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Report Highlights:

Demand for petroleum products dropped by two percent in 2006 due to higher energy prices, rising interest rates, and political uncertainties. The Royal Thai Government (RTG) continues to encourage investment in ethanol plants with the goal of increasing domestic consumption of ethanol to eight million liters/day by the end of CY 2007. The popularity of biodiesel is still far behind that of gasohol due to limited supplies and the lack of clearly defined incentives for biodiesel investment.

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Executive Summary

In 2006 Thailand's economy grew five percent, while demand for petroleum products fell by two percent from the previous year. Higher energy prices, rising interest rates and political uncertainties are working in concert to put downward pressure on petroleum usage.

It is apparent that ethanol-blended gasohol has gained popularity in Thailand at the expense of ordinary gasoline. Demand for ordinary gasoline Octane 95 dropped 34 percent in 2006 while gasohol consumption rose 83 percent. Diesel consumption was also hit by the substitution of natural gas and biodiesel in transportation activities.

Gasohol consumption has grown rapidly from 60 million liters in 2004 to 1,184 million liters in 2006. However, current gasohol consumption still accounts for only 20 percent of total gasoline consumption. The Royal Thai Government (RTG) had planned to replace premium gasoline (octane 95) with gasohol 95 by January 1, 2007, but have delayed full replacement over concerns that existing ethanol production capacity will not meet demand. The RTG is currently promoting gasohol consumption through price incentives targeted at moving eight million liters/day of gasohol by the end of CY 2007 and 20 million liters/day by CY 2011. In addition, the fuel ethanol business has been liberalized to encourage the establishment of ethanol plants. As a result, there are now 45 registered ethanol plants with an anticipated production capacity of 10.9 million liters/day. Presently, there are only seven operating ethanol plants with production capacity of around 545,000 liters/day, and two additional plants that should be operating by the end of 2007. These facilities are expected to operate at 955,000 liters/day once the full replacement of premium gasoline with gasohol occurs. By the end of CY 2007, there will be nine ethanol plants supplying ethanol with production capacity of around 1.2 million liters/day. Most of these facilities produce molasses-based ethanol. Exportable supplies of molasses and cassava, which is also used for ethanol production, will tighten over the medium term when all production facilities are fully operational.

Thailand is also developing biodiesel to ease their reliance on imported energy. However, the domestic popularity of biodiesel is still far behind gasohol due to limited supplies and the lack of clearly defined incentives for biodiesel investment. The current consumption of biodiesel B5 is about one million liters/day, which represents only two percent total daily diesel usage. The RTG has recently announced that it will adopt the mandatory use of biodiesel, at least a blended B2 type, to replace diesel in the future. However, the RTG has yet to add the 640,000 hectares of palm plantation needed for expanding biodiesel production.

I. Biofuels Policy

1 Domestic Policy Environment

1.1 Policy Supporting Production and Use of Biofuels

The RTG has consistently promoted efficiency in the country's energy management as well as a reducing Thailand's dependence on imported energy. The RTG has set ethanol and biodiesel as priority alternative energy sources in its national plan. Measures undertaken to accomplish this goal include monitoring and regulating the pricing of alternative energy, R&D support, and public awareness campaigns. More details about these measures are presented as follows:

Gasohol

The Government set the National Ethanol Program and Gasohol Strategic plan on December 6, 2003 with an ethanol production target of 1.0 million liter/day by the end of CY 2006 and 3.0 million liters/day by the end of CY 2011. The interim Government supported this strategic plan and received cabinet approval for liberalization of the domestic ethanol sector on December 6, 2006. Fuel ethanol production and distribution are separated from liquor ethanol, which falls in a higher tax structure. Recently the number of registered ethanol plants increased from 27 plants to 45 plants with anticipated production capacity of 10.9 million liters/day.

