



APEC Forum on Competitiveness 2005-10 Forum sur la compétitivité du CÉPA

Building Competitiveness in Atlantic Canada's Forest Industries: A Strategy for Future Prosperity

August 2008



About the Atlantic Provinces Economic Council

The Atlantic Provinces Economic Council (APEC) is an independent think-tank dedicated to economic progress in Atlantic Canada. Founded in 1954 as a partnership between the provincial governments and the private sector, its objective is to promote the economic development of the Atlantic region of Canada. It accomplishes this through analysing current and emerging economic trends and policies; by communicating the results of its analysis and consulting with a wide audience; and by advocating the appropriate public and private sector response.

About the APEC Forum on Competitiveness

The APEC Forum on Competitiveness is a five-year research and policy reform initiative from 2006 to 2010, designed to set a clear path for improved growth and prosperity in Atlantic Canada. The APEC Forum brings together business, academia, federal and provincial governments in the Atlantic region, to develop the strategies that will assist Atlantic Canada in strengthening its role in an increasingly globalized world.

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INTRODUCTION

The forest industry in Atlantic Canada is facing enormous pressures. Global conditions such as a steady stream of low cost producers and weak demand in key markets such as the U.S. have eroded the profitability of many firms, with little improvement anticipated in market conditions over the next 12 months. Local factors such as a rapidly aging labour force, high energy costs, and pressures on the wood supply from hurricane damage, insect infestation and competing land use are adding new dimensions to the competitiveness challenges for the forest industry in Atlantic Canada. The rapid appreciation of the Canadian dollar in 2007 added to the woes of many exporters. Temporary or permanent closures are evident across many parts of the industry.

Yet the forest industry remains an important industry across Atlantic Canada, one on which many communities continue to depend as their cornerstone of employment. New Brunswick in particular has the most forest intensive economy of any province in Canada. Some forestry firms have been successful in adopting innovative approaches to reduce input or transportation costs. Others are moving out of low value-added commodities and into products in which they can better protect their investment and withstand market fluctuations. These are all signs of an industry under threat, but one in which many of the key players will be able to rise to the challenge and make a successful adjustment.

The longer term horizon suggests that there will be many new opportunities in global markets, as demand for forest products grows from a burgeoning and increasingly affluent middle class in Asia, Russia and South America. However, for Atlantic firms and producers, the transition from a narrower focus on North American markets to full global partnership is challenging. The restructuring process is painful, and the outcomes can not always be predicted. What is certain is that the forest industry ten years from now in Atlantic Canada will look very different from the industry today.

For those concerned about the future of the forest industry in Atlantic Canada, many questions are on the table.

- Where does Atlantic Canada’s comparative advantage lie in the global forest industry?
- What steps can companies take to meet the continuing challenges of volatile markets?
- How can government best assist the industry to make the transition to the new global reality?
- What is the right balance between optimizing the wood supply for industry and ensuring that environmental values are respected?
- What role should government play in supporting those affected by industry rationalization?

Over the past year, the Atlantic Provinces Economic Council has been engaged in a study on forest industry competitiveness in Atlantic Canada. The study has been carried out with the ongoing participation of many from the forest industry across Atlantic Canada. I want to thank in particular the Forest Products Association of Nova Scotia and the New Brunswick Forest Products Association who supported the research process, the consultants and research team at APEC and the industry and government representatives from all four provinces who provided feedback and new ideas.

Chapter 1 provides a profile of the industry and its importance to the economy of Atlantic Canada. In Chapter 2, the competitiveness challenges facing the industry are analyzed. Chapter 3 explores new directions for the industry while a final chapter summarizes the findings and highlights the key

Forest Industry Definitions

The forest industry is defined to include three key industries: primary forestry, the wood products industry and the pulp and paper industry.

Primary Forestry - includes firms and workers primarily engaged in growing and harvesting timber on a long production cycle. Consequently, Christmas tree production is not included. The primary industry includes commercial timber tract operations and forest nurseries. Logging is the main activity of this industry. Firms that largely provide forestry support services are not included within this industry. However, because of the aggregate nature of the available data, estimates in this report for employment and the number of firms in primary forestry do include forest support services.

Wood Products – includes firms and workers principally engaged in manufacturing products from wood. This category is composed of sawmills; mills and manufacturers that improve the natural characteristics of wood (such as veneer and plywood mills and particle board and fibreboard mills); and other wood product manufacturers (e.g., wooden doors and window frames, flooring, mobile homes and prefabricated buildings). Firms making wooden furniture, such as kitchen cabinets and office chairs and desks, are not included in this industry.

Pulp and Paper - consists of firms and workers engaged in manufacturing pulp, paper and paper products. It includes pulp, newsprint, paper (such as coated paper, fine paper and tissue paper), and paperboard mills. It also includes manufacturers of paper and paperboard products such as boxes, containers, bags, stationary products and sanitary paper products.

Forest Products – includes both the wood products industry and the pulp and paper industry.

Note: A larger list of forest industry terms is in the Appendix of this report

recommendations. Of particular interest to readers will be the views of those engaged in the forest industry in Atlantic Canada, gathered from six industry roundtables held across the Atlantic provinces between April and June of 2007 as well as from individual interviews. These are profiled in the green *Industry Perspectives* boxes which can be found throughout the report.¹ The views of those with the greatest stake in the future of this industry add a rich dimension to this report, illuminating the challenges but also the great potential for this industry.

This study was carried out under the auspices of the APEC Forum on Competitiveness, a five-year policy research initiative which focuses on ways to strengthen the competitiveness of Atlantic Canada. This is the first sector study released under the Forum and is expected to provide a model for future studies on other sectors.

Elizabeth Beale
President and CEO
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¹ See Appendix B for a list of Industry Roundtables and Participants

Chapter 1

Profile of Atlantic Canada's Forest Industry

1.1 Atlantic Forestry in the Global Context

The forest industry has been a key contributor to the economy of Atlantic Canada² since the early days of European settlement. The high quality of trees in the Acadian forest and shipping access through numerous small ports around the region gave Atlantic forest products an initial reach into many corners of the world. Although today most of its exports are designated for U.S. markets, the industry has remained a globally focused industry, with periods of expansion and contraction following trends in international markets.

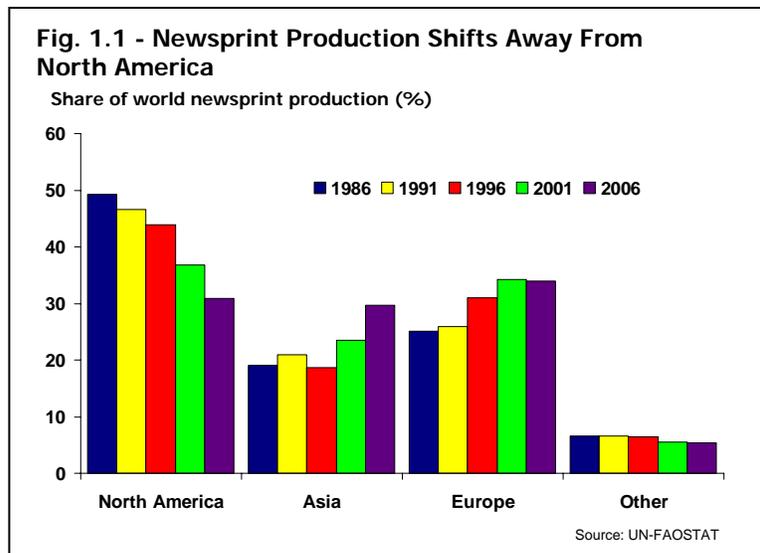
The Atlantic forest industry enjoyed a strong period of growth in the 1980s in both the pulp and paper and wood products sectors, and then again in the mid to late 1990s, as U.S. demand grew and softwood lumber exporters were able to take advantage of their exclusion from the U.S. tariffs on softwood lumber. However, Atlantic forestry firms are now facing a very different environment, with demand and supply growing rapidly beyond North America.

China is now the fastest growing market for forest products, accounting for nearly 50% of the growth in global paper and board demand over the past five years. China has also switched from being a net importer to a net exporter of paper, with a number of large mills now in operation and several others scheduled to come on stream. Other competitors from Eastern Europe, Asia and South America have also encroached into traditional markets, in products ranging from building products to newsprint. As a result, North America's forest industry has been steadily losing its share of global markets. As an example, the North American share of global newsprint production fell from 44% in 1996 to 31% in 2006, while the Asian share of production grew from 19% to 30% over the same period.

² The four Atlantic provinces are Newfoundland and Labrador, Nova Scotia, New Brunswick and Prince Edward Island.

These changes in global markets have led to an inevitable process of forest industry restructuring across North America, with an intense effort over the past decade to improve productivity, cut costs, develop new partnerships and reposition key components of the industry. As the internet has displaced newspapers as a source of news and information, demand for newspaper has fallen sharply in North America and Europe: as a consequence, North American newsprint shipments dropped by 40% between 2000 and 2007. This has triggered a significant reduction in newsprint capacity in Atlantic Canada.

Over the past ten years, most of the new investment in Atlantic Canada’s pulp and paper industry has been directed at product diversification (in the case of pulp), mill conversions (from newsprint to higher quality paper), or advanced machinery (i.e. a super-calendared paper machine). However, the strong Canadian dollar, up about 60% against the U.S. dollar since 2003 negated most of the gains in pulp, paper and newsprint prices over this period, and exports fell for the third year in a row in 2007. The forest industry



faces a particular challenge around the appreciation of the Canadian dollar as most of its inputs are priced in Canadian dollars while its products are priced in U.S. dollars. The industry hit a low point in 2007, when the rapid escalation in the currency's value triggered rationalization and mergers which led to plant closures across the region. Further declines are expected throughout 2008.

