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ISRAEL'S OIL & GAS INDUSTRY NEWSLETTER

A SUMMARY OF ALL TOP HEADLINES

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Table of Contents

Export

- Israel's Gas Offers Lifeline for Peace
- Tshuva: BG Leviathan deal in first quarter 2015
- Gas exports are both political and economic
- Tamar to supply Israeli gas to Egyptian market
- "Forget Gas Export"
- Union Fenosa Links Egyptian suit to Tamar Imports
- Israel-Jordan gas pipeline to cost over NIS 250 million
- Israeli –U.S. energy partnership agrees to export natural gas to Jordan
- Israel signs 15-year natural gas deal with Jordan
- Jordan's Energy Decision: Go with Israel

Leviathan Development

- Leviathan submits first-phase development plan
- Leviathan partners still pursuing Turkish gas sales

Local Market Development

- Report estimates Royee gas prospect at 3.2 TCF
- Oil Price drop could benefit Israeli gas producers
- Tamar partners to invest $2b to expand production
- Energy minister approves Karish and Tanin boundaries
- Regulator extends Ishai gas exploration license

Renewables

- Israel's biggest solar energy plant underway
- Israeli gov't finally raises PV solar power quotas
- Israel's first bio-waste power facility to be built

Miscellaneous

- Preparations for drilling underway at Golan Heights oil exploration site
- BIRD to invest $4m in five Israeli energy projects
- Delek expects London IPO in mid-2015
- Ruppin teams with wood groups on energy training
- Israel Navy to wait years for gas rig defense ships
- Energix completes Golan wind project purchase

Exclusive

Click here for the Antitrust Commissioner's Decision Special

Note from local Specialist

During the second half of 2014, the local market continued its slow development and there were few milestones to report. Regulatory hurdles continue to impede the rapid deployment of gas to the local industry. In the upstream sector, the Delek/Noble Group made significant progress locating regional customers for the Tamar and Leviathan gas. Several LOI's were signed with customers in Jordan, the Palestinian Authority and Egypt. However, when Antitrust Commissioner David Gilo reneged on his March 2014 compromise agreement with the gas companies and reopened the discussion on their monopoly status, he cast a shadow over the development of the Leviathan field and the future of the gas sector. A hearing will be held later this month to determine whether the holdings in Tamar and Leviathan constitute a cartel. (coverage of these developments is included in a separate newsletter)

If you have any questions about market potential for your products and services, please feel free to contact me at irit.vanderveur@trade.gov

Sincerely,
Irit Van der veur
Senior Commercial Specialist

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EXPORT

Israel's Gas Offers Lifeline for Peace

The Tamar natural gas platform off Israel's coast is run by Noble Energy, based in Houston.CreditNoble Energy

THE TAMAR PLATFORM, Israel — Alarms rang out across the Tamar NATURAL GAS platform off the coast of Israel.

The Israeli navy had detected smoky signs that a rocket might have been fired by Hamas from the shores of Gaza. As a voice over the loudspeaker warned to take cover, the crew raced up the metal stairs to a small gym that doubles as an air raid shelter.

It turned out to be a false alarm.

Natural gas is both a geopolitical tool and a target in Israel, where a newfound bonanza of resources has the potential to improve ties with energy-hungry Egypt, Jordan and even the PALESTINIAN AUTHORITY.

But the linchpin of this diplomatic push is not an Israeli official, a Middle Eastern king or an American ambassador. It is an OIL company in Texas.

Noble Energy, the Houston-based company that runs the Tamar platform and is developing another field nearby, has struck a series of deals in recent months to sell gas from Israel to its neighbors, an export strategy encouraged by the Obama administration to help ease tensions in the region. Both Jordan and the PALESTINIAN AUTHORITY have signed preliminary agreements in recent months, while Noble is in talks to supply larger amounts of gas to Egypt.

A processing plant in Ashdod, Israel, and the Tamar platform are tempting targets for Hamas. CreditWarrick Page for The New York Times

The corporate connection is crucial. As the main negotiator and broker, Noble is giving cover to leaders who could otherwise face political blowback for buying gas supplies in deals directly with the Israeli government.

"What these deals demonstrate is that gas can be a tool for partnerships that are commercial with strong, positive geopolitical benefits," said Carlos Pascual, a former international energy coordinator at the State Department.

Noble Energy, which has a taste for risky exploration in unlikely places like the Falkland Islands and Nicaragua, started exploring here in the late 1990s. The platform was built in Corpus Christi, Tex., and transported by boat to its present site.

A slice of Gulf of Mexico OIL culture came, too. The canteen serves fried shrimp and Dr Pepper. A handful of American industry veterans monitor the gas flows and train Israeli technicians.

Noble, which completed the development of Tamar last year for $3.5 billion, says that it has found more than 800 billion cubic meters of gas off Israel. The finds would be enough to satisfy current Israeli demand for about a century, greatly easing the country's need for imported fuels.

Noble is acutely aware of its surroundings. Half of Israel's electric power now comes from the NATURAL GAS that flows through Tamar, making the platform and an onshore processing plant a tempting focus for rockets from Hamas or more distant enemies. Security makes up about half the personnel on the Tamar platform.

The platform "is a sitting duck," said Amit Mor, an Israel energy consultant.

While Israel's gas consumption is growing fast, the domestic market is not large enough to fully tap Tamar's potential, much less develop a much larger field called Leviathan. So Noble and its Israeli partners have focused on Egypt and Jordan as the nearest, cheapest-to-reach places to export.

"As we learned more about the regional market and the need for gas of Israel's neighbors, that became the more attractive approach," said Binyamin A. Zomer, an Oklahoman who heads Noble's operation here.

The Obama administration has quietly pushed the strategy. As United States officials see it, the energy ties could further cement the fragile peace between Israel and its neighbors, and perhaps offer Europe another gas source to lessen its dependence on Russia.

"With energy you are talking about something fundamental that really counts," says Gideon Tadmor, chairman of Delek Drilling, Noble's partner.

While Jordan's relations with Israel have been tense lately, the country has been a receptive customer because it badly needs gas for its growing energy needs. Since 2011, Jordan, like Israel, has had its gas supply disrupted, as militants in Sinai repeatedly attack a major gas pipeline from Egypt.

Secretary of State Hillary Rodham Clinton talked to King Abdullah of Jordan about Israeli gas in 2011. Amos J. Hochstein, a top energy diplomat at the State Department, approached Noble Energy in early 2012 about making a deal with the Jordanians, according to American officials with knowledge of the meeting. Formal negotiations, involving company executives as well as Israeli, Jordanian and American officials, began that year at the Royal Court in Amman.

But the talks dragged on for two years with negotiators shuttling between hotels on Jordan's Dead Sea coast and the Hilton Hotel at London's Paddington Station. In a volatile region, King Abdullah risked drawing the fire of domestic critics if he bought fuel from Israel.

United States officials tried to smooth the process. They provided funding to train Jordanians in gas regulation. The American ambassador to Jordan, Stuart E. Jones, invited negotiators to continue talks in the relaxed atmosphere of his Amman residence when talks got tense elsewhere.

Noble helped break the impasse by striking a separate deal with two Jordanian mineral companies, Arab Potash and Jordan Bromine. The companies will buy about $500 million of gas over 15 years from Tamar.

The private contract paved the way for the Jordanian government, which wanted a deal that would legally be with the American company, rather than Israel. Seven months later, Noble signed a preliminary agreement to sell gas from Leviathan to Jordan for electric power, worth an estimated $12 billion.

Despite the benefits, such deals will most likely face criticism when tensions between neighbors rise. For instance, a large contingent of lawmakers in the Jordanian Parliament last week moved to limit purchases of Israeli natural gas. So far, the government appears unshaken in its desire to buy the gas.

Jordan is one of the latest deals for Leviathan. In January, Noble and its Israeli partners reached an agreement to supply a power plant under construction in the West Bank by a PALESTINIAN group.

Industry experts say that Noble will need more long-term commitments to support the expense of Leviathan. The project is expected to cost as much as $8 billion, and the Jordan deal accounts for only about 9 percent of the gas.

The most likely anchor customer is Egypt, a huge and growing market. Today, two gas export facilities on the Mediterranean are sitting largely idle. The Egyptian government is blocking exports in order to meet high domestic demand and stave off power blackouts.

This year, Noble reached nonbinding agreements with the owners of both of these facilities — BG, the large British producer, and a joint venture of Italy's ENI and Spain's Gas Natural Fenosa — to supply their facilities from Tamar and Leviathan. As part of the deals, the gas would also probably flow to the domestic market in Egypt.

