



CCPA

CANADIAN CENTRE
for POLICY ALTERNATIVES
CENTRE CANADIEN
de POLITIQUES ALTERNATIVES

June 2006

Public Forests, Public Returns

A Way Forward for Ontario

By Ben Parfitt



CCPA

CANADIAN CENTRE
for POLICY ALTERNATIVES
CENTRE CANADIEN
de POLITIQUES ALTERNATIVES

ISBN 0-88627-502-4

**Suite 1400, 207 West Hastings Street
Vancouver, BC V6B 1H7**

**TEL 604-801-5121 FAX 604-801-5122
EMAIL ccpabc@policyalternatives.ca
www.policyalternatives.ca**

CAW 567
OTTAWA

Public Forests, Public Returns: A Way Forward For Ontario is available under limited copyright protection. You may download, distribute, photocopy, cite or excerpt this document provided it is properly and fully credited and not used for commercial purposes. The permission of the CCPA is required for all other uses.

Printed copies: \$10. Download free from the CCPA website at www.policyalternatives.ca.

Please make a donation... Help us continue to offer our publications free on-line.

We make most of our publications available free on our web-site. Making a donation or taking out a membership in the CCPA will help us continue to provide people with access to our ideas and research free of charge. **Suggested donation for this publication: \$10 or whatever you can afford.**

Acknowledgements

The author wishes to thank Charles Campbell, John Cary, Ed Finn, Joe Hanafin, Seth Klein, Keith Newman, and Fred Wilson for their input and helpful feedback on this report.

Any errors and opinions presented in this paper are those of the author, and do not necessarily reflect the views of the Canadian Centre for Policy Alternatives.

The CCPA would like to thank the Communications, Energy and Paperworkers Union for its financial support of this paper. Additionally, thanks to The B.C. Federation of Labour, the B.C. Government and Service Employees Union, the Endswell Foundation, the Pulp, Paper and Woodworkers of Canada, and the United Steelworkers of America District 3 for their earlier support of the CCPA's Resource Economics Desk, which assisted in this research.

About the Author

Ben Parfitt is the CCPA-BC's resource policy analyst. He is a long-time writer on natural resources and environmental issues, co-author with Michael M'Gonigle of *Forestopia: A Practical Guide to the New Forest Economy*, and author of *Forest Follies: Adventures and Misadventures in the Great Canadian Forest*. His most recent CCPA report is *Getting More From Our Forests: Ten Proposals for Building Stability in B.C.'s Forestry Communities* (December 2005).

5	Summary: Public Forests, Public Returns A Way Forward for Ontario
8	Introduction: Ontario's Forest Industry On the Brink, But Not Out
10	1 What Are the Major Challenges?
19	2 What Has the Ontario Government Done in Response?
22	3 What Ways Forward?
29	4 Reinvigorating Social Returns from Ontario's Forests
39	5 Conclusion
41	Notes
43	References

Summary

Public Forests, Public Returns A Way Forward for Ontario

Anyone who has paid attention to Ontario's forest industry over the past few years knows that it is in trouble. Numerous mills have closed, thousands of working people have lost well-paying jobs, and many communities in the northwestern and northeastern regions have been devastated by job losses, population declines, and eroding tax bases.

Many readers are also aware that the provincial government, beginning in 2005, announced a number of initiatives aimed at bringing some financial relief to what remains a troubled industry. They may also know that these relief measures, while welcomed to some degree by municipal and industrial leaders, are generally regarded as being little more than Band-Aid solutions. They do not offer long-term hope to an industry that is clearly struggling or to resource-dependent communities whose isolation and small populations make them minor players in a political arena that is driven by the demands of the more populous and prosperous southern region of the province.

This report has two objectives. The first is to say that there is hope because there are solutions. As calamitous as recent events have been,

the challenges confronting Ontario's forest industry and northern communities cannot and should not be likened to the collapse of the Atlantic cod. Ontario still has a thriving forest resource. And, while that resource has been depleted, it is re-growing and in many cases re-growing well. Communities can and should derive maximum benefits from that thriving resource. And the challenge — a realistic and achievable one it must be emphasized — is to ensure that ways are found to get the best use out of that publicly-owned resource so that everyone benefits to the fullest extent possible.

Hand in hand with the first objective, this report aims to kick-start discussion about what the social contract ought to be between the province, acting on the public's behalf, and the companies logging Ontario's publicly-owned forests.

Despite all of the bad news associated with Ontario's forest industry, it remains a powerful economic force in the province. This is as true for southern Ontario, where the bulk of secondary wood product manufacturing jobs are located, as it is for the more remote regions. However, the fortunes and misfortunes to befall northern communities are much more closely tied to how

the forest industry is faring than is the case in the south, for the obvious reason that southern Ontario has a much larger population and a far, far more diversified economy.

This report begins by chronicling many of the problems confronting the industry in the province, and how those problems have translated into hard times for many workers and communities. Having provided details of the problems, it also tells readers that all is not lost. There is a value-focused way forward, one that would see the core areas of primary and secondary wood products manufacturing, growing energy self-sufficiency, and ecologically sound forest management and conservation strengthened. There are also things that the Ontario government can do that would bring more stability to resource-dependent communities through modest reforms of the province's forest tenure system.

Ten practical and easily implemented recommendations anchor the report — policy changes that would help achieve more social returns from Ontario's publicly-owned forest resources. Hopefully, the recommendations will help to stimulate public discussion about what constitutes a socially progressive way forward. The forests of Ontario belong to the people of Ontario. The government manages and allocates forest resources on the public's behalf. With that in mind, it behooves the province to explain not so much what it will do by way of offering temporary assistance to a struggling industry, but what its vision of forestry is and how it hopes to get there.

The ten recommendations that anchor the report are:

1. Ontario should immediately appoint a provincial Chief Forester whose primary job is to audit forest resources and to ensure that logged areas are adequately reforested. Regions where mills closed, putting communities at risk, should be the highest priority. Audit results, and any subsequent recommendations to lower or raise logging rates, should be subject to public review

and comment before the Chief Forester renders a final decision.

2. Ontario should take back and reallocate at least some of the estimated 4.25 million cubic metres of publicly-owned timber that is annually allocated to the major corporations and that was, until recently, processed by mills that have ceased operations. If companies will not process wood in Ontario, then they should not be allowed to maintain access to valuable, publicly-owned timber.

3. As part of a timber reallocation effort, Ontario should grant new area-based forest tenures to municipalities, First Nations, regional governments, or regional boards. This would allow local governments to derive direct financial benefits from forestlands, helping them to offset revenue losses that have occurred as a result of mill closures and declines in local populations.

4. To maximize financial returns to municipalities or regional entities holding new community forest tenures, Ontario should turn stumpage fees generated on those lands back to the communities.

5. In an effort to encourage innovation in the forest sector, including in the areas of energy, value-added and green forest products, Ontario should set up a new Forest Research and Development Fund. Under the fund, companies would receive matching funds for R&D expenditures on the condition that any operational trials or commercial applications occur in the province. Funds would not be available to existing R&D bodies, which commonly receive funding from the forest industry and the federal government.

6. Ontario should encourage more value-added forest product manufacturing by creating a province-wide wood fibre network. The network would consist of a web-site where log suppliers and primary and secondary manufacturers could advertise what they had for sale and/or what wood products they produced or needed.

7. To further boost value-added output, Ontario should take back and reallocate 10% of the timber volumes in existing forest tenure agreements as those agreements come up for renewal. Companies losing timber as a result of the take-back would be eligible to bid to re-acquire it, provided they bid on the timber in partnership with an Ontario-based secondary wood product manufacturer. Under proposed “partnership sales,” a sawmill interest would get access to standing timber to turn into logs and later lumber, while a secondary mill would get a guaranteed portion of the sawmill’s output (at fair market value) to turn into higher value products. This would encourage more “made in Ontario” activities.

8. Ontario should launch a multi-faceted marketing campaign designed to highlight achievements in forest certification, environmentally friendly pulp, paper and wood products, and value-added output. Major buyers of forest products say increasingly that all three factors influence their purchasing decisions. Such a campaign could help forest companies make further inroads in the Ontario and U.S. home building markets as well as emerging markets such as China, where water and power shortages could ultimately

work to the advantage of Canadian pulp and paper producers.

9. Ontario should create a public power authority for northwestern Ontario with powers to set regional hydro prices and to make decisions on hydro transmission. The new authority would also have power to determine how new energy sources created by forest companies could be more effectively brought on line to assist companies and others in meeting their energy needs.

10. Ontario should create a new Northern Ontario Jobs and Communities Commission, with a dedicated budget to assist communities in local economic development and diversification initiatives and to assist workers in retraining programs that will help stabilize employment in remote communities.

These recommendations are revisited in more detail in the final section of this report, Part 4. By then, it is hoped, readers will see not only why we need to increase public returns from publicly-owned forest resources, but also how such returns can be realized through practical and not unduly onerous public policy changes.

Introduction

Ontario's Forest Industry On the Brink, But Not Out

Rising hydro and fossil fuel costs, higher delivered wood costs, nagging questions about how much economically accessible timber remains, increasing competition from emerging economic powerhouses, and new raw materials from low-cost regions have combined to create what many call the “perfect storm” for Ontario’s forest industry and for dozens of communities in the province’s vast northwest and northeast regions.

And that is only the half of it.

Problems perpetually plague the traditional mainstays of the industry — commodity pulp, paper and lumber — thanks to oversupply of key markets. A strengthened Canadian dollar continues to erode forest company profits because many products are destined for the United States and remunerated in American dollars. And finally, while investments have been made by certain sectors of the forest products industry, they have not, by and large, been made in others. The net result is an increasingly old mill portfolio and, in many cases, mills that lack the significant output (on a high output/low-cost basis) that allow them to compete in today’s commodity markets.

The upshot, as the following table attests, is that over a brief three-year period numerous

pulp, paper, and sawmill facilities have closed their doors in Ontario.

Despite all this, there are ways to reinvigorate Ontario’s forest industry and place it on a more prosperous footing for the decade(s) ahead. And there is compelling research to suggest that, with some serious effort by the industry, the Province of Ontario, and to a lesser extent the federal government, the fortunes of the industry could be revived with a forward-thinking, value-driven strategy.

At the end of the day, however, if we are to see prospering and relatively stable resource-dependent communities (stable always being a relative word when talking about natural resources), the industry will have to look a lot different than it does today.

In the following section of the report, we look at some of the major challenges confronting Ontario’s forest industry. The challenges are many and, taken together, may seem insurmountable. In Part 2, we look at what the provincial government has done in response and question whether it is enough. Despite the doom and gloom, however, we conclude that there are reasons to hope. In Part 3 we explain why, focusing particularly

on some inspiring work that has been done by a leading forest industry analyst who has identified numerous opportunities for the Ontario forest industry to move further up the value-added manufacturing chain.

In that same section, we also show how there is a tremendous amount of interest in using wood and the byproducts from forest industry manufacturing processes to create new forms of energy, which could be of enormous benefit to the industry and province alike. We also look at the potential benefits derived when the forest industry more fully embraces conservation and ecological principles in its operations.

Lastly, in Part 4, we look at what the Ontario government can do to increase social returns from what remains a publicly-owned forest resource. Collectively, the 10 policy recommendations that anchor the report constitute a reasonable way forward — one that is neither too onerous for the government regulator nor for the forest industry. More important, the recom-

mendations would help to bring a modicum of balance to a system that is leaving an increasing number of rural, forestry-dependent communities in Ontario without the means to chart a

► The challenges are many and, taken together, may seem insurmountable... Despite the doom and gloom, however, **we conclude that there are reasons to hope.**

more stable course.

Before getting there, however, we need to set the context. The forest industry in Ontario is in trouble. It has been for some time. Understanding why helps us to better appreciate what must be done in the face of those realities.