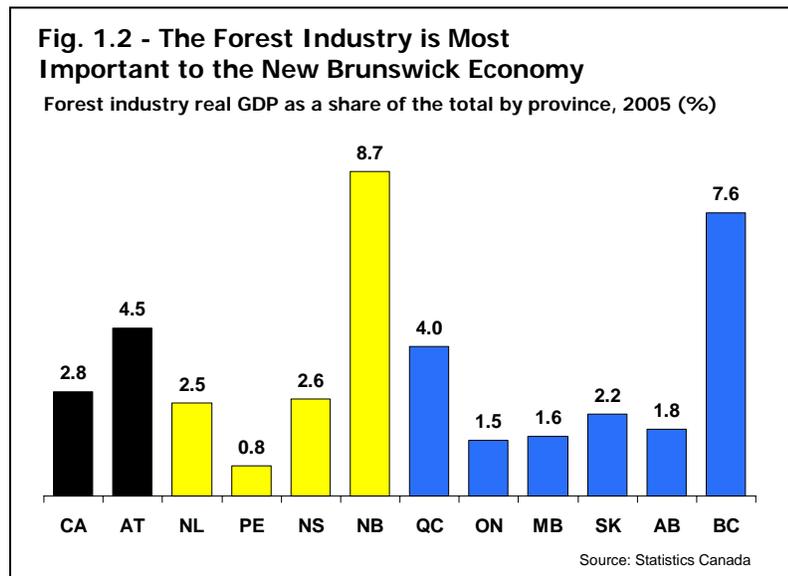
The increase in the Canadian dollar has been particularly hazardous for lumber exporters, who have faced depressed prices for several years including an 11% drop over the past year. ³ With the correction in U.S. housing markets much deeper and longer than anticipated, Atlantic

³ BMOs *Commodity Watch* for May, 2008. Lumber prices currently average US \$210/mbf.

lumber exporters are likely to face continued weak demand and low prices in their major markets in the northeast U.S. Atlantic exports of lumber and other wood products were cut in half between 2004 and 2007, a loss of nearly \$700 million, paralleling a decline in U.S. housing starts of 31% over the same period. With a large supply of existing homes for sale, new home construction in the U.S. is expected to drop a further 30% in 2008 before levelling off in 2009. Atlantic exports of wood products have continued their freefall into the first quarter of 2008 as values have fallen a further 50%. Competition has also intensified from other Canadian lumber producers (following the settlement of the Softwood Lumber Agreement) as well as from global producers of alternative building products.

1.2 The Importance of Atlantic Canada's Forest Industry

Despite its challenges, the forest industry remains a vitally important industry to Atlantic Canada and a major contributor to the region's manufacturing base. In total, the forest industry contributes an estimated 4.5% to the region's GDP⁴, produces the most significant source of export earnings after the energy sector (\$3.1 billion in 2007), and employs about 28,500 people⁵ around the region, about 70% of whom live in rural areas.



But the industry's significance goes well beyond its immediate footprint. Forest industries also have important linkages to other parts of the economy: purchasing goods and services from local suppliers, inducing spending in local retail and contributing to government revenues. An

⁴ Data for 2005, most recent year available for all of Atlantic Canada.

⁵ Data for 2007.

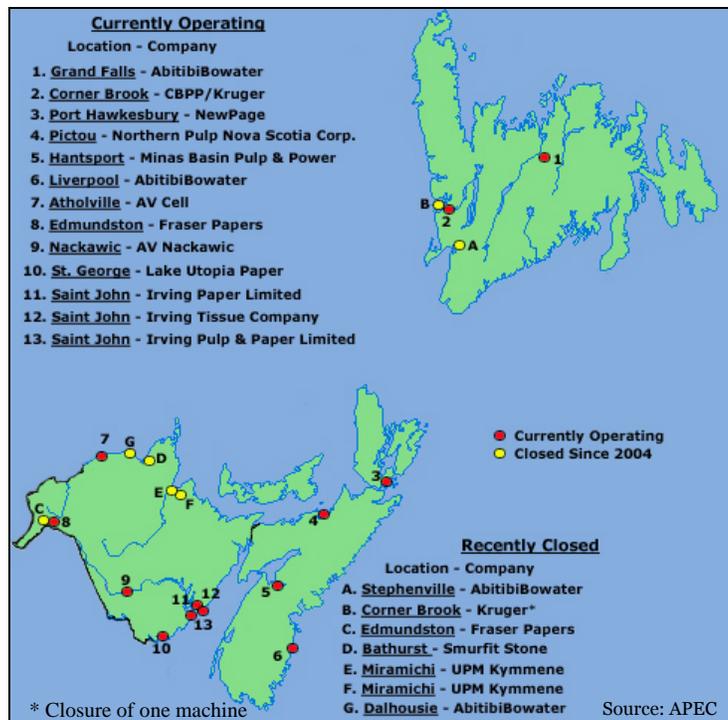
earlier APEC study found that for every 100 direct jobs created in New Brunswick's forest industry, 35 jobs are indirectly created in other sectors of the provincial economy⁶.

The industry has a particular significance to New Brunswick, Canada's most forest-dependant provincial economy. New Brunswick is the dominant player in the forest industry in Atlantic Canada, accounting for 63% of total output in 2005. Nova Scotia and Newfoundland and Labrador follow with 23% and 13% of Atlantic forest industry output respectively. Prince Edward Island's small forest industry accounts for about 1% of the Atlantic total. New Brunswick's share of output in Atlantic Canada's forest industry ranged from 58% in pulp and paper to 72% in the wood products industry in 2005.

1.3 Pulp and Paper

The pulp and paper sector dominates industry output and exports in Atlantic Canada. In 2005, pulp and paper accounted for an estimated 46% of total forest output and 70% of industry exports in Atlantic Canada. New Brunswick, which continues to control the majority of pulp and paper production in the region, has experienced the greatest loss of productive capacity, with four mill closures since 2004 and another announced late in 2007. Output contracted by 11% in that province between 2004 and 2006: with the closure of the Dalhousie mill in January 2008, it is estimated that total capacity in that province's pulp and paper industry is nearly 40% below that achieved in 2003. Output has also

Fig. 1.3 - Atlantic Canada's Pulp and Paper Mills, July 2008



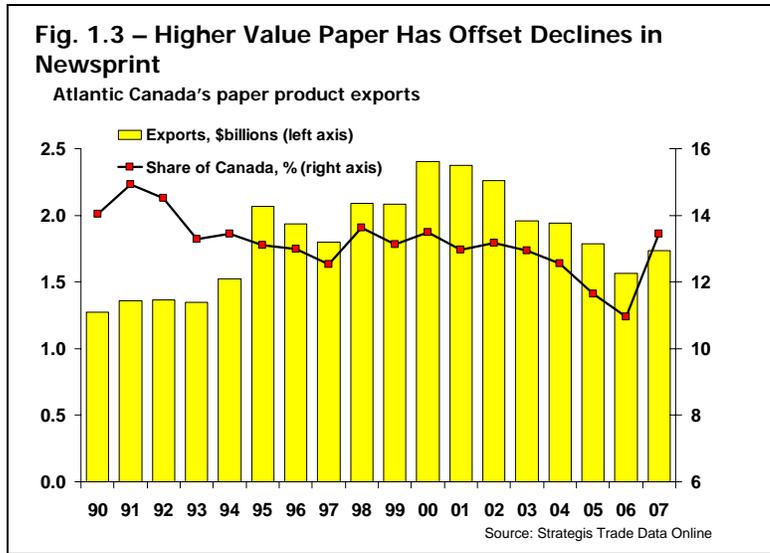
⁶ APEC, (2003) *The New Brunswick Forest Industry: The Potential Economic Impact of Proposals to Increase the Wood Supply*

fallen in Newfoundland and Labrador following the closure of the Abitibi-Consolidated mill in Stephenville in 2005, although two other newsprint mills in that province remain in production (one with reduced capacity). In Nova Scotia, pulp and paper production was dampened in 2006 by the 10 month shutdown of the Stora Enso mill (now NewPage) in Port Hawkesbury, however output in this province has increased since that mill has reopened.

Currently, 13 pulp and paper mills are operating across the region.⁷ Commodity grade products (such as pulp and newsprint) represent the largest share of output, mills that are highly vulnerable to competition from low-cost producers.

Losses in the U.S. and the U.K. markets have been partially offset by rising exports to other markets: Atlantic newsprint exports to India were about \$60 million in 2007, approximately double the average annual exports to India during the 1990s. South American countries Venezuela, Brazil and Columbia are also growing their markets with combined export revenues of \$120 million in 2007. Nevertheless, declines in newsprint exports have accelerated over this decade. Newsprint exports were \$725 million in 2007, a drop of about 42% since 2002. Even with the closure of the Dalhousie mill, newsprint still represents about 30% of total production in the region.

Several mills in the region produce either specialty grades of pulp or higher value grades of paper. Other paper exports (i.e. magazines, catalogues) are the second largest component of Atlantic paper exports. In general, higher quality products have been more resilient to shifting markets: nevertheless, revenues from Atlantic exports of coated and



⁷ Including improved newsprint; supercalendared paper; uncoated freesheet paper; light and heavy weight coated paper; and dissolving specialty grade pulp.

uncoated paper products fell from over \$1 billion in 2000 to about \$850 million in 2007.

Across North America, producers have reorganized and reduced supply (including Canadian pulp capacity): Abitibi and Bowater merged in 2007 in the hopes of lowering costs and strengthening pricing power in the newsprint sector. This merger and other production cuts have helped to boost newsprint prices significantly, up 29% since last November. However, with further declines almost certain to occur in U.S. consumption, rationalization in the newsprint industry is likely to continue. This could be a challenge for the four newsprint mills that remain in operation in Atlantic Canada.⁸

Table 1.1 - Atlantic Canada's Pulp & Paper Mills, July 2008

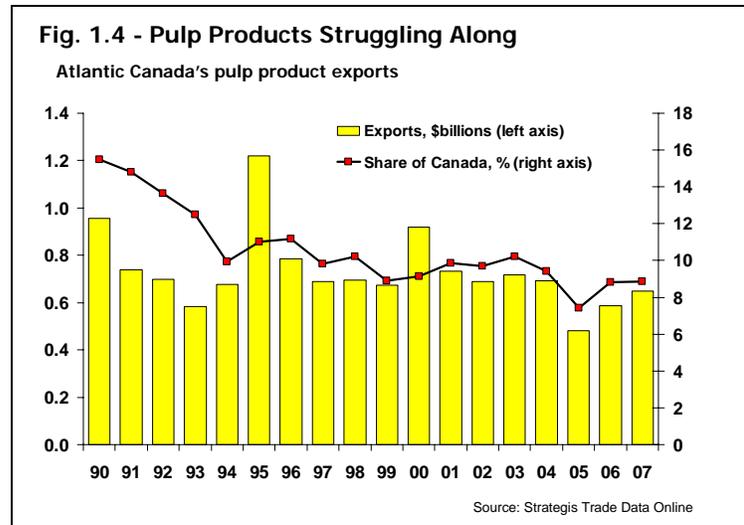
Owner	Location	Output (tonnes / year)	Products
AbitibiBowater	Grand Falls, NL	211,000	Newsprint Uncoated Freesheet
Kruger (CBBP)	Corner Brook, NL	360,000	Standard Newsprint
NewPage	Port Hawkesbury, NS	360,000 190,000	Supercalendered (SCA) Standard Newsprint
AbitibiBowater	Liverpool, NS	253,000	Standard Newsprint
Neenah Paper*	Pictou Co., NS	265,000	Kraft Softwood Pulp Kraft Hardwood Pulp
Minas Basin Pulp & Power	Hantsport, NS	100,000	Recycled Linerboard
AV Cell	Atholville, NB	127,000	Dissolving/Fluff/Specialty Pulp
AV Nackawic	Nackawic, NB	263,000	Kraft Hardwood Pulp Sulfite Pulp Specialty Pulp
Fraser Papers	Edmundston, NB	323,200	Sulfite Pulp Mechanical Pulp
Irving Paper Limited	Saint John, NB	430,000	Uncoated Freesheet Supercalendered (SCA)
Irving Pulp & Paper Limited	Saint John, NB	330,000	Kraft Softwood Pulp Kraft Hardwood Pulp
Irving Tissue	Saint John, NB	75,000	Tissue
Lake Utopia Paper/Irving	Saint George, NB	182,000	Semichemical / Virgin Corrugating Medium / Fluting
Source: RISI - Lockwood Post Directories, Other Industry Directories, Industry Association lists, and Halifax Global. * Neenah announced in May 2008 that it would be selling its mill in NS to Northern Pulp Nova Scotia Corporation.			

