

**Sustainable Energy and Rural Development: Options and Alternatives**

**A Discussion Paper by Bay of Fundy Marine Resource Centre**

## **SUMMARY OF RECOMMENDATIONS**

**Based on its research and community participation, the MRC recommends the following to OEER:**

- **that the plan for tidal energy development in the Bay of Fundy include the principle that adjacent coastal communities should directly benefit from this development**
- **that further research be carried out about the feasibility of creating a “green model” in the Bay of Fundy region by providing reduced energy costs**
- **that further research be carried out about the way that tidal energy development in the Bay of Fundy could benefit local community economic development and small business financing through a system of financial royalties and/or incentives**
- **that further research be carried out about developing financial structures that would allow rural Bay of Fundy communities to invest in tidal energy development in the Bay of Fundy**
- **that further research and public education be undertaken about the question of Aboriginal title as it relates to energy development**
- **that there be further research into how private corporate ownership of Nova Scotia’s electrical grid affects all of the above recommendations, especially in terms of costs and benefits to the public, the environment and other energy generating companies**

## **INTRODUCTION**

It goes without saying that renewable energy is almost entirely produced in rural areas. How rural citizens and their communities might benefit directly from energy generated from their regions is much less clear. Certainly there are many *indirect* economic benefits- employment and local taxation come to mind. But what about *direct* economic benefits? In general the energy and wealth accrued from energy development is moved out of the rural region and into the world beyond, with few immediate local benefits: the energy goes “into the grid”, and the wealth goes into the public treasury at provincial and federal level. While this undoubtedly serves the public good in a general way, it bypasses any special attachment that rural communities might have with the energy wealth that exists in the places they inhabit. The purpose of this paper is to identify some possible models for ways that energy development can directly benefit rural communities.

The specific context for this paper is the development of tidal energy in the Bay of Fundy. The Bay of Fundy Marine Resource Centre (MRC) has been funded by OEER to research options for how rural communities can benefit from energy.

The MRC has undertaken this work in three steps

- 1) Researching examples and precedents for provision of direct benefits to rural communities from energy development projects
- 2) Convening a group Bay of Fundy communities and representatives of community organizations based on the draft discussion paper
- 3) Incorporating ideas from the group discussion into the discussion paper

The paper consist of the following sections

- Background information , including a review of the legislative and jurisdictional context, examples from other jurisdictions and alternatives approaches
- Possible rationales for direct benefits from energy development to rural communities
- Options and models for how this direct benefit might work
- Recommendations

## **BACKGROUND**

### **1. The Legislative and Jurisdictional Context**

Before looking at examples of policies in which adjacent rural communities receive direct benefits from energy development, it is important to understand what is possible in Nova Scotia's legal framework

The Federal legislative context is governed by the following legislation

- Fisheries Act
- Oceans Act
- NWPA
- Shipping Act
- National Energy Board Act
- Species at Risk Act
- Canadian Environmental Assessment Act

The provincial legislative context consists of

- Environment Act
- Fisheries and Coastal Conservation Act
- Energy Resources Conservation Act
- Energy Legislation
- Endangered Species Act

Nova Scotia territorial jurisdiction includes all territories it brought into Confederation, including “a fairly strong claim”<sup>1</sup> to the Bay of Fundy (shared with New Brunswick). The province's jurisdiction is linked to territory (electricity, resources etc). Federal jurisdiction applies to fisheries, navigation and aquaculture.

In addition to the legislative context, an important factor in this discussion is the regulatory context, i.e. the regulation governing Nova Scotia Power, which determines

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<sup>1</sup> Doelle

what can or cannot be done on energy development at a local level. This research is beyond the scope of this paper, but is recommended for further research.

In addition to federal and provincial levels there is also the multi-government context of Mi'kmaq Rights Initiative (MRI) which includes both levels of government First Nations government.