"Egypt has a very severe energy and power crisis right now and they are really desperate for Israeli gas," said Leslie Palti-Guzman, an energy and geopolitical analyst at Eurasia Group, the New York-based political risk consulting firm. "But there is also a lot of opposition from public opinion."

Participants in the continuing talks on Egypt, which usually are held in London, say that many details need to be worked out. But Egypt's new military president, Abdel Fattah el-Sisi, is leaning toward buying the Israeli gas, according to oil executives and independent experts. Ms. Palti-Guzman said it would help protect Mr. Sisi from political resistance if the deals appeared to be between companies, not governments.

Noble and its partners are also looking for alternatives. They have commissioned designs for a floating liquefied natural gas facility, which would allow them to move gas to the global markets.

And domestic businesses are taking advantage of the new gas. One Israeli company, Dorad Energy, recently built a $1.3 billion gas-fired generating plant near Ashkelon. On a typical day, the plant meets about 10 percent of Israel's power demand. The company is planning to add another next door.

"My dream is to sell electricity to Egypt, Jordan and even Syria," said Moshe Cohen, the plant manager, as he showed a visitor the site, including a hole in the street left by a rocket from Gaza. "Israel has the ability to provide a lot of energy."

Published by New York Times on Dec 14, 2014

◊◊◊ BACK TO THE TOP ◊◊◊

Tshuva: BG Leviathan deal in first quarter 2015

Delek is also concluding deals to sell Tamar gas to Union Fenosa and the Egyptian domestic market

DELEK GROUP LTD. (TASE: DLEKG) controlling shareholder Yitzhak Tshuva has told an investors conference today that he expects to sign a deal with BG (British Gas) to supply natural gas from the Leviathan field to its Egyptian installation in the first quarter of 2015.

NOBLE ENERGY INC. (NYSE: NBL) owns 39.66% of Leviathan, Delek unitsAVNER OIL AND GAS LP (TASE: AVNR.L) and DELEK DRILLING LP (TASE:DEDR.L) each own 22.67% and Ratio Oil Exploration (1992) LP (TASE:RATI.L) owns 15%.

Tshuva also said, "We are continuing to consider investment options in international energy companies."

He added that in the coming years the group's combined natural gas sales from the Tamar and leviathan fields will total 35-40 BCM annually.

Delek Drilling CEO Yossi Abu said that the Tamar field will reach annual sales production of 20 BCM following the signing of a contract with Spanish company Union Fenosa and a deal to sell natural gas to the domestic Egyptian market. He added, "We have not neglected drilling at the Leviathan field. It will be carried out with production drilling of Leviathan and expansion of Tamar."

Published by Globes on Dec 11, 2014

◊◊◊ BACK TO THE TOP ◊◊◊

Gas exports are both political and economic

Israel's gas partnerships have signed many letters of intent for exports but only one small deal with the Palestinian Authority. In recent months it seems like the natural gas sector is flourishing. There have been so many reports of gas export deals and talks with neighboring countries. But are these deals that the Israeli economy can rely upon?

In the past five years, Israel has discovered natural gas reserves of 1,000 billion cubic meters (BCM), mainly in the Tamar and Leviathan fields, which have been two of the biggest offshore gas discoveries worldwide over the past decade. In the wake of the conclusions of the Tzemach Committee, the Israeli government decided that up to 50% of the gas discovered can be exported.

Estimates are that revenue from gas exports could bring the State about $70 billion over decades (according to today's values). But the government has additional reasons to encourage signing agreements with foreign customers. Israel, like the gas exploration developers themselves, wants to justify the huge investment in developing the offshore fields. For example, the Leviathan field requires an investment of $6.5 billion for just the first stage of development. Such a small market as Israel cannot justify such a huge investment just for it. Moreover, gas exports have a major geopolitical importance and can help Israel consolidate its position in the region.

However, to date Israel has still not put in place the required arrangements for realizing these exports: what tax rates will be imposed on the gas exploration partnerships, if gas prices will be supervised, how and by whom the export licenses will be given.

With this uncertainty, only one small binding gas export agreement has been concluded so far to sell 4.75 BCM of gas to the Palestinian Authority. There are many letters of intent with three separate bodies in Jordan, and two major multinational companies in Egypt - British Gas (BG) and Union Fenosa. There is also talk of deals with Turkey and Cyprus.

Published by Globes on Nov. 11, 2014

◊◊◊ BACK TO THE TOP ◊◊◊

Tamar to supply Israeli gas to Egyptian market

The Tamar partners have signed an MOU with Egypt's Dolphinus Holdings for supplying gas surplus to Israeli requirements.

The partners in the Israeli Tamar gas field report this morning that they have signed a memorandum of understanding (MOU) with Egyptian company Dolphinus Holdings for the export of up to 2.5 BCM of surplus natural gas from Israel to private Egyptian industrial customers, over a period of seven years. The supply of gas will be on an interruptible basis, and will be of gas that the Tamar partners have available after meeting the needs of Israeli customers, but the partners undertake to supply a minimum of five BCM over three years. The gas will be transported via the Israel Natural Gas Lines system to Ashkelon, and from there to Egypt via the EMG (East Mediterranean Gas) pipeline.

Since the gas supply is interruptible, Dolphinus's Egyptian customers will not commit to buying a minimum quantity. The price set in the MOU is similar to that in other agreements for exporting gas from Israel, and is mainly based on a formula that includes linkage to the price of a barrel of Brent crude and a "floor price". The Tamar partners say that to the best of their knowledge, Dolphinus represents a consortium of large non-government industrial and commercial gas consumers in Egypt, gas distributors and ventures of Dr. Alaa Arafa. The current agreement is for the export of a fairly small quantity of gas, but it follows on the contract with the Palestinian Authority and MOUs for the sale of Israeli gas to the liquefaction plants of Union Fenosa and British Gas in Egypt, and an MOU with the Jordanian National Electric Power Company.

Delek Drilling chairman and Avner CEO Gideon Tadmor said, "The Tamar and Leviathan partnerships have so far signed a series of agreements designed to enable the supply of natural gas to the Palestinian Authority, to Jordan, and for export as liquid natural gas via the existing installations in Egypt. The MOU with Dolphinus is a further, important link in the series of agreements, allowing the supply of gas to the Egyptian domestic market as well. I have no doubt that these agreements will lead to a strengthening of Israel's relations with its neighbors."

The partners in the Tamar field are Noble Energy (36%), Isramco (28.75%), Avner (15.625%), Delek Drilling (15.625%) and Dor Gas (4%).

Published by Globes on Oct. 9, 2014

◊◊◊ BACK TO THE TOP ◊◊◊

"Forget gas exports"

British energy expert Nick Butler says Israeli gas is not competitive, and the government should take the industry in hand.

"Forget about the myth that gas can be exported. The Israeli government paid too much attention to the claims of the gas developers, who said that gas could be exported. Now the government has to take matters into its own hands," says Nick Butler, former senior energy advisor to British Prime Minister Gordon Brown and former British Petroleum Group Vice President for Strategy and Policy Development. Butler is currently a visiting professor at King's College London and a consultant for various businesses and academic institutions. He has published many books and articles, and in the energy industry is considered someone who knows what he's talking about.

In a special "Globes" interview, Butler discusses the Israeli government's role in the natural gas discoveries, and how he thinks it should manage the industry.

Two major gas reservoirs, Tamar and Leviathan, have been discovered in recent years, as well as several smaller reservoirs, such as Shimshon, Karish, Dalit, and Tanin. Many believe that the gas discoveries hold great financial potential for the country. On the other hand, there is a large measure of misunderstanding about the gas issue.

"I think that the government was too hesitant. It was a complete novice with respect to gas, and believed the gas developers when they said that it could be exported," Butler says, "Reality has proven otherwise. It's time for the government to take matters into its own hands."

Israel has gas reserves totaling about 990 billion cubic meters (BCM). The gas partnerships have signed MOUs to sell 3 BCM a year to Jordan for 15 years, about 0.3 BCM a year to the Palestinians, 4.5 BCM a year to Spanish company Union Fenosa, which owns a liquefied natural gas facility (LNG) in Egypt, and 7 BCM a year to British Gas, which also owns an LNG facility in Egypt. Up until several months ago, the gas developers were also considering the possibility of exporting gas to the Far East in the form of LNG.

"Globes": Do the figures for the MOUs not change your opinion about the gas partnerships being wrong in their emphasis on exports?

