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## Indonesia

### BIOFUELS ANNUAL

### Annual Report 2009

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**Report Highlights:**

As CPO prices began to recover during the first half of 2009, one producer confirmed that Pertamina – the state-owned oil company - has stopped ordering biofuel from their plant that had previously reached 5,000 MT/month. As a result, biodiesel in commercial petrol stations has dropped from its earlier peak of 5% mixture to 1% mixture.

**Post:**

Jakarta

**Commodities:**

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**Executive Summary:**

## Production

In Calendar Year (CY) 2008, the drop in global oil prices has led the Government of Indonesia (GOI) to lower the retail prices of gasoline and diesel, respectively. In Indonesia, consumer-based fuel prices are controlled by the government. Concomitantly, as the international market price for CPO declined rapidly in the latter half of 2008, local biodiesel producers began to increase their domestic production. In addition to the economic factors, this move was also affected by the GOI policy decree from Ministry of Energy and Mineral Resources. This decree, known officially as Regulation No. 32/2008, was signed on 13 October 2008 and effective in January 2009, mandates a minimum of 1 percent biofuel mixture in fuel sold in petrol stations in two major cities in Indonesia - Jakarta and Surabaya.

As CPO and other commodity prices fell during the second half of 2008, it became economical during this period to produce biofuel – thus the local biodiesel mixture reached 5 percent while ethanol production reached 1 percent.

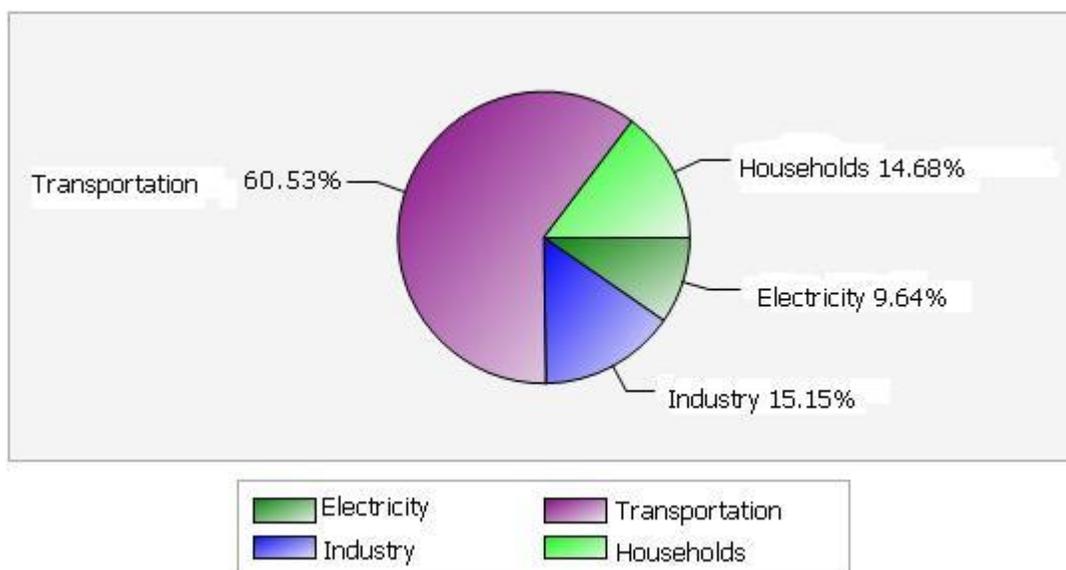
As CPO prices began to recover during the first half of 2009, one producer confirmed that Pertamina – the state-owned oil company - has stopped ordering biofuel from their plant that had previously reached 5,000 MT/month. As a result, biodiesel in commercial petrol stations has dropped from its earlier peak of 5% mixture to 1% mixture.

Currently, there is only one producer which still actively produces biofuel, but the production is well below plant capacity. The installed capacity is approximately 1.5 MMT/year, but reportedly is operating at approximately 7,000 MT/month.

## Consumption

The use of biofuel in power plants as of December 2008 has reached 0.1 percent. Mandated levels within the Ministerial Decree are 0.25 percent in 2009; 1 percent by January 2010; 10 percent by January 2015; 15 percent by January 2020; and 20 percent by January 2025.

