

An aerial photograph of a dense forest with a winding river or stream. A bright, multi-pointed starburst graphic is positioned on the left side of the image. The text 'Newfoundland &' is overlaid in a large, bold, yellow serif font with a black drop shadow.

Newfoundland &

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Labrador Hydro



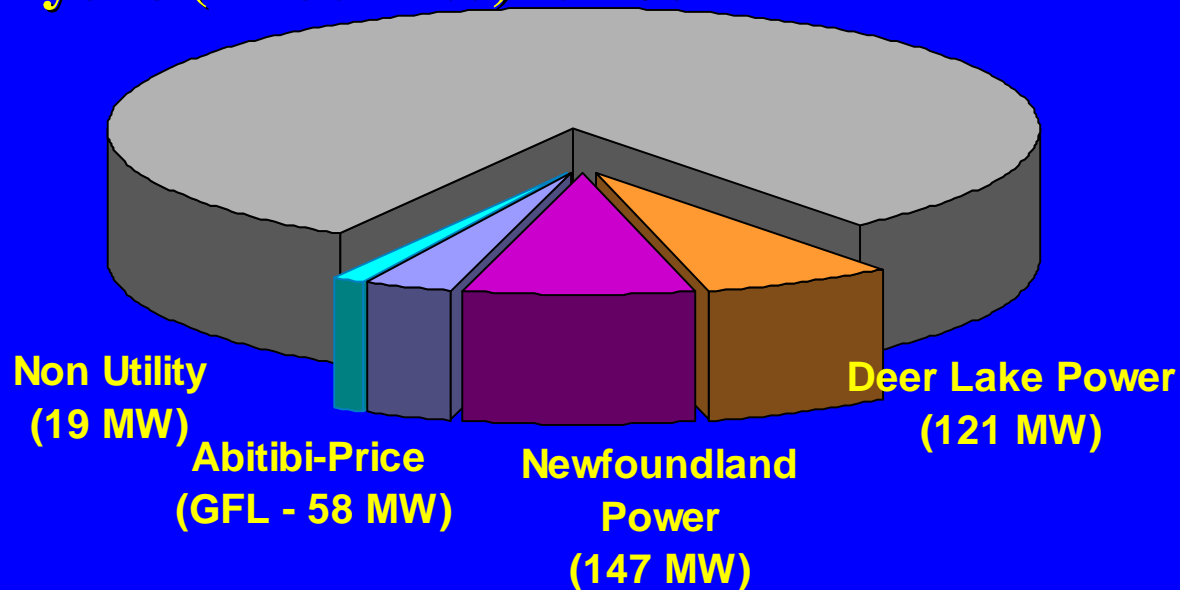
Production

Facilities Overview

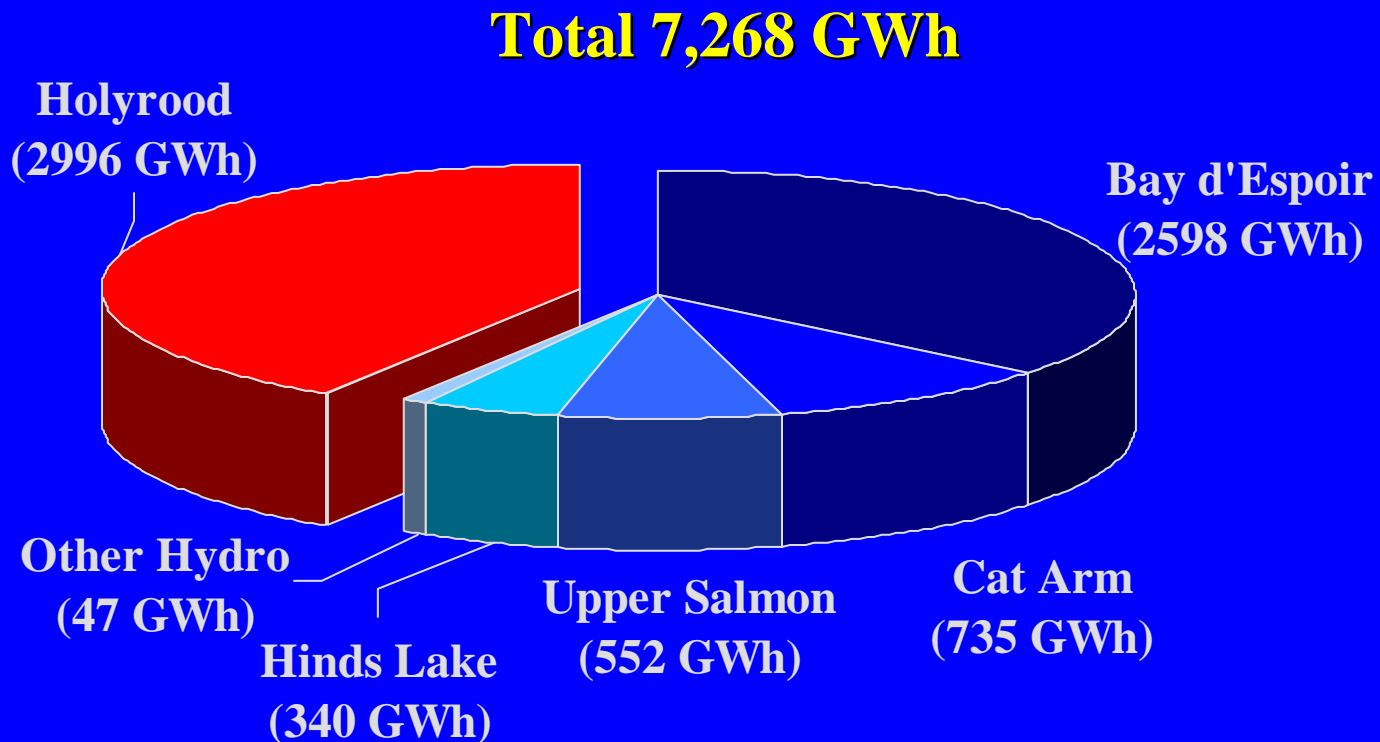
