
Book Reviews

Energy and Economic Reform in the Former Soviet Union

LESLIE DIENES, ISTVAN DOBOZI and
MARIAN RADETZKI

New York: St. Martins Press, 1994
pp.246

There are very few articles and virtually no books on the long-term energy future of the former Soviet Union (FSU) being published nowadays. The main reason for this deficit is obvious. Dramatic changes are happening at such a speed that a six-month period is now considered to be long-term in the FSU; forecasts for anything longer than that usually appear in newspapers or on TV, which is a much less risky business for their authors. For the same reason, an analysis of past experience with energy in the FSU normally becomes outdated if it is to be published in a monthly journal. Nevertheless, there are brave energy economists among us. Leslie Dienes, Istvan Dobozi and Marian Radetzki took the challenge and published a book (!) on what may happen to energy in the FSU in 2005.

The study was completed at the end of 1992 — a life-time ago given the rate at which things are changing — but the book is still very interesting and useful reading. At the time this review is being written (October 1994), the

internal price of crude in the FSU is over four times higher than in 1992, but the authors of the book were able to predict it. They have collected and processed a huge amount of data on the production and consumption of crude oil, natural gas and coal in the FSU, and have made reasonable assumptions on the future development of economic reform. Using our knowledge of past events (which is also likely to be obsolete by the time this review is published), let us go back to 1992 and compare the authors' forecasts with actual developments in this long two-year period. Where was the FSU energy sector in 1992 and where is it now?

The book assumes four alternative scenarios for the reform process in the FSU: Radical Market Reforms (Shock Therapy), Gradual Market Reforms, an Extended Period of Reform Impasse, and Internal War. The approach looks good in general and, even from today's standpoint, the FSU countries theoretically can follow any scenario of the four depicted. However, it was clear back in 1992 that the future of those newly independent states would be different. In their analysis by country, while the authors recognized that the Central Asian FSU republics remained centralized, the scenarios show a common fate for all of the FSU republics. Political change in 1991-1992, covered extensively in Western media, was clear. The Central Asian republics were to keep their central-planning regimes, while the rest of the FSU republics were to pick up any of the four scenar-

ios. It indeed turned out like that.

The development path in Russia in 1992-94 was closer to the Radical Market Reform scenario, with some elements of the Gradual Market Reforms. The government no longer directly controls the energy sector, but is hitting it through numerous taxes. The ruble is internally convertible and the domestic price of all fuels is free, except for natural gas, which is now being adjusted every 3-5 weeks in accordance with the value of the basket of goods and services Gazprom is buying for its operation and maintenance. Both labour costs and the ruble price of everything are growing fast. However, the Russian economy is continuing to fall and the bottom is still to be reached.

The chapter on production constraints and prospects has a very informative section on the structure of FSU oil reserves. This is something you would expect to find in a multi-hundred dollar report. The current oil production in Russia is under 6 MMb/day, which is below anyone's anticipations, including those of the authors, who forecast 6.7 MMb/day in 1995. And, again, the bottom has not yet been reached.

In the economic section of the production chapter, the material on the "realistic" ruble exchange rate is somewhat confusing. It is not clear why the ruble should be valued at more than its market value on each given day. In current dollars at the actual exchange rate of the ruble, the crude oil price and cost were developing as shown in Table 1.

At the time of this writing, the ruble lost a quarter of its value in one day, and the price of crude is also down in dollar terms for the moment. Under similar circumstances in the past, the price caught up in just a few days.

Something is very wrong with the book's treatment of the economics of natural gas supply and the summary data (Table 2.8) associated with it. There is no way for the gas production cost to be higher (nearly 3.5 times, according to the authors) than the transportation cost, and this also follows from the estimated cost of pipelines and the field development costs given in the book. The quoted 1991 report of VNIIEGazprom also gives a production/transportation ratio like one to four, but this fact was

Table 1: Russian Crude Oil: Price, Production Cost and Transportation Cost to an Export Terminal (US\$ of the corresponding period per ton).

	The book 1992	April 1992	April 1993	April 1994	The book 1995
Domestic price	11.70	4.30	28.00	42.00	38.00
Production cost	7.90	17.90	18.90	19.50	12.40
Transportation cost	0.60	10.00	12.00	15.00	0.80

Sources: *Russian Petroleum Investor*, May 1994 (for April 1992, 1993 and 1994); and Table 2.7 of the book reviewed (for "the book," 1992 and 1995).

misinterpreted somehow.

There is also a factual error in the natural gas area: the gas flow in the Nadym-Punga section is not 340 BCM/year, but 440 BCM/year.

Domestic fuel consumption in the FSU is the key issue and the authors have done a great job analyzing that. It was, and still is, impossible to predict how deep the economic crisis would be, so the forecasted consumption curves should be readjusted in accordance with the latest observations. Inclusion of the refining sector in the study would also have been logical and helpful.

Recent developments in fuel use in the Baltic states can illustrate the influence of market forces. In 1992, Gazprom introduced a price of US\$80/MCM for gas exported to these countries. At that time, the substitute fuel, heavy fuel oil, was easily available in Russia for less than \$30/ton, c.i.f. the Baltic states. So, in 1993, gas use in the area dropped by two-thirds from the 1991 level, as all consumers with capability to switch from gas to heavy fuel oil did so, and there was an additional decline in fuel consumption in general. In early 1994, Gazprom cut the price to the average of \$67/MCM and the gas market gained back a portion of what was lost earlier.

Market and geopolitical analyses are missing from the book. The domestic market and export capacity are now dictating the production levels of all fuels in Russia. In the first half of 1994, the oil and refined product export terminals were operating at full capacity. The Druzhba (Friendship) pipeline was an exception because of the lack of buyers in Eastern Europe capable

of paying for the maximum amount if delivered. Crude exports from Kazakhstan were also limited by the pipeline capacity, as well as by the wish of the Russian producers to utilize the capacity before any "outsider."

The current export flow of natural gas is very close to the maximum capacity of the export pipelines. FSU gas consumption is declining, but this does not give any immediate opportunity for an increase in exports. There is already spare gas production capacity in Russia and this will grow in the coming few years. Recognizing that, Gazprom has postponed the Yamal development for the next century. Gazprom also took over the gas export share of Turkmenistan, designated right after the collapse of the USSR in accordance with the Turkmenian share in FSU gas production. Now Turkmenistan is exporting gas only to such unreliable markets as Ukraine and Trans-Caucasus, but Gazprom may eventually take those markets too. So, any increase in exports of gas would be possible only through an investment

into the corresponding infrastructure and without any serious investment on the production side.

The book has detailed coverage of FSU energy export issues. The exceptional value of this book is in its discussion of exports to Eastern Europe, a rare event in energy publications. The East European fuel market is an attractive target for all potential exporters in the near future.

Energy and Economic Reform in the Former Soviet Union provides an interesting approach to forecasting energy developments in that most excitingly developing area of the world. There is a Russian saying about "the first pancake always being a mess." The book by Dienes, Dobozzi and Radetzki, the very first full-size publication on post-Soviet energy issues, does not follow that rule.

Mikhail Korchemkin
Center for Energy and the Environment
University of Pennsylvania, Philadelphia