

ATIKOKAN IN CRISIS: A COMMUNITY STRATEGIC DECISION

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“Climate change is the defining issue of our generation – we’ve come a long way, but we have more to do, together. By putting Ontario at the forefront of green innovation, we can meet our responsibility to the generations to come and create jobs and new opportunities for people today.”

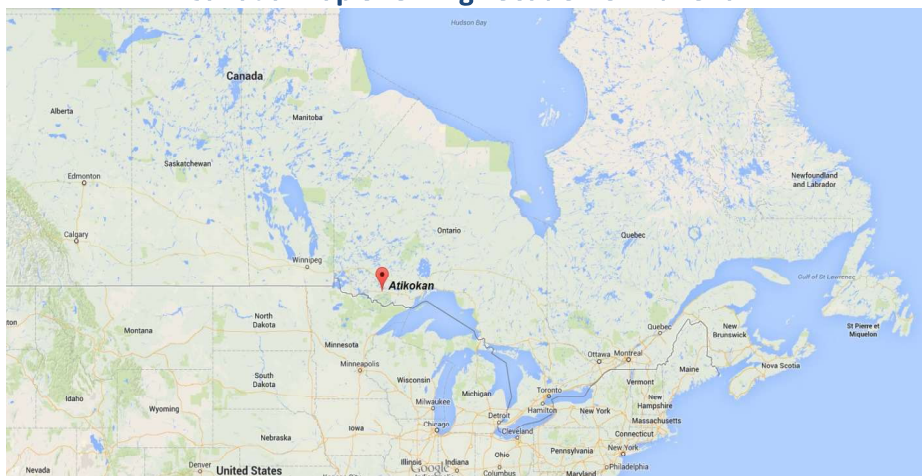
– Ontario Premier Dalton McGuinty

In June 2009, Dennis Brown, Mayor of the small, remote town of Atikokan in northwestern Ontario, was evaluating the strategic options to address the potentially dire consequences of Premier McGuinty’s environment policy. The Government’s plan to make Ontario the North American leader in arresting the growth of air pollution involved among other things the closure of all provincially owned and operated coal-fired power generation stations. Atikokan was home to one of those stations, the only remaining large employer in the town. The closure of the station would remove a mainstay of the local economy. Thunder Bay, the closest urban center, was 200 km away, so alternative large employers for Atikokans were far away (see Exhibit 1). The original deadline for plant closures had been 2007, but that had been extended to 2014 to allow Atikokan time to adjust. But adjust to what?

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After nearly three years of planning discussions, Mayor Brown, the Town Council, and the Atikokan Economic Development Corporation headed by Garry McKinnon, were still undecided about how to proceed. Initially they wondered about the moral justification for a government knowingly harming its own citizens through public policy. They considered shaming the Ontario government into giving their community a reprieve,¹ but the mayor and his colleagues ultimately rejected that idea. They had to admit that the province was taking responsibility. Not only had it extended its closure deadline for Atikokan, but it had also attempted to mitigate potential harm. The Ontario and federal government jointly funded two consultants to make recommendations with respect to Atikokan's economic options: Quadra Consulting Group/William L. Lees & Associates, and Patrick Reid and Associate. (See Appendix B for the consultants' combined report). Brown and McKinnon knew that time was passing and decisions needed to be made. The extended 2014 deadline seemed far away, but major changes to the economic structure of the community required long timelines. As the mayor was fond of saying, "People want to see results now and unfortunately it doesn't happen."

Exhibit 1 Canada Map Showing Location of Atikokan



Source: Google Maps

Brown and McKinnon divided the consultants' recommendations into two groups: those they thought to be important to building support services, enabling factors and infrastructure for economic growth; and four alternatives for business growth. The latter included:

- **Forest products.** This plan linked a rejuvenation of the region's existing sawmills and local fiberboard manufacturing facility with the potential development of a new laminated veneer lumber plant.
- **Energy.** Opportunities included developing new co-generation and run-of-the-river power generation facilities. The energy option could also involve converting the existing Ontario Power Generation (OPG) station from coal to biomass² wood pellets. This would require refitting the existing boilers to burn wood instead of coal, then establishing the most efficient form of heat generating wood pellets into which the wood-waste would be converted. Conversion to wood burning would avert the station's closure while complying with environmental regulations.
- **Mining.** With large known iron ore deposits, international prices rising, new survey techniques and technologies, and increasing entrepreneurial exploration activity in the region, a renewed focus on mining looked promising.
- **Tourism and recreation.** This would involve expanding the outdoor hunting, fishing and recreational experiences, capitalizing on the proximity of Quetico Provincial Park, developing Atikokan's existing cultural and heritage tourism facilities, and developing cottage lots on certain of the region's many lakes.

Brown and McKinnon needed to decide which ones held the greatest strategic promise. In addition, they were aware that other similar communities in distress, such as Elliot Lake and Prince Edward County (see Exhibits 2 and 3), were pursuing industry cluster strategies. Could any of the four alternatives, or some combination, be developed into a viable cluster?

Exhibit 2
Population: Atikokan, Elliot Lake and Prince Edward County, Ontario

Population and dwelling counts	Atikokan Township	Elliot Lake City	Prince Edward
Population in 2006	3,293	11,549	25,496
Population in 2001	3,632	11,956	24,901
2001 to 2006 population change (%)	-9	-3	2
Total private dwellings	1,535	6,061	12,055
Private dwellings occupied by usual residents	1,418	5,647	10,319
Population density per square kilometer	10	17	24
Land area (square km)	317	698	1,050

Exhibit 3
Age and Gender of Population: Atikokan, Elliot Lake and Prince Edward County, Ontario

Atikokan Township				Elliot Lake City			Prince Edward		
Age	Total	Male	Female	Total	Male	Female	Total	Male	Female
Total population	3,295	1,635	1,660	11,550	5,555	5,990	25,500	12,450	13,050
0 to 4 years	170	80	90	310	160	155	935	490	445
5 to 9 years	185	85	100	375	200	180	1,145	600	545
10 to 14 years	205	110	90	550	290	265	1,595	830	765
15 to 19 years	220	115	105	670	335	325	1,655	890	765
20 to 24 years	175	85	90	415	205	205	1,190	590	600
25 to 29 years	140	70	75	320	140	180	885	425	460
30 to 34 years	165	95	75	335	165	170	1,015	485	535
35 to 39 years	225	100	125	405	185	225	1,295	630	665
40 to 44 years	280	140	140	665	310	355	1,885	885	1,000
45 to 49 years	300	170	135	875	400	475	2,120	1,025	1,095
50 to 54 years	265	135	130	885	415	475	2,085	980	1,105
55 to 59 years	220	115	110	960	430	525	2,235	1,100	1,135
60 to 64 years	160	80	85	1,120	505	615	1,905	910	995
65 to 69 years	140	65	80	1,260	625	630	1,595	810	780
70 to 74 years	140	70	70	1,075	555	525	1,415	710	705
75 to 79 years	140	65	75	750	395	360	1,155	570	580
80 + years	160	50	100	565	240	325	1,390	520	860
Median age	43	42.7	43.3	54.8	54.7	54.8	47.7	47.1	48.4
% population >=15	83.1	83.1	83.1	89.3	88.4	90	85.6	84.6	86.5

Atikokan, Ontario

Surrounded by the pristine evergreen forests and lakes of northwestern Ontario, Atikokan was a remote fur-trading center until the mid-19th century. It later developed as a mining town in the first half of the 20th century. In 1950, The *Toronto Star Weekly* named Atikokan a “Boomtown with a future.” The exploration and extraction of large ore bodies found in the Atikokan area led to rapid expansion of the town’s infrastructure and population. To support the mines, a robust logging and sawmill industry developed. By the early 1960s, Atikokan’s population had reached 7,000 people.