**Fuel Consumption by Sector in 2008**

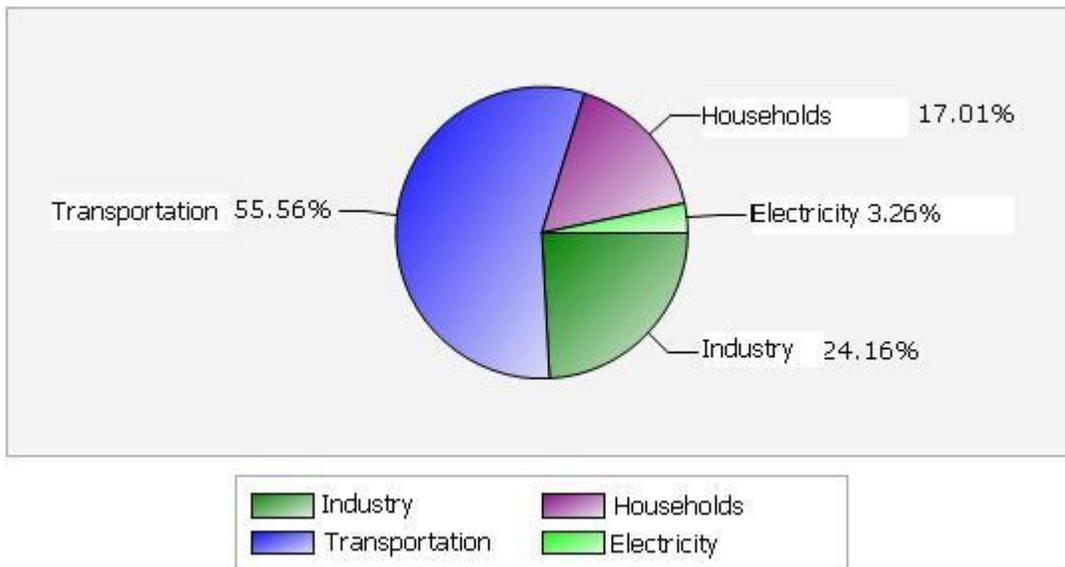


Source: Ministry of Energy and Mineral Resources

Year	Sector	Usage (KL)
2008	Industry	5,203,479.00
2008	Electricity	3,309,124.00
2008	Households	5,043,051.00
2008	Transportation	20,788,075.00
<b>Total</b>		<b>34,343,729.00</b>