TABLE 1 Ontario Mill Closures: 2003–2006

Company and Locale	Product	Capacity (tonnes/board feet)	Job Loss
Abitibi, Kenora	Newsprint	240,000 tonnes	350
Bowater, Thunder Bay	Newsprint/Pulp	140,000/240,000 tonnes	350
Cascades, Thunder Bay	Fine Paper	165,000 tonnes	375
Domtar, Chapleau	Lumber	78 million board feet	200
Domtar, Cornwall	Fine Paper/Pulp	240,000/140,000 tonnes	910
Domtar, Ottawa	Fine Paper	60,000 tonnes	185
Interlake, St. Catharines	Tissue Paper	10,000 tonnes	48
Neenah, Terrace Bay	Pulp	125,000 tonnes	140
Norampac, Red Rock	Containerboard	135,000 tonnes	135
Smurfit, Thunder Bay	Containerboard	140,000 tonnes	100
Tembec, Kapuskasing	Newsprint	75,000 tonnes	65
Tembec, Kapuskasing	Lumber	82 million board feet	125
Tembec, Kirkland Lake	Lumber	13 million board feet	125
Weyerhaeuser, Dryden	Fine Paper	140,000 tonnes	80
Weyerhaeuser, Sturgeon Falls	Containerboard	95,000 tonnes	125
Tembec, Smooth Rock Falls	Pulp	200,000	230
TOTAL			3,543

SOURCE Ontario. Ministry of Natural Resources. Ontario's Forest Industry Facility (Mill) Statistics 1999–2003. 2005.

1 What Are the Major Challenges?

In April 2005, a council appointed by Ontario Natural Resources Minister David Ramsey issued a report on the state of the province's forest sector. The group was known as the Minister's Council on Forest Sector Competitiveness (hereafter called the Council) and consisted of a diverse membership that included mayors from rural communities, forest company executives, veteran forest industry analysts, woodworking and pulp and paper union officials, First Nations leaders, and others. And it did not mince words in its report back to the Minister. There were problems aplenty, and for that the province had reason to be concerned.

Next to auto manufacturing, the forest sector is Ontario's single largest contributor to the province's balance of trade. In 2003, it employed some 85,000 people directly, paying them an average wage-and-benefits package valued at \$68,000 annually. The industry generated \$19 billion in sales that year, \$8.5 billion of which were exported, and it paid all levels of government \$2.3 billion in annual taxes and another \$240 million to the Ontario treasury in the form of stumpage payments for timber logged on public forestlands.¹

Interestingly, while there is no shortage of head-shaking today over plummeting job numbers, in 2003 employment levels in the industry were actually far higher than they were just over a decade earlier. As the Council noted, in 1991 Ontario's forest industry "directly employed about 64,000 workers...and was generating sales of approximately \$9 billion, with exports of \$2.4 billion."

At the time, the Council noted, "Ontario's economy was mired in a recession, and there were short-term challenges, particularly related to the investment climate, globalization, and technological change. But...industry, labour and government members saw strong growth potential for the future, particularly based on robust wood supply and growing demand for forest products."² And that, in effect, is precisely what happened. In Ontario, sawmill expansion in particular was the order of the day in the latter half of the 1990s, with total capacity in the sector increasing by 23%.³ But, as we will soon see, a "robust wood supply" doesn't always stay robust for long.

A high dollar dampens re-investments in aging mills

Flash forward to today, and there is no shortage of problems. A persistent worry remains the strengthened Canadian dollar, which has had a dampening effect on profits. According to the Council, it is estimated that, for every one-cent gain the Canadian dollar makes on its U.S. counterpart, the Ontario industry forgoes \$80 million annually.

A relatively high Canadian dollar, moreover, may be a reality for the Canadian forest industry for quite some time to come. Thanks to abundant fossil fuel energy supplies in Western Canada, particularly Alberta, the country's trade surplus has grown, with energy comprising the lion's share — about three-quarters — of that surplus. This, as a recent report by CIBC World Markets notes, is particularly problematic for the country's forest industry, which is vulnerable to the so-called "Dutch Disease".⁴ CIBC goes on to define the Dutch Disease as:

"...the deindustrialization of a nation's economy that occurs when the discovery of a natural resource raises the value of that nation's currency, making manufactured goods less competitive with other nations. The net result is a withering of the manufacturing base over time. The term originated in Holland after the discovery of North Sea gas in the 1960s."⁵

The dollar's appreciation also appears to be a significant factor in decisions by forest companies in Ontario and elsewhere to delay making timely investments in upgrades at certain mills. Monies saved by forestalling such expenditures may be of immediate attraction to major shareholders, but they pose bigger long-term problems, in particular declining company competitiveness, which, when followed to its inevitable conclusion, leads to mill closures and wrenching community upheaval.

As the Forest Products Association of Canada outlined in a brief to the federal government's Standing Committee on Finance in October 2005, the rising dollar was one factor among many that contributed to a far from optimal level of re-investment in existing mills in Ontario and elsewhere:

"...declining investments in capital stock over the past few years present a serious threat to the industry's longer-term prospects. Factors negatively influencing investment within the sector include the sustained appreciation of the Canadian dollar, depressed commodity prices, the softwood lumber dispute, and comparatively high taxation rates in Canada."⁶

(Since the Association's brief, the Canadian and U.S. governments announced a deal to end the softwood impasse. Should the deal be formally approved, Canadian softwood lumber producers would see \$4 billion out of \$5 billion that they paid in countervailing and anti-dumping duties imposed by the U.S. returned. Much of this money might not be re-invested, however, but simply paid out to company shareholders. Furthermore, much of the gain associated with removing the duties has been wiped out by the Canadian dollar's appreciation over the years that the duties were in effect.)

In tandem with the dollar, there are nagging questions about the buoyancy of the U.S. economy, upon which many Ontario forest companies remain highly dependent. With the trade deficit of our neighbour to the south continuing to deepen, there are worries that this could trigger higher interest rates, which could easily slow economic growth in the near term. The wild card of another spike in energy prices also hovers in the background, again with potentially negative consequences for domestic forest product manufacturers selling into the American housing market, which up until now has been

hot. Demand for lumber was at its highest level ever in 2004, and was high again in 2005. But a downturn would almost certainly lead to further lumber mill closures, both in Canada and the U.S. Why? Because there are already too many mills churning out too much wood.

Finally, with the connection between a higher Canadian dollar and lower profit margins on U.S.-bound Canadian-made manufactured goods, there are increasing calls for the Bank of Canada to slow the dollar's seemingly inexorable upward climb. As such, it would not be a surprise to see Ontario-based forest companies

› Next to auto manufacturing, the forest sector is Ontario's single largest contributor to the province's balance of trade.

joining the chorus of those calling for the central bank to take action. The dollar's value, after all, is influenced by domestic monetary policies, including the setting of interest rates. However, the days in which the industry benefited from a Canadian dollar languishing at a value of 63 to 69-cents on its U.S. counterpart are, for the foreseeable future, over. The emerging challenge is how to work profitably in an environment where our currency is close to or perhaps even on par with the American dollar.

Nagging questions about wood availability and quality

Another major worry is the so-called "robustness" of the wood supply. After two centuries worth of logging in Ontario, much of the older trees, with their higher wood quality, are gone. There will be a significant time lag before much of what has been logged and replanted reaches a

suitable age and quality that it is worth harvesting again. Moreover, timber volumes on an area-by-area basis tend to decline the farther north one moves, simply because colder climates mean shorter growing seasons and slower accumulation of commercially desirable wood fibre.

"Past practice, encouraged by MNR, has been to cut the older forest before the quality of the wood deteriorates from age, insects, blowdown, etc.," the Council reported. "But that means that the yield per hectare in Ontario's forests is declining because much of the older forest, with its larger trees, has been harvested. Regeneration is taking place, but it is not a rapid process in this climate."⁷

In addition to these realities, concerns are growing about the reliability of current information regarding what timber volumes remain in areas slated for future logging. In August 2005, for example, MNR's Industry Relations Branch published a report summarizing an analysis of what forest industry and government officials predicted would be logged versus what was actually logged in various areas in the northwest region of the province. "Some forests have fairly reliable estimates of volume; however, there are others that do a very poor job of estimating the available volumes from the planned harvest areas," the report's authors wrote.⁸

The same report also noted a troubling trend in the approach certain companies took to logging forests, one in which the best trees were targeted for logging and the less desirable trees left behind. Such practices are often referred to as "high-grading," and the end result is usually not pretty.

As the same MNR report noted:

"Some forest companies appear to be concentrating their harvest activities within the forest units that are on upland ground and offer high-quality wood fibre for their mill. This practice will eventually lead to an imbalance in summer versus winter

› Quebec: A Growing Shortage

Following the release in December 2004 of a report by a provincially appointed body known as the Coulombe Commission, the Quebec government enacted new legislation that reduced the amount of timber available from Crown forestlands in the province by one-fifth. There were two main reasons for the reduction. The first was that timber resources had been over-allocated, resulting in an over-cutting of provincial forests. The other was that the province wanted to increase the number of “protected areas,” those landscapes ruled off-limits to logging.

According to an analysis of the provincial government’s decision and its implications for the region’s forest industry, CIBC World Markets noted that logging of Quebec’s softwood forests had jumped nearly 16% between 1990 and 2004. But proper replanting had not followed in step. The result was a 7% decline in the “standing inventories” of the SPF (spruce/pine/fir) resource.¹⁰ The other rising concern was that over roughly a quarter century the average diameter of trees being logged in the province had shrunk by nearly 16% as well. In other words, the timber that remained was more marginal than what had typically been available 25 years earlier.

At the time of its decision, the Quebec government felt that, by doing various things, the forest industry could offset some of the effects of the projected 20% decline. Among the things the companies could do were:

- increase logging on private forestlands;
- log virtually everything that they were allocated on public forestlands — in other words, no under-cut; and
- log lands that had been allocated under other forest tenures, but for whatever reason had not been logged.

Still, the authors of the CIBC report felt, even with mitigating measures, a conservative estimate would see 13 sawmills close in Quebec. The more vexing question was how these closures would exacerbate an already thorny operating environment for the region’s pulp and paper mills, which were faced with rapidly increasing wood chip prices.¹¹

In the three years prior to the Commission’s report, chip prices in Eastern Canada had risen 30%. A projected 15% decline in available chips in Quebec as a result of the scaling back of logging rates on public forestlands, moreover, would only serve to push chip prices higher. This, the CIBC predicted, would result in the “likely” closure of more pulp and paper mills in Quebec, as well as in Ontario and in New Brunswick, because wood chips have historically moved between jurisdictions.

The CIBC report went on to attribute a rash of mill closures in 2005 to higher wood costs. The closures included: a Smurfit-Stone linerboard mill in New Richmond, Quebec, a Smurfit-Stone corrugated medium mill in Bathurst, New Brunswick, a Cascades paper mill in Thunder Bay, Ontario, a Norampac linerboard mill in Red Rock, Ontario, and an Abitibi-Consolidated newsprint facility in Kenora, Ontario.¹²

The report also noted that the wood fibre shortfall that occurred in Quebec could not, in all likelihood be made up elsewhere.

“Ontario cannot be counted on to fill Quebec’s gap,” the CIBC reported. “The wood supply in Ontario is also expected to drop, by between 1% and 3% in 2005 and by close to 10% in 2010, due mainly to an age-class gap.”¹³ The age-class gap refers to a growing gulf between trees too young to log and those that have grown long enough and become big enough to be commercially attractive.

wood (i.e., not enough upland sites/summer ground), and a higher percentage of lower quality/higher costing wood maintained on the unit. The full allowable harvest for all forest units must be encouraged.”⁹

On parts of the British Columbia coast where such practices were once rampant, the result was a precipitous decline in logging rates. Logging the best and leaving the rest was profitable in the short-term, but carried with it considerable downstream costs.

Concerns about wood availability and qual-

► Fully half of the 20 largest electrical purchasing facilities in Ontario are forest companies.

ity, moreover, are not limited to Ontario. To the east in Quebec, for example, a dramatic decline in available timber supply is underway. The decline is having an effect not only on the viability of sawmill and pulp and paper facilities in that province, but in Ontario and New Brunswick as well (*see side story: Quebec: A Growing Shortage*).

Rising energy costs

Another major challenge confronting forest companies in Ontario is the rising cost of energy, both for hydro and for fossil fuels.

