

# HISTORY OF THE NWT ELECTRICITY SYSTEM

### The System

In 1948, the federal government felt that because of the rapid expansion of the mining sector around Yellowknife, there was a need for an organized utility in the NWT to assume responsibility for the construction and operation of power plants in the NWT. By an act of Parliament, the Northwest Territories Power Commission was created, renamed the Northern Canada Power Commission (NCPC) in 1956 when operations expanded to include the Yukon.

The hydroelectric system in place today was developed with federal government and industry support. For example, the Snare Rapids hydro facility was developed by the federal government to supply power to the Giant Gold Mine and the town of Yellowknife. The Giant Gold Mine provided funding towards the transmission line.

In the 1960's, further mining development led to the development of a hydro plant on the Taltson to supply power to the Pine Point Cominco Mine site and the communities of Pine Point and Fort Smith, and was supported by the federal government as well. The commissioning of the Taltson-Hydro Electric Development occurred in 1965 and now supplies power to the communities of Fort Smith, Fort Resolution, Hay River, Enterprise and the Hay River Reserve.

*Hydro Development to Date:*

- Bluefish - Consolidating Mining and Smelting, 1938 (3.0MW);
- Snare Rapids – NCPC, 1948 (8.0MW);
- Snare Falls – NCPC, 1960 (7.5MW);
- Taltson – NCPC, 1965 (18.0MW);
- Snare Forks – NCPC, 1976 (9.0MW);
- Bluefish Expansion - Miramar Con Mine , 1994 (4.0MW); and
- Snare Cascades – NTPC (owned by Dogrib Power Corporation), 1996 (4.3MW).

At the present time there is a proposal to expand the Taltson system and supply power to the diamond mines north of Great Slave Lake.

Today, the electricity system in the NWT is comprised of communities served by both thermal and hydro electricity. There are 25 thermal communities (including two on natural gas and 23 on diesel) and eight hydro communities. The thermal communities tend to be the smaller, isolated communities located throughout the Mackenzie Valley and the hydro communities are located in the area surrounding Great Slave Lake.

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### Rate Design

The NWT electricity system has experienced much change over the decades. Over time it has evolved into a very complex system with electricity rates established on a community-by-community basis.

From 1948 to 1965, the system was relatively unregulated, with the only regulation coming in the form of government and non-government electricity rates.

In 1965, the federal government established community based rates in both the NWT and the Yukon to recover the total costs to generate electricity in each community.

These rates lasted until 1975 when the *Northern Canada Power Commission (NCPC) Act* was amended and rate zones were created for each of the territories - one for communities in the NWT and one for communities in the Yukon. Government/Non-government rates continued and rates operated similar to a levelized rate zone, with across the board increases for both zones and the introduction of fuel adjustment clauses (price and water levels).

From 1983 to 1985, the National Energy Board conducted a non-binding review of NCPC rates. Recommendations included a hydro zone, a diesel zone, a fuel adjustment clause and a water adjustment clause. The recommendations were not implemented.

The next large change to the electricity system in the NWT occurred in 1988 when the GNWT purchased NCPC from the federal government (renaming it Northwest Territories Power Corporation or NTPC) for \$1 and assumed responsibility for the Territorial Power Subsidy Program (TPSP), accumulated debt, as well as administration of rates. By this time, the system had evolved to include over 250 rates as communities and customers were added to the system over the years.

In 1992, electricity rates in the NWT became fully regulated. In 1993-94, the Corporation proposed implementing rate zones as opposed to the complex rate structure inherited from the federal government and largely consistent with the 1985 NEB recommendations. Simply, communities would be divided into various zones. This proposal was met with opposition from many communities and was not approved.

From 1995 to 1998, NTPC again tried to implement rate zones and followed this with their 2001-03 proposal for a fully levelized rate (one rate zone), whereby everyone in the territory would pay the same rate and costs would be split equally among all residents. As before, both these proposals were rejected largely due to the significant price increase that would need to occur in "hydro communities" to move towards a single rate zone.