

CRNM PRIVATE SECTOR TRADE BRIEF

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SUPPORTING THE DEVELOPMENT OF CARICOM'S ETHANOL INDUSTRY

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IN THIS ISSUE: We examine the prospects for the Caribbean as an exporter of ethyl alcohol, more commonly known as ethanol. Amid growing concern about the escalating price of fossil fuels as well as their contribution to global warming, ethanol is gaining increasing recognition worldwide as an important alternative energy source. For regional firms transitioning in the sugar industry and other agribusiness operations, the production of ethanol represents an important value added opportunity. However, there are various bottlenecks affecting the competitiveness of exports. In this issue, we discuss one of them -- Rules of Origin - which is a critical issue where expanding export sales are concerned.

OVERVIEW OF THE GLOBAL ETHANOL INDUSTRY

Ethanol is an alcohol-based, renewable fuel of which there are currently two types on the market. There is agricultural ethanol, on the one hand, which is distilled from a variety of organic sources such as grains, molasses, fruit, sugar cane juice, and cellulose. And there is also synthetic ethanol which is derived from crude oil, gas or coal.

The production of synthetic ethanol is presently concentrated in the hands of a couple of mostly multi-national corporations. For example, there is Sasol which has operations in South Africa and Germany, SADAF of Saudi Arabia, which is a 50/50 joint venture between Royal Dutch Shell of the United Kingdom and The Netherlands and the Saudi Arabian Basic Industries Corporation, and British Petroleum and US-based Equistar.

According to the Renewable Fuels Association (RFA), global ethanol production reached an all time high of nearly 13.5 billion (bn) gallons in 2006. The United States was the leading producer with 5.3 bn gallons, closely followed by Brazil with 4.5 bn gallons. China, India and a number of other nations are rapidly expanding their own ethanol industries.

CARICOM'S ETHANOL TRADE

In 2005, CARICOM-based ethanol producers earned some US\$87.5 million (mn) from export sales of 120,351 tons in international markets. The average price fetched per ton was US\$715. Sales were quite dynamic, growing by an average 23% per annum over the 2001 to 2005 period, and jumping to 50% between 2004 and 2005.

Large diseconomies of scale clearly exist where sales of ethanol to CARICOM are concerned. It is seen, for example, when a comparison is made of the trade experiences of St Kitts-Nevis and Canada in 2005. St Kitts-Nevis, as a small consumer accounting for just 37 tons of CARICOM's total 2005 ethanol purchases, was asked to pay a price of US\$1,270 per ton. On the other hand, Canada, with purchases of 1,007 tons, got a much cheaper price of US\$288 per ton.

What is interesting is that the price paid by CARICOM consumers in 2005 was much higher than the global average of \$715 per ton. This price difference may reflect the impact of transport and other transaction costs in the region as well as diseconomies of scale.

Currently, 99% of CARICOM's ethanol production is sold to the United States, The Netherlands, Canada, Colombia, and the Dominican Republic. The most dynamic markets during the 2001-2005 period were the USA, where sales grew by an average 23% per annum, Canada (94% p.a), Grenada (22% p.a.) and St. Kitts/Nevis (49% p.a.).

Jamaica's Ethanol Trade

According to the United Nations COMTRADE Database, Jamaican ethanol exporters realized earnings of US\$67.4mn from sales of 86,906 tons in 2005. Based on this performance, Jamaica was ranked as the 8th largest exporting nation with 2% of global exports.

Accounting for over two-thirds of the region's ethanol exports, Jamaica is CARICOM's top producer and exporter. With a joint production capacity of 114 million US gallons per year, the country's major plants are Petrojam Ltd, Jamaica Ethanol Processing Company (JEPCO) and Petrojam Ethanol Limited. Jamaica's ethanol trade performance is also dynamic with export sales growing by an average 17% per annum between 2001 and 2005.

Petrojam Ethanol Limited is a wholly owned subsidiary of Petrojam Limited which itself is a subsidiary of the Petroleum Corporation of Jamaica, a statutory body of the Government of Jamaica. The company's primary involvement is in the procurement of ethanol feedstock (hydrous alcohol), the dehydration process to fuel ethanol (anhydrous alcohol), and the marketing of fuel ethanol in the United States or other markets. The Petrojam Ethanol Ltd plant has a capacity of 41.8 million US gallons per year. Production resumed in the 1st quarter of 2005.

In response to the dynamism of the global ethanol trade, the Jamaica Broilers Group is entering production. The company is investing J\$1.1 billion in plant to convert wet ethanol to dry, for sale on the North American market. Jamaica Broilers has already sealed a deal with Bauche Energy's Brazilian subsidiary to supply the wet ethanol.

