



Memorandum

Date: January 25th, 2006

To: David Thompson & Dan Miller
BC Competition Council

From: Russell Horner
Chair – Pulp & Paper Industry Advisory Committee

Subject: Pulp & Paper Industry Advisory Committee Report

The Pulp & Paper Industry Advisory Committee's report to the BC Competition Council accompanies this memo. This report is the result of a consultative process with input from business, government and union leaders as well as key industry experts from the consulting sector.

Pulp & Paper is an essential component of the overall Forest Industry in BC: the production of both Wood Products and Pulp & Paper is required to extract full value from the forest resource in an economically and environmentally sustainable fashion. This relationship is in jeopardy due to the industry's current state of decline. The industry is drawing down its capital base and does not have access to the capital required to re-invest and re-build. The coastal pulp industry is in near term crisis and the interior chemical market pulp industry, while stable in the near term, is not sustainable over the long term in its current form. Mechanical printing papers are sustainable in BC and represent a significant investment opportunity, yet changes are required to reduce the risk of major investments and increase the ability of the industry to generate adequate returns; this will allow the industry to gain access to the large quantities of capital required.

The Pulp and Paper industry in Canada is facing the most severe economic conditions in its history. The Pulp and Paper sector is better characterized as secondary and tertiary manufacturing, rather than forest products. It is a heavy industry sector which happens to depend almost exclusively on the forest sector for its raw materials. Like the rest of the manufacturing sector in Canada, Pulp and Paper has been devastated by the appreciation in the Canadian dollar over the past few years. The impact of this appreciation has been aggravated by substantial increases in energy costs both directly and through increased chemical and transportation costs. With over 85% of the industry's output exported, high transportation costs put BC's industry in a weak position relative to domestic producers in export markets: both infrastructure issues and associated costs have negatively impacted the sector. In Eastern Canada the impact of the strengthening dollar has been aggravated by a "perfect storm" of increasing fibre costs, fibre shortages and dramatically increased electricity prices in Ontario.

The reality of the current situation is evident in the almost daily announcements of permanent and temporary mill closures and federal and provincial government initiatives to support the industry across the country. The industry in British Columbia currently has some cost advantages due to its access to abundant and low cost fibre and reasonably priced electricity, while our geography and distance from markets makes transportation cost escalation a greater concern.

There are two primary production/process systems in BC, one based on chemical pulping (kraft, sulphite) and one based on mechanical pulping. As with the solid wood sector, there are distinct differences between the coastal and interior industries.

The committee is of the view that under status quo conditions, the ten year outlook for the industry is that of a coastal chemical pulp industry that has substantially disappeared due to a high cost structure and an interior chemical pulp industry that has shrunk by half due to the loss of wood supply (pine beetle) and a high cost structure. We believe that there will still be a mechanical paper industry provided electricity rates remain moderate. There will however, be a reduction in the number of paper producing units (both based on mechanical pulping and chemical pulping) of about one third. In order to reverse this scenario, a number of steps need to be taken at both the federal and provincial level to alter the status quo. Our report is focused on provincial issues but does comment on federal level issues.

The committee had great difficulty in resolving the issue of government support and subsidy. We generally feel that government should not interfere directly with individual companies, but rather should follow a guiding principle of even handed improvement in the hosting conditions and reduction of the social rents paid by the industry. However, it is clear that virtually every new installation in the global pulp and paper industry has been initiated by some form of government support and/or subsidy. It is also clear that other jurisdictions, both outside and inside of Canada, are offering support in order to maintain employment (at the expense of regions that do not provide such support). As long as other jurisdictions interfere in the marketplace, we will be at a disadvantage and should not expect to see reinvestment.

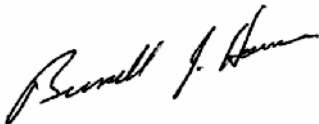
The recommendations of the committee are split into two categories: actions required to ensure that conditions exist for long term success in BC and actions that will help start the turn around of this vital industry. The key recommendations of the committee follow:

- Ensure the viability of the wood products sector. Pulp and Paper and Wood Products are highly interdependent, and we support the recommendations of the Wood Products IAC. Without a viable and low cost Wood Products sector on the coast and in the interior, the Pulp and Paper sector will not survive: this is a fundamental issue that cannot be overemphasized.
- Ensure the sustainability reputation of the forest industry. Without broad recognition and acceptance of our environmental performance we will not be able to sell in our global marketplace.
- Reduce the costs of the industry by reducing the social rents paid by the industry. The provincial government has substantial control of our hosting costs in the province (i.e. PST, Municipal Taxes)

- Improve the regulatory and cultural labour climate in British Columbia. B.C. has a commodity mind set which makes disruption of our systems and operations acceptable. If our future is to include customized, value added products such as printing papers, then we can no longer accept an environment where labour disruptions such as those experienced in the past continue.
- Improve government knowledge of the industry. While there are volumes of information on the solid wood sector in BC, there is an almost complete lack of well documented information and only a weak understanding of the Pulp and Paper industry within government and its various ministries. It is recommended that a more thorough economic and technical review of the industry be conducted to fill this gap.
- Encourage healthy consolidation. Do not intervene to prop up non-viable assets and encourage the federal government to review its policies which interfere with the ability of the industry to consolidate. A positive future will require companies of sufficient size to make the substantial capital investments required.

The B.C. government has the opportunity to intervene now with reductions in the cost structure of the industry rather than waiting for the crisis point that has been reached in other regions. If the asset base of the industry is drawn down too far before corrective action is taken the momentum to recover will be lost.

Respectfully Submitted,



Russell J. Horner
Chair - Pulp & Paper Industry Advisory Committee



BC COMPETITION COUNCIL

Pulp & Paper Industry Advisory Committee

Pulp & Paper Industry Advisory Committee

Final Report – January 25th, 2006

BC Competition Council
Pulp & Paper Industry Advisory Committee

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1.0 Executive Summary

The Pulp & Paper Industry Advisory Committee (IAC) was formed by the BC Competition Council in July of 2005 with a mandate to recommend key actions that should be undertaken by government to improve the global competitiveness of the BC industry. The committee is comprised of business, government, and union leaders as well as key industry experts from the consulting sector.

This report will describe the industry, outline the realities facing it, and draw conclusions based on the analysis and expectations of the committee. The committee has identified steps to ensure conditions for long-term success exist for the industry as well as actions to help turn around the industry in the near term.

The Pulp & Paper Industry in BC

The Pulp & Paper sector is generally assumed to fit within the general description of the forest products industry in British Columbia and, for a variety of historical and corporate structure reasons, has largely fallen under the shadow of the solid wood sector. This has created an environment in which the contribution and issues of the sector are largely misunderstood by government and stakeholders.

The industry is one of the most capital intensive industries in BC and employs more capital than the solid wood sector. This capital intensity requires near-continuous operation which creates the appearance of stability to the outside observer; hiding the fact that the industry is facing significant challenges.

Pulp & Paper is one of the primary drivers of the B.C. economy; many small communities are heavily dependent on individual mills. These mills directly employ 11,400 province-wide, paying compensation and benefits of \$870 million per year. A major employer of technical workers and university graduates, the industry is ranked third in the province in weekly employment earnings. The industry is one of the major exporters in the province with sales of \$6.9 billion per year.

The industry invests \$200 million per year in capital and is one of the largest customers of the high technology industry in BC.

The Pulp & Paper industry was largely created by the solid wood sector to use the waste products from the sawmilling industry. To this day the sector's raw material base is the by-products of the sawmilling sector in the form of bark, sawdust and chips. Pulp & Paper mills also consume logs of too poor a quality to manufacture solid wood products. In effect the industry is one of the first waste product recycling industries; creating value from waste streams which would otherwise be environmental liabilities. While the Pulp & Paper industry consumed 47% of the wood harvested in BC during 2004, harvesting of trees directly for Pulp and Paper manufacture in B.C. is generally uneconomic.

The solid wood sector has become heavily dependent on the Pulp and Paper sector as a source of revenue. The income from sales of residual chips represents 25 to 30% of a typical sawmill's income. At the bottom of the economic cycle this income from chip sales is essential to maintain the economic viability of sawmilling.

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The industry has been in a state of decline for almost two decades with the last major investment taking place in the 1990's. Since 1995 the industry has disinvested over \$1.2 billion and has continuously shrunk both in terms of production and employment. From a peak of 24,200 employees in 1995, direct industry employment has declined 50% to 11,900 in 2004.

Summary Conclusions

Pulp & Paper continues to be a vital component of the forestry industry in BC. Alternative uses of the large volume of by-product fibre produced by the solid wood sector such as biomass energy do not yet approach the value generated by Pulp & Paper. Although Pulp & Paper adds considerable economic value to the fibre it consumes, the industry is drawing down its capital base as there is not economic justification for significant investments. BC must re-build conditions for the industry's long term success, thereby allowing a turnaround and rebuilding of a sustainable Pulp & Paper industry.

Under the status quo conditions for the industry, uncoated and coated mechanical Printing Paper production is sustainable but requires improvement in Return on Capital Employed (ROCE) to attract the capital required to significantly upgrade existing assets. Stimulatory measures in other jurisdictions that prevent capacity closures and artificially support upgrade investments are a major risk to mechanical printing papers in BC. Chemical market pulp on the coast of BC is not sustainable and is in near term crisis; capacity on the coast must be reduced and the remaining assets significantly renewed if they are to successfully compete in the global marketplace. Chemical market pulp in the interior is stable in the near term but is not sustainable long term due to the inevitable reduction in fibre availability post-mountain pine beetle. Interior pulp ROCE, while superior to the coast, is inadequate to motivate significant asset renewal in the region. As with mechanical printing papers, stimulatory measures in other jurisdictions that prevent chemical market pulp mill closures create a risk of closures of BC capacity in excess of what is required to balance the industry.

Summary Comments

The manner in which government responds to the issues facing the Pulp & Paper industry is vital to the effectiveness of the response. The guiding principle must be even-handed reduction of the social rents paid by the industry. The problems facing the industry are long term in nature and require long term solutions that do not distort the marketplace. These solutions include intervention in areas where government is already involved such as taxation, stumpage, electricity and regulation. Even-handed and transparent action reduces the risks to investments in the sector and improves profitability; both of these factors improve the industry's access to capital for reinvestment. The actions of competing jurisdictions may necessitate capital incentives in BC, however any such measures must be even-handed to avoid disrupting the marketplace and perpetuating existing inefficiencies.

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Favourable environmental and social relations must remain paramount for the BC forest industry; as a user of a public good, the industry cannot operate successfully without social license. Further, end-use markets have clearly demonstrated the adverse impact of negative relations in these areas.

For the Pulp & Paper sector, the health and sustainability of the solid wood sector is vital and must be the highest priority of government. In concert with this, the government should improve its understanding of the Pulp & Paper sector in order to successfully support the industry through the transition ahead. Together, government and industry must play a role in improving the labour culture of the province; the products and services produced in today's economy are no longer compatible with the confrontational relationships of the past. The strength of the Canadian dollar, while not controlled by either party, must also be acknowledged as a significant hindrance to the manufacturing sector in BC and Canada-wide.

The pace of change in the Pulp & Paper industry is such that this report is out of date even as it is being completed. It should be noted that the Port Alice sulphite pulp mill is now slated to restart and the kraft pulp mill in Squamish has been permanently shut. In addition, the coated freesheet mill in Delta has been put forward for sale or possible closure. This downsizing of the industry is expected to continue and the industry will ultimately be smaller than it is today; matching the long-term economic supply of raw material. The industry must emerge from this transition more efficient and sustainable if an over-correction is to be avoided. This greater efficiency and sustainability is predicated on an injection of capital that will only be available if the hosting conditions of BC and its communities are improved.

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2.0 Introduction

This report is submitted by the Pulp & Paper Industry Advisory Committee (IAC) of the BC Competition Council and has been compiled based on input from business, union and government leaders. The BC Competition Council was announced on March 30, 2005 by the Premier's office with a mandate to "review the province's competitiveness both on a sectoral as well as a regional basis, identify barriers to economic growth, and solutions to overcome them that can be taken by industry or government." This report fulfills that mandate by recommending solutions and provides a general overview of the industry and its contribution to the overall BC economy. This document will:

- Outline the high-level realities facing the Pulp and Paper industry
 - Description - The composition of the industry
 - Characteristics - The state of the industry
 - Global Context - The global competitive position of the industry
 - Direction - The direction of the industry if the status quo continues
- Draw conclusions based on the current realities of the industry – as determined by the committee of industry experts
- Outline the process of building a sustainable industry in BC and provide parameters for government response
- Recommend steps to establish conditions for long-term success
- Recommend actions to turn around the industry
- Emphasize critical competitive components to maintain
- Highlight issues where the government does not have direct control, but should exert influence

The Pulp & Paper IAC is comprised of the following members:

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President & CEO
Catalyst Paper Corporation

Hank Ketcham
*Chairman of the Board,
President & CEO*
West Fraser Timber Co.

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The Pulp & Paper Industry Advisory Committee wishes to thank the following individuals and their organizations for their input and assistance during the IAC process:

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3.0 Current Situation

3.1 Description

The BC Pulp & Paper Industry is comprised of 23 operating facilities that manufacture products ranging from market pulp to high value magazine papers. Collectively, these 23 facilities have an annual capacity of 8.4 million Tonnes and sales value totaling ~\$6.9 billion.

3.1.1 Products

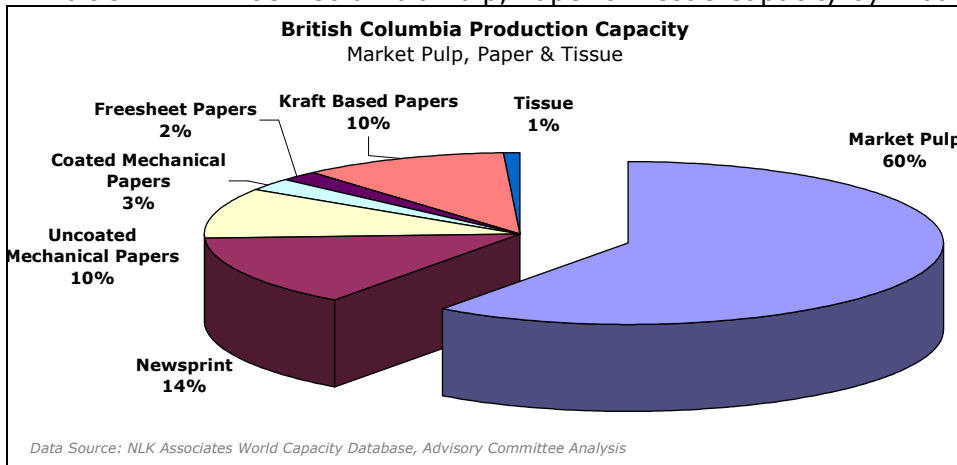
For the purpose of this report, the products manufactured by the BC Pulp & Paper industry are split into five key segments:

- Mechanical Printing Papers
 - Newsprint
 - Uncoated Mechanical Printing Papers
 - Coated Mechanical Printing Papers
- Coated Freesheet Printing Papers
- Kraft-based Papers
- Tissue
- Market Pulp

The relative capacities of these grades are shown in exhibit 3.1.1

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Exhibit 3.1.1 – British Columbia Pulp, Paper & Tissue Capacity by Product



A description of each product segment and its constituent products follows:

Mechanical Printing Papers

Newsprint

Newsprint in BC is produced from mechanical pulp and recycled fibres fed to papermachines configured for the production of newsprint. There are 5 newsprint mills in BC, with a total operating capacity of 1.2 million Tonnes. All newsprint mills in BC have integrated mechanical pulping facilities. Newsprint (30-lb) delivered to the Western US had a list price before discounts of \$625 US/Tonne in August of 2005¹.

Uncoated Mechanical Printing Papers

Uncoated mechanical printing papers are produced in much the same fashion as newsprint however the sheet is generally brighter and lighter (in weight) and the demands on papermachine configuration and performance are higher. Production of most uncoated grades requires significantly higher capital investment than for newsprint. There are 4 uncoated mechanical mills in BC, with a total operating capacity of 813 thousand Tonnes. The uncoated mechanical segment includes many grades of paper with uses including telephone books, flyers, inserts, catalogues and magazines. Uncoated mechanical paper (35-lb Machine Finished offset, 65 brightness) sold in the Eastern US had a list price of \$745-795 US/Short Ton in August of 2005².

¹ Source: Pulp & Paper Week, September 19, 2005

² Source: Pulp & Paper Week, September 19, 2005

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Coated Mechanical Printing Papers

Coated mechanical printing papers are produced by applying a coating to both sides of a light weight sheet of paper. This process produces magazine grade papers with high brightness and gloss. Coated paper production is very capital intensive due to the increased complexity of the process. There is one coated mechanical machine in BC with an operating capacity of approximately 220 thousand Tonnes; this machine produces one of the highest value-added forest products in the province. Coated mechanical paper (No. 5, 34-lb offset rolls) sold in the Eastern US had a list price of \$905-925 US/Short Ton in August of 2005³.

Coated Freesheet Paper

Freesheet paper is also known as “woodfree” paper as it is made with chemical rather than mechanical pulp. There is one facility in BC that produces coated freesheet grades, with an operating capacity of approximately 165 thousand Tonnes per year. Coated freesheet is used for high grade commercial printing applications. Coated freesheet paper (No. 1, 70-lb sheets) delivered to merchants had a list price before merchant commissions of \$1,500-1,600 US/Short Ton in August 2005⁴.

Kraft Based Papers

The kraft based papers segment includes white-top linerboard, unbleached linerboard, recycled linerboard, corrugating medium, bleached and unbleached kraft paper grades. Linerboard and corrugating medium grades are used to manufacture corrugated boxes, while most kraft paper grades manufactured in BC are used for bag or sack applications. There are three facilities producing virgin kraft based papers in BC and one facility producing recycled kraft based papers. These facilities have a combined capacity of approximately 850 thousand Tonnes annually. Unbleached linerboard (virgin) delivered to the West Coast had a list price before discounts of \$455-465 US/Short Ton in August 2005⁵, unbleached kraft paper (natural multi-wall sack, 50-lb) had a list price before discounts of \$650-660 US/Short Ton in the same period⁶.

Tissue

Tissue is manufactured from a combination of mechanical and chemical pulps. Mechanical pulping is integrated on-site with the tissue machines, while chemical pulp is obtained from outside suppliers. Tissue rolls are then converted into consumer products and packaged on-site. There is one tissue manufacturer in BC with an approximate capacity of 80 thousand Tonnes.

³ Source: Pulp & Paper Week, September 19, 2005

⁴ Source: Pulp & Paper Week, September 19, 2005

⁵ Source: Pulp & Paper Week, September 19, 2005

⁶ Source: Pulp & Paper Week, September 19, 2005

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Market Pulp

Market pulp in BC is comprised of two major products: chemical market pulp & mechanical market pulp.

Chemical market pulp is produced by separating wood fibres (from chips) through chemical action, then bleaching and drying the fibres for distribution to market. Chemical market pulp is produced throughout the province in 13 facilities with a total operating capacity of 4 million Tonnes. There are currently two chemical market pulp facilities idle in BC with a combined capacity of approximately 495 thousand Tonnes. One of these facilities, Port Alice, is a dissolving pulp facility – a sub-set of chemical market pulp that is used in specialty applications and requires a different (although still chemical) production process. All chemical market pulp currently produced in BC is classified as NBSK (Northern Bleached Softwood Kraft.) NBSK delivered to Northern Europe had a list price before discounts of \$580-590 US/Tonne in August of 2005⁷.

Mechanical market pulp is produced by separating wood fibres (from chips) through mechanical action. As with chemical pulp, the fibres are then bleached and dried for shipment. Mechanical market pulp is produced in 3 facilities with a total operating capacity of 785 thousand Tonnes. Mechanical market pulp produced in BC is classified as BCTMP (Bleached Chemi-Thermo-Mechanical Pulp.) BCTMP (Canadian Aspen, 85 GE) delivered to Northern Europe had a list price before discounts of \$550 US/Tonne in August of 2005⁸.

There is one DeInked Pulp (DIP) facility in BC with a capacity of 155 thousand Tonnes. The majority of the capacity of this facility is used internally by the coastal paper producer that owns it, although some DIP is sold into the marketplace. De-inked pulp (f.o.b. U.S. customer) had a list price of \$565 to \$600 in August of 2005⁹.

⁷ Source: Pulp & Paper Week, September 12, 2005

⁸ Source: Pulp & Paper Week, September 12, 2005

⁹ Source: Pulp & Paper Week, September 12, 2005

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3.1.2 Producers

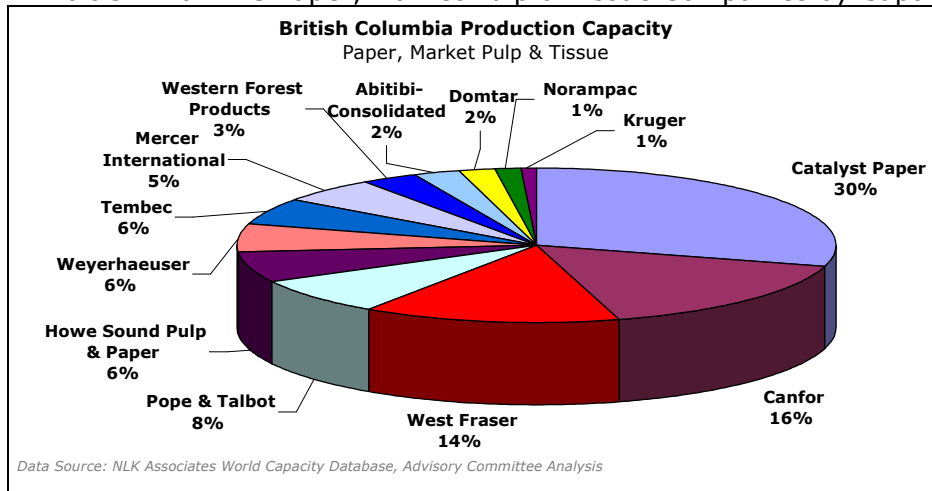
Thirteen Pulp and Paper companies operate the BC capacity detailed in this report. The companies and their production capacities are as follows:

Exhibit 3.1.2a – BC Paper, Market Pulp & Tissue Companies & Capacity

BC Paper, Market Pulp & Tissue Producers	
Company	Capacity (000 Tonnes)
Abitibi Consolidated	185
Canfor	1,340
Catalyst Paper	2,430
Domtar	165
Howe Sound Pulp & Paper	525
Kruger	80
Mercer International	430
Norampac	110
Pope & Talbot	640
Tembec	465
West Fraser	1,140
Western Forest Products	270
Weyerhaeuser	480
BC Total	8,260
Non-Operating Facilities	495

As shown in exhibit 3.1.2b, it is clear that there is relatively low consolidation in the BC industry. The top 3 producers represent 60% of provincial capacity; however the remaining 40% is comprised of ten companies. Pulp & Paper is a capital intensive industry that derives economies of scale from large asset bases; a new world-scale pulp facility is estimated at \$1 to \$1.15 billion, whereas a papermachine conversion to a coated mechanical grade is estimated at \$700 million (these are discussed in section 5.2). To support this magnitude of capital, BC's industry would benefit from further consolidation.

Exhibit 3.1.2b – BC Paper, Market Pulp & Tissue Companies by Capacity

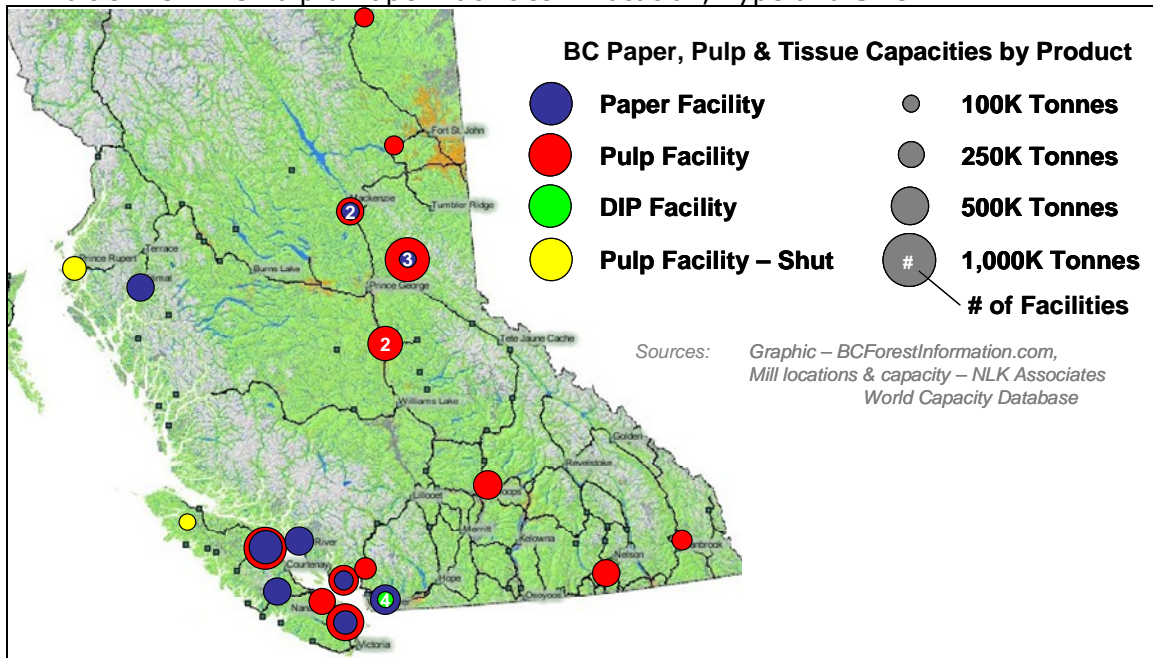


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3.1.3 Facilities

Pulp & Paper facilities can be found throughout BC and are typically the key economic driver of small communities. By necessity Pulp & Paper facilities tend to be located in close proximity to their supply of fibre, hog fuel and power. This often causes transportation issues for finished products which must be shipped to end users elsewhere in North America and around the world.

