Energy in Nunavut

Smart Energy Communities in Northern & Remote Canada

August 27, 2013
Overview

- Only jurisdiction in Canada where 100% of the power being generated comes from fossil fuel generators.
- Each community is a stand-alone grid.
- Government of Nunavut pays approximately 80% of Nunavut's energy costs, either directly or indirectly.
  - Energy costs are subsidized in Nunavut through subsidy programs but also through underinvestment in the replacement of our existing capacity.
Fuel Costs

• Annual Fuels purchase
  – Average $175-$200m /year
    • Arctic grade diesel
    • Bulk purchase
    • Delivered by barge

Energy Rates (April 2011)
  – Domestic Non-Gov’t 52.39-102.71 (cent/KWh)
  – Domestic Gov’t 52.39 – 131.32
  – Commercial Non-Gov’t 43.42-99.92
  – Commercial Gov’t 44.69-110.69
Fuel Transportation

- Barges
  - Fuel is delivered during the open water season
- Planes
  - Emergency resupply
- Ice Roads
Energy Policy

• Energy strategy created in 2007

• Guides Nunavut energy policy up until 2020

• Four policy themes
  – Energy conservation and efficiency
  – Alternative energy
  – Management practices
  – Oil and gas development
Community Initiatives

• Arviat
  • 2012 Hamlet received funding under NRCan’s EcoEnergy program for solar hardware for local recreation facility. (Installation scheduled for 2013)

• Pangnirtung
  • 2013 Hamlet participated in 'Engage North', a program that links students with northern communities.
  • engineering students from the University of Alberta spent the summer in Pangnirtung to study ways to reduce energy consumption. (awaiting results)
Northern Sustainable House (Arviat)

- Culturally appropriate
- Energy performance 50% better than National Energy Code
- CMHC, NHC
Iqaluit Hydro

• Feasibility study
  – Recommence 2014
• Two sites proposed:
  – Jaynes Inlet, 12.5 MW
    • 84 km transmission line
  – Armshow South, 7.3 MW
    • Tap into Jaynes Inlet line
Opportunities

- Energy partnerships
  - Arctic Energy Alliance

- Continued development of energy awareness campaign

- Waste heat recovery in community power plants

- Partnership opportunities for renewable energy in Nunavut
  - Major vendors and suppliers
  - Opportunities in support of resource sector
Questions?