Since the cessation of wine ethanol exports from the European Union to the Caribbean in mid-2004 due to the Biofuels directive, which is explained later, and the pursuant development of a biofuels market in the EU, Jamaican dehydration plants have turned to Brazil as a new source of ethanol feedstock supply. However, this move impacts the ability of exporters to qualify for concessions under the trade agreements discussed below, based on the crafting of qualifying criteria called "Rules of Origin".

RULES OF ORIGIN FOR ETHANOL EXPORTS

Volume 15 of the CARICOM Private Sector Trade Brief provided an in-depth explanation of the business impact of rules of origin. However, for the purpose of this discussion, it is important to recall that one definition

of rules of origin refers to production processes which a good has to undergo in order to qualify for preferential treatment under a trade agreement.

Caribbean Basin Initiative (CBI) Rules of Origin: To qualify for preferential treatment by the United States under the CBI, Caribbean ethanol distillers are required to add at least 35% to the value of any non-CBI ethanol feedstock ("i.e. wet ethanol") appraised when the shipment entered the CBI-beneficiary country. Currently, exporters do not meet the 35% local value-added criterion because the major raw material is imported from non-CBI beneficiary countries.

However, most CBI exports are covered by the Steel Trade Liberalization Program Implementation Act (19 USC 2703) which was amended to cover calendar years after 1989. This Act establishes specific rules of origin requirements for ethanol imported into the United States from CBI beneficiary countries. Non-CBI feedstock is now included to allow several companies to export ethanol made entirely from non-CBI inputs to the United States. This is subject to an overall cap of 60 million gallons or 7% of US domestic consumption, whichever is higher. It is estimated that the region has capacity of about 2% of US domestic consumption left to fill under the CBI. Currently, Petrojam imports hydrated ethyl alcohol from Brazil which is then dehydrated and exported to the United States under the cap.

CARIBCAN Rules of Origin: CARIBCAN is a preferential trade agreement between Canada and Commonwealth Caribbean countries. To qualify for duty-free entry into Canada, CARIBCAN requires that a Commonwealth Caribbean good must be (a) "wholly obtained or produced" or, (b) at least 60% of its ex-factory price must originate in one or more of CARIBCAN beneficiary countries or Canada. The 60% qualifying content may be cumulated from various beneficiary countries or Canada. The good must be finished in the beneficiary country in the form in which it is imported into Canada. (See <http://www.cbsa-asfc.gc.ca/E/pub/cm/d11-4-5/d11-4-5-e.pdf>.)

EU Rules of Origin: Under the Cotonou Agreement between the European Union (EU) and the African Caribbean and Pacific (ACP) group of countries, ethanol originating in the Caribbean qualifies for duty free treatment into the EU once it satisfies the following requirements. It must be manufactured using materials not classified in headings 2207 (i.e. ethyl alcohol of strength >80% vol.) or 2208 (i.e. ethyl alcohol of strength <80% vol), in which all the grapes or any materials derived from grapes used, must be wholly obtained or, if all the other materials used are already originating, arrack (alcohol distilled from fermented plant-based material such as palm sap, rice, or molasses) may be used up to a limit of 5% by volume. Here, the EU rules of origin restrict the feedstock to materials originating in the Caribbean. In other words, no feedstock from outside the region is allowed if the product wishes to receive duty relief under the Cotonou agreement. Producers, therefore, cannot use Brazilian feedstock (molasses), for example, and expect to receive duty relief into the EU market.

(For details, visit [http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:22000A1215\(01\):EN:HTML](http://eur-lex.europa.eu/LexUriServ/LexUriServ.do?uri=CELEX:22000A1215(01):EN:HTML))

Costa Rica Rules of Origin: According to the provisions of the CARICOM-Costa Rica Trade Agreement, ethanol is deemed to originate in the country where it is wholly obtained or entirely produced. The Costa Rica Agreement, therefore, is most restrictive as it does not allow Caribbean ethanol to receive duty relief where non-regional feedstock supply is used in its production. Not surprisingly, CARICOM does not export any ethanol to Costa Rica. (For details, see http://www.sice.oas.org/trade/crcrcom_e/preamb_e.asp#chapiv)

DEVELOPING A CARICOM ETHANOL POLICY FRAMEWORK

In seeking to determine an appropriate policy framework to promote development of CARICOM's ethanol industry, we examine ethanol programs in a number of countries around the world to see what type of support is provided by the state.

Brazil requires 25% of ethanol blends in energy use and provides preferential tax treatment. Brazil also provides a 20% import tariff protection for local ethanol producers. Argentina, on the other hand, requires the use of 5% of ethanol blends in energy use, to be achieved over the next five years, and imposes a 20% import tariff to protect local ethanol producers. In the case of Thailand, the government requires that all gasoline sold in Bangkok must be 10% ethanol blend. There is the imposition of a 30% import tariff to protect local ethanol producers and distributors.