The industry — particularly the pulp and paper sector — is a major consumer of power, in fact the largest of all manufacturers. Fully half of the 20 largest electrical purchasing facilities in Ontario are forest companies.¹⁴ It is estimated that annual hydro costs for the industry are on the order of \$500 million, and for some companies the hydro cost alone represents a third or slightly more of their operating costs.¹⁵

This poses serious challenges for companies — even those that have made relatively recent investments in an effort to stay competitive. One such company is St. Mary’s Paper Ltd. in Sault Ste. Marie. The company invested \$160 million in its specialty paper mill in the past decade in an effort to reduce costs and stay competitive. But, as the company’s external affairs spokesman, Mark Dube, lamented in September 2005:

“The cost of natural gas has doubled in the past year, electrical costs are up 35%, and fuel costs for hauling wood to the mill and product to market have gone through the roof.”¹⁶

Not all sectors of the forest industry are hit equally hard by rising energy costs. Mills that make newsprint from thermo-mechanical pulp may spend 35% of their annual operating budget on hydro purchases alone. Other parts of the industry are somewhat less energy-intensive and include kraft pulp mills, fine paper mills, panel and lumber mills. But it would be misleading to conclude that such operations — particularly those outside of the pulp and paper sector — are not affected when pulp operations curtail production.

The forest industry is highly integrated, with the so-called “waste” from one sector forming an essential feedstock for the other. The classic example of this is the wood chips, shavings, and sawdust left over after lumber mills convert logs to lumber (half or more of every log processed). Many lumber mills become economically inoperable without secured buyers for their waste or residual products, which may represent 30% or so of their sales. And those buyers are falling away by the drove.

As noted forest industry analyst, Peter Woodbridge — a Council member who has done extensive analysis of forest industry trends and market opportunities in British Columbia, Ontario, and elsewhere — noted in late September 2005: “Pulp and paper mills in fibre-short provinces such as Quebec and Ontario are closing. Twenty-one

mills or paper machines have shut down in the past two years, with over 5,000 jobs lost.”¹⁷

In the interim, pulp and paper mill closures have mounted. And the closures are certain to have a ripple effect elsewhere in the industry unless new sources of wood chips can be found.

In addition to the challenges of grappling with high hydro bills, companies also confront escalating fuel costs — a particularly vexing reality given the industry’s historic and entirely predictable efforts to log what was closest at hand first and what was more distant later. So not only are companies grappling with paying more money to fill their fuel tanks, but also more fill-ups are required to transport logs from the bush to the mills. Fuel is a significant contributor to what in industry parlance is known as “delivered wood costs.”

And on that front, Ontario appears to be in a most disadvantageous position. According to Jamie Lim, president of the Ontario Forest Industries Association, delivered wood costs to mills in the province are a major factor explaining the industry’s poor competitive position (see table: *The High Costs of Delivered Wood in Ontario*).¹⁸

In conclusion, the high costs of energy are an obvious challenge for Ontario’s forest industry. But they may also prove an opportunity because they will stimulate innovation. Later, we look at how the quest for lower costs and greater energy efficiencies has resulted in improvements at some pulp and paper facilities and how further opportunity exists to generate power from wood and the byproducts of the chemical pulping process.

Ultimately, high power costs may work in other unexpected and beneficial ways: for example, by forcing countries to reconsider the wisdom of shipping partially finished products great distances to buyers that add value to those products prior to shipping them back. In other words, growing energy shortages and the need to achieve greater energy efficiencies may serve

TABLE 2 The High Costs of Delivered Wood in Ontario

Province	Delivered Wood Cost
Ontario	US\$50 per cubic metre
Manitoba	US\$36 per cubic metre (32 per cent less than Ontario)
British Columbia	US\$44 per cubic metre (12 per cent less than Ontario)

SOURCE Business Edge. October 13, 2005. Note that this report had costs for Ontario pegged at \$55. The \$50 figure used instead reflects recent cost-savings due to various provincial government initiatives.

as a driving force behind higher value-added output at the local level. As we will see a little later, opportunities abound to add further value to forest products in Ontario.

Ratcheting up the competition: emerging forestry powerhouses

In an industry where the essential raw material is a living, breathing thing that may take several decades to a century or more to reach its optimal commercial value, it is natural to expect that regions where trees grow faster have an advantage over those where trees grow slowly. This becomes all the more important as jurisdictions that relied on trees that they did not invest in growing deplete natural forests and are forced into the expensive and time-consuming business of tree farming.

Council members noted that, in countries like Brazil, rotation periods for some trees (rotation is the length of time between when a tract of forest is logged and then logged again) may be “50 to 80 years shorter” than for trees typically found in colder climates such as northern Ontario.” A sign of what Canadian pulp producers are up against is Uruguay. Not often considered a forestry powerhouse, Uruguay has many of the same climatic advantages as Brazil, and it has been expanding its plantation base aggressively, with between 42,000 and 60,000 hectares

TABLE 3 The South: Where the Pulp Dollars are Going (start-up 2007–2008)

Country	Company	Mill	Total New Capacity
Brazil	Votorantim Cel. E Papel	Jacarei	150,000 tonnes
Chile	Arauco	Valdivia	440,000 tonnes
Chile	Arauco	Neuvo Aldea	600,000 tonnes
Germany	Mercer	Zelstoff Stendal	550,000 tonnes
Brazil	Veracel (Stora — Aracruz)	Eunapolis	900,000 tonnes
China	Asia Pulp and Paper	Hainan	900,000 tonnes
Brazil	CENIBRA	Belo Oriente	200,000 tonnes
Chile	CMPC	Santa Fe	780,000 tonnes
Uruguay	Botnia SA	Fray Bentos	1 million tonnes
Uruguay	ENCE	Fray Bentos	500,000 tonnes

SOURCE Paul Lacour, AFOCEL. A presentation to UNECE/FAO, September 26, 2005

of land planted in new trees each year between 1993 and 2000.¹⁹

“We are seeing a shift in the pulp industry from the northern to the southern industry; and over time the same shift is expected in much of the paper industry [too],” Don Roberts, a noted forest industry analyst, told delegates attending a meeting of the Canadian Council of Forest Ministers in the fall of 2005.²⁰ Historically, companies producing market wood pulp in Ontario and elsewhere in Canada got by because of the premium that buyers attached to northern bleached softwood kraft pulp, or NBSK. But, as Roberts subsequently noted, trees converted to wood chips in the north take five times longer to grow than southern pulp plantation crops such as eucalyptus.

If this wasn’t enough cause for concern, Roberts went on to note that many of the pulp mills in Ontario and elsewhere in Canada are relatively old and relatively small, two factors leading to higher operating costs, which in turn makes them vulnerable to closure. To highlight his point, he presented data from the forest industry analyst firm Jaakko Poyry, showing the output and age of pulp mills in Canada versus those in other parts of the world. Very few Canadian pulp mills are even meeting the average output of pulp mills worldwide, which is currently

sitting at about 420,000 tonnes per annum. In addition, the majority of Canadian mills are on the so-called “weak” side of the ledger when it comes to the age of the equipment they employ to make their pulp.

If smaller and older mills were not drawbacks enough, Roberts said, Canadian mills also tend to be owned and operated by companies that, in the broad scheme of things, are small when compared to other players around the globe.

“Canada is the largest exporter in the global industry, and yet our companies are small by international standards — American and European companies dominate,” Roberts told federal and provincial forest ministers. “Abitibi-Consolidated is the biggest in Canada [in terms of net sales in 2004], but it ranks only 21st in the world.” And, Roberts continued, “size matters because there are economies of scale in market and product development and in the capital markets.”

The growing uncompetitive position of many of the province’s pulp facilities also seems to be borne out by a recent analysis of bleached chemical pulp operations by economist Paul Lacour. Working on behalf of the French pulp and paper industry research institute AFOCEL, Lacour noted that all but two of 10 major chemical market pulp mills slated for construction or expansion by 2007–2008 were in the southern

hemisphere (see table: *The South: Where the Pulp Dollars are Going*).²¹

Throw into the mix other areas of the world where massive tracts of forestland are only now beginning to be logged in earnest and the potential exists for a significant increase in a flood of cheap wood products into already crowded global markets. The most significant of these countries are, of course, those that comprised the former Soviet Union. One company to analyze wood flows out of that region — Resource Information Systems Inc. or RISI — noted that harvest levels in the former Soviet Bloc fell from the 1980s to 1990s. But they are on the rise again, with lumber shipments from Russia now reaching the U.S. after being processed in European mills. RISI's projection is for logging rates in the former Soviet Bloc to increase to 320 million cubic metres per year, a staggering 60% increase over the rates at the end of the last decade.²²

Complicating matters, Ontario producers and their counterparts throughout North America are grappling with China's rapid emergence as an economic powerhouse, and the influence it has and will continue to have as both a potential customer and competitor on the forest products front. While China may not be noted for growing great volumes of wood fibre, its booming economy — fuelled by abundant and cheap sources of labour — is having a marked impact on major wood product markets. This includes pulp and paper as well as solid wood products.

An eye-opening snapshot of just some of the trends in forest product movements into and out of China is captured in the February 2005 monthly international solid wood newsletter *Wood Markets*, published by Vancouver-based forest industry analyst Russell Taylor.

In his newsletter, Taylor notes that China's log imports in 2004 alone were 28 million cubic metres — well in excess of all the timber logged annually in Ontario. In the 10 years ending in 2004, Taylor reported, China's imports of sawn lumber, much of which was re-cut into prod-

ucts that were later exported, increased more than nine-fold to 3.2 billion board feet. In recent years, China has gone from being an importer of plywood to an exporter of the panel product, all of which was achieved with a stunning increase in plywood production from 2.1 million cubic metres in 1993 to more than 18 million cubic metres in 2004.²³

Significantly for Ontario, a jurisdiction that does better than many of its Canadian counterparts when it comes to value-added wood products manufacturing, China's emerging role as a *competitor* rather than a *buyer* of wood product

► China's log imports in 2004 alone were 28 million cubic metres — well in excess of all the timber logged annually in Ontario.

markets is the major cause for concern.

For example, U.S. imports of furniture made in China increased nearly a third in each and every year for six straight years ending in 1995. This had a serious dampening effect on Canadian companies that were, from 1994 to 2001, ranked first in exports of furniture to the U.S., a distinction they lost to China in 2001.²⁴ Much of China's growth in this market has been achieved with investments in technology and machinery that the Council noted was "more advanced than that found in the average U.S. furniture factory." But again, because of China's much lower wage rates, such capital investments are far easier for investors to lay out.

The seriousness of China's competition with Canadian furniture makers was underscored in October, 2005 when lawyers representing the Canadian Council of Furniture Makers filed a request with the Canadian International Trade Tribunal. The CITT, which has powers to de-

**TABLE 4 Average Return on Capital Employed
By Region — 1998–2004**

Region	Return on Capital Employed
Latin America and South Africa	7.3%
Europe	6.1%
USA	5.4%
Australia and New Zealand	4.7%
Canada	4.4%
Other Asia	3.5%
Japan	2.1%

SOURCE CIBC World Markets. The Canadian Forest Products Sector: How Do We Adapt For Survival? A presentation to the Canadian Council of Forest Ministers. October 4, 2005.

termine whether imports of goods are causing or could cause harm to domestic producers, was asked to recommend that trade protection measures be put in place for a three-year period. The Furniture Council asked for temporary protection on grounds that furniture imports from China had risen 1,296% over the previous decade. The request was denied in March 2006 on grounds that the industry had not provided enough specific information on eight sub-sectors of a wildly diverse industry.²⁵

Low Returns on Capital Employed

Seen from the perspective of returns on capital employed, forest companies worldwide face tremendous challenges. In its survey of seven regions, CIBC World Markets found that Canada was on the low end of the spectrum when it came to returns on capital employed, with an average return of 4.4% per cent (*see table*).

As the CIBC World Markets report went on to note: “The cost of capital is roughly 10%–13%, but even the most profitable region has only generated an average ROCE [Return on Capital Employed] of 7%, with the very best companies at 12%–15%. The average ROCE in Canada is in the 4%–5% range. The markets are saying, ‘take capital out of the forest products industry’ — we must compete against other industries.”²⁶

Making matters even more challenging is that the larger forest companies in Canada are, in the broad scheme of things, quite small. This matters, the CIBC report emphasized, because, the bigger you are, the easier it is to make investments and to secure favourable interest rates when raising funds for new capital projects.²⁷

2 What Has the Ontario Government Done in Response?

As the fortunes of many of Ontario's forest companies have faltered over the past few years, calls have mounted on the provincial government — landlord of public forestlands — to make regulatory changes that would assist the industry.

