THE Culture OF Hydroelectric Power

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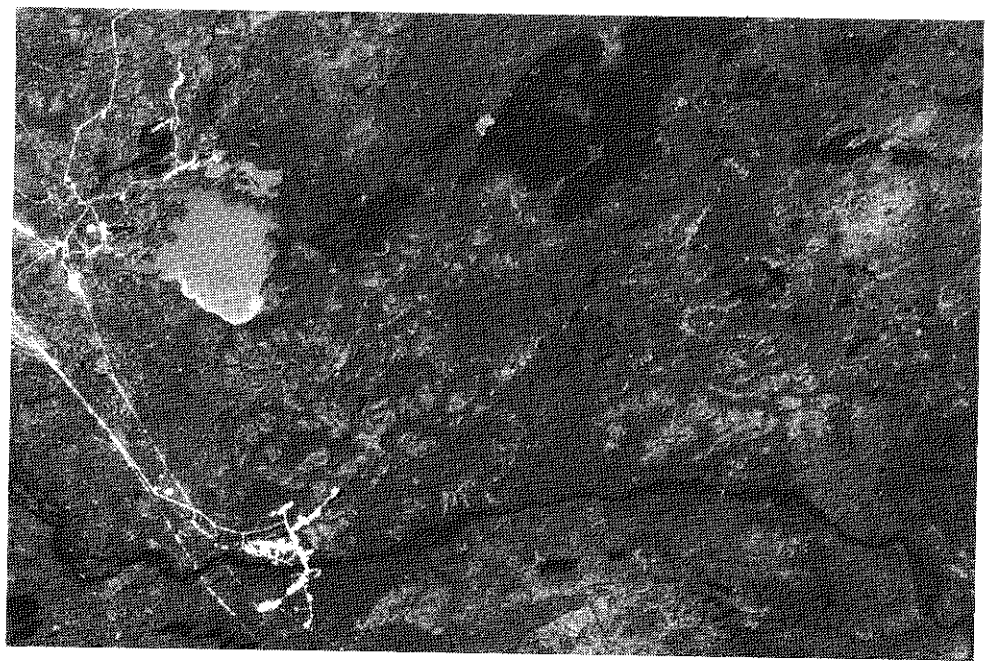
As I sit at my desk, I can almost see the shore of James Bay – ten miles downstream from the island of Moose Factory in the Moose River. Almost Arctic Ocean beachfront, some would say, yet I'm coming to think of it as a Hydro viewpoint. As a matter of fact, if all the plans go ahead, I may no longer live on an island, but, on a peninsula of the mainland overlooking a huge water reservoir, where presently I've become accustomed to the saltwater of James Bay. Dams upstream from this small village promise to lower water levels, and change the ecosystem permanently. And, amazing as it may sound, a powerful group of engineers has a proposal to place a dyke over the bay to eventually create a vast reservoir of fresh water to sell in cities in the southwestern US.

James Bay I, under construction. Landsat satellite image ▼



There are many things Cree people have taken for granted over countless generations. That the rivers will always flow, the sun and moon will alternate, and there will be six seasons of the year. The Cree also have assumed there will always be food from the land, so long as as the Eeu – the Cree, do not abuse their part of the relationship to the animals, and the land. Now, the rivers do not always flow, the animals are not always there, and strange as it may seem, there are no longer six seasons in some parts of this land – Hydro Canada has made sure of that.

This, to me, is the essence of culture and the essence of the meaning of life. From where I sit on James Bay, it seems almost trivial to talk about other things – so called religion, literature, spirituality and economics, when I have to come to terms with my own existence and world view as a person who lives in this ecosystem. If there are no longer six seasons of the year, the waters no longer flow in their order, and places where people have prayed, been buried and harvested their food cease to exist as "land," is that not the essence of cultural destruction, cultural genocide? Is the destruction of the whole ecosystem, as people have come to know it, not only a biological act, but also a cultural act? Because of that, this is a story about culture. This is also a story about all of us, and how this industrial society is consuming the lifeblood of this continent.