It appears that none of the legislation identifies any requirements for benefit to go directly to local rural communities. On the other hand it is important to note that none of this legislation specifically prohibits such direct benefit.

## **2. Examples of policies which create direct benefit from energy development to adjacent rural communities**

### **1) Nova Scotia's Natural Gas**

The case of Nova Scotia's natural gas is more of a cautionary tale than a positive example, but it does illustrate the way energy development has been approached in this part of the world. In the late 1990's there was considerable research and discussion about how natural gas development would benefit rural communities in Nova Scotia. In particular the Antigonish RDA produced an in-depth study on how this might happen. Much of the ARDA work was based on the models of in Alberta and Saskatchewan Alberta oil discussions. The reason why it did not happen is beyond the scope of this paper, but the important thing to note here is that the discussion actually took place and that many Nova Scotians thought that this the way it was supposed to happen. The very fact that this alternative was on the table is important for the tidal power discussion in the Bay of Fundy

### **2) Energy Cooperatives**

A number of energy cooperatives have been established in Canadian in recent years. Amongst these are

Grey Bruce Renewable Energy Co-operative (Owen Sound, Ontario)

- Hearthmakers Energy Co-operative (Kingston, Ontario)
- Positive Power Energy Co-operative (Hamilton-Wentworth, Ontario)
- Windshare Energy Co-operative (Toronto, Ontario)
- WISE Energy Co-operative (Victoria, British Columbia)
- Seaway Valley Farmers Energy Co-operative Inc. (Eastern Ontario)

The BC Institute for Cooperative Studies describes energy cooperatives this way.

*Traditionally co-operative energy purchasing has taken place in a rural setting. Agricultural, dairy and rural consumer co-ops would make bulk energy purchases from energy providers. Today a majority of the world's rural energy co-operatives are located in the USA where they are partnered through the National Rural Electric Co-operative Association. There are a number of rural energy co-operatives in other countries around the world, but locating these co-ops on the Internet has proven difficult. Rural energy co-operatives provide members with access to affordable energy providers. They also facilitate educational opportunities for members, decision-makers and other members of the public who show an interest in co-operative energy consumption. Below are a few examples of rural energy co-operatives with websites on the Internet.<sup>2</sup>*

### 3) Energy Dividends

There are also precedents for citizens receiving direct royalties from energy development.

Perhaps the best known is in Alaska, where under the Alaska Permanent Fund citizens of the state have been receiving individual dividend checks from an oil rent trust fund since 1982.

Norway's citizens receive substantial social services and invest oil rents in a permanent fund for the future.<sup>3</sup>

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<sup>2</sup> Vallillee, Andre <http://web.uvic.ca/bcics/research/energy/rural.htm>

<sup>3</sup> Hartzog 2001

## 5) First Nations Treaty-Based Examples

It is beyond the scope of this paper to analyze the royalties accrued from energy in Canada to First nations in the context of treaty rights. The basis in nation-to-nation treaties makes this entirely different in its basis in law. It however important to note that this is a an example of rural people benefiting form resource extraction that is close at hand.

There are also some examples of First Nations taking a lead role in sustainable energy development. One such example in the Alberni Valley in British Columbia. In November 2004, the Hupacasath started a \$13.7-million micro-hydro power project at China Creek located about five kilometres from Port Alberni. Ecotrust Canada provided a \$250,000 loan to the innovative and historic enterprise, as part of an \$8.5 debt syndicate arranged by VanCity Capital.<sup>4</sup>

## **RATIONALES FOR LINKING ENERGY DEVELOPMENT WITH RURAL COMMUNITIES**

### *1) Linking energy development to rural community economic development*

One of the biggest challenges facing Nova Scotia, along with all other provinces, is rural economic development. There is an increasing disparity between rural and urban economies, with HRM growing and most rural economies declining. Despite the long terms efforts of OED and ACOA, the situation remains basically unchanged. The important exception to this trend is the case of rural economies where there are direct economic benefit form natural resources. For, example communities in Southwest nova Scotia which have a strong attachment to lobster fisheries continues to perform better than rural communities in general across the province and the country.<sup>5</sup> In these communities there is a direct link between household incomes, community well-being and local community development. By linking even a small degree of wealth form tidal energy to community economic development a self-sufficient system of investment in small business development could be put in place.

