



BULLETIN

No. 131 (726), 18 November 2014 © PISM

Editors: Marcin Zaborowski (Editor-in-Chief) ● Katarzyna Staniewska (Managing Editor)
Jarosław Ćwiek-Karpowicz ● Aleksandra Gawlikowska-Fyk ● Artur Gradziuk
Piotr Kościński ● Sebastian Płociennik ● Patrycja Sasnal ● Marcin Terlikowski

Facing the Unknown: Ukraine's Winter Survival Strategy

Andrii Chubyk¹, Zuzanna Nowak

The de facto third gas war between Ukraine and Russia is only a part of a broader, difficult situation for the whole Ukrainian energy sector. This winter may prove to be one of the toughest for Ukraine, as its survival will require important sacrifices in terms of finances, cross-sectorial coordination, and society's compliance. The challenge, however, lies not only in enduring the 2014/2015 heating season, but in ensuring that such a situation will not be repeated in the following years. The EU will help Ukraine provided that the latter commits to European rules.

Russian gas, which Ukraine stopped receiving on June 16, may reappear on the Ukrainian market according to trilateral Ukraine–Russia–EU meeting agreements. Gazprom will resume gas deliveries to Ukraine if Kiev covers its debt and pre-pays for deliveries at a price of \$378 per 1,000 cubic metres (cm) in 2014, and \$365 per 1,000 cm in the first quarter of 2015. Accordingly, but only in the event of significant gas shortages, Ukraine will consider purchasing up to 4 billion cubic meters (bcm), provided that Russia is able to allocate such amounts for export. Nevertheless, Ukraine approaches the heating season with its energy sector heavily undermined by the conflict with Russia, and still unclear prospects for survival during the winter of 2014/2015. The current crisis forced the Ukrainian government to reorganise its energy sector temporarily and, under pressure of the forthcoming winter, to take immediate supply-side and demand-side measures. Even though the status quo is unsustainable as a policy in the long term, the primary goal of the current energy policy is to ensure energy security for Ukrainian citizens.

The Search for Gas Supplies. Ukraine's main problem is the availability of sufficient gas supplies, since domestic production and gas stocks can cover only 50–70% of Ukraine's needs. Ukraine's own production of around 20 bcm annually has little (2–3%) margin to be increased this year. Possessing the largest gas storage facilities in Europe (31 bcm), Ukraine managed to pump nearly 17 bcm into storage, but from the beginning of the heating period on October 20 had already started withdrawing gas from it. The total amount includes active and buffer gas (5–6 bcm), which is important for the uninterrupted functioning of underground gas storage facilities (UGSF). There are claims on ownership (made by oligarch Dmytro Firtash's Group DF) of around 5 bcm gas in UGSF, challenging the further availability of sufficient gas for the winter.

In the absence of Russian gas, Ukraine has for the past few months been relying on reverse flows from Slovakia, Hungary and Poland, which currently account for the annual technical capacity of respectively 11.5 bcm, 6 bcm and 1.5 bcm. These are however short-term (often interruptible) contracts for the de facto re-export of Russian gas, subject to fluctuations due to pressure by Gazprom, which questions their legality. Finally, the short-term and relatively small-volume deal signed on October 3 with Norwegian Statoil allows Ukrainian Naftogaz to acquire 11 million cubic meters (mcm) of gas per day (for around \$340 per 1,000 cm), under the mechanism of volume substitution through Slovakia. The outlook, though more positive, still does not guarantee closing the 3–4 bcm gap.

Swapping Energy Sources. Ukraine's plan of switching some of its energy use from gas (40% of energy mix) to coal (30%) has been undermined by separatist movements in the eastern regions of the country, where most of the

¹ Andrii Chubyk is an energy expert from the Centre for Global Studies "Strategy XXI" with research interests in energy relations and security.

national coal reserves are located. Only 24 out of 93 coal mines on the territory of Ukraine remain operational. The rest are under separatists' control, producing little, or closed or destroyed. As a consequence, extraction of highly thermal coal (mainly anthracite) declined dramatically, resulting in a 4 million tonne coal deficit (out of 40 million tonnes consumed annually by the power sector). Thus, in order to ensure stable electricity production from this commodity, Ukraine has to import coal. It is not certain, however, if by the end of the year Ukraine will receive the contracted 1 million tonne shipment from South Africa. Hence, Ukraine might be forced to buy coal from Russia. Several private Ukrainian companies have already signed agreements for the supply of 4 million tonnes of coal from this country. With the electricity generation capacity mix composed of 47.2% nuclear, 42.2% thermal, 5.3% hydro, 4.3% utilities and power CHP stations, and 1% alternative sources (from January to September 2014), the only possible swap in view of coal shortages this winter will consist of increasing electricity production in Ukraine's nuclear power plants. This is all the more possible (of course within limits of operational safety), as contracts for nuclear fuel supply between Ukrainian Energoatom and Russian Tvel are executed smoothly.

