Address by Mr. Vivek M. Pittie, President, ISMA, at the "India-Brazil Business Forum" organized by ASSOCHAM at Taj Palace, New Delhi on 27th January, 2020 – Session covering "Bio-Energy – How to Build a Clean Energy Matrix".

Respected dignitaries, My co-panelists and dear friends. I speak to you on behalf of the sugar and ethanol producers in India.

I will briefly cover the Indian Ethanol program and thereafter highlight some challanges which we would like our Brazilian friends to address.

The Indian ethanol programme started in 2003 and was further augmented in 2007 but the real growth of the sector started from 2015. The personal attention and concern of the Indian Prime Minister, Hon'ble Mr. Narendra Modi has been instrumental in the growth of the program. It is under his guidance that we are seeing several positive public policies in the recent past. From around 1 to 1½ % of ethanol blending in petrol about 5 years back, we achieved a blend of almost 5% last year, whereby 1.9 billion litres of ethanol was blended with petrol.

The oil companies have been targetting to blend 10% ethanol in petrol. Accordingly last year, there was a demand for 3.3 billion litres, against

which we could supply 1.9 billion litres of ethanol. In the current year, the demand is for 5.1 billion litres, against which contracts for about 1.6 billion litres have been signed. The drop is primarily due to, the impact of drought in the last year, which has reduced sugarcane availability, and subsequently floods in some parts of India, damaging some sugarcane crop.

The Government has been regularly fixing remunerative prices for ethanol. Further, in order to increase the ethanol supplies by making more feedstock options viable and available to producers, the Government in its New Bio-fuel policy of 2018, decided to encourage use of feedstocks like sugarcane juice, intermediate molasses i.e. 'B' heavy molasses, coarse grains, surplus foodgrains etc. Following up on their policy of 2018, the Government has since last year started fixing differential ethanol prices based on the feedstock used. The industry has responded well in the current season, and almost 35-40% of the total ethanol supplies will be from sugarcane juice and 'B' heavy molasses.

The efforts made by the sugar industry and the farmers in the last few years to increase cultivation of sugarcane varieties having higher yield and

better sugar recovery has resulted in the average annual sugar production of India increasing from 26-27 million tonnes to 32-33 million tonnes. However, this significant increase in sugar production has resulted in huge sugar surpluses, consequently burdening the sugar industry with too much inventory.

We strongly believe that we will continue to have more and more sugarcane in the country as compared to what we require for producing sugar to meet our domestic consumption. Therefore, there was a need of finding an alternative use of the sugarcane. When sugar exports are not easy, what better way than to use the surplus sugarcane to produce ethanol ?

The question which therefore arises is that when there is sufficient availability of varied feedtocks for making more and more ethanol, when the ethanol prices are pretty remunerative and when there is a large unmet demand, why is the Indian sugar industry not able to produce enough ethanol for achieving the 10% ethanol blending targets?

The constraint is lack of adequate ethanol production capacity in the country. The distillation capacity across India is over 5 billion litres, but the capacity to produce fuel grade ethanol is around 3.5 billion litres, which you will agree is not sufficient to achieve the 10% target. With regular increase in the annual demand of petrol, the demand for ethanol is and will continue to grow at a fast pace. Therefore, there is an urgent need to invest heavily in developing more fuel grade ethanol production capacity in the country, especially when the other parameters are very encouraging.

The Government has taken initiatives to provide subsidies on the loans for ethanol production capacities and we are seeing a lot of interest from the sugar industry. We expect to divert about eight hundred thousand tonnes of sugar into ethanol by diverting 'B' heavy molasses and sugarcane juice in the current year, at the current capacity. We expect to increase the diversion in the coming years to 2-3 million tonnes, and thereby reduce some of the sugar production. This would result in an additional annual ethanol production of approximately 2.1 billion litres.

Today, as we try to learn from the experiences and successes of our friends in Brazil, on behalf of our sugar industry, I would like to seek their

guidance and expert advice on some important issues that I would like to highlight.

First and foremost, we are aware that all gasoline supplied in Brazil has 27% ethanol in it. However, we also know that in the 70s and 80s of the previous century, Brazil had slowly moved upwards from 10% ethanol blends and did not face any problems with the performance or the engines of the existing vehicles at that time. We have achieved 10% ethanol blends in some States of India and would like to increase the percentages beyond those levels in these states. We need to understand from Brazil as to how this transition was managed by them, so that we too may convince the Indian consumers and Indian automobile manufacturers that it is very much achievable and that no changes to the existing vehicles are required.

Secondly, smooth development of any bio-energy or bio-fuel programme anywhere in the world has happened and can happen only with supporting public policies. These policies need to be stable over a long period of time to provide visibility and confidence to the ethanol manufacturers and investors about not only safe returns on their investments but also the safety of their capital deployed or to be deployed. We would like to know

from our friends from Brazil about these public policies and how they were designed to provide an impetus to investment, particularly in the initial phase when the Brazil Ethanol programme was growing.

Thirdly, the issue of movement of ethanol and distribution of the same across the country is very important. Brazil like India is a large country, and thus the logistical success in the form of the efficient ethanol distribution network built across the country enabling uniform blending with gasoline is of immense interest to us. Any insights and or focal points that you could highlight for us to consider in order to achieve this would be most welcome.

Fourthly, since ethanol has a very high octane rating, we are given to understand that the oil companies need not manufacture or add aromatics to the petrol to achieve the desired levels of octane in petrol as currently done. Ethanol automatically increases the octane rating of blended petrol, and thereby provides a huge savings to the oil companies by dispensing with the requirement of the additives. How has the higher octane value of ethanol been used in the pricing of ethanol and how has it been successfully used to incentivize the ethanol producers?

Fifthly, how can electric vehicles and vehicles running with ethanol blended petrol co-exist on a permanent basis in the long term future.

As we move forward with this far sighted program, we hope to have continuous interaction with all our friends in Brazil as to how to improve ethanol blending levels and use ethanol to balance our sugar production.

Before I conclude, I would like to give some hard figures relating to season 2018-19 that will put the comparison of the Brazilian and Indian Sugar and Ethanol Industry in the right perspective. I will first give figures for Brazil followed by corresponding figures for India:

a)	Cane Crushed	621 million tons v/s 297 million tons
b)	Sugar Production	29 million tons v/s 33 million tons
c)	Domestic Sugar Consumption	9.8 million tons v/s 25.5 million tons
d)	Export of sugar	21 million tons v/s 3.8 million tons
e)	Ethanol Production	32.5 billion litres v/s 1.9 billion litres
f)	% of sugarcane used for sugar	42% v/s 100% as India hitherto made Ethanol only from 'C' Molasses which is a byproduct and in 2019-20, 3% sugar is planned to be diverted to Ethanol and ultimate target is to divert 10-15% sugar to Ethanol.

From these figures, it can be seen that domestic sugar consumption is much higher in India as compared to Brazil whereas Export of Sugar, Ethanol Production & diversion of sugarcane to Ethanol is much higher in Brazil as compared to India.

Finally, I would like to thank all of you for giving ISMA an opportunity today to share our views and suggestions on this platform and would like to acknowledge the inputs given by our Director General, Mr. Abinash Verma, whom I consider as one of the most knowledgeable persons in India regarding the Ethanol Industry.

JAI HIND!