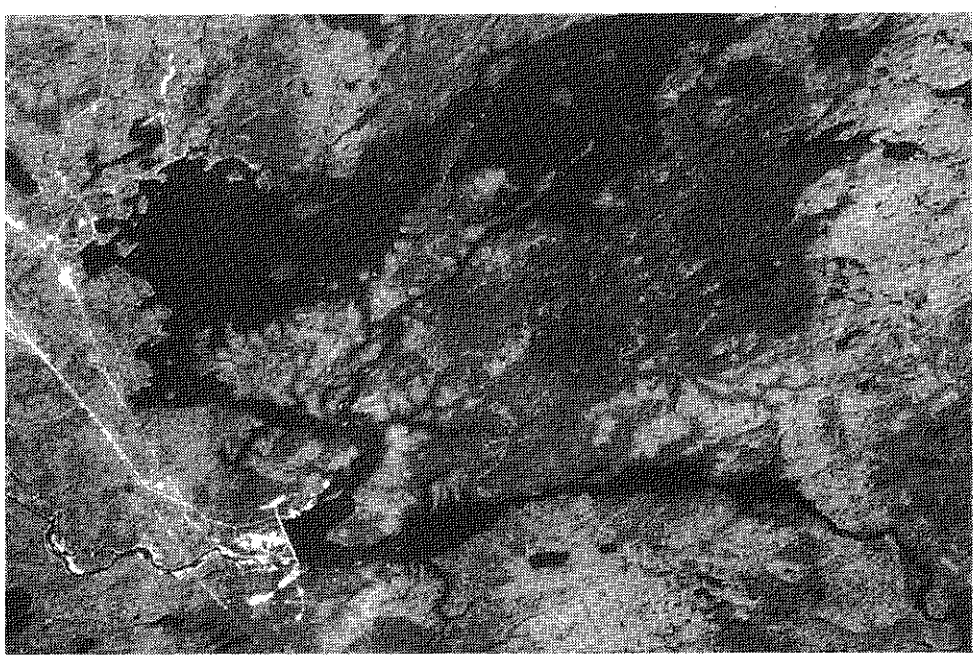
It is now "current" to discuss the destruction of the Amazon rainforest, global warming, "the greenhouse effect" and other climatic changes. But a $60 billion megaproject brings it all home to US and Canadian consumers. The new dams, water divisions and hydroelectric projects will, according to the National Audubon Society, "make James Bay and some of Hudson's Bay uninhabitable for much of the wildlife now dependent on it." Audubon senior staff scientist Jan Beyea reports that the Society is "convinced that in 50 years [this entire] ... ecosystem will be lost...." The ecosystem at stake is as large as California, and includes the central flyway of most of the migratory birds in North America, the drainage of most northern running river systems in the central part of the continent, a number of endangered species of animals, and Inuit, Cree and Naskapi/Innu people, who have lived here for at least 9,000 years.

They are no longer strangers who devour the land. They are entrenched in the north, in the form of Hydro Quebec

which put 4,400 square miles of land under water, and otherwise wreaked ecological havoc in an additional 67,954 square miles. The electric companies, led by Hydro Quebec, Ontario Hydro and Manitoba Hydro are taking a vast territory notable for running water, and essentially transforming it into a vast territory of stagnant reservoirs – virtual toxic sinks.

There is spreading methyl mercury contamination, created by the decomposition of plants and trees drowned in the flooding. The process converts inorganic mercury, already present in the soil, into organic methyl mercury, a lethal contaminant. Because the process is enhanced in acidic conditions, the mercury levels in the reservoir system are up to six times the levels considered safe for humans.

James Bay I, completed. Landsat satellite image ▼



In the village of Chisasibi, downstream from one of the reservoirs (LG-1-4), scientists tested for mercury poisoning several years ago. Two of every three people were found to have excessive levels of methyl mercury already present in their bodies – 30 milligrams per kilogram of body weight. Some elders registered 20 times the levels deemed acceptable, and developed symptoms of mercury poisoning such as shaking, numbness of the limbs, loss of peripheral vision and neurological damage. Hydro Quebec advised the Crees to stop eating fish, and instead to harvest fish from James and Hudson Bay. These fish, which although still relatively free from methyl mercury, are frequently contaminated with PCBs, a result of other "projects" in the region, and contamination now moving into the Arctic food chain from industries to the south.

