# **Ukrainian Oil Refinery Sector Review**

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## **Summary**

Ukraine has six oil refineries with installed production capacities three times exceeding internal demand for oil products. However because of equipment being severely outdated and oil supply being not guaranteed the capacities are utilised for less than one fifth. Due to insufficient amount of oil, Ukraine is forced to import oil products to cover almost a half of its internal demand. At the same time local producers become less price competitive because of unstable foreign exchange rate and significant reserves of "expensive" oil product, which may only increase foreign fuel presence on the market.

## **Sector Description**

There are six oil refineries plants in Ukraine. All refineries are dating from the Soviet era; generally operate with obsolescent equipment at low refining margins and short of European standards for product quality. Out of those six refineries, three are Russian-owned; another one is a Ukrainian-Russian joint venture; and only the two small refineries are Ukrainian-owned with majority stakes in private ownership through Pryvat Group and minority stakes in state ownership. See table 1.

Table 1. Ownership of the Ukrainian oil refineries

Refinery	Short description
Odessa Refinery	The refinery is fully owned by Russian LUKOIL corporation. The refinery was stopped for reconstruction, in August 2005. The distillation unit and various other facilities were rebuilt the first stage. In 2008 the refinery completed the second stage of modernization. It was put back in operation in April 2008. Modernization of the Refinery is projected to increase refining depth from 56% to 78%.
LINOS Refinery	Lisichansk Refinery (Lugansk oblast) is fully owned by close corporation LINIK, which is a part of Russian-British holding TNK-BP in Ukraine.
Kherson Refinery	The "Kherson Oil Refinery" is the oldest refinery which was built in 1938. Since 1999 reconstruction and upgrading project has been implementing on the basis of intergovernmental agreements between Ukraine and Kazakhstan. The main foreign participants are OJSC "Alliance Group" (Russia) and state company "Kazmunaigaz" (Kazakhstan). The refinery was stopped in 2005 because of the need for estimated USD 0.5 bln of investments to increase quality of refining products.
Kremenchug Refinery	The refinery is owned by close corporation Ukrtatnafta, created in 1994. Main shareholders are Naftogaz Ukrainy and Russian "Tatneft".
Drogobych Refinery	The refinery is owned by OJSC "oil-refining complex "Galychyna" 25% shares of which belongs to the state and around 72% of shares is controlled by Pryvat group companies.
Nadvirna Refinery	The refinery is owned by OJSC "Neftekhimik Prikarpatya". 26% of shares belong to the State property fund, 17.5% - "Lider Estate" Ltd, 16.8% - PryvatBank and 14.3% - Copland Industries S.A. (Virgin Islands).

Source: Companies information, CASE Ukraine compilation

Total yearly refining capacity of all the Ukrainian oil refineries exceeds 51 mln tons of crude oil. However capacities differ much from one plant to another. Thus the three biggest plants control over 80% of refining capacities. See diagram 1.

8% 5% 6%

31%

LINOS

Kherson

Kremenchug

Drogobych

Nadvirna

Diagram 1. Share of refining capacities of the Ukrainian oil-refining plants

Source: Companies information, CASE Ukraine compilation.

Refineries in Ukraine are utilized at less than 19 percent of the total capacities in 2008, down from 30% in 2007, 41% in 2004 and 57% in 2000. During 9 months of 2008 oil refineries processed 7.3mln tones of crude oil which is 27.9% less than in January-September 2007. Out of all working plants only Odessa refinery, which is one of low-power once operates on nominal indicators Kremenchug, Nadvirna and Drogobych refineries operates on minimum rates. LINOS refinery processed the greatest volume of oil by the results of three quarters. While the largest in Ukraine plant "Ukrtatnafta" sharply reduced processing since November 2007 which was caused by raw materials supply termination by Russian "Tatneft" in connection with the corporate conflict. See Diagram 2.

