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2010 YEAR-END SURVEY OF BUSINESS CONDITIONS

Basic Chemicals and Resins Industry

Every year, the Chemistry Industry Association of Canada (CIAC) conducts a survey of its member-companies to assess their views of their economic performance as reflected by sales, trade and employment indicators. This report is prepared by CIAC's Business and Economics Team and is based on aggregated results of the survey. The responses by CIAC member-companies to items in the survey are based solely on their company's operations in Canada.



2010 YEAR-END SURVEY OF BUSINESS CONDITIONS

Basic Chemicals and Resins Industry

HIGHLIGHTS

- Sales of basic chemicals and resins in 2010 totalled \$21 billion – a 14% increase from 2009 in current dollars. When expressed in constant dollars, a proxy for volumes, sales in 2010 increased by 5% when compared to 2009. Almost two-thirds of the growth in 2010 can be attributed to price-recovery.
- Sales to customers in Canada increased by only 1%, reflecting an export-led growth in the basic chemicals and resins sector.
- Export sales increased by 19% in 2010 to \$15.7 billion, with 74% of Canadian basic chemicals and resins being exported. Sales to U.S. markets grew by 19% and accounted for 73% of the industry's business outside of Canada.
- Operating profits (before interest, taxes and special write-offs) for 2010 were \$2.3 billion, up 73% from 2009. This may be attributed to the lower-than-anticipated price of natural gas (the industry's main source of raw material or feedstock, the price of which dropped from \$13/Mbtu in mid-2008 to the \$4-\$5/Mbtu range in 2010) and the relatively high ratio of the price of crude oil to the price of natural gas (oil is used by many of our competitors around the world).
- Increase in profits was not reflected in capital expenditures which declined in 2010 by 33%, underpinning investor uncertainty in the economic environment.
- Looking ahead, survey respondents expect sales to continue to increase in 2011, but at a slower rate. Exports to the U.S. are expected to continue, however the momentum of the recovery has been slowing and the sector is concerned about sustaining it. These concerns and projections are based on assumptions that the Canadian dollar will stay strong relative to that of the U.S., protectionist sentiment in the U.S. will remain, the Canadian manufacturing sector will continue to decline and Canadian producers will face heightened competition from the Middle East, China and India.

OVERVIEW OF 2010

The global economy continued its slow recovery in 2010. In developed economies, the recovery was supported by monetary and fiscal stimulus, while in emerging economies, where the recession represented only a modest dip in growth, strong growth has returned.

Conditions in Canada were not unlike the rest of the world. Increased domestic demand fuelled economic growth in Canada in mid-2009 and restored pre-crisis levels of output and employment. The economy assumed a more modest growth in second quarter of 2010 as global trade recovered to pre-recession levels.

Going forward, the Bank of Canada projects a gradual economic recovery in Canada at an annual growth rate of 2% (real GDP). The Bank also projects the Canada-U.S. exchange rate at an average of 98 cents US, as well as decreased natural gas prices and increased crude oil prices. These last factors will have a significant impact on our sector.

The Canadian Basic Chemicals and Resins Industry

In 2010, demand for basic chemicals and resins increased across the supply chain, and as a result, shipments increased by 14%, to \$21 billion. This increase reflects the recovery of the Canadian economy in general. The chemistry sector is export-dependent and our members export almost 75% of production – roughly double the global average and almost three times the U.S. average. The global economic recession (which resulted in a 13% decrease in global trade) hit Canada's export-dominated chemistry sector particularly hard. However, in 2010, exports of basic chemicals and resin rose by 19% and exports to the U.S. also increased by 19%, despite the strengthened Canadian dollar (which averaged around 96 cents US in 2010).

