

**UPPER GANGES SUGAR & INDUSTRIES LIMITED**  
**[For the Quarter ended 30<sup>th</sup> June, 2008]**

**Management Discussion and Analysis**

**Indian economy**

Over the last few decades, India's sugar consumption has been largely independent of the broad economic trend. However, it has been observed that a buoyant economy enhances the offtake of all downstream food products that consume sugar as a preservative and also facilitates the mobilisation of low-cost capital. This macro environment remained positive for the sugar industry in 2007-08. India retained its position as the second-largest emerging market economy, fourth-largest global economy and the second-fastest growing economy; the country recorded 9 percent growth in 2007-08, strengthening its four-year CAGR to 8.9 percent. Besides, the country emerged as the trillion-dollar economy in the first quarter of 2007-08, one of only 12 such countries. The country's agricultural and allied activities grew 4.5 percent, compared with earlier estimates of 2.6 percent.

***GDP growth rate over the years***  
*(percent)*

<b>2004-05</b>	<b>2005-06</b>	<b>2006-07</b>	<b>2007-08</b>	<b>4-year average</b>
7.5	9.4	9.6	9.0	8.88

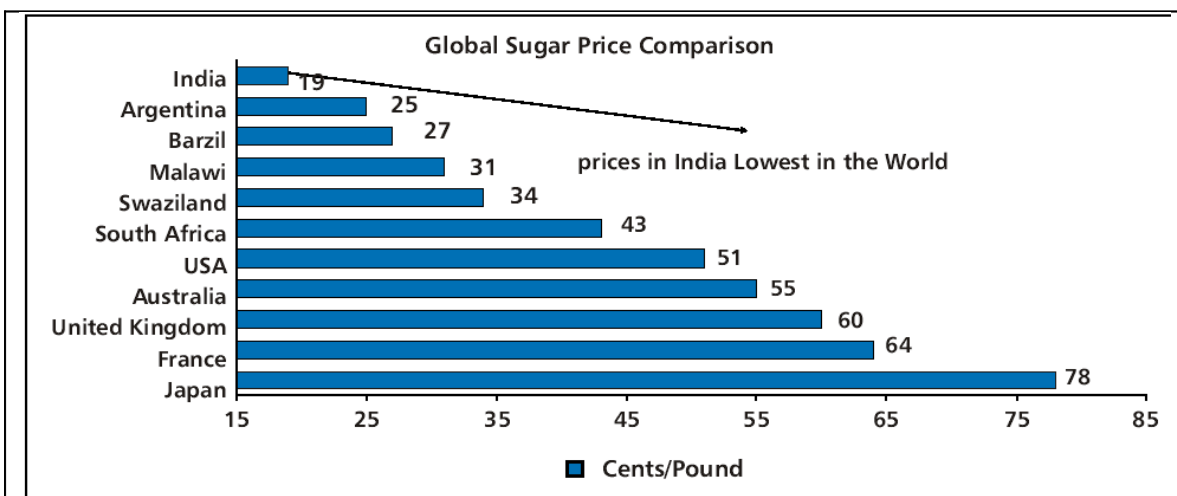
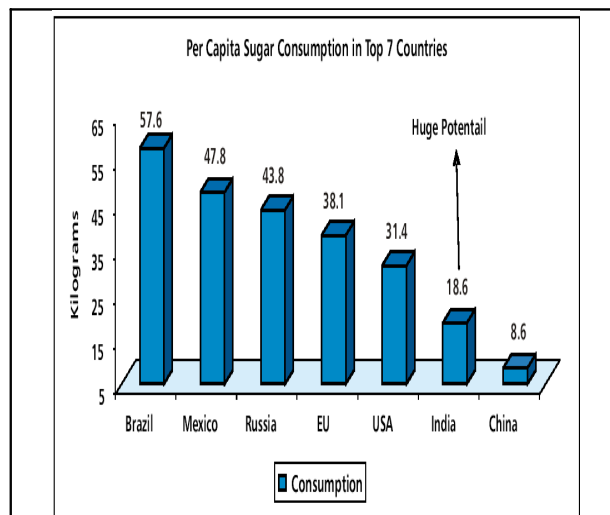
**Sugar**