Exhibit 3.1.3 – BC Pulp & Paper Facilities – Location, Type and Size



3.1.4 Employment & Economic Impact

Economic Impact

The Pulp & Paper industry in BC had sales of ~\$6.9 Billion in 2004: 38% of BC forest industry sales. These goods are largely exported to the US and overseas.

Capital Employed & Capital Investment

The Pulp & Paper industry is extremely capital intensive, employing more capital than the Solid Wood sector. Pulp & Paper manufacturing employed an estimated \$9.6 billion of assets in 2004, while Solid Wood products (including logging) employed \$7.4 billion¹⁰. Capital investment for Pulp & Paper was in excess of \$250 million in 2004 and exceeded \$1 billion over the past five years.

¹⁰ Source: PriceWaterhouseCoopers, "The Forest Industry in British Columbia 2004 Summary Tables" June 2005

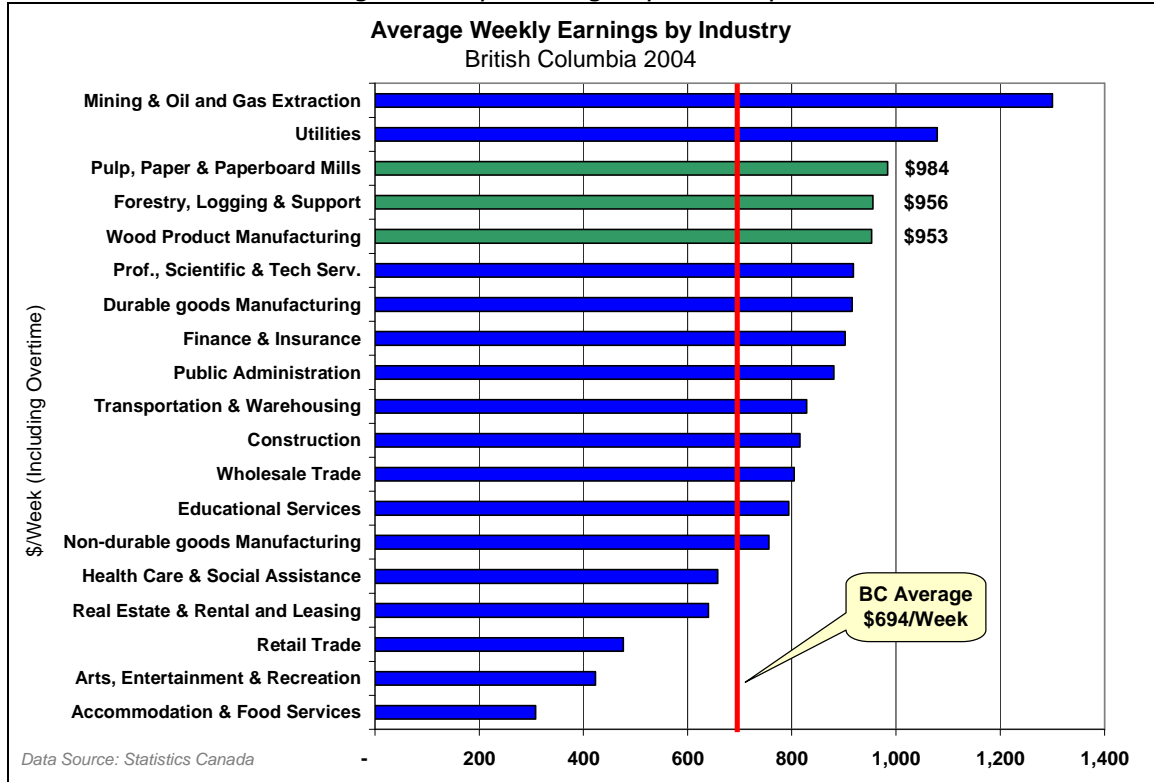
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Employment

The Pulp & Paper industry in BC employs 11,400 people province wide. Total compensation and benefits is estimated at \$870 million/year for the industry. Indirect and induced employment is 22,800 for a total of 34,200 jobs generated by the industry in BC. These jobs, as detailed previously, are spread throughout the province: primarily in rural areas that depend on the industry as their primary economic engine. Employment in the Pulp & Paper manufacturing sector¹¹ overall has declined over 50% in less than ten years: from a peak of 24,200 in 1995 to 11,900 in 2004¹².

The Pulp & Paper industry is a leading edge industry with a high degree of technology application that requires an educated workforce. As a whole, the industry pays among the highest wages in the province averaging \$984/week, well above the provincial average of \$694/week in 2004¹³.

Exhibit 3.1.4b – BC Average Weekly Earnings by Industry



¹¹ North American Industry Classification System (NAICS) 2002 – Includes Converted Paper Product Manufacturing industry – estimated at 500 employees in 2004

¹² Source: Statistics Canada, Labour Force Survey (unpublished data) courtesy BCStats

¹³ Source: Statistics Canada – SEPH, courtesy BCStats

3.2 Characteristics

3.2.1 Fibre Characteristics

Tree species vary in each region of BC and each species has unique characteristics when processed for use in Pulp or Paper. For the purposes of this report, the province is segregated into two regions: the coast and the interior.

Coastal species

- Douglas Fir – coarse fibre not suitable for mechanical pulping (printing papers) yet suitable for certain kraft-based packaging applications. Produces a coarse grade of chemical pulp that is influenced by the pricing of other coarse fibred grades, most notably Radiatta Pine from South America and Southern Bleached Softwood Kraft (SBSK) grades from the Southern US.
- Hemlock – medium coarseness fibre suitable for mechanical pulping (printing papers) and certain kraft-based packaging applications. Often used in combination with Fir in the production of a high coarseness chemical pulp.
- Cedar – fine fibre not suitable for mechanical pulping (printing papers). Used in conjunction with imported interior SPF to produce fine fibred NBSK pulp or in high proportions to create specialty market pulps.
- Yellow Cedar (Cypress) – fine fibre as with Cedar.
- Sawdust – dependant on species makeup, shorter fibre length and less strength than chip based pulps.

Coastal fibre species are advantageous to mechanical pulping applications and to certain kraft based packaging applications. These coastal species are a challenge for chemical market pulp producers as fibres must be blended to produce optimum market grades. A significant amount of interior fibre (SPF) is imported to the coast and is typically blended with Cedar to produce a fine-fibred NBSK.

Interior species

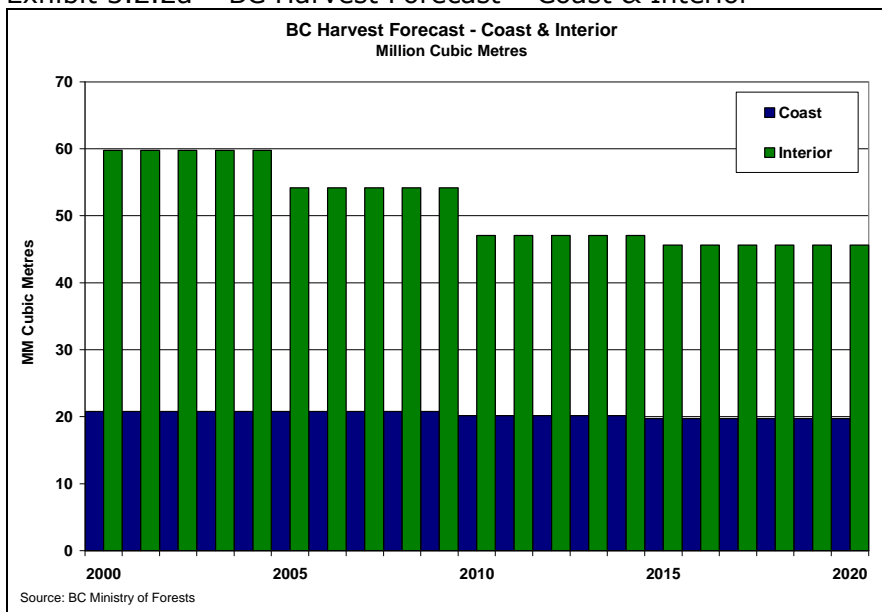
- SPF (Spruce, Pine, Fir) – fine fibre suitable for mechanical pulping (printing papers) and certain packaging applications. Produces an excellent fine-fibred grade of chemical pulp that can generally be differentiated from coarser fibred grades in the marketplace.
- Sawdust – interior sawdust is largely SPF and therefore inherits similar qualities, although with a shorter fibre length and less strength.

Interior fibre species are advantageous for chemical pulping applications including market chemical pulp and kraft based packaging grades. These interior species are suitable for mechanical pulping and use in market mechanical pulp or mechanical printing papers.

3.2.2 Fibre Supply Trends

While BC continues to have an abundance of fibre available for both Solid Wood and Pulp & Paper uses there are some upcoming challenges that are expected to have significant impacts on the Pulp & Paper industry. The Annual Allowable Cut (AAC) on the coast of BC is slowly declining; however the actual harvest level is well below the AAC due to diminished sawmilling activity on the coast. The AAC for the interior is currently at historically high levels; however it is expected to decline significantly in the future due to the life-cycle of the mountain pine beetle epidemic. Some estimates peg the post mountain pine beetle reduction at 10 million m³, while others expect that the diminished economics of logging forests with unusable Pine will decrease supply still further. The Pulp & Paper IAC does not endorse a particular scenario, but instead emphasizes that a large fibre impact is on the horizon and that this will negatively impact Pulp & Paper production province-wide.

Exhibit 3.2.2a – BC Harvest Forecast – Coast & Interior

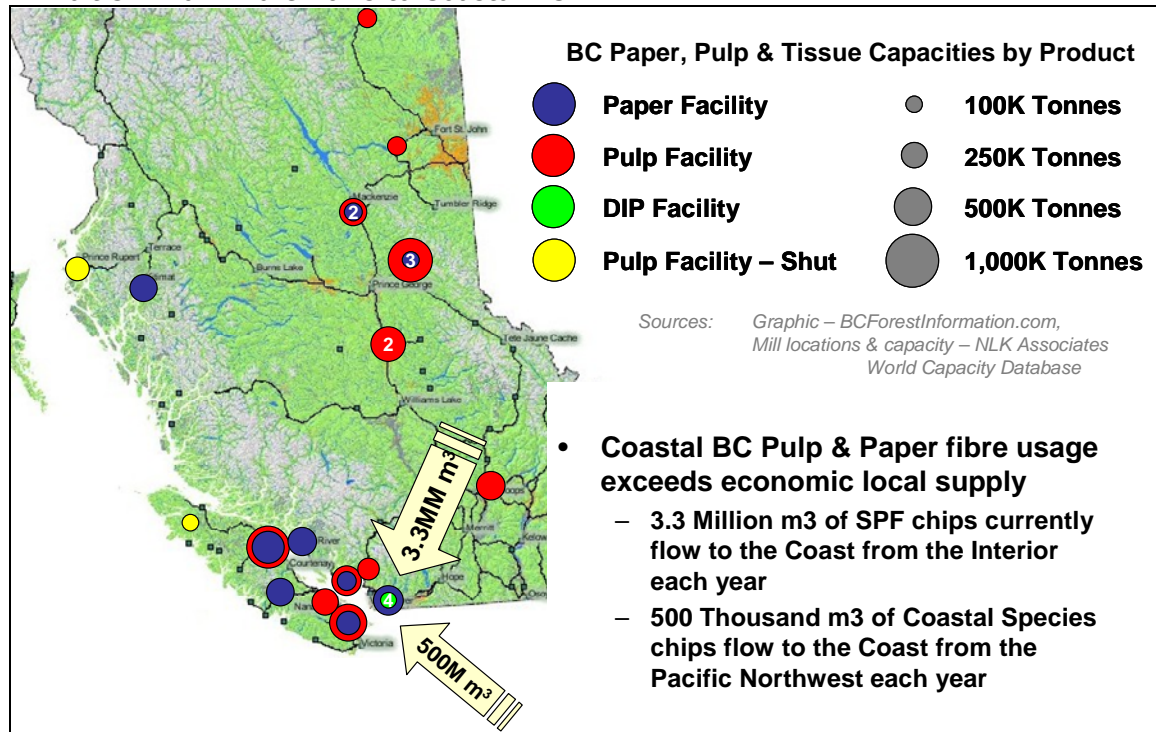


Coastal BC Fibre Supply

The coast of BC is a net importer of chips for Pulp & Paper. Currently 3.3 million m³ of chips flow from the interior to the coast and 500 thousand m³ of chips flow from the US Pacific Northwest. Interior chips typically represent a higher-cost incremental fibre for the coast however the current over-supply in the interior has driven costs down significantly. The availability of relatively low cost interior chips has in turn driven down the market price of Hemlock pulp logs, which represent another source of high cost incremental supply. These price movements have recently driven coastal fibre costs down to world 2nd quartile, which partially counteracts the world 4th quartile conversion costs of the region. This will be discussed further in section 3.3.5.

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Exhibit 3.2.2b – Fibre flows to Coastal BC



Interior BC Fibre Supply

The fibre supply picture for the BC interior is generally dominated by the impact of the mountain pine beetle and has experienced rapid change since the expiry of the Softwood Lumber Accord. Currently there is a significant over-supply of Pulp & Paper chips in the interior which has moved fibre costs to world 1st quartile in the region. Chips are being transported to the coast in higher quantities than in the past and some chips are being exported to Ontario via rail in response to the fibre shortage in that region.

It is important to note that this report has generalized the fibre regions of BC significantly. In practice, the province is made up of a number of discrete fibre baskets, each with its own boundaries defined by transportation costs, species and local supply. Some regions of the interior therefore have higher costs than others; the effect of the MPB is regional as well. Detailed analysis of each of these regions is beyond the scope of this report; however the need for government understanding of these regional fibre baskets is included in the committee’s recommendations.

As seen in exhibit 3.2.2a, the Mountain Pine Beetle (MPB) infestation will ultimately result in a significant reduction in logging due to the decline in suitable timber stands in the region. As the MPB infestation progresses, increasing proportions of the Pine inventory will become unusable for Pulp & Paper or wood products due to decay. A reduction in logging and solid wood milling activity will result in a reduction in the availability of Pulp & Paper chips. The quantity of interior fibre available to the coast will diminish as available surpluses are depleted.

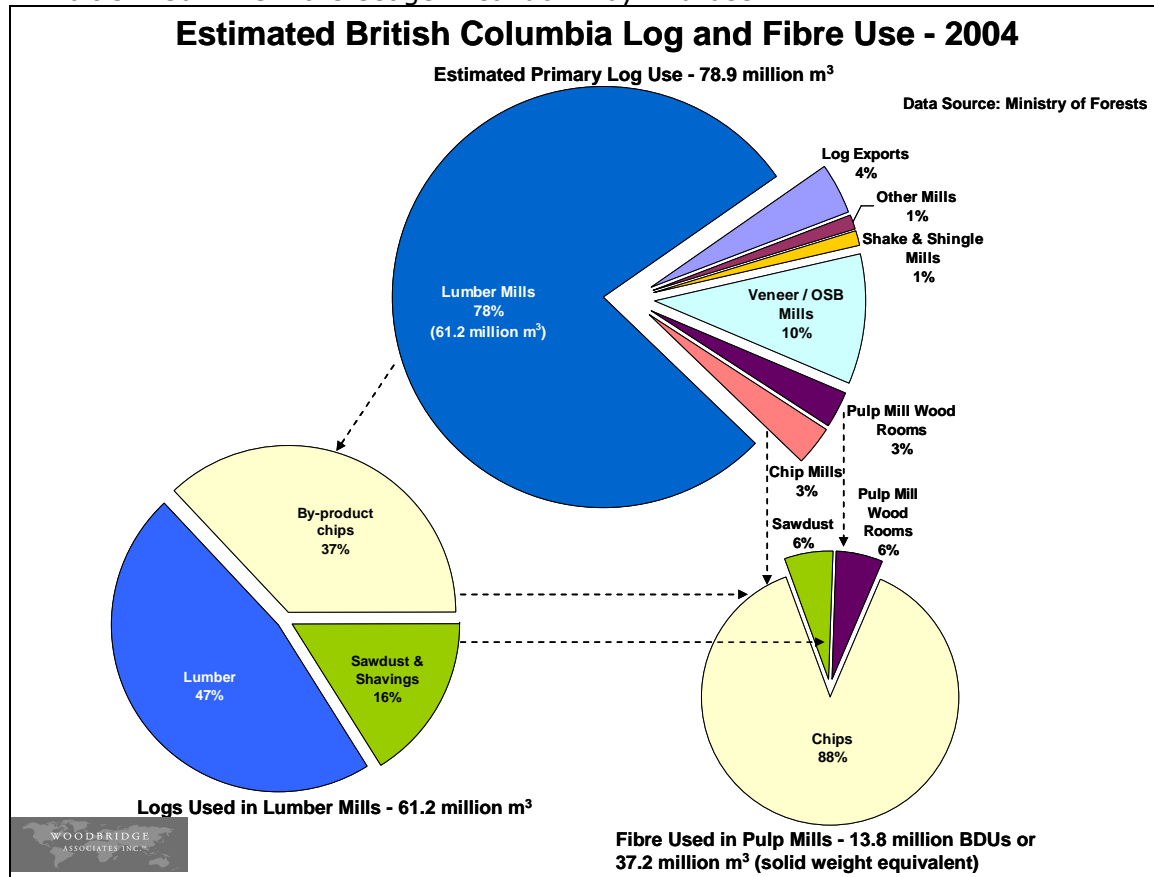
3.2.3 Pulp & Paper and the Solid Wood sector

The Pulp & Paper industry consumed 47% of the fibre used in the province in 2004. 53% of the fibre sent to a typical sawmill is subsequently sold as chips, shavings or sawdust to a pulp or paper producer – this revenue accounts for 25 to 30% of the revenue of the sawmill. In general, the bark stripped from logs before processing is shipped to Pulp & Paper facilities where it is burned in large, efficient boilers to produce steam energy for the manufacturing process. Without pulp and/or paper mills, these by-product and waste streams would represent a crippling waste disposal problem for the solid wood industry. Further, the loss of by-product revenue would render sawmilling significantly less profitable.

Not all logs harvested are suitable for solid wood purposes. 6% of the logs used in 2004 were processed directly to chips for use in Pulp & Paper mills. Loggers do not significantly profit from the harvest of pulp logs however they are an important contributor to the fixed costs of logging each parcel of land. In addition, the steps required for delivery of the logs to a pulp or paper mill in chip form creates significant economic value and contributes to the scale of the industry. If pulpwood is left in the forest it represents a failure to extract full value for each stand of timber. Pulp & Paper cannot economically support logging for pulp logs alone – harvesting must include merchantable solid wood logs in order to cover the high costs of accessing and harvesting timber in BC. The combination of Pulp & Paper and sawmilling maximizes the value extracted from each log and cut-block and is the economic and environmental foundation of the forest industry in BC: one sector cannot survive without the other.

In this environment it is counterproductive to advocate solutions that decrease the cost of Pulp & Paper fibre supplies at the expense of the Solid Wood sector. This would significantly diminish the ROCE of the Solid Wood sector, forcing the same disinvestment that has been seen in Pulp & Paper. At the same time, the Pulp & Paper industry cannot attract the capital re-investment required to turnaround and rebuild the sector without sustained fibre costs (including delivery) that are among the lowest in the world. Freight-logical sawmill residual fibre is generally the lowest cost supply of fibre for the Pulp & Paper sector; increased sawmilling in a given region is therefore highly positive for the sector. This need for a healthy domestic solid wood sector is discussed further later in this report.

Exhibit 3.2.3a – BC Fibre Usage Breakdown by End-use



3.2.4 Labour Culture and Regulatory Environment

BC's current labour culture and regulatory environment is the product of a major industrial base that has been dedicated primarily to commodity production. BC's manufacturing mix is shifting away from commodities toward higher value-added products as industry finds more profitable niches in the world economy. This shift demands a change from the confrontational union-management relationships of the past, with their frequent and occasionally protracted strikes, to a much more stable and cooperative labour-management culture and environment in the province.

Commodities are standardized and customers can obtain supply during production disruptions with little impact; the same customers will return (for the right price) once production resumes. This has generally been the case for dimensional lumber, pulp, newsprint and minerals produced in BC; labour disputes were disruptive but not permanently damaging. This is not the case for higher value-added products as value-added and specialty products are often customized for a specific market and offer unique attributes. Production disruptions motivate customers to find suitable alternatives and erode the strategic advantage of BC manufacturers; customers are often lost forever or reduce purchases to minimize their risk exposure to future BC supply disruptions.

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Value-added producers in BC (primarily paper) have engaged in efforts to improve union-management relations in order to improve their business and reduce the risk of labour related production disruptions. In some cases, these progressive union-management relationships are spreading to key suppliers to further minimize the likelihood of labour related production disruptions. A number of long-term agreements have been completed with Pulp & Paper labour unions in advance of their expiry; this has proven to be an excellent indicator of stability to the value-added paper industry's risk adverse customer base.

Despite all of these positive steps, the old-world labour relations mentality of the province continues to impact the Pulp & Paper business as it is culturally acceptable to bring private sector business into public sector disputes. The existing labour relations culture, in both the public and private sectors, also hinders industry due to its polarized nature; culture change is required to move forward as a province and an industry.

3.2.5 Financial Performance

The financial performance of the BC Pulp & Paper industry has been poor for over a decade. The last period of sustained returns was between 1986 and 1989 for both chemical market pulp & uncoated mechanical papers – which represent 84% of the current output of the BC Industry. There is insufficient data in the public domain to examine the other products covered in this report; however the financial results for a number of the products concerned correlate well with either pulp or uncoated mechanical paper. Others, such as tissue and coated papers, do not necessarily correlate to the larger industry.

As seen in Exhibit 3.2.4a, the 19 year average Return on Capital Employed (ROCE) for chemical market pulp is 3.8%. This is over 8% below the cost of capital for the industry and is a major reason for the gradual disinvestment in the sector over the past decade. Average ROCE for pulp over the past decade is 0.3% - a significant negative return when the cash costs of capital are considered.

Provincially summarized data is not available beyond 1999 for uncoated groundwood papers however average ROCE for the 14 year period ending in 1999 was 4.2%.