Converted paper, including boxes and paper bags, is a relatively minor segment of the Atlantic paper industry, with exports worth \$54 million in 2007. However, in contrast to newsprint, its growth has been steady over

⁸ BMO *Commodity Watch*, 2008. Pulp prices are currently NBSK US\$880/tonne, while newsprint prices are currently averaging US\$665/tonne.

the past decade. The bulk of converted paper products are shipped to the U.S. Major converted paper exporters include Maritime Paper in Nova Scotia and the new Master Packaging plant which opened in Prince Edward Island in 2005. Growth has also occurred in consumer products such as toilet paper, tissue and diapers: exports in this category reached \$67 million in 2007, primarily originating from a new J.D. Irving plant in Moncton.

Atlantic pulp manufacturers have faced substantial headwinds this decade. Export revenues declined from over \$900 million in 2000 to about \$650 million in 2007. The closure of UPM Kymmene's Kraft pulp mill in Miramichi has contributed to the decline, while the re-opening of the AV Nackawic mill as a fibre producer for the textile industry has mitigated the losses to some



extent. The U.S. is the main market for Atlantic pulp (about 50% in 2007), but shipments are growing rapidly to Asia. India, China, South Korea, Indonesia and Thailand accounted for 27% of pulp exports in 2007, up from 4% in 2000. That growth may be more muted in 2009, as pulp prices are expected to soften as new global capacity comes on stream.

1.4 Wood Products

The Atlantic Canadian wood products sector expanded rapidly during the 1990s, with lumber exports behind much of that growth. Lumber exports rose from \$179 million in 1992 to more than \$1 billion in 1999, with total production capacity in the region reaching about 2,500 MMfbm, which under normal operating conditions represents about 10% of Canadian production⁹. Although most of the growth in the 1990s was consolidated in New Brunswick, Nova Scotia also expanded lumber production: it

⁹ For provincial detail, see Appendix 1.

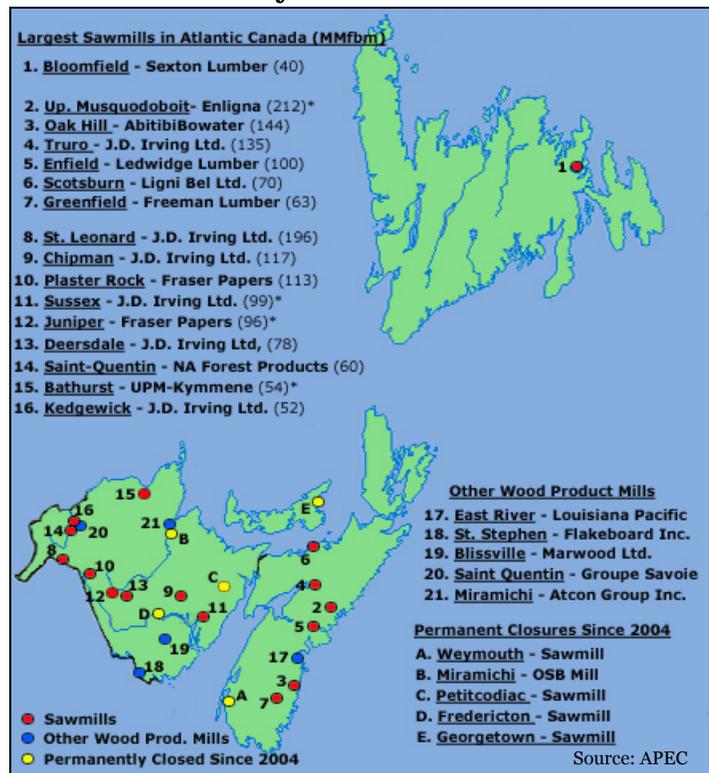
accounted for 28% of the region's output in the early to mid years of this decade. Most of the lumber production in the other two provinces supplies local markets.

Several factors gave rise to the substantial expansion of lumber production in the 1990s. Greater integration between sawmills and pulp mills during the mid-1990s improved the allocation and quality of wood supply to sawmills. Instead of competing for roundwood, sawmills increasingly had first access to this supply while pulp mills used the by-products (i.e. wood chips) or the lower quality roundwood not used by sawmills. This enabled the production of superior lumber that generated higher export revenues. Growth in lumber exports was also fuelled by strong U.S. economic expansion and housing construction, and the Atlantic region's exclusion from the softwood lumber tariffs imposed by the U.S.

In the last three years, the downturn in U.S. housing markets combined with the strong Canadian dollar and competition from other sources has led to a slump in Atlantic lumber markets that was more severe than in the rest of the country. This has led to the closure of large and small sawmills in all four provinces, including several in New Brunswick. Exports have fallen from over \$850 million in 2004 to \$450 million in 2007. Further declines have occurred this year: Atlantic lumber exports are down nearly 54% in the first five months of 2008, and prices are expected to remain low until the U.S. housing market stabilizes in mid-2009.

Until very recently, lumber shipments were almost exclusively shipped to the U.S. However, with the slump in U.S. housing markets expected to continue, lumber producers are gradually extending their reach into

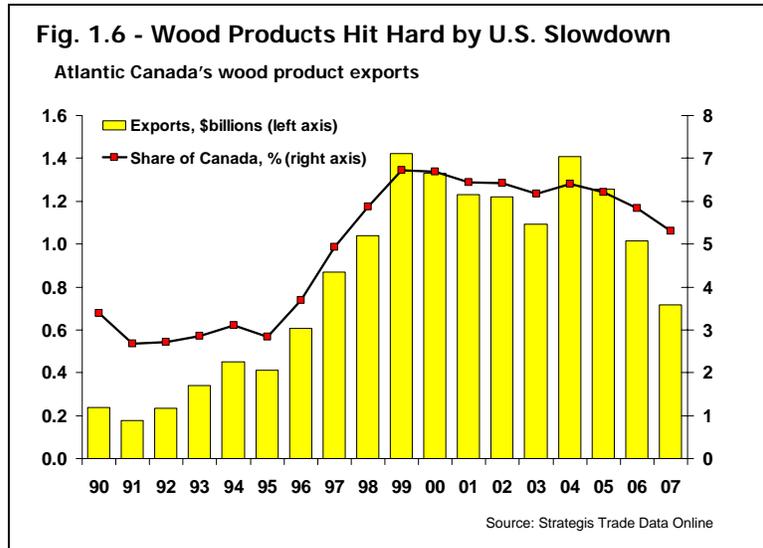
Fig. 1.5 - Atlantic Canada's Largest Wood Product Mills, July 2008



* currently closed for a definite or indefinite period

other international markets. Exports of lumber to the U.K. totalled \$4 million in 2006, but jumped to nearly \$23 million in 2007. In the first five months of 2008 exports are still at a high level but about 20% behind 2007 shipments.

Other segments of the wood products sector also expanded over the past decade, leading to higher value-added production in the engineered products sector, such as Oriented Strand Board (OSB), particle board and fibreboard and other wood products, including windows and doors, wood flooring, pre-fabricated wooden building components and other



millwork. Total exports of wood products peaked at \$550 million in 2004, but fell to just \$270 million in 2007. With 90% of the region's production occurring in New Brunswick, current losses in this sector (including the closure of the Weyerhaeuser OSB mill in Miramichi) are concentrated in this province. As with lumber, wood products exporters are starting to reduce their almost total reliance on U.S. markets, and are finding new markets in western Europe. However tough competition from Chinese producers on lower cost products, particularly windows and doors, makes it difficult to sell to the rest of the world.

1.5 Other Forest Sectors

The primary forestry is an important contributor to Atlantic Canada's economy especially in rural areas of the region. The primary sector consists mainly of small woodlot owners or small harvest operations. Over 1,900 of the 2,200 businesses in the primary forestry in 2006 had less than five employees. The primary forestry industry benefited from the increased demand for fibre in the late 1990s as a result of the expansion in the wood products and pulp and paper industries. However, primary forestry output has stagnated since 2004. The restructuring of the forest industry has led to an 11% reduction in output in the primary

forest sector between 2004 and 2007. Similarly, employment has declined by 3,300 over the same period, a reduction of more than 30%.

The Christmas tree and maple syrup industries are also centred in rural areas of Atlantic Canada. With a value of \$17 million in 2007, the Christmas tree industry in the region is an important contributor to the forest sector. Nova Scotia accounts for \$10 million of the total and New Brunswick for more than \$6 million. Nova Scotia trails only Quebec in total value and volume of production. Industry revenues have stagnated in recent years and are down about 6% since 2000. The value of the region's maple syrup industry has improved significantly up from \$4.5 million in 2000 to \$11.7 million in 2007. The largest share of the industry is in New Brunswick which accounted for \$10.7 million of the total in 2007. While the industry has seen improvement, it pales in comparison with Quebec where sales totalled \$142 million in 2007.

1.6 Industry Integration

One of the most important characteristics of the forest industry is the high level of integration among the different sectors. Residues or by-products from one sector form a key input to another. Forest products manufacturers for example, generate slightly more than six million m³ of mill residues and other products. The primary product in this category is wood chips, of which approximately 3.4 million m³ are produced by sawmills in the region and sold to pulp and paper mills. Sawdust and shavings are also sold to non-structural panel producers, (eg. Flakeboard and CanExel). Most of this activity occurs on a localized basis, although some interprovincial shipments do occur. Some by-products also have a market in other industries: for example, the agricultural sector uses wood shavings for animal bedding.