The Crees call it *nimass aksiwan,* "fish disease," and no other two words could have a more devastating effect on people. "*Nimass aksiwan* strikes at the very heart of our society. It's like being told that Armageddon has started, and people are scared as hell," says George Lameboy, a Cree fisherman and trapper. "The scientists come in here and tell us we're getting better (by eating less fish), but hey, you can't measure the effects of *nimass aksiwan* by taking hair samples. How can you measure a man's fear? How can you measure your way of life coming to an end?"

If the methyl mercury was not enough, the very change in water levels in the rivers has devastating results. Normally, rivers run highest in the spring melt and lowest in the winter. Since the new flow of river is determined not by nature, but by electrical needs for southern consumers, the order has been reversed; and many times, it is increased or decreased dramatically, to respond to the "power grid" of the south. In 1984, a release of water proved deadly. The water was released out of the Canapiscau Reservoir (now the largest lake in Quebec at 1,865 square miles), precisely during the seasonal migration of the George's River Caribou herd. Ten thousand caribou drowned. Hydro Quebec officials called the disaster "mainly an act of god."

The ongoing environmental problems have reiterated Cree opposition to any more development in their territory, and strengthened their calls for a comprehensive environmental review of the first phase of the project, prior to any new dams. The Cree call to halt the project is now supported by a growing number of local, national and international environmental and consumer groups who are deeply concerned about the possible long term consequences of the development. The Crees, and other groups have joined in an extensive, and seemingly endless legal challenge to the project, which, at this point, has resulted in a court decision calling for an environmental inquiry. Unfortunately, neither the scope of the review, or the weight (i.e. if findings will be binding to the utility) have been determined, leaving many Cree and environmentalists frustrated and skeptical.

The Cree and other groups have consistently called for federal intervention. Cree Chief Mathew Coon Come points out the irony, saying, "When you have the largest project of the century in your backyard, and no environmental assessment ... not one person monitoring the impact, there is an obvious failure of federal responsibility ...." Bill Namagoose, of the Cree Regional Authority, echoes his words, calling the federal sidestepping of the issue "environmental racism." Can you imagine a man who has lived his whole life in Paris, one day awakens, looks out of his window and Paris is underwater? It just wouldn't happen. The Crees, Innuit and Innu are far away, dark and different. That is one reason this project, like the exploitation of the Amazon and other rainforests, is planned to go ahead. If Hydro Quebec proposed to flood the villages, farms, homes and gravesites of thousands of French speaking white people, well, it just wouldn't happen. That is perhaps the most disgraceful political aspect of the James Bay proposal. Quebecois and politicians continue to banter about nationalistic economic, social and political agendas, yet Quebec has, through the history of this project, and last summer's events at Oka, clearly illustrated that the province, more so than any other, has no tolerance for diversity – biological or cultural, and is more than willing to sacrifice the Native population for their own program of economic and political independence.

If the second phase goes ahead, the new dams will devastate the ecosystem. At Great Whale, four smaller rivers will be diverted into a single large one. On the Nottaway, Broadback and Rupert River systems, eleven dams would be built, with the Nottaway being diverted into the Broadback, and then the Broadback into the Rupert. In total, the reservoirs will cover more than 10,000 square miles, an area the size of Lake Erie. The project according to the National Audubon Society, "is the northern equivalent to the destruction of the tropical rain forest."

What is worse is that the Quebec dams are only one set of proposals for James Bay. Already, another huge hydro-electric project has been put in place on the Nelson River in Northern Manitoba, draining into Hudson Bay, and an undetermined number of dams are planned for the rivers in Northern Ontario. In total, virtually every single river flowing into James Bay is now proposed for some hydro electric or diversion scheme.

This also worries not only the Native people, but environmentalists and other people to the south. For although an environmental impact assessment is pending for Quebec projects, there is no proposal, as yet, for a cumulative impact assessment for all developments in essentially one ecosystem – James and Hudson's Bay. As Alan Penn, an environmental advisor to the Grand Council of Crees of Quebec points out, "there is no precedent for the manipulation of a subarctic watershed elsewhere in the world on the scale proposed here – the project represents a natural experiment, both ecological and sociological, on a massive scale."

