Strategic Investments in NWT Hydro Development

In support of reducing factors contributing to climate change and speeding the nation's recovery from the recession, there is a need for the federal government to strategically invest in developing hydroelectric energy resources in the Northwest Territories (NWT).

In the NWT the dependence on fossil fuels for power generation is the largest contributor of greenhouse gas emissions in this region of the country more sensitive than most to the effects of climate change. Climate change is an issue that impacts all Canadians and emissions don't stop at jurisdictional borders.

Today three diamond mines and 23 of 33 communities in the NWT are completely dependent on diesel-generated power. In the communities using hydroelectricity, the average cost of power is 20 cents/kWh. In diesel communities the average cost is 65 cents/kWh. The high cost of electricity has long been a barrier to economic development in the NWT and a deterrent for businesses attempting to recruit new employees from outside the North. Canada as a nation – and the NWT in particular – has significant hydroelectric potential both to support industrial development as well as on a smaller scale for community use. While it wouldn't be practical to develop all of these resources, there are several key projects that if targeted for strategic investment in the near-term would help address many of these issues.

For example, the $350-million proposal by the NWT Power Corporation to expand its Taltson hydro facility and construct a 700-km transmission line to the Slave Geologic Province where the diamond mines are located is expected to result in:

- Capacity of 74 megawatts up from the current 18 megawatts
- Extended life of existing diamond mines through reduced operating costs
- Increased mine construction through lower development costs
- Additional exploration activity due to greater infrastructure availability and enhanced development potential
- About 1,000 person-years of construction-related employment over a 30-month development period
- A 320-kilotonne reduction in greenhouse emissions

Additionally, the Government of the NWT proposals to develop $10-million, community-focused mini-hydro pilot projects in Lutsel K'e and Whati are expected to:

- Generate a combined two megawatts
- Diversify the local and regional economies
- All but eliminate the use of diesel-generated power by approximately 800 residents
- Establish a model for future projects in communities isolated from the existing electrical grid
- Build community-based teams of highly skilled hydro workers

- Open up long-term sustainable revenue streams for investing partners, governments and First Nations
- Encourage land access for larger-scale projects in the future by demonstrating the positive economic and environmental benefits of hydro development.

Recommendations

That the federal government :

1. As part of future stimulus and clean energy initiatives, invest in strategic hydro developments in the NWT such as the Taltson expansion and transmission line, and the mini-hydro pilot projects in Lutsel K'e and Whati.
2. Just as an east-west power grid is a national priority, fund a north-south grid connection that would facilitate the export of clean Northern hydroelectric power to southern markets.