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COUNTRY ANALYSIS BRIEFS

Syria

Last Updated: August 2011

Background

Syria produces relatively modest quantities of oil and gas but the country's location is strategic in terms of energy transit. Syria is the only relatively significant crude oil producing country in the Eastern Mediterranean region, which includes Jordan, Lebanon, Israel, the West Bank, and Gaza. Syria produced about 400,000 barrels per day (bbl/d) of crude and other petroleum liquids in 2010. While almost all of its oil is exported to Europe, Syria's natural gas is used in reinjection for enhanced oil recovery and for domestic electricity generation.

Although Syria produces relatively modest quantities of oil and gas, its location is strategic in terms of regional security and prospective energy transit routes. Regional integration in the energy sector is expected to increase as a result ongoing plans for the expansion of the regional oil and gas pipeline networks connecting Syria with neighboring countries Turkey, Iraq, and Iran.



Political unrest began in Syria in mid-March 2011, and led to a government crackdown on political opposition. This was followed by the imposition of sanctions on Syria by the United States and the European Union, as well as by additional sanctions by the U.S. on Syria's energy sector in August 2011.

Oil

Syrian oil production and exports have been in decline since the mid-1990s. While Syrian oil production and exports have been declining since the mid-1990's, Syrian oil demand has been gradually rising, spurred in part by Syria's policy of petroleum product subsidies. According to the *Middle East Economic Survey*, Syria spent \$3 billion on petroleum product subsidies in 2010. Much of these refined products had to be imported, and by 2008, the net value of Syria's oil exports and imports had a negative balance of \$100 million, down from a positive balance of \$1.9 billion in 2006. Syria had announced a long-term plan to phase out these subsidies, but the onset of political turmoil in 2011 in Syria forced a delay in these plans.



Production

Syria had 2.5 billion barrels of petroleum reserves as of January 1, 2011, according to *The Oil and Gas Journal*. Syria's known oil reserves are mainly in the eastern part of the country near its border with Iraq and along the Euphrates River; a number of smaller fields are located in the center of the country.

Since peaking at 582,000 bbl/d in 1996, Syrian crude oil production (including lease condensate) declined to an estimated 387,000 bbl/d in 2010. Heavy oil accounts for about 60 percent of Syria's oil production.

The largest and most mature fields are Al-Furat's Omar and the Jbessa fields, which reportedly had production capacities of 100,000 and 200,000 bbl/d, respectively, in 2010. Other smaller mature fields, such as Oudeh, Gbeibe, and Tishrine, are under field rehabilitation contracts to China's CNPC and Sinopec, and their production capacity is on the rise.

The main foreign producing consortium is the Al-Furat Petroleum Company, a joint venture established in 1985, which currently includes Syria's General Petroleum Corporation (SPC) at 50 percent ownership, Shell Oil at 29.7 percent, and CNPC at 20.3 percent.

Foreign investment is vital for improving production levels. Syria's upstream oil production and development has traditionally been the mandate of the SPC. The SPC directly controls about half of the country's oil production and takes a 50 percent stake in development work with foreign partners.

The SPC has undertaken efforts to reverse the trend toward declining oil production and exports by increasing oil exploration and production in partnership with foreign oil companies. However, previous US sanctions have excluded U.S. companies from participating, and Syria has been working with Chinese, Indian, as well as European companies.

Bids have begun to be awarded from a March 2010 bidding round for eight onshore blocks. Total and Petro-Canada were among the first companies to be awarded exploration licenses in May 2011.

Syria has also opened up its offshore territory for development, although this region is expected to contain primarily natural gas. The Syrian Ministry of Petroleum and Mineral Resources and SPC placed three offshore blocks for bid in March 2011, with a deadline of October 5 for submission of bids.

In addition, Syria's Ministry of Petroleum and Mineral Resources and General Establishment of Geology and Mineral Resources (GEGMR) announced a bidding round for the development of oil shale deposits in al-Khanasir, 60 miles southeast of Aleppo. The area for bid consists of 14 blocks, with total shale oil deposits estimated at 39 billion tons (285 billion barrels). The submission of bids is due by November 30, 2011.

