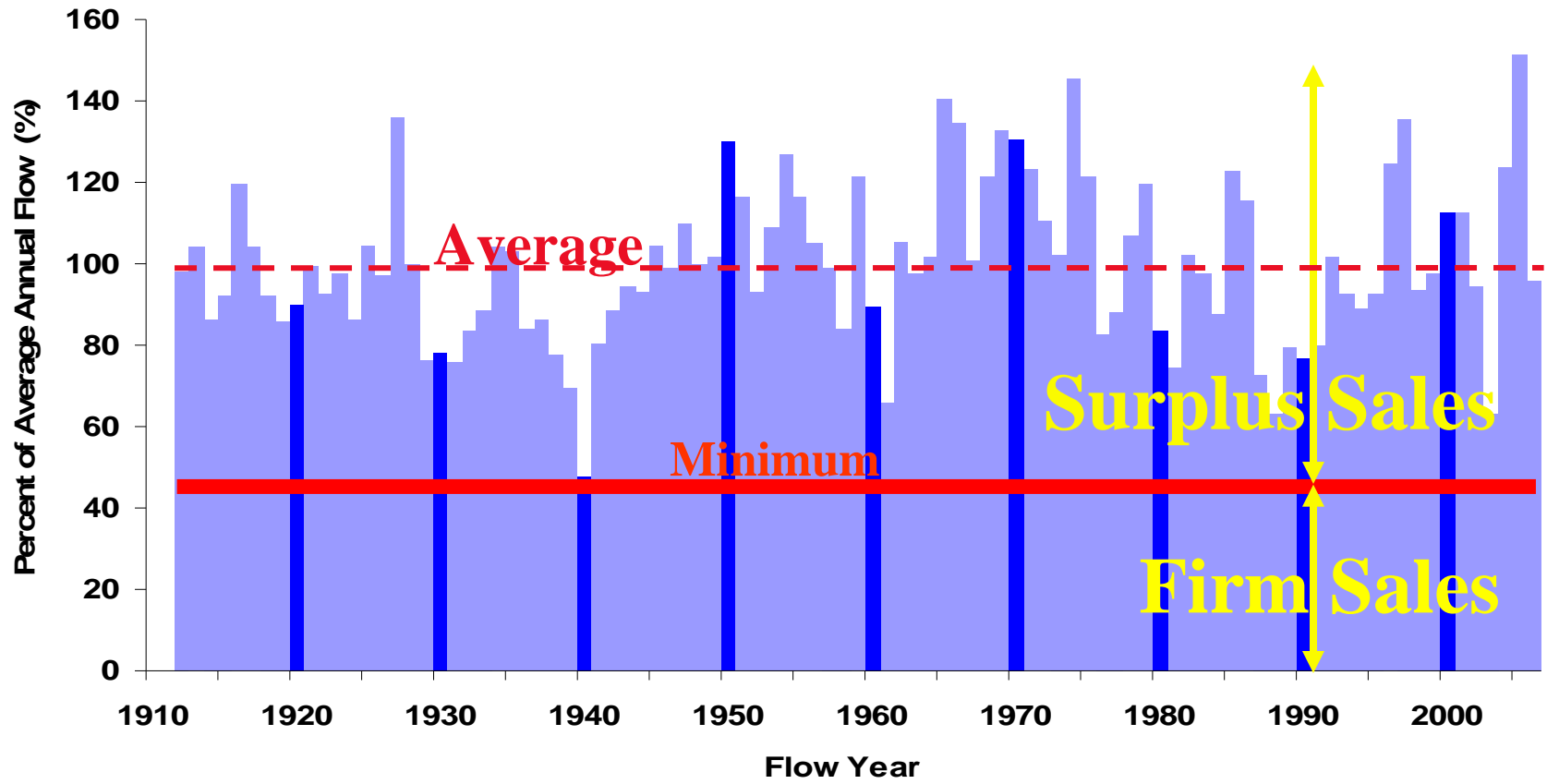
Life-Cycle GHG Emissions

Hydro GHG Emissions Are 290 Times Less Than Coal and 130 Times Less Than The Most Efficient Natural Gas Generation Technology



Source: Pembina Institute for Appropriate Development Study on Life Cycle GHG Emissions and Land Change Related to Selected Power Generation Options in Manitoba

Manitoba Water Supply



Export Products

- Surplus Energy
 - Opportunity and Firm
 - Curtailable and Recallable
- Environmental Attributes
- Storage Services
 - “Rechargeable Battery”



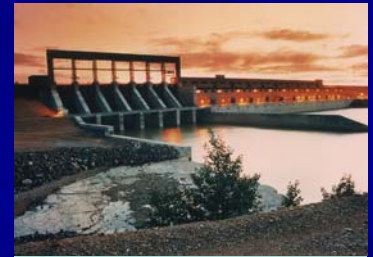
Current Plans

- **Wuskwatim**
 - 200 MW - first power 2011
 - Nisichawayasihk Cree Nation
- **Keeyask**
 - 695 MW - first power 2017
 - 4 First Nation Communities
- **Conawapa**
 - 1495 MW - first power 2021
 - Up to 12 First Nation Communities
- **50% increase in exports by 2023**



Hydro Exports: Should We?

- Sustainable
 - Financially - Yes
 - Environmentally - Yes
 - Socially - Yes
- Reliability/Security - Yes





Thank You