

# Pembina Institute Energy Planning Initiatives for First Nations

March, 2002

The Pembina Institute has been working extensively with First Nations in western Canada on the implementation of sustainable energy options which lead to cost savings, reductions in environmental impacts, and local economic development.

First Nation communities are increasingly becoming empowered to play a role in planning for their energy needs, including managing their energy demand and developing energy supplies. The drivers for their involvement in energy issues include: energy price volatility, electricity and gas market restructuring, increased competition, advancements in distributed energy technologies, and concerns around the environmental impacts of energy use.

Sustainable energy options provide for the needs of the community without compromising the environment, society, or the economy over many generations. They comprise energy efficiency technologies and management practices, low-impact renewable ("green") energy resources, district heating, and hydrogen energy derived from green energy supplies. Many of these are "distributed" energy supplies which provide for energy needs at the site of consumption.

Canada's green energy resource base is abundant, including vast hydroelectric, wind, biomass, and solar resources. Furthermore, the untapped energy efficiency potential is roughly 50% of our current energy use – by using energy more efficiently to meet our societal and industrial needs, we can displace or delay the development of new supplies.

The Pembina Institute's Community Eco-Solutions Program aims to facilitate the planning and implementation of end-use energy efficiency, low-impact renewable energy, and green hydrogen energy in Canadian communities.

The Community Eco-Solutions Program of the Pembina Institute has established working relationships with the following First Nations on such efforts:

- Selkirk First Nation. Pelly Crossing, Yukon
- Vuntut Gwitchin First Nation. Old Crow, Yukon
- Kikino Metis Nation. Kikino, Alberta
- Xenigwet'In First Nation. Nemiah Valley, British Columbia
- Oweekeno Nation. Rivers Inlet, British Columbia
- Gitga'at Nation. Hartley Bay, British Columbia
- Hupacasath First Nation. Port Alberni, British Columbia

The specific components of our approach include the following:

- Community consultation to establish priorities for energy planning.

- Community education initiatives which support the implementation of sustainable energy through increased awareness of economic and environmental issues around energy.
- Community energy demand analysis and forecasting.
- Assessment of energy efficiency and demand management options.
- Assessment of low-impact renewable ("green") energy resources (e.g., wind and stream monitoring).
- Completion of a community energy plan by undertaking a financial, environmental, social and technical assessment of energy options.
- Project implementation planning.
- Facilitation of partnerships between communities and investors, financiers, developers, customers, professionals, and/or other potential project participants.
- Oversight on project engineering and development.
- Development and training of operation and maintenance programs.
- Quantification of environmental benefits such as greenhouse gas emission reductions

The overriding objective of this work is to support the development of capacity in First Nations communities to undertake energy planning and to establish cost-effective sustainable energy technologies and management practices. In 2003, we anticipate that several of the energy recommendations that have been developed through these efforts will advance towards the implementation and construction phase.

For further information on the Community Eco-Solutions Program and our First Nations programs, please contact Jonathan Dogterom at our Calgary office ([jond@pembina.org](mailto:jond@pembina.org)) or Andrew Pape-Salmon in Vancouver ([andrewp@pembina.org](mailto:andrewp@pembina.org)).