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Indonesia

Bio-Fuels

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Report Highlights:

The government of Indonesia plans to develop a biofuel industry have stagnated. In 2008 biofuel production will, decrease compared to 2007 following the increase in oil and CPO prices and developed country policy. The government does not mandate biofuel use or provide the level of subsidy needed to encourage production for domestic use, so most biofuel produced in Indonesia is exported. The rise in fuel prices places pressure on the national budget so further support of a biofuel industry is unlikely in the near term.

Includes PSD Changes: Yes
Includes Trade Matrix: No
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Production

The government of Indonesia subsidizes diesel and gasoline but with the increase in fuel prices on the world market, continuing the subsidy has placed extra pressure on the national budget. The government encouraged the use of biofuel and Pertamina, the former parastatal that has the majority of the consumer market, has included biofuel in their diesel and gasoline since 2006. However, there is no government regulation that mandates the use of biofuel, so when fuel and CPO prices increased, Pertamina reduced the amount of biofuel used.

Consumption

There are three markets for diesel in Indonesia:

Market	2007 Diesel Usage
Consumers	20 million KL
Industry	16 million KL
Institutional	12 million KL

Source: Ministry of Energy and Mineral Resources

Each could offer an opportunity for blending with biodiesel. Most biodiesel goes to the consumer market and some to industry, which includes government-sponsored transportation.

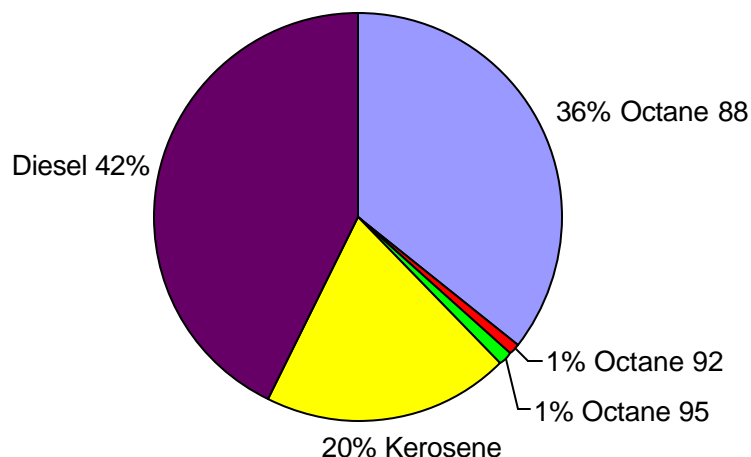
The increased price of CPO provides incentives to producers to export and makes the cost of producing biodiesel high enough that it is not profitable for the major customer, Pertamina. Producers are not provided government incentives to sell to Pertamina and are charged a value-added tax of 10 percent when they buy CPO for input and again when they sell biodiesel to Pertamina.

The institutional market, which includes the state-owned electrical power provider and government offices, could provide an opportunity for biodiesel producers. Electrical service is a problem for major industries in some areas, notably in Medan, where most CPO is processed in Indonesia. Plants have resorted to using their own generators fueled by diesel purchased at the industrial price of \$1.1 per liter, which is double the \$0.6 per liter consumers pay. However, reportedly PLN has not purchased biodiesel. Diesel purchases are subsidized but biodiesel purchases are not.

2007 Indonesian Consumption of Fuel

Product	Consumption (KL)
Diesel	19,857,944.55
Kerosene	9,099,892.63
Gasoline	17,517,261.87
Total	46,475,099.05

Source: Ministry of Energy and Mineral Resources

Fuel Mix in Indonesia for consumers:**Fuel Mix for Consumers**

Source: Ministry of Energy and Mineral Resources

Biodiesel

In 2007, there were 8 plants producing biodiesel from CPO established with total capacity of 765,000 MT. Due to the current policy situation in Indonesia and in developed countries, production is estimated to decrease 10 percent in 2008 versus 2007 production.

Currently, only 5 plants remain that produce biodiesel from CPO in Indonesia, 2 focus on the domestic market and 3 on the export market. The plants are utilizing only 10 to 15 percent of capacity. In 2007, Pertamina purchased 20,000 MT of biodiesel but that should decrease in 2008 because of a decrease in the portion of biodiesel in the mix from 2.5 percent to 1 percent in April 2008. When first introduced May 20, 2006, biodiesel accounted for 5 percent. The remainder of biodiesel production is exported in the form of B100, reportedly for use in the European Union and the United States, though trade statistics suggest it passes through another country first.

Production would decrease further if not for the recent increase in the price of glycerin, a byproduct of biodiesel production. Some producers are reportedly planning to increase production to take advantage of the opportunities in the glycerin market, which would result in increased biodiesel production in the future.