However, by 1979 the two iron ore mines that had driven Atikokan’s dramatic growth had both closed. Further, the main lumber mill was shuttered because of poor market conditions for softwood, and the local fiberboard plant had filed for bankruptcy. Predictably, local businesses and retailers struggled to survive as the local population dwindled. By 1996, Atikokan’s population had fallen to 4,050 and ten years later to 3,293. With a continuing out-migration of those under 40, the population was projected to continue downward as workers looked to opportunities in the burgeoning oil industry of Western Canada for jobs.

There remained - at least for now - one significant economic entity, the Atikokan coal-fired power generating station. Unlike the other three Ontario coal generators, which were near urban centers, the Atikokan station was located in a remote one-industry town. If it closed, where would the workers go? One study estimated that the plant closure would lead to a departure of families that would place one in eight houses on the market and depress home values by 40-70%. In addition, it would reduce the local school population by 20%, which in turn would lower the need for teachers. As the population dwindled, the quality of health, safety and recreational services would be hard to maintain.³ Further, there could be negative

consequences for a major transportation artery with unfavorable implications for future economic opportunity. Canadian National Railway (CN) maintained a link to Atikokan to bring in coal to the power generator. If the station closed, continuing the rail connection would be hard for CN to justify. Clearly, the government's environmental sustainability policy had well-intended consequences for the citizens of Ontario and beyond. Nevertheless, it held potentially devastating outcomes for the existence of the community of Atikokan.

Atikokan's Economic History

The indigenous peoples of the Atikokan region were the Ojibwa. Their economic relation to the French throughout the latter part of the 18th century was the fur trade.⁴ After the fur trade's decline in the 1850s, Atikokan's economy developed along a resource-based path. Mining became its primary economic driver accompanied by lumber and forestry-related products second. As the resource-based economy waned, the Ontario government established a third path, the coal-fired power generation station.

In the late 1800s, gold was found approximately 45 miles southeast of Atikokan, and mining operations developed in the decades that followed. More significantly, a vast deposit of iron ore was discovered under Steep Rock Lake in 1930. In the 1950s, two mines were operating which by the early 1970s employed 1,400 workers, about 60% of Atikokan's workforce. However, the discovery of lower grade ore in Minnesota to the south, combined with new ore processing technology, made mining at Steep Rock uneconomical. Both mines were closed by 1980.⁵

The mining operations required a large quantity of softwood lumber, so numerous lumber mills grew in the surrounding area. The first large-scale stationary mill was constructed in 1945 at

Sapawe Lake. At capacity, it produced 160 million board feet of lumber annually and employed roughly 200 workers. In 1976, Fibratech Manufacturing, Inc. (then called Proboard Ltd.) was established to make particleboard from fiber supplied by Sapawe and other area sawmills. Fibratech, too, was a large employer with approximately 140 workers. However, like the mines, the forest products sector declined and Fibratech filed for bankruptcy in 2007, followed soon by the closure of the Sapawe sawmill.

Ontario Hydro (now Ontario Power Generation, or OPG) began construction of a coal-fired generation facility in 1978 that employed about 800 construction workers. The station received its first trainload of coal in time for the opening in 1984. As an employer, it was smaller than either the mines or forest products operations, but it provided jobs for roughly 100 skilled workers. However, as Atikokans were soon to learn, its future was perilous.

Although not likely to have been thought important three decades earlier, the boilers in the power station were designed to not only burn coal, but also wood waste. Could biomass pellets replace coal in the power generation process?

Environmental Sustainability and Ontario Government Policy

In 1997, Canadian Prime Minister Jean Chrétien's Liberal government ratified the Kyoto Protocol thereby pledging to reduce carbon emissions to specified levels. The successor Conservative government of Steven Harper determined that meeting the stringent targets would have materially negative effects on the economy, so his government was not prepared to implement a program to meet the Protocol targets.

Ontario Premier Dalton McGuinty's government took a more aggressive environmental stance.⁶ In June 2005, it announced a plan to replace all coal-fired generation in Ontario with cleaner sources of energy.⁷ By these measures, the government was seeking to reduce greenhouse gas emissions in Canada by up to 30 megatons a year, the equivalent of taking almost seven million cars off the road. The closure of the coal-fired generating stations was expected to provide up to half of the province's greenhouse-gas-reduction contributions under the Kyoto Protocol.⁸ Ontario's future electricity would be delivered through a more balanced supply, moving away from coal in favor of new nuclear and renewable energy sources.

Crisis and Strategic Response

The town of Atikokan engaged Quadra Consulting Group/William Lees & Associates and Patrick Reid and Associates using \$400,000 of federal and provincial grants to prepare an economic development plan to counteract the negative economic impact of closing the power generating station. To oversee the strategic planning project, a committee was formed comprising representatives of the Council, Atikokan Economic Development Corporation, local businesses and other citizens. Quadra/Reid's process involved community consultation and two public meetings. Their joint report incorporating their consolidated analyses and recommendations was completed and delivered to the community on October 3, 2006,⁹ then formally submitted to the Town of Atikokan on December 18, 2006.

A year later, as part of the Ontario Government's environmental program, the Ministry of Research and Innovation provided \$4 million to establish the Atikokan Bio-Energy Research Centre (see Appendix C). The Centre was a virtual entity whose main purpose initially was to fund research projects. The first of these involved grants to university and college-based research teams from Confederation College, University of Toronto, and Queen's, McMaster and

Lakehead Universities. Since the existing OPG generating station was originally designed with the capacity to burn wood waste as well as coal, a key research objective of the Queen's team was to develop a highly efficient wood pellet to replace coal.

Despite all of this government support, even the most optimistic members of the community were finding it difficult to see a positive future. The inevitable decline in social infrastructure, including healthcare, recreational facilities and hospitality would follow. Atikokan was in serious trouble.

Four Directions

Brown and McKinnon had decided to make a recommendation to the strategic planning committee to concentrate on four key economic alternatives. However, the more that the Mayor reflected, the more he grew concerned about the potential severity of economic and social harm to Atikokan of moving too slowly. Making a decision about a strategic direction was becoming urgent. What course of action would combine the greatest impact with the highest likelihood of successful implementation?