The overall utilization rate, a key indicator of efficiency, has fallen due to many factors: aging equipment, temporary shutdowns at some refineries, and the lack of Ukrainian access to Caspian oil. However the main reason of a crisis in the sector is the shortage of crude oil and absence of modern oil refining capacities for output of products of improved standards.

2%

5%

19%

LINOS

Kherson

Kremenchug

Drogobych

Nadvirna

Diagram 2. Share of the Ukrainian oil-refining plants in total amount of oil processed in January-September 2008

Source: State Statistics Committee.

Note: Kherson refinery was not in operation during the period, Odessa refinery was in operation during April-September only.

## Fuel production and import

Ukrainian refineries' product mix and product quality are also inadequate. Overall, they produce insufficient petrol, diesel, and jet fuel, far below the levels of demand in Ukraine. At the same time they produce excess fuel oil (mazut), at low or even negative margins. Only one refinery (LINOS) is capable of meeting Euro IV quality standards for oil products, but none can meet Euro V standards, implementation of which is expected to begin by 2009.

In January - September, 2008, in comparison with the similar period of last year, petrol production in Ukraine decreased by 0.73mln tons, or by 22.3 %. Diesel fuel production decreased by 0.9mln tons, or by 27.4 %, and mazut production- by 0.95mln tons or by 35.8 %. See diagram 3.

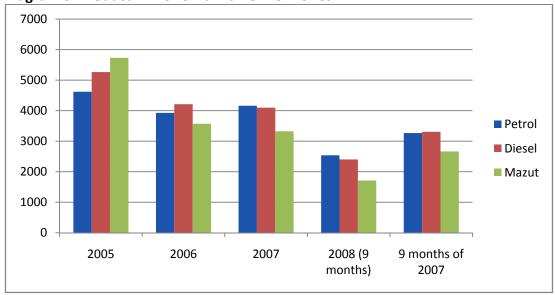


Diagram 3. Product mix of Ukrainian oil refineries

Source: Ministry of Fuel and Energy.

In the result of this sharp drop in production, the share of imported fuel in Ukraine increased on the average by 20 % in 9 months 2008. During three quarters of this year the share of imported petrol constituted 41.7%, which is 20.9% more than in 2007. Share of imported diesel reached 53% (20.3% more).

Ministry of fuel and energy predicts further increase of the share of import fuel in total amount of fuel sold on Ukrainian market and in 2009. Next year the share of imported fuel is expected at the level of 45 %, the share of imported diesel - at the level of 52 %.

According to the Ministry of fuel and energy, demand on automobile petrol in 2009 is expected at level of 5.6 mln tons (5.5 mln tons in 2008), on diesel fuel correspondingly 6.7 mln tons against 6.6 mln tons. Demand for mazut in 2009 is expected to grow from 4 mln tons in 2008 up to 4.2 mln tons in 2009. Internal production is forecasted to cover 3.9 mln tons (3.1 mln tons in 2008), import – 0.3 mln tons (0.9 mln tons in 2008).

Ukraine depends heavily on importing Russian crude oil, which covers some three quarters of Ukrainian demand at present. Russian oil deliveries to Ukraine have declined in recent years, down to 9.8 million tons in 2007 (less than 5mln. tons during 9 months of 2008), causing refineries to operate far below capacity. See diagram 4. Nevertheless, Ukrainian dependence on Russian oil has remained constant or even increased, largely due to the cessation of Kazakh oil exports to Ukraine.

16000 14000 10000 8000 6000 4000 2000 2006 2007 2008 (9 months)

Diagram 4. Oil supply to Ukrainian Refineries '000 tons

Source: Ministry of Fuel and Energy.

Oil supply to the Ukrainian oil refinery plants was reduced by 29.7% in January-September 2008, comparing to the analogous period of 2007. At the same time supply of Ukrainian oil was increased by 1.3% and reached 2.12 mln tons.