Despite the current operation of seven ethanol plants with production capacity of 1.0 million liter/day, actual ethanol production is presently far below full capacity. Current capacity utilization is only around 50-60 percent, reflecting the domestic ethanol surplus situation. The government's plan to replace premium gasoline with gasohol in the beginning of CY 2007 has been delayed over concerns of a domestic ethanol shortage, as seen in the last quarter of CY 2005. Furthermore, around half a million old vehicles are not compatible with gasohol. The Government has temporarily allowed some exports of the surplus in order to have enough storage for continued domestic ethanol production. Export approval is considered on a case-by-case basis, as all seven ethanol producers are registered without export licenses. In fact, there are only three approved ethanol plants that have export licenses. One of these facilities is expected to start molasses-based production in the second half of CY 2007 with a production capacity of 200,000 liters/day, of which half will be for export.

The Government has recently revised the plan to promote gasohol consumption through price incentives instead of the compulsory phasing out premium gasoline sales. The Ministry of Energy targeted gasohol sale to reach eight million liters/day by the end of CY 2007 and to 20 million liters/day by the end of CY 2011 by expanding more gasohol stations throughout Thailand, particularly in small-scale gas stations, which normally have limited access to gasohol supplies. Also, the government set gasohol prices around 2.0 - 2.50 baht/liters cheaper than regular and premium gasoline.

Biodiesel

On April 2, 2007, the Energy Policy Management Committee agreed that all high-speed diesel production must contain biodiesel B100, two percent by weight, as of April 2, 2008. It is estimated that, once implemented, demand of biodiesel B100 could reach 1 million liters/day.

The Committee will provide a refund, at a rate determined by the Committee, to diesel manufacturers of biodiesel B2. In addition, the RTG will lower an amount of fee paid biodiesel B5 manufacturers to the Conservation Fund, which will lower the cost of biodiesel B5 by 0.70 Baht/liter (approx. 8 US cents/gallon).

In order to increase production of raw materials, the RTG plans to expand palm plantation by six million rai (0.96 million hectares) by 2012. In addition, the RTG plans to encourage palm plantations in Laos, Cambodia and Burma on a contract-farming basis. The Cabinet approved a budget allocation of 1,300 million baht (approx. USD 34 million) to promote palm production in 2005. It is estimated that, if the palm oil expansion succeeds, biodiesel production could reach 8.5 million liters/day (3,100 million liter/year) by 2012, which is equivalent to 10 percent of total diesel demand. However, current lucrative rubber prices are likely to discourage the replacement of old rubber trees for new palm trees.

The Office of Agricultural Economics reported that planted area for oil palm has increased steadily from 344,000 hectares in 2004 to 438,000 hectares in 2007.

1.2 Size of Energy Market

Total gasoline consumption in 2006 declined slightly from 7,248 million liters (1,915 million gallon) in 2005 to 7,215 million liters (1,906 million gallon), mainly because of surging gasoline prices and an energy-saving campaign by the RTG. The use of premium gasoline continued to drop by 34 percent while that of regular gasoline fell by 5 percent. Many Thais have adopted the use of other alternative fuels, such as gasohol, liquefied petroleum gas (LPG), and natural gas for vehicles (NGV).

Gasohol is a mixture of 10 percent ethanol and 90 percent regular gasoline. Ethanol is used to replace imported Methyl Tertiary Butyl Ether (MTBE) in gasoline. Gasohol consumption has increased by 83.5 percent to 1,185 million liters in 2006, as compared to 646 million liters in 2005. Prices of gasohol are competitive compared to ordinary gasoline. In addition, many public relation campaigns employed by both the government and private sector have successfully raised public awareness and acceptance. As a result, gasohol consumption has become a viable option for motorists in Thailand. Gasohol consumption is expected to increase significantly in CY 2007 due to relatively cheaper prices of gasohol by around 2.0 - 2.50 baht/liters for regular and premium gasoline. Current consumption of gasohol is around 3.95 million liters/day, an increase of nearly 13 percent over the CY 2006 level of 3.50 million liters/day. However, current gasohol consumption still accounts for only 20 percent of average gasoline.

