

3. Oil and Gas Machinery and Services

Overview

Oil and Gas Field Machinery and Services	2004 (actual)	2005 (estimated)	2006 (estimated)
Total Market Size	920	1,025	1,160
Total Local Production	420	475	555
Total Exports	0	0	0
Total Imports	500	550	605
Imports from the U.S.	145	160	175

The above statistics are in US\$ millions and are unofficial estimates.

Vietnam's oil and gas industry is currently the country's biggest foreign currency earner and a major procurer of imported technology. The rapid expansion of Vietnam's economy has fueled a surging demand for energy, which is projected to grow at the rate of over 10% annually. To meet this need, the Government of Vietnam is encouraging investment from both local and foreign sources in offshore oil and gas exploration and production. It is estimated that an investment of about \$11 billion will be required for the development of offshore activities during the period 2001- 2010. To date, exploration rights for only 25-30% of the country's continental shelf with hydrocarbon potential have been awarded. Forty-nine foreign oil and gas companies with exploration contracts operate under Product Sharing Contracts (PSC), Joint Operating Companies (JOC) and Business Co-operation Contracts (BCC), with total registered investment capital of more than \$7 billion. The remaining offshore areas, generally with water depths of 200 meters or more, are unexplored and open for new bidding.

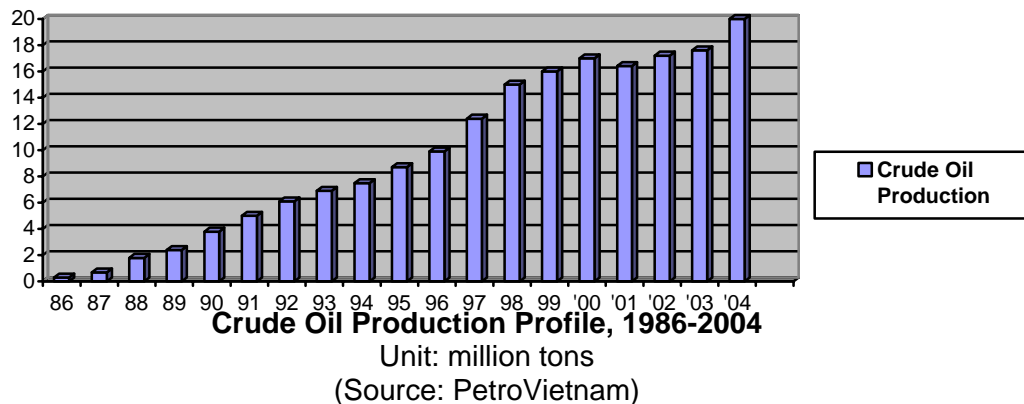
Vietnam Oil and Gas Corporation (also known as PetroVietnam or PV), the national oil and gas monopoly, on behalf of the Vietnamese government, is empowered to make decisions on strategies, plans and policies for the development of the industry, including cooperation with foreign entities, signing petroleum contracts as well as implementing, monitoring, inspecting and supervising petroleum activities. PV has supplied up to 70 percent of services for the domestic oil and gas industry and is also a business partner with foreign companies in the oil and gas sector. Any oil and gas exploration and production activities by foreign entities in Vietnam are subject to cooperation with PV.

Vietnam is ranked third in the Southeast Asian region and 31st in the world in terms of crude oil and gas output. Oil and gas have been found in almost 50 fields, with estimated reserves of approximately 600 million tons of crude oil and 644 billion cubic meters (bcum) (23 trillion cubic feet -Tcf) of gas. Among the 50 structures that proven oil and gas reserves, 20 commercial fields have been developed. At present, eight oil fields are producing crude oil at an average volume of 450,000 barrels per day. Besides crude oil, the country also produces associated and natural gas from several fields.

