

Greening the Public Sector

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Why greening?

- The Millenium Ecosystem Assessment (MEA) has concluded that approximately 60% of the 24 ecosystem services evaluated are being degraded or used unsustainably.
- “The degradation of ecosystem services often causes significant harm to human well-being and represents a loss of a natural asset or wealth of country.”

Why greening?

- The FAO concluded that 15 of the 17 largest marine fisheries are being overexploited, fully exploited or are depleted.
- A recent study by Oceana found that 7 of the top 10 fisheries now target prey fish.
- A study by Myers et al. predicted that by 2050, all large fish species will be gone.

Why greening?

- The World Resources Institute predicts that by 2025, 40% of the world's population will live in water scarce areas.
- The MEA notes that withdrawals from rivers and lakes doubled since 1960.
- In 60% of the European cities with more than 100,000 people, groundwater is being used faster than it can be replenished.

Disappearing lakes!



Lake Boga, Australia

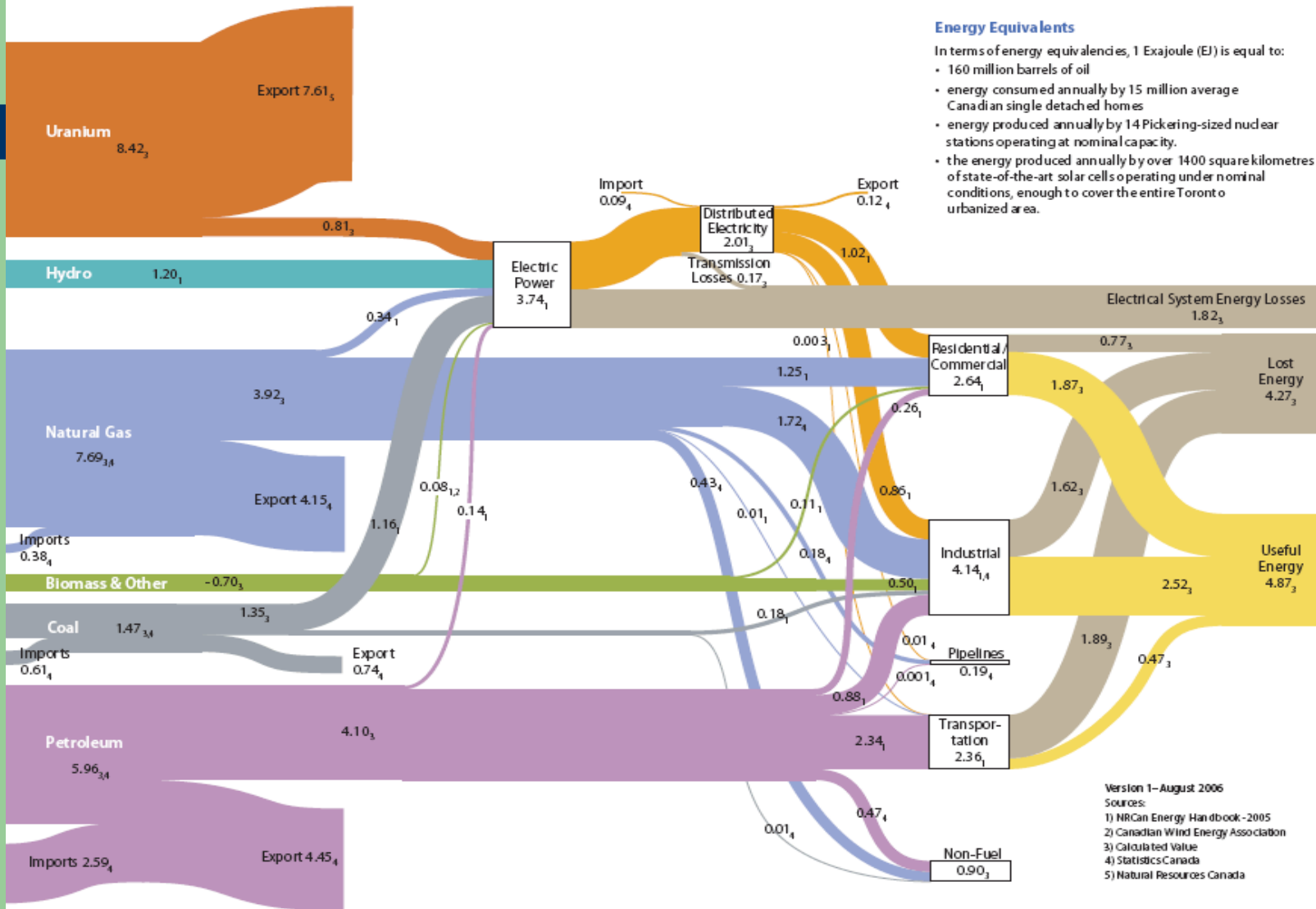


Aral Sea, Russia

Why greening?

- As a species we are incredibly wasteful.
- Almost 90% of what we extract or harvest is wasted (burned or landfilled) within 6 months.
- Approximately 48% of the all of the energy derived from sources extracted and imported into Canada is lost before it can perform **useful work** (National Advisory Panel on Sustainable Energy Science and Technology, 2006)

Wasted energy



Energy Equivalents

In terms of energy equivalencies, 1 Exajoule (EJ) is equal to:

- 160 million barrels of oil
- energy consumed annually by 15 million average Canadian single detached homes
- energy produced annually by 14 Pickering-sized nuclear stations operating at nominal capacity.
- the energy produced annually by over 1400 square kilometres of state-of-the-art solar cells operating under nominal conditions, enough to cover the entire Toronto urbanized area.

Version 1—August 2006

Sources:

- 1) NRCan Energy Handbook - 2005
- 2) Canadian Wind Energy Association
- 3) Calculated Value
- 4) Statistics Canada
- 5) Natural Resources Canada

Why greening?

- The climate is warming and changing more rapidly than originally anticipated by the IPCC.
- The frequency and impacts of severe weather events, floods and fires has increased significantly in the past 50 years and annual losses now exceed \$70 billion per year and could double within 10 years according to Munich Re.

Greening from two perspectives

1. Changing the behaviour of individuals and bureaucracies so that we use resources more effectively and efficiently.
2. Changing policies and programs so that they recognize and address environmental impacts and costs.

Changing behaviour

- Governments employ large numbers of people in Canada at municipal, regional, provincial and federal levels.
- These in turn, have spouses, children and other relatives and neighbours which they can influence.

Changing behaviour

- Sustainable or environmental procurement
- Green buildings designed to LEED standards
- Greening the fleet with hybrid vehicles
- Reducing carbon footprints by adopting energy efficient practices or using renewable sources of energy
- Considering life cycle impacts and costs of projects

Changing policies and programs

- Incorporating environment and sustainability into all initiatives of government, eg.
 - Industry Canada promoting eco-efficiency and corporate social responsibility
 - ACOA promoting “lean and green’ thinking and practice and sustainable communities
 - Natural Resources Canada researching and promoting energy efficiency and sustainable energy and water strategies
 - Foreign Affairs and International Trade leading a Canadian framework on sustainable production and consumption
 - Agriculture Canada promoting Environmental Farm Plans and linking access to funding to plans

Public vs private leadership

To be a little controversial, the public sector in Canada, although expected by the public and the private sector to demonstrate leadership, has a long way to go to catch up to leading corporations.

Panel

- Erika Toby-Wagner, A/Director, Environmental Services, Public Works and Government Services Canada
- Rick Draper, Director, Procurement, Nova Scotia Department of Economic and Rural Development
- Andy Fillmore, Manager, Sustainable Environment, Halifax Regional Municipality