The total consumption of biodiesel B5 is still small compared to regular diesel. Diesel consumption in 2006 was 21,149 million liters or around 133 thousand barrels/day, up by 1.6 percent from the 2005 level. According to Department of Energy Business, demand for biodiesel is 770,000 liters/day in 2006 and increase to 1.1 million liters/day in the first quarter of 2007. Despite the gradual increase in consumption, both public and private sectors are confident in the future of biodiesel.

1.3 Bio-Fuels Production

Gasohol

So far, the Government has approved 45 ethanol plants, which represent a potential production capacity of around 10.9 million liters/day. Over half of them are cassava-based ethanol plants, accounting for around 70-80 percent of total ethanol production. The rest are sugar/molasses-based ethanol plants.

Presently, there are only seven ethanol plants with total production capacity of 955,000 liters/day. Six of them are producing molasses-based ethanol accounting for around 86 percent of total ethanol production with an average conversion rate of around four kilograms of molasses for one liter of ethanol. In addition, one sugarcane/molasses-based ethanol plants utilized 24,200 ton of sugarcane for ethanol production for the test run in CY 2006. However, all six ethanol plants are currently supplying only 545,000 liters/day to domestic oil refineries for gasohol production due to current domestic ethanol surplus of 20 million liters. The Government has temporarily allowed exports of the surplus in order to have enough storage for continued domestic ethanol production.

By the end of CY 2007, ethanol plants are expected to expand by two, to nine plants with production capacity of around 1.2 million liters/day. Most of these are molasses-based ethanol producers. There will likely be only two cassava-based ethanol plants supplying around 200,000 liters/day for gasohol production. In addition, there will be two sugarcane/molasses-based ethanol utilizing sugarcane of around 50,000 tons for ethanol production in the test running sugar-based ethanol production line in CY 2007. Meanwhile, ten ethanol plants are under construction and are expected to operate in CY 2008 with production capacity of around 1.7 million liters/day, of which 1.1 million liters/day will be from cassava-based ethanol plants.

Despite anticipated expansion in molasses, sugarcane/molasses, and cassava-based ethanol production capacity in CY 2007, domestic supplies of sugarcane and cassava will remain sufficient. Sugarcane production in CY 2007 is revised upward to 63 million tons due to an average yield improvement to 9.4 ton/rai (59 tons/hectare) in response to favorable weather conditions. Molasses supplies are expected to increase to 3 million tons, which has led to lower domestic molasses prices to around 2,500 baht/ton (roughly U.S. \$70/MT), as compared to around 4,000 baht/ton (roughly U.S. \$120/MT) in the previous year. Around 1.5 million ton of molasses will be used in food industries (mostly for liquor production), and the balance will be for exports and fuel ethanol production. Exportable supplies of molasses will likely tighten when molasses-based ethanol plants reach their production capacity over the medium-term. In addition, cassava production will likely continue to increase to around 26 million tons in CY 2007. Presently, around 12 million tons are used for flour production, and 10 million tons for cassava chip and pallets for domestic and export market. The balance will likely be far above domestic demand for cassava-based ethanol production which is expected to utilize less than half a million tons of cassava. However, over the medium-term when all cassava-based ethanol plants start ethanol production, exportable supplies of cassava products will be limited under the current average yield of 3 tons/rai (19 tons/hectare).

Biodiesel

In 2007, the total production capacity for blended biodiesel B5, which is derived from used vegetable cooking oil, stearin, and crude palm oil, is 1.04 liters/day or about 33 million liters/month.

PTT Public Company Limited (PTT) and Bangchak Petroleum Public Company Limited (BCP), currently owns 511 stations supplying biodiesel. According to the Department of Energy Business, the sales of biodiesel B5 in the whole month of April 2007 were 32.22 million liters, which is equivalent to 1.07 million liters/day.

The PTT group plans to produce 1.0-1.5 million liters per day once biodiesel use becomes mandatory. The PTT has begun building a biodiesel plant, called Thai Oleo Chemical Co., Ltd. (TOL), which is scheduled to complete and operate by the end of 2007, with a production capacity of 600,000 liters/day. A biodiesel plant under the joint venture between PTT and Bio Energy Plus Company has been completed with the current capacity of 10,000 liters/day. The plant may be extended to 200,000 liters/day in the near future. PTT also has a joint venture with Southern Palm Company to build a biodiesel plants in Surat Thani Province in 2008 with production capacity of 300,000 liters/day.