**Global overview:** Nearly 78 percent of the global sugar production is derived from sugarcane as it costs less than the alternative beet process; the global sugar production in 2007-08 was estimated at 167.38 million tons, Brazil accounting for about 20 percent of the total global production and Asia around 40 percent. Even as the global sugarcane production is estimated to rise by 9 million tons, production from the top seven sugar producing nations is expected to decline from 113.57 million tons in 2006-07 to 113.4 million tons. Driven by increasing prosperity of India, China and some countries in the Middle East, the global sugar consumption is expected to increase to around 160.8 million tons, leading to a considerable increase in India's per capita sugar consumption. With India's lower sugar production and higher cane diversion to ethanol in Brazil, international sugar prices rebounded 21 percent from the US\$280/mnte to US\$380/mnte.

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World Sugar Dynamics					
World Sugar Production (MMT, Raw Value)					
Country/Region	2003-04	2004-05	2005-06	2006-07	2007-08E
Brazil	26.14	27.73	32.64	32.77	34.23
India	14.74	13.8	20.94	30.6	27
EU	20.2	21.95	21.02	17.05	17.45
China	10.9	9.86	9.58	13.04	13.59
USA	7.85	7.15	6.71	7.7	7.66
Thailand	7.28	5.43	5.08	6.98	7.89
Mexico	5.36	6	5.39	5.43	5.58
Total of Top 7 producers	92.47	91.92	101.36	113.57	113.4
% of Total World Sugar Production	63%	65%	66%	68%	68%
Others	53.72	49.18	51.22	53.72	53.98
World Total	146.19	141.1	152.58	167.29	167.38

*(Source: F.O. Licht's International Sugar and Sweetener Report )*



*(Source: LM securities research)*

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**Indian overview:**

The Indian sugar industry retained its position as the country's second-largest rural agro-industry with an annual turnover of Rs. 700 billion, contributing almost Rs. 22.5 billion annually to the central and state exchequer by way of taxes, cess, and excise duty (*Source: Ministry of Food, Government of India*). The industry employs around 50 million sugarcane farmers and labourers, constituting 7.5 percent of the rural population, and provides indirect employment to around 2 million people.

The Indian sugar industry comprises organised (sugar factories) and unorganised manufacturers (*gur and khandsari*) on the one hand and three categories (co-operative, private and public sectors) on the other.

The industry is regulated by the government.

	<b>Current regulations</b>	<b>Impact</b>
<b>Cane price determination</b>	- Statutory minimum price (SMP) by centre - State advised price (SAP) by states - SAP being higher than SMP	Sugar mills in states are at a disadvantage wherever SAP is applicable
<b>Command area</b>	No new mill can be set up within 15 km from existing mills	Cane demand-supply imbalance can impact operations
<b>Monthly release mechanism</b>	Monthly releases given to each mill by the government	Sugar mills are impacted in times of excess, leading to higher carriage cost and lower realizations
<b>Levy quota and levy price</b>	10 percent of the mills production procured by the government at levy price for distribution through public distribution scheme (PDS)	Sugar mills must necessarily sell 10 percent of their production at a low-levy price

Although sugarcane is a hardy tropical crop, around 90 percent of India's sugarcane is grown in irrigated land, accounting for around 5 percent of the country's total irrigated area. India enjoys ideal cane-growing conditions — tropical climate, affordable labour and low-cost irrigation. More than one crop is harvested from a single planting and after the first crop is removed, two or more stubble crops (ratoons) are obtained. Planting season usually starts from February