At larger mills, bark and other wood by-products are used as fuel to generate heat for use in the manufacturing process. The volume of available bark, and potentially other residues may be sufficient to support the operation of a co-generation facility in which electricity and heat may both be generated. Such operations are common in the pulp and paper industry: most of the mills in the region operate some sort of energy generating capacity. At some facilities where there is also biomass

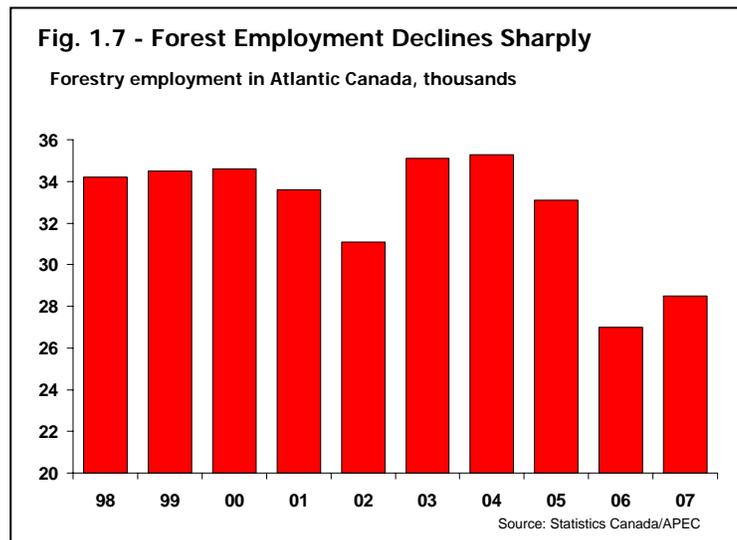
or hydro-generating capacity¹⁰, electricity that is surplus to the mill's needs may be sold into the provincial grid system. A biomass-fired cogeneration plant has operated in association with the AbitibiBowater newsprint mill in Liverpool, Nova Scotia since 1993. The company recently purchased the plant from Brooklyn Power to make that mill more energy self sufficient.

A revived interest in pellet production has created a new market for sawdust residues. One mill in Nova Scotia¹¹ produces fuel pellets for export to electricity producers in Scandinavia, using sawdust from several other mills in its area. Several other proposals for pellet plants are in various stages of development throughout the region¹².

Industry integration at times also has its downside: the loss of key markets in certain products has triggered cost increases in others, at times leading to a domino effect in terms of mill closures.

1.7 The Loss of Employment and Its Impact on Communities

Employment in Atlantic Canada's forest industry increased steadily between 1992 and 2004, largely driven by job growth in wood products. However, the recent downturn in the industry has had a direct impact on employment, with Statistics Canada reporting a loss of over 7,000 jobs between 2004 and 2007, a decline of close to 20%. All three forest industry subsectors; primary, pulp and paper; and wood products, are sharing in the Atlantic job losses. Several closures in the latter part of 2007 will likely be reflected in the 2008 figures. New Brunswick has the largest number of forest industry employees (16,500) and the highest share of total



¹⁰ i.e. Corner Brook Pulp and Paper (Kruger).

¹¹ The Enligna AG sawmill

¹² see expanded discussion in Chapter 3

employment in the Atlantic forest industry (4.6%). However, it is Newfoundland and Labrador that experienced the greatest proportional loss of employment in this industry over the period - a 35% decline in that province between 2004 and 2007 compared to 19% for Canada as a whole.

In Atlantic Canada, about 70% of the forest industry's labour force lives in rural parts of the region. Typically, forest industry jobs in Atlantic Canada are well paid, especially compared to other alternatives in rural areas. In the pulp and paper industry, mill workers typically earn more than \$1000 per week, about 40-60% more than the all-industry average¹³. High levels of unionization in this sector ensure that there is very little variation in compensation levels across the country. There is greater variation in the average earnings of the wood products industry across the country (with lower earnings in Atlantic Canada), but average earnings for wood products employees are still above the all-industry average.

Many communities across Atlantic Canada are dependent on the forest industry as their primary employer. Of the 300 forest dependant communities across Canada¹⁴, over 50 are estimated to be in New Brunswick alone. The closure of forestry-related operations can have a devastating impact on employees and communities alike given the difficulty in replacing these high-paid jobs.

The closures have had a major impact in Miramichi, New Brunswick where a pulp mill, a paper mill, and an OSB mill have closed in the past three years. The combined employment loss for the three mills is estimated to be 1,240, in a town with a labour force of less than 9,000 people; and this does not include indirect employment losses associated with support services or related operations. The nearby communities of Bathurst and Dalhousie have also been hit by mill closures. The high concentration of job losses in this part of New Brunswick is of particular concern, and governments are under increased pressure to provide

¹³ In 2007, workers in pulp and paper in Nova Scotia earned \$1,211 per week, compared with \$1,034 in New Brunswick and \$997 nationally.

¹⁴ As defined by the Canadian Council of Forest Ministers

transitional assistance to individuals and economic diversification support for communities.

1.8 First Nations

First Nations communities in Atlantic Canada are becoming increasingly engaged in forestry. The heightened interest is partially due to legal rulings allowing aboriginal people increased access to crown forests for communal purposes. The federal government has supported the development of an aboriginal forestry sector through the federal First Nations Forestry Program that provides funding primarily for forest management and career development. Trained and skilled workers from aboriginal communities are a growing source of talent for forest industries in many parts of Canada.

Some initial projects in Atlantic Canada are providing an entry point for First Nations communities in commercial forest operations. One such endeavour is the 2002 forestry management contract that Stora Enso (now NewPage Corp.) signed with the Unama'ki Institute of Natural Resources (UINR), which represents the Mi'kmaq people of Cape Breton. The deal gave UINR access to act as a contractor and harvest up to 10% of the annual allowable cut on Cape Breton with an added clause for a potential increase in the harvest volume. The two parties also agreed to establish a joint UINR/Stora Enso forest planning committee that would make recommendations for a long-term forest management plan.

Although the landholdings of First Nations groups in Atlantic Canada are typically small, some have instituted modern forestry practices to improve the commercial capacity of their own woodlots. One example is Pictou Landing First Nation in Nova Scotia: its acquisition of FSC certification in 2000 has generated interest among European buyers.

1.9 Government's Role in Supporting the Forest Industry

With a profound industry restructuring underway and the large number of employees subject to job losses, it is perhaps no surprise that federal and provincial governments are under pressure to provide increased support to the forest industries. Yet most business owners and employees

are well aware that little in the way of long term benefit can be achieved by providing operating subsidies to less productive plants, particularly when these could leave the jurisdiction or company open to countervail.

What then is the appropriate role for government? In general, government needs to allow rationalization and the closure of uncompetitive operations to occur with the minimum disruption and an optimal level of transitional support for workers and communities. However, government also needs to take a long-term view of the opportunities for the forest sector, and help the different segments of the forest industry come together to secure a stronger future. This is especially important for an industry which is dependant on a land base under pressure from competing interests, one whose trees must be planted now in order to secure investment returns in 50 years.

Federal and provincial governments across the country have offered various assistance packages for the forest industry to help offset the recent competitive challenges. These assistance packages have focused on encouraging capital investment, skills development, income stabilization and encouraging productivity improvements in areas related to energy usage, transportation and wood fibre.

All four Atlantic provinces are placing an emphasis on biomass: in New Brunswick, a crown land biomass policy will be announced in late summer, 2008 while in the other provinces, biomass is being addressed as a component of provincial energy strategies. Two of the four provinces, Nova Scotia and New Brunswick, are also undertaking reviews of their respective tax systems, which could have implications for large industry including forestry firms.

Assistance to Industry

In New Brunswick, the pulp and paper industry has benefited from training funds, tax savings and loans for investment in improved efficiency, provided under the provincial government's \$250-million action plan for the forestry industry, which was launched in 2006. Funding under this umbrella supported the purchase, retooling and expansion at AV Nackawic and \$17 million to support an expansion at AV

Cell. Repayable loans are also supporting upgrades and biomass conversion in other mills around the province including the Fraser Papers and J.D. Irving Ltd. mills. Provincial property tax relief is being provided to companies (excluding those involved with lumber) upgrading their capital investment.

New Brunswick reduced stumpage fees in 2006 following a reassessment of fair market values. The government is now reviewing recommendations from a joint industry-government committee to bring the royalty rate calculation in line with fair market value, which could result in an estimated \$10.5 million reduction in crown royalties.

In Nova Scotia, mills have benefited over the past five years from payroll rebates, financing to expand production and support for training. In 2008, the province also committed funding for a biomass project to improve energy self sufficiency at one of the province's mills. In Newfoundland and Labrador, funding of \$14 million was announced in the 2008 budget, primarily for diversification and new market development at sawmills.

Assistance on energy costs

In 2007 and 2008, the government of New Brunswick is providing an energy user rebate on property tax, worth an estimated \$16 million over two years to the province's six pulp and paper mills. However, mills have complained that does not match increases in the rate structure and is less valuable as an incentive compared to similar programs such as the Northern Pulp and Paper Electricity Transition Program in Ontario. Although no specific incentive has been offered in Nova Scotia, the rate structure has been adjusted for large pulp and paper companies.

In its 2007 budget, the federal government also introduced incentives to support next-generation renewable fuel production, such as fuels produced from agricultural and wood waste products. \$500 million, of the \$2 billion for support of renewable fuel production, is available to be invested in the private sector for establishing large-scale next-generation fuel facilities.

Community-Based Assistance Programs

Communities and individuals that have lost their main employer can access a range of support from federal and provincial sources. When the mill closed in Stephenville, Newfoundland and Labrador in December 2005, the province established a task force to address the need for an economic diversification strategy for the town. This was funded in part through federal regional development programs. Federal support was also made available for training and tax breaks helped community members to relocate.

A six-month plan announced in August 2007 has helped New Brunswick communities when a sawmill operation closed. The company selling the mill has been able to transfer their wood allocation for a fee of \$10 per cubic metre to a provincial economic development fund, which will be spent in the area affected by the closure.

Communities hit hard by forest closures will see some funding from the Community Development Trust program announced by the federal government in 2007. This provincially-managed program is aimed at one-industry towns facing major downturns. Atlantic Canada will receive about \$100 million through the program and it is expected that it will support programs that improve productivity and competitiveness, technology development and training for workers and communities facing challenges in forestry and other industries.

In north-eastern New Brunswick, the provincial government has also established community, business development and employment strategies to mitigate the job losses associated with the recent closure of several mills.

Other Directions for Government

The federal government is taking a greater role in supporting forest innovation by bringing together its forest research agencies under one umbrella, with the creation of FP Innovations (announced in 2007, with a budget of \$100 million). Some of the environmental challenges facing the industry are being addressed through federal aid packages intended

to combat the spread of the mountain pine beetle infestation in British Columbia and support research on the brown spruce longhorn beetle in the Maritimes. However, in general the federal government has backed away from providing incentives for land management, including silviculture: the last federal-provincial forest management agreement ended in 1997.

Forest management strategies are currently under review in two of the four Atlantic provinces. In New Brunswick, the province is expected to shortly release two reports, one from its forestry task force on alternative scenarios for long-term forest management strategies on crown lands, addressing topics such as forest diversity and the supply of wood for different industrial applications and a second from CIBC World Markets which will focus on competitiveness and future opportunities. A report is also expected. In Nova Scotia, the provincial government is developing a new natural resources strategy under its “Opportunities for Sustainable Prosperity” initiative, and has held extensive public consultations to provide input on topics such as sustainable forest practices, biodiversity and industrial applications.