Butler: "All these options are very complicated either economically or politically. Exporting gas as LNG is very expensive. Israeli gas isn't competitive enough to compete with LNG from other countries. Most of LNG's cost is in its mobility. In order for Israel to export gas to the Far East, the ship would have to go by one of two routes. One is through the Suez Canal, which will make transportation more expensive, because you have to pay for the right to go through the canal. The other is to sail around Africa, which will be expensive because of the distance. In any case, transportation costs will be very high. Israeli gas will have to compete with gas from East Africa, Indonesia, Qatar, Turkmenistan, and Australia, and will be the most expensive of all those options."

The Leviathan partnerships had an MOU with Australian company Woodside Energy to buy 25% of the reservoir for $2.7 billion, but the Australians turned the deal down. What's your opinion on that?

"As I understand it, the deal was based on the assumption that the gas could be exported as LNG, but as I said, it's not economically viable. From this standpoint, Woodside is right to abandon the deal. The Leviathan partnerships should be more realistic in their plans."

What do you think about exports to neighboring countries?

"Jordan doesn't need much gas, and exporting by pipeline to Egypt and Turkey incurs many political risks, of which you are very well aware. Israeli gas can be a lever for development of the West Bank and the Gaza Strip, with all the political benefits that will result from it. If the government decides to export gas to Jordan and the Palestinians, it will be for justifiable political reasons."

Given the paucity of export prospects that you have indicated, what would you recommend the Israeli government to do?

"The government has to decide that it is putting development of the local gas economy at the top of its order of priorities, and anyone who argues otherwise evidently does not understand the global gas market."

The existing quantity of gas is enough to supply the domestic economy for about 75 years, and 55%-60% of Israel's electricity is currently produced with gas, the highest proportion in the world. Under these circumstances would you not agree that there may be no alternative to thinking in terms of exports?

"This calculation is correct only if the target is to reach 70% of electricity production using gas. In my opinion, however, the target is wrong. The government should aim at having 90% of electricity production based on gas. In addition to electricity, the government should introduce the use of gas in transport and the petrochemicals industry. All these ventures will generate large investments and many jobs in the country."

The Manufacturers Association of Israel estimated in the past that converting 400 plants and institutions in Israel completely to gas would save NIS 1.8 billion a year. 10 factories are currently connected to the distribution network, and only six of them use gas. Is this situation appropriate for the goals you are suggesting?

"I'm surprised at the Israeli's government's complacency. It should do everything in order that gas will flow to industry, transportation, and even homes."

To people's homes?

"Yes, certainly. It's true that at first glance, bringing natural gas to people's doorsteps requires high investment, but although it's expensive, it's undoubtedly likely to pay off. The energy efficiency of coal-fired power plants is 35%, while that of gas-fired power plants is 45%. By the time electricity reaches homes from the power station, we're left with 27% efficiency for coal and 37% for gas. If the gas is brought directly to homes, on the other hand, we're left with 75% efficiency. That is a prodigious saving. In the UK, for example, gas reaches people's homes, and they use it, among other things, for heating, air-conditioners, and cooking. Why shouldn't Israelis benefit from gas like any European country?"

The government does want people to benefit from the gas, and decided to establish a fund that will have $75 billion by 2037, with another $55 billion going to the state budget. Is setting up a fund like this right?

"Might it not be better to repay debt, help the needy, and reduce taxes? To the best of my knowledge, at this moment the fund does not have a penny. I'm sorry to be the one to tell you, but there won't be a fund or any tax reduction as long as the gas stays under the ground. The Leviathan reservoir was discovered four years ago, and nothing has been done with it since. In order to develop it, you have to be realistic about what can and can't be done with the gas. If the reservoir is developed, it will be right to pay some of the money into a fund for future generations. I suggest we have another conversation when development of the reservoir is closer."

Published by Globes on Sep. 22, 2014

◊◊◊ BACK TO THE TOP ◊◊◊

Union Fenosa links Egyptian suit to Tamar imports

"Reuters" reports that Union Fenosa will drop its lawsuit against Egypt if imports of Tamar gas are permitted.

Spain's Union Fenosa Gas is considering dropping a lawsuit against Egypt, if it approves a deal for the Spanish company to import Israeli gas from the Tamar field at its liquefied natural gas (LNG) export plant in Damietta, Egypt, a source close to the talks told "Reuters."

Leviathan partners negotiating $30b BG deal

Union Fenosa was compelled to suspend exports from its plant at Damietta in 2012 when gas shortages led the Egyptian government to channel supplies to its growing domestic needs. Consequently, Union Fenosa filed a multi-billion dollar lawsuit against Egypt in 2013 in the International Chamber of Commerce for breach of contract, and began talks for gas from Tamar. Egypt owes around $5.9 billion to foreign oil and gas firms operating in the country, "Reuters" estimates.
Three-way talks with the Tamar partners and Egypt on securing a 2.5 trillion cubic feet gas import deal over 15 years are progressing, the source told "Reuters", but technical, commercial and legal issues still have to be ironed out, he added.

BG Group, which owns Egypt's other LNG export plant at Idku, is in talks to import gas from Israel's giant Leviathan offshore field in order to revive exports from its own plant which have declined sharply.
Noble Energy Inc. (NYSE: NBL) holds a 36% stake in Tamar, Isramco Ltd. (Nasdaq: ISRL; TASE: ISRA.L) (28,75%), Delek Group Ltd. (TASE:DLEKG) units Delek Drilling Limited Partnership (TASE: DEDR.L) and Avner Oil and Gas LP (TASE: AVNR.L) (each hold 15.625%) and Alon Natural Gas Exploration Ltd. (TASE: ALGS) holds 4%.

Published by Globes on Sep. 17, 2014

◊◊◊ BACK TO THE TOP ◊◊◊

Israel-Jordan gas pipeline to cost over NIS 250 million

The Ministry of Energy wants the Leviathan partners to pay for the pipeline, which will cross into Jordan near Bet Shean.

The overall investment in the pipeline to convey natural gas for exports to Jordan will cost above NIS 250 million, the Ministry of Natural Infrastructures, Energy and Water Resources Natural Gas Authority estimates. On Monday, the Natural Gas Authority Council published its decision on the subject of arrangements for financing natural gas exports to neighboring countries. The Council decided that the exporter will foot the bill for any conveyance infrastructures.

The Council also decided that the exporters will pay costs for any duplication in infrastructure where it is conveying gas to Israeli consumers as well as to neighboring countries.

The Council's decision comes as a new reality has taken hold in Israel's energy sector over the past year on the subject of natural gas exports with the topic of a national natural gas pipeline gaining ground. Only

last week an agreement was signed between Leviathan partners and the Jordanian Electric Power Company (JEPCO) to sell 3 BCM of gas annually for 15 years for a total of 45 BCM.

Minister of Energy Silvan Shalom said, "Natural gas exports to neighboring countries through a pipeline opens up new horizons for our natural resources and increasing revenue from them. Exports will bring us closer together with our neighbors and allow us to cooperate with them in the long term bringing about an improvement in the situation of all the countries in the region."

Sources in the energy industry believe that the Leviathan partners will build a floating offshore terminal for natural gas for use in Israel and Jordan. The pipeline will continue through the Jezreel Valley to Bet Shean and over the border to Jordan. However, no decision has yet been taken regarding the final route of the pipeline to Jordan.

Published by Globes on Sep. 10, 2014

◊◊◊ BACK TO THE TOP ◊◊◊

Israeli-U.S. energy partnership agrees to export natural gas to Jordan

JERUSALEM — A U.S.-Israeli partnership of energy companies agreed to supply Jordan with natural gas from Israeli offshore gas fields, in a deal that is likely to benefit the neighbors economically and could strengthen the Jewish state's relations with other countries that share an interest in fending off Islamist extremists.

A nonbinding letter of intent, signed Wednesday by Texas-based Noble Energy and Israel's Delek Group — key investors in Israel's Leviathan offshore natural gas reservoir — and Jordan's National Electric Power spelled out a plan to supply 1.6 trillion cubic feet of gas to Jordan over the next 15 years.

Israel discovered natural gas off its northern coast in 2009 and last year started to distribute the commodity domestically. But the agreement with Jordan is its first export deal, and it would make Israel Jordan's principal supplier of natural gas.

The deal, which would send natural gas to Jordan via overland pipes, is still dependent on final approval from the Israeli and Jordanian governments. But it is being hailed here as a historic pact that will bolster relations between Israel and neighbors worried about the regional rise of the radical Islamic State and other militant groups.

"This deal has major geopolitical implications, even more important than the vast economic benefits," said Amit Mor, chief executive of Eco Energy, a Tel Aviv-based financial and strategic consulting firm specializing in Middle East energy. "These days, when ISIS is butchering Americans, as well as many thousands of Iraqis and Syrians in the region, this deal shows that an alliance is forming between the moderate countries in the region — Israel, Jordan, Egypt and Saudi Arabia."