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Exhibit 3.2.4a – ROCE of the Pulp & Paper Industry in BC

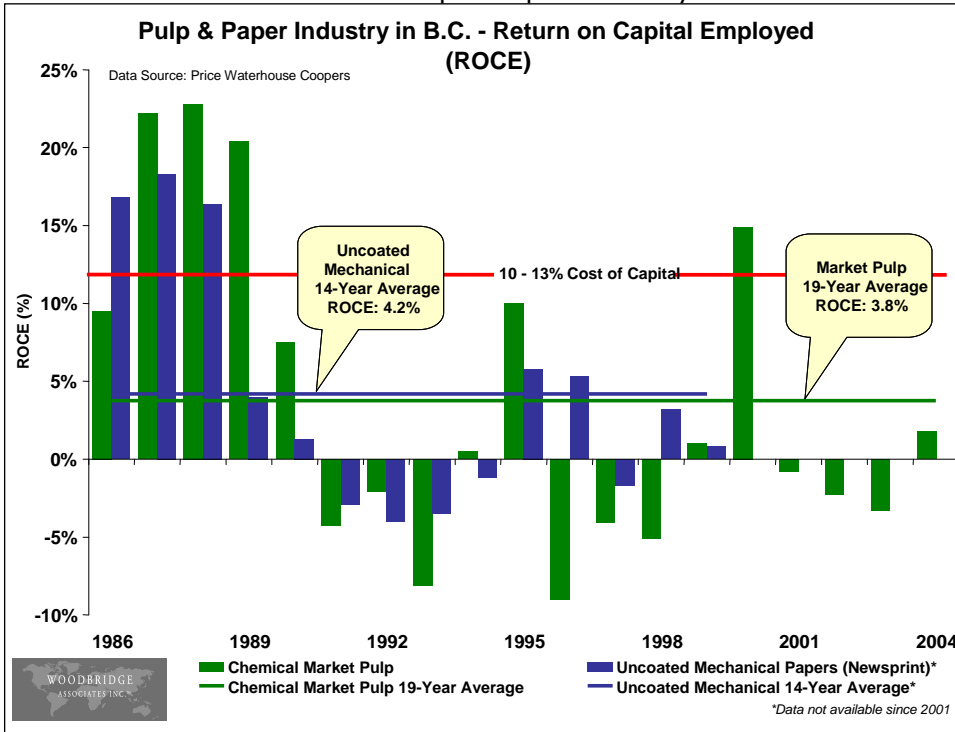
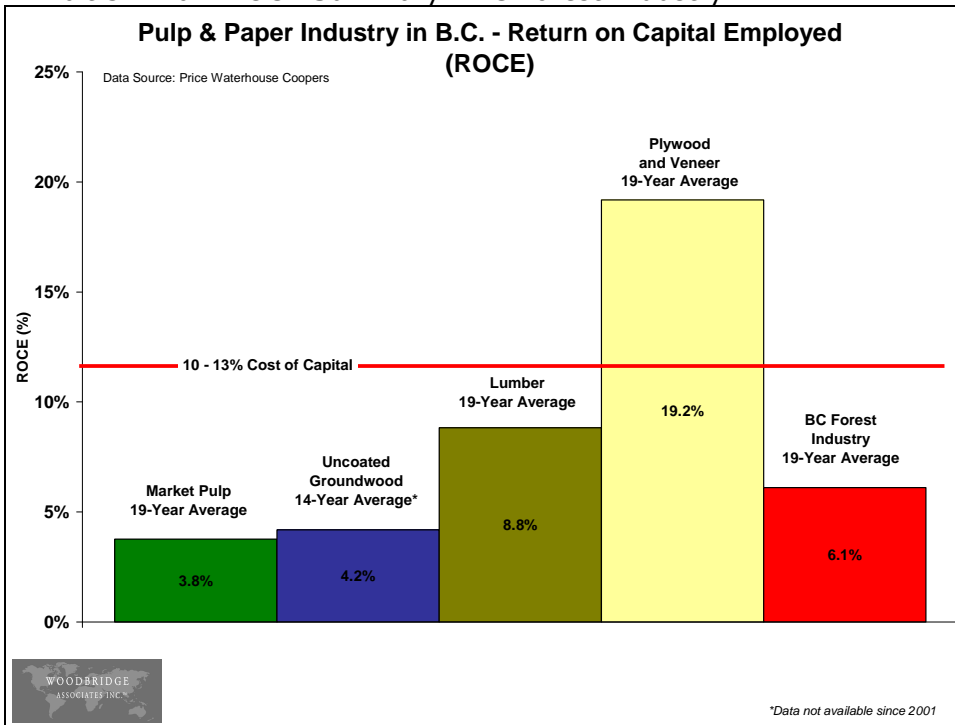


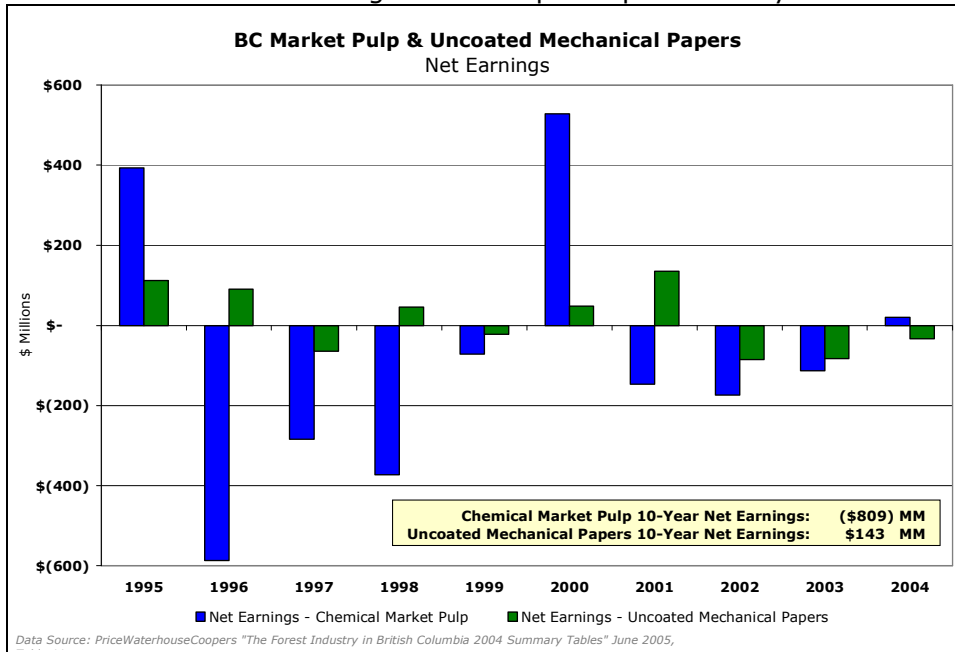
Exhibit 3.2.4b – ROCE Summary - BC Forest Industry



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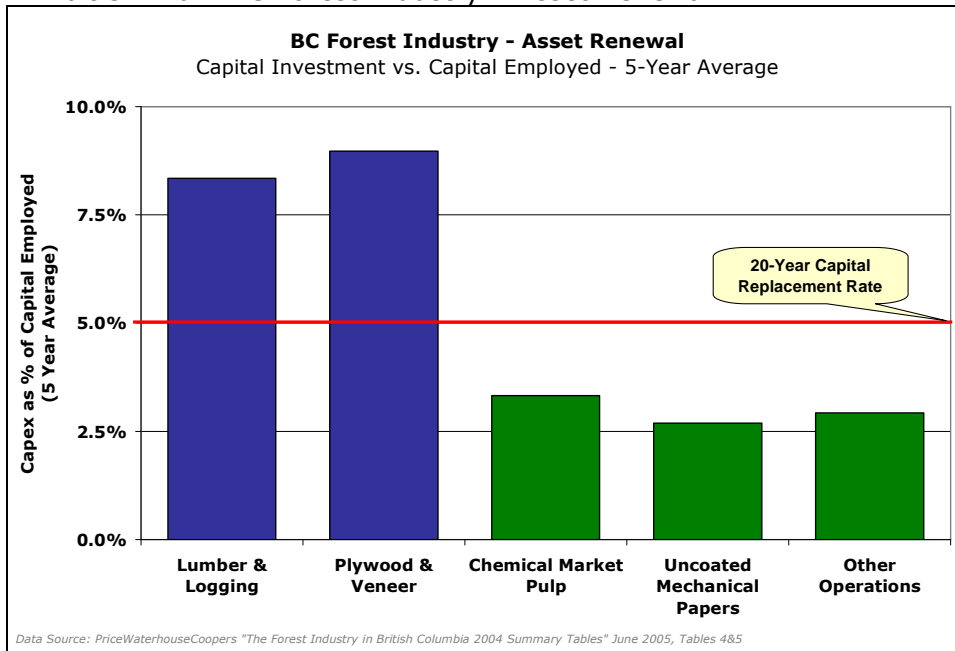
Net earnings data is available for chemical market pulp and uncoated mechanical papers. As before, these products represent 84% of provincial capacity. The earnings picture is incomplete but indicative of the overall industry's performance. Earnings for some grades, such as coated mechanical papers, were significantly better than uncoated mechanical grades during the periods covered. Chemical market pulp producers incurred losses of \$809 million between 1995 and 2004. Uncoated groundwood paper producers earned \$143 million over the same period, generating an estimated 0.6% average ROCE.

Exhibit 3.2.4c – Net Earnings of the Pulp & Paper Industry in BC



As an industry with long-lived assets, the Pulp & Paper industry can sustain itself for an extended period of time on a much lower rate of return than the cost of capital; this is provided enough capital is reinvested to sustain the industry's assets. The BC Pulp & Paper industry has sustained itself in this manner for over a decade. Exhibit 3.2.4d relates capital spending to capital employed in each segment of the BC forest industry. Capital employed by paper, market pulp and tissue manufacturers declined by \$500 million in the past five years.

Exhibit 3.2.4d – BC Forest Industry – Asset Renewal



3.3 Global Context

The products of the BC Pulp & Paper industry are each exposed to different competitive factors in the global and North American marketplace. Each individual production facility has a unique cost structure and competitive advantage (or lack thereof). The global factors impacting each major product of the BC industry are outlined in the following section. Where possible, the average BC producer’s cost structure relative to world or North American competitors and key drivers of competitive advantage are also discussed.

3.3.1 Mechanical Printing Papers

Newsprint

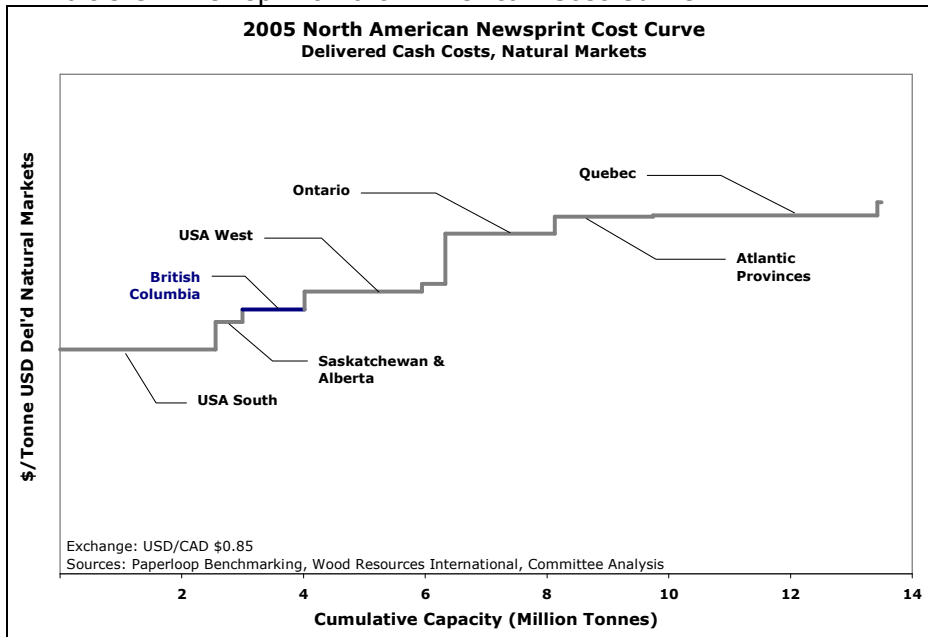
Global demand for newsprint in 2004 totaled 37 million Tonnes and is forecast to grow 0-1% per year from 2005 to 2007. Demand growth is expected in Asia and Eastern Europe, partially counteracted by slow demand decline in Japan and significant demand decline in North America. North American demand has dropped every year since 2000 and total demand is forecast to be ~10 million Tonnes in 2005 – a 5% drop from 2004 levels. Demand is expected to decline at 2-4% per year through 2006 and 2007, pressuring North American producers to reduce capacity. Imports from outside of North America account for only 2.4% of North American demand.

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Global newsprint capacity in 2004 totaled 39.6 million Tonnes and is expected to grow ~1% between 2005 and 2007. The majority of this new capacity will be in China (1.5 million Tonnes), partially counteracted by capacity closures in North America totaling 1 million Tonnes. The global supply/demand balance is expected to be between 92-94% in 2005 to 2007. North America is expected to produce 12.6 million Tonnes annually with exports totaling 20% of sales due to low domestic demand (10 million Tonnes). Rising energy and transportation costs combined with lower export pricing will result in significantly lower profitability on export business, further increasing the pressure to rationalize North American capacity.

BC newsprint producers are, on average, low cost suppliers to the Western US and second quartile suppliers to the US East (Chicago). BC enjoys stable power costs and currently has low fibre costs due to the mountain pine beetle epidemic and increased lumber production post-Softwood Lumber Agreement. These advantages are partially counteracted by higher labour and overhead costs in the region. There has been one newsprint machine closure in BC in the past year and a number of marginal machines continue production due to the advantages of power and fibre pricing mentioned above. Over-supply of newsprint to the North America market has driven pricing down to the point that BC's newsprint sector is cash positive but is not returning adequate return on capital on a consistent basis, even with its favourable cost position. This speaks to the need to shift to higher value added grades with better supply-demand balances and potential for adequate ROCE.

Exhibit 3.3.1 Newsprint North American Cost Curve



Uncoated Mechanical Printing Papers

Global demand for uncoated mechanical grades was 15 million Tonnes in 2004 with growth of 2 to 3% per year forecast until 2007. North American demand is expected to be 6.4 million Tonnes in 2005 with growth of 2.7% until 2007. Demand growth is primarily driven by retail sales advertising and inserts; further growth is due to grade switching between coated, uncoated and newsprint grades.

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Global capacity is 16.6 million Tonnes with projected growth of 2.2% to 2007. The majority of capacity additions are in Western Europe (750 thousand Tonnes) and Eastern North America (320 thousand Tonnes). No new capacity is expected in Western North America despite regional under-capacity.

Western North American uncoated mechanical capacity is comprised of a number of small machines that generally have been converted from newsprint production. Transportation and energy costs are regionalizing supply/demand balances, allowing these smaller machines to continue operating despite pressures from lower cost capacity elsewhere. BC capacity is low cost delivered to the Western US; freight costs and lead time advantages are partially shielding BC's capacity from imports.

Coated Mechanical Printing Papers

Global demand for coated mechanical grades was 17 million Tonnes in 2004 with growth of 2.3% per year from 2005 to 2007 expected in major markets. In North America, demand is forecast to be 6 million Tonnes in 2005 with growth of 1-2% per year in 2006 and 2007. Primary end-uses are the growing magazine, catalog and retail insert market segments. North American capacity supplies 16 million Tonnes of domestic demand, the remaining 1 million Tonnes is satisfied by European imports.

Global capacity is 20 million Tonnes and is expected to grow at a lower rate than demand, improving the supply-demand balance of the grade. The majority of new capacity is expected in Western Europe and China. China is expected to export coated mechanical grades to North America until Asian demand increases to match supply. Capacity growth expectations in North America are limited to a few speculative (i.e. unapproved) projects of which the most credible are machines in Ontario and Minnesota.

BC is home to the only coated mechanical machine in western North America. The west is undersupplied with coated mechanical grades and is attracting mid-western and eastern supply as well as Chinese imports. Rising transportation and energy prices are increasing the cost of this external supply to the west and increasing the competitive advantage of BC based supply. BC's capacity is first quartile delivered to the west of North America and borders between first and second quartile for delivery to Chicago. As noted in the financial performance analysis of the industry, coated mechanical printing papers have significantly out-performed the rest of the paper industry of BC.

3.3.2 Coated Freesheet Paper

Global coated freesheet capacity in 2004 totaled 28 million Tonnes with 4.9 million Tonnes of capacity residing in North America¹⁴. North American demand was 5.6 million Tonnes in 2004 with imports of 1.3 million Tonnes, 23% of North American volume¹⁵. The West Coast of North America is particularly accessible to Asian imports which are a source of both volume competition and price pressure. BC's coated freesheet capacity is endangered in the near term by these realities.

¹⁴ Source: Pulp & Paper Products Council (PPPC)

¹⁵ Source: PPPC

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3.3.3 Kraft Based Papers

Unbleached Virgin & Recycled Linerboard

US consumption of unbleached linerboard has declined in four of the past five years. North American production capacity of unbleached linerboard has been reduced by 6 million Short Tons since 1998 due to trends such as product substitution (shrink wrap, etc.), mega retailers, increased imports of finished goods (in boxes) and environmental issues (packaging reduction.) Overseas production has increased in Europe and Asia, reducing export opportunities for North American producers.

As with other products, the Canadian dollar is significantly impacting margins for linerboard. Four linerboard machines have shut down in Eastern Canada over the last 18 months; this is a symptom of the fact that Canadian producers lack the pricing power necessary to raise prices to counteract the dollar.

Manufacturing cost pressures for linerboard are heavily linked to those of the chemical market pulp sector due to the high proportion of chemical pulp in the product. Significant progress has been made on controllable costs in BC operations with more improvement expected, however these improvements will not fully counteract the rapid movements of the Canadian dollar.

White-top Linerboard

White-top linerboard has seen many of the same market realities as unbleached linerboard. White-top has been partially insulated from finished goods import pressures due to the more varied uses of the product, which include produce and higher value-added products still manufactured in North America. The impact of the Canadian dollar and cost pressures are very similar between the two grades.

3.3.5 Market Pulp

Chemical Market Pulp

World paper grade chemical market pulp capacity was 48 million Tonnes in 2004 with corresponding demand of 45 million Tonnes¹⁶. Bleached softwood, the grade of chemical pulp produced in BC, represents 22.4 million Tonnes of this capacity.

Exhibit 3.3.5a – 2004 World Paper Grade Chemical Market Pulp Capacities

	2004 Practical Max. Capacity (000's)	Comments
Bleached Softwood	22,445	Produced in BC
Bleached Hardwood	21,950	Not produced in BC
UKP (Unbleached Kraft Pulp)	2,580	Not produced in BC
Sulphite	1,370	No longer produced in BC
Total	<u>48,345</u>	

Source: Pulp & Paper Products Council Data

¹⁶ Source: Pulp & Paper Products Council (PPPC) Data

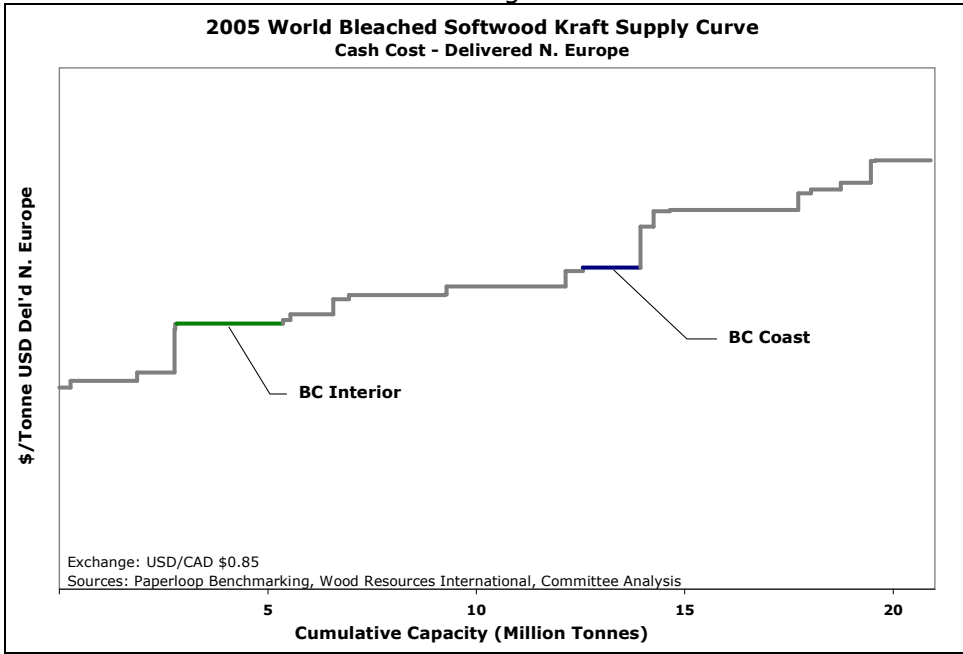
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Canadian chemical market pulp capacity was 8.9 million Tonnes in 2004: 6.8 million Tonnes of softwood, 2.0 million Tonnes of hardwood and 0.1 million Tonnes of unbleached pulp. Canada represents 18% of the world supply of paper grade chemical market pulp and 30% of the world supply of softwood chemical market pulp. Despite this significant market share, Canadian producers are price-takers in the marketplace; partially due to the very fragmented nature of the manufacturing base.

Cost

The cost position of interior producers is generally superior to that of coastal producers, as seen in exhibit 3.3.5b below. Interior mills are generally newer, more efficient facilities than coastal mills. Labour costs are higher on the coast due largely to mill age and manning efficiency. In addition, fibre costs are lower in the interior than on the coast. The current mountain pine beetle epidemic has resulted in significant reductions in fibre costs for both regions in the near term, it is unknown how long this impact will continue (see section 3.2.2).

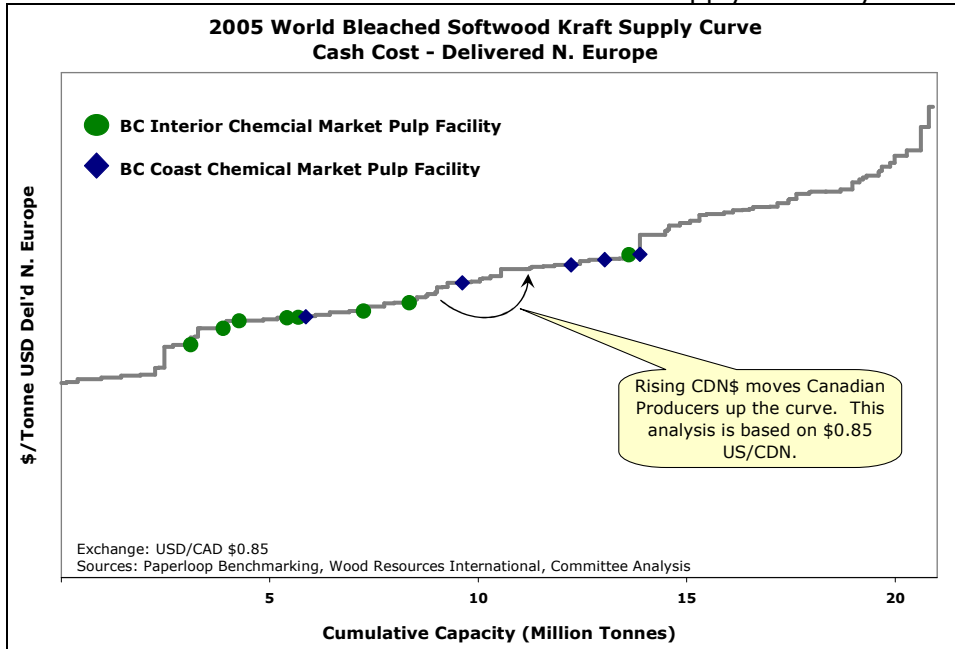
3.3.5b – BC Interior and Coast Average Delivered Cash Cost vs. World Capacity



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When individual facilities are identified on the cost curve, it is clear that a number of BC facilities, particularly on the coast, are at risk of closure.

Exhibit 3.3.5c – World Bleached Softwood Kraft Supply Curve by Mill



The competitive position of the major producing regions is represented in exhibit 3.3.5d below. Bubble size indicates the relative capacities of the regions, location on the horizontal axis indicates relative fibre cost and the vertical axis indicates the relative cost of conversion and market delivery. The current over-supply of fibre in the province has moved the BC interior into a 1st quartile cost position for fibre. Due to higher transportation costs for interior fibre and higher consumption of whole-log chipped fibre the coast has 2nd quartile fibre costs. Ranked against competing regions on conversion plus delivery to market, the Interior is 3rd quartile while the coast ranks in the 4th quartile.

This competitive analysis demonstrates that BC’s high conversion costs are currently being partially counteracted by low fibre costs. When fibre costs increase (due to declining supply) BC operations will react with closures due to heavy financial losses. This rationalization of capacity should lower the fibre cost to the remaining mills, allowing their continued operation.

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Exhibit 3.3.5d – Competitive Position by Region

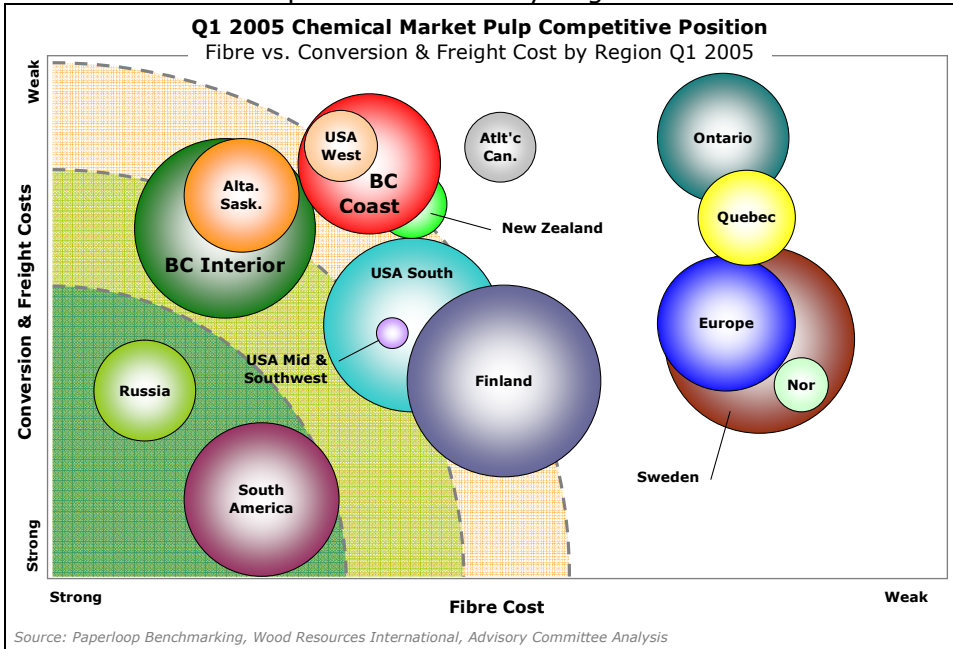
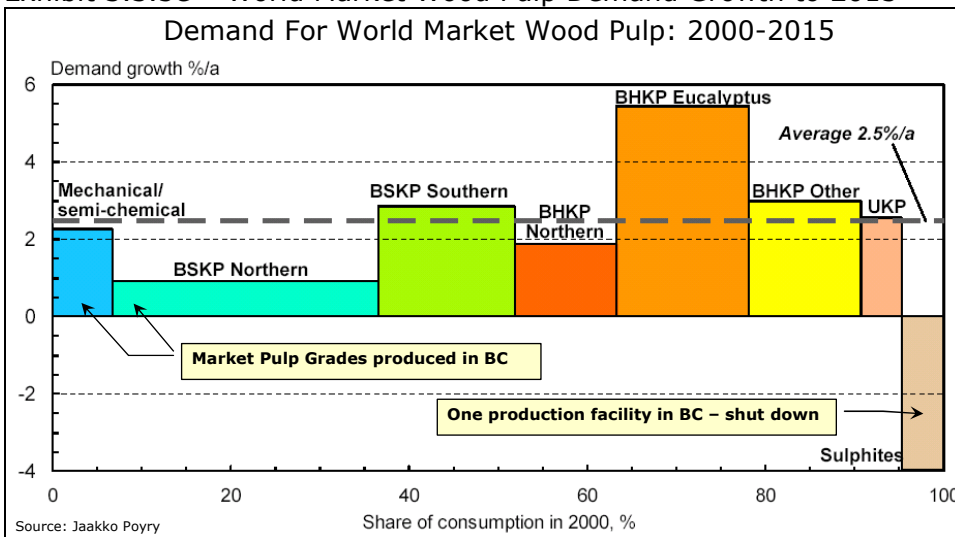


Exhibit 3.3.5e shows the Jaakko Pöyry Consulting view of world demand growth of market pulp grades to 2015. Products produced in BC have low growth rates, albeit against large baselines. In the case of BSKP Northern (discussed as Chemical Market Pulp in this report) world capacity is likely to decrease over the forecast period, improving the supply-demand balance for the grade*. Demand for all pulp grades is expected to increase with the exception of sulphite pulp which is not currently produced in BC**.