Recent Developments in Atlantic Canada's Forest Products Industry

- St. Anne-Nackawic Pulp Co. closed its Nackawic, NB mill in September 2004 due to bankruptcy, with the loss of 400 jobs. The Nackawic mill was reopened in January 2006 by Aditya Birla with 250 employees. The company is spending \$45 million to upgrade the mill to produce a fibre product for the textile industry.
- UPM Kymmene closed its aging Miramichi, NB, Kraft pulp mill in January 2005, with the loss of 400 jobs. The mill was considered too expensive to modernize.
- Smurfit-Stone closed its Bathurst, NB corrugated paper mill in August 2005, with the loss of 270 jobs. Demand for packaging has been slowing in North America, as manufacturing is being shifted overseas.
- Abitibi closed its Stephenville, NL newsprint mill in October 2005, forcing 280 people out of work. High energy costs and an unstable wood supply were given as reasons for the closure.
- Fraser Papers closed its paperboard operation in Edmundston, NB in October 2005, putting 100 people out of work. Increasing competition in global markets forced the company to sell its equipment and shut the mill. Most of the paperboard produced in Edmundston was used in the frozen food industry.
- The Stora Enso Port Hawkesbury mill in Nova Scotia was shut down in December 2005. The newsprint and supercalendered paper mill was threatened with closure unless labour costs, electricity costs and taxes were reduced. A deal with employees, concessions from the provincial government and a ruling on electricity rates were sufficient to restart the mill in October of 2006. Nova Scotia's paper exports were down over \$300 million in 2006 largely due to the shutdown.
- Weyerhaeuser announced in June 2007 that it will not reopen its oriented strand board mill in Miramichi, with the loss of 140 jobs.
- In August 2007, UPM-Kymmene closed its paper mill in Miramichi and announced its permanent closure in December. The closure also shut down the company's groundwood mill. In total 600 jobs have been lost.
- The sale of Stora Enso's Port Hawkesbury mill and its other North American assets to NewPage Corp. is being closely watched as the new owner will be evaluating all of its assets. The older newsprint machine is considered more at risk of closure than the newer supercalendered machine.
- Corner Brook Pulp and Paper (Kruger) shut down its oldest and lowest producing machine at its Corner Brook, NL mill in November 2007 putting 100 people out of work.
- The merger of Abitibi and Bowater was completed in October 2007. The new company reviewed all of its operations and closed eight mills in North America in November including its Dalhousie, NB mill which employed 300. The company still operates two mills in the region (Liverpool, NS and Grand Falls, NL) which will face further reviews in the months ahead.
- Most sawmills in the region have been hit with either reductions in output or temporary or permanent closures. A mill survey completed by the New Brunswick Forest Products Association in March 2008 found that; of the 61 sawmills in the province, only 13 are operating at full capacity; 14 are operating at significantly reduced shifts; 33 are shut down (17 temporarily, 8 indefinitely, 8 permanent closures). In Nova Scotia several of the largest mills have reduced shifts or have had to layoff employees. The province's largest mill in Upper Musquodoboit, NS closed indefinitely in December 2007.
- Neenah Paper announced in May 2008 that it would be selling its mill and associated woodlands operation in Pictou Co., NS to Northern Pulp Nova Scotia Corporation. Neenah will retain ownership in its 500,000 acres of timberlands in the province

CHAPTER 2

THE COMPETITIVENESS CHALLENGES IN ATLANTIC CANADA'S FOREST INDUSTRY

As rationalization of the forest industry in Atlantic Canada continues, it is becoming increasingly evident that this is more than a market correction in response to the appreciation of the Canadian dollar or the downturn in the U.S. housing markets. A fundamental restructuring of the industry is underway, with changes in numerous factors affecting the supply of and demand for forest products. In this chapter, the key competitiveness challenges facing Atlantic Canada's forest industry are analyzed. As each challenge is outlined, the perspectives of the forest industry are profiled, offering additional insights on how these changes are impacting the industry and highlighting industry's suggestions on the ways ahead.

Industry Perspectives

In the Industry Perspectives boxes found throughout this chapter, the opinions of forest industry representatives from across Atlantic Canada are profiled. Some of these comments reflect a synthesis of views, others are direct quotes from individuals. These were gathered from six forest industry roundtables held across the Atlantic provinces from April to June of 2007 as well as from individual interviews. A list of those consulted is included as Appendix B.

2.1 The Productivity Challenge

Productivity data provide a good starting point for evaluating the competitive performance of this region's forest industry. Productivity performance reflects a broad range of factors such as industry composition, investment patterns, cost competitiveness and skill composition of workers. Rising productivity in forest firms is typically associated with a high level of innovation as companies move up the value chain and/or acquire new technologies. It may also reflect resource endowments and low input costs, specialization in the production process and the commitment by firms to invest in training. Persistent low productivity means that companies may be less competitive, with a rate of return on capital and wage compensation levels below the industry norm.

In general, the forest industry in Atlantic Canada has a high level of labour productivity, measured as real output (GDP) per hour worked, relative to most other industries in the region. Output per hour worked

is typically lower in wood products and primary forestry, but the pulp and paper industry has one of the highest rates of labour productivity next to the mining and oil and gas industries. These trends in labour productivity are reflected in labour compensation: it is perhaps no surprise that the workers in the pulp and paper industry are among the highest paid in the country.

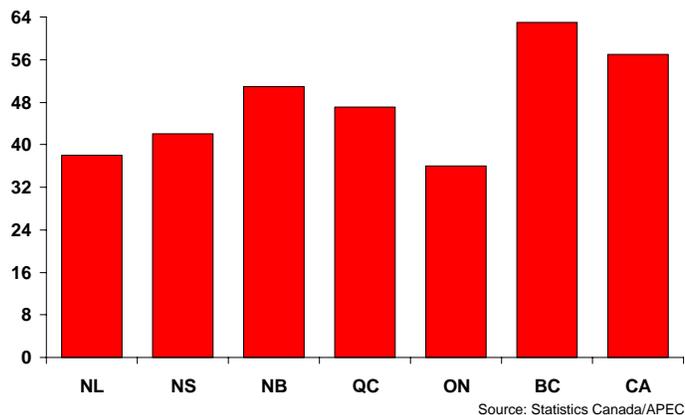
Nevertheless, labour productivity in Atlantic Canada's forest industry ranks below national levels. In 2005, real GDP per hour worked in Atlantic forest industries was only 85% of the Canadian average. Labour productivity is higher in New Brunswick (94% of the Canadian average), reflecting the concentration of pulp and paper activity in that province. However, Nova Scotia at 76% and Newfoundland and Labrador at 70% are well below the national level. The lower productivity numbers in Atlantic Canada reflect a higher concentration of activity (and workers) in the primary forestry and high concentration of small firms, particularly in the primary and wood products sectors.

Looking behind the aggregate numbers gives a better understanding of the trends in productivity performance. In 2005, Nova Scotia's forest industry productivity reached levels which were 40% higher than in

2000, a growth rate almost three-times the national level. This was largely on the strengths of new investment in the province's pulp and paper sector. Productivity growth in New Brunswick's pulp and paper industry has been more modest at 14% between 2000 and 2005, while in Newfoundland and Labrador, labour productivity in the forest industry deteriorated between 2003 and 2005.

Fig. 2.1 - Atlantic Forest Industry Productivity Trails the National Average

Real GDP per hour worked, 2005 (\$)



Source: Statistics Canada/APEC

2.2 The New Investment Paradigm

The shift into global production patterns over the past 20 years has revolutionized manufacturing everywhere, and the forest industries are no exception to this trend. Much of the global investment in the forest industry is now directed towards large production facilities which can achieve significant economies of scale. Large pulp and paper mills are becoming the global forestry standard. In Europe, China and South America, new pulp and paper mills are being built that produce 1 million tonnes annually. In Atlantic Canada, average annual production per mill is about 280,000 tonnes and the largest mill has the capacity to produce 430,000 tonnes.

A similar trend is occurring in the wood products industry where large sawmills can deliver substantial productivity gains. New mills in Europe and western North America are now averaging capacity of close to 600 million foot board measure (MMfbm), well above Atlantic Canada's largest sawmill which has a capacity of 212 MMfbm¹⁵. British Columbia-based Canfor currently

Industry Perspectives ~ Size of Mills in Atlantic Canada

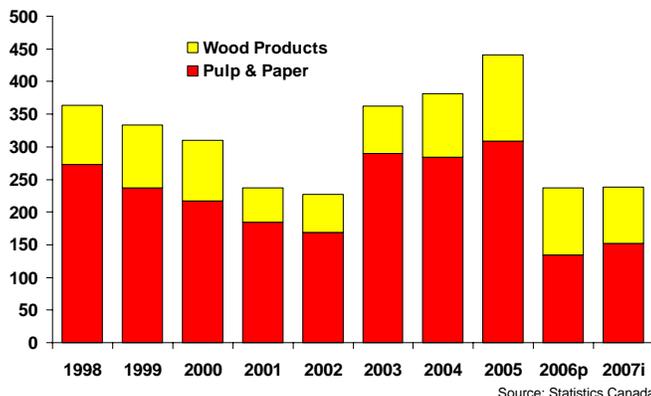
Many in the forest industry in Atlantic Canada are concerned about the trend towards larger firms. Industry representatives pointed to the recent merger of Canfor and West Fraser, the two largest sawmill operators in Canada, a move which places the amalgamated firm in the top 20 forest companies in the world. If the two biggest mills in Canada need to integrate in order to survive, where does that leave the industry in Atlantic Canada?

The small scale of sawmills in Atlantic Canada is due to many factors. Long-standing agreements on the distribution of the wood supply and a declining wood supply across the region have meant that individual mills in Atlantic Canada have considerable difficulty in gaining access to an increased volume of fibre. In contrast, sawmills in British Columbia have benefited from dedicated access to Crown land. A similar constraint exists for pulp mills, given the licensing arrangements attached to these mills in Newfoundland and Labrador and in New Brunswick. In the primary forestry, the high proportion of private lands and a large number of small private woodlot owners have contributed to a large number of logging contractors.

Industry representatives acknowledge that larger scale mills would help competitiveness but also point out that there can be benefits to small scale. Small mills offer flexibility, and can respond to market opportunities quickly. Small size also means that overheads are low. Small mills serving primarily a local market may be the only option in a province such as Newfoundland and Labrador, where road access is limited and transportation costs are high. Many woodlot owners see value in their small holdings and are concerned that a concentration of ownership in the rest of the industry may reduce competition and prevent them from getting good prices for their timber. Some foresters argue that rather than focusing only on increasing size, forest companies can become more competitive by developing specialized niche markets and value added processes.

