GBEP 3rd Bioenergy Week
Medan, Indonesia
May 25-29, 2015

Bioenergy Regulatory Frameworks in Asia – An Overview

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**Biofuels Act of 2006**

Mandated 1% biodiesel blend during the first two years of implementation of the law and 2% thereafter — all are locally-sourced

Mandated 5% bioethanol blend after two years of the implementation of the law and 10% bioethanol blend after four years — importation is allowed provided all local ethanol are purchased & lifted

Biofuels production and sales are regulated by the Department of Energy while feedstocks by the Department of Agriculture, Phil. Coconut Authority & Sugar regulatory Administration

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**Renewable Energy Act of 2008**

Varying Feed-in-tariff rates for RE Projects — Biomass-$0.15/kwh, Run-off River Hydro-$0.13/kwh, Solar -$0.22 / kwh, Wind-$0.19/kwh, Geothermal — no feed-in-tariff

Mainly regulated by the Energy Regulatory Commission and Department of Energy
National Energy Policy of 2006

Bioethanol - initial blend of 3% & 5% for the transport sector (subsidized & non-subsidized) while 5% for industry sector with a target of 15% by 2015;

Biodiesel - initial blend of 1% for the transport sector, 2.5% for industry and 0.1% for electricity sector with a target of 20% by 2025

New biodiesel mandatory program: transport & industry – 10% by 2015, 20% by 2020 and 25% by 2025; electricity – 25% by 2015 and 30% by 2020

New bioethanol mandatory program: transport with & without subsidy -1% & 2% by 2015, 5% & 10% by 2020 and 20% by 2025 and industry – 2% by 2015, 10% by 2020 and 20% by 2025

Reference: GAIN, 2014
**Malaysia**

**National Biofuel Policy of 2006**

Initial policy on production of a biofuel blend of 5% processed palm oil and 95% diesel (or B5), encouraging the use of B5 among the public, establishing an industry standard for palm biodiesel quality, and the setting up of biodiesel plants in Malaysia for exports (MPOB, 2012).

Recent policy – Implementation of B7 or 7% palm biodiesel blended with 93% petroleum diesel for the subsidized sector.

Reference: MPIC, Ministry of Agriculture & Agro-based Industries of Malaysia

**Renewable Energy Policy**

A comprehensive national policy to secure and manage a reliable supply of energy, as well as measures to encourage the efficient use of energy and provide incentives for investments in renewable energy that includes biomass.

Malaysia produces at least 168 million tons of biomass from timber and oil palm waste, rice husks, coconut trunk fibers, municipal waste and sugar cane waste annually.

Reference: EPU, 2010
Alternative Energy Development Plan

Minimum of E10 in all but 95 Octane gasoline plus E20 and E85

Subsidies to spread E20 and E85 pumps which translates to lower tax rates for E10, E20 and E85

In 2012 and onwards, the Ministry of Energy mandates that the proportion of B100 in diesel fuels should not be less than 4.5% but no higher than 5%

Reference: Greenpool & PTT 2013 presentation
Bioethanol Directives

Ethanol blending mandate at 5% in seven major cities of Hanoi, Danang, Ho Chi Minh City, Haiphong, Cantho, Quangngai, and Baria-Vungtau from December 2014.

5% ethanol mandate nationally from December 2015;

Year 2020 target of reducing fuel importation to 33%;

Increase biofuel component to 1% of total fuel in 2015 and 5% of total by 2025.

Some consideration will be introduced on export duties of 3% on ethanol and 5% on cassava to slow exports of these products to support local ethanol utilization and production.

Reference: Greenpool
In 2009, India issued its National Biofuels Policy encouraging the use of renewable energy as alternative to petroleum fuel with a planned target of 20% bioediesel and bioethanol blends by 2017.

Initial target of 5% bioethanol blend in 2009 and increased to 10% in 2013; However, average blend in 2014 was only 2.1% and estimated to increase to 2.5% in 2015.

Reference: GAIN, 2014
Renewable Energy Policy

The government has set up an RE policy to promote biofuels production and development of small power or village-scale bioenergy-based power generation plants to provide electricity for rural & remote communities.

No firm regulatory framework yet

Reference: GAIN, 2014
Kyoto Protocol

Blending of Ethanol & ETBE (Ethyl Tertiary Butyl Ether) into gasoline starting from 3% & 7% respectively; to date – around 43% of ethanol in ETBE.

10% ethanol and 22% ETBE is allowed in 2012 provided vehicles are designed for such fuel grades.

Reference: Greenpool
Since 2008, China made ethanol use mandatory in six provinces (Heilongjiang, Jilin, Liaoning, Henan, Anhui and Guangxi) and 27 cities in Hubei, Hebei, Shandong and Jiangsu.

The official government guideline for the biofuel sector remains unchanged; biofuel development (including fuel ethanol and biodiesel) should not compete with crops intended for human consumption and land used for (food or feed) crop production.

Reference: GAIN, 2012
A 2% biodiesel blend is being mandated but plans for higher blends has been delayed due to pricing issues.

Reference: Biofuels Digest
A 1% biodiesel mandate was in place since 2008 and considering a 3% bioethanol mandate...

Reference: Biofuels Digest
Pakistan

Reference: Greenpool