In 2004, Vietnam exploited more than 20 million tons of crude oil and over 6 billion m3 gas, exported 19.5 million tons valued at US\$5.7 billion that accounted for 25% of Vietnam's exports. It is forecasted that in 2005 Vietnam will exploit 18.5 million tons of crude oil and 6.6 billion m3 gas. In June 2005, PV officially announced that the

company had exploited a cumulative 200 million tons of equivalent oil, calculating from the very first ton of oil exploited in June 1986. Of this 200 million tons of equivalent oil, were 178.1 million of crude oil and 21.9 billion m3 gas. (One billion m3 gas is equivalent to 1 million tons of crude oil.) The United States has become the biggest importer of Vietnam's crude oil, accounting for 27.9% of the export volume, followed by Singapore with 27%, Japan 22.2%, and China 18%. For the 2005-10 period, PV has targets to explore for 30 to 32 million tons of new oil reserves per year.

In the downstream area, PV is contemplating development of two oil refineries; the Dung Quat refinery with a planned capacity of 6.5 million tons per year and an estimated total investment of \$2.5 billion; and the Nghi Son refinery with estimated capacity of 7 million tons and \$3 billion in investment. According to many industry experts, the decisions to build these two facilities have been taken based largely on political considerations, leaving the implementation of these projects seriously delayed due to questions regarding their commercial viability. It is expected, however, that the Dung Quat could be operational in 2009, while the Nghi Son's schedule is undetermined. Moreover, PV is also studying the possibility of constructing a third refinery, probably located in Vung Tau, close to both the currently producing oil fields and the major markets in southern Vietnam. Many experts believe that this is the most commercially viable project. The development of the third refinery is, however, being held back by PV so as not to compete with the other two projects.



Best Products and Services

Vietnam's expanding offshore exploration and production has created a steadily growing market for offshore oil and gas equipment and services, which is estimated at \$1.02 billion in 2005. American equipment and services have captured about 15% of the market and this share is expected to expand over the next few years. In the local market, American companies are well known as the world leaders for advanced technologies, quality, and in-depth experience in the offshore oil and gas sector. These U.S. firms are currently the most successful in the oil and gas sector in the country.

In general, U.S. suppliers of oil and gas equipment and services are quite competitive in the upstream and midstream sub-sectors where advanced technologies and reliability are strict requirements. Sales opportunities are promising in the following areas:

- 3-D Seismic Survey Equipment
- Blowout Preventers
- Buildings
- Chemicals
- Computer and Wireless Technologies
- Corrosion and Abrasion Control
- Cranes, Hoists, and Winches
- Deep-Sea Drilling Services
- Enhanced Recovery Equipment Services
- Fishing Tools
- Instruments and Control Systems
- Logging and Formation Evaluation
- Marine Equipment and Services
- Offshore Engineering & Design Services
- Offshore Platforms (Fixed and Floating)
- Offshore technology licensing
- Perforating and Testing Services
- Pollution, Oil Spill Control, and Environmental
- Power Supply, Engines, and Turbines
- Process Equipment
- Production Equipment and Services
- Project management services
- Pumps and Compressors
- Ropes, Wire Ropes, and Chains
- Rubber Products
- Software Engineering Services & Equipment
- Tools
- Tubulars and Piping
- Valves and Actuators
- Wellhead Assemblies
- Well-Completion Equipment & Services

Opportunities

American companies will find significant opportunities for exporting their equipment and services to Vietnam in more than 25 ongoing offshore oil and gas exploration and production projects, as well as several gas pipeline projects. The number of projects is likely to increase substantially over the next few years as PV awards new oil and gas blocks to foreign oil and gas companies.

Resources

For more information, please contact the following addresses or visit the following websites:

- **Vietnam Oil and Gas Corporation (PetroVietnam)**

22 Ngo Quyen Street

Hoan Kiem District

Hanoi, Vietnam

Phone: 84-4-825-2526, Fax: 84-4-826-5942

Website: www.petrovietnam.com.vn

The largest trade show in the oil and gas industry in Vietnam is the Vietnam Oil & Gas Expo co-organized by CP Exhibition (Hong Kong) and PetroVietnam. This show is held every two years. Since 1992, Vietnam Oil & Gas expo has been the premier international exhibition with over 8,000 professional visitors at each event. The last expo, held from October 27-29, 2004 in HCMC, was attended by 129 exhibitors from 19 countries, showcasing equipment and services for the upstream, midstream and downstream segments. In 2006, the show will be held at the HCMC International Exhibition & Convention Center (HIECC) from October 12-14, 2006. For more details, visit www.cpexhibition.com/vnoffshore.