Bangchak Petroleum Public Company Limited (BCP) also successfully develops its own biodiesel B100 production unit from used oil with total capacity of 50,000 liters/day. BCP recently reported its plan to open new production facilities in 2008, which will add another 400,000 liters/day to its current production capacity.

2. Import and Export Regimes for Bio-Fuels

Thailand does not apply a quota system or other trade barriers to the importation of gasohol and biodiesels. Previously the Government imposed a tariff rate of 2.50 baht/liter (about 27 US cents/gallon) on imported ethanol mainly because imported ethanol is used for liquor production. However, in CY 2005, the insufficient domestic ethanol supplies caused the Government to allow ethanol imports of around 24 million liters duty-free in order to counter an ethanol shortage. Meanwhile, in CY 2007, Thailand is expected to export around 1-2 million liters of ethanol due to excess domestic supplies as the plan to replace premium gasoline with gasohol in the beginning of CY 2007 has been delayed. The Government discourages ethanol exports in order to guarantee sufficient domestic supplies for gasohol production. Most ethanol producers plan to supply ethanol domestically, particularly those who do not have sugar mill businesses, due to concerns over sourcing of raw materials. At the moment, around 350,000 liters have been approved for exports to the Philippines.

As for corn sweetener (both solid and liquid), imports are subject to a 20 percent tariff rate. Imports of palm oil are subject to tariff rate quota system with the in-quota tariff being 20 percent.

II. Statistics

Table 1 Quantity of Feedstock Use in Biofuel Production (Ton)

Quantity of Feedstock Use in Biofuel Production in MT

	2003	2004	2005	2006	2007
Biodiesel					
Vegetable oil					
Soybean Oil	0	0	0	0	0
Rapeseed Oil	0	0	0	0	0
Palm Oil	0	0	20815	21149	33000
Coconut Oil	0	0	0	0	0
Animal Fats	0	0	0	0	0
Recycled Vegetable Oil	0	0	0	0	0
Other					
Ethanol					
Corn	0	0	0	0	0
Wheat	0	0	0	0	0
Sugarcane		0	0	25000	50000
Sugar beat	0	0	0	0	0
Rye	0	0	0	0	0
Molasses	862	25180	292105	440800	560200
Wood	0	0	0	0	0
Cassava/tubers	0	0	0	163800	321300

Table 2 Biofuel Production/Consumption/Trade (Million Liters)

Biofuel Production/Consumption/Trade (million liters)

	2003	2004	2005	2006	2007
Biodiesel/Ethanol					
Beginning Stocks	0	0	0	30	38
Production	0	6	94	156	222
Imports	0	0	24	0	0
Total Supply	0	6	118	187	260
Exports	0	0	0	0	2
Consumption	0	6	88	149	226
Ending Stocks	0	0	30	38	33

Table 3 Thailand's Biodiesel Plan and Development Strategy

	Biodiesel Community, Biodiesel Standardization		Biodiesel B5 on sales in some areas of southern provinces and Bangkok. To be expanded nationwide by 2011					Biodiesel B10 nationwide
	2005	2006	2007	2008	2009	2010	2011	2012
Palm Crop (million rais/year)	0.26	0.6	0.67	1.07	1.4			
	Palm crop in country 4 million rais and 1 million rais in neighbor countries Develop palm yield from 2.7 to 3.3 tonne/rai/year Develop Physic Nut yield from 0.4 to 1.2 tonne/rai/year							
Production (million litres/day)	0.03	0.06	0.36	0.46	0.46	1.76	3.96	8.5
Sales (million litres/day)	0.6	1.2	7	9	15	35	79	85
	Community Biodiesel		Commercial Biodiesel					
Research & Development	<i>Extended researchs to add value for by-product from biodiesel production</i>							

Source : Department of Alternative Energy Development and Efficiency, Ministry of Energy