Source: Ministry of Energy and Mineral Resources

Fuel Consumption by Sector in 2007

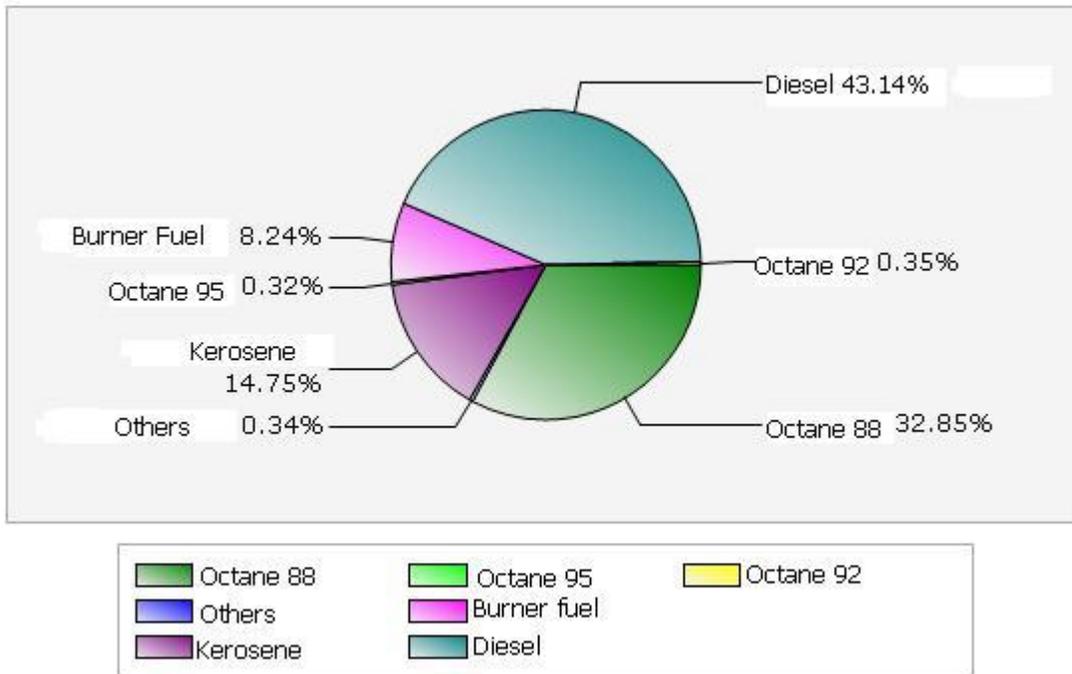


Source: Ministry of Energy and Mineral Resources

Year	Sector	Usage (KL)
2007	Industry	12,860,843.11
2007	Electricity	1,735,970.00
2007	Households	9,055,221.30
2007	Transportation	29,576,200.70
<b>Total</b>		<b>53,228,235.10</b>

Source: Ministry of Energy and Mineral Resources

Fuel Mix 2008



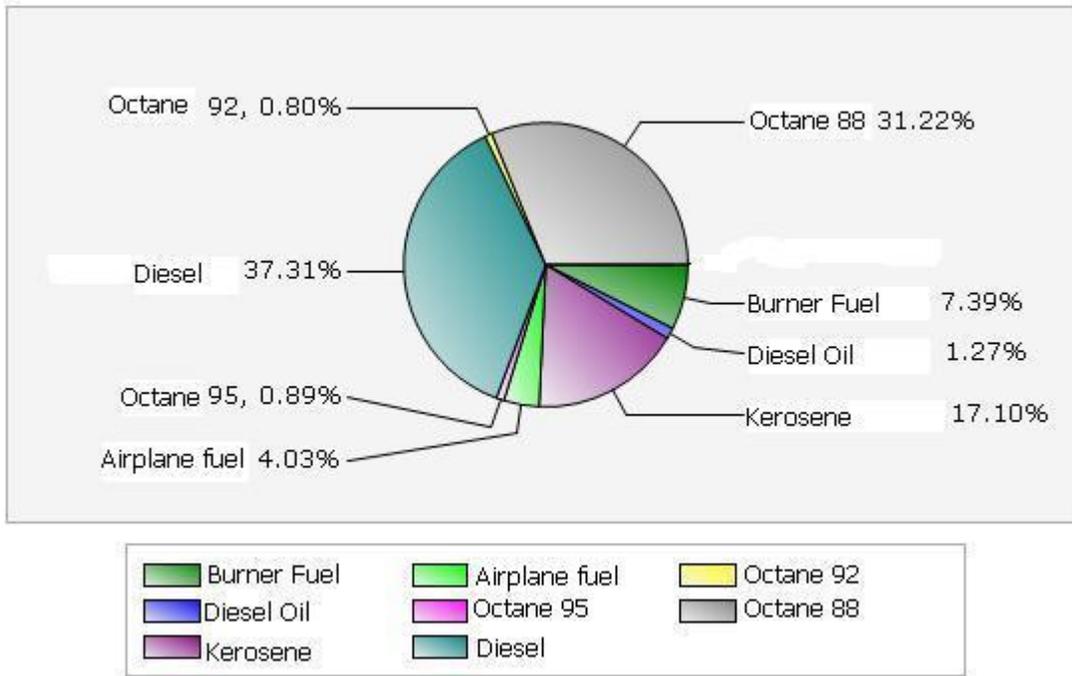
Source:

Ministry of Energy and Mineral Resources

Year	Products	Sales (KL)
2008	Burner Fuel	2,829,592.00
2008	Diesel Oil	117,646.00
2008	Diesel	14,815,245.00
2008	Kerosene	5,065,977.00
2008	Octane 88	11,283,564.00
2008	Octane 92	121,735.00
2008	Octane 95	109,970.00
<b>Total</b>		<b>34,343,729.00</b>