Current Year* Production by Field Operator			
	Liquids	Liquids & Gas	Share of non-
Operator	('000 boe/d)	('000 boe/d)	Syrian Total (%)
CNPC	11.8	11.8	5%
DEZPC	24.6	45.2	20
Gulfsands	22.5	22.5	10
HayanPetrol	9.8	24.1	11
Shell	80.2	85.6	39
Sinopec	13	13	6
SuncorEne	4.5	18.5	8
Syrian Gas	8.4	45.6	
Syrian PetCo	203.4	243	
Grand Total	378	509.4	

Source: Wood Mackenzie

Exports

Syria has three Mediterranean oil export/import terminals, all managed by the Syrian Company for Oil Transportation (SCOT). Baniyas (7 berths) and Tartous (2 berths) are larger ports from which Syria's two main export crude oil grades are exported. Latakia handles smaller cargoes. The terminals are connected to refineries through the domestic pipeline network.

Syria's net petroleum exports were estimated to be 109,000 bbl/d ln 2010, down slightly from 117,000 bbl/d in 2009. Syria exports two crude oil blends, Syrian Light and Souedieh (or Syrian heavy), through its state marketing company Sytrol. Heavy crude oil accounts for about three-fourths of Syria's oil exports. Souedieh, a heavy, very high-sulfur oil, is produced by SPC from Soueidieh and Jebeisseh, two of the country's oldest oil fields. Syrian Light is Syria's only light crude stream, and is a blend of production from the Royal Dutch Shell-led AFPC venture, and smaller amounts from Total's Deir ez-Zor venture.

Syrian crude oil exports go almost entirely to OECD European countries, in particular Germany, Italy, and France, and the Netherlands.



Syrian Crude Oil Exports by Destination, 2010

Pipelines

Syria has a developed domestic pipeline system for transporting crude and petroleum products managed by SCOT. Pipelines include the 250,000-bbl/d, 347-mileTel Adas-Tartous crude line linking SPC and other fields to the port at Tartous with a connection to the refinery at Homs, and oil products pipelines linking the Homs refinery to Syria's major cities.

Two trans-national pipelines across Syria had been built to transport oil from Saudi Arabia and Iraq to terminals on the Mediterranean. The 500,000 bbl/d Tapline was built during the 1940's to transport Saudi crude oil to an export terminal in Lebanon, but was closed during the 1970's because it had become uneconomical. Proposals have been made to rehabilitate the Tapline, but the pipeline remains closed.

The second was built during the 1950's to transport oil from Kirkuk in northern Iraq to the Banias terminal in Syria and to Tripoli in Lebanon. This approximately 800 kilometer (500 mile) pipeline system had been re-habilitated in 2000, but closed in 2003 during the war in Iraq. Syrian and Iraqi ministers have discussed rehabilitating this pipeline, as well as building new ones. In June 2011, Syria and Iraq signed yet another Memorandum of Understanding to repair the existing 800,000 bbl/d pipeline system, and to build two new ones, including a 1.5 million bbl/d pipeline to carry heavy Iraqi crude oil, as well as a 1.25 million bbl/d pipeline to transport light crude oil from Iraq.

Refining

Syria's total refining capacity was approximately 240,000 bbl/d as of January 2011, according to *The Oil and Gas Journal*. Syria's two state-owned refineries are located at Baniyas and Homs, which have 133,000 bbl/d and 107,000 bbl/d, respectively, of refining capacity. Syria faces shortages of gas oil and diesel, and needs additional domestic refining capacity to meet these needs. However, foreign oil companies have been reluctant to commit the investment needed to build new refineries in Syria without more support from the government. In December, 2010, Venezuela signed a Memorandum of Understanding to construct the 140,000 bbl/d Froklos refinery, a projects which had been stalled since an agreement to establish it was signed in March, 2008. Chinese officials have also discussed a long-delayed 70,000 bbl/d refinery project in Deir al-Zor, where construction was supposed to have begun in 2008.

Natural Gas

Syria natural gas production is rising, but Syria will need to import gas to meet domestic demand, especially in the power sector. Syria's proven natural gas reserves were estimated at 8.5 trillion cubic feet (Tcf) as of January 1, 2011, according to *The Oil and Gas Journal*, about 60 percent of which is associated gas. Non-associated gas reserves are mainly located in the east and center of the country. Roughly one-fourth of Syrian gross natural gas production was reinjected into oilfields in 2009, with most of the rest distributed to power generators and other domestic users. All of Syria's oil-fired power stations are being converted to natural gas, and Syria's domestic gas demand is expected to more than double by 2020. Although Syrian natural gas production is expected to rise, it will be insufficient to meet expected demand, and Syria is developing plans to import more natural gas.



