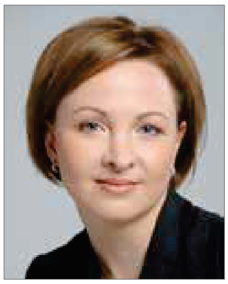
Russian oil and gas in the new reality



Dr Tatiana Mitrova,
Energy Research Institute, Russian Academy of Sciences

Russia is one of the key participants of the global oil and gas markets. It is among the largest hydrocarbon resource holders, producers and exporters, with nearly 6 per cent of global proved oil reserves, 13 per cent of world oil production, 12 per cent of the global oil exports and 17 per cent of the global gas reserves, 19 per cent of global gas production and 24 per cent of the global cross-border gas trade. It is a dominant supplier both for Europe and for neighbouring CIS countries, and holds great influence over these regional markets. Nevertheless, despite this extraordinary position, Russia (and previously the Soviet Union) has always been a "price taker", just accepting the market conjuncture and never trying to influence it. It has always stayed away from OPEC's attempts to rebalance the oil market, and even in the gas market, where it has potentially huge leverage, it has just followed price movements (driven by oil-indexed prices in the long-term contracts), without any attempts to impose its own agenda.

Therefore with the recent downward turn of the commodity price cycle, Russia had to adapt to the far lower oil and gas prices and export revenues, which was extremely painful for the country's economy: Hydrocarbons provided more than 50 per cent of the federal budget revenues in 2011-2014 and dropped down to just 34 per cent in 2016. This external shock from the sharp oil price decline was exacerbated by the imposition of international sanctions in response to Russia's actions in Crimea, which undermine investment and technological capabilities of the Russian oil and gas sector.

The common expectation was that the Russian economy, as well as hydrocarbons output, would collapse, but amazingly for many observers, the oil and gas sector demonstrates an opposite dynamic, recalling the famous words of Winston Churchill that "Russia is a riddle wrapped in a mystery inside an enigma".

Oil: Magic of cheap ruble and past investments

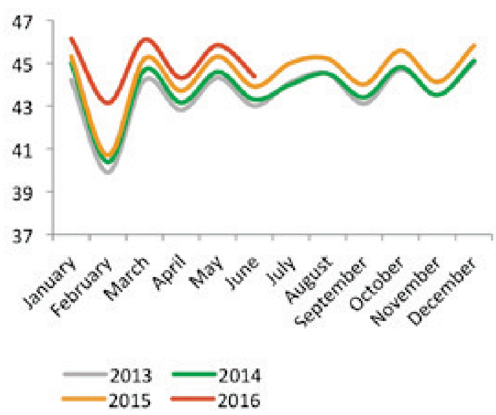
Recently there have been very strong expectations that Russian oil production has approached its peak as the production rates of the Soviet legacy fields in Western Siberia, where more than 60 per cent of Russian crude is currently produced, are in steep decline. However, in reality, despite low prices, economic crises and sanctions, in 2015 Russian oil companies increased their oil output by 1.4 per cent (Figure 1) and exports by 9 per cent (Figure 2), and in 2016 the growth continues.

The main contribution to the growing oil production was provided by gas condensate and by the new greenfields, where major investments were made in the period of high oil prices prior to 2014. These are reaching their plateau and will not now be stopped in any price scenario. Moreover, Russian production costs went down significantly, due to a nearly 60 per cent ruble devaluation. Since the Russian companies incur most costs in rubles, lower oil prices were offset by the ruble devaluation. Russia's system of oil taxation has further softened the blow – it was mainly the Russian federal budget which took the heat of the oil price decline: The progressive scale of export duty means that the state is the main beneficiary of high oil prices, and loses a significant part of its revenues at lower oil prices, while oil companies have nearly the same revenues. Tax concessions, adopted in 2013, became another factor which helped to sustain production volumes, as they stimulated oil output growth in the new Eastern Siberian fields.

So, past investments in the new greenfields, ruble devaluation, specific taxation concessions, and also depressed domestic demand for liquids, ensure record high production and export volumes – at least for 2016-2017.