Exhibit 3.3.5e – World Market Wood Pulp Demand Growth to 2015



* Note: this is the view of the committee and does not necessarily represent the view of Jaakko Pöyry consulting

** Sulphite Pulp was produced at the Port Alice mill – restart scheduled

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Mechanical Market Pulp

World capacity of BCTMP in 2004 was approximately 2.8 million Tonnes, of which Canadian producers produce ~70%. BCTMP is subject to many of the same trends as chemical market pulp however supply demand imbalances are slightly more contained due to different substitution pressures for the grade. In 2005, a significant quantity of BCTMP capacity has started up in Europe and Asia – resulting in significant over-supply in the near term. This supply/demand imbalance is expected to continue and represents a risk to Canadian capacity.

3.3.6 Capital Subsidies and Incentives in Competing Jurisdictions

A number of global regions actively use government incentives to encourage investment in the Pulp & Paper sector. These regions recognize the value of the Pulp & Paper industry as a source of employment and economic activity. They also recognize that Pulp & Paper enhances the viability of their solid wood sectors. As is the case with BC, far less value would be extracted from the forest resource in the absence of a Pulp & Paper industry; with this in mind some regions are prepared to go to great lengths to establish and protect their domestic industries. Incentives in other regions are a risk to BC in two main ways:

- a. Incentives that delay or prevent closure of uneconomic facilities contribute to continued over-supply in various products.
 - o Continued oversupply increases downward price pressure, reducing the profitability of all market players
- b. Incentives that artificially encourage major capital can prevent capital investment in regions with superior competitive advantage.
 - o The first major capacity increase in a given grade generally fills the existing excess demand in the marketplace. This removes the incentive to invest in other regions; even if a significant competitive advantage exists (the increased risk of the second project eliminates access to capital).

A partial list of subsidies and other incentives are listed here:

Global

- International Finance Corporation (IFC), a member of the World Bank group, has provided financing of \$1.13 billion USD for Pulp & Paper projects worldwide. Many of these projects have been in South America.

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China¹⁷

- China has a National Strategy to modernize and increase the capacity of its domestic Pulp & Paper industry. The Chinese Central Government has been aggressive in setting policies to encourage the industry's development.
 - Access to capital
 - \$1.73 Billion US designated for plantation development
 - \$1.67 Billion US in government financing and loan interest subsidies for technology upgrades in 21 state-owned paper mills throughout China from 1998 to 2002
 - Tax policy
 - Tax holidays to attract foreign investment
 - VAT rebates on exports of value added wood products
 - Trade policy
 - Tariffs
 - Zero tariffs on inputs: logs, lumber, pulp and waste paper
 - Tariff exemptions for high-grade paper machinery
 - Continued tariffs on incoming value added wood and paper products
 - Anti-dumping investigations
 - Dumping margins on newsprint imports to protect inefficient domestic capacity
 - Recent anti-dumping movement against linerboard imports from the US

Europe

- Germany: Stendal and Rosenthal
 - Rosenthal - €102 million in German government grants
 - Stendal - €275 million in German government grants, 80% of project debt government guaranteed
- Highlights of other European loans & grants
 - Loans totaling €710 million
 - Grants totaling €1,128 million

Quebec

- Current: over \$450 million in aid over 3 years
- Frequent use of capital incentives, loan guarantees, job creation grants from various sources:
 - SGF Rexfor, Investment Quebec , Inno-Pap, Emploi Quebec

Ontario

- Current forest industry aid package
 - \$350 million in loan guarantees
 - \$330 million including:
 - \$150 million "prosperity fund" with incentives for cogeneration, productivity Capex and other investment attraction incentives
 - Multi-ministry steering committee to trouble-shoot cost creep and excessive regulation

Newfoundland

- Proposed payments of up to \$150 million to keep a newsprint mill open
 - Negotiations ultimately failed, mill closed

¹⁷ American Forest & Paper Association, 2004. "China's Subsidization of its Forest Products Industry"

3.4 Direction

The direction of the BC Pulp & Paper industry discussed in this report is based on the views of the Pulp & Paper Industry Advisory Committee: an expert panel of CEO's and senior representatives from BC's Pulp & Paper companies, the principal Pulp & Paper labour union in the province, and industry experts.

3.4.1 Mechanical Printing Papers

Newsprint

North American demand is expected to continue declining in the near and long term. Particularly relevant for BC will be significant consumption reductions in western North America coupled with reduced export opportunities to Asia due to increasing supply in that region. These factors will combine to cause dramatic over-supply on the West Coast and are likely to result in significant shut-downs of newsprint capacity. Chemical pulp closures, particularly on the coast, will also impact newsprint prospects as three of five newsprint mills in BC are integrated with chemical pulp operations. Closure of half of an integrated facility typically has significant cost impacts on the rest of the operation (paper); newsprint machines will be particularly susceptible to closure under these circumstances. The Pulp & Paper IAC expects two newsprint machines, likely on the coast, to close within the next ten years. Recent actions by governments in competing North American jurisdictions to prop up their paper sector may delay or prevent the shutdown of newsprint capacity. This will maintain the supply pressure in the marketplace and could result in the closure of additional BC capacity.

Uncoated Groundwood

Uncoated groundwood consumption is expected to continue growing in North America, with a shift toward higher quality (brightness, gloss) grades. This shift in quality will reduce the competitive position of BC's capacity as machine capabilities are exceeded by the requirements of the market. Robust demand and quality increases will motivate incremental capacity improvements and moderate quality improvements. There are significant opportunities for new machine installations and substantial upgrades however large capital expenditures cannot be justified in the current environment; these upgrades could potentially counteract the expected newsprint closures noted earlier. Other jurisdictions are implementing aid packages that could stimulate conversions in these areas. If a significant number of newsprint machines are converted to uncoated grades elsewhere in North America, the opportunity for conversions in BC will disappear.

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Coated Groundwood

Demand for coated groundwood papers is expected to continue growing in North America and the World in the near term. Capacity additions in Western Europe and China are expected, however energy and transportation costs work against the competitive advantage of these new machines in the North American marketplace. The current supply balance to Western North America and BC's advantages to paper production represent a significant opportunity for coated mechanical capacity growth in BC. Despite these advantages, the current BC industry has been unable to secure capital for a project of this magnitude (~\$400 to \$600 million). There is a significant risk that government incentives will be used to convert a machine to coated groundwood elsewhere in North America despite BC's clear competitive advantage. This would likely preclude a similar conversion in BC as a second machine would risk over-supplying the market.

3.4.2 Coated Freesheet Printing Papers

The prospects of coated freesheet printing paper are poor due to pressures from the Canadian dollar, freight costs and heavy competition from Asia in the Western North American marketplace. The ownership of BC's sole coated freesheet machine has announced a sale process for the mill.

3.4.3 Kraft Based Papers

The markets for kraft based packaging grades are generally declining and the lifespan of BC's facilities will largely depend on the cost position of each producer. Energy, market proximity and fibre cost advantages in BC will help maintain the viability of these facilities, as will the value-added nature of the end-products when compared to market chemical pulp operations. The overall expectation is that kraft based papers will fare better than market chemical pulp when the post-mountain pine beetle fibre supply impact takes hold.

3.4.4 Market Pulp

Coastal Market Pulp

Disinvestment in coastal market pulp assets will continue, no new investments are expected and producers are likely to spend little or no profit adding capital in their facilities. One market pulp facility on the coast is expected to close within the next 2-3 years if not earlier. Any facility that encounters a major capital repair is expected to shut down rather than investing extensive capital; in the face of low or nonexistent long term ROCE, capital is simply not available for these investments. Over the next ten years, 1 or 2 other facilities are expected to close for similar reasons as the asset base ages and poor ROCE continues. With 50% of existing (i.e. currently running) coastal capacity shut down, consumption of fibre will be in balance with regional supply. This is provided there is not a significant reduction in coastal solid wood activity; if more sawmill operations close, coastal Pulp & Paper capacity will be reduced to match and the critical mass of the coastal industry will likely be at risk. During the intervening period – before coastal capacity balances with coastal fibre and while the MPB effect continues – the current imbalance of fibre usage on the coast will continue (this is discussed further in section 6.1.4). With regional fibre balance restored, it is reasonable to expect surviving mills to be more profitable due to lower fibre costs.

Interior Market Pulp

Until sawmilling activity in the interior moderates, the current surplus of chips and corresponding low pricing will help maintain the profitability of the interior market pulp industry. The prospects for investment in the interior will be limited until the lasting effects of the MPB epidemic are better understood. Once the AAC of the province is reduced post MPB, one half of interior pulp assets will likely shut. As with the coast, any major capital repairs will threaten mills with closure due to the lack of long term ROCE.

4.0 Conclusions: Current Reality in BC

Conclusion 1: Pulp & Paper are a large part of the ultimate solution

BC's forest industry requires a consumer for the by-products of the solid wood sector. Energy uses of Pulp & Paper grade fibre may become economic over the long-term however these uses will support a lower fibre value than a viable Pulp & Paper industry. The current industry is already supporting a much higher value than energy uses can economically justify. A number of side-stream options for pulp mills exist today however these too have yet to mature to a level that will support the fibre value that the current pulp industry supports. Beyond simply paying more for the fibre input, the economic value added by producing Pulp & Paper is significantly higher than the value added by producing power.

Conclusion 2: Mechanical Printing Papers are sustainable in BC, but changes are required to generate adequate ROCE and access capital for new investment

BC offers a number of key strategic advantages for producers of mechanical printing papers including well suited fibre and stable electricity costs. Even with these key advantages the BC industry has not generated adequate ROCE, primarily due to over-supply in newsprint and other aspects of the BC cost structure. Consequently, newsprint machine closures are expected over the next ten years. The key success factor for the mechanical printing papers segment is the ability to gain access to capital in order to invest in papermachine and mill upgrades.

Key factors that impede access to capital for the BC industry include poor industry structure, historical and continuing extraction of excess social rent from the sector and the relatively small size of the Pulp & Paper companies of BC. Increased consolidation will help rationalize the industry structure, while increasing the size of companies to yield economies of scale and the ability to execute large capital projects. Capital access is also impeded by the high availability of capital in other regions such as China and South America. These regions are aggressively increasing capacity in key grades through subsidization, reducing the ability of BC producers to compete in these grades. Government intervention in Ontario and Quebec could be artificially increasing the lifespan of assets which would otherwise close, further aggravating oversupply in the market pulp and newsprint markets. Section 5.2.1 examines an investment scenario for BC and examines the challenges to capital access further.

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Conclusion 3: Coastal Chemical Market Pulp is not sustainable and is in near-term crisis

The coastal Market Pulp industry is not sustainable and is in near-term crisis. In the absence of adequate ROCE, coastal facilities are running to generate cash. The capital intensity and economies of scale of these facilities demand high operating rates which hide the underlying reality that these facilities are significantly challenged in the near term. Reduced fibre costs due to the surplus of chips in the interior are partially counteracting low product pricing, the high Canadian dollar and 4th quartile conversion costs. This committee expects 1 mill to shut down within 2-3 years (if not less) and 2 further closures within ten years. A significant capital investment requirement at any given coastal pulp mill is likely to result in closure.

Conclusion 4: Interior Chemical Market Pulp, while stable in the near term, is not sustainable long term

The interior market pulp industry, while stable in the near term, is not sustainable in its current form. The interior currently has a surplus of fibre due to the mountain pine beetle (MPB) Annual Allowable Cut uplift and the increase in industry output after the expiry of the Softwood Lumber Accord. Fibre prices are significantly lower as a result and are providing a near-term boost for the interior industry. Residual fibre supply will be significantly reduced once the MPB epidemic has run its course and prices will likely increase; this reduces the ROCE prospects of the mills and is a barrier to long term capital re-investment.

Conclusion Summary:

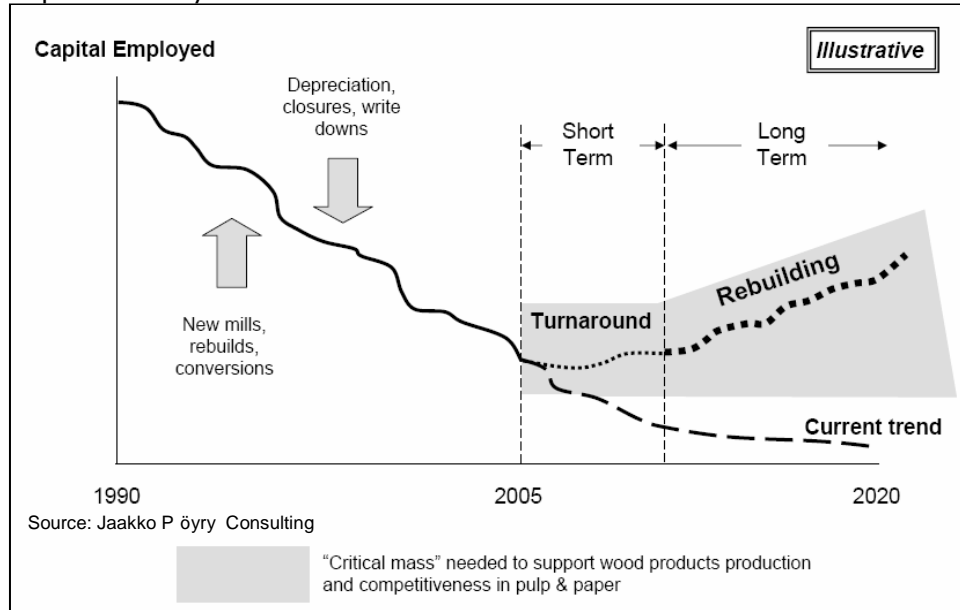
The Pulp & Paper Industry in BC is in a state of decline and the coastal pulp industry in particular is in near-term crisis. The industry is drawing down its capital base: ROCE is well below the cost of capital, eliminating access to the capital required to re-invest and rebuild. Section 5.0 discusses the process of building conditions for long term success to allow the turnaround and rebuilding of the industry.

5.0 Building a Sustainable Pulp & Paper Industry in BC

The BC Pulp & Paper industry must achieve a turn around and then rebuild itself. Turn around will require near-term action to stop the decline of the industry before the balance between Solid Wood and Pulp & Paper is lost (critical mass). Government has a role to play in the turn around of the industry by reducing the social rents paid by the industry to allow a return to profitability. With profitability and prospects for future return on investment the industry will be better able to access the capital investment necessary to re-invest and begin rebuilding. A conceptual diagram of this process can be seen in Exhibit 5.0a – the capital employed by the industry has been declining over time as producers have been unable to reinvest due to risks and low expected returns. The turn around phase must stop this downward trend by returning the economic incentive to invest in this industry: prospects for sustainable ROCE above the risk adjusted cost of capital. With this in place the industry will be able to access capital and rebuild. Ultimately, the industry will be able to once again bear higher social rents; but likely not of the magnitude that has been supported in the past.

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Exhibit 5.0a – Conceptual Diagram: Turn around and Rebuilding of the BC Pulp & Paper Industry



The remaining sections of this report detail the concept of sustainability for the BC Pulp & Paper industry, the near term responses required of government and the responsibilities of the industry in contributing to its own success. The Pulp & Paper IAC has considered a framework for appropriate government response with emphasis on retaining efficient market forces in the BC industry.

5.1 A Sustainable Pulp & Paper Industry in BC – Defined

To be sustainable, the Pulp & Paper industry in BC must generate Return on Capital Employed (ROCE) in excess of its risk-adjusted cost of capital over the long term. This suggests that the following key conditions must exist on a long term basis:

- a) Sufficient demand for the products of the industry
 - b) Adequate volume and quality of raw materials
 - c) Cash cost is first quartile versus market producers
 - d) Socially acceptable environmental practices
 - e) Sufficient re-investment in the industry to:
 - o Maintain competitiveness
 - o Meet market demands for quality & compliance
- a) Sufficient demand for the products of the industry

In general terms, there is sufficient demand in the marketplace for the products of the BC Pulp & Paper industry. A number of individual Pulp & Paper grades are over-supplied or are experiencing declining demand. However, in these cases an efficient capital market will channel new investment in BC into different grades, or convert existing capacity to more profitable grades.

b) Adequate volume and quality of raw materials

There is adequate volume and quality of raw materials (chips) provided the BC industry adjusts to current imbalances. The coastal supply of economic chips is insufficient for existing demand; consequently, high transportation cost interior chips are being brought to the coast. In turn, the interior of the province is currently over-supplied with chips due to the Mountain Pine Beetle (MPB) epidemic. As the epidemic progresses it is generally expected that interior fibre supply will drop off. In the absence of an outflow of economic chips from the interior the coast must rationalize capacity and only those investments that suit this emerging reality will be contemplated. Pulp & Paper industry in BC will be smaller in the future: sized to match the stable residual and economic pulp log output of the solid wood sector.

c) Cash cost is first quartile versus market producers

At its inception, the BC Pulp & Paper industry enjoyed a global cost advantage due to low cost fibre and energy in addition to new world-class mills with conversion cost advantages over the competition. Over time these advantages have diminished to the point that many facilities in the province are nearing the end of their economic life. In general, the cash cost of BC's existing capacity is not first quartile versus market producers. The industry's cash cost is comprised of three main cost components: fibre, conversion and other.

First quartile fibre cost can be achieved and maintained in BC by ensuring a prosperous solid wood sector and by ensuring that first quartile fibre costs at the stump flow through to first quartile fibre costs delivered to the mill. This implies a balance between supply and demand of pulp fibre (rational capacity) as discussed in point b) above.

First quartile conversion costs will require capital investment in the asset base as most existing BC capacity cannot achieve first quartile conversion costs without modification or replacement. The feasibility of such investments is explored in the following section of this report. Other cash costs of the industry include taxation and non-manufacturing costs. Many of these are the social rents that are generally high in BC.

d) Socially acceptable environmental practices

The products of the BC Pulp & Paper industry must be environmentally acceptable in the marketplace. This requires clean production and good community relations as well as a regulatory and cultural environment that helps ensure the right conditions exist to meet the expectations of customers and society. The forest industry as a whole must operate in an appropriate manner throughout the value chain (from trees to products) in order to ensure both sustainability and customer acceptance.

- e) Sufficient re-investment in the industry to maintain competitiveness and meet market demands for quality & compliance

Re-investment is a critical area in which the industry must exercise discipline. In order to maintain competitive advantage the industry must invest a proportion of free cash flows to maintain and enhance the business. The BC industry has a history of re-investment despite its declining asset base: available cash has been reinvested in existing assets, even during the poor profitability of recent years. While the BC industry has shown inclination to reinvest, ROCE to support investment has not been present.

5.2 Major Pulp & Paper Investment in BC – Status Quo Feasibility

Three major investment scenarios were analyzed by the Pulp & Paper IAC to establish the high-level feasibility of major investment in BC. Jaakko Pöyry Consulting was engaged to model these prospective investments on their respective cost curves. A lightweight coated mechanical printing papers machine installation on the coast was considered, as were two chemical pulp mills: one on the coast of BC, the other in the interior. By reviewing these investments under status quo conditions, gaps between today's conditions and those that must be created can be identified and discussed.

5.2.1 Lightweight Coated Mechanical Printing Papers Investment

Assumptions

The Lightweight Coated (LWC) mechanical printing papers investment assumes that a machine is built at an existing coastal mill site that provides steam, power and effluent infrastructure (brownfield). The assumed capacity is 420,000 Tonnes, producing a #5 Coated Groundwood grade (aka LWC), 40# sheet with an on-line coating and off-line calendering. This grade was selected as an indicator grade and is not necessarily an indication of the most likely paper grade to be invested in. Fibre is assumed to be 100% Hemlock, both from sawmill residuals and whole-log chips. Capital cost of the installation is estimated at: \$700 million CDN.

Competitive Position

The prospective LWC machine would be well positioned in the North American market as a new, highly efficient installation with high capacity. Exhibit 5.2.1a represents the machine's competitive position graphically. The production cost of the LWC machine would be low first quartile in the North American market as shown in Exhibit 5.2.1b.

Exhibit 5.2.1a – Competitive Position of Theoretic LWC Machine Investment

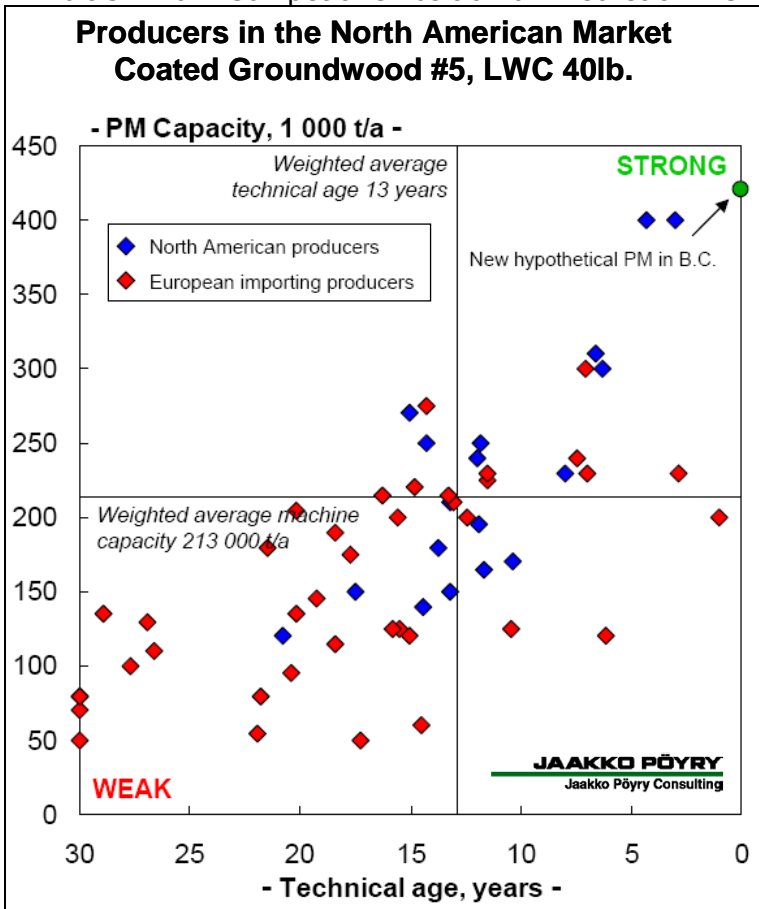
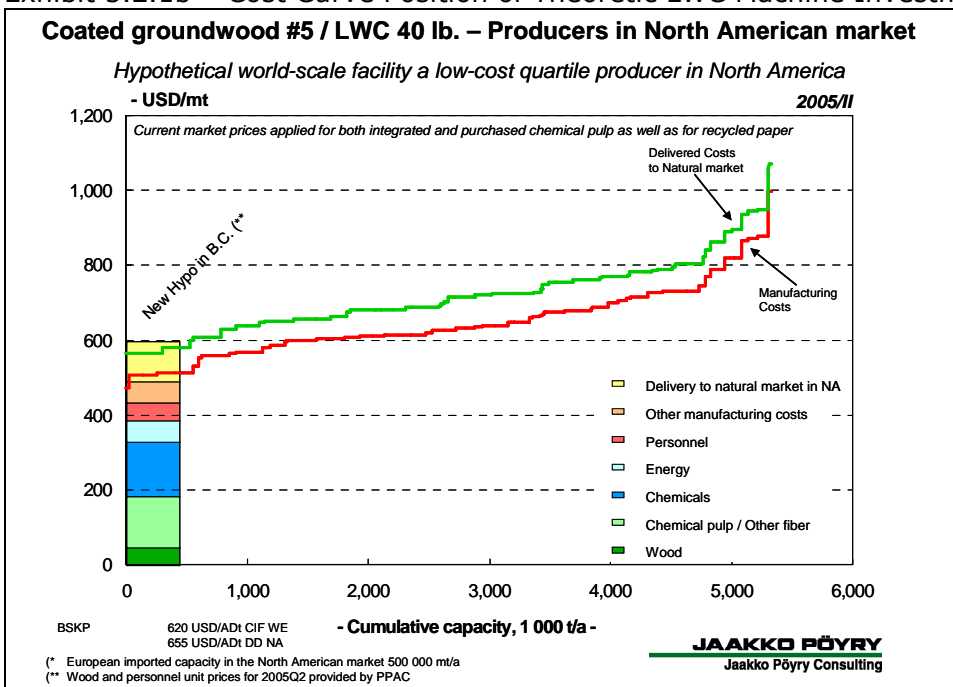


Exhibit 5.2.1b – Cost Curve Position of Theoretic LWC Machine Investment



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Barriers to Investment

Estimates indicate that ROCE would marginally exceed a Weighted Average Cost of Capital (WACC) target of 10% for this project. WACC of 10% assumes 40% debt financing at 8% and 60% equity financing at an 11.3% return; these debt and equity rates reflect *industry* risk levels but not necessarily the risk of a specific investment. The issue for BC is that the long term *risk-adjusted* Weighted Average Cost of Capital is higher than 10% due to the specific risk exposure of Pulp & Paper investments in this province. Long term ROCE is exposed to significant risks from a number of factors in BC, including fibre costs, labour disruptions, environmental controversy and social rents. External market pressures such as demand declines or capacity increases also present risks to the ROCE of this prospective project.