Total Island Generating Capacity

**Newfoundland & Labrador
Hydro (1486 MW) 81 %**

1831 MW's

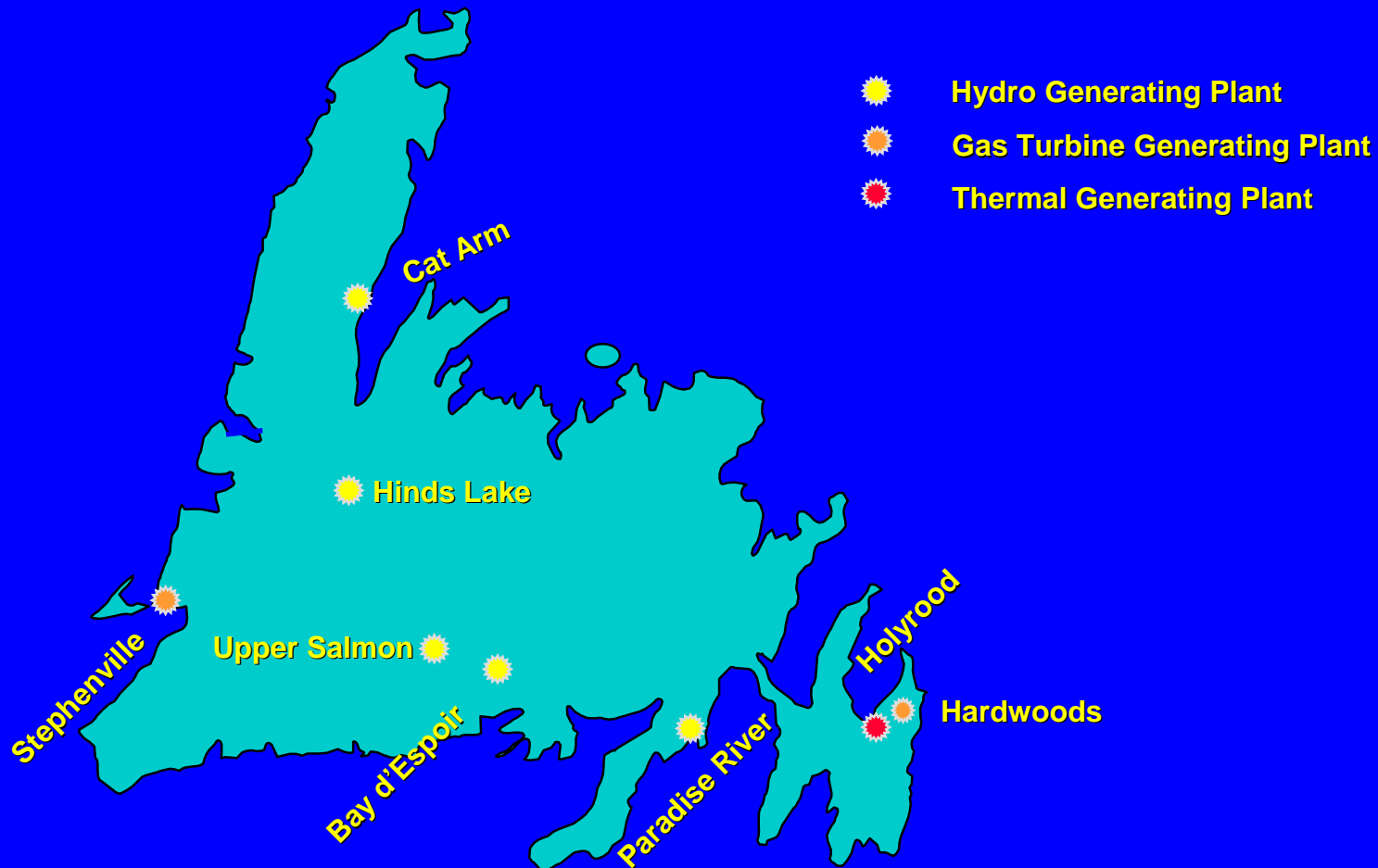


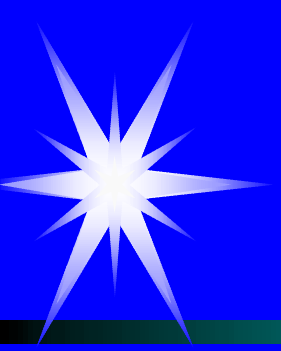
Newfoundland & Labrador Hydro's Island System Energy Capability



Total Hydro-electric 4,272 GWh (59%)

Newfoundland & Labrador Hydro System Generation Map





Large Reservoir System

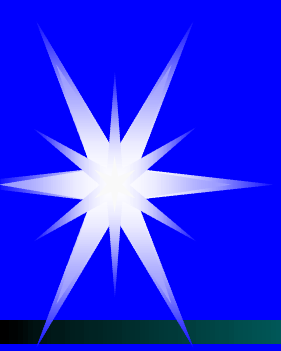
- Bay d'Espoir System (5,903 sq. km)
 - ◆ 4 Reservoirs
 - ◆ Total Volume 3,483 million cubic meters(Mm³)
- Hinds Lake (651 sq. km)
 - ◆ Reservoir Volume 273 Mm³
- Cat Arm (651 sq. km)
 - ◆ Reservoir Volume 448 Mm³
- Total Energy Storage Capability of 2,400 GWh
(One Third of Annual Load)



Energy Control Centre

- Remotely Monitors and Controls
 - ◆ Cat Arm
 - ◆ Hinds Lake
 - ◆ Upper Salmon
 - ◆ Paradise River
 - ◆ Gas Turbines & Diesels
 - ◆ Reservoir Control Structures