Table 4 Registered Ethanol Manufacturers in Thailand, as of April 2007

Industry	Location	Raw material	Capacity (Liter/day)
Status : Registered and On-production Ethanol Manufacturers in Thailand			
1 Ponwilai	Ayudhaya	Molasses	25,000
2 Thai Alcohol	Nakornprathom	Molasses	200,000
3 Thai Agro	Supanburi	Molasses	150,000
4 Thai Nguan Ethanol	Khonkean	Tapioca	130,000
5 Khonkean Alcohol	Khonkean	Cane/Molasses	150,000
6 Thai Sugar Ethanol	Kanchanaburi	Cane/Molasses	100,000
7 Petro Green	Chaiyapoom	Cane/Molasses	200,000
Status : Registered and Under Construction Ethanol Manufacturers in Thailand			
1 ITA	Rayong	Tapioca	150,000
2 Fha-kwantip	Prajinburi	Tapioca	60,000
3 Ratchaburi Ethanol	Ratchaburi	Tapioca/Molasses	150,000
4 K.I. Ethanol	Nakornratchasima	Cane/Molasses	100,000
5 Thai Ruangruong Energy	Saraburi	Cane/Molasses	120,000
6 E. S. Power	Srakaew	Tapioca/Molasses	150,000
7 Ekarat Pattana	Nakornsawan	Molasses	200,000
8 PetroGreen	Kalasin	Cane/Molasses	200,000
9 Srima Inter Products	Chachoensao	Tapioca	150,000
10 Supthip	Lopburi	Tapioca	200,000
11 P.S.C. Starch Products	Chonburi	Tapioca	150,000
12 T.P.K Ethanol	Nakornratchasima	Tapioca	1,020,000
Status : Registered Ethanol Manufacturers in Thailand			
1 Khonkaen Alcohol	Kanchanaburi	Cane/Molasses/Tapioca	150,000
2 Khonkaen Alcohol	Chonburi	Cane/Molasses/Tapioca	100,000
3 Erawan Ethanol	Nhongbualampoo	Cane/Molasses	200,000
4 Thai Sugar Ethanol	Kampangpet	Cane/Molasses	200,000
5 Thai Ruangruong Energy	Petchaboon	Cane/Molasses	120,000
6 N.Y. Ethanol	Nakornratchasima	Tapioca/Molasses	150,000
7 Ang-wiang Industry	Nakornratchasima	Cane/Molasses	160,000
8 Somdej Ethanol	Udonthani	Tapioca	200,000
9 Siam Ethanol	Chaiyapoom	Tapioca	100,000
10 Picnic Ethanol	Chachengsaw	Tapioca	250,000
11 Boonanek	Nakornratchasima	Tapioca	1,050,000
12 Burirum Ethanol	Burirum	Tapioca/Molasses	200,000
13 Kim Phong	Rayong	Tapioca	330,000
14 Siam Ethanol Industry	Rayong	Tapioca	100,000
15 C. Gigantic Carbon	Nakornratchasima	Cassava	100,000
16 Central Energy	Kampangpet	Tapioca	340,000
17 Impress Technology	Chachoengsao	Tapioca	200,000
18 North Eastern Sugar Industry	Kalasin	Tapioca/Molasses	120,000
19 Taiping Ethanol	Sakaew	Tapioca	300,000
20 Energy Industry Park	Uthaithani	Tapioca	200,000
21 Friends for Land	Ubonratchathani	Tapioca	700,000
22 Power Energy	Ubonratchathani	Tapioca	400,000
23 Saieak Engineering	Chachoengsao	Tapioca	400,000
24 E.B.P Ethanol	Sakaew	Tapioca	200,000
25 Double A Ethanol	Sakaew	Tapioca	500,000
26 Sakaew Bio Ethanol	Sakaew	Tapioca	500,000

Table 5 Thailand's Petroleum Consumption (Unit: Million Liters)