The risk of increased fibre costs (versus today) have been discussed and are of major concern due to the MPB epidemic, stability of the coastal solid wood sector and the risk that industry rationalization will be prevented through mill bail-outs. The chance of labour disruptions at the facility itself can be reduced through progressive union-management relations; however BC's history of unrelated third party disputes that impact mill operations is of concern (see section 3.2.4). Social rents that can drastically change once capital has been invested are also significant risks, these include municipal taxes and the stumpage portion of fibre costs. Capacity increases in this grade due to stimulatory measures by other jurisdictions also pose a significant risk to this prospective project. In the face of these risks, there is insufficient motivation to make this investment: ROCE is *less* than long term risk-adjusted WACC. BC must reduce or eliminate the risks and costs within the province's control to the point that industry is motivated to make this type of large scale investment.

5.2.2 World Scale Chemical Market Pulp Mill Investment

Assumptions

The chemical market pulp investments assume that a new mill is constructed from the ground up (greenfield). The assumed capacity of the pulp facilities is 650,000 Tonnes from a single pulping line, producing Northern Bleached Softwood Kraft (NBSK) pulp from today's species mix in each of the two regions modeled. The greenfield mills would be net producers of electricity and are assumed to sell power into the grid at the BC average rate. The capital investment for one such facility is estimated at \$1 to \$1.15 billion CDN, the investment would be approximately 10% lower if an appropriate brownfield site were used.

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Competitive Position

The prospective pulp mills would be well positioned in the global market due to their advantages of scale and modern technology. The interior facility's cost is \$34.5 million CDN per year lower due to lower fibre costs versus the coast. Exhibit 5.2.2a compares the interior and coastal facilities against the existing BC average production cost. Notable differences include energy, which is a source of *revenue* for the prospective mills, versus a significant *cost* for the BC average. A modern European facility is also included in the exhibit; despite significantly higher fibre costs, this mill's delivered cost to Europe is very close to that of the coastal facility. Chemicals, personnel and other manufacturing costs are significantly lower for the prospective facilities due to the economies of scale and efficiencies of the new facilities. Exhibit 5.2.2b shows the relative position of the mills versus world producers. Both mills are first quartile although the advantage of the interior mill is apparent.

Exhibit 5.2.2a – Cost Breakdown of Prospective Mills versus BC Average

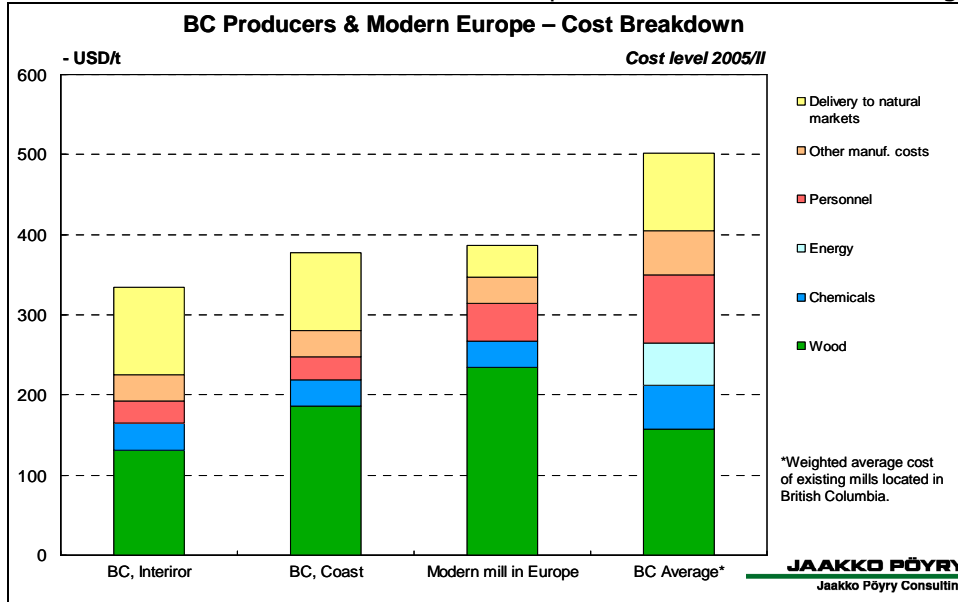
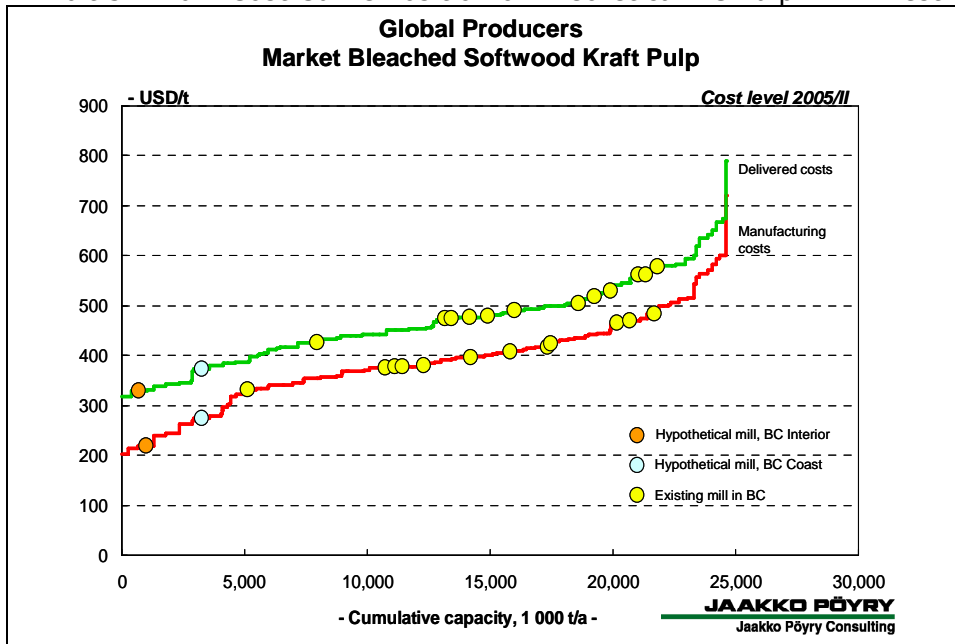


Exhibit 5.2.2b – Cost Curve Position of Theoretical BC Pulp Mill Investments



Barriers to Investment

Estimates suggest that the coastal facility would not achieve ROCE of 10% by a wide margin. The gap to achieve targeted ROCE with the coastal investment is approximately \$47 million in reduced costs per year. The same estimates suggest that the interior facility also would not return ROCE of 10% but by a narrower margin; the gap is approximately \$16 million per year for the interior. Based on this analysis and given the massive capital expenditure involved it is highly unlikely that any company would contemplate one of these investments under status quo conditions. As with the LWC investment, the mitigation of risks and costs by the province would improve the prospects for these investments; although the gap is far higher for the pulp investments.

BC’s lack of consolidation also reduces the prospects of large pulp investments due to the volume of fibre they require: each new pulp mill would consume more fibre than two existing mills. On the coast this means existing pulp mills would need to close to free up fibre; the current over-supply of chips in the interior suggests one mill would need to close in the near term, with a second in the longer term. There is currently insufficient concentration of ownership in the coastal industry to allow this to occur and while *possible* in some regions of the interior, it should be considered unlikely.

5.3 Parameters for Government Response

The manner in which government responds to the issues facing the Pulp & Paper industry is vital to the effectiveness of the response. The guiding principle of this response should be: *even-handed reduction of the social rents paid by the industry*. The following key parameters focus on ensuring that government intervention and assistance does not impede the efficient market forces that will guide the rebuilding process:

- a) Recognize that this is a long-term problem which will require long-term solutions and commitment.

The near term actions that are included in this report are a vital first step to the turnaround and rebuilding of the Pulp & Paper industry in BC; however further actions will be required in the mid and long term. Some of the required actions will not be apparent until the impact of the mountain pine beetle is known and others will depend on the movement of international markets for BC's products.

The government must build knowledge of the industry and its challenges, then define long term actions in consultation with industry.

- b) Interventions should be executed in a manner that minimizes market distortion.

Intervention by government should be done in a manner that does not significantly advantage one player over others. The short term recommendations of this report are compatible with this view; a property tax solution that impacts *all* municipalities is favoured for example.

- c) As mills ultimately fail it will be preferable to provide government aid for the adjustment of workers and their communities rather than propping up failing mills. The capacity of the Pulp & Paper sector must be allowed to adjust to the changing economics of its products and the fibre supply of the province. Measures to improve general profitability, rather than case by case bail outs, will ensure that the facilities that ultimately shut-down will be the least viable from a competitive, rather than political perspective.

A few competing regions do so with subsidies, examples of which were included in section 3.3.6 of this report. Response in kind is not *typically* advisable; recognition of the problem and response through other mechanisms (such as those advocated here) is the best course of action. With that said, a number of actions being considered or underway in other provinces present major risks to the BC industry. Grants for capital investment in papermachine upgrades and energy efficiency improvements for pulp & paper mills could prevent closure of eastern mills and challenge BC facilities which would otherwise be viable. Some of these government subsidized upgrades could directly preclude the ability of BC companies to make similar investments despite BC's competitive advantages.

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- d) Intervene where the market fails or where the province is already involved.

In industries with low consolidation such as the Pulp & Paper industry of BC the market can fail to motivate optimal behaviour because the benefit for any single player is insufficient to motivate action. Examples for the BC industry include research into alternative uses for Fir and Cedar residuals. Coastal Pulp & Paper producers also have a considerable interest in the viability of Hemlock for solid wood uses due to the interdependence of the two sectors. Facilitation of R&D into this type of industry-wide issue is a very appropriate role for government.

The BC Government is already involved in electricity rates, stumpage, taxation and regulation in the province and these represent areas in which even-handed adjustment of the cost structure of the Pulp & Paper industry is appropriate and necessary.

- e) Reduce regulatory and policy uncertainty.

Uncertainty or lack of clarity in policy direction ultimately increases the risk exposure of major investments in a jurisdiction. The BC Government controls a large number of factors that affect the ultimate success of the Pulp and Paper industry: power policy and costs, fibre costs through stumpage and forestry policy, environmental policy & compliance costs, and even the structure of the labour environment. Where the future of policy cannot be predicted, such as with the mountain pine beetle epidemic, it is desirable to have as much clarity as possible between parties to minimize risk. The forum discussed in item a) above is an excellent tool to help reduce uncertainty and build trust between industry and government.

6.0 Recommendations

The recommendations of the Pulp & Paper IAC are split into two segments. The first segment deals with re-establishing conditions for a long-term viable Pulp & Paper industry in BC. The second segment outlines recommendations to start the process of turnaround for the BC industry.

6.1 Recommendations: Ensuring Conditions for Long Term Success

Section 5.1 of this report discussed the long-term conditions that must exist for BC to retain a viable Pulp & Paper industry. While there is sufficient demand for BC's Pulp & Paper products it is clear that raw materials are at risk of imbalance, cash costs are not globally competitive and conditions for reinvestment therefore do not exist. The first step for BC must therefore be re-establishing these conditions for success and ensuring they exist for the long-term. Long-term mechanisms to assure these conditions must not be underestimated as they significantly impact the perceived and actual risk of investments in this industry and this region. Other global jurisdictions have been attracting Pulp & Paper investment by mitigating risks for investors (i.e. assuring long term ROCE). BC can combat these incentives by leveraging BC's advantages rather than by responding in kind.

The key conditions in need of action are:

- Market acceptance of the industry's environmental performance
- A viable solid wood sector
- Increased consolidation through combinations and shut-downs
- World first-quartile delivered fibre cost – assured for the long term
- A labour culture compatible with value-added manufacturing
- A knowledgeable government, engaged with the industry as a key stakeholder

Implementation of the following recommendations will lay the necessary foundation on which to rebuild BC's Pulp & Paper industry:

6.1.1 Ensure the Viability of the Solid Wood Sector

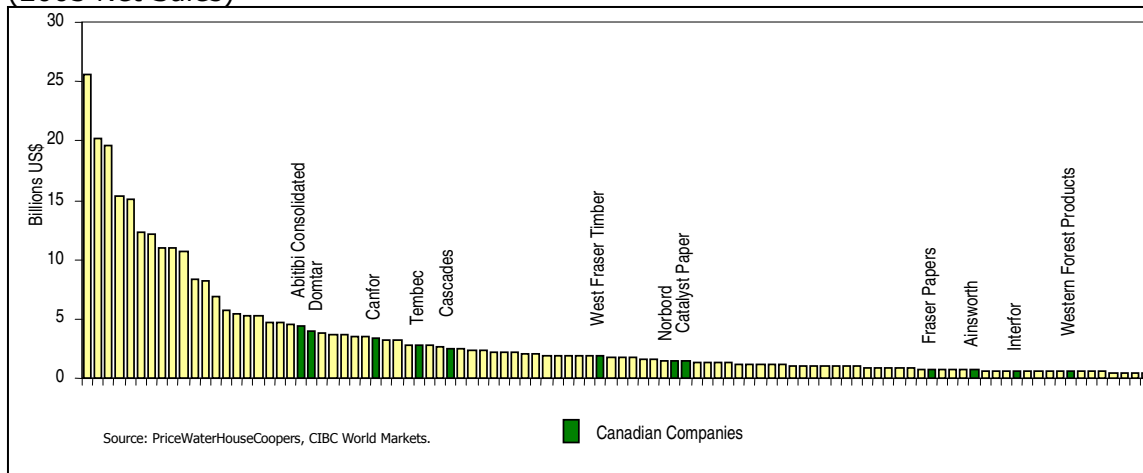
The Solid Wood and Pulp & Paper sectors are dependant on one another to efficiently create value with BC's forest resource. It is therefore critical that the government provide appropriate support for the solid wood sector as advocated by the Wood Products IAC; however *world-first-quartile fibre costs must flow through to Pulp & Paper* if the industry is to turn around and rebuild for the future. The imbalance of fibre residuals in BC is of particular concern and reinforces the critical nature of the solid wood sector's problems on the coast.

6.1.2 Encourage Healthy Consolidation

Consolidation through asset closures and merger & acquisition activity is essential to the long term viability of the Canadian and BC forest industry. The current environment creates significant barriers to the rationalization of the industry and government must help remove these barriers.

Canada is the largest forest products exporter in the world, yet the largest forest products company in Canada ranks 21st worldwide. There are 12 Canadian companies in the top 100, as seen in exhibit 6.1.3 below.

Exhibit 6.1.3 - Top 100 Public Companies in the Global Forest Products Industry (2003 Net Sales)¹⁸



The scale of companies is of particular importance for the BC Pulp & Paper sector. Companies must be large to access and support the size of capital expenditures that are required in the Pulp & Paper industry. For example, a new chemical pulp mill in BC with world class scale and efficiency represents an expenditure of \$1 billion or more. The papermachine conversions to higher value added grades that are so vital to BC's long term success range from \$400 to \$600 million, with greenfield (new) installations ranging far higher.

Beyond the ability to execute massive capital projects, operational economies of scale are required to successfully compete in the global marketplace. These economies include greater leverage for distribution system investments, grade mix synergies and market presence. For raw materials, scale provides the ability to react rationally to supply shocks such as the inevitable mountain pine beetle supply reduction. Larger players are better able to reduce capacity to balance the supply and demand of fibre in a particular region.

¹⁸ Roberts, Don et al. "Changes in the Global Forest Products Industry – Defining the Environment for British Columbia." CIBC World Markets Equity Research Industry Update, March 14, 2005.

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The current BC environment has rendered it extremely difficult to affect permanent closure of production facilities. Investor groups are able to purchase facilities and operate them for cash in the short term; once cash flows disappear the companies are able to declare bankruptcy to avoid liability for environmental remediation and even severance. The vital rationalization of the industry is delayed as facilities rise and fall before finally closing permanently. This drawn out process ultimately extracts a higher cost from the small businesses in the communities and competitors which experience inflated fibre pricing and price pressures in the marketplace. Workers are often denied fair severance due to ill-fated asset purchases and bankruptcies – the funds invested in bail-outs and extracted from society in the process would be far better invested in the wellbeing of communities the first time an asset fails.

Recommendations

The BC Government must recognize that consolidation of the industry is part of the solution for BC. Consolidation will arise from both acquisitions and mill closures. Closures are the most likely scenario in the near term.

1. Do not intervene to prop up non-productive assets
 - a. Moves to bail out failing assets will delay or render industry turnaround impossible by perpetuating the inefficiencies that are hindering the industry
2. Encourage capacity rationalization where possible
 - a. Provide remediation assistance for industry
 - b. Provide assistance to communities when assets fail as an alternative to intervention in closures
3. Advocate a change in perspective at the Federal Competition Bureau
 - a. Consolidation in Canada's forest industry is necessary and healthy
 - b. Blockage and delay of mergers and acquisitions should be minimized

6.1.3 Reduce Fibre Costs

The primary fibre supply objective for the Pulp & Paper Sector is sustained, world-first-quartile delivered fibre costs.

Recommendations

All actions taken must recognize the interdependency of the Pulp & Paper and Solid Wood sectors. It is critical that low Pulp & Paper fibre costs at the stump are allowed to flow through to the fibre costs of Pulp & Paper mills. The Wood Products IAC has a number of recommendations that will improve fibre supply costs in the province. Given that favourable fibre supply costs improve the viability of the solid wood sector, the Pulp & Paper IAC supports these recommendations. Some specific recommendations related to the supply of Pulp & Paper fibre, which are part of the overall solution for the province, follow:

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1. \$0.25/m³ stumpage on low grade (X & U) Hemlock logs on the coast, with utilization policy that ensures an appropriate proportion of these logs are removed from the forest. (Y Grade logs are currently at \$0.25/m³.)
 - a. If high volumes of uneconomic logs are left in the forest the resulting environmental backlash will injure both Solid Wood and Pulp & Paper.
 - b. Lower utilization represents a failure to extract full value from the forest resource.
 - c. Healthy levels of available pulp logs allow Pulp & Paper operations to respond to sawmill market downtime as logs can be inventoried to deal with chip shortages.
2. Reduce the cost burden of low grade logs on the logging operator
 - a. Accounting for low grade logs with the same rigor as sawlogs is not warranted given the low value of the fibre.
 - b. Increased efficiency for the logger provides benefit for both sectors by improving the economics of logging.
3. In determining stumpage, the cost of sawlogs must react more quickly to the rapidly changing market value of the sawmill residues that represent 53% of mill output.
 - a. As market forces drive the price of residual chips down, the burden is shifted to sawmills – some of which are already financially challenged – until stumpage or sawlog prices adjust accordingly.
 - b. Without *both* healthy sawmills and healthy Pulp & Paper operations the economics of harvesting and processing collapse.
4. Measures that reduce the overall cost of doing business in the Solid Wood sector will ultimately increase the industry's output (more residuals available) and its ability to support lower residual fibre revenues.

6.1.4 Improve Government Knowledge of the Industry

This report is an important first step in building better government understanding of the realities and challenges facing the Pulp & Paper industry in BC. Considerable effort has been invested in outlining the shape of the industry, its global position and its apparent future; however this report only begins the process of building government knowledge. In general, government and stakeholders think only of solid wood when they consider the forest industry in BC. There is a general lack of government knowledge about the structure, challenges and contribution of the Pulp & Paper sector in BC.

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By recommending further study of this issue the Pulp & Paper IAC in no way diminishes the urgency of the near term actions identified here. In the view of the committee these actions are essential. The studies proposed here are intended to improve government's knowledge of the industry further, rather than to confirm the validity of this report's conclusions.

Recommendations

1. Commission two studies of the Pulp & Paper industry in BC:
 - a. Economic Study – The Value of the Pulp & Paper Industry to BC
A detailed study of the economic impact of the Pulp & Paper industry.
Quantifying:
 1. The industry's symbiotic relationship with solid wood
 2. Value generation in host communities
 3. Value generation for the overall provincial economy
 4. Employment, compensation and benefits
 5. Taxation at all levels
 - a. Provincial
 - b. Municipal
 - c. Personal
 - d. Stumpage
 - e. Permitting
 6. Impact of mill closures
 - a. Scenario: government intervention (bail out)
 - b. Scenario: orderly and final shutdown of a facility
 - b. Industry Study – The Competitiveness of BC's Pulp & Paper Industry in Global Markets
A detailed study of the BC industry considering:
 1. Regional fibre baskets
 - a. Comparisons or species, costs, volumes, environmental issues
 - b. Regions within BC will have different opportunities and challenges
 2. Basic cost input factors
 - a. Direct & Indirect
 - b. Trends
 3. Capital structure and capital availability in key competing regions
 4. Global benchmarking of costs, asset quality and operating performance
 5. Future demand trends for global and regional markets (for each applicable grade)
 6. Regional business models for industry development
 7. Logistics networks & costs for key competing regions
 8. Barriers to entry and exit in key competing regions
2. Use the knowledge gained: actively engage with the industry to foster conditions for success in the long-term

6.2 Recommendations: Starting the Turnaround

A key first step to turnaround for the industry is an improvement in Return on Capital Employed (ROCE) through reductions in the social rents borne by the industry. Prospects for adequate ROCE will improve the industry's ability to invest in profit adding projects, adding momentum to the turnaround process. If these or similar actions are not taken, the industry will continue to draw down its capital base. BC has the opportunity to learn from the mistakes of other provinces and turn its industry around before more drastic and expensive measures are required.

6.2.1 Reduce the Property Tax Burden of Major Industry

The Pulp & Paper IAC submitted a position paper on major industry property taxes in BC to the competition council before this report was completed. The position paper is attached and includes detailed analysis of this issue. Additional material on the impact and actions of the BC Assessment Authority can be found below; these were not available for the advanced submission.

Major Industry property taxes in BC are significantly higher than competing North American jurisdictions. BC Pulp & Paper producers pay total property taxes that are higher than the provincial average resulting in property tax costs per Tonne that rank among the highest in North America. These high property tax costs arise from the disproportionate burden of municipal taxes that Pulp & Paper facilities bear. The BC Assessment Authority process provides no real protection for major industry as municipalities have increased rates when assessment values declined in order to maintain or even increase revenue. When assessment values increase, municipalities have kept rates unchanged and collected windfall revenue for which no additional services are provided. The result: egregious taxation by municipalities with no functional mechanism for appeal or relief, a reality that is a significant disincentive to investment in the province.

The BC Assessment Authority (BCA) is also a matter of concern for major industry (which includes Pulp & Paper) in BC. While the Assessment Authority is intended to be a neutral organization with a mandate to establish fair value for all properties in the province, the authority has adopted a pro-municipality stance in its behaviour. The emphasis of assessment reviews is focussed on maximizing assessed value rather than determining the most reasonable valuation. The following key issues have been highlighted to this committee:

Supplementary Assessments

BCA has the ability to apply supplementary assessments to the roll after mill rates have been set for a given year. BCA has added assessments to rolls in mid-December, precluding review by the taxpayer (the mill) and the potential to negotiate appropriate adjustments before taxes are assessed. Where supplemental assessments are substantial, the affected mill must launch an appeal to maintain a reasonable assessed value. While under appeal, the Property Tax Appeal Board can reopen the affected mill's tax roll and potentially add retroactive assessments; as a net effect, a taxpayer can emerge from an appeal paying more than they would have before the appeal process was initiated. While it can be argued that this is a tool to prevent frivolous appeals, in practice it is rendering BC's property taxation environment even more hostile to the major industrial taxpayer.

