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**Bioenergy Regulatory  
Frameworks  
in Asia – An Overview**

*By: Rosemarie S. Gumera*

Philippine Sugar Regulatory Administration

Alternate Representative, National Biofuels Board

(NBB) and National Renewable Energy Board (NREB)

# Philippines

## 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

## 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

# Indonesia

## 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

# Malaysia

## National Biofuel Policy

Initial policy on production of a **5 of 2008**

[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

## 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 (EPU, 2010)

million tons of biomass from timber and oil palm waste, rice husks, coconut trunk fibers, municipal waste and sugar

cane waste annually

# Thailand

## 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%

# Vietnam

## 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

## National Biofuels Policy

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% biodiesel 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

## 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



## 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

# China

## Biofuels Policy

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

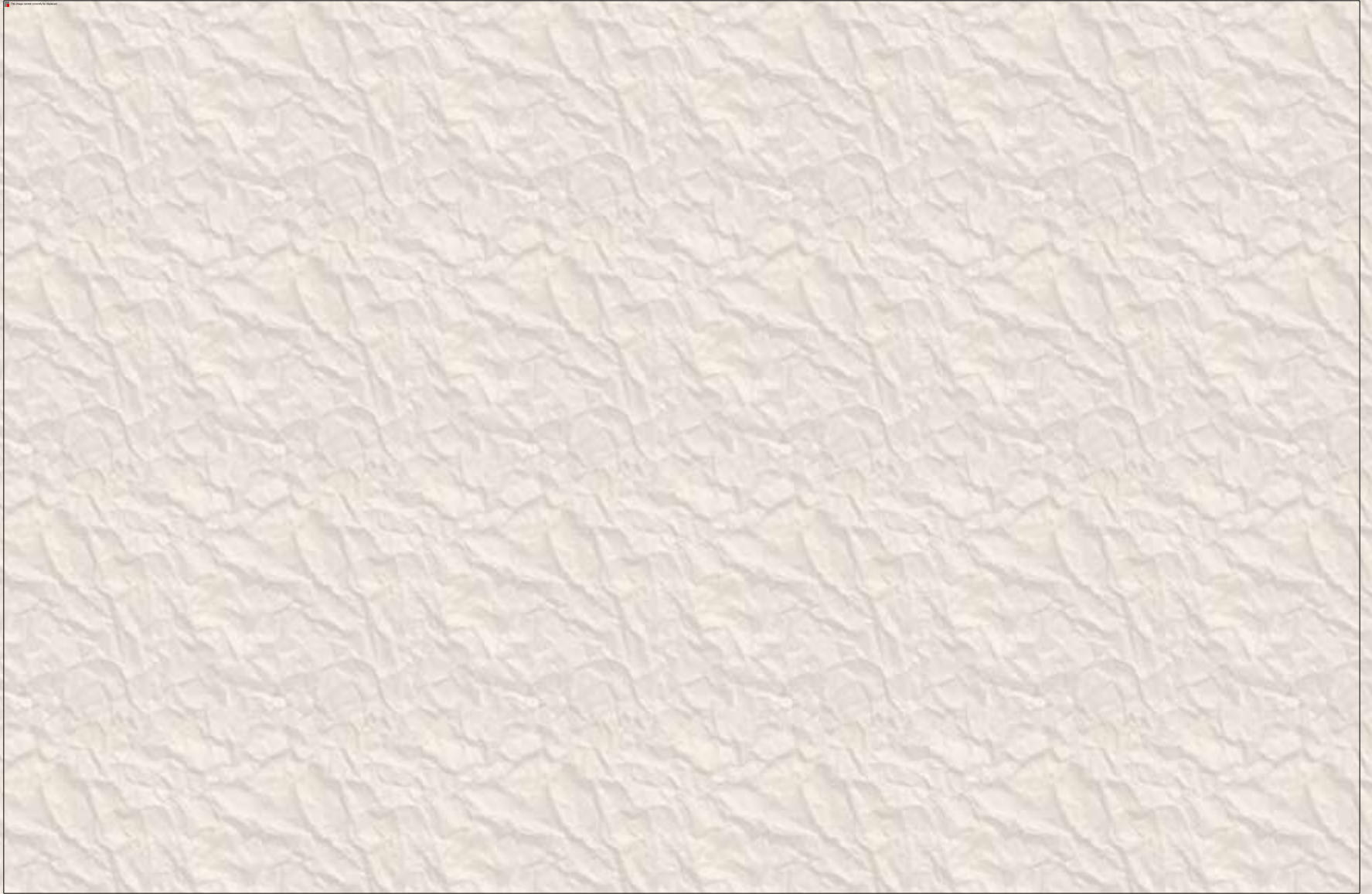
## Biofuels Policy

A 2% biodiesel blend is being mandated but plans for higher blends has been delayed due to pricing issues

## Biofuels Policy

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

# Pakistan



**Reference: Greenpool**