In the year 2007 deliveries of oil to Ukrainian refineries was reduced by 6.0 % in comparison with 2006, down to 12.6 mln. tons. At the same time deliveries of Ukrainian oil in 2007 increased by 1.3 %, in comparison with 2006, to 2.8 mln. tons.

During 9 months of 2008 Ukraine reduced oil import by 37.8% in comparison with the corresponding period of 2007 down to 5.08 mln. tons. At the same time in money terms deliveries have increased by 11.4 % - to USD 3.9bln because of increase of the average price of oil to USD 775 per ton against USD432.8 for 9 months of 2007.

To compensate oil import reduction, import of petrol increased by  $102.6\,\%$  - to 1.7mln tons, and by three times in money terms – to USD 1.6bln as the average price reached to USD  $965.3\,$  from USD $645.7\,$  in  $2007.\,$  Import of diesel grew by  $67\,\%$  to  $2.37\,$  mln tons, or in money terms by  $2.9\,$  times - to USD  $2.2\,$  bln for the price of USD  $924.4\,$  per ton.

It needs to be mentioned, that while Ukraine is supplied with crude oil by Russia, Russian Federation practically does not sell petrol to Ukraine. High octane level petrol origins from Belarus, Lithuania and Romania, and also from the countries of the Mediterranean region.

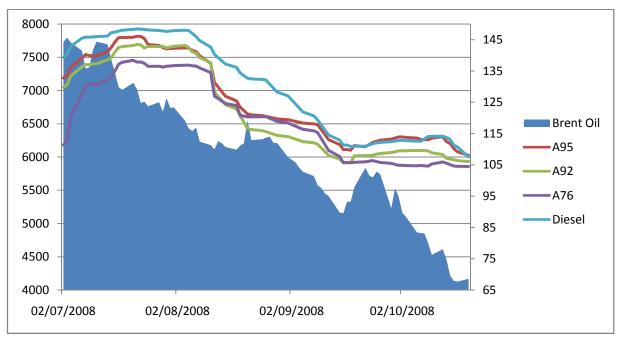
According to the governmental order of the Russian Federation of September, 19th, 2008 from the October 1st the rate of the export custom duties on crude oil is lowered from USD495.9 down to USD 372 dollars per ton instead of previously planned USD 485.8.

For gasoline and diesel the rate was decreased to USD 263.1 per ton, for mazut to USD 141.7 per ton. For the first time the rates have been calculated not on the basis of two-months monitoring of the oil prices, but based on the oil prices from September 1st till September, 17th when the average oil price was USD97.3 per barrel.

#### **Prices**

During January-September price for diesel fuel was risen by 27% up to UAH 6.45 per litre while in September – the price fallen by 4.2%. The price of petrol A-76 rose from the beginning of year by 13.4 % while in September it decreased by 5.4 %. While until the middle of July fuel price increase was conditioned by rising price of crude oil, after oil price picked and went down, rates of prices reduction on fuel did not correspond to rates of decrease of oil prices in the world which since July have fallen more than twice. See Diagram 5.

Diagram 5. Average bulk prices on fuel in Ukraine UAH/ton (left scale) against Brent oil price USD/barrel (rights scale) 1 July – 20 October 2008



Source: UPECO, Bloomberg, CASE Ukraine calculation.

Note: A95, A92 and A76 correspond to petrol of different octane level.

Among the main reasons for the slow fuel price reduction was inadequacy of dollar exchange rate fixed by the National Bank and the rate on the interbank market.

The other reason is the large stock of oil products accumulated by fuel traders earlier at the time of higher prices. Thus, on the first of October oil products remains were at the level of 0.34mln tons of petrol and 0.41mln tons of diesel. Political risks have also been included into the price. However, keeping the prices up, national producers lose their competitive advantage as foreign suppliers (Lithuania first of all) are able to offer better quality of petrol cheaper by 4-6%. This fact poses the risk of even faster increase of the share of foreign oil products on the Ukrainian market.