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Annual inflationary indexing

Via Order in Councils (at the cabinet level) the BCA can have inflationary changes made to the Major Industrial Properties Manual (MIPS). In 2004, BCA proposed a 10% increase in assessed values. Through intense lobbying of MLA's, the Order in Council was not signed and the resulting increase was a far more reasonable 3.9% for the 2005 roll year. The initial attempt for a 10% increase is indicative of the actions of the BCA to aggressively increase major industry assessments.

Retroactive legislation

BCA can have retroactive changes made to the MIPS manual via Orders in Council. Through these orders, BCA has the ability to add new sections or make changes to the manual retroactively. Business cannot plan for, or adequately respond to, retroactive changes that impact a given assessment base. In addition, blockage by MLA's is the only mechanism available to industry to prevent unjustifiable changes; this is a lobbying process rather than a formal governance process and is therefore less efficient for both parties.

Additional roll Inventory

BC Assessment routinely reviews major industry operations and has been aggressively searching for new inventory to add to the assessment rolls. It is appropriate for the Authority to ensure that the rolls are complete, however the underlying goal of the assessment process has been lost; assessment rolls are being inflated to increase their value with no regard for the actual value of the overall property they represent. As major industrial sites are re-assessed with higher values, the host municipalities are generally keeping rates static and collecting higher revenue from the sites rather than lowering rates to keep revenue static.

Recommendations

The Pulp & Paper industry has traditionally supported enormous value extraction by BC and its communities. Profitability has virtually disappeared over the past two decades and the industry can no longer support these high social rents. Relief is required to help restore profitability and motivate the reinvestment required to rebuild the BC industry.

1. A 50% reduction in average major industry property taxes and real protection from unreasonable burden is required as a first step in the process.
2. This rate reduction and protection for major industry taxpayers must be consistently applied across the province and be of an enduring nature in order to succeed.

6.2.2 Facilitate Biomass Energy Investments by the Industry

The BC Pulp & Paper industry has been generating energy with biomass since it was established. Bark stripped from logs in the sawmilling process, woodwaste from land clearing and logging activities, and in some cases sawdust and shavings are all consumed by Pulp & Paper manufacturing facilities to produce process steam and generate electrical power. The chemical pulping process produces steam from the by-products of the cooking process, generating most of the energy required for the pulping and drying process. As noted earlier, state of the art pulp mills are energy self sufficient and capable of selling electricity to external users; this means pulp production is capable of being carbon neutral with a side stream of renewable, carbon neutral electricity. Modern European mills are able to sell carbon credits under the EU's Kyoto provisions as an additional source of revenue.

The current regulatory and market environment for biomass use in BC does not favour Pulp & Paper users. Evidence of this is the fact that the Pulp & Paper industry remains a net purchaser of energy, yet wood waste is being pelletized in BC and shipped to Europe for consumption (where Carbon Credits make this economically feasible). Fuel pellet plants are beginning to compete with Pulp & Paper facilities for shavings and sawdust.

Pulp & Paper facilities are well suited to biomass energy projects due to their proximity to the biomass source, high on-site steam and electricity use, and existing infrastructures. In addition, increased biomass use by the BC industry will improve the environmental footprint of the industry further and decrease the industry's exposure to fluctuations in fossil fuel prices. Increased biomass use within the province will help BC move toward Kyoto and other environmental commitments while decreasing BC's dependence on electricity imports.

Recommendations

The following recommendations represent some of the ways biomass energy can be encouraged in BC:

1. Biomass electricity projects must have full access to the BC Hydro grid without onerous contractual requirements from BC Hydro.
2. Biomass electricity projects must have access to export power markets.
3. Incentives for clean power production or fossil fuel reduction projects.
4. Through cooperation at the provincial and federal level:
 - a. Amendment of the eligibility criteria for the Renewable Power Production Incentive (RPPI) to ensure that the forest products industry is eligible
 - b. Support the development of a market based carbon-credit trading system
 - c. Increase CCRA write-off to 100 percent on capital equipment installed for biomass energy projects
 - d. Increase CCRA write-offs for greenhouse gas reduction projects

6.2.3 Facilitate Research & Development

National research bodies exist for broad initiatives and for research funded by individual companies however the industry generally fails to invest in larger issues where no single company can justify a research effort. In these cases, the government can support BC specific R&D initiatives as it has the most to gain (as the owner of the forest resource) and is in the strongest position to provide leadership.

Recommendations

1. The BC government should put more effort into R&D through funding and encouraging partnerships. Research should be performed on regional issues, which will include, but are not necessarily limited to:
 - a. Salt laden hog fuel
 - b. Regional fibre species
 - i. Alternative uses
 - ii. New markets
 - iii. Improved processing
 - c. Extending the useful life of beetle-killed Pine for Pulp & Paper use
 - d. Industry specific biomass and biofuel energy

6.2.4 Eliminate PST on Electricity Purchases

The Pulp & Paper IAC submitted a position paper on PST policy in BC to the competition council before this report was complete. The position paper is attached for reference but is consistent with the following discussion of the issue.

British Columbia is currently the only Province in Canada in which full PST is collected on the sale of electric power for industrial uses. Removing PST from industrial purchases of electricity would bring BC into line with the sales tax policy of other provinces and provide an even-handed, well-targeted boost to the industrial sector of BC. The Committee acknowledges that BC's power costs are already among the lowest in Canada; however this is the type of action the government must take to help the industry return to profitability and re-invest in BC.

BC's low cost power is a key competitive advantage for the power intensive Pulp & Paper industry and was among the primary reason for early investments in the BC paper industry. Mechanical pulps (aka CTMP, BCTMP) and mechanical printing papers are particularly intensive electricity users due to the mechanical pulping process. Exhibit 6.1.1 illustrates the relative energy intensity of key sectors: paper is the most energy intensive of the sectors examined. Market pulp has a far lower exposure to energy as modern pulp facilities can be net *producers* of electricity; the typical BC market pulp facility is a net *consumer* of electricity. In financial terms, a \$10/MW-hr rise in electricity prices increases costs in the typical mill by: \$25/tonne for CTMP* pulp, \$20/Tonne for newsprint, \$3/Tonne for NBSK** pulp and \$2/Mbf for lumber.¹⁹

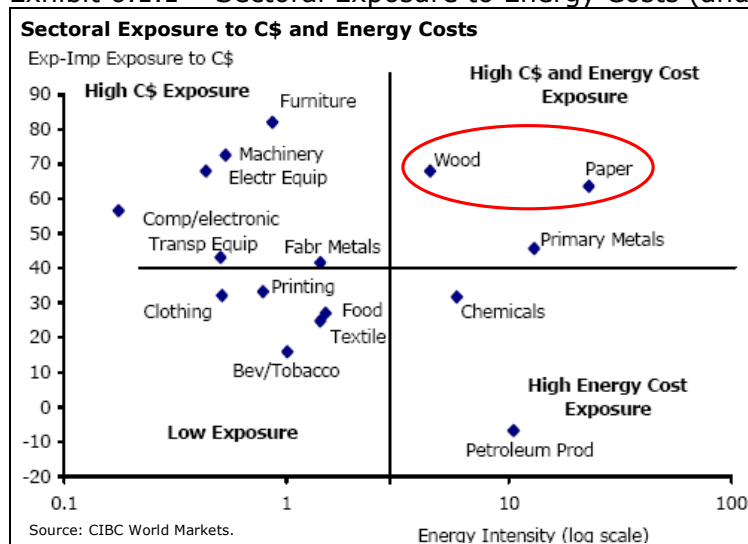
* CTMP = Chemi-Thermo-Mechanical Pulp – produced in BC but not covered in this paper

** NBSK = Northern Bleached Softwood Kraft – referred to as “Market Pulp” in this paper

¹⁹ Roberts, Don. CIBC World Markets

BC Competition Council
Pulp & Paper Industry Advisory Committee

Exhibit 6.1.1 – Sectoral Exposure to Energy Costs (and Canadian\$)



Recommendation

1. Provide a PST exemption for industrial purchases of electricity

Industrial purchases of electricity total ~\$500MM per year according to Ministry of Finance estimates. This suggests a cost reduction of \$35MM for industry in BC, much of which will flow to the Pulp & Paper sector as a substantial user of electricity. Four committee member companies paid a total of \$15.3MM in PST on electricity used to produce Pulp & Paper in 2004 – these companies represent over half of BC’s Pulp & Paper capacity.

It has been reported in the media that the PST act is to be reviewed by the government in order to simplify it while remaining revenue neutral. It is the view of the Pulp & Paper IAC that a delay in a PST exemption for industry in BC would be short sighted as the review process will likely take an extended period of time to result in changes to the act itself. The Pulp & Paper industry needs cost reductions immediately to begin the turnaround process.

6.2.5 Eliminate PST on Pulp & Paper Capital Expenditures

The current PST exemption on manufacturing equipment applies to most of a given capital expenditure. There is however a high administrative burden associated with these exemptions for both government and industry. A blanket exemption on capital expenditures on Pulp & Paper capital projects would be beneficial to both parties if the process could be significantly streamlined. This exemption would also improve the economics of the capital projects that are vital to the long term success of the Pulp & Paper industry in BC.

6.3 Maintain Critical Competitive Components

The committee has identified the following critical competitive components that already exist in BC and should be carefully maintained by the government. Loss of these BC advantages would significantly hinder the industry.

6.3.1 Competitive Power Costs

BC currently has advantageous power costs when compared to many regions of the world. There is a need to react to growth in electricity demand in BC by building new low-cost generating capacity in order to preserve this advantage.

Many committee member-companies are members of the Joint Industry Electricity Steering Committee (JIESC) and support that organization's efforts to ensure BC's low cost advantage in electrical power is maintained.

6.3.2 Healthy Solid Wood Sector

The importance of a healthy solid wood sector has been discussed elsewhere but warrants mention here, particularly in reference to the interior industry which is generally healthy. The coast must be re-built, as mentioned earlier: the health of the interior industry must be carefully maintained.

6.4 Exert Influence in Federal Issues

A few issues that affect the Pulp & Paper industry are outside of the provincial government's direct control, yet within the sphere of influence of the province.

6.4.1 Reduced Restrictions on Mergers and Acquisitions

Federal competition policy has obstructed or delayed a number of mergers and acquisitions in BC. The province should take an active role by lobbying for reduced restrictions on M&A activity in the Pulp & Paper sector.

6.4.2 Federal Ports and Infrastructure

Transportation costs to natural markets are a competitive disadvantage for the BC pulp industry (see exhibit 5.2.2a – European vs. BC facilities); the BC paper industry is also disadvantaged in a number of key regions. The industry is highly dependant on Federal Ports and the US Border for shipment of its goods to market. Several issues exist with the system and it is appropriate for the provincial government to act as an advocate for industry on these issues. A submission from the Pulp & Paper IAC to the Transportation committee of the Competition Council is attached to this report. The submission to the transportation group includes provincial issues and further discussion on the items noted below.

1. Port efficiency
 - a. Truck delays are commonplace and require a combined approach by the region's ports: automation of the process using a common system. Port Authority leadership is needed to foster a collective solution rather than implementation of unique systems at each port.
 - b. Changes to hours of operation should be considered to boost efficiency and allow deliveries in off-peak periods to ease congestion.
 - c. Union relations and performance management require improvement and are hindering the efficiency of the ports.
2. Port cost escalation
 - a. All port costs are passed on to users through port fees. The recent resolution of the container truckers dispute simply passed on increased costs to port users rather than solving the root issues behind the dispute (efficiency).
3. Offloading of infrastructure costs
 - a. Certain activities (such as dredging the Fraser River to maintain port access) provide a common good that is best provided by the Port Authority rather than being left in the hands of individual ports.
4. Access to USA
 - a. Access to the USA continues to cause delays and inefficiency. The federal government must continue to emphasize this issue and pursue an exporter-friendly solution.
5. Federal/Provincial transportation routes
 - a. Road routes that serve the ports are vital components of the overall transportation infrastructure. Political pressures can swing debate toward commuter and community planning issues – progress must continue on twinning the Port Mann Bridge, the South Fraser Perimeter Road and other improvements as these are essential to efficient port access.

6.4.3 National Pulp & Paper Strategy

The provincial government should actively encourage the formation of a National Pulp & Paper Strategy. Historically, any work on the forest sector has focused on Solid Wood yet Canada must have a clear Pulp & Paper strategy to compete with other nations. Finland, Brazil, Chile and China have demonstrated that a clear plan to foster Pulp & Paper industry health can significantly increase value generation from the industry.

BC Competition Council
Pulp & Paper Industry Advisory Committee

7.0 Appendices

Appendix A – BC Paper, Market Pulp & Tissue Producers – By Company

BC Paper, Market Pulp & Tissue Producers - By Company			
Company	Location	Product	Capacity (000 Tonnes)
Abitibi-Consolidated	Mackenzie	Newsprint	185
		Abitibi Consolidated	185
Canfor	Prince George	Chemical Market Pulp	300
	Prince George	Kraft Papers	175
		Chemical Market Pulp	95
	Prince George	Chemical Market Pulp	550
	Taylor	Mechanical Market Pulp	220
		Canfor	1,340
Catalyst Paper	Crofton	Newsprint	254
		Uncoated Mechanical Printing Papers	176
		Chemical Market Pulp	335
	Elk Falls	Newsprint	365
		Uncoated Mechanical Printing Papers	145
		Virgin White-top Linerboard	115
	Port Alberni	Chemical Market Pulp	160
		Coated Mechanical Printing Papers	205
	Powell River	Uncoated Mechanical Printing Papers	220
		Newsprint	168
		Uncoated Mechanical Printing Papers	287
		Catalyst Paper	2,430
Domtar	Vancouver	Freesheet Printing Papers	165
		Domtar	165
Howe Sound Pulp & Paper	Port Mellon	Newsprint	210
		Chemical Market Pulp	315
		Howe Sound Pulp & Paper	525
Kruger	Vancouver	Tissue	80
		Kruger	80
Mercer International	Castlegar	Chemical Market Pulp	430
		Mercer International	430
Norampac	Vancouver	Recycled Packaging Grades	110
		Norampac	110
Pope & Talbot	Mackenzie	Chemical Market Pulp	240
	Nanaimo	Chemical Market Pulp	400
		Pope & Talbot	640
Tembec	Chetwynd	Mechanical Market Pulp	215
	Cranbrook	Chemical Market Pulp	250
		Tembec	465
West Fraser	Kitimat	Virgin Kraft Linerboard	450
	Quesnel	Mechanical Market Pulp	350
	Quesnel	Chemical Market Pulp	340
		West Fraser	1,140
Western Forest Products	Squamish	Chemical Market Pulp	270
		Western Forest Products	270
Weyerhaeuser	Kamloops	Chemical Market Pulp	480
		Weyerhaeuser	480
		BC Total	8,260
Not Operating	Port Alice	Chemical Market Pulp - Dissolving	160
Not Operating	Prince Rupert	Chemical Market Pulp	335
		Not Operating Total	495



BC COMPETITION COUNCIL

Pulp & Paper Industry Advisory Committee

Pulp & Paper Industry Advisory Committee

Appendix B

Competitive Cost Positions in BC for World-Scale Pulp and Paper Facilities



Prepared for
BC Competition Council
Pulp and Paper Industry Advisory Committee
November, 2005

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Background and Introduction

23A06589
PPIAC Cost Curves

Jaakko Pöyry Consulting (JPC) has been requested by the BC Competition Council Pulp and Paper Industry Advisory Committee (PPIAC) to prepare competitive cost analyses for hypothetical, world scale market pulp and paper facilities located in BC.

Delivered cash manufacturing costs are estimated for a world scale market softwood kraft pulp (BSKP) facility located both on Vancouver Island and the BC interior. The hypothetical facilities are positioned on a global BSKP cost curve delivered to natural markets. Unit costs and currency exchange rates are based on 2nd quarter, 2005.

Delivered cash manufacturing costs are estimated for a hypothetical, world scale light weight coated (LWC) paper machine located adjacent to an existing mill on Vancouver Island. The paper machine is positioned on a North American cost curve delivered to natural markets in North America. Unit cost and exchange rate assumptions are consistent with the BSKP analysis

World Scale BSKP Facility Cost Competitiveness

23A06589
PPIAC Cost Curves

Key Assumptions

- Cost level second quarter of 2005
- Exchange rates of June 2005
- New Bleached Softwood Kraft Pulp mill
 - Location in Vancouver Island and in Central BC
 - BSKP production capacity of 650 000 t/a
 - Modern continuous cooking plant, two-stage oxygen delignification and three-stage elemental chlorine free bleaching (D-Eop-D) sequence.
 - All wood raw material delivered to site as residual and/or whole log chips
 - Fiber distribution, the mill located in BC coast:
 - Hemlock – Whole Log Chips 16%
 - Fir 21%
 - Cypress 6%
 - SPF 27%
 - Cedar 30%
 - Fiber distribution, the mill located in central BC:
 - SPF 100%

BSKP Facility Cost Competitiveness (cont.)

23A06589
PPIAC Cost Curves

Assumptions

- Manning of the site (252) is estimated to be in line with a modern BSKP mill located in Northern Europe:
 - Operating personnel 119
 - Maintenance personnel 81
 - Supervision personnel 52
- Energy plant includes recovery boiler, small power boiler and extraction-condensing turbine. Excess electricity is sold to common grid.
- Delivery to natural markets. Distribution of delivery destinations for mills located in BC:

	Coast	Interior
• USA	10%	20%
• Japan	5%	10%
• Korea	5%	10%
• China	40%	20%
• Europe	40%	40%
- Total investment cost of a BSKP greenfield mill with the capacity of 650 000 t/a estimated at the range of 850 - 975 MUSD. For a brownfield mill the investment is approximately 10% lower.

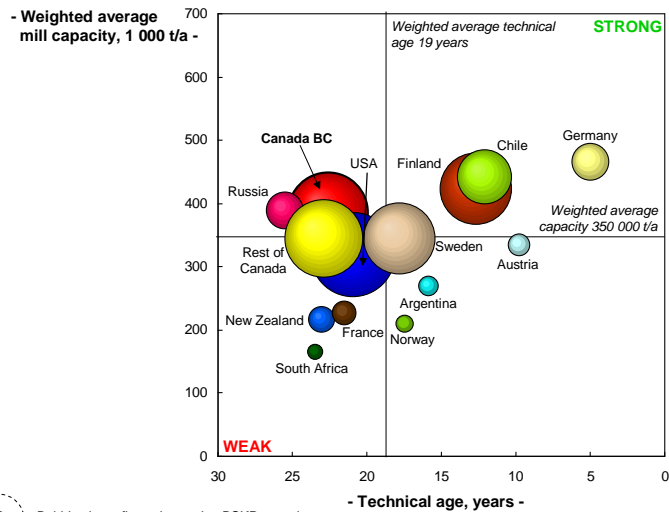
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BSKP Industry Structure

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PPIAC Cost Curves

Market BSKP – Global Producers. BC mills more strongly positioned than E. Canadian mills but weak compared to global competition



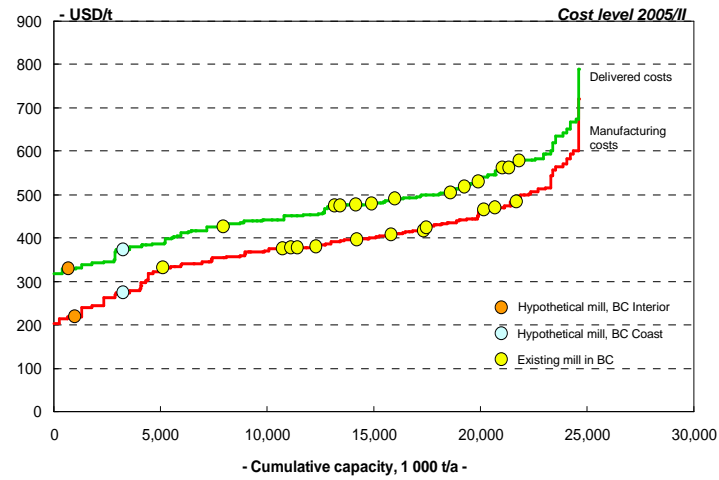
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Cost Competitiveness in Natural Markets

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PPIAC Cost Curves

Market BSKP – Global Producers. Hypothetical world-scale mills in BC, both on the coast and interior, are low quartile producers



1 CAD = 0.81 USD
1 EUR = 1.22 USD

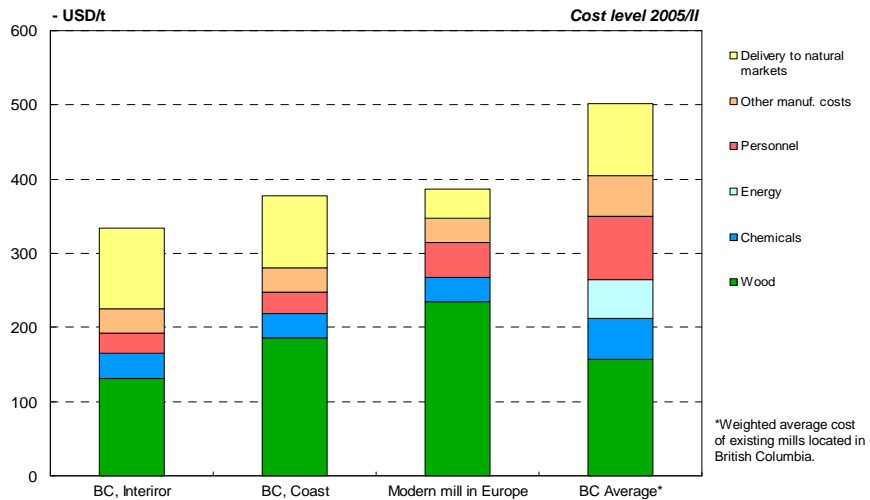
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Cost Competitiveness in Natural Markets

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PPIAC Cost Curves

Hypothetical world-scale BSKP mills in BC compare favorable with modern European BSKP facilities



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BSKP Facility Units of Consumption

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PPIAC Cost Curves

Key consumption figures of a world-scale 650 000 t/a BSKP mill.

	Consumption, Unit/ADmt	Price, CAD/Unit of raw material	Cost, CAD/ADmt	Cost difference Coast - Interior
Wood				
Coast	5.7 m ³ sub	40.50 CAD/m ³ sub	230	68 CAD/ADmt
Interior	5.4 m ³ sub	30.00 CAD/m ³ sub	162	
Chemicals				
Caustic	9 kg	420 CAD/t	4	
Sulphur dioxide	15 kg	342 CAD/t	5	
Chlorate	32 kg	648 CAD/t	20	
Oxygen	25 kg	138 CAD/t	3	
Other	-	-	9	
Total	102 kg	-	42	
Energy				
Lime kiln oil (gas)	0.97 GJ	10 CAD/GJ	10	
Oth. purch. fuel	0	-	-	
Power (excess)	-391 kWh	0.035 CAD/kWh	-14	
Self-generation rate 133%				

BSKP Facility Units of Consumption (cont.)

23A06589
PPIAC Cost Curves

Key consumption figures of a world-scale 650 000 t/a BSKP mill.

	Consumption, Unit/ADmt	Price, CAD/Unit of raw material	Cost, CAD/ADmt	Cost difference Coast - Interior
Personnel				
Oper.	119 persons	85 250 CAD/person	16	
Maint.	81 persons	93 000 CAD/person	12	
Superv.	52 persons	100 000 CAD/person	8	
Total	252 persons		35	
Other manufacturing costs (Incl. packaging, operating and maintenance materials and general overhead)			40	
Distribution				
Coast	Delivery to natural markets including sales commission of 10 USD/ADmt.		121	-14 CAD/ADmt
Interior			135	
Total manufacturing costs delivered to natural markets excluding capital costs, CAD/ADmt BSKP			461	53 CAD/ADmt
Coast			408	
Interior				

LWC Facility Cost Competitiveness

23A06589
PPIAC Cost Curves

Key Assumptions

- North American producers of coated groundwood #5 40 lb. and European importing producers (LWC 60 g/m²). Total imported tonnage included is 500 000 mt/a.
- Cost level second quarter of 2005 and regional average unit prices have been applied except for wood and personnel pricing for Canada BC, where PPIAC has provided the price information.
- Exchange rates of June 2005
- New LWC/coated groundwood #5 paper machine
 - Production site is assumed to be a brownfield site in proximity of an existing facility on Vancouver Island.
 - Annual capacity of the new hypothetical paper machine is 420 000 mt/a of LWC
 - Machine concept based on on-machine film coating and off-machine calendering
 - New TMP-line, annual capacity of 200 000 ADmt/a is assumed to be invested upon. Otherwise the brownfield site is assumed to offer all other needed infrastructure.
 - Furnish of 65 % of TMP and 35 % of NBSKP is assumed, filler content of base paper estimated at 9 %. Filler is assumed to be CaCO₃.
 - Coating is estimated to be of calcium carbonate and clay and the applied amount as 8 BDg/m² per side.
 - Manning of the site is estimated as the current manning with additional 120 men for the extended operations.
 - Energy concept is assumed to remain as current and all additional power would be purchased from the grid.
- An order of magnitude, conceptual investment cost of the above described production facility is estimated at 600 MUSD.