Ethanol

There are only 2 plants producing ethanol from molasses and all production is used domestically. Pertamina also reduced the ratio of ethanol used in gasoline in 2008, and production is estimated to drop 20 percent compared to 2007 production.

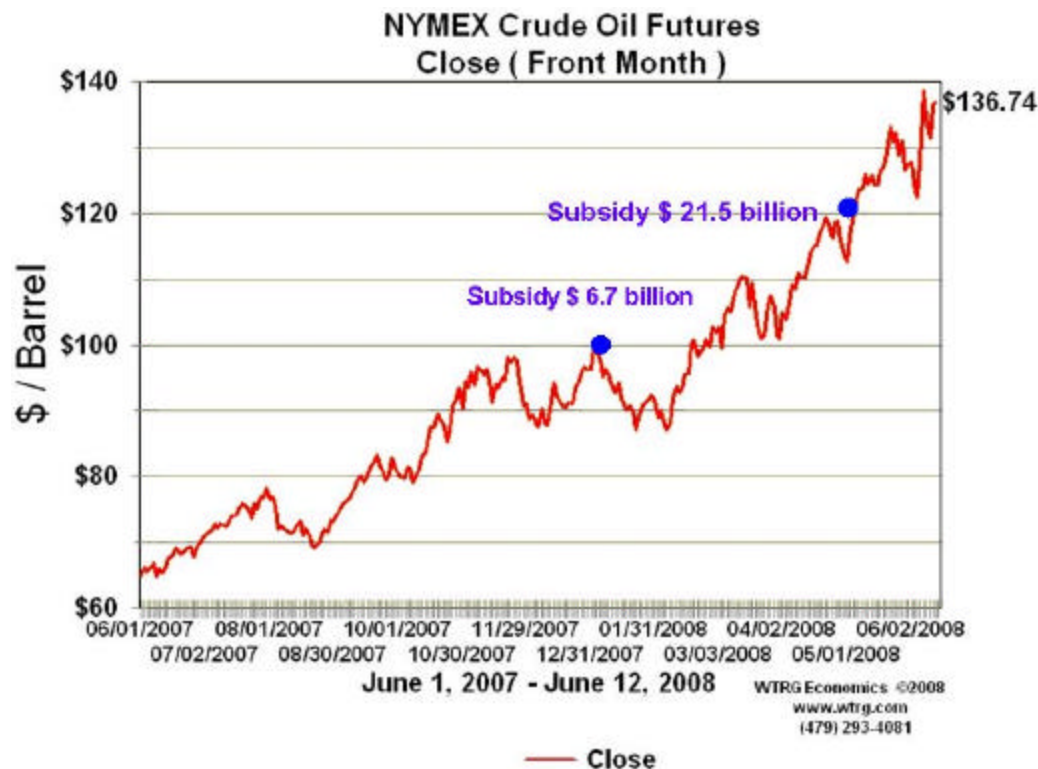
Biomass

Plants desperate for power are using biomass, the byproduct from kernel processing. The shells continue to be a source of alternative fuel, but as electrical service becomes even

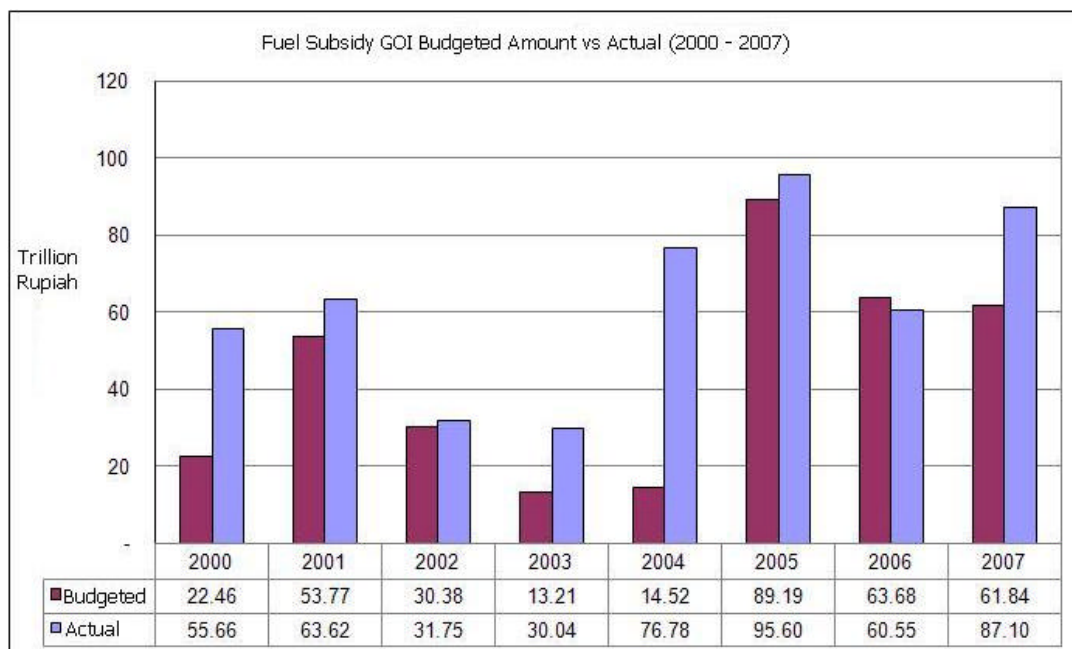
more intermittent, what was once waste is now a valuable commodity, so the price has increased.