Production

Although natural gas is important to Syria, it is not one of the region's top natural gas producers. In 2009, Syria produced an estimated 219 billion cubic feet per year (Bcf/y) of dry natural gas,

consumed 251 Bcf, and imported 32 Bcf. Syria's dry natural gas production, which peaked at 252 Bcf in 2004, it is expected to increase as onshore projects come on stream. In addition, bids are now being awarded from a March 2010 bidding round for eight onshore blocks. Total and Petro-Canada were among the first companies to be awarded exploration licenses.



Syria has also opened up its offshore territory for development. This region is expected to contain primarily natural gas, much like other offshore blocks in the eastern Mediterranean. The discovery of large deposits of gas offshore Israel led to renewed interest in the offshore regions of neighboring Lebanon, Cyprus, and Syria. After disappointing results from its 2007 bidding rounds, the Syrian Ministry of Petroleum and Mineral Resources and Syria's General Petroleum Corporation (GPC) placed three offshore blocks for bid in March 2011, with a deadline of October 5 for submission of bids.

Natural Gas Imports and Pipelines

Syria had planned to become a natural gas exporter, and completed its first export pipeline to Lebanon in 2003. However, no Syrian natural gas was delivered until 2009, and Syria itself became a natural gas importer in mid-2008, when it began importing an estimated 5 Bcf/y of natural gas from Egypt via the Arab Gas Pipeline (AGP). Syria's long-term aim is to become a transit state for Egyptian, Iraqi, Iranian, and also Azerbaijani gas, which would translate into valuable transit revenues as well as help increase the availability of natural gas supplies to Syria. Syria's natural gas pipeline network is operated by the Syrian Company for the Storage and Distribution of Petroleum Products (Mahruqat), which took over the operations of the Syrian Company for Gas Distribution (SCGD) in 2009.

Arab Gas Pipeline (AGP)

The AGP transports Egyptian natural gas to Jordan and Syria (a separate spur of the AGP supplies Egyptian gas to Israel). Although the AGP does not link directly to Lebanon, Egypt also began to be supply Lebanon in 2009 through an exchange agreement under which Egypt sends gas to Syria via the AGP, and Syria sends gas to Lebanon through Syria's own export pipeline. The AGP has been subject to numerous supply disruptions beginning in February 2011.

A memorandum of understanding with <u>Turkey</u> was signed in 2009 under which Turkey would build a 56-mile pipeline on its side of the border to link into the AGP extension that Syria is building from Aleppo to Kilisr, due to be completed by the beginning of 2012. According to the agreement, Syria would receive between 17.5 and 35 Bcf of Turkish gas annually for 5 years.

Azerbaijani Gas

Syria and Azerbaijan signed a protocol in June 2010 under which Azeri natural gas could flow to Syria via Turkey, beginning in 2012. Delivery of this gas is dependent upon the completion of the AGP pipeline extension that Syria is building that would link the Syrian and Turkish pipeline networks. Azeri gas could begin flowing by early 2012 at the rate of 35 billion cubic feet per year, doubling to 70 billion cubic feet per year by 2015.

Islamic Gas Pipeline

An agreement was signed on July 25, 2011, by Iran, Iraq, and Syria for construction of the Islamic Gas Pipeline.Under this agreement, a 3100 mile pipeline would be built that would enable 1.4 Tcf/y of natural gas from Iran's South Pars field to be exported to Europe via Iraq, Syria, and Lebanon. The pipeline is expected to take 3-5 years to build, at a cost of \$10 billion.

Links

EIA Links EIA: Country Information on Syria

U.S. Government

<u>CIA World Factbook</u> U.S. State Department - Consular Information Sheet - Syria

Other Links

Oxford Business Group AlBawabaSyroil Al-Furat Petroleum Co. Syrian Petroleum Co. Gulfsands Petroleum Euro-Arab Mashreq Gas Market Project Nabucco Pipeline Syrian Oil and Gas News

Sources

Agence France Presse Al- Furat Petroleum Co. APS Review Oil and Gas Mar ket Trends BBC World wide Monitoring **Business Middle East** Daily News Egypt Energy Intelligence Group Global Insight Government of Syria , Ministry of Petroleum and Natural Resources Syrian Petroleum Company Gulfsands Petroleum Co. International Energy Agency Middle East Economic Survey (MEE S) Oxford Business Group Syrian Arab News Agency (SANA) Syrian News Digest Syrian Petroleum Company (SPC) TendersInfo **UPI Energy** U.S. Energy Information Administration (EIA)

Contact Info

cabs@eia.gov (202) 586-8800 cabs@eia.gov