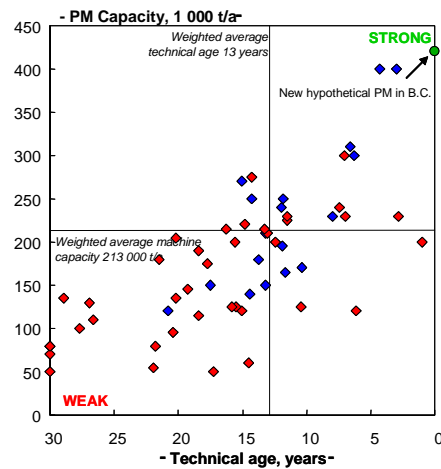
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Industry structure

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PPIAC Cost Curves

Coated groundwood #5 / LWC 40 lb. – Producers in North American market



- ◆ North American producers
- ◆ European importing producers

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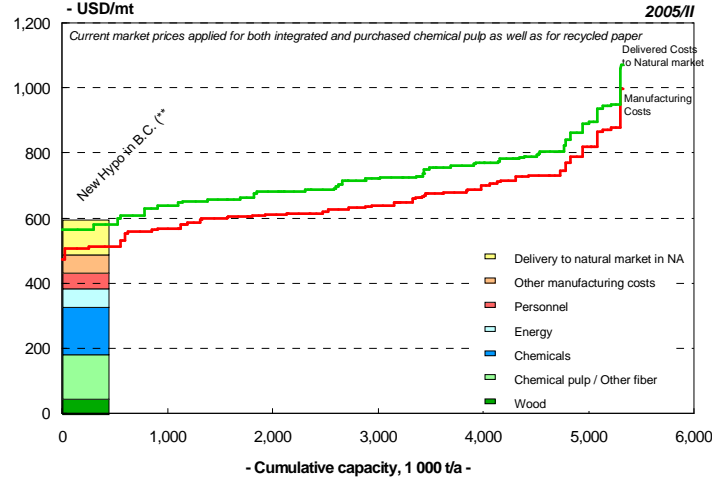
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Cost Competitiveness in North America

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PPIAC Cost Curves

Coated groundwood #5 / LWC 40 lb. – Producers in North American market.

Hypothetical world-scale facility a low-cost quartile producer in North America



BSKP

620 USD/ADt CIF WE
655 USD/ADt DD NA

(* European imported capacity in the North American market 500 000 mt/a
(** Wood and personnel unit prices for 2005Q2 provided by PPAC

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Consumption and Unit Prices

23A06589
PPIAC Cost Curves

	Consumption, Unit/mt of paper	Price, CAD/unit of raw material	Cost, USD/mt of paper
Wood	1.169 m ³ sub/mt of paper	49 CAD/m ³ sub (***)	46
Purchased fiber (*)	0.246 ADmt/mt of paper	NBSKP DD in NA 2005Q2 655 USD/ADmt	137
Chemicals (incl. pulping and papermaking chemicals – coating and wetend)	0.375 mt/mt of paper	Coating colour estimated to be 70% of CaCO ₃ and 30% of clay	145
Energy	Power 1.9 MWh/mt of paper Fuel 0.07 GJ/mt of paper Self-generation rate 6 %	Purch. power 35 CAD/MWh Purch. fuel (**) 278 CAD/GJ	53 5
Other manufacturing costs (incl. packaging, operating and maintenance materials and general overhead)			56
Personnel	276 of the mill's total personnel of 670 allocated to the paper machine	weighted average personnel cost 90 856 CAD/person/a (***)	48
Distribution	Delivery to natural market in North America is estimated at 111 USD/mt of paper including sales commission of 20 USD/mt of paper		111
Total manufacturing costs delivered to natural markets in North America excluding capital costs, USD/mt of LWC paper			602

(*) 2005 Q2 market price assumed with a large buyer discount of 8 %

(**) Assuming Vancouver Island fuel mix of hog fuel 80 %, gas 10 % and oil 10 %.

(***) Wood and personnel unit prices for 2005Q2 provided by PPAC

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BC COMPETITION COUNCIL

Pulp & Paper Industry Advisory Committee

Pulp & Paper Industry Advisory Committee

Appendix C



Memorandum

Date: October 19th, 2005

To: David Thompson & Dan Miller
BC Competition Council

From: Russell Horner
Chair – Pulp & Paper Industry Advisory Committee

Subject: Pulp & Paper IAC Tax Recommendations

The Pulp & Paper Industry Advisory Committee (IAC) has compiled tax recommendations for submission to the BC Competition Council in response to the Council's memo to IAC chairs dated October 4th, 2005.

While the Pulp & Paper IAC's final report to the Council is not yet complete the conclusions of the committee are already clear. The Pulp & Paper Industry in BC is in a state of decline and the Coastal Pulp Industry in particular is in near-term crisis. The Return on Capital Employed of the BC Industry is well below its cost of capital and the industry cannot access the capital required to re-invest and rebuild in the current environment.

The Pulp & Paper IAC advocates a process to turnaround and rebuild the industry and has developed a framework for government response. The guiding principle is even-handed reduction of the social rents paid by the industry as a first step to create conditions for re-investment in the Province. In turn, the industry must raise and invest the capital required. The BC Pulp & Paper Industry has an established history of re-investing cash flows in its assets: Capital expenditures exceeded \$1 billion over the last 5 years despite poor business results.

Taxation policy is one of the ideal tools for government to use in bringing about the even-handed changes that the Pulp & Paper IAC advocates. Taxation changes do not favour individual market players but rather improve the economics of the industry while efficient market forces are left unimpeded.

Five tax categories were covered in the Competition Council's request for input: Corporate Tax, Municipal Tax, PST, Tax Credits and Small Business Tax. Position papers covering Municipal Tax and PST are submitted as attachments to this memo. The Pulp & Paper IAC's views on the remaining categories follow.

Corporate Tax

The recent reduction in the Corporate Tax rate is well received as it is critical that BC remain competitive with neighboring jurisdictions. The effects of Corporate Taxation on major industry have been well documented and the Pulp & Paper IAC can add little to this body of knowledge. It is important to note that Canadian business remains highly taxed relative to world competitors. To quote the CD Howe Institute's September 2005 Commentary, "it is to our detriment that Canada has the second highest effective tax rate on capital... out of 36 developed and leading developing competitors." The BC Pulp & Paper industry's global competition for capital and customers are among this group.

Tax Credits

The Pulp & Paper IAC is not advocating tax credits for the industry as they generally do not fit with the Committee's guiding principles for government response. This does not diminish the need for real assistance from the government. The Committee favours reductions in the overall social rents paid by the industry through various taxes, stumpage and other government controlled costs rather than tax credits.

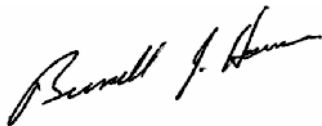
It is important for the Provincial Government to be aware of the stimulatory measures employed by other jurisdictions, which include tax credits, loan guarantees and direct grants. These include the recent Forest Industry aid packages in Ontario and Quebec; moves that reinforce the need for well structured government action before a crisis point is reached.

Small Business Tax

The Pulp & Paper IAC is comprised of large companies and will defer to other IAC's on Small Business taxation.

This committee appreciates the opportunity to put these vital recommendations forward to government and welcomes any questions.

Respectfully Submitted,



Russell J. Horner
Chair - Pulp & Paper Industry Advisory Committee



October 13th, 2005

BC Property Taxes: Impact on the BC Pulp & Paper Industry

Executive Summary

Major Industry property taxes in BC are significantly higher than competing North American jurisdictions. BC Pulp & Paper producers pay total property taxes that are higher than the provincial average resulting in property tax costs per Tonne that rank among the highest in North America. These high property tax costs arise from the disproportionate burden of municipal taxes that Pulp & Paper facilities bear. The BC Assessment Authority process provides no real protection for Major Industry as municipalities have increased rates when assessment values declined in order to maintain or even increase revenue. When assessment values increase, municipalities have kept rates unchanged and collected windfall revenue for which no additional services are provided. The result: egregious taxation by municipalities with no functional mechanism for appeal or relief, a reality that is a significant disincentive to investment in the province.

BC's Pulp & Paper communities have traditionally extracted enormous value from the industry; however profitability has virtually disappeared over the past two decades and the industry can no longer support such high social rents. Relief is required to help restore profitability and motivate the reinvestment required to rebuild the BC industry. A 50% reduction in Major Industry property taxes and real protection for the future is required as a first step in the process.

Introduction

This paper is submitted by the Pulp & Paper Industry Advisory Committee (IAC) in response to the BC Competition Council's request for input on taxation issues dated October 6th, 2005. The Pulp & Paper IAC has compiled extensive data on property taxes in British Columbia; the following submission covers the impact of these property taxes on the Pulp & Paper sector in BC.

Current Situation

BC property taxes are not competitive with other North American jurisdictions

BC property taxes are high relative to other jurisdictions both in Canada and the USA. The average Major Industry tax rate of 5.13% is over twice that of Alberta and is far higher than the average urban and rural rates in the USA. The ratio of the Major Industry rate to the Residential rate is extremely high in BC at a staggering 4.2 times the Residential Rate. This ratio is far lower in competing jurisdictions such as Alberta and Rural USA at 1.30 and 0.86 respectively. Exhibit 1 details BC's competitive position versus other regions.

Exhibit 1 – Summary of Rates in Key Jurisdictions

2003	Average Tax Rates		Major Industry Ratio
	Residential	Major Industry	
USA Rural	1.52	1.30	0.86
USA Urban	1.18	1.68	1.42
Alberta	1.68	2.18	1.30
Nova Scotia	1.48	3.68	2.49
BC	1.22	5.13	4.20
Ontario	1.58	6.50	4.11

Note: Rates include Municipal, District, Hospital, School & Other Property Taxes

Source: Bish, Robert. 2003. Property Taxes on Business and Industrial Property in British Columbia: Comparisons and Business Climate Observations. Working Paper #11, Local Government Institute, School of Public Administration, University of Victoria

The Major Industry rate in Pulp & Paper municipalities is above the BC average

While the BC average taxation rate for Major Industry is already high at 5.13%, the average rate in Pulp & Paper municipalities is higher still at 6.38%. Municipalities with Pulp & Paper operations are burdening their Major Industry base more heavily than other municipalities in the province as demonstrated in Exhibit 2.

Exhibit 2 – BC Pulp & Paper Municipalities – Major Industry Rate and Quartile

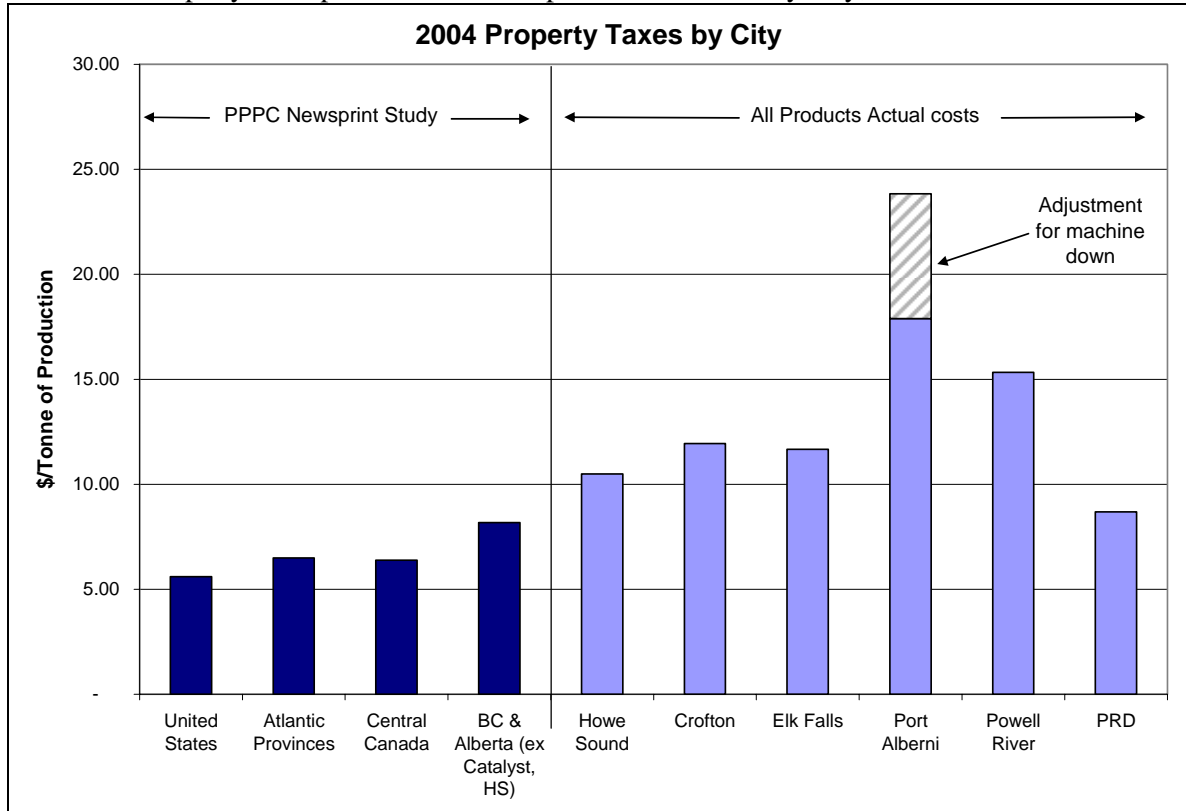
BC Property Tax Rates		
Pulp & Paper Industry Locations by Quartile		
Quartile	Municipality	Major Industry Rate
Q2	Castlegar	4.75%
	Mackenzie	4.82%
	Delta	4.85%
	New Westminster	4.92%
Q3	Burnaby	5.09%
	Nanaimo	5.50%
	Port Alice	5.66%
	Prince George	5.97%
	Prince Rupert	6.24%
Q4	Chetwynd	6.31%
	North Cowichan	6.40%
	Powell River	6.59%
	Coquitlam	6.79%
	Squamish	6.97%
	Kitimat	7.02%
	Taylor	7.02%
	Quesnel	7.17%
	Campbell River	7.50%
	Kamloops	8.63%
Port Alberni	9.43%	

Source: Bish, Robert. 2003. Property Taxes on Business and Industrial Property in British Columbia: Comparisons and Business Climate Observations. Working Paper #11, Local Government Institute, School of Public Administration, University of Victoria

BC property taxes per Tonne are among the highest in North America

A recent Price Waterhouse study of North American Newsprint production costs indicates that producers in BC pay far more in property taxes on a per-Tonne basis than producers in other North American jurisdictions. Newsprint producers in BC pay 2.4 times more property tax per Tonne than US competitors and 2.1 times more than Central Canada.

Exhibit 4 – Property taxes per Tonne of Newsprint Production – By City, 2004



(Note: The BC & Alberta total excludes Howe Sound Pulp & Paper and Catalyst Paper but includes Abitibi Consolidated's Mackenzie Newsprint operation – with Abitibi Consolidated removed Alberta costs would be approximately 50% of BC levels.)

Major Industry is paying a disproportionate burden of municipal taxes

It is commonly argued that many municipalities with Pulp & Paper operations have smaller population bases and therefore lack economies of scale. While this can be a reasonable argument, Pulp & Paper municipalities in BC currently over-burden major industry in order to charge artificially low rates to residential taxpayers. 18 of 20 Pulp & Paper municipalities collect higher property taxes per capita than the provincial average. Of the 18, 13 are shifting burden to non-residential taxpayers in order to collect below-average property taxes from residential taxpayers. The relative position of each Pulp & Paper municipality is shown in Appendix A.

The Major Industry share of municipal tax payments exceeds 30% in 12 of the 20 Pulp & Paper communities in BC. On average, these 12 municipalities collect 58% of their revenue from Major Industry. As shown in Exhibit 3, the share of taxes paid by Major Industry is as high as 85% and averages 39% in the Pulp & Paper municipalities of British Columbia.

Exhibit 3 – Major Industry Share of Municipal Tax Revenue in Pulp & Paper Municipalities

Pulp & Paper Municipalities		
Major Industry Share of Municipal Tax Revenue		
2004 Taxation Year - Municipal Taxes Only		
	Major Industry Share of Municipal Taxes (%)	Major Industry Share of Total Assessed Value (%)
Port Alice	85.2	46.2
Kitimat	79.1	35.4
Chetwynd	73.7	40.3
Taylor	72.2	45.6
Mackenzie	66.8	40.1
Quesnel	65.7	22.8
North Cowichan	51.3	6.6
Castlegar	48.8	17.4
Powell River	45.1	12.5
Port Alberni	43.2	11.2
Prince Rupert	35.0	21.5
Campbell River	32.8	6.1
Squamish	24.0	3.4
Prince George	17.6	5.9
Kamloops	9.0	1.5
Delta	8.0	2.0
Nanaimo	7.1	2.0
New Westminster	6.9	1.6
Burnaby	3.8	0.4
Coquitlam	1.3	0.1
Average	38.8	38.8

Data Source: BC Government Infrastructure and Finance Website

Non-Residential taxpayers pay a 38% higher proportion of municipal taxes in Pulp & Paper Municipalities: residential taxpayers pay only 49.7% of taxes in Pulp & Paper municipalities versus 68.4% in municipalities without major industry.

Exhibit 4 – Relative burden of Residential vs. Non-Residential Taxpayers

	2004 Taxation Year - Municipal Taxes Only			Share of Taxes Paid	
	Taxes Paid (000's)			Residential	Non-Residential
	Residential	Non-Residential	Total		
Pulp & Paper Communities	304,778	308,848	613,626	49.7%	50.3%
Other Industrial Communities	579,671	500,610	1,080,281	53.7%	46.3%
Non-Industrial Communities	387,886	178,846	566,732	68.4%	31.6%
All BC	1,272,335	988,303	2,260,638	56.3%	43.7%

Data Source: BC Government Infrastructure and Finance Website

Declining assessed values have not reduced the burden on the Pulp & Paper industry

Assessed values have been declining in the BC Pulp & Paper sector due to aging assets and declining re-investment (a result of poor profitability.) Despite these declining assessment values, the BC industry has received no relief from its tax burden. In British Columbia, the BC Assessment Authority is mandated to provide impartial and consistent assessment of property values. This assessment approach is intended to provide protection for taxpayers, however in the case of Major Industry, and Pulp & Paper in particular, no real protection exists. As industrial sites depreciate or are partially shut down, assessment values fall. In this case, many municipalities increase the tax rate to ensure a consistent cash flow from major industry regardless of the declining assessment value. When assessments increase, due to re-assessments by the BC Assessment Authority or major capital investment municipalities generally do not lower their rates, but rather use the additional income as windfall revenue – even when no additional services are provided to the industrial site.

Overall, major industry assessments in Pulp & Paper municipalities (in which assets are currently operating) have declined by 2.3% between 2001 and 2004. Over the same period, municipal taxes paid have increased by 3.2% due to a rate increase of 5.6%. An Industrial Tax Analysis report prepared by the Ministry of Community Services for the Premier’s task force on community opportunities confirms this analysis. “The tax rates levied on properties in the Major Industry class rose steadily between 1986 (\$17/1000) and 2004 (\$40/1000). With decreases in assessment over the same period, municipalities may have relied on tax increases to retain their revenue base for Major Industry.” A chart from the report demonstrates this increase over time:

Exhibit 5 – Weighted Average Municipal Tax Rate for Industrial Property in BC



The Major Industry tax burden is not consistent with services received

A KPMG study: “Study of Consumption of Tax-Supported City Services” commissioned by the Vancouver City Council in 1995 determined that 71% of the City’s services were consumed by residential users. The remaining 29% of tax-supported city services were consumed by non-residential users including commercial, light industrial and major industrial users (largely ports in Vancouver’s case.) While municipalities differ, it is clear that the 50.3% of municipal taxes paid by the non-residential classes in Pulp & Paper communities is not representative of services consumed.

BC’s high property tax rates are a disincentive to new investment

High property taxes have a significant impact on new investment decisions as they influence the real cost of an investment. BC’s pattern of heavily burdening major industry once a significant capital investment has been made also represents a major disincentive.

The upgrade of one Papermachine to a value added grade such as Lightweight Coated or SCA would result in approximately \$22MM in real property improvements that would attract property tax. Over ten years this investment would incur \$11.3MM in property taxes at the average rate for BC Pulp & Paper municipalities. This represents a 51% tax on the investment over ten years in BC versus 13 to 17% in other jurisdictions. Even at the BC average rate of 5.13% the effective 10-year tax is 41% (see Exhibit 5.)

Exhibit 5 – Property Tax on a New Investment – 2003

Cumulative Effect of Property Tax on a New Investment						
<i>\$22,000,000 Buildings & Improvements Capital Investment, Depreciated at 5%/yr</i>						
	USA Average	Alberta Average	Nova Scotia Average	BC Average	BC Pulp & Paper Average	Ontario Average
Property Tax Rate	1.68%	2.18%	3.68%	5.13%	6.38%	6.50%
10-Year Property Taxes (000's)	\$2,966	\$3,849	\$6,497	\$9,057	\$11,264	\$11,476
Cumulative Tax on Investment	13%	17%	30%	41%	51%	52%

Property Tax Rate Source: Bish, Robert. 2003. Property Taxes on Business and Industrial Property in British Columbia: Comparisons and Business Climate Observations. Working Paper #11, Local Government Institute, School of Public Administration, University of Victoria

Conclusion

Property taxes in BC are high compared to other North American jurisdictions and property taxes in BC's Pulp & Paper municipalities are higher still. 13 of 20 municipalities with Pulp & Paper operations are using high major industry taxes to subsidize below-average tax rates for residential taxpayers. Today's high property taxes are hindering the cost competitiveness of BC Pulp & Paper producers which are already challenged by rising energy costs and a strong Canadian dollar.