While changes have been made in three installments since 2005, the overall impression is that the new measures may bring no more than some partial relief to an industry that remains plagued with many problems.

As a CIBC World Markets analysis of the middle of the three packages unveiled by the provincial government put it: “While some of the components in the package are logical, we do not think the package will have a meaningful impact on those companies with significant assets in the province, and we are not changing our stock recommendations.”²⁸

The first of the packages, unveiled in June 2005 by Ontario Minister of Natural Resources David Ramsay, offered up to \$350 million in loan guarantees to “stimulate new investment in value-added manufacturing, improve energy efficiency, and make better use of wood fibre.” The province projected that such investments would

have a ripple effect, helping to leverage twice as many funds in new investments.²⁹

This package was regarded by CIBC, and also by many in the woodworking unions and the industry, as of little consequence. “Given the weak balance sheets in the industry,” CIBC reported to stock market watchers, “the impact of this program is [likely to be] minimal.”³⁰

The second of the two packages was more specifically targeted to offer incentives and relief on very defined fronts. It included a \$150 million “Forest Sector Prosperity Fund,” essentially a vehicle for extending grants, which would further serve to entice private sector investment. The idea behind the fund was to finance up to 10% of project costs in the areas of energy co-generation, value-added manufacturing, and advanced building materials. The fund was to be modelled on an earlier one that had been designed for the province's auto industry. The second program component was a commitment to place \$1 million per year into a program promoting wood consumption.

The other two program components were very much geared to addressing costs that the industry said it should rightfully not have to

bear. The first cost was maintaining so-called “primary roads,” essentially mainline logging roads that are often used by all kinds of vehicle drivers to get off the beaten track. The industry argued, and the province ultimately accepted, that such costs should not be borne by the forest companies because the roads were, in essence, public. The province, in agreeing to assume responsibilities for the maintenance of such roads, initially pegged the annual price tag at \$28 million annually.

The final major aspect of the package was a commitment by the Ministry of Natural Re-

› There is very little to suggest that government reforms are designed **with the needs and interests of northern resource-dependent communities** in mind.

sources, which had earlier offloaded such responsibilities and costs onto the forest industry, to re-assume responsibilities for conducting forest inventories and analysis of forest resources. In a nutshell, such work is critical to understanding how much public timber is actually out there, what volume may be suitable for commercial harvesting, and at what rate it can be cut. The Ministry estimated such costs would be around \$7.5 million in 2006–2007 and approximately \$10 million per annum in following years.

While this package did address specific issues of forest company concern, the overall impression was that it would not add measurably to improving the bottom line of many companies in the logging business. Put in context, the last two measures — road subsidies and transfer of forest inventory costs — probably would serve to drop delivered log costs by roughly \$2 to \$3 per cubic metre. The CIBC analysis called this insignificant in the broad scheme of things — especially

when viewed against low-cost producers such as Brazil whose delivered wood costs (the cost to bring the wood from the forest to the mill) are somewhere in the US\$35–\$40 per-cubic-metre range, well below the average in Ontario (*see earlier table: The High Costs of Delivered Wood in Ontario*).³¹

The third and most recent provincial aid announcement came in February 2006, and was unveiled by Ontario Premier Dalton McGuinty. The package further increased primary road construction and maintenance costs by \$47 million, for a combined total of \$75 million annually. It also included a \$70-million refund as a consequence of retroactively reducing stumpage fees for 2005 and 2006. And the package further promised \$3 million a year over the next three years as a result of reduced stumpage fees for poplar and white birch trees harvested to make wood veneer.³²

The government press release included requisite third-party praise, including from Jamie Lim, president of the Ontario Forest Industries Association. Lim characterized the provincial assistance package as: “...a home run by the government...[one that will] pay huge returns for the people of the province in terms of jobs, the generation of wealth and tax contributions from the industry that annually exceed \$1 billion.”³³

And Greenstone Mayor and President of the Northwestern Ontario Municipal Association, Michael Power, also gave it the thumbs up, saying the measures would “have positive effects on not just the north, but the entire province.”

But there are reasons aplenty to be less than sanguine about just how much these measures will revitalize the fortunes of the industry and resource-dependent communities.

For one thing, major issues such as the ongoing high costs of energy are not addressed. High energy costs are clearly hurting the industry, with some sectors being hit much harder than others. While such costs are currently viewed as a serious challenge to the ongoing financial

viability of certain mills, however, they may in the long run also present opportunities. Are there ways for the industry to generate power, thus lowering its overall operating costs and/or potentially producing power that could be fed onto the grid?

Second, there is very little to suggest that government reforms are designed with the needs and interests of northern resource-dependent communities in mind; — communities suffering from a serious erosion of high-paying jobs, capital flight, declining industrial taxes, and decreasing populations.

Third, the measures almost completely ignore the integrated nature of the forest industry. With a significant number of pulp and paper facilities having closed, there is bound to be an impact on sawmills, which produce large volumes of wood chips. This byproduct from producing lumber forms a significant amount of the overall wood volume produced by sawmills — around half, in fact. Without reasonably close buyers for such products, many sawmills could become financially unviable. In the absence of new pulp facilities being built, there is a crying need to identify alternative economic uses for the residual products from lumber production.

Fourth, the province, which benefits enormously from Ontario's forest industry, lacks a vision of what its long-term role is in helping the industry transition to a new and hopefully more secure future. The importance of this last point should not be underestimated. Forestry in Canada has almost always involved some kind of partnership between companies and individual provincial governments. What the provinces brought to the table was access to publicly-owned forests, which in most jurisdictions comprise the overwhelming majority of forestland. In exchange for receiving access to the timber (usually but not always in the form of long-term volume-based

or area-based renewable licences), companies agreed to pay timber-cutting or stumpage fees to the provinces based on the volume and value of what was being extracted. In many cases, they also agreed to construct and operate wood-processing facilities in various communities. And often, the provinces retained the right to reassign forest tenure in the event that such facilities were closed. Ontario does not require this, but in neighboring Quebec the idea that certain mills are attached to certain forest tenure agreements remains in place.

As a partner in forest enterprises, the On-

› **The province, which benefits enormously from Ontario's forest industry, lacks a vision of what its long-term role is in helping the industry transition to a new and hopefully more secure future.**

tario government needs to look ahead, better understand what the challenges and opportunities are in the forest sector, and see where it can play a meaningful and effective role in helping to bring a greater degree of stability to the forest sector.

Government should also be looking seriously at ways to lessen the vulnerability of resource-dependent communities to mill closures by giving them more of a direct stake in forestry operations. Again, later in this report we will suggest ways that this can be achieved through some much-needed reallocation of forest resources and revenues.

With that said, we turn to what may be some ways forward for the industry in Ontario and, by extension, elsewhere in Canada.

3 What Ways Forward?

The challenges confronting Ontario's forest industry and forest communities are multi-faceted and will not be readily remedied in the short-term. The wrenching upheavals associated with pulp, paper, and sawmill closures, moreover, may not yet be over. Older, smaller, and less efficient mills remain in operation and it is questionable how long they can continue.

There are, however, things that can be done. With effort on the part of the industry and government, strategies can be pursued that enhance the Ontario forest industry's position in key markets — strategies that help to stabilize (although not necessarily increase) employment in the industry.

Three areas of major importance are value-added forest products and what role they can play in future years, the emerging market for "eco-certified" forest products, and energy production from wood and other products created during forest product manufacturing.

Value-Added

One of the more comprehensive analyses of the province's value-added wood products potential

was completed and published in December 2003. The report was one of many funded by the Ontario government's Living Legacy Trust, a \$30 million fund set up to support projects that delved into the economic, social, and recreational benefits that Ontario derived — or could derive — from its forestry, fish, and wildlife resources.³⁴

Prepared by Peter Woodbridge of Woodbridge and Associates Inc., a Vancouver company with extensive experience in researching forest product markets and their potential, the report offered a refreshing counterpoint to the doom and gloom that many were coming to associate with the industry and its prospects in Canada's largest province. The company has done similar analyses for other Canadian provinces, notably British Columbia.³⁵

Woodbridge's analysis found that Ontario's wood products and value-added wood manufacturing sector is "one of the most important and substantial contributors to the provincial economy, both in northern Ontario and the south." Yet these sectors of the provincial economy are "significantly under-rated."³⁶

Based on much analysis of trends in the major markets for Ontario's lumber and value-

added industries, Woodbridge concluded that there were “good prospects” for sustained sales increases on the order of 7% per year. “Over the next several years,” the report projected, “the value of the sector’s total shipments could increase by 40%, from an estimated C\$5 billion in 2003 to C\$7 billion by the year 2010.”³⁷

The major market, not surprisingly, consists of the eight U.S. states that run in a belt around the Great Lakes just to the south of the province and that are home to some 83 million people, a population roughly the size of Germany.

The Woodbridge report identified five major areas where increased sales of Ontario wood products into the Great Lakes states were achievable — increases on the order of C\$2 billion. These included:

- lumber output from Ontario sawmills;
- output of door, window frames, and other millwork;
- more factory-built housing systems such as wall units;
- more building components such as trusses; and
- more engineered wood products.

In order for this growth to happen, however, the analysis foresaw the need for “a substantial upgrading of Ontario’s sawmill industry.” Without this, opportunities to expand the export of factory-built housing components and engineered wood products into the U.S. building materials market would be severely limited.

While noting that Ontario’s sawmills had increased their exports of softwood lumber throughout much of the 1990s and into the first years of the current decade, the report observed that this came at the expense of the industry not making investments in other products that were capturing more of the building materials market — products such as machine-stress-rated lumber (MSR) or fingerjoint studs.

It went on to note that many sawmills were still turning out green lumber, a lower-value product than kiln-dried boards. Furthermore, some of the kiln-dried boards that were produced often suffered from defects and were not uniformly dried, making them unreliable both in domestic and export markets.

“This is not a good base of supply for sustainable exports,” the report noted. “Nor can it meet the needs of Ontario’s non-integrated value-added wood product manufacturers, many of whom now purchase their materials from outside the province. The province loses the benefits of in-

> Ontario’s forest industry needs investments on the order of \$250 million per year for several years to make its sawmills and other solid-wood facilities truly competitive, value-added leaders.

dustrial synergies and cost savings that could be available if sub-sectors were more closely linked to each other’s needs.”³⁸

The Woodbridge report foresaw that, in order to meet the projected growth in wood product sales, the incremental investments in upgraded sawmills and facilities that manufactured engineered wood products and value-added building components would need to be on the order of C\$250 million annually until at least 2010.

One of the cornerstones of Woodbridge’s work is its analysis of the broader trends that are taking place in major wood product markets such as the home building market in the United States. As elsewhere, there is a growing shortage of skilled labour and trades. This has implications for on-site construction, leading either to delays or the use of semi-skilled work-

ers that serve to drive up the cost of construction: either because it takes longer to build the product, or things are not done right and have to be done again.

This, Woodbridge believes, will continue to drive a trend toward standardization in the industry. Bigger home builders, in particular, will look more and more to having ready-to-install building materials, made to extremely exacting standards, delivered to building sites. Such materials can then be installed with a high degree of confidence that they will fill the required use. Standardization will also do something else, which Woodbridge believes must happen, and that is to drive down spiralling housing costs. There is only so much debt that consumers can take on, so by achieving savings in building costs at least some of those savings can be passed on to consumers.

In jurisdictions that have traditionally supplied products to the U.S., latching on to the broader implications of such a transition is fundamental to figuring out how to build and market the right products. It also may be key to figuring out how the different components of an industry such as the forest products sector in Ontario can better work together: For example, how the primary producer of a finger-jointed lumber product can better supply a company that then takes that product and uses it to make the ready-to-install building component that is bound for domestic or export markets.

Bringing things back to Ontario, the Woodbridge report foresaw increases in investments in sawmill operations in the more remote northwestern and northeastern regions. But it also concluded that much of the more labour-intensive value-added manufacturing would continue to be in areas of higher population, where such enterprises were already well established. The net overall job gains in both sectors were not projected to be that significant. But what likely would result from such a value-focused manufacturing strategy would be a more stable and

prosperous industry — a far cry from what we have at present.