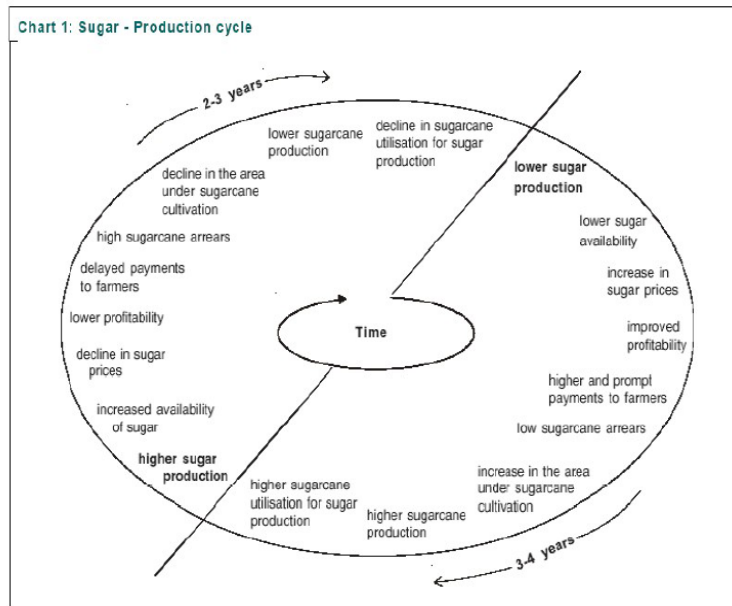
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to April, followed by harvesting in October. Crushing starts in October, peaks in January and continues till May. India's average sugar recoveries are modest at around 10-11 percent, compared with 12-13 percent in Brazil and other major sugar producers.

In 2007-08, India is expected to produce around 27-28 million tonnes of sugar, despite small farm holdings and low- productivity. Although India's sugar industry suffered from low-crushing capacity, yet it recorded one of the lowest sugar processing costs. India's major sugarcane producing states comprise Maharashtra, Uttar Pradesh, Andhra Pradesh, Gujarat, Tamil Nadu and Karnataka, accounting for around 85-90 percent of the country's cane production. In 2007-08, India's sugar consumption is expected to decline to 22 million tones.

India's volatile sugar prices rebounded by 11.1 percent from December 2007 to Rs 15,080 per tonne in March 2008 and declined further, following the partial removal of government aid for carrying buffer stock. In July 2008, sugar prices increased by 8 percent over the previous month on account of supply shortages and higher exports.

Sugar production cycle



Source: CRISIL Research

**Government Policies**

The sugar industry in India is subject to numerous controls at various levels starting from procurement of sugarcane to sugar distribution, pricing and the use of end-product sugar. Sugar prices are closely monitored by the government and controlled by a set of measures like the release mechanism and levy allocation. The sugarcane prices are fixed by the Central or State Governments to ensure a

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remunerative return to the farmers. The Government of India fixes Statutory Minimum Price (SMP) for sugarcane. Moreover, certain State Governments like Uttar Pradesh insist for an even higher payment in the form of State Advised Price (SAP).

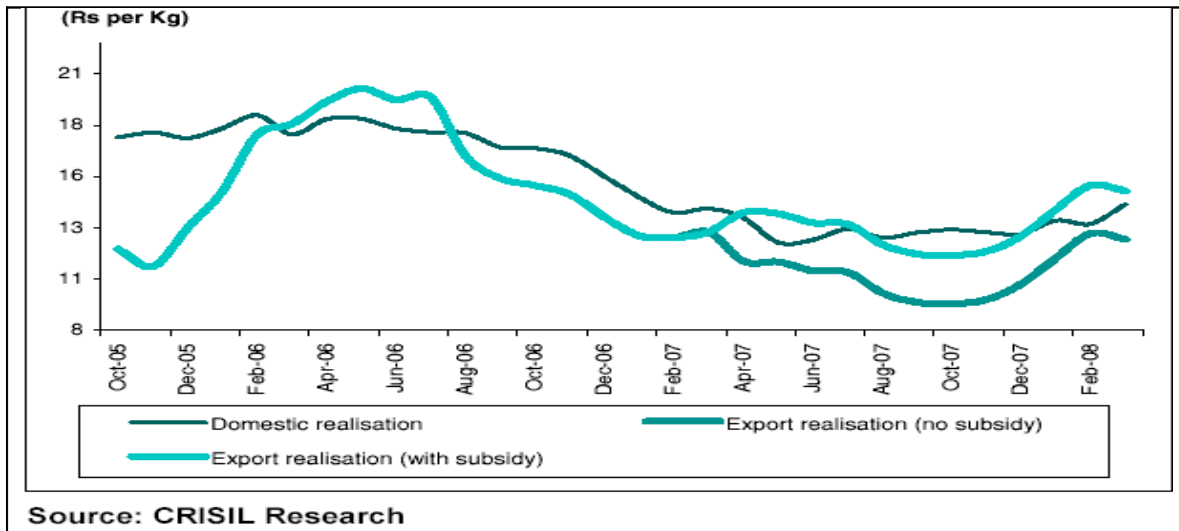
In the seasons 2006-07 and 2007-08 sugar production skyrocketed to record levels due to the irrational and unchecked increase in sugarcane prices by the State Government in U.P. due to political considerations. A unique situation existed where the cost component of raw materials was more than the selling price of sugar. The industry challenged the methodology used by the State Government at the High Court in Allahabad and Lucknow Bench of Allahabad High Court for both the seasons. While the Allahabad High Court ruled in favour of the industry by quashing the SAP for the seasons 2006-07 and 2007-08, the Lucknow bench of Allahabad High Court upheld the SAP for the season 2007-08. This matter is now pending at the Supreme Court.

