

Soybean oil is all set to capture a larger share of the Indian import market this season at the expense of palm oil.

On March 1, 2004, the Indian government lowered the reference price for crude degummed soybean oil from \$565 per MT to \$485, which effectively lowered the duty by \$36 a ton and improved the competitiveness of soybean oil against palm oil, says United States Department of Agriculture (USDA).

Moreover, on February 15, 2004, India raised the import duty on crude palm oil from 65% to 80% and on all refined and further processed palm oils, from 75% to 90%, while also lowering the reference price for crude palm oil from \$454 to \$400.

In this case, the combination of a lower reference price and higher duty rate leads to an

## Soybean Oil to Gain Larger Share Of Import Market

effective tax increase of about \$25 per ton. This increase in tax plus decrease in soybean oil tax of \$36 a ton narrows the market price by \$61 a ton, making soybean oil much more competitive, *financiallexpress.com* reported.

The government's decision to reduce the reference price for soybean oil is being disputed in India. The Solvent Extractors' Association argues that this reduction deviates from the current market price of soybean oil (on CIF basis) of



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around \$546 per ton and that it would adversely affect Indian farmers. India imported 7.59,000 tons of soybean oil in marketing year (MY) 2003/04, and is forecast to import 1.5

million tons (MT) of soybean oil in 2004/05. In contrast, imports of palm oil declined to 3.55 mt in MY 2003/04, compared to 3.95 mt in MY 2002/03, and are expected to further decline to 3.4 mt in MY 2004/05.

It is worth mentioning that the US is the largest soybean producer, followed by Brazil, Argentina, China and India. According to latest forecast by USDA, world soybean production for 2004-05 is pegged at 224.14 mt, of which US will account for 85.48

mt, Brazil for 59 mt, Argentina for 39 mt, China for 18 mt, India for 6.50 mt, Paraguay for 4.50 mt and the rest of the world for 11.66 mt.

On the exports front, the US will emerge as the largest exporter at 28.44 mt, followed by Brazil at 21.10 mt, Argentina at 2.67 mt, Paraguay at 2.60 mt and others at 2.61 mt.

According to USDA's forecast, peanuts or groundnut will be the highest produced oilseed at 7.5 mt in India for 2004-05, followed by cottonseed at 6.9 mt, soybean at 6.5 mt, rape/mustard seed at 6.4 mt and sunflower seed at 1.75 mt.

India's oil consumption during the year 2004-05 is expected to be a total 11.81 mt, of which palm oil will account for 3.40 mt, followed by soybean oil at 2.45 mt, rapeseed oil at 2.14 mt, groundnut oil at 1.80 mt, cottonseed oil at 0.731 mt and others at 1.29 mt.

## Where Japan Shines

Pushing Japan to become a leader in the alternative energy industry has been no small feat. The country is 80 percent reliant on energy imports, compared to 50 to 60 percent for the United States and the European Union. To curb its dependence, Japan has steadily pursued the potential of solar energy for more than 40 years. Now, with oil prices hovering around \$50 per barrel, Japan is putting its solar project at full throttle—with a potentially big payday.

Japan's solar industry is "hot" and set to grow more than 40 percent this year alone—from around \$5 billion to \$7 billion—according to an autumn report from investment house CLSA Asia-Pacific, which surveyed more than 200 solar power-related companies. Customer demand is also strong: many Japanese solar vendors are sold out until 2006. Since 1990, their market size has grown an average of 30 percent per year, *redherring.com* reported.

"Japan is the global leader in commercializing solar cell technology," notes Merrill Lynch analyst Hitoshi Kuriyama. The country's cumulative installed capacity (the total wattage output created by all the solar panels currently operating) is close to one-half of the world's total, according to fiscal 2003 figures. Total production of photovoltaic (PV) cells—the most efficient technology for turning the sun's rays into usable energy—has tripled in the past four years, with growth in Japan being the highest, at 45 percent, followed by Germany at 43 percent.

According to Mr. Kuriyama, Japan's low domestic fossil fuel production is the major impetus for it to develop new sources of energy. But cooperation from both the private and public sectors is also pushing the process.

The Japanese government continues to subsidize research into solar energy, as does the German government. At nearly ¥51.7 billion (\$500 million) per year, the Japanese government outspends the US and the EU by more than five times. But the industry has reached the point where manufacturing efficiencies may be more important than great strides in innovation.

Sensing this transition, the Japanese government has slowly decreased its incentives for solar power, which now amount to around ¥25.8 billion (\$250 million) per year. Yen/watt discount incentives fell from ¥900 (\$8.70/watt) to ¥450 (\$4.40/watt) in the course of fiscal 2004, and the government has said it will impose another 50 percent cut in fiscal 2005.