Unit : Million Litre

Type	2004	2005	2006	Change Rate (%)		
				2004	2005	2006
Gasoline	7,661	7,248	7,215	0.3	-5.3	-0.4
Regular (octane 91)	4,631	4,362	4,559	1.7	-5.8	4.5
Special	3,030	2,885	2,655	-1.7	-4.7	-7.9
- Gasohol	60	645	1,184	2211.1	984.6	83.4
- Premium (octane 95)	2,970	2,240	1,471	-3.6	-24.5	-34.3
Diesel	19,623	19,593	18,371	11.8	-0.1	-6.2
Liquid Petroleum Gas (LPG)	4,035	4,363	4,982	1.5	8.1	14.1

Source: Energy Policy and Planning Office, Ministry of Energy

Table 6 Thailand's Petroleum Products Imports

DESCRIPTION	2003	2004	2005	2006	2007			GROWTH RATE (%)			
					JAN	FEB	MAR	2004	2005	2006	2007
1.CRUDE OIL											
-VALUE (M. BAHT)	346,057	486,627	644,933	753,783	45,766	55,654	49,338	40.6	32.5	16.9	-16.4
-QUANTITY (M. LITERS)	45,025	50,621	48,033	48,125	3,508	4,327	3,681	12.4	-5.1	0.2	-2.4
- (BBL/D)	775,870	869,925	827,702	829,300	711,688	971,909	746,885	12.1	-4.9	0.2	-2.4
-VALUE(M.US\$)	8,310	12,038	15,932	19,824	1,268	1,552	1,403	44.9	32.4	24.4	-7.8
-PRICE (\$/BBL)	29.34	37.81	52.74	65.49	57.47	57.04	60.58	28.9	39.5	24.2	-5.5
2.PETROLEUM PRODUCTS											
-VALUE (M. BAHT)	8,909	15,775	29,363	23,514	402	760	2,231	77.1	86.1	-19.9	-42.7
-QUANTITY (M. LITERS)	998	1,715	2,165	1,504	24	46	131	71.9	26.2	-30.5	-50.2
- (BBL/D)	17,197	29,473	37,303	25,912	4,815	10,315	26,491	71.4	26.6	-30.5	-50.2
-VALUE(M.US\$)	214	395	729	615	11	21	63	84.4	84.7	-15.6	-36.3
-PRICE (\$/BBL)	34.09	36.58	53.51	65.02	74.66	73.43	77.24	7.3	46.3	21.5	27.9
3.OTHERS											
-VALUE (M. BAHT)	21,826	25,759	26,317	36,739	2,989	2,173	6	18.0	2.2	39.6	-53.9
-QUANTITY (M. LITERS)	2,638	2,464	2,044	2,383	229	142	0	-6.6	-17.0	16.6	-50.9
- (BBL/D)	45,465	42,350	35,229	41,061	46,369	31,837	25	-6.9	-16.8	16.6	-50.9
-VALUE(M. US\$)	522	638	653	964	83	61	0	22.2	2.3	47.7	-49.5
-PRICE (\$/BBL)	31.46	41.17	50.75	64.31	57.60	67.99	220.75	30.8	23.3	26.7	2.8
4.TOTAL PETROLEUM											
-VALUE (M. BAHT)	376,792	528,161	700,613	814,035	49,157	58,587	51,575	40.2	32.7	16.2	-19.3
-QUANTITY (M. LITERS)	48,661	54,801	52,242	52,012	3,760	4,514	3,812	12.6	-4.7	-0.4	-6.7
- (BBL/D)	838,532	941,747	900,233	896,273	762,872	1,014,060	773,401	12.3	-4.4	-0.4	-6.7
-VALUE(M.US\$)	9,046	13,070	17,314	21,403	1,362	1,634	1,466	44.5	32.5	23.6	-11.0
-PRICE (\$/BBL)	29.56	37.92	52.69	65.43	57.58	57.55	61.15	28.3	39.0	24.2	-4.6

SOURCE : DEPARTMENT OF ENERGY BUSINESS

COMPILED BY : ENERGY POLICY AND PLANNING OFFICE (EPPO)