Post 2018-2020, some steep production decline is becoming inevitable, due to accelerating depletion rates in mature fields and delays in the commissioning of new projects resulting from capex constraints and the expected ongoing impact of the sanctions. In this time frame, Russian oil output will be mainly defined by the tax regime and financing availability (which depends on oil prices and financial sanctions) (Figure 3).

Figure1: Monthly oil production in Russia in 2013-2016, million tonnes



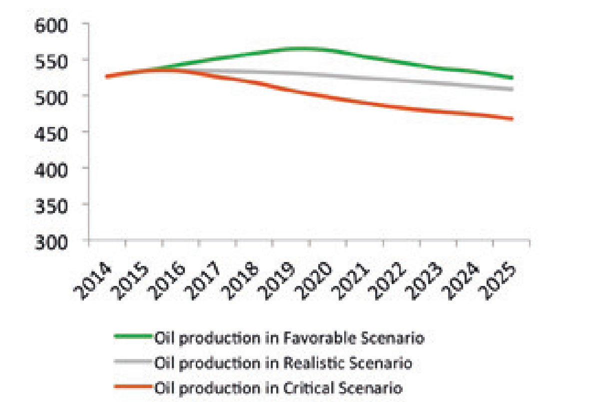
Source: Energy Ministry of the Russian Federation

Figure 2: Russian crude oil export dynamics by destination in 2000-2015, million tonnes

Sources: Central Bank RF (http://www.cbr.ru/statistics/print.aspx?file=credit_statistics/crude_oil.htm) based on the Russian Custom Service data, Rosstat, CDU TEK

Under favourable conditions, it would be realistic to foresee production raised to 560-570 million tonnes per annum. But if oil prices and taxation are less advantageous, production decline would begin in the next few years. With weak macroeconomics, there is a growing likelihood of an oil tax increase, and the sanctions over time will exacerbate the existing problems associated with depleting financial resources. If sanctions stay in place, Russia will also face technological difficulties developing its offshore and unconventional resources or implementing enhanced oil recovery. In the critical scenario of low oil prices, macroeconomic challenges and thus additional taxes, production declines could be even sharper. So, in the long term, the trajectory of Russian oil production is expected to be declining, but the speed of this decline is extremely uncertain.

Figure 3: Three Russian oil production scenarios, million tonnes



Source: Mitrova. T. The Shifting Political Economy of Russian Oil and Gas. CSIS. Washington, 2016. http://csis.org/files/publication/160323_Mitrova_RussianOilGas_Web.pdf

Gas: Big ambitions and stranded investments

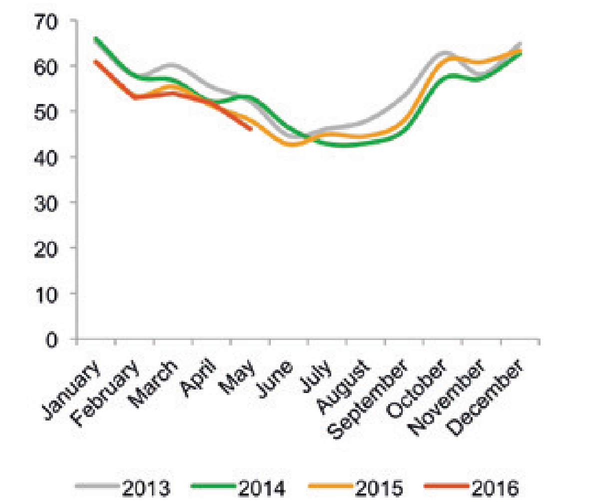
Russia was dynamically raising its gas production in the "golden age" of 1998-2007, but since 2008, production has dropped significantly (Figure 4) and still has not recovered, due to the demand slowdown in the domestic and European markets, and lower supplies to CIS countries. This decline is solely demand-driven: On the supply side, Russia has been investing heavily since 2008 and now possesses huge spare production capacities of 150-170 billion cubic metres per annum (bcma), which are projected to increase up to 250-265 bcma by 2020 as a result of the past investments – similar to the oil sector.