Forest products options

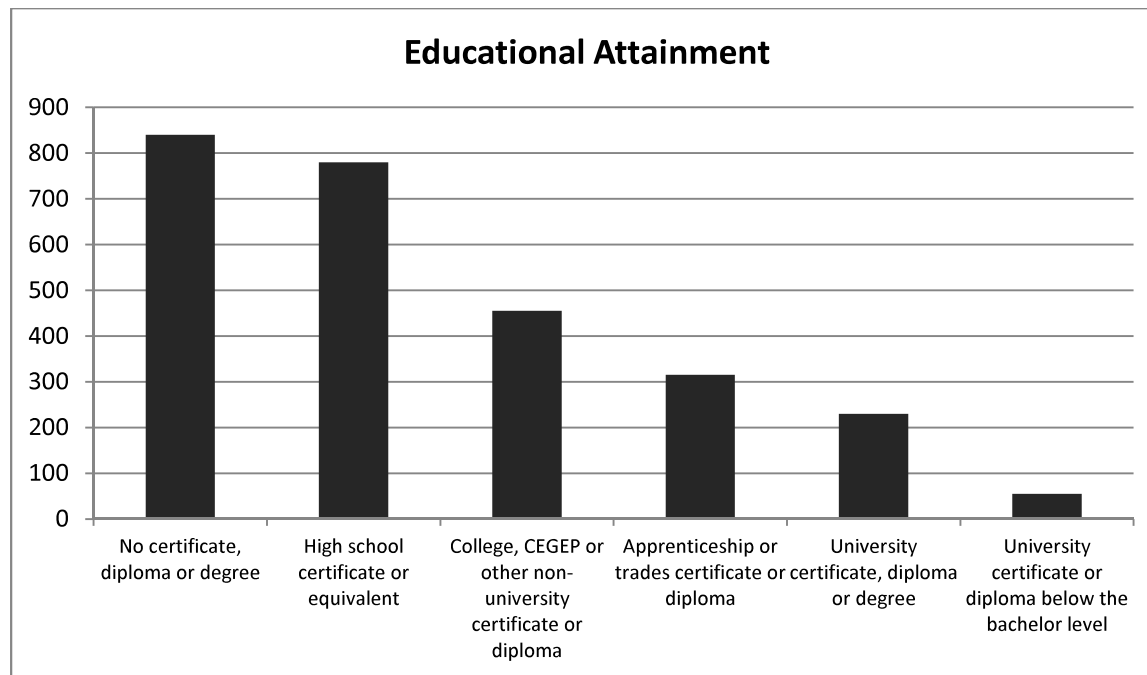
The Canadian softwood industry had been under considerable stress in recent years. Contributing to this was softwood import duties applied by the U.S. combined with a high Canadian dollar, rising transportation costs, and increasing electricity costs. Still, these cost factors could have a positive effect. They might provide an incentive to move away from basic volume commodity production such as bulk lumber, pulp and paper, and shift attention toward more profitable high value-added and specialty products. This could be beneficial for Atikokan. For instance, talks were under way with a potential buyer for the fiberboard plant. A new

owner's investment in more efficient technology that lowered costs could also lead to reopening the big Sapawe sawmill.

Historically the fiberboard plant and sawmill had together employed 340 workers. If the re-engineered plant recommenced operations using new technology, it would likely replace the prospective 100 jobs to be lost from the OPG station closure. In addition, the Atikokan Economic Development Corporation had recently commissioned a study to analyze the feasibility of building a laminated veneer lumber facility. The manufacturing process would involve a gluing process that adhered multiple wafers of wood in varying lengths to produce a very dense high-strength wood product that could be used in construction, such as heavy load-bearing beams as long as 25 meters. Also, smaller non-structural products, such as furniture components, staircases, and door and window frames could be produced. The study estimated that if the new facility built only the structural beams, it would generate an inflow of 90 skilled workers and their families, resulting in 180 jobs. If the non-structural component manufacturing process were included, the incremental workforce requirement would increase to 140 workers and their families, which would generate 240 new jobs.¹⁰

To facilitate investment, Atikokan could provide infrastructure and support applications for government financing. Brown and McKinnon knew the community's labor market possessed the right skills to support such endeavors (see Exhibit 4). Still, private sector investors would need to be found, and they wondered if these developments would create enough jobs to sustain the town.

Exhibit 4 Demographic Profile of Atikokan



Source: Statistics Canada. 2007. 2006 Community Profiles. 2006 Census. Statistics Canada Catalogue no. 92-591-XWE. Ottawa. Released March 13 2007. <http://www12.statcan.ca/english/census06/data/profiles/community/index.cfm?Lang=E>

Energy sector options

Although the consultants had not been engaged to provide analysis of energy sector possibilities, they nevertheless offered some interesting suggestions. They raised the possibility of developing one or more co-generation facilities for both residential and industrial use. Biomass from the region's woodlands could be one of the potential fuels. Another idea was 'run-of-the-river' power generation that could be developed from a number of different river systems in the Atikokan area. Linked with this was 'pump-up-flow-down' peaking electrical power production. This would involve pumping water from the partly flooded former open iron ore pits and generating electricity from the water as it flowed back down.

The final energy alternative was using biomass wood pellets to replace coal in the OPG generator. This was being investigated by the university/college research-teams. If the pellets worked, this could save the plant and the loss of roughly 100 jobs. Of course, this would not be a growth strategy in itself. The Atikokan generator was relatively small, and keeping it active would only maintain the town's current population and economic base. But the question then arose: could pellet production be developed into a strategy with more scale and scope? In other words, could the rapidly growing global market for biomass energy in Europe and Asia offer commercial opportunities beyond simply a replacement of coal for the OPG station? The scope of the production could potentially be expanded to include an export strategy. The scale of production would depend on the projected size of the market and the economic viability of meeting the demand. On the surface, it seemed like Atikokan had the forestry resources, the potential to develop pellet production capacity, and at least some generation and exporting options to make this worth considering. (See Appendix D for an explanation of Biomass Energy Production).

Mining sector options

Although the region had a labor force appropriate to mining operations (see Exhibit 5), and sporadic private-sector exploration was occurring, a comprehensive area-wide geological survey had not been conducted since the early 1980s. The region was known for its high mineral potential. Meetings with the Ontario Ministry of Northern Development and Mines staff had been promising, as had discussions with the Ontario Geological Survey agency. However, to be pursued effectively, a mining strategy would require an area-wide geological/geophysical survey for iron ore, followed by advanced exploration. In terms of gold mining, the small entrepreneurial producers currently holding claims would need incentives to carry out further exploration and to acquire a gold milling and concentration plant.