Energy Control Centre

- Remotely Monitors and Controls the High Voltage Transmissions Systems Including Approximately 30 Terminal Stations
- Limited Monitoring and Control of
 - ◆ Bay d'Espoir and Holyrood
- Automatic Generation Control
- Economic Generation Dispatch

Telecommunications

- Facilities Enable
 - ◆ Teleprotection
 - ◆ Remote Control of Generating Plants and Terminal Stations
 - ◆ Operational Voice
 - ◆ Administrative Data & Voice

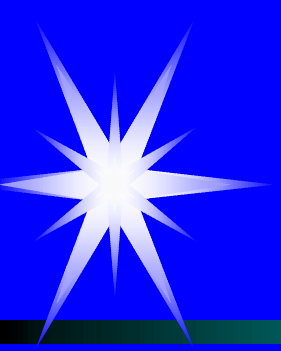


Telecommunications

• Communications Facilities for Power System Operation

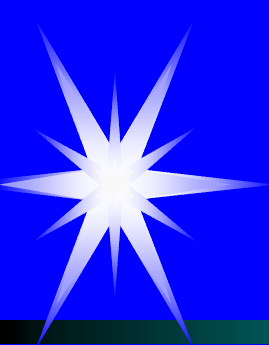
- ◆ VHF Mobile Radio System
- ◆ Microwave System
 - Deer Lake to Bay D'Espoir
 - St. John's to Sunnyside
- ◆ Satellite Link
 - St. John's – Churchill Falls
- ◆ Power Line Carrier
- ◆ UHF Radio/Fibre Optic





Newfoundland & Labrador Hydro

The End



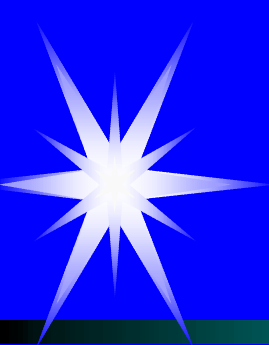
Hydro Generation Bay D'Espoir



Bay D'Espoir

592 MW

2598 GWh



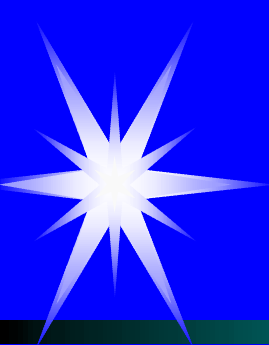
Hydro Generation Cat Arm



Cat Arm

127 MW

735 GWh



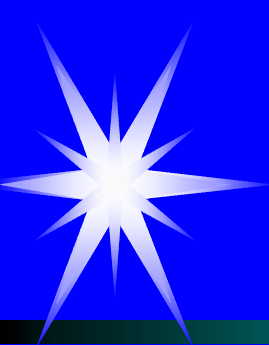
Hydro Generation Upper Salmon



Upper Salmon

84 MW

552 GWh



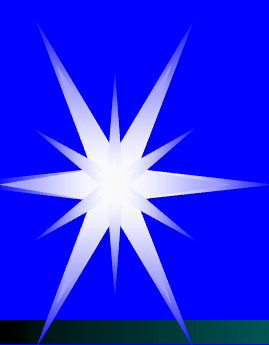
Hydro Generation Hinds Lake



Hinds Lake

75 MW

340 GWh



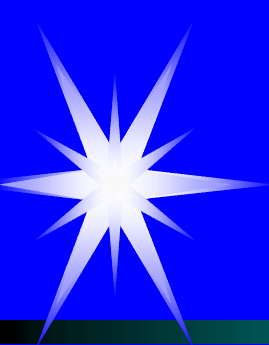
Hydro Generation Paradise River



Paradise River

8 MW

39 GWh



Thermal Generation

Holyrood



Holyrood

466 MW

2996 GWh