Energy: Challenges and Opportunities

Energy costs have had a major influence on forest company profits, particularly in Ontario. It is reasonable to expect that as costs for power continue to rise there will be implications for the industry, particularly more energy-demanding sectors. On the pulp and paper side of the equation, the facilities that will face the biggest hurdles in the years ahead will be mechanical pulping operations.

Wood-based pulp production generally takes two forms. In mechanical pulping, wood chips are run through two rotating plates that separate and mechanically manipulate the wood fibres so that they can then be used as pulp furnish and later converted to paper, typically a paper product like newsprint. The grinding action requires tremendous amounts of power, which is among the greatest challenges in the process. On the other side of the ledger, mechanical pulping is much more efficient in converting wood fibre to its end use, typically twice as efficient as the other pulping process, chemical pulping. From a forest conservation and environmental perspective, this is a good thing.

In chemical pulping — and in Ontario and elsewhere in Canada this is typically chemical kraft pulping — chemicals, mixed with water, are used to separate the wood fibres by dissolving the lignin between the fibres so that they come apart. The chemical mix used to do this is often called white liquor, and is essentially composed of sodium hydroxide and sodium sulphide. The wood fibres, along with the white liquor, are heated in a digester. There are two outputs from the digester. The first is the separated fibres, which are used to make pulp and later paper. The second is called black liquor, which is a mixture of the dissolved lignin, chemicals, and water.

Kraft pulping would be economically unfeasible if this liquor could not be used. So the black liquor is then diverted to a recovery boiler, which evaporates the water, leaving a thickened black liquor which is then burned. The burning of the organic material in the liquor produces steam, which helps to offset the mill's power costs. The recovery process also allows for recapture of sodium and sulphur, which is then looped back into the chemical pulping process. In most kraft pulp mills, substantial amounts of power are generated through the use of black liquor. However, mills also take advantage of burning so-called wood waste (also known as hog fuel) along with some fossil fuels in power boilers, which also generate steam power.

The big advantage in kraft pulping is that, with state-of-the-art technology, a mill can meet virtually all of its energy needs on-site in the processing itself. The downside is that kraft pulping consumes at least twice the amount of wood fibre to make the same volume of product, albeit a higher-value product. And then, of course, there are the challenges of reducing chemical loads in the effluent streams leaving the mills, something that the industry has done much to improve on in the last two decades, most notably in the area of removing dioxins and furans, byproducts of chlorine-bleaching. As improvements in pulp mill effluents have progressed, the prospect for completely "closed loop" systems (where all chemicals are recaptured and there are zero emissions to the receiving environment) is closer to becoming a reality.

This admittedly short description of the two pulping processes is significant in the Ontario context, especially if one speculates about what might lie ahead. While mechanical mills face challenges because of their high power demands, kraft mills face hurdles in terms of wood fibre availability. As noted earlier, both high power costs and perceived problems with wood supply are viewed as major impediments for the

industry moving forward — at least as it is currently constituted.

It would seem reasonable, then, that those industries that use less power will have inherent advantages, particularly as energy costs climb. Those advantages will only increase if those same industries are also capable of generating their own power, something the kraft pulp industry can do but that the mechanical pulping industry is hard-pressed to do. However, with only so much wood fibre to go around, and with their high wood fibre needs, there can only be so many kraft pulp mills. Moreover, in an environment where wood and chip hauling costs are rising, it seems reasonable to expect that only those kraft pulp mills that are located close to low-cost transportation systems such as rail lines, and those that are near major sawmilling centres where chip supplies are readily available, will survive.

Present-day Examples of Power-efficient Pulp Mills

Overall, the industry in this country and in the neighbouring United States operates a lot of older, inefficient equipment that will need substantial investments over the next while in order for the industry to remain competitive. The heartening thing, from an energy use perspective, is that there are good examples of highly efficient mills in some Canadian jurisdictions. At a time of rising energy costs and heightened concern over the implications of continued fossil fuel burning and global warming, any energy savings have both economic and environmental benefits. Moreover, energy savings in the pulp and paper sector often involve capturing and recycling byproducts in the pulping process, an obvious benefit both from a business and environmental perspective. As further gains are made in recapturing and recycling materials, the prospects for closed loop systems, where everything is recycled and reused, improve.

Three examples of power-efficient mills in Alberta, Ontario and Quebec follow.

In Alberta, the Weyerhaeuser mill at Grande Prairie uses a natural gas-fired turbine whose exhaust is channeled into a steam generator to create more power, the excess of which is fed onto Alberta's power grid.

In Trenton, Ontario, Norampac turns a portion of its black liquor into a gas that is then used to fire its boiler, making even more power. The interest in gasifying black liquor is of growing interest in jurisdictions around the world, with Scandinavian countries taking the lead (a top-

► **As further gains are made in recapturing and recycling materials, the prospects for closed loop systems, where everything is recycled and reused, improve.**

ic addressed below). Dealing with the sulphur content in black liquor, however, is a challenge because it can be extremely hard on equipment. The Norampac mill has an advantage in this regard that most kraft pulp mills do not, in that it uses a different chemical pulping process called soda pulping. That process, which creates a lower-grade pulp used in packaging papers, does not result in a lot of sulphur in the spent liquor, making it easier to be gasified.

Third, in St-Félicien Quebec, the SFK mill has achieved remarkable energy savings by using relatively new equipment that allows the mill to generate 100% of its steam needs on site and to be self-sufficient in meeting 95% of its energy requirements.

Wood and Pulping Byproducts as New Energy Sources

There are at least two reasons why the forest industry in Ontario and elsewhere should be looking with keen interest at wood waste and/or pulping byproducts as sources for fuel. First, in the event that certain jurisdictions experience a significant number of pulp and paper mill closures, sawmills and other solid wood producers will still require an outlet for the wood chips and sawdust that they produce. This may comprise up to half of the wood in a log processed in a typical sawmill, and traditionally the market for that byproduct has been the pulp and paper sector. Without some kind of outlet for the byproduct, sawmills would not be profitable. Second, with gasoline costs continuing to rise, using wood waste or a pulping byproduct such as black liquor to create a biofuel that both competes with gasoline and emits less CO² is attractive.

Europe, and Scandinavian countries in particular, are looking with keen interest at wood and pulping liquors as sources of power and/or biofuels. The European Parliament and the Council of the European Union, for example, have set minimum targets for replacing a portion of the diesel or petrol currently consumed in the transportation sector with biofuels. The targets call for 5.75% of transport fuels to come from biofuel sources by 2010, and 20% by 2020.³⁹ In 2003, a report partially commissioned by the EU's Energy Framework Program and submitted to the EU, was completed by a team including individuals from:

- STFI, a leading pulp and paper R&D company;
- Scandinavian car and truck maker Volvo;
- Chemrec, a company specializing in waste solvent recycling; and
- Nykomb Synergetics, an engineering company working in the area of energy conversion, and others.

The report found that, because “modern kraft mills have a surplus of energy, they could become key suppliers of renewable fuels in the future energy system.”⁴⁰ A particular focus of the research was the black liquor stream in kraft pulp mills. Rather than using the black liquor in the traditional way, which is essentially to create steam power through heating it, the research team looked at it instead as a source of gas that could later be converted to alternate liquid fuels.⁴¹

The research is only now entering a partial commercial testing phase at a kraft pulp mill in Pitea, Sweden, where a pilot plant has been built alongside the existing mill. Gas from the mill’s gasifying unit is at present simply being flared off. No synthetic fuel is being produced. There are hurdles to be overcome here, because sulphur, a major component in the gas, is extremely hard on catalytic reactors, which would be required to turn the gas into fuels that could then be used to power vehicles.

Nonetheless, the authors of the 2003 report concluded that, with the black liquor currently produced by Swedish pulp mills, the biofuels that could be produced from that source would be enough to displace nearly 30% of the fossil fuels used currently in Sweden’s cars and trucks. Canada’s pulp mills produce nearly double the volume of black liquor per year as does Sweden, the same report noted, enough material to manufacture 7.1 million tonnes of biomass-based methanol fuels.⁴²

In 2005, the Volvo Group unveiled its first truck equipped with a dimethyl ether (DME) engine. The fuel to run the engine, the auto and truck maker went on to say, is a “synthetic fuel...produced through gasification of various renewable substances,” of which black liquor is the most promising source.⁴³

Biofuel production is also possible by taking wood waste and heating it in the absence of oxygen in a special chamber. The wood breaks down into a char or gas that can ultimately be turned into a biofuel. Ontario’s Ministry of

Natural Resources is itself testing a mobile unit that will take wood waste from old logged sites in the province in 2006 and use it to convert to essentially a diesel-like fuel. The ratio of wood to fuel output is on the order of four to one. The Ministry is doing the field-testing in conjunction with the maker of the mobile unit, Advanced BioRefineries Inc.

Other energy options that could help to make Ontario’s pulp industry more energy self-sufficient might include building new boilers that could more efficiently burn bark, wood waste from sawmills, branches, and other wood waste

► With the black liquor currently produced in Swedish pulp mills, the biofuels that could be produced from that source would be enough to **displace nearly 30% of the fossil fuels used currently in Sweden’s cars and trucks.**

from logged sites, and possibly peat. The world’s largest biomass-fed boiler is presently located at the Alholmens kraft pulp mill in Finland.⁴⁴

By burning wood waste under high heat, both sawmills and pulp mills could create power that could be fed onto the existing power grid in Ontario or, conversely, have power sources of their own to help offset production costs. Solid wood mills could also get into the business of producing and selling wood pellets, for which there is a growing market, including countries like Sweden which currently import wood pellets from Canada as part of that country’s increasingly diversified energy portfolio.

These examples are not extensive, but are offered here to stimulate policy debate about how the forest industry in Ontario might diversify

and put itself on a more secure footing for future years. A caveat to such an evolution — one of considerable importance — is to understand that wood “waste” is also a key building block in replenishing forest soils, which can be severely harmed by overzealous logging activities. Much woody debris needs to be left behind following logging so that soils are replenished. Any strategy predicated on utilizing more wood waste would best be focused first on the wood already being handled in the manufacturing process and not on “cleaning up” harvesting areas to the point where insufficient wood remains to be returned to the soil as vital nutrients.

Finally, the use of so-called “wood waste” as a source of electricity, heat, or energy in the form of a gas falls onto the positive side of the ledger as far as concerns about continued fossil fuel burning and global warming is concerned. Although carbon dioxide is released into the atmosphere when wood residue is combusted, the amount of CO₂ released is equal to, or in some cases less than, what is re-absorbed by growing trees. Trees are a renewable resource. Fossil fuels are not.

The Green Advantage: Eco-certified forest products and forest conservation

In a world where forest conservation campaigns attract widespread publicity and where related consumer education campaigns have impacts both on the purchasing decisions of major corporations and of individuals, many forest companies are finding that there are advantages to marketing their green credentials.

This includes publicizing support for increased conservation of forests where logging does not take place, and other areas where logging is limited, as well as independent third party certification of forestry operations as being conducted in a sustainable manner.

Ultimately, such moves in higher-cost regions may serve to give forest companies a leg up on competitors in lower-cost regions where environmental regulations are absent or lax.

One fairly recent example of note, with implications for the Ontario forest industry, was the signing in December 2003 of a framework agreement that promoted conservation of at least half of the pan-Canadian boreal forest. Known as the Boreal Forest Conservation Framework, the agreement has been signed by an array of groups representing conservation organizations, First Nations, and forest companies, including Tembec, Domtar, and Alberta Pacific Forest Industries. The agreement calls for setting aside at least 50% of the boreal region in a network of large interconnected, protected areas, as well as using “world-leading” ecosystem-based resource management practices on the remaining land-base.

Significantly, those same companies are considered at the forefront of Canadian companies seeking and obtaining third-party certification of their forestry operations under the rigorous guidelines laid down by the Forest Stewardship Council, or FSC. The FSC is widely regarded in conservation circles as having the greatest credibility and highest standards of all forest certification systems. Both Tembec and Domtar have significant operations in Ontario.

Ultimately, these initiatives may prove of considerable “added value” for companies competing for the pocketbooks — as well as the hearts and minds — of discerning consumers, who are increasingly calling for “green” wood and pulp and paper products. Moreover, they will serve to make forests and company operations more sustainable, which in the long run is the underpinning of all successful business enterprises.