Perhaps most horrendous is that this massive experiment is all about making money. Hydro Quebec is the provincial government's chief economic tool for capitalizing their economy. Although the promised 125,000 jobs never materialized from James Bay 1, Hydro Quebec has, all in all, done well from its huge investments. In 1970, Hydro Quebec had 12,000 employees, assets of $3.5 billion, and debts of $2.6 billion. Today, Hydro has 23,000 employees, assets of $34 billion and a debt of $23 billion. The provincial corporation accounts for 20 percent of all investments in Quebec.

While the problem may seem "northern" and remote to residents of southern Canada and the US, a great portion of the scheme is designed to service electrical markets in the US. A number of American utilities have accepted Hydro's promotion of the power as a cheap, clean alternative to coal and nuclear generating. New York, for instance has purchased Hydro Quebec power, and the purchase has accounted for about nine percent of the electricity supply since 1970. This figure is expected to rise 30 percent by the year 2000. Seven US utilities – the New England Power Pool, the New York Power Authority, Vermont Joint Owners, Massachusetts Power Authority, Citizens Utilities, Consumers Power, Detroit Edison – and others have entered into longterm contracts with Hydro Quebec and Ontario Hydro to secure power for the next ten years or more. This, of course, enhances the utility's ability to raise the huge investments required for the new phase of development. In other words, American consumers are clearly implicated in the destruction of this ecosystem.

Canadians, however, are far from innocent. According to Tom Adams, from Toronto-based Energy Probe, "We are the single most inefficient consumers of electricity in the world. We are twice as inefficient as even the next in line – the US." And that inefficiency is buttressed by low rates – industries in Ontario, for instance, pay six times less for electricity than would their counterparts in Japan. Not only do the provincial electric corporations subsidize the "hidden costs and diseconomics" of the power production, but the very "cheap" rates discourage conservation and essentially any incentive to plan realistically. Energy analysts like Amory Lovins have frequently pointed out that conservation of electricity would make the dams not only unnecessary for the projected demand, but cost a great deal less, just in hard cash. More so, it is outrageous that "cheap electrical rates" are a justification to destroy an entire ecosystem and way of life.

At some point there will be no more "frontiers" to conquer. There will be no more resources to mine, rivers to dam, trees to fall or capital to invest.

As politicians, environmentalists and economists speak of the future, "sustainable development" is the phrase most in vogue. While the interpretation of the phrase is in the mind of the audience, the concept stays in my mind. Some days, I listen to my father-in-law talk when he has come in from the trapline – which is, incidentally, just west of the proposed NBR project. He explains that he walked five miles one way to check his rabbit snares and his traps. And he tells me of reaching his hand into a beaver house to count the number of beavers in the house. There is even a word for this counting in Cree. The point of the counting is so that no person will take more beavers than should be taken from a specific area. There is no word for this in English – only a long description. And it makes no sense, whatsoever to explain to a Cree the concept of "sustainable development" when my father-in-law and his ancestors have been harvesting and hunting this same area, for thousands of years. It appears to me that "sustainable development" and a "sustainable economy" are scheduled for destruction, only so, twenty years from now, some southern expert can "reinvent" a sustainable economy for this same area.

The problem is not Hydro Quebec, Ontario Hydro and the American electrical contracts. The problem is "development," and the structure of Canada's (and for that part, the US's) industrial economy. The Canadian economy has always been based on the exploitation of raw materials and resources from the "frontier." The north has always been the "frontier," and continues in this role today. The Canadian economy requires this exploitation to prosper. The James Bay projects are only a small set of many megaprojects presently underway, or proposed for the north. All share a common denominator – a development policy based on capital-intensive, resource-extractive industries. The promise is jobs and prosperity, but, as evidenced in James Bay 1, the reality is stark and destructive.

At some point, there will be no more "frontiers" to conquer. There will be no more resources to mine, rivers to dam, trees to fall or capital to invest. As we approach the year 2000, those who have an interest in surviving to the next century, would say that point in time is now. As I sit in my Arctic Ocean beachfront, I think about that. And I hope that by a collective act of conscience, sanity, political and economic change, James Bay will remain salt water and free of methyl mercury. ◆