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<sup>4</sup> Ecotrust Canada For more information see <http://ecotrustcan.org/projects/ecodevo/upnit.shtml>

<sup>5</sup> Williams

As one participant in the discussion put it:

*...it just so ironic that it is only the huge companies that are doing the exploitation seem to get all the tax breaks, the big ACOA loans and yet the small independent businesses or the small independent fisherman, for example what few are left they are getting hit with downloading, of doing all their own monitoring in that [cod], and is there an argument to be made, I think there is an argument to be made or at least to start giving some of the rural communities the capacity to do appropriate economic development relative to that area that supports local livelihood, that is opposed to exploiting them and driving them out. I am a little pessimistic, I think we're coming on the heels of so much burnout here I am little bit pessimistic, this is one thing that the government but when you're dealing with Nova Scotia power.*

## 2) Attachment

Another rationale linking direct economic benefit to rural economics is that of historic attachment. Although it does not seem to carry any weight in law, the fact deep historical attachment between a stable rural population and a rural place must carry some moral weight in any deliberations about natural resources.

## 3) Stewardship

Similar to the previous suggestion is the idea that rural citizens have an important role to play in the stewardship of natural resources, including energy resources. Without rural citizens paying this stewardship role Canada, with the second biggest landmass of nay country and the mist urbanized population, is at risk of turning huge tracts of rural territories into unliveable industrial wastelands. We know this is possible- visit northern Russia or China- and that it can happen very quickly.

## 4) The Need for Green Models

More than ever Canadian society needs example of models where local economies and ecosystems are working together. Rural Nova Scotia is in a unique position to demonstrate such models.

## **OPTIONS**

### *1) Energy Advantage*

Rather than just putting new energy into the grid or exporting it, the Nova Scotia government could decide to give rural communities of the Bay of Fundy region an energy advantage by reducing local energy costs. This would support economic development in the region, and would support the development of a model for a green rural economy.

One participant put it this way:

*I think in terms of this technology the tidal power one is different with the wind is that as of yet, this tidal power technology what they are proposing not the barrages but the in stream tidal turbines, they say to you that the costs of development are going to be really, really high so I have been asking this question a lot to the energy people at the EAC, is there a way that these can be used to power small rural communities? Can the power go directly there or can smaller communities buy into these like you can buy into a windmill on your own yard or as a community? And the sense I get is that unless we find new ways for communities to invest in the development of these or the innovation for innovative ways to support the research and development, it's going to be, its current state it is going to be difficult to use these directly as a community-owned thing. We may just not be thinking about this imaginatively enough, but this one seems to be challenging because the technology is so new and will be so expensive to develop.*

There are also limits to this approach, as another participant pointed out:

*... because of the new technology, new and un-proven and so there's a lot of R&D costs, which presumably over time there are more and more products that are made that will*

*generate power through tidal action, the cost per unit will come down. But has the cost of infrastructure been calculated to reduce costs? If you were to generate and retain that electricity only locally it seems to me that some of the provincial infrastructure costs could down. The costs of putting the output from these apparatus on the grid, that's an infrastructure cost and if it has to go province wide presumably that increases cost so it seems to me that there's some potential cost savings as well as cost because of the technology. Am I wrong?*

*...the cost of putting these on the grid is almost immaterial of how...the grid is a bit archaic, it's set up mostly to serve, to kind of have the wires from places where electricity is produced, often those coal building plants towards major cities. So where ever you put these you going to have to plug in a wire and add it.*

## *2) Rural Economic Development*

Invest some small percentage of the wealth generated by new renewable energy projects into local economic development, with a focus on providing capital for new small businesses