Those alliances already were strengthening over the past two months, as Israel battled Islamist Hamas militants in the Gaza Strip, he said. Israel, the United States and the European Union consider Hamas a terrorist group.

An even larger deal is under discussion between the U.S.-Israeli energy partners and companies in Egypt, a wary ally of Israel that played a key role in brokering a cease-fire last month between Israel and Hamas.

Israel and Jordan signed a peace agreement in November 1994, but in recent years, relations between the two countries have been strained because of Israel's occupation of the West Bank — a swath of territory sandwiched between the two nations that Palestinians want for a future state — and its partial siege of the Gaza Strip, which borders Egypt.

During the past 20 years, Israel and Jordan have had some economic cooperation, mostly in trade and water supply. The transfer of gas, which probably will not begin until 2017, will be by far the biggest economic agreement between the two.

Mohammad Hamed, Jordan's minister of energy and mineral resources, told the Jordan Times on Wednesday that the government had "allowed all Jordanian companies, whether public or private, to import gas from anywhere they want and think is feasible. This agreement between the power company and Noble Energy is part of the government's interest to help institutions address challenges they face due to rising energy costs."

Israel's minister of energy and water, Silvan Shalom, said the deal would lift Israel's regional standing as a "central source of energy."

The Israeli financial newspaper Globes reported that the State Department had supported the deal and that Amos Hochstein, Secretary of State John F. Kerry's special envoy for international energy affairs, was in Jordan for the signing ceremony.

Ruth Eglash is a correspondent for The Washington Post based in Jerusalem. She was formerly a reporter and senior editor at the Jerusalem Post and freelanced for international media.

Published by Washington Post on Sep. 4, 2014

◊◊◊ BACK TO THE TOP ◊◊◊

Israel signs 15-year natural gas deal with Jordan

An industry official who asked not to be identified said the deal was worth about $15 billion.

REUTERS - Israel will sign a deal to supply natural gas from its Leviathan field to Jordan for 15 years, Israeli Energy Minister Silvan Shalom said on Wednesday.

Shalom said the agreement comes after many meetings with Jordanian officials but gave no other details.

An industry official who asked not to be identified said the deal was worth about $15 billion.

Leviathan, which holds an estimated 22 trillion cubic feet of gas, is controlled by Noble Energy and two units of the Delek Group.

Noble and Delek declined to comment although a Delek Drilling spokesman confirmed that senior officials from Delek and Noble were in Jordan.

Published by Haaretz on Sep. 3, 2014

◊◊◊ BACK TO THE TOP ◊◊◊

POLICY ALERT – The Washington Institute

Jordan's Energy Decision: Go with Israel

Today's draft agreement will have to withstand domestic and foreign pressure on Amman.

The announcement of a planned energy deal between Israel and Jordan will be followed by several stages of negotiation, and it will be several years before the first gas reaches Jordan. The "nonbinding letter of intent" envisages the supply of gas from Israel's Leviathan field, which lies deep under the seabed eighty miles off the coast of Haifa. The gas will be supplied to Jordan's main electricity-generating body, the National Electric Power Company (NEPCO). Over the fifteen-year proposed span of the contract, 1.6 trillion cubic feet will be supplied, equating to around 3 billion cubic meters a year. This is probably sufficient for most of Jordan's electricity-generation requirements.

Reported as being worth $15 billion (though $8 billion seems a more likely figure, given current prices for natural gas), the deal is much larger and certainly more significant than an agreement announced in February for Israel to supply $500 million worth of gas to two Jordanian industrial plants near the Dead Sea. That gas will come from Israel's Tamar offshore field, which began production last year. Noble Energy, the U.S. natural gas company that leads the consortium planning to develop the Leviathan field, which will not come on-stream until 2017, says the price for NEPCO's gas will be "based primarily on a linkage to [international] oil prices and is dependent on negotiation of a binding agreement." A new pipeline will also need to be constructed.

The putative deal offers additional good news for the export prospects for Israeli gas. A more significant quantity of Leviathan gas is planned to be pumped to an underutilized liquefied natural gas (LNG) plant in Egypt's Nile Delta, from where it can be shipped anywhere in the world, including Asia, where prices are much higher.

For its part, Jordan currently relies on expensive fuel oil to generate electricity. The importation of natural gas from Egypt has become erratic because of pipeline sabotage, and seems unlikely to resume even if chronic Islamist terrorism in the Sinai is eventually contained. Jordan's Arab allies will probably oppose the deal with Israel and have already offered to build an LNG import facility at the Red Sea port of Aqaba.

The biggest challenge for Jordan's King Abdullah, though, will likely be managing domestic political opposition to the deal. The majority of Jordan's population is of Palestinian origin, and the close bilateral relationship with Israel is not popular. Ever since the 1994 Israel-Jordan peace agreement, professional syndicates in Jordan have backed a so-called "antinormalization" campaign, boycotting products -- including water -- from Israel. In the aftermath of the war in Gaza, this campaign has only intensified.

Unlike the earlier $500 million deal -- which involved Noble Energy and two corporations owned by Arab and Jordanian investors -- this agreement provides the palace with little political cover, and the opposition will all but certainly exploit the agreement to attack the king. The Committee for Protecting the Nation and Syndicates Resisting Normalization described the last agreement as a "crime" and called for protests to reverse it.

Given the rather desperate economic conditions in the kingdom, however -- the prime minister recently described the economy as being in "its worst situation in history" -- the deal with Israel could not come at a better time. Since 2011, rising energy costs have been the prime driver in the kingdom's fiscal deficit. In addition, the agreement -- which has U.S. State Department backing -- should obviate Amman's determined but ill-advised plans to move ahead with the construction of two nuclear power plants.

Politically, the deal will have a steep cost for the palace, but it should also provide some welcome budget relief and longer-term energy security for the kingdom. *Simon Henderson is the Baker Fellow and director of the Gulf and Energy Policy Program at The Washington Institute. David Schenker is the Institute's Aufzien Fellow and director of its Program on Arab Politics*

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◊◊◊ BACK TO THE TOP ◊◊◊

LEVIATHAN DEVELOPMENT

Leviathan submits first-phase development plan

The floating facility will be able to stream up to 16 BCM of gas annually to Israel - 60% higher than Tamar.

The Leviathan partners have submitted the first phase of the development plan for the Leviathan gas field to the Ministry of National Infrastructures, Energy and Water Resources, sources inform "Globes." The first stage will include a Floating Production Storage and Offload (FPSO) facility with 16 BCM capacity for gas, which will be linked up to a pipeline connecting it to the Israeli grid.

"Globes" has also learned that the potential annual production capacity of the field will be 16 BCM, 60% higher than the Tamar field's 10 BCM. The leviathan field will have eight boreholes compared with Tamar's five.

The cost of developing the Leviathan field including the FPSO is likely to reach $6.5 billion but despite the high cost this is the option that will allow the natural gas to flow swiftly to Israel. According to the plan gas from the Leviathan field will only come on stream in early 2018 and the offshore production and processing installation will avoid the protracted amount of time it would take to get the approvals and permits for an onshore facility.

A further advantage of the FPSO plan is that if the Leviathan partners want to export gas via a marine pipeline to Turkey or Egypt, they will be able to do so swiftly and relatively cheaply. For exports to these countries, pipelines could provide a direct link without the need to first bring the gas ashore to Israel.

In March 2014, the Leviathan partners were granted the license to the field for 30 years and it was required to submit its development plan within six months. The license requires the partners to develop an infrastructure capable of supplying at least 9.2 BCM annually to Israel. The Petroleum Supervisor will permit the partners to supply less gas if other fields such as Karish and Tanin can make up the shortfall.

In addition to supplying the Israeli market, the Leviathan partners can export 50% of the field's gas (up to 75% if other fields export less and agree an exchange deal with the partners). The Leviathan partners are looking for more Israeli and overseas customers to justify developing the field.

The Leviathan partners have signed an MOU to sell 3 BCM of gas annually to Jordan for 15 years and 0.3 BCM annually to the Palestinians, as well as 7 BCM annually to BG's LNG installation in Egypt. The partners have also been considering selling liquefied gas to the Far East.

The Leviathan partners are Noble Energy Inc. (NYSE: NBL) (39.66%),Delek Group Ltd. (TASE: DLEKG) units Avner Oil and Gas LP (TASE:AVNR.L) and Delek Drilling LP (TASE: DEDR.L) (22.67% each) and Ratio Oil Exploration (1992) LP (TASE:RATI.L) (15%).