Private-sector incentives are quickly picking up the slack. Japanese banks are offering consumers between a 1 and 2 percent discount on mortgages if they buy a new home with a solar system installed. And Japanese companies think that critical mass in solar power is increasingly likely, so they are making the appropriate investments.

For example, Japanese electronics giant Sharp is investing heavily in residential solar panel growth, as are Kyocera and Omron. In typical Japanese fashion, the three companies are integrated entities, giving them a singular advantage over their German counterparts. They have formed operational partnerships that can handle the entire process, from production to retail. Together, Sharp, Kyocera, and Omron are large enough to cover all parts of the manufacturing process.

The CLSA report boldly forecasts 30 percent year-on-year growth for the next six years, concluding that "the global solar power market has realistic potential to expand from \$7 billion in 2004 to \$30 billion in 2010."

### Power Players

Sharp is now the world leader in the production of PV solar cells, with a 26.6 percent global share, according to PV News, a US-based solar cell industry magazine, well ahead of second place Shell's 10 percent share. PV cells are flexible, expeditious, and adaptable—ideal for use in homes, industries, and utilities.

Sharp has long been waiting for a major payoff: since 1971, for example, it has provided NASA with its solar technology. That year, NASA awarded the Japanese company the Apollo Achievement Award for its development of solar panels for satellites and space craft. Sharp began installing solar cells on Japanese satellites in 1967.

Four percent of Sharp's global revenues currently come from the solar market. Last year, the company posted \$96.1 billion (\$930 million) in revenue from its solar division (out of ¥2.2 trillion [\$21 billion] in fiscal 2003 net sales) at a world-record 315 megawatts of output production.

The CLSA report estimates that by 2006, Sharp's profits from solar will grow to 12 percent of total profits.

"Sharp's aim is to be the biggest solar manufacturer in the world, so it has focused its efforts on constant improvement of its solar manufacturing facilities," says the company's spokesperson.

### Weighing the Costs

Michael Rogol, the chief analyst behind the CLSA report, admits that the solar power solution will take some persuading. Since its first laboratory applications in 1954, solar has been riding the classic technology path of hype, followed by disappointment.

The biggest stumbling block has always been the high initial cost of the system itself.

Scientists who contributed to the CLSA report now believe that the industry will operate with the following dynamic: the cost of producing PV modules will decrease by 20 percent for every cumulative doubling of output.

This brings Japan back to its traditional strength: manufacturing.

## China's Global Hunt for Energy

China's craving for oil to drive its industrial boom and, to a lesser extent, satisfy its love affair with the motorcar, has helped to push up global crude oil prices.

In 2003, China raced past Japan to become the world's second biggest consumer of petroleum products after the US.

In 2004, its thirst grew by 15%, while its output only rose 2%.

"They have a problem," says Philip Andrews-Speed, an energy analyst at Dundee University and former BP China executive.

China accounted for 40% of the growth in oil demand over the last four years, says the US Energy Information Administration (EIA).

To slake its seemingly insatiable thirst, Chinese oil firms are trying to squeeze more out of their wells using smarter technology and they are rumored to be considering buying parts of Western oil majors.

China has also embarked on a frenzy of oil hunting diplomacy. China's rulers seldom go anywhere these days without talking oil, while at home in the last year they have unrolled the red carpet in Beijing to dignitaries from all 11 countries in the OPEC.

They got results.

China clinched deals to develop fields in Iran.

The red flag came out too, as China opted for a bit of anti-imperialist bonding. Cuba agreed to let China explore its coastal oil fields, *bbc.co.uk* reported.

And eyebrows were raised in Washington when left-wing Venezuelan president Hugo Chavez offered Chinese firms operating rights to mature oil fields.

As the world's fifth biggest oil exporter, Venezuela is vitally important to the US, though relations between the White House and President Chavez are strained.

Venezuela's output has been poor since a political tussle led to the sacking of senior managers at national oil group Petroleos de Venezuela.

President Chavez may hope Chinese engineers can help "revive Venezuela's oil fields on the cheap", says Leo Drollas, Deputy Director of the UK-based Centre for Global Energy Studies.

### 'Aggressive Quest'

None of this has gone unnoticed by Western oil majors, and it risks getting up some powerful US noses.

James Lilley, ex-US ambassador to Beijing, has said



In 2003, China raced past Japan to become the world's second biggest consumer of petroleum products after the US.

"the Chinese are on an aggressive quest to increase their supply of oil all around the world", according to remarks quoted on industry website Alexander's Gas and Oil Connections.

ChevronTexaco chief Dave O'Reilly has warned of a "bidding war for Middle Eastern oil between east and west".