Acknowledging the financial difficulties being faced by the sugar industry, the Government took a number of initiatives to help the industry tide over the present crisis:

- The Government of India extended interest free loans to the sugar mills equivalent to the excise duty payable in the seasons 2006-07 and 2007-2008 on sugar for payment of cane arrears and other statutory liabilities.
- In order to encourage export of sugar, the Government of India agreed to offset the higher freight costs incurred by the Indian sugar industry by extending subsidy of Rs 1,350 per tonne to mills located in the coastal areas and Rs 1,450 per tonne to mills situated in the interiors till September, 2008. As a result, India is exporting about 4.2 MT of sugar in 2007-08 compared with 1.7 MT of the previous year.
- The Government of India created a buffer stock of five million tonnes in the year 2007 to ensure availability of sugar in the domestic market. However, with effect from 1<sup>st</sup> May 2008, 2 million tonnes has been liquidated and the remaining stock of 3 million tonnes has ceased to exist from 31<sup>st</sup> July 2008.
- The State Government of Bihar in order to overcome the crisis being faced by the sugar industry announced cane price subsidy @ Rs.7/- per quintal for the sugar seasons 06-07 and 07-08. Further, the State Government also reduced the cane commission payable to Zonal Development Council for the season 06-07 from 1.8 % to 0.45 % of actual cane price paid.

**Export realisations**

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Box item

**Did you know?**

India, the world's second-biggest sugar producer, entered the raw sugar export market in 2007 by marketing to Dubai's Al Khaleej, the world's largest refinery, prompting it to switch from Brazil to India

Box ends.

**SWOT of the Indian sugar industry**

<p><b>Strengths</b></p> <ul style="list-style-type: none"> <li>• The world's second-largest sugar producer</li> <li>• Employs (including ancillary activities) directly around 0.5 million workers.</li> <li>• Supports downstream food processing industries</li> <li>• Engine of India's rural growth</li> <li>• Classified as an essential commodity for mass consumption</li> </ul>	<p><b>Weakness</b></p> <ul style="list-style-type: none"> <li>• Most of the sugar factories are more than 30 years old and use legacy technology</li> <li>• Low production capacity leads to low recovery and a relative inability to cover production costs.</li> </ul>
<p><b>Opportunities</b></p> <ul style="list-style-type: none"> <li>• By-products providing superior value for downstream industries</li> <li>• Huge potential to increase cane</li> </ul>	<p><b>Threats</b></p> <ul style="list-style-type: none"> <li>• Vulnerable to short-term political interests</li> <li>• Low ground water availability</li> </ul>

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<ul style="list-style-type: none"> <li>• productivity and sugar recovery</li> <li>• Technology upgradation, new advanced technology available for by-product utilisation</li> </ul>	<ul style="list-style-type: none"> <li>for irrigation</li> <li>• Deteriorating soil quality due to fertilizer and pesticide overuse</li> <li>• Unhealthy mill competition related to cane acquisition.</li> </ul>
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**Operational review**

The sugar industry is positioned at the cusp of an upturn in the sugar cycle. This start of the uptrend in the sugar cycle was triggered by increased sugar availability, decline in sugar realisations, lower mill profitability, delayed farmer payments, high sugarcane arrears, prospects of lower cane planting, correspondingly lower sugar production, prospect of an increase in sugar realizations and better industry health. In this rebounding climate, the Company produced 16.53 lakh qtls of sugar during the financial year under review, 29% decrease over the previous year. The realisation of per ton (net of excise) of free sugar for the Company also decreased from Rs. 15,326 in 2006-07 to Rs. 13,585 in 2007-08.