Fig. 2.2 - Forest Products Investment Weakening

Capital investment in the forest products industry, Atlantic Canada (\$millions)



¹⁵ This mill has recently closed.

operates 14 sawmills that are bigger than the largest mill in Atlantic Canada. Most of this region's sawmill production is concentrated in mills that produce over 40 MMfbm. There are about 18 mills in the region that produce at this level, including 11 in New Brunswick, six in Nova Scotia and one in Newfoundland and Labrador. Another 20+ mills, some of which operate seasonally, produce annual volumes of 10-40 MMfbm.

Industry Perspectives ~ Family Owned Firms

Family owned mills have managed to make it through the recent turmoil because their interests are solely invested in this region. An international company looks at this from a business performance perspective: if the mill is not making money, that firm is not going to stay in the region.

Although productivity gains can be realized from investing in size

and new technologies, many companies have been reluctant to make these investments in Atlantic Canada. Weak profitability has persisted in much of the region's forest industry throughout this decade: the larger publicly traded companies that operate in Atlantic Canada have struggled to get a 3-4% return on

investment in their portfolio compared to a 10% return on investment which global players expect from their new operations in developing countries.

Industry Perspectives ~ Lack of Investment

A lack of investment is impeding competitiveness in the region's forest industry. Mills in the region are typically under-capitalized and in the bottom quartile of global productivity in the forest industry. In many of the region's pulp and paper mills, existing production is unprofitable, but there are no opportunities to attract the large amount of capital investment required to retool. Depreciating assets in the logging sector have also reduced the capacity of these operators to secure financing.

New investment is being channeled towards some segments of the forest industry which have a growing market share, such as tissue and some uncoated paper products. The region's largest investment in 2007-08 is the \$50 million conversion of the AV Nackawic mill in New Brunswick to produce a fibre product for the textile

Many forest operators feel that too much regulation, particularly for environmental purposes, is hurting the forest industry in Atlantic Canada. The red tape reduction initiatives underway have not provided any significant benefit for the forest industry. Furthermore, many regulations are not consistent across the provinces, which creates barriers for companies that are operating across the region.

Governments need to reduce their high tax levels – it is hard to lure back workers who have migrated to Western Canada when they will pay much higher income tax in Atlantic Canada. Easier access to tax credits for capital investments is also required. Eventually, the introduction of a carbon credit system could really help the region's forest industry. But the key to attracting new investment is to ensure an increase in the wood supply. From industry's perspective, without a stable wood supply as collateral, it is almost impossible for forestry firms to get new financing.

industry. However, much of Atlantic Canada's current capacity remains concentrated in segments of the industry such as newsprint or pulp where North American production is expected to decline¹⁶. Atlantic

¹⁶ RISI

newsprint mills currently produce about 1/3 of the region's output in the pulp and paper sector, mostly in older mills which have attracted little new investment in recent years, while pulp captures about 1/4 of output. Annual capital spending in the Atlantic forest products industry (most of which is in the pulp and paper sector) has now dropped to about \$230 million a year. Data on capital investment for the primary forest industry is difficult to obtain for the region but investment intentions are estimated to have fallen from a high of about \$80 million in 1998 to about \$25 million in 2007.

Changes in ownership structure are also influencing investment at mills across the region. Corporate mergers which have resulted from industry rationalization can trigger a reassessment of the competitiveness of each operation within the merged company. A prime example is the recent amalgamation of Abitibi and Bowater. An initial review of their combined assets led to the closure of one mill at Dalhousie, New Brunswick, although their two other newsprint mills in the region have survived, aided by assets such as self-generated hydro power (Newfoundland) and greater diversity in markets. However, given the state of the newsprint industry, it may be unrealistic to expect any substantial new investment at any of these plants in the near future.

2.3 A Competitive & Sustainable Wood Supply

Wood fibre is the single largest input cost for many segments of the forest sector, accounting for more than half of variable production costs for some products¹⁷, and as much as 3/4 of operating costs at some sawmills. Thus ensuring that the forest industry has access to a sustainable supply of fibre at competitive prices is one of the central challenges facing the industry.

Jurisdiction	Estimated Fibre Costs
Nova Scotia	≈ \$65 - \$70 / m3
New Brunswick	≈ \$65 - \$70 / m3
Newfoundland	≈ \$65 - \$70 / m3*
Ontario	≈ \$75 / m3
Alberta	≈ \$55 - \$65 / m3
Saskatchewan	≈ \$40 - \$50 / m3 (aspen)
Québec (east)	≈ \$65 - \$70 / m3
Sweden	≈ \$74 / m3
Germany	≈ \$84 / m3
U.S. NW Great Lakes States	≈ \$56 / m3

Source: Halifax Global Databases and various published reports in industry journals and similar publications. Most recent data is from 2006 or 2007.
 *Note: – smaller and lower quality wood may result in reduced yields and higher effective costs.

¹⁷ FPAC , Forest Products Industry Competitiveness Task Force, 2007

Halifax Global analysed fibre supply and costs in a report produced for APEC in 2007. Their analysis placed average delivered wood costs in Atlantic Canada in the range of \$65 - \$70 / m³, although the margins can widen considerably, depending on factors such as harvest site conditions, distance from mill and density of stands being harvested.

More recent estimates for smaller operations – specifically sawmills – place average delivered wood costs in the range of \$75 - \$82/m³.¹⁸ Industry evidence suggests that costs have increased by approximately 20–25% over the past five years, driven primarily by increased fuel costs.

The FPAC report on forestry competitiveness indicated that eastern Canada, including the Atlantic provinces, face “some of the highest fibre costs of any producing region in the world.”¹⁹ The price differentials are exacerbated at the current time by an oversupply of wood from western Canada, which is the result of efforts to reduce timber stands affected by the pine mountain beetle. However, it is the longer term influences on the fibre supply which are the greatest concern in Atlantic Canada, including the challenges of managing a wood supply which is largely under private ownership, increasing pressures from competing land use and the allocation and management of crown lands.

Industry Perspectives ~ Fibre Costs

Fibre costs have increased in recent years, due to a lack of supply. In New Brunswick, pulp and paper companies have pulled out of the province due to increasing costs, of which wood is the major factor. High fibre costs are also a barrier to new businesses coming into the region.

The slow growth of our forests and lack of uniformity in the fibre creates added costs for our forest industry. Our trees grow more slowly than in temperate climates, such as South America. Although our fibre can be of very high quality, in general, our fibre quality is less uniform than in other parts of the world. Scandinavian mills pay more for fibre but the quality is consistently better.

Key Determinants of Fibre Cost and Supply

In the three Maritime Provinces²⁰, 97% of the forested land – or roughly 40–45% of the total land mass - is defined as productive forest land, i.e. capable of producing a merchantable forest within 80 to 100 years. That forest land base supports a growing stock of approximately 1.5 billion m³

¹⁸ N.S. Forest Products Association, July 2008.

¹⁹ Ibid, p 16.

²⁰ The three Maritime provinces are Nova Scotia, New Brunswick and Prince Edward Island.

of timber, of which slightly more than 75% is softwood (predominantly spruce and fir) and 25% is hardwood (with maple, birch and poplar the most prevalent species). Considerable variations in forest density and age structure affect productivity and yields (Nova Scotia, for example has the youngest forests in the region), and hence the consistent supply of raw materials for industrial users.

In Newfoundland and Labrador, where half the forested land area is considered unproductive, the forest is almost entirely coniferous and dominated by mature stands (over 80 years). Yields are considerably less (88 m³/ha) compared to the Maritimes (100m³/ha).²¹

Although most mills rely primarily on wood supply from their local areas, fibre is sourced on occasion from greater distances. Significant reductions in the annual wood supply in Québec in 2005 opened up opportunities for suppliers of softwood from Prince Edward Island and Nova Scotia. Maine, Nova Scotia and Quebec are important suppliers of roundwood and wood chips to New Brunswick. Softwood roundwood has also been shipped by barge from Prince Edward Island and Nova Scotia to the west coast of Newfoundland in recent years because the delivered

Table 2.2 - Growing Stock and Harvest Density, By Province

	Growing Stock (Canada's Forest Inventory 2001)			Harvest Volume Density (2004)		
	Total Forest Land	Total Wood Volume	Volume / Area	Industrial Harvest Area (2004)	Harvest Volume (2004)	Volume / Area (2004)
	(000's ha)	(millions m ³)	(m ³ / ha)	(ha)	(million s m ³)	(m ³ / ha)
NL	10,730	562.0	52	22,845	2.3	101
NS	4,240	385.0	91	52,858	6.9	131
PE	265	31.0	117	5,495	0.7	127
NB	6,091	535.0	88	111,348	11.4	102
Atlantic	21,326	1,513.0	71	192,546	21.3	111
Maritimes	10,596	951.0	90	169,701	19.0	112

Source: Canadian Forest Service

Industry Perspectives ~ We Need a Growing Wood Supply

A growing and more predictable wood supply would encourage more investment in Atlantic Canada's forest industries. This is the key factor holding back the ability of the industry to grow and become more competitive in this region. But while many in the forest industry are firmly behind an increase in the wood supply on Crown lands, other stakeholders such as private woodlot owners (in New Brunswick) and environmental groups throughout the region are not as supportive.

Private wood lot owners need to be better informed about the potential for their land and the advantages of adopting improved forest management practices. In Prince Edward Island, for example, up to 90% of the remaining forests are of low quality: it has been the practice to take the best and leave the rest. But under the right management regime, this can be improved upon, to the benefit of the forest industry and other users.

Provincial governments need to be encouraged to adopt strategic wood supply and land use policies which will benefit the forest industry. But it is easier to get things from government if everyone is asking for the same thing. There needs to be more collaboration among stakeholders on establishing wood supply goals, and a combined effort to grow more wood on public and private lands.

²¹ Source: Halifax Global

cost of fibre from those areas is below the cost of fibre harvested in some areas of Newfoundland.

The annually available wood supply or annual allowable cut (AAC) from the forest base in Atlantic Canada totals slightly more than 22 million m³, of which more than 96% (21.3 million m³) has been harvested each year until very recently. However, as the industrial harvest is very heavily skewed to softwoods, this suggests a more positive situation than actually exists. With volumes of hardwood harvested below the annual available wood supply, harvesting of softwood fibre has been in excess of the AAC, in Nova Scotia in particular. Although recent mill closures in all provinces and reductions in output have relieved some of the immediate pressure on the wood supply, the limited availability of fibre is a key constraint to future investment in the industry.

