



# MEMU Supplement No.3-2007

## Bio fuel policy in Ukraine – some comments

High world energy prices, the dependency on energy imports and agrarian lobby groups put bio fuels high on the political agenda in many countries in the world, including Ukraine. In December 2006 the Cabinet of Ministers approved a Program of the development of bio diesel production aiming to substitute about 33% of the Ukraine's agriculture demand for fossil diesel with bio diesel by 2010. In February 2007 two draft laws on the promotion of bio fuel production and consumption in Ukraine have been submitted to the Verkhovna Rada. Despite the ongoing optimistic public discussion, the policy makers should be cautious while making further steps in the direction of developing the bio fuel market in Ukraine as experience of other countries shows that promotion of bio fuels might be expensive.

Empirical evidence indicates that the impact of first generation bio fuels (bio diesel or bio ethanol) on the world crude oil market is rather limited. Bio fuels can substitute only a small share of the world's energy use. Even if all vegetable oils (grains) produced in the world were converted into bio diesel (bio ethanol), they would substitute less than 3% (11-13%) of world crude oil use leaving nothing for food or feed. Current bio diesel and bio ethanol market shares are estimated to be much lower at 0.2%-0.8% respectively of world crude oil consumption.

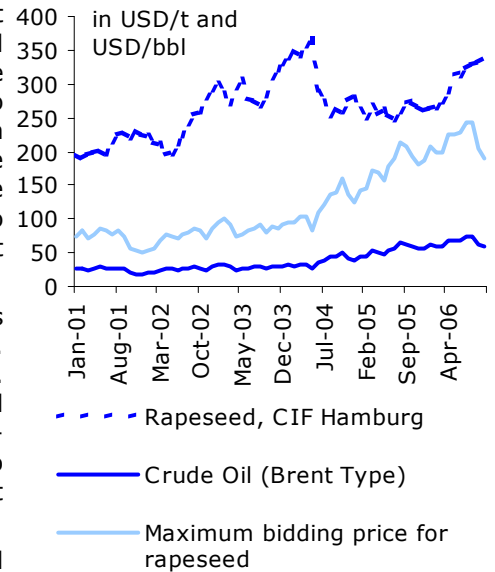
In contrast, the impact of world energy markets on the grain and oilseed markets is substantial. Although a limited amount of the world vegetable oil supply of less than 8% is used for bio diesel production, this additional demand is difficult to meet. This is why prices for vegetable oils and oilseeds have been skyrocketing recently. The same holds true for the grain market. Depleting of ending grain stocks, partly because of growing demand from bio ethanol sector, resulted in a rise of prices for grain to a ten-year high.

The competitiveness of bio fuels compared to fossil fuel depends on a number of factors, of which the price of crude oil is the most important one. Theoretically, bio fuel is to compete directly with respective fossil fuel. However, the empirical evidence shows that bio diesel and bio ethanol production has never been competitive without subsidies during the last five years. Thus, bio fuel production or consumption in Ukraine would have to be subsidised (e.g. by tax breaks, budget transfers, mandatory blending, etc.), which might appear to be a rather expensive policy. For example, in Germany due to mandatory policy of blending around 5% of bio diesel into the fossil diesel drivers pay 2 to 3 cent per litre more than it would be without the policy accruing extra EUR 0.8-1 bn expenditures for the blended diesel.

Therefore, the promotion of bio fuel use could be rather expensive policy in Ukraine, which has somewhat arguable economic justification. Such policy would result in adverse effects for certain groups of society. Taxpayers, consumers or farmers would have to pay the price.

