UKRAINE'S OIL AND GAS SECTOR - AN EMERGING OPPORTUNITY

Dr Jim Bown*
Energy Industry Consultant
General Director
The Deane Group (Ukraine)
Kyiv, Ukraine

ECONOMIC BACKGROUND (This article updated September 2003: CLICK HERE)

Ten years after declaring independence from the Soviet Union, Ukraine is still struggling through a long period of transition from a centrally-planned economic system to a market economy. However, after posting eight consecutive years of negative real gross domestic product (GDP) growth rates, Ukraine appears to be turning the corner.

Significant progress has been seen towards macroeconomic and financial stability during 2000-2001. Real GDP grew by 14% in two years, inflation declined to an average 12% in 2001 and the fiscal deficit was cut to 1.3%of GDP. Net general government public and external debt decreased to 29% of GDP and 23% of exports, respectively, in 2001, down from a peak of 54% of GDP and 63% of exports, respectively, in 1999. Added to this list are recent significant improvements in liquidity reflecting the restructuring of liabilities to the Paris Club, the settlement of natural gas arrears, and rising international reserves. Reserve coverage of the external financing gap increased to over 300% in 2001, up from a trough of 21% in 1998. These figures hold out real hope for Ukraine's continued economic development in the future.

If added to this is the on-going privatisation programme (200 large enterprises holding over 80% of the assets in Ukraine's industrial and utilities sectors are scheduled for privatisation in the 2000 - 2002 programme), and the introduction of a new Land Code effective from 1 January 2002 (which introduces a formal mechanism for private land ownership and allows agricultural land to be bought and sold and after 1 January 2005 to be used as collateral), the future for Ukraine may be considered to be substantially better than at any time previously.

Ukraine's energy sector is one of the most critical components of the country's economy. The sector has been plagued by a lack of domestic energy sources, increasing foreign debt, outdated and inefficient equipment, a lack of funds, fuel shortages, barter deals, and non-payment by consumers. However over the last two years Ukraine has pressed ahead with energy reforms, increasing cash collection rates and the promotion of privatisation efforts. Barter transactions have been virtually eliminated and agreement has been reached with Russia concerning Ukraine's sizeable gas debts.

In turn, the oil and gas industry is now beginning to stabilise after years of decline. According to Ukraine's 'National Program for Oil & Gas to 2010', developments are planned in the following key areas: increased geophysical research and exploration drilling, increased development drilling, and stabilisation and gradual increase of oil, gas and condensate production. All of these areas provide significant opportunities for foreign investment, with particular regard to exploration/production and the supply of advanced technologies, products and services to facilitate increased production (eg horizontal drilling, reservoir management, work-over services, completion services). Pipeline products and services will also be of interest to the operators of Ukraine's huge oil and gas pipeline networks.

OIL

Ukraine has 395 million barrels of proven oil reserves, the majority of which are located in the Dnipro-Donets basin in the eastern part of the country. Although the pace of exploration has picked up, particularly in Ukraine's sector of the Sea of Azov, oil production has tapered off since independence. Since 1992, when Ukraine produced 95,000 barrels per day (bbl/d), production has been on the decline, dipping to 84,000 bbl/d in 2000. Naftohaz Ukrainy, the country's majority state-owned, umbrella oil and gas organisation, is predicting oil production in 2001 to stay flat at 84,000 bbl/d. At this level of production, Ukraine's oil production volumes satisfy only about 25% of the country's domestic needs, making Ukraine highly dependent on foreign oil supplies. Although Ukraine's oil consumption has dried up dramatically since independence--dropping 57% from 813,000 bbl/d in 1992 to 346,000 bbl/d in 2000--the country's consumption still far outstrips its production capacity. Ukraine imports the majority of its oil from Russia, with lesser amounts coming from Kazakhstan

Oil Transit

With a highly developed oil pipeline system, Ukraine plays an important role as a transit country for Russian oil exports to Europe. The southern branch of the 1.2-million-bbl/d Druzhba pipeline from Russia transits Ukraine en route to Slovakia, Hungary, and on to western Europe. In addition, due to its geographic location and its oil pipeline system, Ukraine has an excellent opportunity to play a major role in bringing increased oil exports from Azerbaijan and Kazakhstan to European oil markets. Rather than seeking to import Caspian Sea region oil for domestic consumption, Ukraine is hoping to reap tariffs for Caspian oil transiting its territory as it heads westwards.