4 Reinventing Social Returns from Ontario's Forests

Forestry in Ontario, like forestry in other Canadian provinces, has always involved a partnership between the owner and manager of the public's forests — the provincial governments — and the various companies to whom those provinces have granted long-term logging rights.

What governments use to entice companies into the partnership is, of course, publicly-owned forestland, whose timber assets alone are valued in the hundreds of billions of dollars. In return, governments expect to collect substantial revenues in the form of timber-cutting or stumpage fees, payroll and corporate taxes. They also want to see jobs created and some stability brought to smaller, resource-dependent communities, particularly those in remote regions.

This report has outlined the numerous challenges facing the industry in Ontario and elsewhere in Canada. It has also shown what the Ontario government has done in response and how that response may go part way to addressing some immediate needs, but is unlikely to provide long-term relief. And it has looked briefly at three major arenas in which the industry could flourish in the years ahead.

The following policy suggestions are offered as a means of further enlivening public debate about what would constitute a more diversified, forward-thinking, environmentally-friendly way forward, with the provincial government playing a lead role on the public's behalf.

The suggestions do not pose particularly onerous challenges for either the provincial government or the forest industry. But they would go some way toward:

- increasing the prospects for healthier and more stable communities, through limited forest tenure reforms;
- assisting forest companies in increasing value-added output in the province;
- addressing outstanding concerns about high energy prices in more remote regions of the province;
- encouraging more industry innovation on the energy front; and
- building a forest industry that is ecologically sustainable.

In this section, we look at areas where the provincial government could act in ways that

promote healthier communities and a more diversified and resilient forest industry. The ten accompanying recommendations or new policy proposals would go far toward reinvigorating the public benefits derived from publicly-owned forests.

1. Addressing wood supply

In a province as large and spread out as Ontario, there are obvious challenges when it comes to forestry. This is particularly true in an era of higher energy costs. Forests located far from existing or contemplated processing facilities may be theoretically suitable to log but marginally economic. The costs to access and log the timber, let alone transport logs back to mill sites, may simply be too high.

For many years, the more remote northern forests of the province have not even been considered in calculations of how much timber is available to log. And there are many people who argue that they should remain so.

At the same time, considerable stretches of forests to the south of the more northern zones have been extensively logged. And there are questions about not only the volume but also the value of what remains.

For these reasons, there is a pressing need for a thorough and speedy review of the commercially accessible timber that remains in the province's forests, and how it fits with the needs of existing and prospective commercial forest enterprises and resource-dependent communities.

Such a review must also take into account outstanding and as yet unresolved issues around First Nations communities and their rights and interests to forest resources. And it must also reflect the implications of forest certification efforts and proposed forest conservation initiatives, the most significant being the boreal framework agreement reached between leading resource industries and conservation groups that calls for protecting half of the country's boreal forests.

As noted earlier, there is speculation that logging rates in Ontario could decline by 10%. Certainly, the experience next door in Quebec, where logging rates were reduced by 20% following a government-ordered review, would suggest that a reduction is in the offing.

With the Ontario government having recently re-assumed responsibility for timber inventories, it is imperative that adequate resources be channeled immediately into completing this work, with initial emphasis placed on understanding timber supplies in the forests adjacent to those communities that have experienced recent mill closures.

Recommendation No. 1: *Ontario should immediately appoint a provincial Chief Forester whose primary job is to audit forest resources and to ensure that logged areas are adequately reforested. Regions where mills closed, putting communities at risk, should be the highest priority. Audit results, and any subsequent recommendations to lower or raise logging rates, should be subject to public review and comment before the Chief Forester renders a final decision.*

2. Timber reallocation

Forestry in the Canadian context has traditionally entailed a partnership between provincial governments (owners of public or Crown forestlands) and various companies that were granted long-term access to either set volumes of timber or specified areas of public forest by those governments. In return for access to a resource valued in the billions of dollars, companies paid stumpage fees to the provinces for each unit of timber cut. In some provinces like Quebec and, until recently, British Columbia, companies also were required to operate wood-processing facilities, typically sawmills or pulp mills, in various communities in exchange for gaining access to the timber.

The tying of certain mills to certain communities was seen as a means of opening up regions

to economic development. It was also viewed as essential to bring some stability to smaller, resource-dependent communities that lacked diversified economic bases. However, the concept of so-called “appurtenant” mills has been under attack for some time. In British Columbia, appurtenancy was a feature of forest tenures going back several decades. In practice, however, various provincial administrations from both the right and left ends of the political spectrum chose not to exercise powers at their disposal when forest companies opted to close appurtenant mills. (The power was to take back the forest tenures and reallocate them.) Both the Social Credit governments of the 1970s and 1980s, and the New Democratic governments in the 1990s, chose to reject tenure take-backs, largely out of the belief that it would place a damper on investment.

Under the first mandate of the current B.C. Liberal administration (the Liberals came to power in 2001 and were re-elected to a second term in 2005), appurtenancy clauses were officially scrapped. In Quebec, however, appurtenancy remains very much alive. As noted in a recent analysis of the impact associated with a 20-% reduction in available timber supplies: “in Quebec...the support of the local community is still required for a company to keep its harvesting rights following a mill closure.”⁴⁵

From a public policy perspective, it would be instructive to understand the degree to which new investments are being made in wood processing facilities in both provinces (B.C. and Quebec) and to see if some conclusions can be reached about the effectiveness of appurtenancy provisions.

The argument in favor of appurtenant mills — at the risk of stating the obvious — is that they ensure that raw resources flow from the hinterland into specified communities where mills are built to process the wood, thus generating local jobs, a healthier tax base, and economic spin-offs.

The argument against them is that they artificially lock companies into operating facilities

that may have made sense at one time but do so no longer. Generally, if the mills in question produce commodities, as those mills become older and less efficient there is a need to reinvest. Reinvestments often result in more logs being pushed through new or refurbished mills at lower per-unit costs, thus enabling companies to stay on par with their competitors who are doing much the same thing.

It doesn’t take much to see that such a model cannot be replicated everywhere. There is only so much forest to go around. This helps to explain why, over time, smaller mills in a number

► It is entirely unreasonable to suggest that members of the public should get virtually nothing for handing a resource that they own over to commercial interests. **Surely some sort of social contract between forest companies and the public is in order.**

of communities may close, to be replaced by a much bigger mill or mills in fewer locations.

Having said that, it is entirely unreasonable to suggest that members of the public should get virtually nothing for handing a resource that they own over to commercial interests. Surely some sort of social contract between forest companies and the public is in order. Ontario has powers at its disposal to re-allocate timber. Moreover, it would be justified in taking such action, given the large number of mills that have recently closed in the province and the realistic prospect that further closures lie ahead (see side story *Mill Closures and Associated Wood Volumes*).

› Mill Closures and Associated Wood Volumes

As a result of the closure of a number of sawmills, pulp and paper mills and other wood processing facilities in Ontario, there is considerably less logging activity occurring in provincial forests. Not all the mills to close, however, relied on fibre exclusively from Ontario forests. Some were dependent on fibre from so-called urban forests — waste paper that was recycled back into pulp. Still other Ontario mills to cease operating relied on wood imports, primarily from Quebec.

The following table (*Table 5: Volumes Associated with Ontario Mill Closures*) admittedly involves approximations, but begins to address the impacts on available provincial timber supplies as a result of declines in primary milling capacity. In order to avoid double counting, wherever a sawmill is listed, the estimate is based only on the raw material that ended up in the finished product. It does not include the significant amount of wood that ended up as chips following the processing of logs and that would, in most cases, be bound for the pulp and paper sector.

On the other side of the equation — the pulp and paper mills and containerboard mills — we count all of the wood volume associated with the output from the various mills that have closed.

In addition to these mills, a number of others may also be vulnerable to closure. The following table looks at each of those facilities and the wood volumes associated with them. For obvious reasons, conclusions from this table are harder to derive. None of the facilities may actually close in the foreseeable future. A more likely scenario is that some may close, with those that remain benefiting as a result of reduced competition. Obviously, as milling capacity declines and over-supplied markets come more into balance, there is a corresponding upward pressure on prices, assuming, that is, that market demand remains constant or increases. Higher prices help mills stay in business: mills that might otherwise not be competitive because of aging machinery and/or low rates of output. Such advantages, however, may be short-lived, forcing companies to grapple once again with the realities of the marketplace. If the equipment in the mills is relatively old, if output is relatively low, if wood fibre is relatively scarce or comparatively high in price, or if the turnaround time in growing fibre is relatively long compared to other jurisdictions, pressures will mount to close such facilities.

Assuming, however, that some of the mills in the following table (*Table 6: Timber Processing Facilities Considered at High Risk of Closure*) do close in the near future, there will again be an impact on overall timber supplies in the province.

Recommendation No. 2: *Ontario should take back and reallocate at least some of the estimated 4.25 million cubic metres of publicly-owned timber that was annually processed by mills that have recently ceased operations. If companies will not process wood in Ontario, then they should not be allowed to maintain access to valuable, publicly-owned timber.*

3. Grant new forest tenures to communities

Many rural Ontario communities are experiencing population declines. These include larger communities such as Thunder Bay (a loss of 3.7% of its population between 1996 and 2001) and Sault Ste. Marie (a 5.6% population decline over

the same five-year time frame). And it includes smaller communities such as Kenora, Pembroke, and Haileybury (declines of 3.2%, 4.2%, and 6.2%, respectively).⁴⁶

The losses tend to reflect an exodus of younger people, many of whom are moving to larger urban centres. These same cities are also, by far, receiving the bulk of new immigrants to the province, for the simple reason that that is where the jobs are.

Such trends pose significant challenges for the economy of smaller communities, which have also experienced mill closures. Such closures present a two-fold problem. First, they mean the loss of some of the highest-paying jobs

TABLE 5 Volumes Associated with Ontario Mill Closures

Mill	Location	Wood Volume Cubic Metres (m ³)
Abitibi-Consolidated newsprint mill	Kenora	430,080 m ³
Bowater newsprint/kraft mill	Thunder Bay	164,801 m ³
Neenah Paper kraft mill	Terrace Bay	687,500 m ³
Norampac containerboard mill (partial closure)	Red Rock	594,000 m ³
Tembec newsprint mill	Kapuskasing	153,600 m ³
Cascades mechanical pulp mill	Thunder Bay	102,400 m ³
Tembec sawmill	Opasatika	224,200 m ³
Domtar sawmill	Chapleau	212,400 m ³
Tembec sawmill	Brantford	118,000 m ³
Uniboard medium density fibreboard	New Liskeard	133,000 m ³
Hearst medium density fibreboard	Hearst	304,876 m ³
Tri-Lake sawmill	Kenora	28,230 m ³
Tembec pulp mill	Smooth Rock Falls	1.10 million m ³
TOTAL VOLUME		4,253,087 m³

TABLE 6 Timber Processing Facilities Considered at High Risk of Closure*

Mill	Location	Wood Volume
Abitibi-Consolidated uncoated paper mill	Fort William	120,320 m ³
Domtar pulp/uncoated freesheet mill	Espanola	1.95 million m ³
Tembec Spruce Falls newsprint mill	Kapuskasing	718,080 m ³
Tembec/Kruger pulp mill	Marathon	1.04 million m ³
Norampac containerboard mill	Red Rock	1.18 million m ³
Weyerhaeuser pulp, uncoated freesheet mill	Dryden	1.65 million m ³
TOTAL VOLUME		6.65 million m³

*SOURCE CIBC World Markets Report. Fiber Supply Reduction in Quebec. November 22, 2005.

in the community, which makes it even less attractive for young people to stay. And, second, they mean the loss of important commercial or industrial property tax bases.

Turning areas of forestland over to direct community control would provide an opportunity for communities to manage forest resources and related revenues in a manner that is in keeping with community needs. While not necessarily representing a huge new revenue stream, it would at least be something. In British Columbia, the community of Mission on the edge of Greater Vancouver holds one of the oldest area-based forest tenures in the province, and has di-

rectly benefited from it for decades (see side story *Community First: The Mission Story*).