**Statutory minimum prices (Rs per quintal)**

	<b>2005-06</b>	<b>2006-07</b>	<b>2007-2008</b>
Seohara	89.18	85.38	89.28
Sidhwalia	81.26	82.95	81.18
Hasanpur	85.66	83.85	-

However, the company has paid State Advised Price (SAP) of Rs. 110 per quintal for the season 2007-08 in terms of Hon'ble Allahabad High Court's (Lucknow Bench) interim order dated 15<sup>th</sup> November, 2007.

In Bihar, the company has paid mutual agreed price of Rs.96/- per quintal (at gate). However, in addition to the said price, the Bihar Government has also paid a subsidy of Rs.7/ per quintal to the farmers.

**Highlights**

- The Company crushed 164.53 lakh qtls of sugarcane and produced 16.53 lakh qtls of sugar in 2007-08 compared with 241.40 lakh qtls of sugarcane crushed and 23.19 lakh qtls sugar produced in 2006-07.
- The Company produced 266.48 lakh litres of spirit, up 74.40% over the previous year.
- It sold 907.28 lakh units of power in 2007-08, as against 76.37 lacs units in 2006-07.

**Projects**

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In 2007-08, the Company invested Rs. 9878.17 lakhs in capital expenditure for projects expansion and modernisation, including co-generation and distillery modules across its three operating units.

**The comparative operational figures of the sugar factories for the last two seasons:**

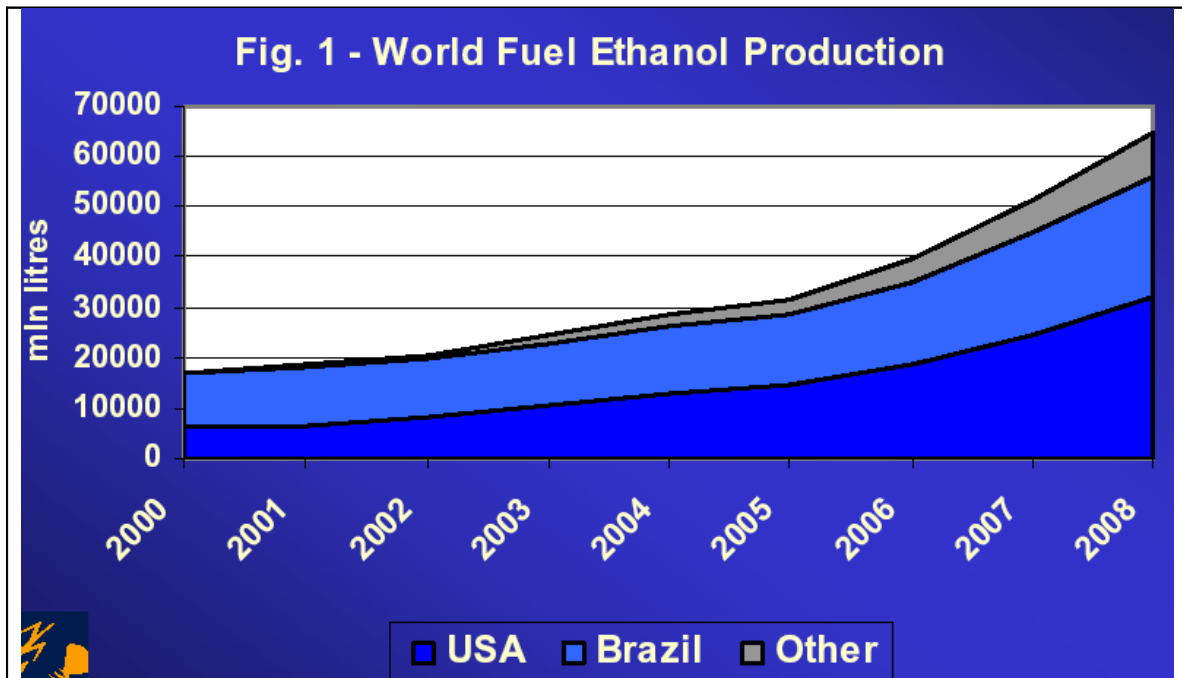
	Season 2007-08				Season 2006-07			
	Seohara	Sidhwalia	Hasanpur	Total	Seohara	Sidhwalia	Hasanpur	Total
Sugarcane crushed (lakh quintals)	140.60	23.93	--	164.53	176.35	40.83	24.22	241.40
Recovery (%)	10.26	8.73	--		9.93	8.86	8.69	
Sugar produced (lakh quintals)	14.44	2.09	--	16.53	17.48	3.61	2.10	23.19
Crushing days	140	75	--		189	161	142	