Exhibit 5
Atikokan Labor Force by Industry and Occupation

Industry	Percentage of Population
Manufacturing	22.6%
Other services	18.3%
Health care and social services	13.7%
Agriculture and other resource-based industries	10.9%
Educational services	9.4%
Business services	7.9%
Retail trade	6.7%
Construction	3.9%
Finance and real estate	3.3%
Wholesale trade	3.0%

Occupation	Percentage of Population
Sales and service occupations	21.3%
Trades, transport and equipment operators	21.3%
Processing, manufacturing and utilities	14.3%
Social science, education, government service and religion	10.9%
Business, finance and administration	7.6%
Management	7.3%
Primary industry	6.4%
Health	6.1%
Art; culture; recreation and sport	2.7%
Natural and applied sciences	1.5%

Source: Statistics Canada. 2007. 2006 Community Profiles. 2006 Census. Statistics Canada Catalogue no. 92-591-XWE. Ottawa. Released March 13 2007. <http://www12.statcan.ca/english/census06/data/profiles/community/index.cfm?Lang=E>

It had been some time since a viable mine had operated in the region and the potential for new mining operations remained unknown. In any event, it was hard to imagine an operating mine in today's highly technological world employing nearly as many workers as in the 1970s and before.

Tourism and recreation options

Brown and McKinnon were aware of how Elliot Lake, Ontario had transformed itself from a uranium-mining town into a tourist and retirement destination, and they wondered if Atikokan could do likewise. Beginning in the 1990s, Elliott Lake turned around its population decline by investing heavily in adventure tourism. (See Appendix E) The community mapped out scenic driving routes, built panoramic lookout stations, and attracted both U.S. and Canadian tourists with a range of well-developed options for year-round outdoor recreation. Elliot Lake had married its outdoor lifestyle options with affordable housing and accessible transit to attract retirees to relocate to the community.

Other communities were building tourism clusters as well. Prince Edward County, located in Southeastern Ontario between Toronto, Ottawa, and Montreal, had struggled with industrial development. Located on an island south of the major transportation artery, Highway 401, it had limited highway and rail access. In the early 2000s, developers looked to the food and arts communities to attract outside investment. The "Taste Trail" was established to help outsiders connect with the wealth of small food producers in the region, and a mechanism for area restaurants to promote local foods. Before long, the wine sector was booming and bed-and-breakfasts and gourmet restaurants began to flourish. (See Appendix F.) Similarly, the "Arts Trail" linked local artisans and provided venues for them to promote their work. While the region had no competitive advantage in manufacturing, it had successfully built a tourism cluster, which attracted high-income urban customers.

Compared with Elliott Lake, Atikokan had certain limitations. The town was developed in the 1950s and 60s to service the mines, so its commercial buildings, main streets and residential areas were built for utility, not aesthetics. Unlike Elliot Lake, which was located beside two beautiful lakes, Atikokan had no breathtaking scenery or quaint historical buildings. Unlike Prince Edward County, Atikokan was not easily accessible to larger urban communities, and lacked the critical mass of tourism businesses across the value chain that could lead to a flourishing cluster. If a tourism strategy were to be pursued, it would need to focus on other strengths.

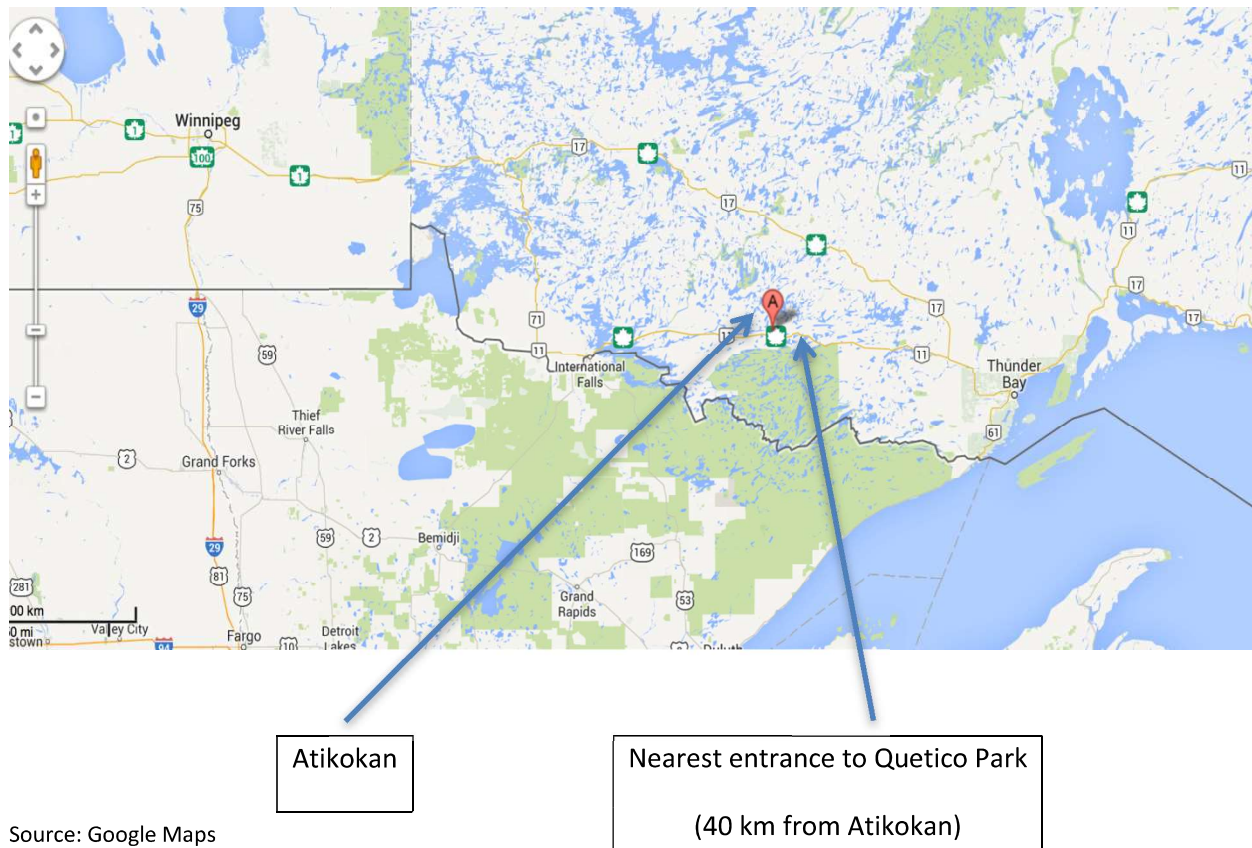
The Quadra/Lees and Reid report built on earlier tourism and marketing studies in recommending two basic approaches to development. While Atikokan had a nine-hole golf course, small ski hill, museum, and other cultural attractions, it needed to expand interesting local features in order to attract tourists. The consultants proposed an “Adventure Country” concept to promote Atikokan’s reputation for recreational hunting and fishing. It meant leveraging the strong brand of the Quetico Provincial Park’s pristine wilderness summer camping, canoeing, and winter snow machine recreation. Unfortunately, the closest entrance to the Park was 40 km from Atikokan, so a considerable effort would be required to find ways of drawing tourists into the town (see Exhibit 6). Important to success would not only be enhancing existing outfitter operations and expanding the range of outdoor activities, but also developing connected historical, recreational, and heritage tourism infrastructure with a variety of indoor attractions.