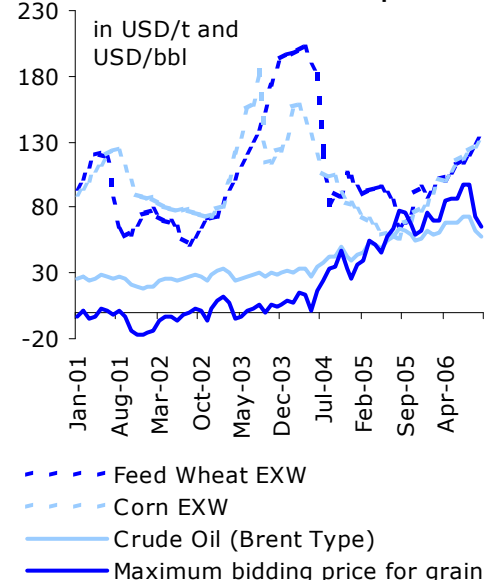
At the same time, Ukraine could be one of the major beneficiaries of the world bio fuel boom and record high world agricultural prices if Ukrainian farmers are let to export more agricultural goods used for bio fuel production, including rapeseed, rapeseed oil, and grain. This could provide the necessary incentives for farmers in Ukraine to increase their productivity and production and to overcome the deep crises it experienced. Consequently, the pressure to subsidise farmers and agribusiness will reduce in the future. For receiving benefits from exports of bio fuel related products it is absolutely necessary that the Ukrainian government does not interfere in the market. .

