Ukraine

The Impact of Higher Natural Gas and Oil Prices

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Executive Summary

Traditionally the impact of higher international energy prices on Ukraine have been mitigated by three factors: (i) the effect of oil wealth in Russia, which has translated into increased demand from Russia for Ukrainian exports; (ii) low cost energy imports through negotiated import prices of natural gas which are fixed significantly below European prices (through its long term contracts with GazProm and Turkmenistan); and (iii) pro-cyclical increases in the prices of Ukrainian exports (such as metals and chemicals) which have maintained strong terms of trade.

But what has helped Ukraine can also hurt it. These same factors have contributed to high energy intensity of energy use which makes Ukraine vulnerable to energy price increases. Net energy imports are equal to 16 percent of Ukraine's GDP. Oil imports are equivalent to 7.5 percent of GDP and gas imports are equivalent to 5.5 percent of GDP. While these are not particularly high, the energy intensity of use in Ukraine is perhaps the highest in the region — 22 times more than Germany on a GDP basis, and 3.6 times higher than Germany on a purchasing power parity basis. This high energy intensity makes Ukraine especially vulnerable to both oil and gas price increases.

According to a simple model employed in the paper, if the price of a barrel of Ural oil were to average US$57 in 2006 and fall to US$54 per barrel in 2007, while the price of Russian and Turkmen gas were to rise to US$105 and US$126, respectively, for 1000 cubic meters (that is, by approximately 110%), the negative impact on GDP would be roughly 4 percent in the first year after the price shock and 3 percent in the second year. The total impact may be higher or lower depending, not only on the extent of the price changes, but also on how the energy sector and the economy respond to higher prices.

Overall, it is clear that upward energy price pressures are going to be a fact of life for Ukraine over the coming few years. Oil prices have already risen dramatically. Russia has established an oil stabilization fund which, over the foreseeable future, will tend to moderate the potential growth in export demand from Russia. At the same time,

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pressures are increasing from both Russia and Turkmenistan to fundamentally renegotiate long term natural gas contracts and bring gas import prices closer to European prices.[2]

While some of the sources of its energy vulnerability are external, Ukraine has within its own control the ability to significantly reduce its vulnerability. This requires urgent reforms to its energy sector, reforms that have been identified for many years, and whose implementation is now overdue. They include measures to promote energy efficiency, quicken and deepen the effort to create market supporting institutions, pursue hard budget constraints on energy producers and consumers that should include full cost recovery and economic price setting, and create a market-friendly regulatory environment in the energy sector that would attract additional investment and expertise.

[2] Ukraine presently pays between $50 and $60 per thousand cubic meters of natural gas. The World Bank estimates the European parity price at $235 per thousand cubic meters.