More recently, the British Columbia government awarded other community tenures and has also approved changes in stumpage fee schedules on those new tenures in order to ensure that the fledging operations start off on a profitable footing.

Recommendation No. 3: *As part of a timber re-allocation effort, Ontario should grant new area-based forest tenures to municipalities, First Nations, regional governments, or regional boards. This would allow local governments to derive di-*

› Community First: The Mission Story

During the dark years of the Great Depression, the small community of Mission in the Fraser Valley to the east of Vancouver found itself with a growing portfolio of Crown grant lands on its hands due to non-payment of taxes.

In all, about 1,200 hectares of heavily forested land reverted to the community during those years. As this land base grew, the local Reeve and Council hit on an idea: to manage the land for the collective benefit of the community.

Forestry was on the cusp of becoming a huge economic enterprise in the province. And local elected officials believed that, if they could convince the province to turn over more Crown forestlands either through an outright grant or long-term lease, that the community could make a go of it.

A formal request to the province was rebuffed in 1946, but this failed to discourage local elected officials. Two years later, they created the Mission Municipal Forest Reserve, rolling into it most of the lands that had reverted to community ownership in the '30s. A decade later, they succeeded in convincing the province to grant Mission an area-based forest tenure, known as a Tree Farm Licence, which today is comprised of 1,200 hectares of municipal land and a further 9,200 hectares of provincial Crown land.

Over the ensuing years, more than 1.2 million cubic metres of timber have been logged on the TFL, in excess of 3.2 million trees have been planted, and a growing area of trees are being spaced in order to increase their future commercial value.

The municipality is proud of its forestry accomplishments and the benefits that flow from the TFL, including:

- community stability in the form of local employment opportunities and revenues from the sale of timber, which help to pay for local public works and community grants;
- control over local forest resources, including how they are harvested and how they fit in with protecting other important resources, including water and the overall tourism potential of the forestlands; and
- opportunity to promote recreation, education, and wildlife opportunities.

No one, least of all the municipality's foresters, kid themselves, however. There are business challenges aplenty in such an enterprise. Forestry is notorious for its many economic ups and downs. In order to smooth out financial returns, local forestry officials try to "market log." This translates into logging more intensively when markets are good and less so when they are bad, averaging costs out over five-year periods with built-in financial reserves that can be drawn on when markets are down.

Also, because the municipality is essentially a log supplier as opposed to processor, there is a growing interest in increasing the potential sales value of logs coming off the TFL. This can be done by making strategic choices about what trees are logged and by making investments in increasing log growth through such things as fertilization. (In years past, Mission's forestry department has also invested heavily in tree pruning to increase the amount of knot-free wood in trees that will later be harvested). These and other measures can help the seller to better target end-users who will pay higher prices, e.g., log homebuilders, pole manufacturers, and other higher-end forest product manufacturers.

Kim Allan, a professional forester and director of forest management for Mission, says that since 1959 the community has posted average annual profits of \$330,000 (in 2004 dollars). That is money that has had tangible benefits for the community, Allan said, noting that in the past decade alone forestry operations have helped to provide:

- \$685,000 to a local library and archives;
- \$132,000 toward the building of a new fire hall and the acquisition of a new fire truck;
- \$170,000 to a local ice-rink conversion; and
- \$1.2 million to a municipal budget stabilization fund, to help Mission offset some of the costs downloaded on the municipality by the province.

rect financial benefits from forestlands, helping them to offset revenue losses that have occurred as a result of mill closures and declines in local populations.

Recommendation No. 4: *To maximize financial returns to municipalities or regional entities holding new community forest tenures, Ontario should turn stumpage fees generated on those lands back to the communities themselves.*

4. Ramp-up research and development efforts

The problems confronting the forest industry in Ontario are not entirely unique and they are far from over. While other Canadian provinces are faced with challenges that Ontario does not share (for example, the devastating mountain pine beetle outbreak in British Columbia), they also confront similar problems. Rising energy costs, for example, are likely to be a permanent fixture of forest industry activities from here on. Older and smaller mills, wherever they are located, will continue to be vulnerable to closure. Companies closing those facilities may well see that it makes more business sense to invest in jurisdictions outside the country where delivered wood costs are lower and where the time required to grow new wood fibre and recoup investments is considerably less than here. Wood fibre shortages are already upon provinces such as Quebec and have had a serious ripple effect in Ontario, and they loom in British Columbia on the after side of the mountain-pine-beetle-fuelled logging boom now underway. Worse yet, declining logging rates and mill closures will have a ripple effect because of the highly integrated nature of the forest industry. One sector's "waste" is the essential raw material for the other sector's use. Too many sawmill closures imperil pulp mills, just as the closure of too many pulp mills imperils sawmills.

A key element to setting the industry on a new course and bringing some stability to resource-dependent communities and provincial econo-

mies that benefit from forest industry activities, is in the area of research and development.

Historically, Canada has had three independent institutes doing R&D work on pulp and paper processes, forest products, and related engineering. They are PAPRICAN, Forintek, and FERIC. The funding for the work of all three is largely derived from forest companies and government contributions, the federal government in particular.

The most recent financial statement for PAPRICAN reports revenues of \$41.3 million⁴⁷, while Forintek's revenues are listed as \$27.7 million.⁴⁸ And FERIC's published revenues for 2004 are \$11.7 million, for a combined total of close to \$81 million.⁴⁹ In addition to contributing to these entities, the federal government also funds a considerable amount of research through the Canadian Forest Service. Notably, it has committed \$40 million over five years to study B.C.'s mountain pine beetle outbreak and, among other things, its potential to spread into the cross-country boreal forest, an event that would have serious ecological, social, and economic implications for Ontario and every other province.

Given the significant economic benefits that provincial governments derive from forestry activities, and the savings many of them have achieved by cutting the staff and budgets of their respective forest services, including research programs, a major increase in provincial government funding of R&D initiatives is warranted.

Recommendation No. 5: *In an effort to encourage innovation in the forest sector, including in the areas of energy, value-added and green forest products, Ontario should set up a new Forest Research and Development Fund. Under the fund, companies would receive matching funds for R&D expenditures on the condition that any operational trials or commercial applications occur in the province. Funds would not be available to existing R&D bodies, which commonly*

receive funding from the forest industry and the federal government.

5. Strengthening links between Ontario's rural and urban forest sectors

With its much larger population and proximity to major wood-consuming markets, both domestically and in the U.S., Southern Ontario has inherent advantages when it comes to manufacturing, marketing, and transporting higher-value wood products.

Communities outside of the populous southwestern region, however, are closer to the forest. That proximity, coupled with cheaper land and lower tax rates that make it more attractive to locate large mills and associated wood yards, make these areas good sites for primary mills, the output from which becomes the feedstock for secondary wood product manufacturers.

To encourage maximum social returns from publicly-owned resources, Ontario should work with both primary and secondary manufacturers to ensure that all opportunities are pursued to move wood from one part of the provincial forest industry to the other.

Currently, there is at least one major home-builder in Ontario (Viceroy) who accesses higher grades of lumber from British Columbia that could be supplied by Ontario mills. Through greater efforts to make both sectors of the industry aware of what the other produces and needs, Ontario could stimulate more "made in Ontario" manufacturing.

Moreover, such an idea has been pursued in other provinces, notably B.C., where it was considered by forest industry analysts such as Peter Woodbridge to be an exemplary program. (The program, however, was subsequently scrapped following the dissolution of the Crown corporation Forest Renewal B.C. by the current provincial government following the 2001 election. FRBC was the funding vehicle for the program, which was known as the B.C. Wood Fibre Net-

work. The network was part of a broader wood marketing strategy pursued by FRBC.)

Another tool to encourage value-added is through the forest tenure system. Currently, Ontario lacks any kind of competitive bidding program for public timber. Such competition has driven a portion of timber allocation decisions in provinces such as British Columbia where, within the lumber remanufacturing and value-added wood products sectors, it was widely viewed as a successful tool in stimulating more value-added production and fostering stronger linkages between primary and secondary manufacturers.

Recommendation No. 6: *Ontario should encourage more value-added forest product manufacturing by creating a province-wide wood fibre network. The network would consist of a web-site where log suppliers and primary and secondary manufacturers could advertise what they had for sale and/or what wood products they produced or needed.*

Recommendation No. 7: *To further boost value-added output, Ontario should take back and re-allocate 10% of the timber volumes in existing forest tenure agreements as those agreements come up for renewal. Companies losing timber as a result of the take-back would be eligible to bid to re-acquire it, provided they bid on the timber in partnership with an Ontario-based secondary wood product manufacturer. Under proposed "partnership sales," a sawmill interest would get access to standing timber to turn into logs and later lumber, while a secondary mill would get a guaranteed portion of the sawmill's output (at fair market value) to turn into higher-value products. This would encourage more "made in Ontario" activities.*

Recommendation No. 8: *Ontario should launch a multi-faceted marketing campaign designed to highlight achievements in forest certification, environmentally friendly pulp, paper and wood*

products, and value-added output. Major buyers of forest products say increasingly that all three factors influence their purchasing decisions. Such a campaign could help forest companies make further inroads in the Ontario and U.S. home building markets as well as emerging markets such as China, where water and power shortages could ultimately work to the advantage of Canadian pulp and paper producers.

6. Addressing hydro in the north

At present, certain regions of Ontario such as the northwest are largely isolated from the larger power generation and transmission system further to the south, a fact noted in a 2004 report on electricity transmission and distribution in the province published by Ontario's Ministry of Energy.⁵⁰

The costs to produce electricity in the northwest are, however, fairly low. Yet the prices being paid are high, much higher than the rates paid in other jurisdictions.

When the Ontario government unveiled its loan guarantee program for the forest industry in June 2005, many questioned just how effective the program would be in the absence of resolving other issues like high energy costs.

Kenora-Rainy River MPP and Ontario NDP leader Howard Hampton, for example, noted that high power costs were placing many northern Ontario mills on a precarious economic footing.⁵¹ Currently, regional mills may pay 7 cents or more per kilowatt-hour for electricity, while the costs to produce that power are just two cents a kilowatt hour. Meanwhile, mills in neighbouring Quebec and Manitoba face hydro costs of 3.5 and 3 cents, respectively.

The relatively high costs of power in the region are not the only worries. Plans unveiled by the Ontario government in June 2005⁵² to replace existing coal-fired hydro plants with cleaner energy sources have also raised concerns in the northwest about what impact the measures will have on regional power prices.

The Thunder Bay Chamber of Commerce, for example, urged the Ontario government in February 2006 to delay the announced closure of two coal-fired plants in the region — the Atikokan and Thunder Bay facilities — until such time as “cost-effective replacement[s]” had been brought online.

“Without the guarantee of reliable, affordable power, companies are reluctant to make investment in capital and technology, leading to a further decline in productivity and resulting in plant closures,” said Chamber President Mary Long-Irwin. “We have lost too many jobs and mills in this area. If yet another operation shuts down here in Northwestern Ontario, it surely will not open in another part of the province. This is an urgently critical issue for all of us in the province, as well as here in Northwestern Ontario.”⁵³

In addition to these concerns, there are obvious opportunities noted earlier in the report for the forest industry to generate power of its own. This can be achieved either through burning wood “waste” and residues under high heat to generate electricity or to take residual wood or byproducts from the pulping process, such as black liquor, and gasify them. If an evolution does occur in this area, however, there needs to be some assurance that the power generated can actually be moved onto and through a transmission system capable of handling it.

Recommendation No. 9: *Ontario should create a public power authority for northwestern Ontario with powers to set regional hydro prices and to make decisions on hydro transmission. The new authority would also have power to determine how new energy sources created by forest companies could be more effectively brought on line to assist companies and others in meeting their energy needs.*

7. Helping communities chart a new course

Communities throughout northern Ontario have suffered significant declines in local populations, particularly as young people leave their home communities and take up residence in more populous centres to the south. Now, many of those same communities are dealing with the aftermath or likely closure of local sawmills and pulp and paper facilities.

Forest industry jobs have been among the highest-paying jobs in many northern communities, meaning that when they are lost there is a noticeable ripple effect elsewhere in the local economy. As mills close, there is also a pronounced and negative effect on the industrial property tax base, making it more difficult for local governments to provide the services needed to help make communities liveable.