Unique characteristics of forest ownership in each of the four Atlantic provinces have a direct bearing on fibre availability and costs. Unlike in other regions of Canada where forest ownership is predominantly vested in the Crown, in the Maritime provinces resource ownership is predominantly private, with Crown control of the resource less than 10% in Prince Edward Island, approximately 27% in Nova Scotia, and approximately 50% in New Brunswick. In Newfoundland and Labrador, although forest lands are primarily under the ownership of the Crown, long-term leases for the two pulp and paper companies operating on the island of Newfoundland have been recognized as equivalent to private sector

Industry Perspectives ~ Private Woodlots

From the perspective of private woodlot owners, the slump in market prices has been devastating. There is still a market for some of their timber at local sawmills, but the demand for residual pulp has collapsed, which discourages many woodlot owners from selling their wood. Some are exporting their goods to buyers outside their province. But many woodlot owners will choose to simply wait out the current situation until the industry restructures and prices improve, although their incentive to invest in new silviculture may be greatly diminished. The New Brunswick Federation of Woodlot Owners estimates that sales from woodlots in that province have declined by \$60 million over the past three years.

While the current climate is hurting small producers, larger industries are worried about the long-term effects on private wood supply. Private woodlots are an important source of raw materials for larger mills in the region. In the Maritimes there are more than 100,000 private woodlot owners and their ability to sustainably manage their land varies significantly. From the perspective of the large mills, the current upheaval in the industry could make it even more difficult to ensure a predictable wood supply from private woodlots in the future.

In New Brunswick, private woodlot owners, the regional marketing boards and industry have had difficulty working together effectively. Differing opinions on contracts for wood supply have caused tensions in relationships for many years. From the perspective of the woodlot owners, large mills are bypassing the marketing boards and not working within the system: from the perspective of large industry, the marketing boards have been unable to guarantee the secure supply required by industry.

ownership in terms of the land management practices and associated costs.

Within the Maritime provinces, private forested land is vested in a large number of owners, many of whom hold very small woodlots. While this has advantages in terms of flexibility to respond to market conditions, it has also made it difficult to control the supply of timber: the need for short term stumpage revenue on the part of woodlot owners may result in an acceleration of harvest volumes, undermining government's longer term sustainability objectives. Owners of smaller woodlots may also be more resistant to investing in silviculture or incorporating advanced forest management practices, such as third party certification²². Efforts are being made to improve forest management practices on private lands: Nova Scotia, for example, has implemented a Wood Acquisition Plan which requires registered wood buyers²³ to contribute \$3.00 per cubic metre of softwood, either to the Sustainable Forestry Fund or to provide the equivalent in verified silviculture activities on private lands.

The management and marketing of fibre from private woodlots varies across the region. In Nova Scotia there are 16 forest co-operatives that help negotiate better prices for woodlot owners. They also provide other assistance including woodlot management and marketing services. In New Brunswick, seven regional marketing boards have the responsibility for improving the selling power and profitability of small woodlot owners, and also provide consulting advice for market expansion, promote better forest management practices and represent woodlot owners in public and private consultations. New Brunswick is now introducing a two year pilot project to give marketing boards control over private wood sales: this stems from the conflict between mills and woodlot owners over the past year on the sale of private wood.

Access to the timber on Crown land in each province is provided through licensing agreements which confer right of access in return for royalties

²² In response to growing demand for wood and paper products which meet environmental and biodiversity standards, forest product companies are engaging third party organizations to provide certification of sustainable forest practices. In Atlantic Canada, a majority of forest land is certified, with New Brunswick holding the highest proportion at 75%.

²³ i.e. those who acquire more than 5000 cubic metres of round wood

and a requirement to manage the resource. In New Brunswick, for example, Crown land is divided into 10 timber licences held by the six large forest product companies: each licensee is assigned sub-licensees which include many of the small- to mid-sized forest product companies (including sawmills) in the province. In Nova Scotia, over 98% of the wood provided to the forest industry from Crown land is supplied under two types of tenure agreements²⁴ which distinguish long term leases and shorter volume utilization commitments (principally for sawmills). In Newfoundland and Labrador, both mills are covered by long-term leases for the use of Crown land while sawmills do not have an independent allocation and must enter into a voluntary agreement to receive logs from one of the paper companies. The lease for nearly 1 million hectares of forest land currently held by AbitibiBowater in Newfoundland and Labrador is set to expire in 2010.

The Crown tenure arrangements in each province have been subject to criticism from inside and outside the industry. Smaller companies have argued that the license agreements give large companies too much control over the wood supply, allowing them to effectively set the price hence influencing management practices re silviculture and harvesting for the rest of the industry. Licensees have complained about the inflexibility of the agreements (i.e. mill production is essentially tied to the leasehold and cannot be sold or transferred without provincial approval) and about the lack of attention to market conditions in setting stumpage fees. However, the concern of the major mills mostly centres on the insufficient incentives for silviculture and the continuing encroachment of non-timber objectives on Crown lands, both of which could limit incremental timber growth and thus reduce the Atlantic forest industry in the future.

Industry Perspectives ~ Stumpage Fees

“In northeastern New Brunswick, the Weyerhaeuser plant (which closed in 2007) was charged \$11 for hardwood pulp in stumpage fees. That’s too high – companies can go anywhere else today and get cheaper wood. Those rates were set at a time when demand was high, but the situation is different now. There are many things that governments can’t change such as the dollar and global demand, but they can change royalties.”

²⁴ The first type is a Long-Term License and Management Agreement which is currently held by Stora Enso and Neenah Paper and account for about 70% of Crown land. These long-term licenses were established through specific and separate Acts passed in the Nova Scotia Legislature. The second type of agreement is a 10-year Volume Utilization Agreement.

An independent study undertaken by the New Brunswick government in 2002²⁵ recommended that the province modernize its forest management practices, to greatly increase its harvest levels by 2062. They proposed an approach similar to the best practices undertaken in some Scandinavian countries, including shifting priority to the commercial timber supply; along with a substantial increase in silviculture, focusing on greater planting rather than relying on natural regeneration. Although no action was taken to implement these recommendations at the time, the report has been influential: New Brunswick's Self Sufficiency Task Force made similar recommendations in its report last year²⁶. Similar recommendations are being made in other parts of the region: the forest industry in Newfoundland and Labrador has suggested that silviculture should be enhanced and focused on replanting faster growing tree species such as the Norway spruce.

A greater concern for the licensees at the current time is the continuing encroachment on Crown lands for purposes other than industrial forest uses, resulting from increasing demands for protection and preservation of unique natural features or ecosystem characteristics or protection of wildlife habitat. In New Brunswick for example, the amount of Crown land set aside for conservation purposes is now estimated to be 30% of the total. In Newfoundland and Labrador, an estimated 60% of the

Industry Perspectives ~ Competing Interests

“Provincial governments often seem to have conflicting strategies on the use of forest resources. The Tourism Department wants cutting stopped to avoid visual and other aesthetic issues. The Wildlife Division wants cutting stopped to address wildlife habitat concerns. The Environment Department wants cutting delayed as they assess the necessity for more stringent environmental regulations. The Water Resources Division wants to avoid issues related to harvesting in municipal water supply areas so they push decision making out to municipalities.

Who then is standing up for the interests of the forest industries? More and more forest land is encroached upon. As responsible industry representatives, we understand the need to accommodate other interests. But the voice of the forest industries, the economic driver behind the forest resources, seems to be lost under the weight of other opinions. If we can't stem the losses, it will be difficult to ensure a growing wood supply, and attract new investment to the industry.”

Industry Perspectives ~ The Environment

Forests in Atlantic Canada are a source of enormous environmental benefit. For one, forests in Atlantic Canada are younger and fast growing compared to many other parts of the country, and thus serve as a carbon sink. Provincial green plans which incorporate strategies for the forest industry could encourage investment in the industry, improve cost efficiencies, and reduce greenhouse gas emissions at the same time.

The focus on the environment is important and the forest industry has made great strides in recent years that few recognize. There is still a need to improve our understanding on where to plant trees, and what conditions are best for growing certain species. We also need to improve our understanding of insect infestations and the link to forest management and cutting practices. Balance is required between environmental and harvesting issues so that so that woodlot owners can manage appropriately.

²⁵ Jaakko Poyry Consulting, *New Brunswick Crown Forests: Assessment of Stewardship and Management*, 2002.

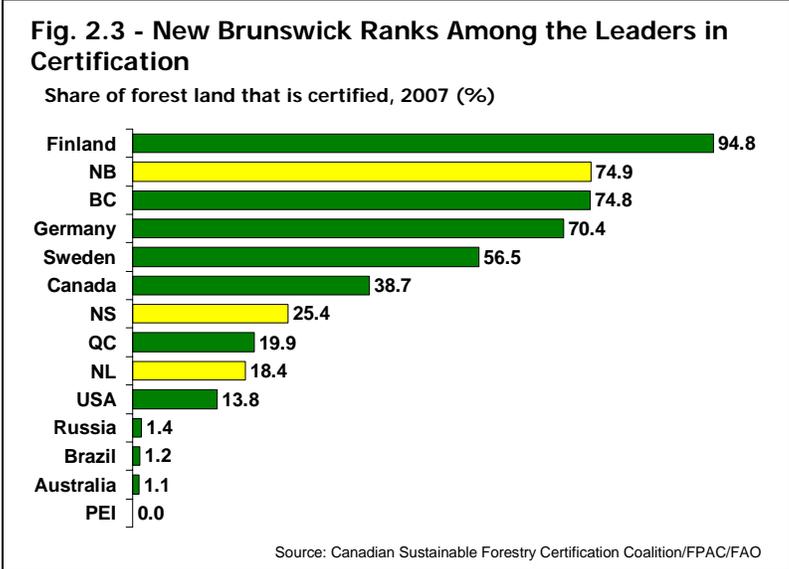
²⁶ *The Road to Self Sufficiency: A Common Cause*, May 2007

Crown land is subject to some form of constraint. Although industry recognizes the need to adopt improved conservation practices, the frequent changes in environmental standards have increased operating costs significantly and are making it difficult to forecast the future wood supply. The forest industry has suggested that they would prefer to see the public interest met through an increasing allocation in protected lands, with fewer constraints on the remaining leaseholds. Certainly the lack of a widely accepted framework to govern the forest use of crown lands sets the stage for continuing conflict between industrial users and others in the community.

Forest Certification

As consumer demand for eco-friendly products increases, forest product companies are looking to third-party organizations that can provide certification confirming that they are using sustainable forest practices. Certification standards take environmental, economic and social values into consideration. Certification can provide a competitive advantage, broadening market access: certified forest products can also attract a higher price. A growing number of corporations, globally and in Canada, are implementing procurement policies stating a preference for certified products.

In Canada, certification standards are offered by the Canadian Standards Association (CSA), the Forest Stewardship Council (FSC), and the Sustainable Forestry Initiative Program (SFI). While all three of these certification agencies emphasize sustainable and environmental practices, such as maintaining biological diversity, they vary in other requirements. For example, the CSA certification requires organizations to ensure public participation at the community level for each forest, while SFI and FSC certifications emphasize compliance with laws



and mitigation of illegal logging. The wood flow accounting process, or chain of custody, is the process used to track wood from certified forests through each stage of the production cycle, to the end purchaser. Chain of custody standards are now also capable of tracking recycled content. The Forest Product Association of Canada has made a commitment to certify all of its forest operations to one of the three standards.