The chief components of Ukraine's strategy are the $750-million Pivdenny oil terminal and the 500,000-bbl/d Odessa-Brody pipeline Ukraine is hoping to entice Caspian oil exporters shipping oil via the Black Sea to bypass the crowded Bosporus Straits already a major chokepoint for tankers, and instead send their oil to European markets via Ukraine. The Odessa-Brody system is now complete and ready for operation once the first fill of oil has been obtained. Ukraine is currently seeking investor companies to join an international consortium that will arrange to fill the pipeline and then manage the operation of the system.

Refining

Ukraine has six refineries, with a combined crude oil refining capacity of just under 1.1 million bbl/d. However, with domestic demand at just over 30% of the country's refining capacity, Ukraine's refineries are operating significantly below capacity. Moreover, Ukraine's refineries have been unable to attract even the crude oil supplies they need to supply the country's petroleum product demand. Crude supplies in 2000 to the 361,000-bl/d Kremenchuk refinery, the country's largest, dropped 67% from 1999 to just 48,000 bbl/d. Similarly, Ukraine's State Oil & Gas Committee reported that crude shipments to the Odessa refinery in 2000 declined by over 60%, to 22,500 bbl/d. From January to October 2000, Ukraine's Ministry of Fuel and Energy estimated that Ukrainian oil refineries were using only 15% of their capacities as Russian oil companies diverted oil supplies elsewhere and/or exported already refined oil products to Ukraine.

However, Ukraine's recent success in privatising its refineries has begun to turn this trend around. By offering foreign oil companies a stake in Ukraine's refineries, Ukraine has been able to secure additional oil supplies to meet domestic demand, as well as to attract funds for necessary renovation work and to boost utilisation rates at its refineries. Although still operating far below its 320,000-bbl/d potential, throughput has increased at the Lisichansk (LiNOS) refinery since

Russian oil major Tyumen Oil (TNK) purchased 67% of the refinery in July 2000. In 2000, some 48,000 bbl/d of crude was processed at Lisichansk against just 10,600 bbl/d in 1999. Likewise, with LUKoil's purchase of a controlling share of the Odessa refinery, the Russian oil company agreed to pay $39.6 million of the refinery's debts and promised to supply 48,000 bbl/d of crude to the refinery annually until 2004. The Kazakh company KazakhOil more recently has taken a major shareholding in Kherson Refinery and intends to invest in substantial funds in the rfinery infrastructure.

NATURAL GAS

Although Ukraine has sizeable natural gas reserves of 39.6 trillion cubic feet (Tcf) or a little over 1100 billion cubic metres (bcm), the country's consumption of natural gas far exceeds the country's natural gas production. In 1999, Ukraine consumed 2.8 Tcf (78 bcm) of natural gas while producing only 0.6 Tcf (17 bcm), leaving the country dependent on imports for nearly 80% of its consumption needs. Figures for 2000 and 2001 show a similar discrepancy between the country's natural gas production and consumption.

According to Chornomornaftohaz, a division of Naftohaz Ukrainy, the country's state-owned gas company, three new gas deposits have been found on the southern Sea of Azov shelf in the last two years. As many as 13 gas and condensate and dry gas deposits with a combined 2.6 Tcf (73 bcm) of predicted reserves are known on the shelf. The central region of Ukraine known as the Dnipro-Donets Basin holds a significant proportion of the remaining gas reserves with somewhat smaller amounts in western Ukraine’s Carpathian Region.