*What we would like to see is 0.05% of that go into local community economic development capital fund for small business development. You know it sounds crazy to say that but you know in the United States there is national, there is federal legislation that says every bank has to put a small amount of every loan it makes into local community economic development. You just levy a tax in a sense and you say if you going to do that, you are going move money through here, you have to leave a little bit which will benefit locally. So there is sort of two things, one is to do with this problem about energy, you know where can you use it and where can't you and there is some other things that this is about money, that says if you are going to generate this wealth is*

*there any point in making that argument to say, you know you got to leave some tiny percentage here to acknowledge that there actually are people here?*

*3) Part of integrated environmental model comity based management integrate management*

Link tidal energy development to ecosystem management, which is a priority for both the province and for DFO, creating local governance structures with on an overall holistic management framework

*4) Working with First Nations*

Increase community understanding the treaty-based resource claims and negotiations, and how they relate to local rural community economic development

*5) Developing way for Communities to be Investors in Renewable Energy Projects*

As well as being recipients of direct benefits, rural communities can also benefit by investing in energy development. There are a number of successful examples of energy cooperatives across North America that do this.

Community Economic development Invest Funds (CEDIFs) are also an available means for rural communities to invest in energy development. There is a lot of experience in the province form taking this approach to wind energy, as in the case of bay Windfields.

## **RECOMMENDATIONS**

*I think the best we could do as a community is to make recommendations as to our fundamental values and wants, those benefits. But when you start talking about what's possible you know these issues of the grid and so on. There is an unequal playing field within the community and industry and government and it just comes back to this need*

*for education and information sharing. And sure if you have high speed internet you can spend a day or two getting everything available on the internet informing yourself you know to that point but you know who has time to do that.*

**Based on its research and community participation, the MRC recommends the following to OEER:**

- **that the plan for tidal energy development in the Bay of Fundy take into accounts ways that the bay of Fundy’s coastal communities can directly benefit form this development**
- **that further research be carried out about the feasibility of creating a “green model” in the Bay of Fundy region by providing reduced energy costs**
- **that further research be carried out about way that tidal energy development in the Bay of Fundy could benefit local community economic development and small business financing through a system of financial royalties and incentives**
- **that further research be carried out about developing financial structure for rural Bay of Fundy communities to invest in tidal energy development in the Bay of Fundy**
- **that further research and public education be undertaken about the question of Aboriginal title as it relates to energy development**
- **that there be further research into how private corporate ownership of Nova Scotia’s electrical grid affects all of the above recommendations, especially in terms of costs and benefits to the public, the environment and other energy generating companies**

### **Further Reading**

Alaska Permanent Fund <http://www.apfc.org/>

Doelle, Meinhard *Tidal Energy Governance: Law and Policy Considerations*

[http://ns.energyresearch.ca/files/Meinhard\\_Doelle.pdf](http://ns.energyresearch.ca/files/Meinhard_Doelle.pdf)

Ecotrust Canada <http://ecotrustcan.org/projects/ecodevo/upnit.shtml>

Hartzog, Alanna *The Alaska Permanent Fund: A Model for resource rents for Public Investment and Citizen Dividend*

[http://www.earthrights.org/component/option,com\\_frontpage/Itemid,61/](http://www.earthrights.org/component/option,com_frontpage/Itemid,61/)

Vallillee, Andre *Energy Cooperatives* BC Institute for Cooperative Studies (2003)

<http://web.uvic.ca/bcics/research/energy/rural.htm>

Williams, Rick *Between the Land and the Sea* Coastal Communities Network

[http://www.coastalcommunities.ns.ca/documents/Between\\_the\\_land\\_and\\_sea\\_Final  
Version\\_January\\_2005.pdf](http://www.coastalcommunities.ns.ca/documents/Between_the_land_and_sea_Final_Version_January_2005.pdf)