The second component of the tourism strategy was the sale of cottage lots on four lakes that the Ontario Ministry of Natural Resources had approved for economic development.

Development of 130 lots on the lakes would generate about \$4.1 million in local expenditures

on goods and services, equating to about 40 person-years of employment in the development phase. Assuming that families from outside Atikokan purchased the cottages, approximately \$700,000 annually would be generated, or seven full-time equivalent jobs.¹¹

Exhibit 6
Quetico Provincial Park Entrance



Source: Google Maps

Brown and McKinnon were cautiously optimistic about the four strategic alternatives. However, they were giving serious consideration to a fifth alternative. Could the forest products and energy alternatives be combined with biomass wood pellet production to form the nucleus of a cluster strategy?

Biomass and Wood Pelletizing

The use of biomass as a fuel source was considered environmentally sustainable because during the growth of the organic material, carbon dioxide was absorbed from the air. This carbon dioxide was released back into the air when the fuel was burned; thus, the system was considered carbon neutral.

With the global shift towards more environmentally sustainable public policy and an understanding of the detrimental impacts of consuming fossil fuels, the biomass industry had become a growing alternative to traditional energy sources.

In Ontario, biomass was particularly attractive as a lower-cost alternative to crude oil and natural gas, as well as a more environmentally sustainable energy source. Due to the presence of vast wood resources, the production, harvesting and processing of biomass presented significant opportunities for stimulating the provincial economy. According to BIOCAP Canada, a national, not-for-profit research foundation addressing the challenges of climate change, Ontario had sufficient biomass resources to support at least 27% of the total current energy needs of the province.¹²

Biomass products such as wood pellets, a form of biomass derived from wood fiber, were becoming a global commodity as a more sustainable substitute for fossil fuels.¹³ Demand in the bio-energy market was very strong, particularly in Europe, considerably bolstered by the National Renewable Energy Action Plans (NREAPs), the legally binding commitments that all European Union member states were required to establish. European pellet production had risen from 1.4 metric tons in 2005 to 7.5 metric tons in 2007. European demand for biomass was expected to grow to 147.5 metric tons by 2020, with pellets representing an increasing share of the demand, creating significant opportunities for North American producers as

European consumption outstripped production.¹⁴ Increasingly, China, Korea and the U.S. were becoming significant growth markets as well. In 2009, thirteen new biomass energy projects were announced in North America, creating up to 3,918,000 green tons of wood use per year. The total North American wood pellet demand in 2007-2009 would reach 19,218,000 green tons per year.¹⁵ In all markets, expected continuing rising oil prices were expected to bolster demand for biomass.

Production in Canada was mainly from the Western province of British Columbia. Could the Atikokan region become a player in the biomass energy sector? Pellet production could potentially leverage both forest resources and dormant wood production facilities. Conversion of the OPG generator would create local demand and the rail line serving the power plant could be a window to a world of pellet exports. Could there be a sufficient base of businesses across the wood pellet value chain to nurture an industry cluster? Mayor Brown wondered if the town possessed the entrepreneurial spirit to head in this new direction.

Atikokan at a Decision Point

Dennis Brown had been mayor for sixteen years and a town council member for eight before that. He had lived in Atikokan most of his life. He was an optimist by nature and could see glimmers of hope in the otherwise grim reality of the impending OPG plant closure. There had been interest from a potential purchaser for the fiberboard plan; some mining exploration was taking place; and one of the tourist projects, doubling the size of the bass fishing derby, had been implemented successfully.

However, working piecemeal on the recommendations of a consulting report was not the same thing as having a long-range strategic plan.

At one meeting, some of the members of Council and representatives from the Atikokan Economic Development Corporation expressed their concerns. Someone noted unhappily that it was June 2009 and not a single job had been created since the consultants' report in October 2006. Another commented that, "people can't see any progress; the interest is waning." "It doesn't appear as if anything is getting done," said still another. Toward the end of the meeting, one voice seemed to capture the sense of the group: "We don't have a vision and Council has readily admitted that...they're reacting to crisis right now."

Mayor Brown and Garry McKinnon were worried. The mayor repeated what he had said many times before: "Job creation and economic development take time, and it is unrealistic to expect it to happen overnight." But this was beginning to sound hollow. As the closing-out sale from the local children's clothing store was winding down, it was clear to many Atikokans that this could be a symbol of the town's own fate. A bold strategy was badly needed. Choices needed to be made.

Mayor Brown picked up his cellphone and punched in McKinnon's number. "Garry," he said, "we can't let the planning committee go back and forth endlessly debating which strategy to support. We need to spell out the options and give them our recommendation. My choice is...."



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Appendix A

Selections from News Release from the Ontario Ministry of Energy and Infrastructure

June 15, 2005

McGuinty Government Unveils Bold Plan to Clean up Ontario's Air

Replacing Coal-Fired Generation Means Cleaner Air and Better Health for Ontarians

TORONTO – The McGuinty government's aggressive plan to replace coal-fired generation with cleaner sources of energy and conservation will clean up our air, improve the health of our citizens, and contribute to the sustainability of our environment while ensuring a reliable supply of electricity, Energy Minister Dwight Duncan said today.

We are leading the way as the first jurisdiction in North America to put the environment and health of our citizens first by saying 'no' to coal," Duncan said. And as we have said all along, maintaining reliability is the first principle of our plan. It's a prudent and responsible path that will ensure cleaner air for the province." The first of the five coal-fired plants, Lakeview Generating Station (GS), was officially closed in April. The plan released today will see three out of the four remaining coal-fired generating stations close by the end of 2007, with the remaining station, Nanticoke GS, to close in early 2009...

Under the coal replacement plan:

- Lakeview GS, representing 1,140 megawatts of generating capacity, was closed in April 2005, following completion of projects to strengthen the transmission system in the Toronto area.
- Thunder Bay GS, representing 310 megawatts, will be replaced by gas-fired generation in 2007.
- Atikokan GS, representing 215 megawatts, will close by the end of 2007, following the replacement of Thunder Bay units and necessary transmission upgrades, with no direct replacement necessary.
- Lambton GS, representing 1,975 megawatts, will be replaced by the end of 2007 by two combined-cycle gas-fired generating stations in the Sarnia area announced as a result of the government's request for proposals for clean energy capacity.
- Nanticoke GS, representing 3,938 megawatts, will have units closed through 2008 with the last unit to close in early 2009. In addition to new generation capacity, transmission upgrades in southwestern Ontario are necessary for the closure of Nanticoke.

To support the replacement of coal-fired generation in Ontario, the McGuinty government has put the wheels in motion to produce well-over 7,500 megawatts of cleaner, more diversified power. Between 2004 and 2007, Ontario will secure more new generating capacity than any other jurisdiction in all of North America...