Elsewhere in this report, recommendations are made to turn forest tenures over to communities and for the provincial government to turn back stumpage revenues generated from logging activities on those tenures to communities themselves. This assistance will help somewhat in bringing needed funds back into northern communities. But more is needed.

With the natural resource industries from northern Ontario having done much over the years to contribute to the province's GDP, it is time for the province to acknowledge the breadth of the challenges facing rural communities and

to give something back. Most urgently needed are community adjustment and worker transition measures. Communities are literally losing their economic foundation, which is putting basic infrastructure (roads, schools, etc.) at risk. As mills close and infrastructure declines, smaller communities are less able to attract new residents and businesses, real estate values drop, more businesses close, and there are upswings in family troubles and crime.

What is desperately needed is something like a Northern Ontario Development Initiative, funded perhaps out of a portion of PST revenues or an emergency allocation of funds from both the federal and provincial governments. The fund would help communities to stabilize in the short term and plan economic diversification in the long term. The initiative could also help to identify what potential vehicles might be available — Crown corporations, perhaps — that would be prepared to take on longer-term investments that would assist in community and industry diversification initiatives.

Recommendation No. 10: *Ontario should create a new Northern Ontario Jobs and Communities Commission, with a dedicated budget to assist communities in local economic development and diversification initiatives, and to assist workers in retraining programs that will help stabilize employment in remote communities.*

5 Conclusion

In an effort to offer assistance to the forest industry in the province, the Ontario government has introduced a number of measures aimed at improving the bottom line of companies that are clearly struggling. While individual companies, industry associations, and various municipal leaders have welcomed the changes to some degree, the overall impression is that the government's initiatives are insufficient to bring about a fundamental, value-focused change in forest activities in Ontario.

More importantly, from this paper's perspective, the government has so far failed to grapple with the more fundamentally important issues of how to restore and build greater stability in northern, resource-dependent communities. People and communities need to be factored into the equation. For that to happen, the Ontario government must more fully embrace its responsibility as the guardian of the province's publicly-owned forests.

Forestry in Ontario has always involved a partnership between the province, which controls public forestlands, and companies which gained access to Ontario's forests through long-term licence agreements negotiated with the Crown. The

expectation has always been that, in exchange for obtaining logging privileges, the companies would pay reasonable amounts of money to the Crown in the form of stumpage payments, and that they would generate economic activity beyond simply logging trees. In other words, that they would build mills that would process the wood and provide jobs in local communities as well as in the more populous southern region of the province where much of the forest industry's value-added manufacturing base is naturally located.

That partnership is now badly frayed. Thousands of mill workers have lost their jobs following the closure of pulp and paper mills and sawmills. In communities already struggling with shrinking populations and local economies that are highly dependent on the forest industry and related services, the closures have had a chilling effect. Not only are some of the highest-paying jobs in communities gone, further exacerbating the trend toward shrinking populations and tax bases, but each time a mill closes it increases the prospect that other mills may close, too. The forest industry in Ontario, as everywhere, is highly integrated. The residual product from one mill

becomes the feedstock for another. If too many sawmills close, that poses problems for pulp mills. Conversely, if too many pulp mills close, there is a ripple effect in the sawmill sector.

Clearly, things must be done to improve the situation. It is in the province's power to do so. By using its control over timber tenures to foster greater community stability and encourage more

value-added forest product manufacturing, the Ontario government could go a long way toward putting the industry and resource-dependent communities on a stronger, more stable, more socially and environmentally responsible footing for decades to come.

The time for bold initiatives, not Band-Aid solutions, is at hand.

Notes

1 Ontario, 2005b.

2 *ibid.*

3 Roberts, 2005a.

4 Roberts, 2005b.

5 *ibid.*

6 Forest Products Association of Canada 2005.

7 Ontario, 2005b.

8 Ontario, 2005a.

9 *ibid.*

10 Roberts, 2005b.

11 *ibid.*

12 *ibid.*

13 *ibid.*

14 Ontario, 2005b.

15 Wyatt, 2005.

16 Bellerose, 2005.

17 Woodbridge, 2005.

18 Wyatt, 2005.

19 Ontario, 2005b.

20 Roberts, 2005a.

21 Lacour, 2005.

22 *ibid.*

23 Taylor, 2005.

24 Ontario, 2005b.

25 Knell, 2006.

26 Roberts, 2005a.

27 *ibid.*

28 Roberts, 2005c.

29 Ontario, 2005c.

30 Roberts, 2005c.

31 *ibid.*

32 Ontario, 2006.

33 *ibid.*

34 For more information on the Living Legacy Trust visit the web site www.livinglegacytrust.org.

35 Woodbridge, Peter. 2003a.

36 Woodbridge, 2003b.

37 *ibid.*

38 *ibid.*

39 Ekbohm, 2003.

- 40 *ibid.*
- 41 *ibid.*
- 42 *ibid.*
- 43 Green Car Congress, 2005.
- 44 Aker Kvaerner. 2004.
- 45 Roberts, 2005b.
- 46 Slack, 2003.
- 47 PAPRICAN, 2005.
- 48 Forintek Canada Corp., 2005.
- 49 FERIC, 2005.
- 50 Ontario, 2004.
- 51 Kelly, 2005.
- 52 Ontario, 2005d.
- 53 Thunder Bay Chamber of Commerce, 2006.

References

- Aker Kvaerner. 2004. "Indonesia: power boiler for pulp and paper mill." News Release. July 12.
- Bellerose, Dan. 2005. "Provincial forestry plan praised, rapped: Liberals put \$350M over 5 years, but reveal few details." *The Sault Star*. September 9.
- Forest Products Association of Canada. 2005. Submission to the Standing Committee on Finance. October.
- Ekbohm, Tomas, et. al. 2003. Cost-competitive, efficient bio-methanol production from biomass via black liquor gasification. A report carried out under the Energy Framework Programme of the European Union.
- FERIC. 2005. 2004 Annual Report.
- Forintek Canada Corp. 2005. Annual Report 2004–2005.
- Green Car Congress. 2005. "Volvo Introduces DME-Powered Truck." *Green Car Congress*. May 19.
- Kelly, Jim. 2005. "He just doesn't get it: Ramsey's report slammed." *The Chronicle Journal*. June 14.
- Knell, Michael J. 2006. "No Canada Safeguards?" *Furniture Today*. March 22.
- Lacour. Paul. 2005. "Pulp and paper markets in Europe." Prepared for the United Nations Economic Commission for Europe and the Food and Agriculture Organization of the United Nations. September 26. Available on-line at: http://www.unece.org/trade/timber/docs/tc-sessions/tc-63/Presentations_MktDiscussions/Presentations_PDF/18_Lacour.pdf.
- Ontario, Ministry of Energy. 2004. Electricity Transmission and Distribution In Ontario — A Look Ahead. December 21, 2004.
- Ontario, Ministry of Natural Resources. 2005a. Northwest Region. Volume & Area Analysis of Planned vs Actual Harvest. For the Period 1998–2002. Ministry of Natural Resources' Industry Relations Branch. August 11, 2005.

- Ontario. Ministry of Natural Resources. 2005b. Minister's Council on Forest Sector Competitiveness: Final Report April, 2005.
- Ontario, Ministry of Natural Resources. 2005c. "Ontario Strengthens Forest Industry: Up to \$350 Million in Loan Guarantees To Stimulate New Investment." Press Release. June 13, 2005.
- Ontario, Ministry of Energy, 2005d. "McGuinty Government Unveils Bold Plan to Clean Up Ontario's Air." Ministry of Energy. News Release. June 15, 2005.
- Ontario, Office of the Premier. 2006. "A Vision for Prosperity in Ontario's Forest Sector." Press Release. February 22, 2006.
- PAPRICAN. 2005. Meeting The Needs of the Pulp and Paper Industry. 2004 Annual Report.
- Roberts, Don. 2005a. "The Canadian Forest Products Sector: How Do We Adapt For Survival?" A presentation to the Canadian Council of Forest Ministers. Saskatoon, Saskatchewan. October 4, 2005.
- Roberts, Don. 2005b. "Fibre Supply Reduction in Quebec: A Survivor's Game." CIBC World Markets Equity Research Estimate Revision. November, 22, 2005.
- Roberts, Don. 2005c. "Ontario Government's Package for the Forest Products Industry." CIBC World Markets Equity Research Industry Update. September 29, 2005.
- Slack, Enid. 2003. Small, Rural, and Remote Communities: The Anatomy of Risk. A report prepared for the Panel on the Role of Government. August 13.
- Taylor, Russell. 2005. "China Part II — Wood Import Trends." *Wood Markets: The Monthly International Solid Wood Report*. February.
- Wyatt, Charles. 2005. "Forest industry facing tough fight: Production costs, changing markets hit competitiveness." *Business Edge*. October 13.
- Woodbridge, Peter. 2003a. *Manufacturing of Value-Added Wood Products in Western North America: How Competitive is BC? A report to the Interior Value-Added Wood Association*. Peter Woodbridge and Associates. March.
- Woodbridge, Peter. 2003b. Ontario's Value-Added Wood Products Market Potential In the U.S. Great Lakes States. Volume 1 Main Report. Prepared for the Living Legacy Trust. December 2003.
- Woodbridge, Peter. 2005. "In the pulp game, B.C. needs to plan for when the chips will really be down." *Business in Vancouver*. September 27.



CCPA

CANADIAN CENTRE
for POLICY ALTERNATIVES

CENTRE CANADIEN
de POLITIQUES ALTERNATIVES

About the Centre...

The Canadian Centre for Policy Alternatives is an independent, non-profit research institute funded primarily through organizational and individual membership. It was founded in 1980 to promote research on economic and social issues from a progressive point of view. The Centre produces reports, books and other publications, including a monthly magazine. It also sponsors lectures and conferences.

For more information about the Centre, call or write:

National Office

410-75 Albert Street, Ottawa, ON K1P 5E7
tel: 613-563-1341 fax: 613-233-1458
email: ccpa@policyalternatives.ca

BC Office

1400, 207 West Hastings St., Vancouver, BC V6B 1H7
tel: 604-801-5121 fax: 604-801-5122
e-mail: info@bcpolicyalternatives.org

Manitoba Office

309-323 Portage Ave., Winnipeg, MB R3B 2C1
tel: 204-927-3200 fax: 204-927-3201
e-mail: ccpamb@policyalternatives.ca

Nova Scotia Office

P.O. Box 8355, Halifax, NS B3K 5M1
tel: 902-477-1252 fax: 902-484-63441
e-mail: ccpans@policyalternatives.ca

Saskatchewan Office

105-2505 11th Avenue, Regina, SK S4P 0K6
tel: 306-924-3372 fax: 306-586-5177
e-mail: ccpask@sasktel.net

Au sujet du Centre...

Le Centre canadien de politiques alternatives est un institut de recherche indépendant et sans but lucratif, financé en majeure partie par ses membres individuels et institutionnels. Fondé en 1980, son objectif est de promouvoir les recherches progressistes dans le domaine de la politique économique et sociale. Le Centre publie des rapports et des livres, ainsi qu'une revue mensuelle. Il organise aussi des conférences et des colloques.

Pour de plus amples renseignements, téléphonez ou écrivez au:

Bureau National

410-75 rue Albert, Ottawa, ON K1P 5E7
téléphone : 613-563-1341 télécopier : 613-233-1458
courrier électronique : ccpa@policyalternatives.ca

Bureau de la C.-B.

1400-207 rue West Hastings, Vancouver, C.-B. V6B 1H7
téléphone : 604-801-5121 télécopier : 604-801-5122
courrier électronique : info@bcpolicyalternatives.org

Bureau de Manitoba

309-323 avenue Portage, Winnipeg, MB R3B 2C1
téléphone : 204-927-3200 télécopier : 204-927-3201
courrier électronique : ccpamb@policyalternatives.ca

Bureau de Nouvelle-Écosse

P.O. Box 8355, Halifax, NS B3K 5M1
téléphone : 902-477-1252 télécopier : 902-484-63441
courrier électronique : ccpans@policyalternatives.ca

Bureau de Saskatchewan

105-2505 11e avenue, Regina, SK S4P 0K6
téléphone : 306-924-3372 télécopier : 306-586-5177
courrier électronique : ccpask@sasktel.net

<http://www.policyalternatives.ca>