India requires 5% ethanol in all gasoline blends and uses a 186% import tariff to protect local ethanol producers. Australia requires voluntary blending of up to 10% ethanol while the UK provides incentives for ethanol production at 36 cents per liter. The EU had established a requirement for a biofuels energy content of 2% by 2005 with a target to increase to 5.75% by 2010. There is an imposition of a 19.2cents per liter import tariff to protect local ethanol producers. Since 1992, Canada has provided provincial tax breaks for ethanol production and imposes a 4.92 cents per liter import tariff to protect local ethanol producers.

The United States offers gasoline refiners a tax credit for every gallon of ethanol they blend regardless of where the ethanol is produced. This credit benefits agri-biodiesel producers by giving them a 10 cent per gallon tax credit for up to 15 million gallons of agri-biodiesel produced. In addition, the limit on production capacity for small ethanol producers has been raised from 30 million to 60 million gallons. This was originally effective until the end of 2008; however, on October 22, 2004, President George W. Bush signed into law the American Jobs Creation Act (JOBS Bill), which includes the Volumetric Ethanol Excise Tax Credit (VEETC) extension of the ethanol tax incentive to 2010, modifications to the small ethanol producer tax credit to allow it to be claimed by farmer cooperatives, AMT relief for Section 40 - the Alcohol Fuels Income Tax Credit, and a new biodiesel tax credit. To avoid subsidizing foreign producers of ethanol, an equivalent credit offset is placed on imported ethanol. History has shown that foreign ethanol arriving in the US can pay the credit offset and still compete effectively in the marketplace.

In Canada, the federal government has excise tax exemptions for ethanol and methanol-blended fuels. The purpose of the federal program is to encourage the development and marketing of ethanol and methanol made from biomass. This program provides a 100% exemption from the \$0.10 per litre excise tax on gasoline for ethanol and methanol made from biomass that is blended with gasoline. Similarly, at the provincial level, British Columbia exempts natural gas and ethanol and methanol blends of 85% or more from provincial fuel taxes. Alberta has tax exemptions for ethanol and natural gas. Manitoba has reduced fuel taxes for ethanol-blended fuels, as well as propane. Saskatchewan has a tax rebate for fuel taxes paid on Saskatchewan-produced and consumed ethanol. In Ontario, ethanol receives a tax exemption as set out in the Gasoline Tax Act when it is used as a motor fuel in the province. This exemption amounts to \$0.147 per litre of ethanol. Quebec has an accelerated capital cost allowance program on specific capital equipment used in fuel ethanol production. An ethanol tax incentive of \$0.204 per litre of ethanol is available in Quebec for ethanol produced in the province.

In 2001, the European Union adopted a communication accompanied by legislative proposals on alternative fuels for road transport. Three main fuels -- biofuels, natural gas and hydrogen -- were identified as having potential for development. The legal proposals were adopted, in amended form, in 2003. The Biofuels Directive set "reference values" of a 2% market share for biofuels in 2005 and a 5.75% share in 2010. To implement the directive, many EU Member States are relying on fuel tax exemptions, facilitated by the Energy Taxation Directive. A number recently turned to biofuel obligations, requiring fuel supply companies to incorporate a given percentage of biofuels in the fuel they place on the national market.

It is believed that the EU will require some imports in order to sustain the Biofuels directive. In the past, the EU has been a net exporter, mostly of wine alcohol, which was processed in the Caribbean and then used as motor fuel in the United States. However, this wine alcohol is now increasingly used on the domestic market in biofuel applications. The Energy Taxation Directive makes it possible for Member States to grant tax

reductions/exemptions in favour of biofuels under certain conditions. These tax concessions are considered as state aids, which may not be implemented without prior authorization by the European Commission.

In CARICOM, Trinidad and Tobago imposes a tariff of \$18.59 per litre on imported ethanol, while Jamaica imposes a tariff of 30%. Furthermore, in Jamaica, the renewable energy policy introduced in 2000 calls for 12% of the country's electricity requirements to be produced from renewable energy sources by 2020. In the nine-member Organization of Eastern Caribbean States (OECS), a tariff of 20% is imposed on imported ethanol.

It is apparent that the Caribbean has not used the breadth of policy instruments at its disposal to promote the use of alternate energy. Trade policy practice has allowed subsidization of investments and trade in energy products such as ethanol. Below, we propose the adoption of a suitable mix of measures that would give greater promotion of the use of alternative energy in the region.

TOWARDS IMPROVING CARICOM'S COMPETITIVENESS IN ETHANOL.

Jamaica, CARICOM's leading ethanol producer, has identified the United States as its main export market in the short term. In 2004, US demand for fuel grade or anhydrous ethanol was estimated in excess of 3 billion gallons per year.