In creating new capacity, the government has placed particular emphasis on expanding renewable generation in the province, and is well on its way to meeting its target of adding five per cent, or 1,350 megawatts of new renewable generating capacity by 2007. By the end of 2007, it is expected Ontario will see a 75-fold increase in its wind capacity alone.

Appendix B
Atikokan Strategic Community and Economic Development Plan – Executive Summary

December 18, 2006

In 2005 the Province of Ontario announced the closure of coal-fired generating stations throughout the Province. The Atikokan Generating Station, which is coal-fired, was scheduled to close by the end of 2007. Closure of the AGS would have resulted in significant economic and social dislocations in Atikokan and the surrounding area. Although the closure has been delayed, the Township of Atikokan continues to face major economic uncertainties. There is clearly a need for the Municipality to "assume the worst and hope for the best". At the very least, the delay of the closure provides more time for the Municipality to implement a Community and Economic Diversification Strategy to mitigate the impending job losses and economic hardships.

In the fall of 2005, a consulting team led by Quadra Consulting Group and William L. Lees & Associates Ltd began working with the Township of Atikokan and the Atikokan Economic Development Corporation to identify and assess opportunities for economic expansion and diversification as well as broader community development and improvements. The Federal government, through FedNor, provided financial assistance to the Township to retain the consulting team. As well, the Province of Ontario, through the Northern Ontario Heritage Fund, provided financial assistance for the Township to retain Patrick Reid and Associates to act as liaison to Queens' Park, and Business Advisor, for a one-year period. The contracts with Patrick Reid and Associates and Quadra Consulting Group/William L. Lees & Associates Ltd. began at roughly the same time. It was evident to the members of Atikokan Council and the two steering committees that had been established to oversee the two consulting teams that it would be advantageous for the teams to coordinate their activities and report to a single steering committee. Over the last fifteen months, the consultants, the Township, AEDC, the steering committee and other area organisations have worked closely to identify a range of initiatives that, with sufficient support from the Federal and Provincial governments, could contribute to economic and community improvements.

This report is intended to be read in conjunction with the Economic Development Opportunities for The Township of Atikokan, prepared by Patrick Reid & Associates, November 2006.

All members of the combined consulting teams worked closely to ensure a successful outcome. Over the course of their work, the firms made numerous trips to Atikokan in order to gather information and meet with local people from Municipal government, not-for-profit organisations and the private sector. As well, an extensive series of meetings and interviews were conducted over the course of the engagement with representatives of the Federal and Provincial governments and numerous private and not-for-profit organisations outside the immediate area. Throughout this process, the combined consulting team maintained frequent contact with a provincially-organised committee of Assistant Deputy Ministers and representatives of FedNor in order to appraise them of the study's progress and to discuss promising initiatives as they were identified.

An extensive preliminary list of preliminary initiatives was identified. Upon further examination, several of these were deemed to be not worth pursuing. However, there were still a significant number of promising opportunities that could be considered. Those that held some promise were discussed with the steering committee and presented to both Council and the public at various meetings. Over the course of the study, opportunities were eventually segregated by priority.

Appendix B, cont.

Priority One opportunities, deserving immediate attention and potential implementation; Priority Two opportunities, offering some potential possible implementation at a future point; and Priority Three opportunities, which offered less potential, but still warranted future consideration.

Priority One opportunities that have been identified and which are strongly recommended for implementation include the following, several of which are indeed currently underway:

Forest Products

- Laminated Veneer Lumber (LVL) Plant
- Other Value-Added Products (Confidential)

Mineral Prospecting, Development and Mining

- Atikokan Mineral Development Initiative: AMDI - Updated Geological/Geophysical Survey
- Bending Lake Iron Ore Mine

Energy

- OPG, AGS Alternative
- Bio-Energy Research Centre

Tourism, Recreation and Culture Sector

- Cottage Lot Development
- Quetico/ Atikokan Wilderness Adventure Area
 - Multi-Use Trail Loops- East and West
 - Trans-Canada Trail Designation
 - Beaten Path Nordic Trails
 - Atikokan/Batchewaung Access Road
 - Bio-Research Facility
 - Interpretive Centre and Trail User Staging Facilities
 - New Park Entrance
 - Private Sector Opportunities
- Charleson Recreation Area Facilities Upgrading and Expansion (Motocross, ATV, Snowmachine, Horseback Riding, Mountain Biking)
 - Market Analysis
 - Financial Analysis
 - Facilities Plan
 - Water/Hydro
 - Safety Fencing
 - Clubhouse Facilities
 - Short-Term Marketing
 - Long-term Marketing
- Bass Classic Expansion
- White Otter/Turtle Lake Park Links to Atikokan
- Atikokan/Quetico Tourism Marketing- Short Term (Community and Highway Signage)
- TV Series Production

Appendix B, cont.

Information Technology

- Business Support Services
- Atikokan Online ("Portal") - Single Online Source Multiple Users/Services

Municipal/Community Development

- DARC (Downtown Improvements) Implementation
- Town Beautification
- Barrier-Free Initiative

Government, Social, Health, Education

- Atikokan Hospital- Long-term Care Facilities
- Relocation Of Government Agencies
- Improved Eastern Hwy 11 Entrance To Atikokan

Implementation Resources

- AMDI Coordinator
- Economic Geologist
- Implementation Committee
- Interim "Contract" Implementation Assistance

It should be noted that the Federal and Provincial governments have both been extremely helpful in providing immediate assistance to the Township to actively pursue some of these Priority One initiatives prior to the completion of this Strategy. At the same time, there are several other Priority One items on the list which will require both Provincial and Federal financial support if the Township and other organizations within the public and private sector are to proceed successfully. Several of the Priority One initiatives do not "fit neatly" within existing Provincial and/or Federal assistance programs. Yet they are initiatives that can have a major impact on the economic and social well-being of Atikokan and regional residents. Clearly, the Federal and Provincial governments will need to be flexible if the majority of the high priority initiatives are to be successfully pursued.

Virtually all of the initiatives identified will require financial contributions from the Municipality and/or other area organizations and businesses and the Federal and Provincial governments. Financial resources will be required to undertake further feasibility studies, design studies and market analyses, as well as significant capital contributions for a number of the initiatives. In addition, the Municipality must find resources with the assistance of the Federal and Provincial governments to have the human resources available to the Town and other organizations in the area that will be required to oversee and implement these initiatives.

Source: Quadra/Lees and Reid, op cit.

Appendix C
News Release from the Ontario Ministry of Energy and Infrastructure
September 5, 2007

McGuinty Government Supports Clean Energy Projects in Northern Ontario

Projects Will Help Make Ontario a Leader in Cleaner Energy Generation

ATIKOKAN - The McGuinty government is promoting the development of cleaner electricity generation in Ontario by investing \$4 million in the Atikokan Bio-Energy Research Centre to support six innovative projects that will include research and testing in northern Ontario, Bill Mauro, MPP for Thunder Bay-Atikokan announced today on behalf of Energy Minister Dwight Duncan.