The maximum bidding price for rapeseed derived from crude oil price



Source: IER

The maximum bidding price for corn and feed wheat derived from crude oil price



Source: IER

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**Quarterly trends**

<b>National accounts **</b>		Q1 04	Q2 04	Q3 04	Q4 04	Q1 05	Q2 05	Q3 05	Q4 05	Q1 06	Q2 06	Q3 06	Q4 06
GDP	UAH bn	64.7	79.0	100.5	100.6	84.3	97.5	119.4	123.6	102.0	122.8	149.6	...
GDP (real)	% yoy	12.7	13.7	14.0	8.5	4.9	3.4	1.4	1.7	3.2	7.3	8.0	...
Households consumption (real)	% yoy	14.6	16.8	13.1	16.2	14.3	17.7	17.0	17.1	19.7	19.9	17.3	...
State consumption (real)	% yoy	3.3	1.0	5.0	10.1	6.1	0.0	1.0	4.0	2.0	7.3	-4.4	...
Gross fixed capital formation (real)	% yoy	18.4	6.5	4.6	12.9	-2.3	-0.5	0.2	0.3	8.2	10.4	15.7	...
Exports of goods and services (real)	% yoy	18.1	19.9	10.5	8.6	-0.6	-14.0	-12.7	-15.5	-19.9	-11.2	1.3	...
Imports of goods and services (real)	% yoy	13.8	7.3	6.7	7.8	2.8	3.2	3.9	-0.9	5.6	1.0	7.1	...
Agriculture, hunting, forestry (real)*	% yoy	-4.4	0.9	35.7	9.9	5.8	8.3	2.6	-7.4	4.1	2.9	-5.0	...
Manufacturing industry (real)*	% yoy	23.9	16.3	12.5	9.4	7.0	1.8	-1.1	2.0	-2.9	5.4	8.9	...
Construction (real)*	% yoy	29.9	30.6	16.4	3.9	-8.4	-11.3	-8.5	-7.5	2.6	5.7	8.8	...
Trade, repair services (real)*	% yoy	23.6	35.0	2.7	13.7	-2.1	-10.7	-11.7	-11.9	4.1	14.7	19.4	...
Transport (real)*	% yoy	10.1	8.0	12.3	10.5	6.6	5.7	2.8	7.8	3.4	9.7	12.6	...
<b>Balance of payments</b>													
Current account balance	USD bn	1.4	2.3	2.1	1.1	1.6	0.6	0.4	-0.1	-0.7	0.0	0.5	...
Current account balance	% of GDP	11.1	15.7	10.9	5.7	10.1	3.2	1.7	-0.4	-4.0	-0.2	1.6	...
Trade balance in goods	USD m	933	1552	774	482	1020	-236	-1131	-788	-1288	-876	-769	...
Trade balance in services	USD m	133	198	749	157	188	392	1035	191	176	401	885	...
Current transfers	USD m	475	758	720	623	626	694	745	780	616	782	846	...
Direct investment (FDI)	USD m	333	614	420	344	247	365	477	6474	662	1410	1602	...
Portfolio investments	USD m	449	149	1313	156	397	923	90	1347	0	-264	364	...
Gross international reserves	USD bn	7.9	9.6	12.1	9.5	12.0	13.1	14.3	19.4	17.3	17.6	19.1	...
<b>Fiscal indicators</b>													
Consolidated fiscal revenues	% of GDP	27.2	26.9	26.3	25.9	32.1	35.1	31.5	31.0	32.2	32.0	32.1	25.6 <sup>e</sup>
Personal income tax	% of GDP	4.4	4.1	3.8	3.8	4.3	4.4	3.9	4.2	4.5	4.6	4.1	4.3 <sup>e</sup>
Enterprise profits tax	% of GDP	3.9	4.0	4.1	6.1	4.8	5.9	5.3	6.3	3.5	4.6	4.3	6.9 <sup>e</sup>
Value-added tax	% of GDP	6.2	5.7	5.1	4.1	8.6	9.2	7.9	7.3	9.5	9.3	9.8	9.6 <sup>e</sup>
Excise tax	% of GDP	2.1	2.1	2.0	1.8	2.0	2.0	2.0	1.7	2.0	1.8	1.5	1.6 <sup>e</sup>
Consolidated fiscal expenditures	% of GDP	25.3	26.5	26.8	35.2	28.3	36.4	28.1	41.7	31.9	33.2	29.5	37.8 <sup>e</sup>
Current expenditures	% of GDP	22.4	22.7	21.7	27.2	26.5	33.6	24.0	34.2	29.9	30.0	25.0	30.1 <sup>e</sup>
Capital expenditures	% of GDP	2.9	3.8	5.1	8.0	1.8	2.7	4.1	7.5	2.0	3.2	4.5	7.7 <sup>e</sup>
Consolidated fiscal balance	% of GDP	1.9	0.4	-0.5	-9.3	3.7	1.0	-5.0	6.2	-0.4	1.1	2.4	-4.0 <sup>e</sup>
Privatisation receipts	% of GDP	1.5	3.7	3.5	1.0	0.2	0.6	0.6	16.0	0.1	0.1	0.1	0.1 <sup>e</sup>
<b>Labour market</b>													
Average wage (real)	% yoy	19.9	18.6	14.7	15.4	15.0	19.0	19.6	26.4	23.8	22.6	18.8	11.3
Household income (real)	% yoy	11.7	16.3	11.3	16.6	24.0	28.0	19.4	18.9	22.1	18.6	20.3	16.3
Unemployment rate (ILO methodology)	%	9.3	8.3	8.1	8.7	8.7	7.1	5.2	7.8	7.9	6.8	6.4	...
<b>Banking system</b>													
Monetary aggregate M0	% yoy cum	29.1	25.6	37.1	27.9	28.2	39.1	31.1	42.2	36.2	25.3	23.7	24.5
Monetary aggregate M2	% yoy cum	45.4	44.8	51.5	32.3	38.9	37.4	31.3	53.9	39.2	36.6	36.7	34.3
Household deposits in national currency	% yoy cum	69.4	67.3	67.9	26.2	28.3	31.6	30.4	90.8	54.6	41.1	39.7	37.3
Household deposits in foreign currency	% yoy cum	67.0	61.7	55.2	54.3	51.8	45.4	46.4	59.1	54.5	66.2	64.3	57.5
Com. bank credits in national currency	% yoy cum	56.8	52.1	44.3	29.4	28.3	32.6	43.4	58.7	59.8	53.7	49	52.3
Com. bank credits in foreign currency	% yoy cum	63.6	56.2	43.5	32.2	33.1	36.8	47.1	66.3	72.0	82.1	90.4	95.4
Long-term com. bank credits	% yoy cum	141.7	102.7	82.7	57.1	49.5	53.0	70.1	84.6	87.6	86.7	76.6	79.5
Long-term com. bank credits	% of total	47.4	49.3	50.9	54.2	54.4	56.1	59.7	61.8	63.1	63.4	63.5	64.9
Average lending rate on national cur. credits	% p.a.	17.2	16.6	17.0	17.6	17.0	15.4	15.4	16.4	15.8	15.5	14.6	15.1
Average lending rate on foreign cur. credits	% p.a.	12.2	12.1	12.6	12.2	12.1	11.0	11.3	11.7	11.5	11.3	11.3	11.5

SOURCES: National Bank of Ukraine, State Committee of Statistics, State Treasury, Ministry of Finance, IER estimates

\* change in value added

\*\* preliminary

**Notes:**
**yoy** year on year change

**p.a.** per annum