REMARKS : EXCLUDING LUBE OIL AND GREASE

Table 7 Thailand's Petroleum Products Exports

DESCRIPTION	2003	2004	2005	2006	2007			GROWTH RATE (%)			
					JAN	FEB	MAR	2004	2005	2006	2007
1.CRUDE OIL											
-VALUE (M. BAHT)	29,356	33,883	52,858	56,835	4,237	3,846	2,526	15.4	56.0	7.5	-22.2
-QUANTITY (M. LITERS)	3,876	3,288	3,806	3,798	363	297	188	-15.2	15.8	-0.2	-5.4
- (BBL/D)	66,800	56,502	65,580	65,441	73,739	66,653	38,102	-15.4	16.1	-0.2	-5.4
-VALUE(M.US\$)	704	836	1,300	1,494	118	108	72	18.8	55.5	14.9	-14.3
-PRICE (\$/BBL)	28.86	40.44	54.31	62.56	51.70	57.84	61.18	40.1	34.3	15.2	-9.4
2.PETROLEUM PRODUCTS											
-VALUE (M. BAHT)		70,954	99,398	138,063	7,871	7,469	8,294		40.1	38.9	-22.8
-QUANTITY (M. LITERS)	6,130	7,004	7,093	8,399	584	554	571	14.3	1.3	18.4	-7.9
- (BBL/D)	105,631	120,370	122,222	144,739	118,408	124,524	115,771	14.0	1.5	18.4	-7.9
-VALUE(M.US\$)		1,753	2,440	3,637	220	210	237		39.2	49.1	-14.7
-PRICE (\$/BBL)		39.80	54.70	68.85	59.81	60.13	66.13		37.5	25.9	-7.4
3.OTHERS											
-VALUE (M. BAHT)		15,505	10,345	20,113	2,374	1,296	2,576		-33.3	94.4	70.1
-QUANTITY (M. LITERS)	1,342	1,473	890	1,342	195	102	182	9.8	-39.6	50.8	90.4
- (BBL/D)	23,127	25,319	15,341	23,132	39,650	22,933	36,936	9.5	-39.4	50.8	90.4
-VALUE(M. US\$)		384	256	530	66	36	74		-33.4	107.0	87.5
-PRICE (\$/BBL)		41.49	45.74	62.79	53.86	56.66	64.36		10.2	37.3	-1.6
4.TOTAL PETROLEUM											
-VALUE (M. BAHT)	29,356	120,342	162,602	215,010	14,482	12,611	13,396	309.9	35.1	32.2	-15.5
-QUANTITY (M. LITERS)	11,348	11,766	11,789	13,539	1,142	953	940	3.7	0.2	14.9	1.1
- (BBL/D)	195,557	202,191	203,143	233,312	231,797	214,109	190,808	3.4	0.5	14.9	1.1
-VALUE(M.US\$)	704	2,974	3,997	5,662	404	354	383	322.6	34.4	41.7	-6.7
-PRICE (\$/BBL)	9.86	40.19	53.90	66.48	56.21	59.05	64.80	307.6	34.1	23.4	-7.8

SOURCE : DEPARTMENT OF ENERGY BUSINESS

COMPILED BY : ENERGY POLICY AND PLANNING OFFICE (EPP)

Table 8 Domestic Taxes and Calculation of Retail Prices for Gasohol and Biodiesel

	Gasohol 95	Gasohol 91	High speed Diesel	Biodiesel
Ex-factory Refinery Factory Price	20.3331	20.148	18.6478	19.1654
Excise Tax	3.3165	3.3165	2.305	2.1898
Municipal Tax	0.3317	0.3317	0.2305	0.219
Petrol fund	0.6	0.6	1.5	0.3
Conservation Fund	0.63	0.063	0.07	0.0665
Wholesale price (WS)	24.6442	24.4592	22.7533	21.9407
VAT	1.7251	1.7121	1.5927	1.5358
WS&VAT	26.3693	26.1713	24.346	23.4765
Marketing Margin	0.6736	0.5782	0.9289	1.0873
7% VAT of Marketing Fee	0.0471	0.0405	0.065	0.0761
Retail price	27.09	26.79	25.34	24.64

* Price as of May 21, 2007

End of Report.