**Ethanol**

Ethanol is a renewable fuel produced from biomass. This liquid alcohol (made of oxygen, hydrogen and carbon) is obtained from sugar fermentation or converted starch contained in grains and other agricultural or agro-forest feedstock. The fuel additive can be used independently or as a gasoline blend. Its advantage is that it combusts more cleanly and completely than gasoline or diesel fuel, reducing greenhouse gas generation. It is a relevant weapon to counter vehicular pollution and reduce particulate emissions.

**Global scenario:** The global production of ethanol increased by 18 percent to 46 billion litres in 2007, the sixth consecutive year of double-digit growth. Consider this: Brazil derives more than 40 percent of its automotive fuels from sugarcane-based ethanol. Besides, the sugarcane diverted towards ethanol production increased from 58 percent in FY07 to 64 percent in FY08. Correspondingly, this increased the country's ethanol production by 21 percent to 19 billion litres in 2007. Brazil and the US accounted for 95 percent of all ethanol production in 2007.

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(Source: ISO Presentation)

**Indian scenario:** In India, ethanol is produced primarily from molasses, the by-product derived from cane processing. In October 2007, the Indian government made it mandatory to blend ethanol to the extent of 5 percent with petroleum, while 10 percent mandatory blending will come into force from October 2008. In view of this, the government permitted sugar mills to produce ethanol directly from sugarcane juice. Ethanol is used to meet the demand of the country's chemical industries. India's ethanol producing states comprise UP, Karnataka, Tamil Nadu, Andhra Pradesh, Maharashtra, Gujarat and Bihar.

**Outlook:** The global ethanol production is expected to exceed 20 billion gallons at a CAGR of about 5 percent between 2008 and 2012. The US and Brazil are expected to lead this growth followed by new ethanol producers in Asia and Latin America. Ethanol's future buoyancy in India is reflected in the following table:

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	Blended petrol demand (Litres)	Demand for ethanol (mn litres)		
		at 5% blending	at 10% blending	Demand other than ethanol
2007-08	14,320	716	1,432	1,835
2008-09	15,724	786	1,572	1,917
2009-10	17,272	864	1,727	1,998
2010-11	18,975	949	1,898	2,083
2011-12	21,391	1,070	2,139	2,173

	Total alcohol requirement (mn litres)		Potential alcohol production	Surplus/Deficit at 10% blending
	at 5% blending	at 10% blending		
2007-08	2,551	3,267	2,765	(502)
2008-09	2,703	3,489	2,084	(1,405)
2009-10	2,862	3,725	1,996	(1,729)
2010-11	3,032	3,981	1,996	(1,985)
2011-12	3,243	4,312	1,996	(2,316)

*Source : Cris Infac, Industry Data, Edelweiss research*

### Co-generation

Bagasse is used as a raw material in power co-generation in the sugar industry. The generated power is used for captive consumption, which reduces power costs on the one hand and the excess is marketed, generating incremental revenues on the other. Besides, the companies can earn certified emission reduction points (CERs) or carbon credits, which can then be marketed for additional revenues.

India is expected to add 1,200 MW bagasse-based power generation capacity during the Eleventh Five-Year Plan period, nearly twice the 750 MW addition during the Tenth Five-Year Plan. India, which is among the largest sugar producers in the world, generates nearly 40 million metric tonne (MMT) of bagasse, most of which is currently used as a captive boiler fuel.