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◊◊◊ BACK TO THE TOP ◊◊◊

Leviathan partners still pursuing Turkish gas sales

Former Foreign Ministry director general: Turkey really needs Israeli gas.

The partners in the Leviathan natural gas field will not call off their efforts to sell gas to Turkey, Delek Group Ltd. (TASE: DLEKG) CEO Asaf Bartfeld said a few days ago in a "Bloomberg" interview. He was responding to Turkish Minister of Energy Taner Yildiz, who stated, "Turkey will not sign a gas pipeline agreement with Israel, given the diplomatic tension between them during Operation Protective Edge."

Israel sources believe that the Turkish option is still relevant. A senior gas industry source said, "Where there are good economic foundations, a deal will emerge, and in the case of Turkey, there is no doubt that it will happen."

The Leviathan partners announced last week that they had signed an MOU for the sale of 45 BCM of gas to Jordan's National Electric Power Company (JEPCO) for up to $15 billion. This deal follows MOUs signed in February 2014 with two Jordanian chemical production companies, Arab Potash and Jordan Bromine, operating on the eastern side of the Dead Sea for the sale of gas for hundreds of millions of dollars. The Israeli gas developers have also signed MOUs with foreign companies operating in Egypt.

The partners in the Tamar natural gas field signed an MOU in May with Spanish company Union Fenosa for the sale of 70 BCM of gas, and the Leviathan partners signed an MOU in June with British Gas for the sale of 105 BCM. "Bloomberg" believes that the monetary value of these two deals is likely to reach $60 billion.

The Palestinians and the Cypriots are also in the picture, with relatively small gas sale deals in the pipeline.

Former Ministry of Foreign Affairs director general Alon Liel, considered one of the most prominent experts in Israel on relations with Turkey, said, "There is no doubt that Israel should sell, and there is no doubt that Turkey wants the gas. Turkey really needs Israeli gas, despite all the statements, including the recent one by the Turkish energy minister." Liel asserted that the agreements with Egypt and Jordan were welcome, but that this region is unstable, while Turkey, on the other hand, is considered a very stable country.

In recent months, the holders of rights in the Leviathan reservoir have negotiated with Turkish companies, and Turkish groups, including Turcas and Zurlu, have expressed interest in negotiations with the partners. The preferred option for gas exports from Leviathan is through a 500-km pipeline to southern Turkey. One of the difficulties is that the pipeline is slated to pass through the Cypriot economic marine area, and under the Sea Convention, the consent of Cyprus is required. Up until now, the Cypriot leaders have rejected the idea, given the tense relations between Cyprus and Turkey, which occupied the northern part of the island in 1974. Furthermore, Cyprus is trying to compete with Turkey as an energy passageway from Asia to Europe.

According to Liel, "If we don't export our surplus gas, there won't be any more drilling . There is a strategic asset here that could serve as glue for important diplomatic agreements."

Profile of the Turkish natural gas system

The question of importing gas from Israel was discussed at a conference conducted early this month in Istanbul under the title, "Diversification of the Energy Sources of Europe and Turkey." Among other things, ways of importing Israeli gas to Turkey were discussed. About half of Turkey's electricity is produced from natural gas. The Turkish economy's total gas consumption is seven times that of the Israeli economy, and it is expected to grow quickly and double in the next 20 years.

Along with Turkey's burgeoning demand for gas, the country lacks its own independent sources, and must import its gas from suppliers at high prices. Turkey pays an estimated $15 per million metric British thermal unit (MMBTU) for gas from Iran, $12 for gas from Russia, and $10 for gas from Azerbaijan. In contrast, the local cost in Israel is $5.75 per MMBTU, while the average price in Europe in 2014 is expected to be $10.50. In order to compete with the European market, the Turks are trying to find a way to lower the price of their gas. The price of gas in Turkey is relatively high, because most of Turkey's gas contracts are still linked to the price of oil, which entails risk. In Europe, on the other hand, only 50% of the contracts in recent years have been linked to the price of oil; the other contracts are influenced more by supply and demand in a competitive market.

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◊◊◊ BACK TO THE TOP ◊◊◊

Local Market Development

Report estimates Royee gas prospect at 3.2 TCF

If it materializes, this makes Royee, owned by Ratio, Israel Opportunity and Edison, Israel's third largest gas reserve.

This morning, Ratio Oil Exploration (1992) LP (TASE:**RATI.L**) and Israel Opportunity released the resources report by US company NSAI on the Royee prospect in the Neta and Royee licenses, in which Ratio holds 70%, Israel Opportunity 10%, and Edison 20%.

NSAI gives a best estimate of 3.2 trillion cubic feet (TCF) of gas in the prospect, with a low estimate of 1.9 TCF and a high estimate of 5 TCF. If the drilling does indeed discover gas at these volumes, Royee and

Neta will become the third largest natural gas reserve in Israeli waters, after Leviathan, at 21.9 TCF, and Tamar, at 11 TCF, and the fourth largest in the Levant basin.

The figures in the resources report are based on a three-dimensional seismic survey carried out in early 2010 over an area of 505 square kilometers.

It should be pointed out that discovering gas does not necessarily mean that it is commercially worthwhile to produce it, since this depends, among other things, on the amount of gas that can be sold in the Israeli economy and its price, and the amount that can be exported.

It is not certain that there is sufficient demand in the local economy to justify developing the Royee reserve, since the Tamar reserve has many long-term contracts with Israeli firms such as Israel Electric Corporation, the private power producers, and other large consumers. As far as exports are concerned, these will command a higher price, but will also require higher investment in development and infrastructure.

Israel Opportunity CEO Eyal Shuker said this morning in response to the NSAI report, "I feel great satisfaction at the results and at the fact that our strategy of spreading assets and risk has proved itself. Israel Opportunity today is a partner not just in a range of licenses, but also in a range of prospects.

"This is also good news and highly significant at the national level. We have learned that the Levant basin contains in its depths many more reservoirs, and I hope that the next Israeli government will understand the opportunity and encourage entrepreneurs to continue their exploration and development activity for the sake of a promising future."

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◊◊◊ BACK TO THE TOP ◊◊◊

Oil price drop could benefit Israeli gas producers

The cost of hiring production rigs has plummeted, making development of the Tamar and Leviathan cheaper.

Energy stocks fell sharply yesterday on the Tel Aviv Stock Exchange, against a background of tumbling oil prices, which led to falls in energy stocks in Europe and the US at the end of last week.

It could be, however, that the stocks of the Israeli entities that are partners in the Israeli Tamar and Leviathan gas fields, such as **Delek Group Ltd.** (TASE: **DLEKG**), **Avner Oil and Gas LP** (TASE: **AVNR.L**), Delek Drilling, and Ratio Oil Exploration (1992) LP (TASE:**RATI.L**), will actually benefit from the situation.

Delek expects London IPO in mid-2015

The partnerships face investing $6.5 billion in developing the Leviathan reserve and a further $1.2 billion in expanding the Tamar reserve. Following the drop in oil prices, oil drillings around the world have been cancelled, leading to the hire of drilling and production platforms becoming substantially cheaper.

For example, a drilling rig that a year ago cost $650,000 a day now costs just $340,000 a day, a reduction of nearly 50%. Because of the fall in the cost of hiring rigs, energy market sources estimate that the cost of developing the Leviathan and Tamar fields will also fall, although it is still not clear by how much.

Although they fell on the stock exchange yesterday, the Israeli partnerships have no exposure to the price of oil. The anchor contract of the Tamar partners with Israel Electric Corporation is not linked to the oil price but to the US Consumer Price Index. Similarly, the contracts of the private power producers are linked to the Electricity Authority's electricity production cost tariff, and not to the price of a barrel of oil. In fact, only the Tamar partners' contract with Oil (TASE:**ORL**) is linked to the price of oil, but its effect is small compared with that of the other contracts.

The gas partnerships are exposed to fluctuations in the price of oil in a series of memoranda of understanding they have signed with customers in Egypt and Jordan, but even there a floor price is set for each contract that does not allow the price to fall below the average price of gas sales in the local market.

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◊◊◊ BACK TO THE TOP ◊◊◊

Tamar partners to invest $2b to expand production

The investment will enable gas exports to Union Fenosa's installation in Egypt.

The Tamar partners are set to invest $1.5-2 billion in expanding production capacity of the offshore natural gas field. The report was made to the Tel Aviv Stock Exchange (TASE) this morning by the Tamar partners, **Delek Group Ltd.** (TASE: **DLEKG**) gas exploration units **Delek Drilling Limited Partnership** (TASE: **DEDR.L**) and **Avner Oil and Gas LP**(TASE: **AVNR.L**). The other partners are **Noble Energy Inc.** (NYSE: **NBL**), Isramco Ltd. (Nasdaq: **ISRL**; TASE: **ISRA.L**) and Alon Natural Gas Exploration Ltd. (TASE: **ALGS**).