Canadian chemical prices increased by 8% because of the recovering economy and consumer demand. In addition, the operating profits of Canadian chemical operations rose by an impressive 73%. This strong profit result was mainly due to the decline in the price of natural gas (the main feedstock for the sector, which dropped from \$13/Mbtu in mid-2008 to the \$4-\$5/Mbtu range) and the resulting higher ratio of the price of crude oil to natural gas (this ratio was, until recently, in the 7-9:1 range; the current ratio is closer to the 15-20:1 range).

In 2010, CIAC members continued their recovery from the recession (which started in 2009) and their output is on track to reach pre-recession levels. Capacity utilization for the overall chemistry industry was 82% at the end of the second quarter of 2010, compared to only 69% at the end of the second quarter in 2009.

Key Challenges: The Strong Dollar & Feedstock Availability

Even though the basic chemicals and resins sector showed positive growth in 2010, it was dampened by uncertainty in the economic environment, especially in the United States. The weak U.S. dollar, while boosting American exports, negatively affected Canada's ability to compete both within the U.S. and in offshore markets. Furthermore, Canada-U.S. trade was put at risk by a growing protectionist sentiment in the United States. In addition, the petrochemical subsector faced another pressing issue: feedstock availability. Low gas prices depressed drilling activity and resulted in less production from the Western Canadian

Sedimentary Basin. Growing supplies of shale gas in the Lower 48 also dampened demand for Canadian gas, resulting in less movement through export points where plants could extract ethane feedstock for Canadian chemical production. New gas finds (preferentially moving ethane-rich gas to extraction points and lean gas to intra-Alberta use) and the extraction of ethane and other raw materials from bitumen off-gases, will all be required to restore feedstock supply and permit petrochemical plants to return to optimal capacity.

CIAC members pointed to several additional factors affecting their business in 2010, including: rail service, electricity costs, regulation, the need for investment, and continued weakness in related industrial sectors and Canadian manufacturing in general.

Rail Service

Canada's chemistry industry relies on rail to bring almost 80% of its products to market, including vital export markets. Over the past decade, rising rail and distribution costs, as well as declines and changes in the terms of service, were cited by some members as having a negative impact on competitiveness. Service has recently improved, as rail carriers have become more focused on the need to attend to shipper concerns. A federal review of Canada's rail service has also identified practical and workable solutions to improve service levels in the short to medium term. CIAC members see this as a vital first step in improving their ability to deliver products to market. With growth in the chemistry sector and the full recovery of the economy, additional rail capacity could be needed.

Electricity Costs & Regulation

For CIAC members in Ontario, the cost, availability and reliability of electricity continued to be a serious concern, affecting both competitiveness and prospects for growth. Regulatory factors also had a dampening effect on chemical operations. Canada's ongoing lack of federal-provincial regulatory alignment in areas such as climate change was seen as hurting the sector's ability to attract investment, and concerns were raised over potentially different federal and provincial approaches to chemicals management (despite Canada's world-leading Chemicals Management Plan, Ontario now has its own toxic reduction legislation, adding to the federal-provincial non-alignment). CIAC continues to work with government officials and ministers federally and provincially to reach workable solutions.

Investment

Survey respondents also indicated that investment was a key challenge facing the basic chemicals and resins sector. The last round of major investment in the Canadian chemistry industry was in the early 1990s, giving Canada a significant productive edge (some 50%) over its U.S. counterparts. CIAC members recognize that this performance cannot be sustained without new investment. Much has been done on the corporate-tax front at both the federal and provincial levels, notably in Ontario, with its recent lowering of the provincial tax-rate for manufacturers and the harmonization of the retail sales-tax with the federal GST. However, an accelerated capital cost allowance (ACCA) for at least five years would be crucial to both the upgrading of Canada's energy resources, and further investment in the chemistry sector. Alberta and Ontario both recognize that an ACCA needs to be in place for an extended period of time to enable large projects to be realized, and that new investment is a friend of the environment (as new machinery and processing equipment delivers

measurably improved energy efficiency and reduced greenhouse gas emissions). The CIAC hopes that the federal government will deliver on this in its next budget, and that the provinces will follow suit.