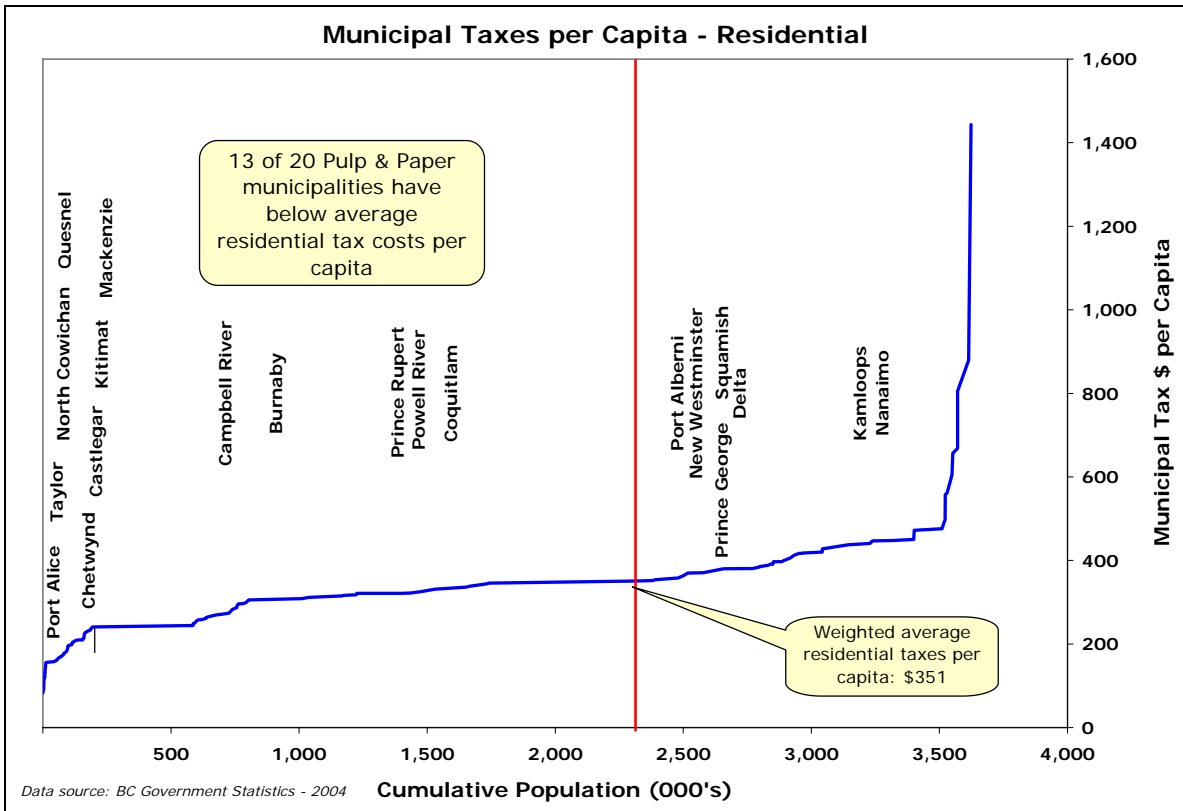
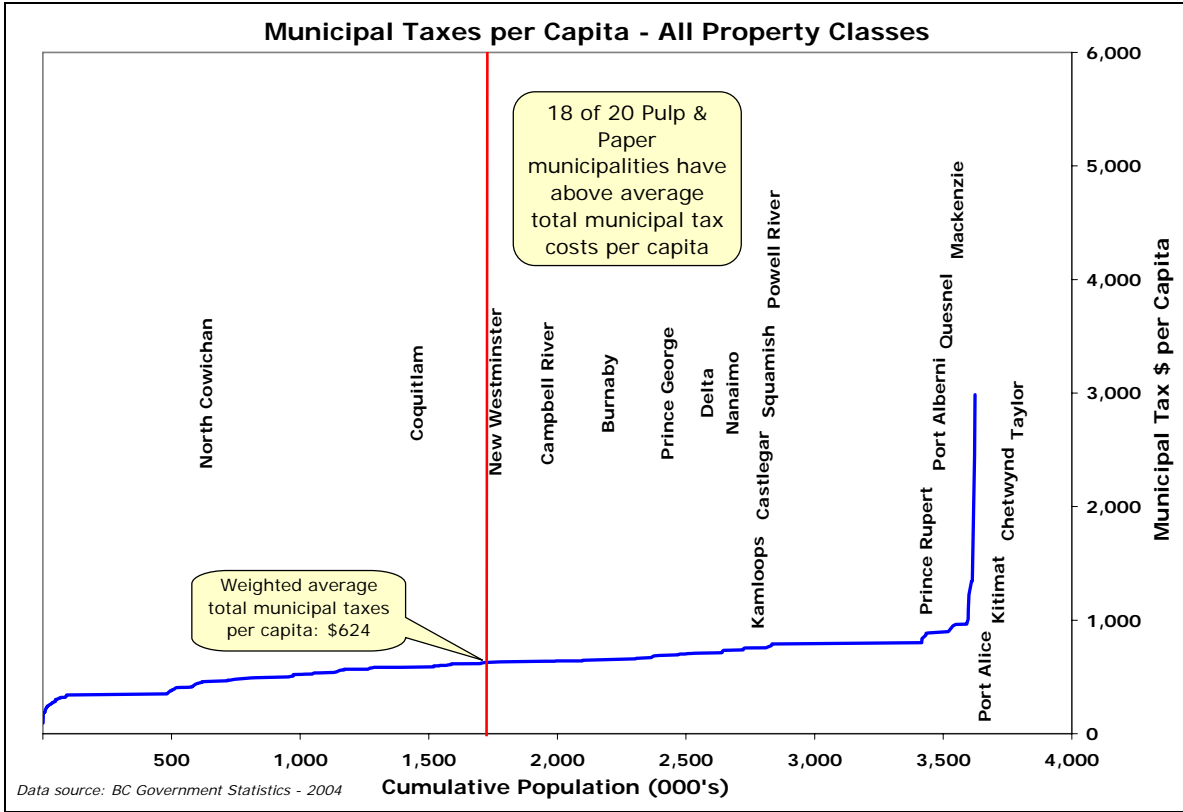
Beyond the near term competitive effects of high property taxes, BC's current rates are a major disincentive to new investment or re-investment in the province. The 2004 provincial average Major Industry rate represents a 45% tax on a given investment over the first ten years. In addition, the past behaviour of municipalities (burdening captive major industry with high rates) creates uncertainty for investors. Pulp & Paper investments must vigorously compete for capital; the costs and uncertainties of BC property taxation can mean the difference between proceeding with a major investment and abandoning it.

There is no protection from unrestrained rate setting for Major Industry in BC. The BC Assessment Authority process is intended to provide protection but has been rendered irrelevant by the unrestricted ability of municipalities to raise rates to counteract any reductions in assessed value.

A 50% reduction in Major Industry property taxes is required to bring BC into line with competing jurisdictions. This reduction in rates must be consistently applied province-wide and be of an enduring nature to ensure stability for investment decisions. Immediate relief is needed for Major Industry in communities such as Kitimat, Mackenzie and Port Alberni where the largest disparities exist.

A more equitable property taxation regime in BC is one of the vital first steps required to stabilize the Pulp & Paper industry in the province. Beyond providing real cost savings for the industry, these moves would be a concrete demonstration of BC's desire to foster a more favourable business environment for Pulp & Paper and other major industry.

Appendix A





October 17th, 2005

PST Policy Changes – The BC Pulp & Paper Industry

Executive Summary

The Pulp & Paper industry is a vital component of the BC economy, generating 34,000 jobs province wide and sales of ~\$6.9 billion annually. The industry is a vital component of the overall Forest Industry of BC as the Solid Wood and Pulp & Paper sectors are mutually dependent. The Pulp & Paper industry has earned less than half of its Cost of Capital over the past two decades and is in a state of decline. Near term action is required to stop the downward trend and begin the process of rebuilding this vital component of BC's forest economy.

The Pulp & Paper Industry Advisory Committee (IAC) of the BC Competition Council recommends two near-term changes to PST policy:

- 1) Eliminate PST on electricity purchases for industrial users
- 2) Eliminate all applicable PST on Pulp & Paper industry capital expenditures

These government actions are part of a longer term framework for rebuilding BC's Pulp & Paper industry that will be outlined in the IAC's final report to the BC Competition Council.

Introduction

This paper is submitted by the Pulp & Paper Industry Advisory Committee (IAC) in response to the BC Competition Council's request for input on taxation issues dated October 6th, 2005. The Pulp & Paper Industry Advisory Committee (IAC) has identified two PST policy changes to improve the competitiveness of the BC industry. This position paper will detail the state of the industry in general terms and discuss the recommendations themselves. The main report from the IAC, slated for completion in November, will include a more detailed view of the industry, the issues it faces and the framework for government response. Alteration of PST policy is compatible with the framework for government response advocated by the committee.

Current Situation

The Industry

The BC Pulp & Paper Industry is comprised of 23 operating facilities that manufacture products ranging from market pulp to high value magazine papers. These 23 facilities have a capacity of 8.4 million Tonnes annually with a sales value of ~\$6.9 billion (38% of BC forest industry sales.) In 2004, capital employed was ~\$9.6 billion and capital spending exceeded \$250 million.

The Pulp & Paper industry directly employs 11,400 and generates an estimated 34,000 jobs province wide. Total direct compensation and benefits is estimated at \$870 million. The industry pays among the highest wages in the province averaging \$984/week, well above the provincial average of \$694/week¹. Employment is spread throughout the province, primarily in rural areas that depend on the industry as their primary economic engine. Employment in the Pulp & Paper Manufacturing sector² overall has declined over 50% in less than ten years: from a peak of 24,200 in 1995 to 11,900 in 2004³.

Interdependency of Solid Wood and Pulp & Paper Sectors

The Pulp & Paper and Solid Wood sectors are mutually dependent: Pulp and Paper mills are dependent on residual fibre flows from solid wood, both as low grade logs and sawmill residual chips. Pulp and Paper mills also consume hog fuel produced during the sawmilling process to produce process steam and power. In turn, sawmilling operations are dependent on the consistent revenue stream (25 to 30% of mill revenue) derived from residual chip sales to Pulp & Paper producers. Sawmills also benefit from the disposal of other by-products: hog fuel, sawdust and shavings. The combination of the two industry sectors maximizes the value extracted from each log and cut-block and is the economic foundation of the Forest Industry in BC: one cannot survive without the other.

Financial Performance

The Pulp & Paper industry in BC is challenged by global and local factors that have resulted in Return on Capital Employed (ROCE) well below the industry's cost of capital. Market Pulp achieved a ROCE of 3.8% over the 19 years ending 2004. Uncoated Mechanical Printing Papers earned \$143MM during the past ten years: an estimated 0.6% ROCE. Cost of Capital for the industry is 10 to 13% - the industry has fallen well short of this level. Reinvestment is stagnant; Market Pulp & Uncoated Mechanical Printing Paper producers invested an average of only 3% of capital employed over the last 5 years⁴.

¹ Source: Statistics Canada – 2004 SEPH data, courtesy BCStats

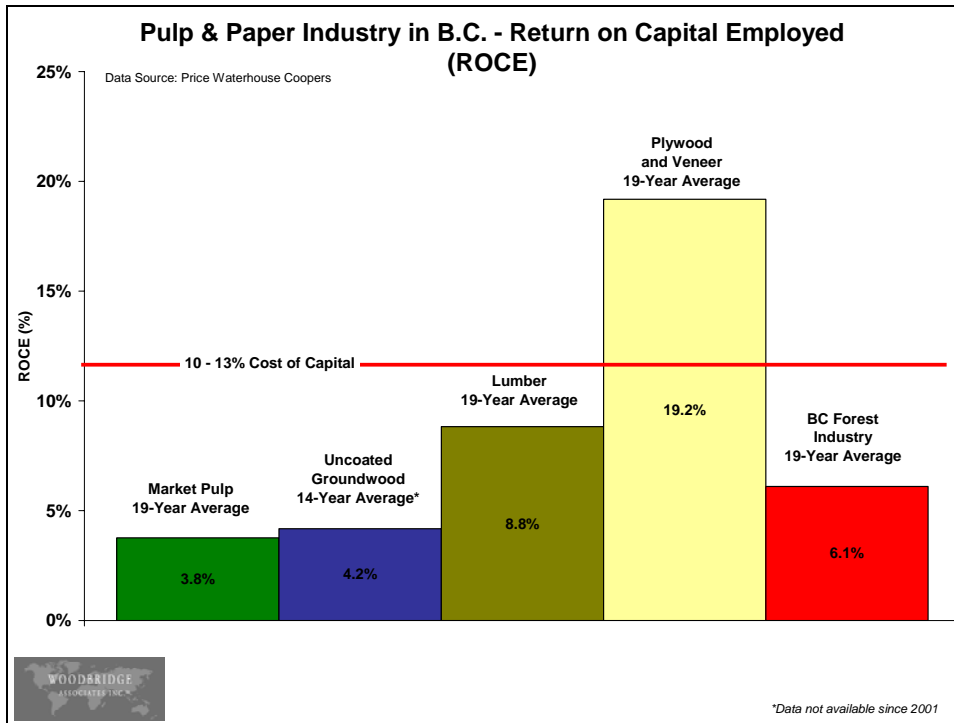
² North American Industry Classification System (NAICS) 2002 – Includes Converted Paper Product Manufacturing industry – estimated at 500 employees in 2004

³ Source: Statistics Canada, Labour Force Survey (unpublished data) courtesy BCStats

⁴ Source: PriceWaterhouseCoopers, “The Forest Industry in British Columbia 2004 Summary Tables” June 2005

Figure 1 shows the 19 and 14 year ROCE performance of the Market Pulp and Uncoated Mechanical Printing Papers segments.

Exhibit 1



Market Pulp

Coastal Market Pulp

The coastal Market Pulp industry is not sustainable and is in near-term crisis. In the absence of adequate ROCE, coastal facilities are running to generate cash. The capital intensity and economies of scale of these facilities demand high operating rates which hide the underlying reality that these facilities are significantly challenged in the near term. Reduced fibre costs due to the surplus of chips in the interior are partially counteracting low product pricing and the high Canadian dollar. This committee expects 1 mill to shut down within 2-3 years (if not less) and 2 further closures within ten years.

Interior Market Pulp

The interior Market Pulp industry, while stable in the near term, is not sustainable long term. The interior currently has a surplus of fibre due to the Mountain Pine Beetle (MPB) Annual Allowable Cut (AAC) uplift and the increase in industry output after the expiry of the Softwood Lumber Accord. Fibre prices are significantly lower as a result and are providing a near-term boost for the interior industry. Once the MPB epidemic has run its course residual fibre supply will be significantly reduced.

Market Pulp is a large part of the solution for the Forest Industry in BC, particularly in the interior. The high volume of chips consumed for Market Pulp production is required to deal with the by-product chips produced by the solid wood sector. Energy uses may become economic over the very long term but will currently support a much lower fibre value than a viable pulp industry. Market Pulp must attract the large capital investment necessary for asset renewal once existing assets become uneconomic. This new capacity must be balanced with the evolving fibre supply realities of the province; ultimately the pulp industry will be smaller on the coast (medium term) and in the interior (post MPB.) The interior of the province will continue to offer excellent fibre for chemical pulp production – albeit in lower quantities than today as the long-term effects of the Mountain Pine Beetle materialize.

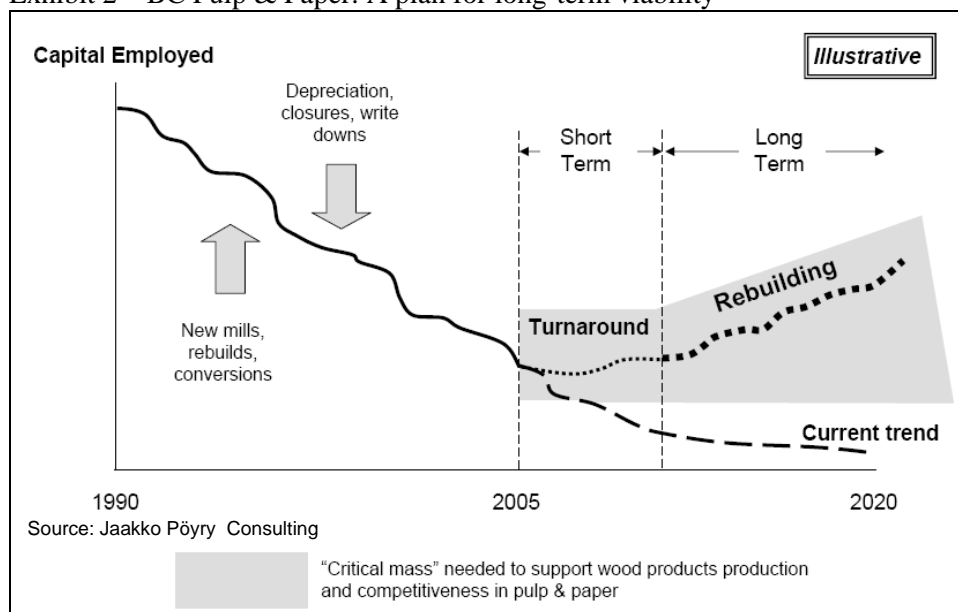
Uncoated Mechanical Printing Papers

Mechanical Printing Papers are sustainable and BC offers the advantages of low cost power, good fibre and good market access. While ROCE in the sector has been poor in recent years due to oversupply in Newsprint and import pressures, current capacity can be re-positioned into higher value-added products with appropriate capital investment. BC’s advantages for mechanical printing papers must be leveraged to attract the capital necessary to execute these investments.

Conclusions

The BC Pulp & Paper industry requires long-term, large-scale change to return to profitability and adequate ROCE – particularly in chemical pulp. The first step is turn-around, which will require near term action to stop the decline of the industry before the balance between Solid Wood and Pulp & Paper is lost (critical mass.) Some of these short term actions are detailed here, as PST policy is one of the tools the Provincial Government has at its disposal. Longer term actions for both government and industry flow from these and other short term actions. Exhibit 2 illustrates the concept for returning the BC Pulp & Paper industry to long-term viability which will be discussed in greater detail in the IAC’s final report.

Exhibit 2 – BC Pulp & Paper: A plan for long-term viability



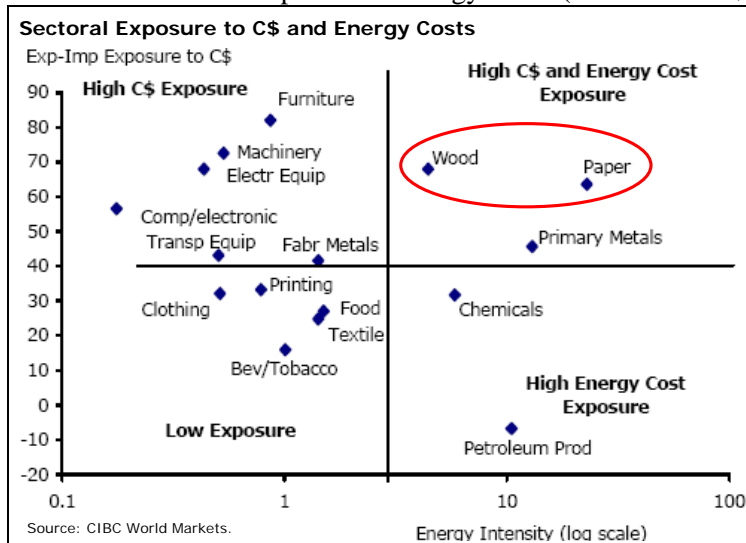
Recommendations

PST Exemption for Industrial Electricity Purchases

British Columbia is currently the only Province in Canada in which full PST is collected on the sale of electric power for industrial uses. Removing PST from industrial purchases of electricity would bring BC into line with the sales tax policy of other provinces and provide an even-handed, well-targeted boost to the industrial sector of BC. The Committee acknowledges that BC’s power costs are already among the lowest in Canada; however this is the type of action the government must take to help the industry return to profitability and re-invest in BC.

BC’s low cost power is a key competitive advantage for the power intensive Pulp & Paper industry and was among the primary reason for early investments in the BC Paper industry. Mechanical Pulps (aka CTMP) and Mechanical Printing Papers are particularly intensive electricity users due to the mechanical pulping process. Exhibit 3 illustrates the relative energy intensity of key sectors: Paper is the most energy intensive of the sectors examined. Market Pulp has a far lower exposure to energy as modern pulp facilities can be net *producers* of electricity; the typical BC Market Pulp facility is a net *consumer* of electricity. In financial terms, a \$10/MW-hr rise in electricity prices increases costs in the typical mill by: \$25/tonne for CTMP* pulp, \$20/Tonne for newsprint, \$3/Tonne for NBSK** pulp and \$2/Mbf for lumber.⁵

Exhibit 3 – Sectoral Exposure to Energy Costs (and Canadian\$)



Industrial purchases of electricity total ~\$500MM per year according to Ministry of Finance estimates. This suggests a cost reduction of \$35MM for industry in BC, much of which will flow to the Pulp & Paper sector as a substantial user of electricity. Four committee member companies paid a total of \$15.3MM in PST on electricity used to produce Pulp & Paper in 2004 – these companies represent over half of BC’s Pulp & Paper capacity.

* CTMP = Chemi-Thermo-Mechanical Pulp – produced in BC but not covered in this paper

** NBSK = Northern Bleached Softwood Kraft – referred to as “Market Pulp” in this paper

⁵ Roberts, Don. CIBC World Markets

PST Exemption for Pulp & Paper Capex

The current PST exemption on manufacturing equipment applies to most of a given capital expenditure. There is however a high administrative burden associated with these exemptions for both government and industry. A blanket exemption on capital expenditures for Pulp & Paper assets would be beneficial to both parties if the process could be significantly streamlined. This exemption would also improve the economics of the capital projects that are vital to the long term success of the Pulp & Paper industry in BC.



BC COMPETITION COUNCIL

Pulp & Paper Industry Advisory Committee

Pulp & Paper Industry Advisory Committee

Appendix D



November 23rd, 2005

BC's Transportation System: Pulp & Paper Industry Issues

Introduction

In the course of its research into the fundamental challenges facing the Pulp & Paper industry in BC, the Pulp & Paper Industry Advisory Committee (IAC) of the BC Competition Council has compiled input related to transportation issues in the province of BC. A summary of the issues identified by Pulp & Paper IAC participants is attached for the reference of the Transportation Industry Advisory Committee.

This input should not be considered a complete situation assessment of the transportation challenges facing BC's Pulp & Paper industry as it was not possible to invest significant research effort into transportation. Instead, this input highlights some of the transportation challenges facing the Pulp & Paper industry which the Transportation IAC may wish to investigate further. Participants in the Pulp & Paper IAC process are available to provide further detail and input at the discretion of the Transportation IAC.

Current Situation & Issues

Transportation costs to logical markets are a competitive disadvantage for the BC Pulp industry; the BC Paper industry is also disadvantaged in a number of key regions. The industry is highly dependant on Federal ports, rail carriers and the US border for shipment of its goods to market. Several issues exist with the transportation system and it is appropriate for the Provincial Government to act as an advocate for industry on these:

1. Road Network in Vancouver
 - a. The road network in Vancouver has seen some major improvements in recent years and it is vital that progress continues.
 - i. Items such as the twinning of the Port Mann and the South Fraser Perimeter Road are necessary projects.
 - ii. The Gateway Project is of vital importance to the efficiency of the Port.
 - b. Access to the Ports is a major issue for local shippers, especially access to Fraser Surrey docks. The impact on efficiency directly affects all players: reduced profitability for truckers and increased costs, missed cutoffs (service failures) and increased lead times for shippers.
2. Access to the USA
 - a. Even with certification and complete documentation, up to 4 hour delays are a regular occurrence at the border crossings (for trucks).
 - b. Increased efficiencies in processing paperwork are needed.
 - c. Crossing the US border is a significant source of customer service failures for the industry – customers are not tolerant.

3. Port of Vancouver

- a. The container strike, while settled, did not address the fundamental inefficiencies that caused the strike in the first place.
 - i. Trucks experience extended delays in accessing the ports and being loaded/unloaded. This reduces their cycle time and eliminates their profit margin.
 - 1. Gate delays due to data entry inefficiency – recommend a standard system to automate the process for high volume shippers (Centerm’s SCORE system is one example) with dedicated lanes for fast entry volume.
 - 2. Incentives (and hours of operation) to encourage port access during non-peak hours, reducing peak volumes. Example: Port of Long Beach charges more during the day than in PM hours.
 - ii. Additional issues affecting efficiency for truckers include hours of operation at the ports, standards of operation and other procedural inefficiencies.
 - 1. Terminal management must plan crew and equipment for each shift more effectively – crew performance must be monitored with prompt corrective action when productivity is sub-standard.
 - 2. Poor ILWU service provided to drivers based on their race or who they are employed by must not be tolerated.
 - iii. The increase in rates for the container truckers merely placated them – the root issues still remain.
 - 1. Low “loads per day” to utilize equipment appropriately due to line-ups, traffic congestion and inefficiencies loading and unloading at the ports.
 - 2. Higher rates are now attracting new carriers to the marketplace, this will increase availability but further dilute the number of revenue generating deliveries available to each driver – a focus on reduction of congestion will help re-establish and maintain balance.
 - iv. The costs of the rate increase are not borne by the Port of Vancouver; they are passed on to the shipper.
 - v. The agreement essentially forced price collusion among container truckers: competition no longer exists in the ports.
 - 1. Motivation for cooperative cost reductions between the shipper and trucker has been eliminated – pricing is fixed, eliminating any cost savings between parties.
- b. Emphasis on container shipping is a good strategy, however breakbulk capability is also essential to BC commodity exporters.
 - i. If too much breakbulk loading capacity is removed, the economies of scale will be lost for breakbulk port calls. This will not only affect Vancouver, but also mill docks such as Elk Falls, Crofton, Port Mellon and others due to loss of a viable “base port” for the region.

- c. Offloading of infrastructure activities.
 - i. Dredging of the Fraser has been significantly offloaded to port facilities and others. This is a "common good" that should remain under the umbrella of the Federal Port Authority.
- 4. Labour Issues
 - a. The Longshoreman's union can be extremely inflexible.
 - i. Examples include denial of vessel extensions with 15 minutes left to load, resulting in product missing the vessel, dead freight charges, re-routing of product, etc. (extra cost for the shipper.)
 - ii. Benchmark against Australia, New Zealand, UK, East Coast USA to find solutions and the scope of the problem.
- 5. Truck Drivers
 - a. A vast shortage of truck drivers is emerging in North America with ~2 million new truck drivers required in North America over the next decade.
 - i. The government can help with training programs.
 - ii. Root causes of the problem include low pay, safety issues (interior road conditions), competition from other employment sectors (such as oil and gas in Alberta), working hours and working conditions.
- 6. Land for future Port Development is being taken up with other uses, primarily residential and commercial
 - a. Land with rail, road and water access is extremely limited today. Land with this type of access should be carefully protected from residential and commercial users that do not need this type of access. The current real estate market and rapid residential expansion represent a real risk to multi-access land packages in the GVRD.
 - i. Establish restrictions on the use of multi-access (road, rail, water) land – similar to ALR?
 - ii. If lost, this type of land cannot be replaced as vessels cannot go further up rivers or inlets and rail spur access is diminishing.
- 7. Rail Infrastructure & Efficiency
 - a. Rail services to the interior of the province are controlled by one carrier.
 - i. There is an absence of price competition.
 - ii. Service failures are rising and little incentive exists for carrier(s) to improve performance in the absence of competition.
 - b. Rail carriers do not share enough infrastructure; this significantly impedes the efficiency of the North American rail system.
 - i. An agreement for rail infrastructure similar to the "open skies agreement" in the airline sector could help to remove these inefficiencies.

- c. There is insufficient infrastructure investment in the rail sector.
 - i. Poor railcar availability and condition is one symptom of this problem
 - ii. The rail system is currently running near capacity and needs significant annual investment to keep pace with demand.
 - iii. How can re-investment in rail be stimulated to keep pace with growth?