India is expected to enjoy a total exportable power potential of around 9,700 MW from the co-generation route in 2017, addressing nearly 6 percent of the country's additional power requirement of 128 GW by then. The sector can also generate 48 million carbon credits through co-generation (*Source: KPMG*).

The Company has two co-generations plants

Place	Capacity	Commissioned
Seohara	24 MW	June 2007
Sidhwalia	18 MW	Will be Commissioned by November 2008

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**Future Outlook**

The sugar industry seems to be finally coming out of the worst ever recession that it had seen over the past few decades. After successive years of surplus production and uninhibited capacity addition, the sugar output in India has started declining. While it may be still premature to comment on the production estimates for 2008-09, it is evident that production will not exceed consumption as area under sugarcane plantation has fallen significantly. This development has witnessed a smart rally in sugar prices that have come back to the levels that were prevailing in 2006. There is still uncertainty about the sugarcane prices as the matter is under litigation and will have a significant impact on the profitability of the industry. The sugarcane price for 2008-09 is yet to be determined. Furthermore, with the fall in sugarcane production, prices of by-products such as molasses and bagasse have also started strengthening.

The growth of sugar demand by food industries and other non-household users, estimated to account for about 45% of total consumption, could provide additional impetus to longer-term market growth. Although gur and khandsari are still consumed in rural areas, demand for white sugar is expected to continue to increase. Indian sugar industry can be a global leader provided it comes out of the vicious cycle of acute shortages and surplus of sugarcane. A stable long term policy is needed in which the shackles are removed which constrain this industry from growing in a healthy manner. Against the backdrop of skyrocketing crude prices policymakers have become aware of sugarcane as an energy crop and are encouraging mills to go integrated and produce ethanol and power.

**Tea**

As the world's largest tea producer, India accounts for around 13 percent of the global tea export; tea production improved moderately from 947.17 million kg in 2006-07 to 947.93 million kg in 2007-08; Assam contributed 50 percent of the total tea production with over 800 tea estates. The domestic consumption of tea increased from 653 million kg in 2000 to 786 million kg in 2007 at 2.68 percent CAGR [Source: Tea Board of India]. Although per capita consumption grew from 691 gm to 693 gm, yet it is one of the lowest compared with other countries.

The Company's tea production decreased by 1.93% percent over the previous year, while realisations increased 6% percent from Rs. 85.39 per kg in 2006-07 to Rs. 90.50 per kg in 2007-08.

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**Human resources**

The Company recruits the best, trains them and provides them with opportunities for personal and professional development. An emphasis is laid on achievement, motivation, participation, empowerment and leadership. The Company followed employee-friendly policies and undertook various staff welfare measures. It believes in regular communication with its employees. With this objective, regular meetings were held with employees and the management. Industrial relations in the Company remained cordial during the year. Due to various measures adopted by the management, the Company had a low employee-turnover ratio.

**Internal Audit**

Adequate control systems have been institutionalized for monitoring all operational and managerial functions, being carried out in conformity with well-defined processes. The compliance of these processes and refinement of the same to reflect learning and changes in business environment is reviewed periodically. Regular audits of all key areas of business activities are conducted by internal audit teams. The internal audit function is jointly carried out with external management audit firms. The audit observations are reported and discussed by the senior management and also presented to the Audit Committee of the Board. The observations are discussed with the operations teams and the recommendations generated from there are implemented appropriately.

**Cautionary statement**

The statements in the Management Discussion & Analysis Report detailing the Company's objectives, projections, estimates, expectations or predictions may be forward looking within the meaning of applicable securities laws and regulations. As these statements are based on certain assumptions and expectations of future events, actual result could differ materially from those expressed or implied. Important factors that could make a difference to the Company's operations include economic conditions affecting global or domestic demand and supplies, political and economic developments in India or other countries, government regulations and taxation policies, prices and availability of raw materials, prices of finished goods, abnormal climate and geographical conditions, etc. The Company assumes no responsibility in respect of forward looking statements that may be revised or modified in the future on the basis of subsequent developments, information or events.