In December Asian industrialized powers walked their rivalries to invite OPEC oil ministers to India in an attempt—albeit unsuccessful so far—to renegotiate long-term supply contracts to run for up to five years, says Mr Drollas.

China has also been "building strategic relationships" with states "along the sea lanes from the Middle East", according to Alexander's, quoting a briefing paper written for US Defense Secretary Donald Rumsfeld.

### Pumping Up Technology

China is not fussy where its oil comes from, whether Kazakhstan, Sudan or Angola. Its main concern is having enough of it, and the quest is driven from the very top.

China has plenty of oil of its own, but the onshore fields in particular are old and running dry. Offshore, the situation is rosier.

Technologically, China's big four oil groups lag behind Western majors, particularly at deep sea drilling—unfortunate, given the future importance of offshore finds.

But government backing could help. "They're less liable to put projects through the same rigorous commercial evaluation that multinationals would do," says Mr Andrews-Speed.

They are also "making great strides" with advanced seismic imaging techniques that can pinpoint oil reservoirs to save time and money, says Jeffrey Logan, China researcher at the International Energy Agency (IEA).

### Acquisition Trail?

Internationally, a strategy has been mooted whereby Chinese oil firms would be buying chunks of Western ones.

China National Offshore Oil Corporation (CNOOC) has asked its bankers to price up a takeover of mid-sized US oil company Unocal, which drills in Indonesia and Thailand.

This raises two questions: Could China's main offshore explorer afford to buy Unocal, ranked ninth among US oil producers? And do Chinese firms have the management skills to run such an acquisition?

The answer to both is 'Maybe'.

## Coal Still King in Nova Scotia

Nova Scotia's four coal-fired electric generation plants will likely belch greenhouse gases for years to come despite Ottawa's renewed commitment to reduce such emissions, provincial officials say.

Environmentalists are hoping money from the \$1-billion Clean Fund, announced in the recent federal budget, can be used to dismantle or convert coal-fired plants, which would help Canada comply with the Kyoto treaty on climate change.

But Nova Scotia appears reluctant to embrace the wholesale change proposed by Ottawa, even though 74 per cent of the province's electricity is generated by burning coal—one of the biggest sources of greenhouse gases.

"I wouldn't see decommissioning a coal-fired plant for the sake of reducing . . . emissions," said

Allan Crandlemire, director of climate change at the provincial Energy Department, *Canada.com* reported.

"I wouldn't suggest we're going to move to an electricity system that has no coal or oil in it. We'll migrate there over decades and decades, but that is not going to change over the five or 10 years."

Bruce Cameron, another senior adviser to the Energy Department, said retrofitting the plants isn't much of an option either.

"Generally speaking, to retrofit a coal plant for natural gas, while it is technologically possible to do so, it is not economic to do so," Cameron told a legislative committee last week.

"It makes a lot more sense to start with a new plant and have it designed to use natural gas."

Under the Kyoto protocol, Canada is supposed to



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cut its greenhouse gas emissions to a rate six percent below 1990 levels, and it must attain that goal between 2008 and 2012.

Though the protocol came into legal force last month, Ottawa has yet to draft a plan on how to reduce these heat-trapping emissions.

Crandlemire said he believes Nova Scotia can reach its reduction targets through conservation, bet-

ter use of public transit and retrofit programs, among other things. He said the biggest obstacle to shutting down coal-fired generators is the absence of a suitable alternative.

The province has no major rivers to produce hydroelectric power and going nuclear isn't an option.

But a leading environmental group says Nova

Scotia should use the federal money to make bigger changes.

The budget "is a signal to the province that if they come forward with a really good plan the federal government will help them do it," said John Bennett, spokesman for the Sierra Club of Canada.

He said Nova Scotia could utilize its wind and tidal resources to produce power.

But the province's electric utility, Nova Scotia Power Inc., has said it would take up to 900 windmills to equal the output of one coal-fired plant, and the Conservative government recently shut down the Crown corporation set up to harness tidal power in the Bay of Fundy.

In some respects, Nova Scotia represents a microcosm of the challenges the federal government faces as it tries to persuade Canadians—individuals

and businesses—to go green.

In neighbouring New Brunswick, Premier Bernard Lord has suggested the federal government could help it meet its Kyoto targets by contributing \$400 million toward refurbishment of the Point Lepreau nuclear plant.

Ontario, Ottawa is still negotiating with auto industry to draft stricter emission-control standards for vehicles. The industry is pushing for a voluntary code instead of federal regulation, but progress has been slow.

Last August, Calgary-based power producer TransAlta became the first Canadian company to buy foreign emission-reduction credits, even though Canada has yet to approve such trading.

About 65 per cent of the electricity TransAlta produces in Canada comes from coal-fired plants.