Weakness in Related Industrial Sectors

Canada's chemistry industry provides key inputs to other manufacturers. For the inorganic chemistry sector, continued weakness in the pulp and paper and energy sectors, in addition to lower overall industrial activity, reduced the demand for its products. The organic and specialty sector was also impacted strongly by the economic recession. As a result of the decline in overall employment everywhere in the economy, the demand for consumer goods such as electronics – a key customer for this sector – was severely diminished, and its recovery is proving to be both fragile and slow. Due to structural changes within the North American manufacturing sector, and the trend of industrial production moving to offshore locations such as Asia, the Canadian chemistry industry is losing key customers, and as a result, must seek markets much further away.

OUTLOOK FOR 2011

Overall, the Canadian industrial sector continued to recover in 2010 from the 2008-2009 recession, although growth is modest and fragile.

Members of the petrochemical sector look to 2011 with cautious optimism. They are projecting that the industry will remain in a situation of low growth as a result of limited export opportunities, the rising Canadian dollar and increasing protectionist sentiments in the U.S.

Survey respondents indicated that they expect sales values to increase by only 2% in 2011, as the economy emerges from the recession with trepidation and uncertainty. Sales to customers in Canada are expected to increase by 6% in 2011. However, this will rely on the domestic recovery holding and gathering steam. Economic uncertainty in the U.S., as well as higher oil prices, could still impede the growth of the Canadian economy.

Overall sales volumes are forecast to increase by 5%. Exports are expected to increase by a modest 2% to U.S. customers, a reflection of our membership's ongoing concern for the recovery in our key export market. Total exports are projected to be virtually unchanged, underlining the projections for only a modest recovery. Members are predicting a decline (-5%) in sales to offshore customers, and operating profits are projected to increase only slightly (by 2%) in 2011. These very modest projections are based on the strong exchange rate, weakness in the automotive and pulp and paper industries and Canadian manufacturing in general, and increasing competition from the Middle East, China and India. The U.S. recovery continues to be uneven. Weakness in the housing sector and personal spending will impact demand for chemistry products which are predominantly exported into this market. Globally, high debt levels in many nations continue to threaten financial and banking stability.

Due to declining ethane extraction from traditional sources in Alberta, the petrochemical sector will be faced with the additional challenge of decreasing feedstock availability.

Natural gas production in Western Canada has been declining because of the depletion of conventional gas fields. In addition, the natural gas supply and demand fundamentals are affecting border flows and reducing the natural gas available for ethane extraction. As a result, there is a projected gap in the range of 70,000 barrels-per-day in ethane production by the year 2015 if nothing is done to increase the ethane supply. This is equivalent to the feedstock demand for a world-scale petrochemical plant. CIAC has been actively engaged with the Government of Alberta in advocating for an extension of the Incremental Ethane Extraction Policy and other policy measures, with the view to improving the opportunity for further value-added resource upgrading in Alberta. The Alberta government began a competitiveness review specifically aimed at addressing value-added goals in the province, and the government appears poised to take measures to address the feedstock issues facing the region. CIAC members are also taking action, exploring new feedstock sources such as those from the Bakken and Marcellus shale deposits, and off-gases from bitumen upgrading in Canada's oilsands.

In 2010, the natural gas price was very low relative to that of oil and gave a competitive edge to the Canadian chemistry sector, as much of the world relies on oil as a feedstock source. The expanded supply, from growing shale gas discoveries, is resulting in more gas in the U.S., closer to key markets. As a result, prices are not expected to rise in the near term, maintaining the advantage for gas-based petrochemical producers, but also emphasizing the need to secure increasingly valuable natural gas liquids feedstock.

