

India's Bio-Diesel Policy and the Current Turmoil

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The BioFuel industry has lately been into news for wrong reasons- probe by The Competition Commission of India (CCI) to investigate the artificial suppression of the bio-diesel market in India. Energetica India looks at the current turmoil and revisits the biofuel policy of India along with examples of policy implementation in India.

The Turmoil

Recently the industry heard the announcement that India's antitrust watchdog will launch a probe into whether the petroleum ministry and state-run oil marketing companies have suppressed the market for bio-diesel, over-riding a report on the contrary by the Director-General of Investigation and Registration.

An official from The Competition Commission of India (CCI) has said that Rs.2,500 crores of investments made by bio-diesel industry is lying idle, as the government has not let the clean-fuel market grow in the country.

The industry has alleged that India has no commercial market for bio-diesel. The government allows producers to sell it as transport fuel only to oil marketing companies with regulated prices and curbs on its transportation.

Disgruntled bio-diesel producers such as Royal Energy Ltd had earlier complained against the curbs. Sections 3, 4 and 26 of the Competition Act allow the regulator to probe including government enterprises and ministries.

Data from the industry lobby shows that the domestic industry, which has 1.2 million tonnes of unutilised capacity, has registered flat growth since 2009, when commercial sales of the fuel were banned; whereas diesel imports may rise by up to 30%.

"Given the current demand of diesel, the bio-diesel sector has huge opportunity to grow, but the price set is too low to sustain the investment. Until companies are allowed to sell it directly to bulk consumers, there wouldn't be parity in the mar-

ket," Bio-Diesel Association of India president Sandeep Chaturvedi said. "It's crucial for bio-diesel to be freed of diesel prices," he added.

In India, the price of bio-diesel is regulated by the petroleum ministry, which uses the retail price of diesel for its calculation. It is currently sold at about Rs.30 a litre.

In view of the current situation of bio-diesel in India, Energetica India revisits the Indian policy on bio-diesel and also looks at some developments in the field of bio-diesel in India.

Policy Overview

India's National Bio-Diesel policy is driven by the fact that Energy is a critical input for socio-economic development of our country. The energy strategy aims at efficiency and security and to provide access which being environment friendly and achievement of an optimum mix of primary resources for energy generation.

India meets just 23% of petro demand through domestic production while the rest is met from imported crude. Keeping this in view, India's energy security remains vulnerable until alternative fuels to substitute/supplement petro-based fuels are developed indigenously.

As we all know, Biofuels are derived from renewable bio-mass resources providing a strategic advantage to promote sustainable development. This supplements conventional energy sources in meeting the rapidly increasing requirements for transportation fuels associated with high economic growth, as well as in meeting the energy needs of India's vast

rural population. India believes that Biofuels can increasingly satisfy India's growing energy needs in an environmentally benign and cost effective manner; reducing dependence on import of fossil fuels and thereby providing a higher degree of National Energy Security.

The Policy says that Indian approach to biofuels is different to the current international approaches which could lead to conflict with food security. It is based solely on non-food feedstocks to be raised on degraded or wastelands that are not suited to agriculture, thus avoiding a possible conflict of fuel vs. food security.

The Policy:

- Facilitates and bring about optimal development and utilization of indigenous biomass feedstocks for production of biofuels.
- Envisages development of the next generation of more efficient biofuel conversion technologies based on new feedstocks.
- Set out the Vision, medium term Goals, strategy and approach to biofuel development,
- Proposes a framework of technological, financial and institutional interventions and enabling mechanisms.

The Indian government envisioned a central role for Biodiesel in the energy and transportation sectors of the country in coming decades and had expectations of the Policy bringing in accelerated development and promotion of the cultivation, production and use of biofuels in India. The Policy looked at increasingly substituting petrol and diesel with bio-diesel for transport and be used in stationary and



other applications, creating new employment opportunities and leading to environmentally sustainable development.

Approach

The Policy looked at a minimum level of biofuels become readily available in the market to meet the demand at any given time; with an indicative target of 20% blending of biofuels, both for bio-diesel and bio-ethanol by 2017.

The focus for development of biofuels in India is to utilize waste and degraded forest and non-forest lands only for cultivation of shrubs and trees bearing non-edible oil seeds for production of bio-diesel.

In India, bio-ethanol is produced mainly from molasses, a by-product of the sugar industry. In future too, it would be ensured that the next generation of technologies is based on non-food feedstocks. Therefore, the policy checked the issue of fuel vs. food security.

Cultivators, farmers, landless labourers etc were encouraged to undertake plantations that provide the feedstock for bio-diesel and bio-ethanol. Corporates were also

enabled to undertake plantations through contract farming by involving farmers, co-operatives and Self Help Groups etc. These are now supported through a Minimum Support Price for the non-edible oil seeds used to produce bio-diesel.

The Policy emphasised plantations of trees bearing non-edible oilseeds on wasteland, degraded or fallow land in forest and non-forest areas and discouraging plantations on agricultural lands. The support also came through Minimum Support Price mechanism.

A major instrument of this Policy was that a Minimum Support Price (MSP) for oilseeds with a provision for its periodic revision so as to ensure a fair price to the farmers. The National Biofuels Co-ordination Committee was formed and entrusted with this task. The Statutory Minimum Price (SMP) mechanism prevalent for sugarcane procurement was to be examined to be used for oilseeds (to be utilized for production of bio-diesel by the processing units). Payment of SMP would be the responsibility of the bio-diesel processors.

Different levels of Minimum Support

Price for oilseeds were supposed to be declared by the States.