It is clear that Ukraine will continue to rely heavily on imports to fulfil domestic demand. Traditionally, Russia has been Ukraine's major source of gas supplies, with Ukraine receiving up to 1.1 Tcf (30 bcm) per year of Russian natural gas as payment for transiting Russian gas to European markets. Because of the deficiency of indigenous natural gas, Ukraine has been forced to buy up to 1.1 Tcf (30 bcm) additional gas annually from Russia or Turkmenistan beyond what it receives as compensation for transit.

Increasing Ukraine’s own production of natural gas is a central element of the government’s energy strategy. To deliver this strategy Ukraine needs both money and advanced technologies and this provides major opportunities for foreign investors.

GENERAL INVESTMENT CONSIDERATIONS

Legal and Fiscal Issues

The Ukrainian government is now working hard to improve the legal and fiscal framework to provide the long-term clarity, stability and consistency needed to sustain the significant level of foreign investment required. It is unrealistic to expect an overhaul of the entire legal and fiscal regime overnight, but there are significant steps which are now being taken. The most important of these has been the adoption of production sharing legislation. This form of legislation, which is an effective and speedy method of jump-starting the energy sector, has been successfully adopted in many other countries around the world and is a proven means of reducing the perceived risks of investing in an otherwise rapidly evolving fiscal and legal environment. Ukraine has now enacted a workable production sharing law together with the essential enabling legislation necessary for the production sharing law to operate effectively. This key development in Ukraine’s legislative framework will be welcomed by all potential investors in Ukraine’s oil and gas sector.

Advanced Technology

In addition to the creation of the right business environment, access to the best available technology is needed to unlock Ukraine's full natural gas potential. Huge advances in exploration and production technology have been made by the industry over the last twenty years, enabling the identification and commercial exploitation of increasingly more complex reserves. Unfortunately, many of these advances have not generally been available in Ukraine, primarily due to severe shortages of funding. On the other hand, Ukrainian technologists are highly innovative in making the best use of tools when they are available.

3D Seismic

One of the major advances in exploration technology has been the development of three-dimensional seismic technology and - equally important - the associated processing and interpretation techniques. This technology has significantly improved understanding of the geology of prospective areas and has enabled the identification and exploitation of hitherto unrecognised structures. For example, barely ten years ago the accepted wisdom in the industry was that both the UK North Sea and the US Gulf of Mexico were highly mature basins, with relatively limited remaining potential. However, in both these regions the development and application of three-dimensional seismic technology has enabled the imaging and identification of new geological structures - in particular, sub-salt formations - with enormous hydrocarbon potential. The net effect has been a resurgence in both exploration and development activities in areas previously considered more or less fully explored.

This has some interesting implications for Ukraine which appears to have large areas with closely analogous geology to that of the UK North Sea and the US Gulf of Mexico. The application of three-dimensional seismic technology could offer the possibility of identifying and exploiting significant new reserves in Ukraine, whose potential was previously unrecognised.

Drilling

In the drilling area, there are a variety of technologies which could materially increase Ukraine's gas production and improve overall recovery rates. These include, for example, drilling deviated, high angle and horizontal wells, to access reserves more efficiently, and applying multi-lateral well completions, to enable simultaneous production from several different horizons. Advanced drilling technology such as this will allow gas production to be accelerated while reducing the total number of wells. This in turn will reduce the overall capital costs and thus make it economic to exploit even smaller and technically more challenging reserves.

People

When considering technology, it is too easy to be blinded by the specialised equipment, the computing power, and the advanced materials, and to forget the know-how and experience of people. It is important that western resource companies planning to invest in Ukraine are prepared to share the best technology and know-how with Ukrainian specialists to ensure that technical solutions are found that are appropriate to local needs and which will create the maximum value added to any joint activities. In Ukraine, where there is already a highly skilled and experienced technical resource, sharing technology and know-how will undoubtedly produce major benefits to any exploration and production project.