And there are other challenges looking ahead. As noted earlier, many of the chemistry industry's customers are moving production to China and other Asian countries, thereby eroding the Canadian customer base. The increasing number of new basic chemical facilities in the Middle East is also adding competitive pressure to Canadian operations. In Canada, federal government stimulus spending is scheduled to stop in early 2011, and this may affect industries supplying materials for infrastructure spending. Members are also anticipating transmission price increases for regulated transporters (for gas, electricity, and rail), and those could have a negative impact on the bottom line in 2011 and onwards.

For producers of inorganic and specialty chemicals, the health of the automotive, pulp and paper, and housing industries will contribute significantly to their 2011 performance. The partial recovery in 2010 has been welcomed, but there are still uncertainties, particularly in the U.S. market. The higher exchange rate, especially compared to the U.S., has resulted in lost market share for some producers in both the U.S. and offshore markets.

The rate at which the North American economic recovery continues will determine the sales-volume growth for our sector in the coming year.

WHAT WOULD MAKE A DIFFERENCE?

As this year winds down and we look towards 2011, the best prognosticators in our business remain "cautiously optimistic". We are still looking at a very shallow recovery; it could take some time to build back to pre-recession levels across the overall economy. A recovery strategy that includes and actively engages all of our energies in resource-upgrading and value-added manufacturing can result in Canada emerging from the recession as a winner and even better poised for sustainable growth. We need to collectively build on and diversify

our energy and resource advantages to achieve a healthy, vibrant and competitive manufacturing sector.

IN SUMMARY – A SLOW FRAGILE RECOVERY

BASIC CHEMICALS & RESINS INDUSTRY¹

(millions of current dollars except where noted)

	1999	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009 ²	2010 ³	%chg 10/09	2011 ⁴	%chg 11/10
Sales of Goods ex Works	15,558	18,806	18,878	20,103	20,719	24,136	26,037	26,882	26,229	26,772	18,528	21,057	14	21,388	2
Sales (Constant 2002 Dollars) ⁵	17,500	18,767	18,398	20,103	19,705	21,817	21,250	21,262	20,218	19,149	14,748	15,503	5	16,279	5
Sales to Customers in Canada	5,265	6,509	6,050	7,351	8,471	9,267	9,209	9,018	6,493	8,382	5,315	5,372	1	5,678	6
Selling Price Index (2002 = 100)	88.9	100.2	102.6	100.0	105.1	110.6	122.5	126.4	129.7	139.8	126	136	8	131	-3
Total Exports	10,293	12,297	12,828	12,752	12,248	14,869	16,829	17,865	19,736	18,390	13,213	15,684	19	15,710	0
Exports to U.S.	8,551	10,245	10,850	10,609	9,972	11,822	13,144	13,583	13,055	13,538	9,656	11,511	19	11,756	2
Operating Profit before Interest, Taxes and Special Write-offs	1,797	2,195	1,242	1,442	544	1,770	1,640	1,362	1,743	1,078	1,328	2,294	73	2,340	2
Fixed Capital Expenditures	1,905	1,882	1,261	1,127	931	658	1,046	938	1,292	932	1,733	1,165	-33	1,293	11
Number of Employees	22,600	22,166	22,462	22,793	22,191	21,539	19,830	18,739	17,931	17,827	14,974	13,869	-7	13,899	0

¹ Basic chemical manufacturing (NAICS 3251) and resin, synthetic rubber, and artificial and synthetic fibres and filaments manufacturing (NAICS 3252) closely match the output of member-companies of the Chemistry Industry Association of Canada.

² 2009 estimates are based on the monthly 2009 vs. 2008 % change applied to 2008 ASM data, the most recent available.

³ 2010 estimates are based on January to September monthly 2010 vs. 2009 % change applied to the 2009 estimate.

⁴ 2011 forecast is based on the Chemistry Industry Association of Canada's annual year-end survey of business conditions and short-term prospects. Responses were received from member-companies representing over three-quarters of their 2009 sales.

⁵ Calculated using a chemical price index based on Statistics Canada data.