The investment is required mainly due to the agreement signed in May with Union Fenosa to supply 4.5 billion cubic meters (BCM) of gas annually for 15 years. As the current capacity of Union Fenosa's liquefying installations are 7 BCM annually, the Tamar partners and Union Fenosa are examining options to significantly increase annual supply capacity without increasing the maximum overall quantity in the letter of intent that was signed.

Consequently Noble Energy is investigating, among other possibilities, expanding the production processing network so that it can reach 20.4 BCM annually of which 16 BCM will be for the domestic market.

Union Fenosa has a natural gas liquefying facility in Damietta, Egypt, which halted operations in 2012 following the Egyptian government's decision to use the gas for domestic use rather than exports. British Gas (BG) has a similar liquefying facility at Idku and their inability to meet commitments on the international market because Egypt redirected the gas to their domestic market has caused the two companies huge damage.

The expanded capacity that the Tamar partners are readying will include three additional production drills that will connect to the production network, an additional supply pipeline from the Tamar field to the Tamar platform and upgrading the Tamar and Mari B platforms.

In addition, a pipeline will be laid from the Tamar platform to Union Fenosa's installation in Egypt. The Tamar partners and Union Fenosa will share the costs of laying and operating the pipeline in Israeli economic water to the Egyptian border. Union Fenosa will bear the entire costs from that point to its installation in Damietta. Assuming that the agreement is finally signed the supply of gas from the Tamar field to Egypt is planned for 2017.

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◊◊◊ BACK TO THE TOP ◊◊◊

Energy minister approves Karish and Tanin boundaries

Italy's Edison and other European and US energy companies are interested in buying the Israeli fields from Delek and Noble Energy.

Delek Group Ltd. (TASE: **DLEKG**) energy exploration units **Delek Drilling Limited Partnership** (TASE: **DEDR.L**) and **Avner Oil and Gas LP**(TASE: **AVNR.L**) report that Minister of Energy Silvan Shalom has accepted the recommendation by the Petroleum Council to approve the change in the boundaries of the Karish and Tanin gas fields. The two fields will receive new boundaries and be registered as gas discoveries. This removes one of the regulatory obstacles to the $6.5 billion development of the Leviathan reservoir.

As a result of this change in boundaries and the sale of Karish and Tanin, Antitrust Authority director general David Gilo will grant **Noble Energy Inc.** (NYSE: **NBL**) and Delek Group, owners of the rights to the Tamar and Leviathan fields, an exemption from being a cartel, thereby paving the way to developing Leviathan.

Last March, Gilo published the order requiring Delek and Noble to sell their rights in Karish and Tanin to allow more competition in the Israeli natural gas market. Gilo ruled that such an arrangement was preferable to a court battle to force Noble and Energy out of Leviathan, and which would delay the field's development for many years. Selling Karish and Tanin would allow a new player to enter the field and provide 50% of Israel's domestic natural gas needs for 16 years.

The Tanin and Karish fields together contain between 60 and 80 billion cubic meters of natural gas in which NIS 700 million has so far been invested, Avner Chairman Gideon Tadmor reported several months ago.

Interested buyers for the two fields include Italy's Edison S.p.A (BIT. EDN), and other European and US energy companies.

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◊◊◊ BACK TO THE TOP ◊◊◊

Regulator extends Ishai gas exploration license

Israel and Cyprus are negotiating a unitization agreement that will include the license.

"The negotiations between Israel and Cyprus on a framework agreement to consolidate joint development and production activity are in full swing, and are likely to include arrangements for dividing up the joint reservoirs," Alexander Varshavsky, Director of the Natural Gas Authority and Petroleum Commissioner at the Ministry of National Infrastructure, Energy and Water Resources told the companies that are partners in the Ishai exploration license, after informing them that their license was being extended to 2016.

Gas and oil exploration partnership Israel Opportunity said in a notice to the Tel Aviv Stock Exchange this morning that the agreement between Israel and Cyprus would include the Ishai license.

Ishai is one of six offshore drilling licenses known as the Pelagic licenses, covering 2 million dunams (2,000 square kilometers) 170 kilometers west of Haifa, and bordering the Gal and Ratio Yam licenses where the Leviathan structure is situated and Noble Energy's Block 12 in Cyprus. The Aphrodite 2 drilling that the license partners carried out towards the end of 2012 showed that the Aphrodite reserve discovered in the Cypriot Block 12, containing some 5 TCF (trillion cubic feet) of natural gas, partly runs into the area of the Ishai license.

According to the Petroleum Commissioner's notice, the agreement between Israel and Cyprus will contain many clauses that apply to license holders on both sides, among other things, clauses obliging the two license holders to reach a unitization agreement, subject to the conditions and timetable set out in the framework agreement.

Israel Opportunity chairman Rony Halman welcomed the agreement being formulated, saying, "There is great potential for finding additional gas and oil reserves in the Levant Basin, and so cooperation between Israel and Cyprus will restore attention to our region and enable the two countries to exploit the possibilities of exporting the gas that has been discovered and that will be discovered in their territories, which will strengthen them both politically and economically."

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◊◊◊ BACK TO THE TOP ◊◊◊

RENEWABLES

Israel's biggest solar energy plant underway

The Energix solar energy project at Neot Hovav will supply power for 40,000 homes.

Energix Renewable Energies Ltd. (ENRG) of the ALONY HETZ PROPERTY AND INVESTMENTS LTD. (TASE: ALHE) group controlled by Nathan Hetz and the Wertheim family announced today that Israel's biggest solar energy project, at Neot Hovav in the Negev, has received a permanent license for producing electricity. According to the company's estimates, power production will yield annual revenue of NIS 42-45 million for twenty years.

An event will be held tomorrow at Neot Hovav to mark the inauguration of the solar power plant, which has an output of 37.5 megawatt. The event will be attended by the Minister of National Infrastructures, Energy and Water, the director of the Prime Minister's Office, the chairman of Israel Electric Corporation, and the chairman of the Electricity Authority. The plant is on reclaimed land formerly used as an evaporation pond for industrial waste, on which some 400,000 photo-voltaic panels have been erected for collecting the sun's rays and converting them to electricity.

The power produced by the plant will be transmitted via a sub-station to Israel Electric Corporation's national grid, and will be sufficient to power about 40,000 homes. Energix plans to set up an educational tourism center on the site on the subject of renewable energy.

In 2009, the Israeli government decided that by 2014 5% of Israel's electricity would be generated from renewable sources, but today renewable energy accounts for only 1% of Israel's power consumption. This puts Israel at the bottom of the table of the developed countries, despite the fact that it enjoys more sunshine than most European countries.

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◊◊◊ BACK TO THE TOP ◊◊◊

Israeli gov't finally raises Photovoltaic power quotas

The decision is a shot in the arm for the Israeli solar industry, which has been frozen for two years.

In a bit of good news for the solar industry, an increase in quotas for electricity production using solar panels has been approved. After two years of waiting, during which the solar industry came to a complete standstill, the government voted in favor of increasing the quotas for photovoltaic (PV) solar roof power production.

The cabinet decision makes it possible to divert quotas amounting to 300 megawatts initially allocated for environmentally friendly power production using other means (wind and treated waste) to power production using PV technology.

The government also approved the conversion of 180 megawatts in Mishabei Sadeh and Ze'elim initially allocated for solar panels using thermo solar technology (a conversion that the Ministry of Finance says will save the economy NIS 2 billion), a 30-megawatt PV quota at Ashelim, and a 30-megawatt quota in Judea and Samaria.

The only reason why approval of the quota was delayed until now was an objection lodged by Minister of Finance Yair Lapid to the 30-megawatt quota in Judea and Samaria. Lapid did not agree with the clause guaranteeing compensation to owners of facilities in Judea and Samaria in the event of a permanent political settlement with the Palestinians, and therefore nothing was done for two years.

The renewable energy targets were set in a 2009 government decision, which set a 5% interim target for renewable energy production in 2014 and a 10% target for 2020. As of now, however, renewable energy accounts for only 1% of total annual energy consumption (98% of that comes from PV solar facilities).

The world is also progressing towards solar energy production. According to figures published by the International Energy Agency (IEA) in September, it is predicted that by 2050, solar energy will become the main source of electricity, and that solar systems will account for 6% of global energy consumption by 2030.