CURRENT PARTICIPATION IN UKRAINE'S OIL & GAS SECTOR

Up to 250 enterprises of various types of ownership operate in the oil and gas sector: in exploration, production, refining or pipelines. The largest companies are subsidiaries of state-owned holding company Naftogaz Ukrainy. Naftogaz controls the domestic natural gas and crude oil extraction industry and over 60% of the gas trading market. With subsidiary companies Ukrnafta and Chornomornaftohaz, Naftogaz produces 97% of domestic natural gas. Ukrnafta is the largest oil producer in Ukraine (94% of domestic oil production).

Companies from the following countries currently operate in Ukraine (upstream and downstream): Russia: RAO Gazprom, TNK, Lukoil, SlavNeft, TatNeft, Gruppa Alliance; Kazakhstan: Kazakhoil (Kherson refinery), USA: Chevron, Mobil, Shell, USENCO, JV UkrKarpat Oil, JV Karpatsky Petroleum Corporation; US-Russia: Itera International Energy Company, Itera-Ukraine; US-German: JV Eurogas; UK: JKX, CanArgo Energy, Poltava Petroeum Company JV, Europa Oil & Gas Ltd; Poland: Polish Oil &Gas Company; Greece-Cyprus: JV Plast; and others.

CONCLUDING REMARKS

Amongst oil industry specialists working in Ukraine there is a widespread belief that, in spite of the challenges, the benefits both for investors and for the country from successful oil and gas exploration/production projects are potentially very substantial. Currently a great deal of work is being done in Ukraine by many dedicated individuals in government and in state organisations to maintain and extend the improvements in the legal, fiscal and business regimes. Such effort is now being rewarded by a steadily improving climate for upstream investment. As a result the future for Ukraine's oil and gas sector is now brighter than at any time previously.

STATISTICAL INFORMATION

Economics

Currency: Hryvnia
Market Exchange Rate (9/6/02): US $1=5.32 hryvnia
Nominal Gross Domestic Product (GDP) (2000E): $31.8 billion; **(2001E):** $36.5 billion
Real GDP Growth Rate (2000E): 5.8%; **(2001E):** 6.2%
Inflation Rate (Change in Consumer Prices, Dec. 1999-Dec. 2000E): 25.8%; **(2001E):** 13.2%
Official Unemployment Rate (2000E): 5.3%; **(2001E):** 5.5%
Current Account Balance (2000E): $1.48 billion; **(2001E):** $1.07 billion
Major Trading Partners: Russia, EU, China, U.S., Turkey
Merchandise Exports (2000E): $15.7 billion; **(2001E):** $21.7 billion
Merchandise Imports (2000E): $14.9 billion; **(2001E):** $23.1 billion
Merchandise Trade Balance (2000E): $780 million; **(2001E):** -$1.4 billion
Major Exports: ferrous and nonferrous metals, fuel and petroleum products, machinery and transport equipment, food products
Major Imports: energy, machinery and parts, transportation equipment, chemicals
External Debt (12/00E): $10.4 billion

Energy

Proven Oil Reserves (1/1/01E): 395 million barrels
Oil Production (2000E): 84,000 barrels per day (bbl/d), 74,000 bbl/d of which was crude
Oil Consumption (2000E): 346,000 bbl/d
Net Oil Imports (2000E): 262,000 bbl/d
Crude Refining Capacity (1/1/01E): 1.15 million bbl/d
Natural Gas Reserves (1/1/01E): 39.6 trillion cubic feet (Tcf)
Natural Gas Production (1999E): 0.63 Tcf
Natural Gas Consumption (1999E): 2.75 Tcf
Net Natural Gas Imports (1999E): 2.12 Tcf
Coal Reserves (1/1/01E): 37.9 billion short tons
Coal Production (1999E): 90.8 million short tons (Mmst)
Coal Consumption (1999E): 97.8 Mmst
Electricity Generation Capacity (1999E): 54.8 gigawatts, GW
Electricity Production (1999E): 157.8 billion kilowatt-hours (Bkwh)
Electricity Consumption (1999E): 146.7 Bkwh

Sources for this report include: Energy Information Administration, CIA World Factbook, U.S. Department of Commerce's Business Information Service for the Newly Independent States (BISNIS), Economist Intelligence Unit ViewsWire, U.S. Embassy in Ukraine, Canadian Embassy in Ukraine, Oil and Gas Journal, Petroleum Economist, PlanEcon, The Deane Group (Ukraine).