From an oversupply situation early in 2003, the US ethanol market has moved to a position of undersupply during the past months as a result of increased demand from California, New York and Connecticut. The increased demand in these states stems from a ban, since January 1, 2004, on a chemical compound known as methyl-tertiary-butyl-ether (MTBE) that was used as a fuel additive but which was later found to have contaminated some sources of drinking water. The previous oversupply was due mainly to the construction of several new ethanol plants or the expansion of existing plants in 2001 and 2002 in response mainly to the California MTBE ban.

European markets are also possible targets for ACP ethanol exporters in due course. These countries are exempted from duty into Europe while a major exporter like Brazil, for example, faces a duty of approximately US\$0.44/gallon (denatured) and US\$0.84/gallon (undenatured). The German market was launched in January 2004 and the governing standards have already been developed and accepted.

In the long term, demand for lead-free additives and environmentally benign octane enhancers combined with expected modification of the CBI legislation, should ensure the marketability of Caribbean ethanol.

Meanwhile, across the region, there is a raging debate about the benefits of the ethanol industry. On one hand, it is argued that ethanol has provided a mechanism for the US to provide corn producers subsidies which are not currently under negotiation under the WTO (World Trade Organization) Agriculture agreement. In another move, it is proposed that ethanol be considered an environmental product and receive duty preferences as such. Additionally, the price of meat and basic staples such as corn and wheat has gone up several times since mid 2006 and industry analysts state that there is no end in sight.

However, in Brazil, and more recently, in the USA, support for the ethanol industry has encouraged rural development and the revitalization of many declining industries such as sugar. Such support has stimulated the creation of jobs and foreign exchange earnings and has provided much food for thought about the benefits this industry can bring to the Caribbean. Ultimately, the more the region can produce alternative energy, the more it will be able to dampen the impact of high energy costs for both business and consumers.

It is on this basis that we propose some changes in rules of origin to allow CARICOM producers to manufacture ethanol from as wide an array of feed stock as possible. It is apparent that the main driving force

behind competitiveness now is the high price of petroleum fuel, various biofuel directives, and the tax credits being given for processing ethanol in the US, Canada and the EU. These tax credits are time bound in most cases and, as such, regional ethanol producers risk losing competitiveness in their extremely expensive bio-refineries.

Ethanol producers should seek to review all rules of origin requirements to allow for the use of greater third party feedstock so that, in addition to receiving the tax credits, their ethanol will also be able to benefit from duty concessions in all major markets that are proffered by the suite of external trade agreements.

There is probably no ethanol distiller in the region right now that can satisfy 'wholly produced' rules of origin as is the case in the Cotonou agreement with the EU and the Costa Rica agreement. Indeed, available trade data shows very little trading activity with either the EU or Costa Rica. Therefore, ethanol seems to be one product that is sensitive to rules of origin treatment. It is thus recommended that a tariff change (i.e. "tariff jump") requirement be used in all trade deals. This would make ethanol producers/distillers more competitive as all that would be required is that the final product be classified in a different tariff heading than its feedstock, which is currently the case for persons using molasses to produce ethanol. For investors importing wine to produce ethanol, then a CBI-like value added criterion could be more appropriate.

Based on their relatively small volume of exports, and the low likelihood of trade distortions from the regions economic activity in this sector, regional ethanol distillers should also lobby for national treatment (i.e. no discrimination with domestic distillers) with regards to incentive programs. In anticipation of future increases in regional production capacity, it may also be timely that the region lobby for an increase in the ethanol cap from 7% to 10%.

We also recommend that where the CARICOM investment regime is being finalized as part of the single economy, the biofuels sector, specifically ethanol production, receive a suite of incentives which can be informed by what other countries are providing (some examples were listed earlier) where this is not already being contemplated. Where required, the CARICOM private sector should lobby member governments to consider introducing biofuels directives to spur greater utilization of these alternative sources of energy, and provide a greater motivation to investors in this sector.

Investors should also note a proposal made in the WTO to classify ethanol as an environmental product and as such deem it duty free for sustainable development purposes. This proposal has however not yet been finalized or met with any consensus, but could impact the competitiveness of the significant investments being made in the region. With the timid restart of the WTO discussions and the slow negotiation of any rules of origin in the Economic Partnership Agreement (EPA), it may be an appropriate time for this sector to prepare and submit a short brief on some critical trade policy issues for its growth.

What is clear however is that skyrocketing energy demand is fuelling a thrust for wider sources of cost efficient energy, and as such, protectionist policies in the energy sector seem short-sighted. The region should anticipate a more open energy sector in terms of tariffs, quotas and other policies, and enhance their competitiveness appropriately to survive.

As usual, we encourage you to submit your comments to us at privatesector@crnm.org and visit us on the CRNM Web site at – <http://www.crnm.org/>.