Green Energy Association of Israel CEO Eitan Parnass said, "The Israeli government is giving the solar market a shot in the arm. After two years of stagnation, solar facilities amounting to NIS 3 billion will be built in the coming years. This is a lifeboat for the solar industry, which has been waiting for additional quotas to be approved since 2012. We applaud Minister of Energy Silvan Shalom, who has been pushing the matter with determination since he took up his post, and who is taking steps to move the environmentally friendly energy industry in Israel forward. The projects are expected to be constructed mainly in outlying areas, and will provide jobs and sources of income in the places that need them the most."

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◊◊◊ BACK TO THE TOP ◊◊◊

Israel's first bio-waste power facility to be built

The facility to generate electricity from organic waste will be built in Neot Hovav in the Negev.

Blue Sphere Corp., a Wall Street OTC market-traded US company and the Environmental Services Company (ESC) will work together to establish a biogas facility to generate electricity from organic waste, primarily food leftovers. The facility will be built at the Neot Hovav Eco Industrial Park in the Negev, at an investment of NIS 100 million, and is expected to produce 5 megawatts of electricity and process more than one hundred thousand tons of organic waste per year.

This project is the first of its kind in Israel, and a first step in the Israeli government and Environmental Services Company's initiative to close the gap between Israel and other OECD countries in matters of waste recycling and the production of "green" energy.

The waste-treatment process at the facility will significantly reduce the annual volume of landfill waste, and will thus prevent soil contamination caused by the landfill process. The process will also make possible the production of clean energy as an alternative to oil and diesel, which are more expensive and more polluting materials.

According to the regulation for the production of energy from waste, the project will be eligible for a license to produce and provide electricity for Israel Electric Corporation (IEC) (TASE: ELEC.B22). The license is for a 20-year period, and the Israel Electric Corporation will commit to buy the electricity that Blue Sphere produces.

Blue Sphere CEO Shlomi Palas said, "The facility we will build will be the first to generate electricity from organic waste. The field of generating electricity from waste is a perfect solution to the rising demand for energy, and also to the need for proper treatment of the vast amounts of waste. We bring our international experience in establishing biogas facilities and we are convinced that the operation will work well also in Israel."

Environmental Services Company CEO Dr. Gilad Golub said, "Expanding the company's business operation to the field of generating electricity from bio-waste is in line with its overall strategy, which includes providing new and advanced environmental solutions in a broad range of fields having to do with the environment - this is in addition to the company's current operations.

Blue Sphere Corporation deals in development, management, and operation of projects to produce electricity from waste around the world, and manufactures biogas from organic waste. The Environmental Services Company is a government company, founded in 1990, which specializes in environmental projects including the biological treatment of contaminated soil and land rehabilitation.

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◊◊◊ BACK TO THE TOP ◊◊◊

MISCELLANEOUS

Preparations for drilling underway at Golan Heights oil exploration site

Project being conducted by Afek Oil and Gas, involves three years of exploration for conventional oil using up to 10 wells.

Oil drilling site on the Golan Heights. (photo credit: AFEK OIL AND GAS)

Preparatory work began at a Golan Heights exploratory oil drilling site on Tuesday morning – advancing a project that was delayed by environmental opposition.

The project, which is being conducted by Afek Oil and Gas, involves three years of exploration for conventional oil using up to 10 wells. While the company has held a license for the project for the past 20 months, petitions against the activities put the plans on hold since September. But on Tuesday, the "dirt works" to prepare the first site for drilling were under way.

"It's the preparation of the area where we're eventually going to put the rig to work, to drill," Afek Oil CEO Geoffrey Rochwarger told The Jerusalem Post over the phone, on his way to the site. "We hope that within the first two weeks of February we can start the actual drilling."

After receiving its exploratory drilling license for a 395-sq.km. plot south of Katzrin in April 2013, the project earned approval at the Northern District Committee for Planning and Building on July 24 this year.

On September 1, however, Adam Teva V'Din (Israel Union for Environmental Defense) and a group of Golan Heights residents submitted a petition to the High Court of Justice, demanding the cancellation of the exploratory drilling project. In the petition, the complainants wrote that the petroleum in the region is likely "tight oil," also known as shale oil, and would require nonconventional drilling procedures such as fracking – which could pollute groundwater and cause underground fluctuations.

Afek Oil has maintained that the oil in the region is just as likely conventional as tight, and would not necessarily require fracking for extraction. Meanwhile, the permit issued by the Northern District Committee allows only for exploratory drilling in a gradual, site-by-site manner, forbidding any fracking or production of oil in a nonconventional way.

At the end of September, the High Court issued an order for the temporary cessation of Golan Heights drilling operations, to give the state more time to respond to the petition.

This order was extended at the end of October.

On December 23, however, the justices removed the temporary order and dismissed the petitions, determining that the Northern District Regional Council's decision stands.

The judges determined that Afek could begin the project as planned, reiterating that the company would not be allowed to transition to commercial production without the approval of a plan by the National Council for Planning and Building. In addition to only drilling at one site at a time, the company will be limited in the amount of oil that can be produced during the trials – as per the original license.

Both the Afek Oil executives and Adam Teva V'Din representatives responded fairly positively to the ruling.

"I'm certainly very pleased. I'm happy that the justices did what they were supposed to do," Rochwarger said. "They were asked to investigate whether the committee awarded us the permit in accordance with the regulations.

Although there was a lot of noise about other things not related to that, I am very pleased that the justices focused on what they were supposed to."

Expert opinions from outside the company demonstrated that the dangers raised by the project's opponents were not present, according to Rochwarger.
"I am very pleased that they came out and gave their stamp of approval on everything we've done," he said.

Despite the fact that the project would continue, Adam Teva V'Din representatives identified a "significant achievement" in the wording of last Tuesday's ruling. The organization particularly praised the requirements that drilling occur on an individual, site-by site basis and that only limited amounts of oil be produced.

Commercial production could only occur following approval of a new program by the country's planning bodies, they explained.

Nonetheless, Rochwarger maintained that "everything that the justices said is exactly what the [Northern District] Committee said when it gave us a permit." Drilling one site at a time, as well as the production limitations, were already part of this permit, and "not even one clause was changed from the original permit that was awarded," he said.

Orly Ariav, an attorney responsible for environment and community at Adam Teva V'Din, argued that the justices did make a noticeable clarification in their ruling. Now, the company will not simply be able to approach the National Infrastructure, Energy and Water Ministry for a modified drilling license if it seeks to move to commercial production, she explained. Instead, it will have to undergo an entire new procedure of approval with the planning authorities, she said.

Before the ruling last week, Ariav and her colleagues feared that the questions regarding commercial oil production "would never be answered by the planning committees in Israel," she stressed. "We were really certain that before this decision that the company could have produced oil without having an approved zoning plan to do it," she continued. "Now we are sure it won't be able to do it."

Regardless of which side achieved more in the court ruling, drilling preparations are under way and after significant delay, the project is beginning as planned. Afek Oil has chosen site No. 5 out of 10 to start with, located north of Nahal El Al near Moshav Natur, a former kibbutz on the southern Golan Heights.

Drilling at the first site will require the most preparation time, as the company's workers are assembling the rig within Israel for the first time, Rochwarger said. After beginning drilling, they expect to have a much better idea of the properties of the surface level as well as drill operations.

"We do expect that once we get past the first well it will be a smoother, faster process," he said. Once they have procured drilling samples, the workers will be conveying their findings to laboratories at Ben-Gurion University of the Negev in Beersheba, where researchers will examine the subsurface material, according to Rochwarger.

"This will start to give us a picture of what might exist down there," he said.
With that knowledge, the company can determine which well to drill next.
"We'll try to efficiently as possible prepare everything beforehand and then move on," Rochwarger said.

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◊◊◊ BACK TO THE TOP ◊◊◊

BIRD to invest $4m in five Israeli energy projects

The projects are in the areas of fuel cells, electric vehicles, energy efficiency and water-energy nexus.

The US Department of Energy (DOE) and Israel's Ministry of National Infrastructure, Energy and Water Resources have selected five projects to receive $4 million under the 2014 Binational Industrial Research and Development (BIRD) Energy program.

Each of the cooperative projects includes a US and an Israeli partner and addresses energy challenges and opportunities of interest to both countries, while focusing on commercializing clean energy technologies that improve economic competitiveness, create jobs, and support innovative companies. The selected projects will leverage private sector cost-share for a total project value of $10.3 million. This is the sixth year for BIRD Energy which has, so far, approved 22 projects with a total investment of about $18 million (including the projects in this cycle).

BIRD executive director Dr. Eitan Yudilevich said, "We are pleased to see a continuous flow of joint US-Israel innovation to further develop renewable energy and energy efficiency technologies. Projects

awarded under the BIRD Energy partnership have already delivered new commercialized technologies, attracted follow investment, and contributed to job growth in both countries."