Policy

When the price of oil on the world market reached \$100 in December 2007, the government fuel subsidy budget increased from the 2007 projection of \$5.4 billion to \$6.7 billion. Since the price consumers pay for gasoline was not increased in 2008, GOI estimates that when the average price of oil reached \$120 per barrel in 2008, the National government fuel subsidy budget increased from the originally projected amount of \$14.5 billion to \$21.5 billion. Due to this burden on the national budget, the government is in the process of reducing the fuel subsidy. Plans to increase support for biofuel use and production have stagnated.



Source: <http://www.wtrg.com/daily/crudeoilprice.html>

GOI Budgeted for Fuel Subsidy vs Actual:

The National Plan for Biofuel Development presented in January 2007 called for the development of 12 “Biofuel Zones” where the process and bureaucracy to invest in biofuel production was simplified. The government did not reach its goals. The Plan also called for the development of energy self-sufficiency for villages in poorer areas. However, these goals, as well as the expected results from implementing the National Plan, such as increased employment opportunities and foreign exchange reserves, will not be reached in the near term.

Efforts to mandate biofuel use have not moved forward. Reportedly, the legislation would move the benefits of the subsidy from Pertamina to producers. Currently, the government subsidizes biodiesel at the same level as fossil fuels, leaving Pertamina to cover the difference of biodiesel production costs. However, Pertamina sells the biodiesel in gas stations at the same price as diesel and if the subsidy for biofuel were lost, Pertamina would experience further losses.

Links to other reports:

Indonesia Biofuels 2006

<http://www.fas.usda.gov/gainfiles/200605/146197848.pdf>

Indonesian Biofuel Set to Take Off?

<http://www.fas.usda.gov/gainfiles/200701/146280036.pdf>

Indonesia Biofuels 2007

<http://www.fas.usda.gov/gainfiles/200706/146291372.pdf>

Indonesia Oilseeds & Products 2007

<http://www.fas.usda.gov/gainfiles/200702/146280302.pdf>

Indonesia Oilseeds & Products 2008-06-13

<http://www.fas.usda.gov/gainfiles/200802/146293732.pdf>

PSD Table

Quantity of Feedstock

Quantity of Feedstock Use In Biofuel Production					
Biodiesel Vegetable Oil	2004	2005	2006	2007	2008
	(in MT)				
Soybean Oil	0	0	0	0	0
Rapeseed Oil	0	0	0	0	0
Palm Oil	13,560	15,560	16,600	18,300	19,700
Coconut Oil	0	0	0	0	0
Animal Fats	0	0	0	0	0
Recycled vegetable oil	0	0	0	0	0
Other	0	0	0	0	0
Ethanol					
Corn	0	0	0	0	0
Wheat	0	0	0	0	0
Sugarcane	0	0	0	0	0
Sugar beet	0	0	0	0	0
Rye	0	0	0	0	0
Molasses	0	0	27,000	23,436	25,000
Wood	0	0	0	0	0
Cassava/tubers	0	0	0	0	0

Biofuels Production

Biofuel Production/Consumption/Trade (000 MT)					
	2004	2005	2006	2007	2008
Biodiesel					
Beginning stocks	0	0	0	0	0
Production	0	8	70	100	90
Imports	0	0	0	0	0
Total supply	0	8	70	100	90
Exports	0	6	46	80	80
Consumption	0	2	24	20	10
Ending stocks	0	0	0	0	0
Ethanol					
Beginning stocks	0	0	0	0	0
Production	0	0	6	10	8
Imports	0	0	0	0	0
Total supply	0	0	0	10	8
Exports	0	0	0	0	0
Consumption	0	0	6	10	8
Ending stocks	0	0	0	0	0

Notes:

Density biodiesel: 0.88 gr/cm^3 ; bioethanol: 0.79 gr/cm^3

1 MT of biodiesel = 1.136 Kiloliter

1 MT of ethanol = 1.267 Kiloliter

There is no specific HS Code for FAME (Fatty Acid Methyl Ester) or B100 (pure biodiesel). The World Customs Organization Harmonized System Committee confirmed that biodiesel should be classified under Harmonized System code 3824.90. However, export statistics under 3824.90 suggest that Indonesian biodiesel exports are also appearing under other Harmonize