Source: Ministry of Energy and Mineral Resources

Fuel Mix 2007



Source: Ministry of Energy and Mineral Resources

Year	Products	Sales (KL)
2007	Airplane Fuel	2,143,000.96
2007	Burner Fuel	3,933,074.11
2007	Diesel Oil	675,007.72
2007	Diesel	19,857,944.55
2007	Kerosene	9,099,892.63
2007	Octane 88	16,616,342.82
2007	Octane 92	427,671.20
2007	Octane 95	473,247.85
<b>Total</b>		<b>53,228,235.10</b>

Source: Ministry of Energy and Mineral Resources

### Biodiesel

Indonesia Biofuels Association (APROBI) reported that the biofuels industry has suffered a \$2.0 billion financial loss from January – May of this year. With CPO prices at \$700 or higher, one biodiesel producer has stated that the loss could reach Rp 2,000/liter (Note: US\$1 = Rp 10,150 as of June 1, 2009).

The only biodiesel producer that still operates at 7,000 MT/month is an integrated palm oil producer. Thus, from plantation to refinery, the feedstock for biodiesel is always available. FAME (Fatty Acid Methyl Ester = biodiesel) can be produced from fresh CPO or from the derivatives of CPO refinery process, such as RBD Palm Stearin.

RBD (Refined, Bleached and Deodorized) palm stearin is obtained from fractionating refined palm oil to separate olein from stearin. It is a white solid at room temperature, melting to a clear yellow liquid upon heating. RBD palm stearin is used in margarine and shortening industries. It is also used in soap, candles and oleochemical industries.

RBD palm stearin can be an alternative raw material for biodiesel which is cheaper than fresh CPO and is considered a derivative. The integrated palm oil and biodiesel producer can therefore switch to RBD Palm Stearin when it is economical to do so. Under normal market conditions, the price of RBD palm stearin is usually about 10 – 20 percent less than the CPO price.

## Policy

### Minimum Mixture of Biodiesel (B100)

Sector	Oct 08 - Dec 08	Jan 2009	Jan 2010	Jan 2015	Jan 2020	Jan 2025
Households	not defined					
Transportation (Public Service Obligation)	1%	1%	2.5%	5%	10%	20%
Transportation (Non PSO)		1%	3%	7%	10%	20%
Commercial & industries	2.5%	2.5%	5%	10%	15%	20%
Power plants	0.10%	0.25%	1%	10%	15%	20%

*Regulation No. 32/2008 of Ministry of Energy and Mineral Resources*

### Minimum Mixture of Ethanol (E100)

Sector	Oct 08 - Dec 08	Jan 2009	Jan 2010	Jan 2015	Jan 2020	Jan 2025
Households	not defined					
Transportation (Public Service Obligation)	3%	1%	3%	5%	10%	15%
Transportation (Non PSO)	5%	5%	7%	10%	12%	15%
Commercial & industries		5%	7%	10%	12%	15%
Power plants	not defined					

*Regulation No. 32/2008 of Ministry of Energy and Mineral Resources*

## Quantity of Feedstock

Quantity of Feedstock Use In Biofuel Production					
Biodiesel Vegetable Oil	2005	2006	2007	2008	2009
	(in MT)				
Soybean Oil	0	0	0	0	0
Rapeseed Oil	0	0	0	0	0
Palm Oil	15,560	16,600	18,300	19,500	20,750
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	27,000	23,436	25,000	27,000
Wood	0	0	0	0	0
Cassava/tubers	0	0	0	0	0

### Biofuels Production

<b>Biofuel Production/Consumption/Trade (000 MT)</b>					
	<b>2005</b>	<b>2006</b>	<b>2007</b>	<b>2008</b>	<b>2009</b>
<b>Biodiesel</b>					
Beginning stocks	0	0	0	0	0
Production	8	70	100	90	80
Imports	0	0	0	0	0
Total supply	8	70	100	90	80
Exports	6	46	80	80	70
Consumption	2	24	20	10	10
Ending stocks	0	0	0	0	0
<b>Ethanol</b>					
Beginning stocks	0	0	0	0	0
Production	0	6	10	8	8
Imports	0	0	0	0	0
Total supply	0	0	10	8	8
Exports	0	0	0	0	0
Consumption	0	6	10	8	8
Ending stocks	0	0	0	0	0