Demand-side Measures. Significant improvements in Ukraine's highly inefficient economy could reduce its dependence on the import of energy resources.² While structural reform cannot happen in one autumn, rational use of energy, in particular during peak demand on cold days, becomes crucial. Naftogaz forecasts a 24.5% total reduction in natural gas consumption during the current heating season. In 2013, gas consumption was 17 bcm for households, 9 bcm for public utilities, 4 bcm for technical reasons (transit and distribution) and 23 bcm for industry. The latter is today expected to decline under 18 bcm, with a further possible downturn in large part due to the destruction or loss of industrial assets in the east of Ukraine and in Crimea. The Ukrainian government has established an emergency plan in case there is a need to reduce gas consumption for all consumers (for industry and municipalities by 30% and for public buildings by 10%), including legally protected individual households. As an important element of the demand response, the Ukrainian government sees the possibility of switching district heating plants to fuel oil, using alternative fuels for electricity production, switching to electricity for heating purposes, or simply lowering the temperature of water delivered to residential buildings for heating.

To encourage reduction in energy consumption, the government decided to postpone the heating season in Ukraine and might end it earlier than 15 April 2015, depending on weather conditions and gas availability. Also, temperatures in Ukrainian households with central heating can diminish to 16–19° C instead of the usual 20–23° C. Bearing in mind probable interruptions in heat and hot water supply, Ukrainians are trying to undertake measures of their own, such as mass purchasing of electric heaters and insulating their flats.

Conclusions and Recommendations. The energy balance of Ukraine is not a given, and a relatively small change (for example, a sudden increase in the use of electric heaters) may upset the whole system. Only proper mobilisation of all available resources and careful implementation of supply- and demand-side solutions will allow the country to get through the winter even without Russian gas. It is crucial for Ukraine to monitor the stability of the grid closely, to gather alternative fuels stocks, and to ensure as much as possible back-up capacities for existing plants. The implementation of Ukraine's winter strategy means high costs, counted in billions of euro. Ukraine is thus seeking funds from various sources, including the country's gold and foreign reserves, as well as international financial institutions such as the EBRD or the IMF. Even at a cost of plunging the country further into debts, this year Ukraine definitely has to consider energy security over economic losses and liabilities.

The temporary agreement concluded between Ukraine and Russia does not exclude further disputes. The Stockholm court of arbitration will not consider claims of Naftogaz and Gazprom concerning gas prices and the amount of Ukraine's debt until the second half of 2015. Also, adaptation of the Ukrainian gas transmission system to European standards, including switching to an entry/exit model of transit tariff calculation, can be problematic, because of discordance between conditions of contracts between Naftogaz and Gazprom, and European legislation. Thus, steps should be taken now, in order to avoid a repetition of the current situation next year. Energy strategy, currently under development, as well as further legislation, has to prioritise reduced energy intensity and increased energy efficiency. The government should ensure rapid modernisation of housing stock, develop energy metering, and rationalise prices. External energy policy must bring a pragmatic and comprehensive solution for energy imports from all suppliers, based on market prices.

The EU's support for reforms in Ukraine depends on the construction of a robust relationship based on mutual trust. If Ukraine demonstrates reforms in its energy sector compliant to the EU *acquis*, the EU may enhance its presence in Ukraine by technical and financial means (budget support, twinning, projects of common interest, and energy efficiency investments). Strong commitments to the fulfilment of obligations under the EU's third energy package should become a must, both for Ukraine in its internal reform process, and for international energy relations without exceptions in favour of Russian interests. It is a *sine qua non* condition to attract foreign investment. The EU might, however, be required to demonstrate consistent actions in terms of changing its gas delivery point to the eastern border of Ukraine and reconsider gas projects that bypass Ukraine.

² D. Wnukowski, "Improving Energy Efficiency: A Key Task for the Ukrainian Economy," *PISM Bulletin*, no. 60 (655), 7 May 2014.