Due to the weak demand, Russia has not restored its pre-crisis export volumes to Europe (162 bcm in 2006 vs 126 bcm in 2014 – Figure 5), though 2016 might be more optimistic, as low oil prices make Russian gas one of the cheapest and most attractive options in the market. At the same time the Ukrainian conflict dramatically reduced CIS sales volumes, while gas exports to Asia are now limited to Sakhalin LNG exports, and the recently signed deal on pipeline gas supplies to China is only a longer-term prospect.

In the longer term, the Russian gas sector undoubtedly has capacity for sustainable production growth — the resource base is huge, and is sufficient to meet domestic and export demand. As Russia has no gas resource constraints, its future gas production will depend solely on the degree of market demand and availability of investments to build the new gas transportation infrastructure. In the high demand scenario, the call on Russian gas results in rather bullish production projections, increasing from 650 bcm in 2010 up to 820 bcm in 2025, though these figures are still much lower than the previous production targets of 870-970 bcma in the General Scheme of gas industry development drafted in 2008-2010.

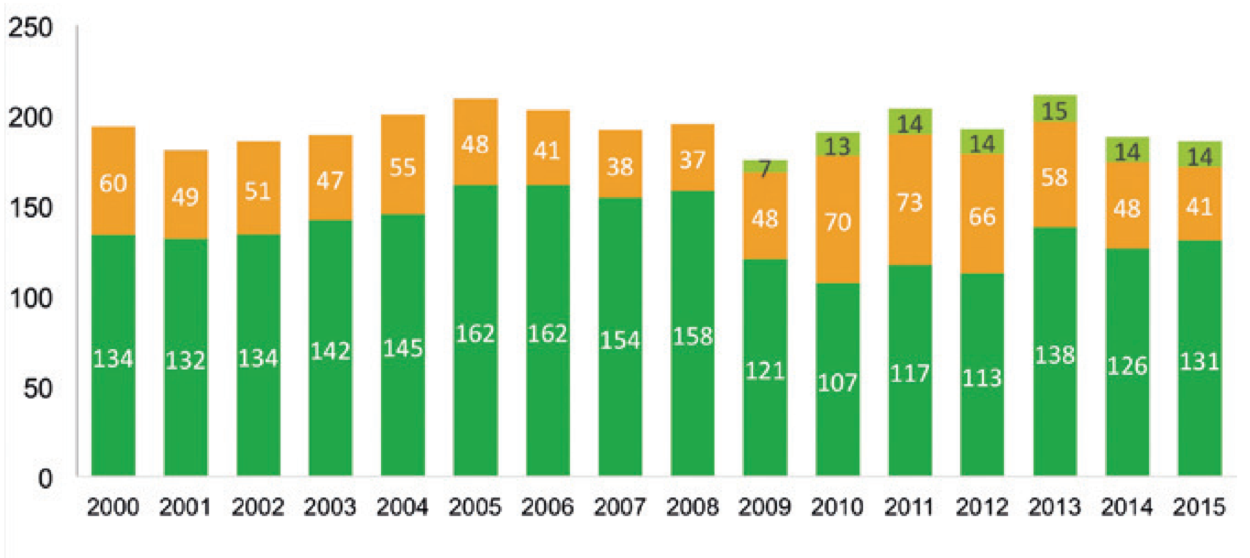
Summing up, the resilience of Russia's oil and gas output and recent growth of its hydrocarbon exports came as a big surprise to the market: When the country found itself in painful economic crises and increasing international isolation, expectations were much more pessimistic. Nonetheless, Russia's vast resource base, low-cost hydrocarbon production and momentum of past investments ensure that the country will remain a major oil and gas exporter in any scenario, and therefore its influence should not be overlooked.

Figure 4: Monthly gas production in Russia in 2013-2016



Source: Energy Ministry of the Russian Federation, CDU TEK,

Figure 5: Russian gas export dynamics by destination in 2000-2015, bcm



Sources:Central Bank RF (http://www.cbr.ru/statistics/print.aspx?file=credit_statistics/gas.htm) based on the Russian Custom Service data, Gazprom