Nationally about 60% of the certified forests are under the CSA program, 23% under SFI and the remainder under FSC. In Atlantic Canada a majority of the certified forest land in New Brunswick and Nova Scotia uses SFI while in Newfoundland the CSA program is used.

With nearly 40% of Canada's forest land certified as of 2006, the country ranks in the top tier when compared to other leading forest product producing countries. New Brunswick has the highest proportion of certified forest land of any province in Canada with nearly 75% (or 4.7 million hectares) certified.

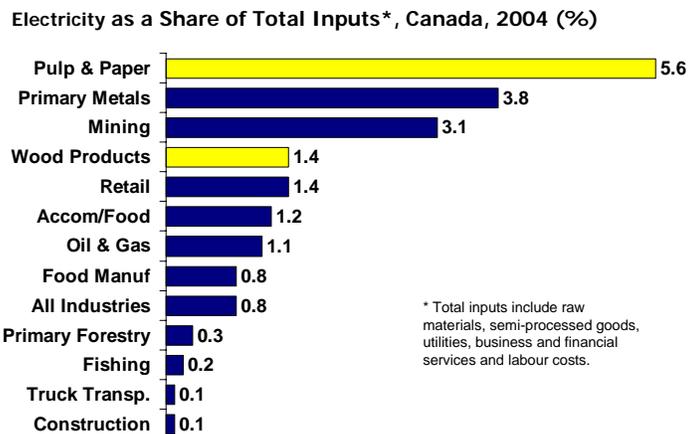
Industry Perspectives ~ Certification

The forest industry recognizes the advantage of a very high level of certification for Canadian forest products, and the high reputation for Canadian forest products. Increasingly, customers are demanding certification to guarantee the quality of the product. Further differentiation of forest products through certification could help the Canadian industry to develop a competitive advantage in terms of its higher quality product compared to others in the global market. However, there needs to be more consistency in the certification process, as there are currently three separate certification systems utilized within Canada. There are also challenges with respect to the certification of private lands which do not have the same controls on the management of the product harvested as do Crown or industrial freehold lands.

2.4 Energy Use and Energy Costs

Rising energy costs have a big impact on profitability in the forest industry. The pulp and paper sector has the highest reliance on electricity of any industry in the country. In 2004, electricity costs as a share of total inputs for Canadian pulp and paper plants averaged 5.6%, seven times the all-industry average and up substantially from 2001, when energy costs as a share of total

Fig. 2.4 - The Forest Products Sector is Most Affected By the Rising Cost of Electricity



* Total inputs include raw materials, semi-processed goods, utilities, business and financial services and labour costs.

Source: Statistics Canada

inputs were less than 5%. The wood products sector is also heavily dependent on electricity at 1.5% of total inputs, about twice the all-industry average. However, energy use can vary considerably by type of plant. For example, electricity costs for modern paper mills that use the thermo-mechanical pulping (TMP) process are typically much higher, as much as 20-30% of total input costs.²⁷ For plants that generate their own hydro power, as do the two newsprint mills in Newfoundland and Labrador, electricity is a much smaller share of total input costs.

Global energy prices have risen considerably over the last few years fuelled by strong global demand and dwindling supply from traditional sources. Oil prices rose from US \$26 a barrel in 2002 to US \$72/ barrel in 2007, and as high as \$140 per barrel this spring. A similar trend has occurred in coal and natural gas prices. The 60% appreciation of the Canadian dollar against the U.S. currency since 2002 has provided some price protection for Canadian utilities but prices of gas, coal and oil have still increased substantially. In Canadian dollar terms, coal prices increased by 65% and oil prices by 87% between 2002 and 2007.

Higher energy prices have increased generation costs for electric power. This has been felt most acutely in the three Maritime provinces, where a heavy reliance on thermal generation has resulted in substantial increases in the costs of production. In Nova Scotia, thermal sources account for about 90% of generation, with most current production coming from coal. In New Brunswick, thermal sources account for over 50% of generation but about 70% of total fuel costs (including oil, natural gas and coal) for NB Power. Prince Edward Island purchases close to 90% of its electricity from New Brunswick while Newfoundland and Labrador generates over 85% of its electricity from hydro. On average, published electric power rates for large industrial users in Atlantic Canada have not increased as much as the price has increased in coal, oil and natural gas. This partly reflects a lagged response due to factors such as contracts for fuel purchases and regulatory approval processes, and partly reflects the steps which utilities are taking to improve efficiency. Nevertheless, large industrial users in the three Maritime provinces have

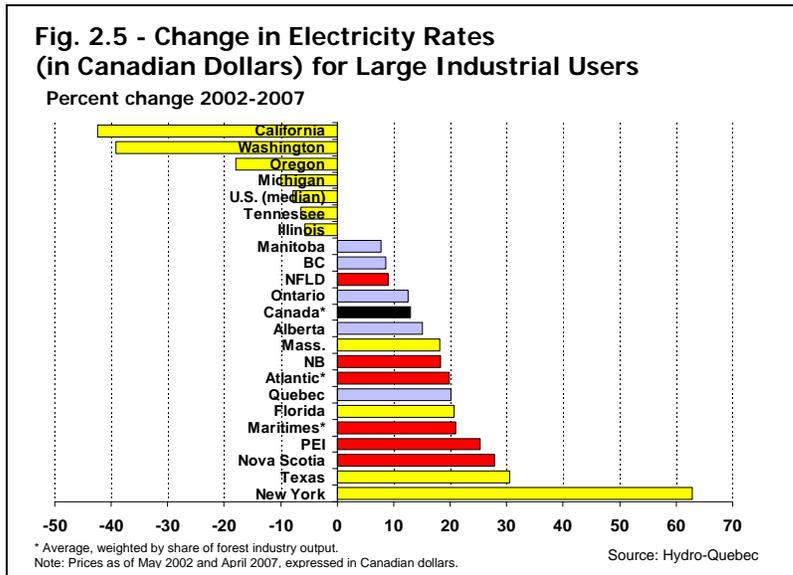
²⁷ Francis, D.W, Towers M.T. and Browne T.C., *Energy Cost Reduction in the Pulp and Paper Industry*, Pulp and Paper Research Institute of Canada, Ottawa, 2002.

faced higher increases in electricity rates over the past five years, compared to many of their competitors in Canada and the U.S.

Relative Energy Costs in Atlantic Canada

For most power utilities, pulp and paper mills are among their largest customers. Utilities typically provide their large industrial customers with rates per kilowatt-hour which are lower compared to smaller power users, reflecting the efficiencies associated with delivering larger loads. In the past, many provincially owned utilities provided preferential rates for large industries as a stimulus for economic development: in recent years, the trend among most utilities in Canada has been to reduce the cross-subsidization across rate classes.

Some utilities provide large industrial customers with additional pricing options, so that effective rates may be lower than posted rates. Nova Scotia for example, recently introduced an interruptible rate which provides a lower rate in exchange for reduced service during times of peak demand. Some states and provinces are offering incentives or rebates to mitigate the impact of rising power costs on large power users: Ontario for example recently introduced a rebate for pulp and paper mills in the northern part of that province as an encouragement to improve their energy efficiency, effective for three years. It is estimated that this could reduce electricity costs for these mills by as much as 15%

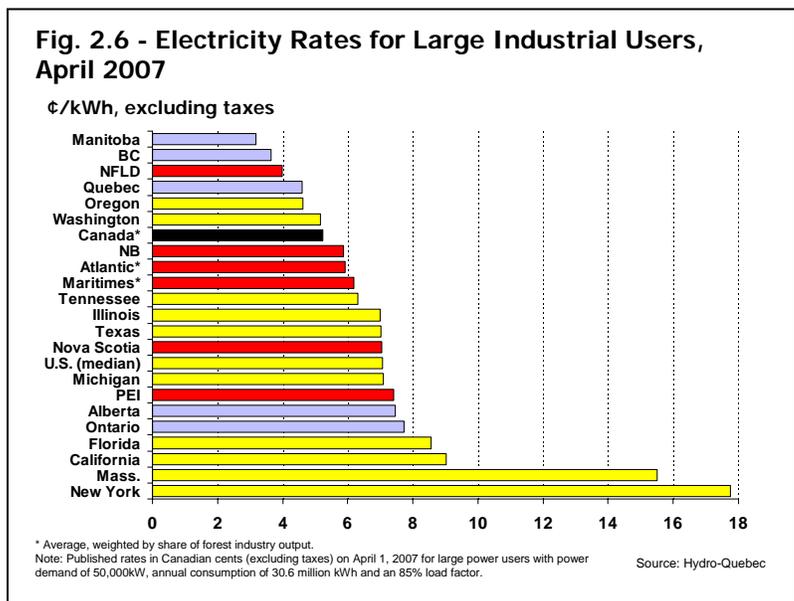


by 2009. As mentioned previously, New Brunswick is currently providing a property tax rebate in 2007 and 2008 to alleviate the impact of the 2007 rate increase on its six working pulp and paper mills, worth an estimated \$16 million over two years.

Electricity rates for large industrial users in Atlantic Canada rose by 20% between 2002 and 2007 and by 21% in the Maritime provinces.²⁸ A comparison with other jurisdictions indicates that the rates for large industrial users in the three Maritime provinces have increased significantly faster compared to many other jurisdictions since 2002, including Ontario, Quebec, Massachusetts and Alberta.

Are industrial electricity rates currently higher in Atlantic Canada than elsewhere? Large industrial rates in Newfoundland and Labrador have remained low, largely because of access to hydro-electricity, which is also the key factor in keeping rates low in Quebec and British Columbia. However, based on a comparison of published rates as of April 1, 2007, Nova Scotia and New Brunswick's large industrial users face electricity costs which are higher than the Canadian average, although the rates in many U.S. states are much higher.

It should be noted that comparisons of published rates for purchased electricity, which are based on standardized assumptions of power demand, do not necessarily reflect the actual cost paid by pulp and paper companies, which can vary with actual demand, time-of-use rates, and other rate adjustments. For example, some mills produce electricity surplus to their needs and are able to sell that electricity to the provincial grid: these power purchase agreements can



significantly lower the effective cost of energy for that mill. However, the forest industry has argued that there is a larger gap in actual electricity prices for mills in the Maritime provinces compared to their competitors in other jurisdictions than is revealed by the published rates.

²⁸ These data are for the period April 1, 2002 to March 31, 2007 and this does not take into account the NB Power rate increase implemented in June, 2007. Industry sources suggest that the five year power increase in NB for large industry users has been closer to 24% when this is included. This comparison also does not take into account the new interruptible rate in Nova Scotia.