"These projects will help us develop the technologies to make Ontario a leader in cleaner energy," said Mauro. "Producing electricity from bio-energy sources can reduce air pollutants and greenhouse gas emissions while providing new economic opportunities that will strengthen our communities in northern Ontario."

The six projects will be directed by researchers from Ontario universities and colleges and will receive additional financial or in-kind support from partner companies in the industrial sector.

"These projects will provide a number of benefits to our region and to the rest of Ontario," said Mayor Dennis Brown of the Township of Atikokan. "Every project has the potential to provide new economic opportunities to northwestern Ontario, while also providing training to students, increasing our expertise in bio-energy and helping to create a competitive commercial advantage for Ontario-based companies."

The Ontario Centres of Excellence (OCE), an organization that connects academia and industry to bring innovations to market, is managing the program on behalf of the Ministry of Energy. OCE has issued offers of funding through the Atikokan Bio-Energy Research Centre for six research projects.

The selected projects cover a range of practical, applied research topics in the field of bio-energy:

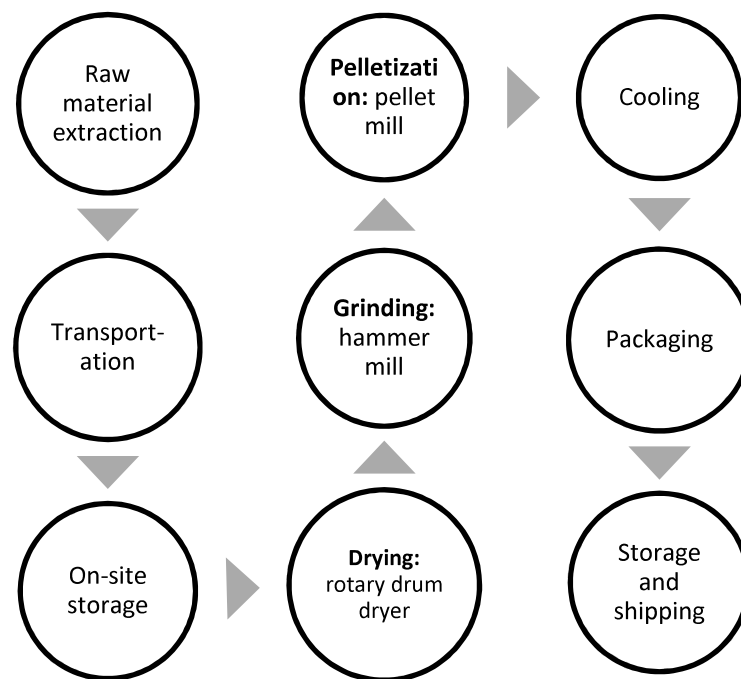
- Direct and indirect methods of co-firing peat and forest biomass with coal (Lakehead University);
- Assessing the environmental impacts of peat as a potential energy source (Lakehead University);
- Maximizing the economic benefit of utilizing wood biomass for energy production (Lakehead University and Confederation College);
- Optimizing power plant combustion processes for co-fired biomass fuels (McMaster University, University of Toronto);
- New technology to monitor mercury emissions (University of Toronto); and,
- Enhancing the capacity in Northwestern Ontario to develop a sustainable wood pellet industry (Queen's University).

It is expected that research will begin this fall. The McGuinty government is committed to addressing climate change and building a more sustainable energy future for Ontario by supporting investments of up to \$15 billion in clean and green energy supply, conservation and investments in Ontario's transmission system.

Source: http://www.energy.gov.on.ca/index.cfm?fuseaction=english.news&body=yes&news_id=163

Appendix D Biomass Energy Production

Biomass pellet production is an emerging global industry with significant potential for Canadian firms and communities, given the nation's ample natural resources. Pellet production is a relatively simple process involving three major steps: drying, grinding and densification (i.e., conversion to pellet form):



Source: S. Mani, S. Sokhansanj, X. Bi, and A. Turhollow. 2006. Economics of Producing Fuel Pellets from Biomass. *Applied Engineering in Agriculture* 22(3): 421-426.

The greatest barrier to entry for new producers, however, is capital costs, averaging over \$2m with installation. For existing wood products manufacturers, some existing equipment such as forklifts, trucks and packaging equipment might already be in place. A rotary drum dryer, hammer mill and pellet mill alone would be expected to cost over \$1m. A 2004 analysis found North American producers maintain a significant cost advantage. Where European production costs range from \$78-113/t, North American plants average \$51/t thanks to lower material and energy costs. Critical to efficient production, however, is locating pellet production within close proximity to the raw materials, thus minimizing transportation costs.

Demand for biomass energy, including biomass pellets was growing. The introduction of the Ontario Green Energy Act in 2009 pointed to the elimination of coal-fired power generation by 2014, creating new opportunities for renewable energy providers. Global forecasts predict that world biomass demand

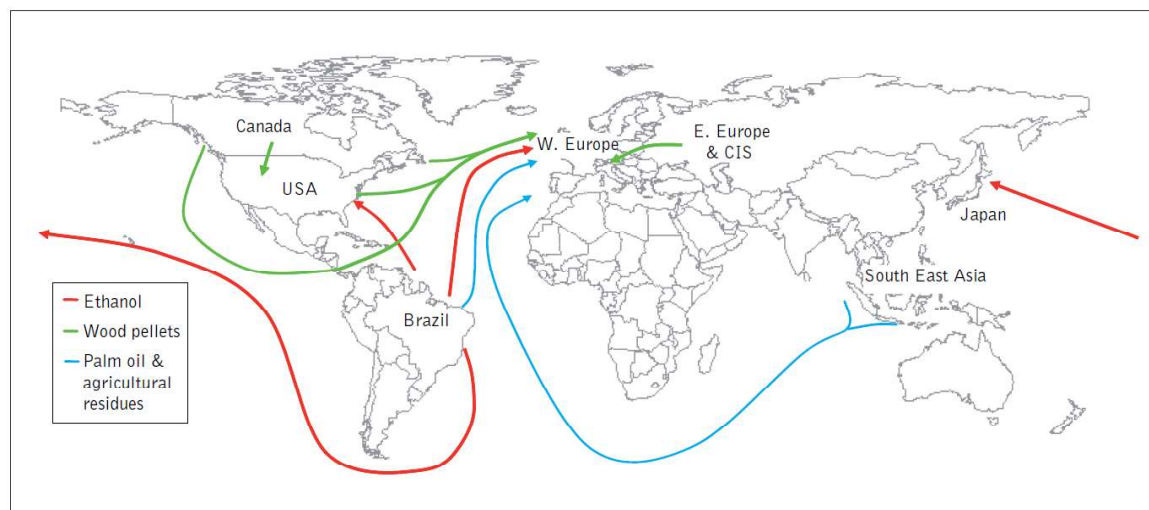
Appendix D, cont.

will grow from 50 EJ/year to 250 EJ/year. With Asian markets only being to emerge in this arena, significant opportunities exist for Canada to tap into new growth markets for biomass pellets.