The five approved projects are: Advanced MemTech (Ness Ziona) and Arkema (King of Prussia, PA), will develop a carbon nanotube composite membrane that is electrically conductive: Aquanos (Shoshanat HaAmakin) and Aquagen ISI (South Yarmouth, MA), will collaborate on the development and commercialization of an algae-activated aerobic wastewater treatment technology: Fridenson Logistics (Haifa) and ChargePoint (Campbell, CA), will develop a smart grid capable, cloud-connected electric vehicle charging station: NewCO2Fuels (Rehovot) and Acumentrics (Westwood, MA), will collaborate on the development of enhanced performance solid oxide fuels cells for dual application: and Silentium (Rehovot) and GE Energy (Houston, TX), will collaborate on the development of active noise control for power generation ventilation.

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◊◊◊ BACK TO THE TOP ◊◊◊

Delek expects London IPO in mid-2015

Delek CEO: A London listing will help us become a leading international energy company.

In its third quarter financial report published today, Delek Group Ltd.(TASE: DLEKG) said it is currently exploring the possibility and making preparations for registering the company's shares for trading on the London Stock Exchange in mid-2015, in addition to its current listing in Israel.

Delek CEO Asi Bartfeld said, "We continue to promote the listing of Delek Group shares for trading on the London Stock Exchange. We believe that as a leading Israeli company with strong results, high liquidity and strong balance sheets, the Group is positioned as an attractive investment for foreign investors. We believe that a UK listing will allow increased exposure to the Group's energy activities to a large and diverse international investors' base, and is a step in our long-term goal of becoming a leading international energy company."

Revenue for the third quarter of 2014 was NIS 5.2 billion down from NIS 5.6 billion in the corresponding quarter of last year. However, despite the drop in revenue, net profit more than doubled to NIS 150 million in the third quarter, from NIS 74 million in the corresponding quarter of 2013. Delek will pay a dividend of NIS 150 million for the third quarter of 2014.

Bartfeld said, "During the third quarter, as well as October, we made a series of successful exits. This is a solid representation of our ongoing achievements and success in executing on our strategic decision to focus on the upstream energy. In the coming quarters, we intend to continue our strategy of focusing the group on the exploration, development and production of natural gas and oil with an emphasis on promoting the development plans of Leviathan, as well as identifying new opportunities in these areas."

Highlights during the third quarter included the sale of holdings in Roadchef, Delek Europe, Barak Capital, and partially in Republic Insurance for total proceeds of NIS 2.85 billion. However, talks to sell its 47% controlling stake in the Phoenix Holdings Ltd. (TASE:PHOE1;PHOE5) to the US Kushner family for NIS 1.7 billion seem to have stalled.

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◊◊◊ BACK TO THE TOP ◊◊◊

Ruppin teams with Wood Group on energy training

Wood Group will train staff for the Ruppin Academic - Noble Energy Center for Energy and Natural Gas Training.

The Ruppin Academic - Noble Energy Center for Energy and Natural Gas Training has signed a collaboration agreement with international energy services company Wood Group, sources inform "Globes." Under the terms of the agreement, Wood Group's engineers will hold workshops and train a faculty of lecturers at the Center, support activities and assist in drawing up a curriculum.

The agreement will cost an estimated $120,000 and has been approved by the Natural Gas Authority and the Ministry of Economy's Professional Training Department, as required by all bodies that set up a study center for acquiring professional knowhow.

Beersheva Technology College and Tel Hai College are also partners in the agreement.

Wood Group is an international energy services company that currently operates in 50 countries worldwide and earns around $7bn in sales. With 40,000 employees, Wood Group operates in Israel and among other things is managing construction of the Dorad private power plant in Ashkelon.

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◊◊◊ BACK TO THE TOP ◊◊◊

Israel Navy to wait years for gas rig defense ships

The decision on the winning bid to build the patrol vessels will only take place next year.

The Israel Navy is still waiting for the new warships designed for the defense of Israel's economic waters. After examining possible procurement of the new ships from Germany, South Korea, and the US, and even Israel Shipyards, the Ministry of Defense published an international tender several weeks ago inviting companies in the industry to present price bids. It is believed that the stage of opening the envelopes in the new tender will take place only at the end of the week, and that the decision will be taken only next year. It should be kept in mind that building the ships, adapting them to the Israel Navy's operational requirements, and declaring them operational is liable to take several years after a decision is made.

The Ministry of Defense wants to procure four advance patrol vessels for the Navy that will ensure an extensive protective envelope for the natural gas infrastructure in the Mediterranean Sea against a broad range of threats. These include deadly shore-based Yakhont missiles that Hezbollah is believed to possess, which pose a threat to the gas drilling platforms, as well as vessels in Israeli territorial waters. The ships to be procured are designed to carry advanced defense systems, including a new generation of Barak missiles produced by **Israel Aerospace Industries Ltd.** (IAI) (TASE: **ARSP.B1**), which can intercept Yakhont missiles.

The Defense Ministry's discussions of the urgent need to equip the Navy with the new ships began five years ago: procurement plans were raised and rejected, mainly for budgetary reasons. Senior naval officers made it clear several times in the past that the existing equipment could not provide absolute

protection for Israel's economic interests in the Mediterranean Sea. State Comptroller Judge (ret.) Joseph Shapira published an audit report on the Defense Ministry in March, in which he criticized the Defense Ministry and the Prime Minister's Office National Security Council for the delays in the plan. He said that due to foot-dragging by government ministries, the gas facilities in the Mediterranean were only partially protected, although they constituted a target for attacks by terrorist organizations.

The cost of the plan for procuring the new ships was previously estimated by Navy officers at over NIS 2 billion. The Navy last year considered the possibility of purchasing skeletons of civilian ships and adapting them to its operational needs, after installing radar, command and control systems and advanced firing systems on them. The Defense Ministry later conducted a comprehensive examination of procurement of the new ships from Germany, with the German government bearing part of the cost. These negotiations were unsuccessful, and the plan did not go through. Israel and Germany have cooperated for many years in Israel's procurement of Dolphin submarines manufactured in Kiel Shipyards. The German government participates in the cost of the submarine plan.

The Defense Ministry said, "The Ministry has been preparing for a number of years an international tender for the procurement of ship to operate in Israel's marine economic area, and has done in-depth staff work in the matter. The government decided to procure the ships only in November 2013, and provided a special budget for them. Procurement was suspended in order to provide enough time for negotiations for a deal with a foreign country. Last July, following the prolonging of these processes, the Defense Ministry decided to issue an international tender for procurement of the ships. The tender is currently taking place; the envelopes will be opened next December, and a preliminary answer will be given. The tender will be completed by the end of 2015."

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◊◊◊ BACK TO THE TOP ◊◊◊

Energix completes Golan wind project purchase

The Ministry of Defense currently opposes the wind farm project on the Golan Heights.

Green energy company Energix Renewable Energies Ltd. (TASE: ENRG) is seeking to expand in the field of wind energy, and today announced the completion of an investment and acquisition of control deal in a 155 megawatt capacity wind farm project in the Golan Heights.

This deal was completed after the preconditions were met, including receiving court approval for an arrangement with the existing project company creditors. Energix, which is controlled by Alony Hetz Property and Investments Ltd. (TASE: ALHE), believes that if the project reaches the financial closing stage, the capital that will be required for it will amount to NIS 200 million.

Energix has received 100% of the management rights in the project company and 75% of the shares with dividend rights. The company says that the requisite financing will be provided through owner loans or equity. This project has been under development for more than eight years. In the past, the project was a recognized national infrastructure project, and received a conditional license. However, in 2011, after the license-holder did not meet the conditional license's milestones, it expired, and development was suspended.

Currently, Energix, managed by Asa Levinger, will work to renew the processes. The company believes that the cost of setting up the project will be NIS 1 billion, and that annual revenue from the project is expected to be NIS 185 million. Energix says it is in talks with various parties regarding development, and

possible solutions to "Ministry of Defense considerations, which, to the best of the company's knowledge, has changed its position vis-à-vis the project, and as of the date of this report, disapproves of its establishment."

In the absence of Ministry of Defense approval, and considering other regulatory and planning considerations, at this stage, Energix is unable to estimate whether it will be able to "advance the project, complete development, and bring the project to financial closure." Energix deals in construction, management, and sale of electricity from solar energy systems, and is traded on the Tel Aviv Stock Exchange (TASE) at a market cap of NIS 340 million, after rising 47% in the last year.

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◊◊◊ BACK TO THE TOP ◊◊◊

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