Processing

Ethanol is produced in the country at present from molasses, which is a by-product of the sugar industry. 5% blending of ethanol with gasoline was already taken up by the Oil Marketing Companies (OMCs) at the time of Policy formation. The Policy emphasised on 10% mandatory blending of ethanol with gasoline. In order to augment availability of ethanol and reduce over supply of sugar, the sugar industry was permitted to produce ethanol directly from sugarcane juice.

The sugar and distillery industry were further encouraged to augment production of ethanol to meet the blending requirements prescribed from time to time, while ensuring that this does not in any way create supply constraints in production of sugar or availability of ethanol for industrial use.

While it was difficult to exactly specify the percentage of bio-diesel to be blended with diesel in view of the uncertainty

in the availability of bio-diesel; it was recommended that the blending will be permitted upto certain prescribed levels, to be recommendatory initially and made mandatory in due course. The prescribed blending levels were to be reviewed and moderated periodically as per the availability of bio-diesel and bio-ethanol.

A proposal was made to form a National Registry which notes the feedstock availability, processing facilities and offtake and maintains the necessary data. This data will then be used for decision making.

In order to take care of fluctuations in the availability of biofuels, OMCs were permitted to bank the surplus quantities left after blending of bio-diesel and bio-ethanol in a particular year, and to carry it forward to the subsequent year when there may be a shortfall in their availability to meet the prescribed levels.

The blending followed a protocol and certification process, and conformed to BIS (Bureau of Indian Standards) specification and standards.

Distribution & Marketing

The responsibility of storage, distribution and marketing of biofuels were to rest with OMCs. This was carried out through their existing storage and distribution infrastructure and marketing networks.

The entire value chain comprising production of oil seeds, extraction of bio-oil, its processing, blending, distribution and marketing was taken into account for determination of bio-diesel purchase price. The Minimum Purchase Price (MPP) for bio-diesel by the OMCs was to be linked to the prevailing retail diesel price.

The MPP for bio-ethanol was to be based on the actual cost of production and import price of bio-ethanol.

The MPP, both for bio-diesel and bio-ethanol is determined by the Biofuel Steering Committee and decided by the National Biofuel Coordination Committee. In the event of diesel or petrol price falling below the MPP for bio-diesel and bioethanol, OMCs will be duly compensated by the Government.

Financing

Plantation of non-edible oil bearing plants, the setting up of oil expelling/extraction and processing units for production of

bio-diesel and creation of any new infrastructure for storage and distribution was declared as a priority sector for the purposes of lending by financial institutions and banks.

National Bank of Agriculture and Rural Development (NABARD) was to provide re-financing towards loans to farmers for plantations.

Biofuel technologies and projects were allowed 100% foreign equity through automatic approval route to attract Foreign Direct Investment (FDI), provided biofuel is for domestic use only, and not for export. Plantations were not open for FDI participation.

As biofuels are derived from renewable biomass resources they are also eligible for various fiscal incentives and concessions available to the New and Renewable Energy Sector from the Central and State Governments.

Bio-ethanol enjoys concessional excise duty of 16% and biodiesel is exempted from excise duty. No other Central taxes and duties were proposed to be levied on bio-diesel and bio-ethanol. Custom and excise duty concessions is provided on plant and machinery for production of bio-diesel or bio-ethanol, as well as for engines run on biofuels for transport, stationary and other applications, if these are not manufactured indigenously.

Not All is Lost

The current turmoil states that not much is happening on the putting the policy into action. That can be true; nevertheless, there is still hope. The industry has seen some encouragement from the following news and events seen recently in India.

- Five hundred government buses in Mysore are proposed to be run on bio-diesel as per proposals cleared by Karnataka Cabinet. This is a part of the central government sponsored Sustainable Urban Transport project. The Centre would fund Rs 17.5 crores of the more than Rs 19 crores project for Mysore. Under the initiative, an intelligent transport system project would be also be taken up in Mysore involving 500 buses, which would give information in advance to commuters like departure and arrival times and the next bus stops.. The buses are proposed to be run on biodiesel under the "Innovative Envi-

ronmental System" initiative. Under these initiatives to be taken up over an 18-month period, 105 bus stops and six bus terminals (45 platforms) would be covered in Mysore.

- The Indian Railways has put forward plans to set up four biodiesel plants costing about Rs 1.2 billion. Two of these plants will be built at Raipur and Chennai during the next two years, the other two units will be built later. Each plant is expected to cost Rs300 million and will produce up to 30 tonnes of biodiesel a day. The plants will use waste oil, fatty acid and non-edible vegetable oil as a feedstock and the biodiesel will be blended with the HSD oil for running the trains. The use of biodiesel is expected to earn the railways Rs20 million a year in carbon credits. The Railways currently consumes 2.2 billion litres of diesel a year. Indian Railway Organisation for Alternative Fuels has been formed to take up projects to introduce alternative fuels such as CNG and biodiesel.
- A research project in India has fuelled a Chevrolet Tavera on a 20 per cent biodiesel blend made from marine micro algae. The project was part of the New Millennium India Technology Leadership Initiative (NMITLI) with researchers from the Ministry of Earth Sciences (MoES) and Council of Scientific and Industrial Research (CSIR). The Central Salt Marine and Chemical Research Institute found the microalgae growing naturally on the western coast. The B-20 biodiesel to operate the diesel Tavera was prepared from these microalgae mats and the test drive recorded a mileage of 12.4 km better than the 10-11 kms recorded by diesel run SUV's. The aim is now to run the test vehicle on B-100 (neat biodiesel) marine micro algae biodiesel and evaluate economic viability.
- MNRE expects India to save Rs.3,000 crores in expenses and generate revenue of Rs.5,500 crores if the initiative of blending 2% of bio-diesel is achieved in 2011-2012. India's economic growth aim needs energy security and this will not come from either conventional or non-conventional technologies but a mix of all available technologies.