Pellet Process Operations	Capital Costs (\$/t)	Operating Cost (\$/t)	Total Cost (\$/t)
Raw material	0.34	19.39	19.73
Drying operation	2.46	7.84	10.3
Hammer mill	0.25	0.7	0.95
Pellet mill	1.43	1.88	3.31
Pellet cooler	0.13	0.21	0.34
Screening	0.11	0.05	0.16
Packing	0.56	1.37	1.93
Pellet Storage	0.07	0.01	0.08
Miscellaneous equipment	0.42	0.33	0.76
Personnel cost	0	12.74	12.74
Land use and building	0.21	0.05	0.26
Total cost	5.99	44.58	50.57

Source: S. Mani, S. Sokhansanj, X. Bi, and A. Turhollow. 2006. Economics of Producing Fuel Pellets from Biomass. *Applied Engineering in Agriculture* 22(3): 421-426.

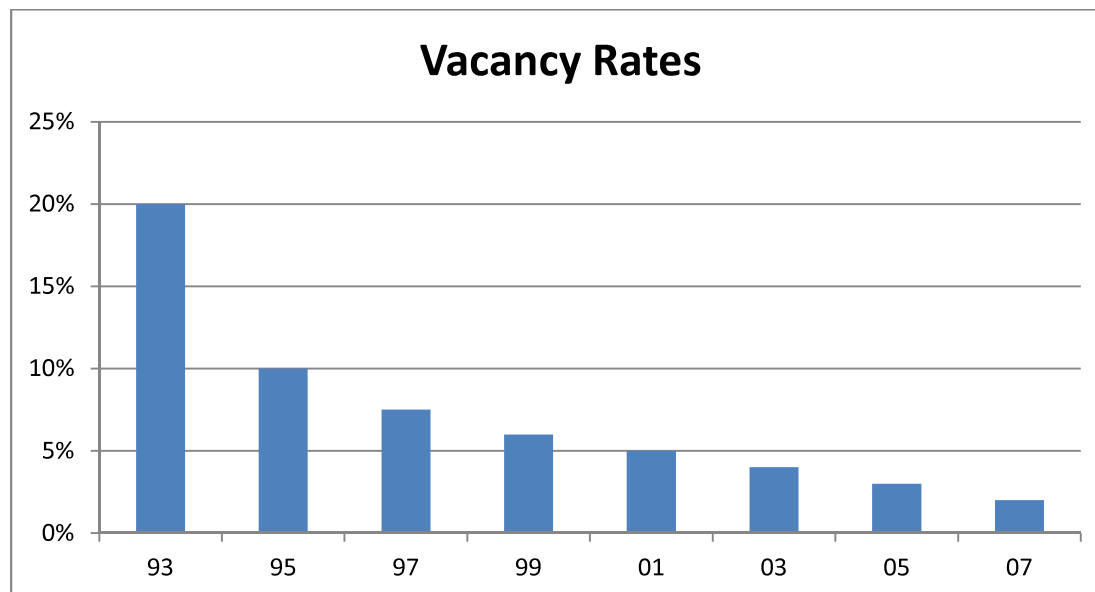
Bioenergy Trade Flows (Excluding Intra-European Trade)



Source: A. Bauen, et al. 2009. *Bioenergy – A Sustainable and Reliable Energy Source: A Review of Status and Prospects*. Utrecht: IEA Bioenergy.

Appendix E Elliot Lake Retiree Attraction

Beginning in the early 1990s, Elliot Lake looked to reverse population decline created by the closure of the last of 11 local mines by attracting retirees as both tourists and residents. Population growth amongst this target demographic was expected to generate increased service sector jobs for young professionals. By the mid-2000s, the strategy appeared to be working. The real estate sector, in particular, showed a significant decline in vacancy rates.



At the heart of Elliot Lake's growth was Elliot Lake Retirement Living, a non-profit corporation set up to provide affordable accommodations to retirees. From their inception in the mid-1990s, the organization encouraged urban residents to relocate to Elliot Lake based on two key selling points: affordable housing and easy access to an outdoors lifestyle. By 2008, with vacancy rates in the city at an all-time low, they had planned a new waterfront condominium development on 400 acres of undeveloped land.

Tourism continued to boom in the region as well. Again, drawing on its pristine nature and waterfronts, the City created an innovative approach to cottage development in partnership with the Provincial Government. Working through another non-profit corporation, Lakeshore Properties, the city oversaw the development of almost 250 cottages – many year-round – from 2003-2008. By summer 2009, a new hotel would open in the city as well, creating added opportunities to develop its tourism offerings.

Source: Success Stories, 2008. Elliot Lake. <http://www.cityofelliottlake.com/en/invest/sucesstories.asp> Accessed June 14, 2014.

Appendix F
News Release from Prince Edward County
September 26, 2007

“TEAM” Prince Edward County wins at 2007 Marketing Canada Awards

Picton, ON - The County of Prince Edward was awarded 1st place and Best of Category for its Taste Trail culinary tourism product in the 2007 Marketing Canada Awards held last week in Saskatoon. In addition, the County won 1st Place for its 5th Anniversary – TASTE! a celebration of regional cuisine event and 1st Place for the Prince Edward County Media Kit. These 4 awards follow the prestigious Lieutenant General’s Award of Excellence and 5 other awards the County received this past February at the 2006 Ontario Economic Development Awards in Toronto.

The 2007 Marketing Canada Awards were sponsored by the 700+ member Economic Developers Association of Canada. This year’s Awards program, termed ‘The Best of the Best’ consisted of 18 subcategories and attracted 173 submissions from across Canada.

“These national awards highlight the successes that are achievable when we engage the business community in partnerships to promote our strengths,” said Mayor Leo P. Finnegan. “The Taste Trail has certainly put us on the culinary map and I would like to extend my congratulations to our Economic Development Officer Dan Taylor, the team at Taste the County™ and the many community businesses that were involved in these programs.”

The Taste Trail and TASTE! event were developed in partnership with the Municipality, Taste the County™ and the agri-culinary businesses throughout the County. The 2007 Prince Edward County Media Kit was developed by Taste the County™ with partnership support from Prince Edward Lennox-Addington Canadian Futures Development Corporation (PELA CFDC) and the Municipality.

“We are so proud of our Taste the County™ partners; we wouldn’t be able to develop this community’s winning formula without them. Our partnership with the Economic Development Office continues to reap many rewards and we are thrilled to have achieved these awards on behalf of the community.” Noted Rebecca LeHeup-Bucknell, Executive Director of Taste the County™

“All of these winning programs are a result of partnerships,” states Economic Development Officer Dan Taylor. “In most cases the partnerships include community organizations such as Taste the County, dozens and dozens of local businesses, multiple levels of government and PELA CFDC, as well as our talented suppliers. It’s pretty amazing to be selected as a top economic development region by our peers on a provincial and now on a national level, especially when you think of the size and scale of Prince Edward County.”