* Biographical Note

Dr Jim Bown has extensive experience in the international oil and gas industry having worked for more than 25 years with British Petroleum (BP). He moved to Kyiv in April 1997 to establish the company's upstream representation in Ukraine. Previously he had spent four years with BP's exploration and production activities in Baku, Azerbaijan. Jim Bown retired from BP in April 2000 and is currently engaged in his own energy industry consultancy business based in Ukraine.

DR JIM BOWN - RESUME

Dr Jim Bown is the owner and General Director of The Deane Group (Ukraine) which he established in Kyiv in June 2000. Through his company Jim Bown provides energy industry consultancy and business services to companies operating within the energy industry in Ukraine, and to foreign or Ukrainian companies wishing to establish new energy-related businesses in Ukraine. He has particular expertise in the international oil and gas sector, and offers advice and services in areas such as business and political analysis, investment project development, government and external relations and corporate representation. His list of current and previous clients has a strong international content including Lateral Vector Resources (Canada), Momentum Energy Inc (Canada), Europa Oil and Gas (UK), Rolls Royce Power Ventures (UK), Bellwether Exploration (USA), and Marsh (USA). In addition he has provided advice to a number of Ukrainian state enterprises including Naftogaz Ukrainiy, Ukrnafta and Ukrtransnafta.

Jim Bown has extensive experience in the global energy industry, having worked for more than 25 years with British Petroleum (BP) in the international oil and gas sector. During a 4 year involvement in BP's business development activities in Azerbaijan (1993-97) the first of the major Caspian Sea oil production sharing contracts was signed with the Azeri Government. Following this he moved from Baku to Kyiv in April 1997 to establish the BP Group's corporate representation in Ukraine. From 1997 to 2000 he was involved in the development and implementation of BP's upstream oil and gas investment strategy for Ukraine, the principal focus of which was the exploration and development of potentially very large on-shore natural gas resources in Ukraine's Dnipro-Donets Basin. He retired from BP in March 2000 to establish his energy industry consultancy practice based in Kyiv where he is now resident.

He maintains high level relationships with senior Ukrainian government, political and business decision-makers critical to the success of major oil and gas industry investment projects in Ukraine. Important relationships are also maintained with the dplomatic and international business communities in Kyiv, particularly Ambassadors and staff of the Embassies of the UK, USA, Canada and the European Union, and with representatives of the World Bank, IMF and EBRD. He provides corporate representation and business development advice to client companies currently operating in Ukraine and to foreign and domestic companies wishing to enter the Ukrainian oil and gas sector. He conducts on-going political and business analyses in Ukraine, and compiles regular business commentaries and situation reports relevant to the interests of his international client list.

He helped to establish and was the first foreign co-chairman of the Oil and Gas Working Group of President Kuchma's Foreign Investment Advisory Council (FIAC) in which he is still involved. He is a member of the Board of Directors of Ukraine's International Centre for Policy Studies and he is currently serving as Chairman of the British-Ukrainian Chamber of Commerce.

He is a Professional Member of the British Institute of Management and has a doctorate in engineering science. He is a Chartered Engineer (UK), a Professional Member of the Institute of Materials (UK), and is a Fellow of the UK Institute of Corrosion in which Institute he has also served as President.

Contact Information:

Dr. Bown and Pan EurAsian cooperate on certain projects in the Ukraine. He may be contacted through Pan EurAsian Enterprises, or directly as below. We invite your inquiry.

The Deane Group (Ukraine)
Apt 18, 8 Kostolna Street
Kyiv 01001, Ukraine

OfficeTel/Fax/Ans: +38 044 228 7212
Cellphone: +38 050 310 3590
E-mail: bownj@ukrpack.net