

Getting on the grid

Five Nations Energy Inc. deals with the challenges and opportunities of green power in the north.

by MELISSA SHIN

five Nations Energy Inc. (FNEI) is an example of eco-innovation borne of necessity. “Growing up in Fort Albany, [FNEI President Mike] Metatawabin remembers many freezing mid-winter nights when storms knocked out electricity, plunging residents into darkness for days,” wrote Ian Ross in a profile of FNEI for Northern Business’ 2007 First Nations Business Award of Excellence.

So in 1997, with the support of the Moose Cree and Taykwa Tagamou Nations, the chiefs and communities of Attawapiskat, Fort Albany, and Kashechewan in northern Ontario began expanding the power grid from Moosonee to their communities.

FNEI now provides these communities with power, and supplies a line connected to the De Beers Canada mine north of Attawapiskat. It is a non-profit corporation owned equally by three local distribution companies, which are in turn fully owned by their respective First Nation. Attawapiskat, the northernmost community, was the last to join the grid in 2003.

The \$58 million construction costs were

financed through a mix of private and public funds. Indian and Northern Affairs Canada provided one-time funding of \$38 million and the Northern Ontario Heritage Fund extended a \$4.9 million loan.

Before FNEI was established, the communities used diesel generators. Schools, community centres, and arenas struggled without a reliable grid connection. “It limits the growth of communities,” says Edward Chilton, project coordinator and secretary treasurer. “You’re tied into the budgets of the federal government for upgrades to the diesel generation system.”

Chilton remembers development projects that were put on hold because there wasn’t enough electricity. “There was a chronic electricity shortage,” he says. “It also acts as a barrier to social infrastructure.”

Diesel usage also caused environmental issues. Many communities had diesel lines running underground, and fuel was often spilled during transportation. Diesel had leached into the grounds in 1979, and in 2000, J. R. Nakogee School in Attawapiskat was closed following a diesel spill.

The community is still waiting for a new school.

These issues spurred FNEI’s creation. “Hydro One stretched their line, which was helpful, but the driving forces were the communities themselves,” says Joe Gaboury, FNEI’s CEO. “It allowed us to build bigger stores, and for community expansion.”

“FNEI is a lifeline for the area,” says Chilton. FNEI also installed a fibre-optic telecommunications system going north from Moosonee to supplement FNEI’s transmission lines. This system, if harnessed for general use, will be a major upgrade to the area’s current analog microwave system. Chilton says that a First Nations organization is currently applying for government funding to do so.

In May 2002, the Ontario Government opened the electricity market to competition, which helped open the door for further First Nations electricity development. In Ontario’s new Green Energy Act, tabled in February of 2009, contains a provision allowing for resources to be applied specifically for engagement with First Nation communities in energy projects. In addition, it

Potentially electrifying

A high-voltage direct current (HVDC) transmission supergrid, while capital intensive, would reduce reliance on fossil fuels, support national energy independence, and promote northern development. Manitoba's Nelson River HVDC project, built in the 1970s, delivers electricity to southern customers at some of the lowest rates in North America. For long-distance transmission, HVDC offers lower energy losses than traditional alternating current lines.


Diesel backs up

According to Indian and Northern Affairs Canada, roughly 130 remote communities rely on diesel power generation. As a result of being far from natural gas or electric grids, many Aboriginal communities depend on this fuel. But diesel contributes to the release of greenhouse gases and toxins, and has been linked to heart and respiratory diseases.

moves the responsibility for planning these projects, along with the accompanying regulations, from the municipalities to the province. This provides a provincial standard for energy planning, removing the one-municipality-to-another approach to dealing with First Nations—an approach that creates bottlenecks in the planning process.

FNEI is happy to do its part.

“One of the biggest constraints to any generation project is getting your generation on to the grid,” Gaboury says, explaining that FNEI's line now makes many northern energy projects feasible. “As a transmitter, we have to hook up anyone who wants to produce power. It leaves that option open to any entrepreneur who wants to start up a generation facility for wind or small hydro.”

“People can move back home, and new houses can be built,” he says. “They won't have to worry about a lack of power, which puts the communities on equal footing with the rest of Ontario.” 

Melissa Shin is the managing editor of Corporate Knights.

A New Model

“First Nations come first” is Gemini Power Corp.'s philosophy.

Gemini Power (GPC) is an Ontario-based renewable power generation corporation whose investment strategy is designed to provide First Nations with a clear path to ownership. GPC partners with First Nations to develop existing and new sustainable power generation and renewable energy resources including hydro, wind power, and biomass energy.

The First Nation contributes land, water, human resources, and cultural guidance. GPC provides technical, financial, environmental, and operational resources. They then work together to build and operate the facility.

Once the facility is up and running, most of the net revenues are paid over to GPC in order to repay its initial investment. Once GPC recovers its investment plus fair profit, it departs—in as little as ten or up to 20 years. The First Nation then owns, operates, and receives all net revenues from the facility.

“The project continues as a legacy asset for the First Nation for generations to come,” says GPC.

GPC also creates a scholarship fund in partnership with the First Nation, funded by the project's operating revenues. Recipients are chosen primarily by community members.

Current projects include partnerships with the Lac La Croix First Nation for the High Falls Generating Station; the Nipissing First Nation to investigate the construction and operation of a biofibre-fuelled Combined Heat and Power plant on Nipissing First Nation lands; and Shaman Power Corp. for the Fenelon Falls and Marmora generating stations.

For more Aboriginal green power projects, go to:

www.corporateknights.ca/aboriginal

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