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A SUMMARY OF ALL TOP HEADLINES

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Note from local Specialist

With some major issues, e.g. exports, anti-trust, fiscal issues, partially resolved, and without Woodside, Noble Energy and its partners are exploring their options for the development of Leviathan. In the wake of the latest military action, Turkey's political leaders demonstrated again that Turkey is not an easy partner for pipeline development and as customer. But in the Middle East shifts occur and the door to Turkey's involvement in Israel's gas evolution is still open, albeit at a jar. Leviathan's development has slowed down and the field is expected to come online in 2018.

This newsletter is divided into four parts: a. exports, dealing with Noble's search and some successes in signing up overseas customers; b. the development of the Leviathan field, showing the tail end of the Woodside saga and Noble's decision to secure supply contracts with customers in the region using pipeline connections rather than LNG. In "local market development" the articles show the development has been much slower than anticipated because of legislative and regulatory obstacles. Also, there is still only one entry point to get the gas onshore and the dispute regarding a second entry point has not yet been resolved. Articles in the fourth part deal with miscellaneous and regional issues.

I wish to draw your attention to two articles in particular: "Natural Gas Stuck in the Pipeline" that discusses some of the reasons for the stagnation in the development of the local market and "Leviathan in Trouble explaining the challenges surrounding the development of the Leviathan field.

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

Turkey rules out buying gas from Israel (for now)

Turkish Minister of Energy Taner Yıldız: The deal has become politically inconceivable.

Israel's incursion into the Gaza Strip has resulted in the freezing of progress on a deal to sell Israeli gas to Turkey, after the possibility became politically inconceivable, Turkey's Minister of Energy Taner Yıldız said yesterday. The minister said at a press conference that "in the reality that has come about it will not be gas that flows in a pipeline constructed between Israel and Turkey but the blood of the innocents."

Nevertheless, the Turkish minister did leave an opening for renewal of negotiations on future gas purchases, saying that Turkey would review its position if a long-term cease-fire was achieved and if Israel lifted its blockade of the Gaza Strip.

The developers of the Leviathan gas reserve, US company Noble Energy (39.66%), **Delek Group Ltd.** (TASE: **DLEKG**) units Avner and Delek Drilling (45.33%), and Ratio Oil Exploration (1992) LP (TASE:**RATI.L**) (15%), have been conducting negotiations for a year on selling gas to Turkey under a fifteen-year agreement that would be worth tens of billions of dollars.

Ten consortia have been involved in a quasi-tender process that the Leviathan partners have been conducting, from which one leading consortium is meant to be selected in the next few days. The name that has appeared in international media reports is that of a consortium of Turkey's Sabanci Group and German energy giant E.ON, in equal shares.

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Tamar pipeline expansion on course

The new pipeline will allow delivery to Union Fenosa Gas in Egypt.

While delays and question marks involving the Leviathan natural gas reservoir are multiplying, expansion of development in the Tamar reservoir is making rapid progress. Tamar has been providing all the gas for the Israeli economy since April 2013. The Tamar developers are expected to submit soon to the Ministry of National Infrastructure a development plan for laying an additional gas pipeline at a cost of $1.5 billion. The pipeline, which will have an annual capacity of 7-8 billion cubic meters, will make it possible to deliver gas to the liquefaction facility of Spanish company Union Fenosa Gas (UFG) in Damietta, Egypt.

The new pipeline will be connected on the Egyptian border to a pipeline to be built by UFG. The facility in Egypt is expected to buy 4 BCM a year, leaving the remaining gas for use in the Israeli economy. If the UFG deal goes through, Tamar will be able to supply the economy with a maximum of 16 BCM, compared with 10 BCM at present. This quantity also includes the compressors project, which will make it possible to increase the quantity of gas supplied through the current pipeline by 25%.

Published by Globes, on July 30, 2014

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Egyptian gov't sets out terms for Tamar gas deal

Union Fenosa will reportedly withdraw its lawsuit as part of approval of the Tamar deal.

Egypt's Ministry of Petroleum announced on Friday that the government will only approve the pending sale of natural gas by the partners in the Tamar gas field "if it creates substantial added value for the Egyptian economy." It said that the Egyptian government has added another condition: that the deal with Spain's Union Fenosa SA (BMAD: UNF), which operates the Damietta liquefied natural gas (LNG) facility, will only be approved if the company withdraws its claim against the government.

The Ministry of Petroleum's statement was reportedly preceded by intensive negotiations with Union Fenosa and was published in coordination with the company.

Union Fenosa's $6 billion lawsuit against the Egyptian government is in arbitration. It sued the government, after it banned gas exports, because of the domestic gas shortage, resulting in the company being in breach of contracts with customers in Europe and Asia.

Union Fenosa will reportedly withdraw its lawsuit as part of approval of the Tamar deal, so the Egyptian condition is in line with the company's interests. Union Fenosa said in response to the Ministry of Petroleum's statement, "It can be cautiously said that this is a positive step that indicates goodwill to manage serious negotiations."

The Egyptian government owns 20% of the Damietta LNG plant. When the letter of intent for the sale of gas from Tamar was signed in late April, the partners - Noble Energy Inc. (NYSE: NBL), Delek Group Ltd. (TASE: DLEKG), Isramco Negev 2 LP (TASE: ISRA.L), and Alon Natural Gas Exploration Ltd. (TASE: ALGS) - predicted that an agreement would be signed in six months, after Egypt's presidential elections.

Union Fenosa, which has had no natural gas deliveries since 2012, sued the Egyptian government with the International Court of Arbitration. BG Group plc (NYSE; LSE: BG), which owns the LNG plant at Ideko, reported a loss of $1.5 billion in 2013 because of reduced Egyptian gas deliveries and its CEO has announced his resignation.

BG Group is also in talks with the rights holders in Leviathan - Noble Energy, Delek, and Ratio Oil Exploration (1992) LP (TASE:RATI.L) - for the purchase of double the quantity of natural gas than Union Fenosa, for a total of up to $40 billion.

Under the letter of intent between the partners in Tamar and Union Fenosa, it will buy up to 2.5 trillion cubic feet (TCF) of gas over 15 years for a total of $20 billion. This amounts to the entire unsold gas at Tamar plus the gas from the adjacent Tamar SW field. The deal is still subject to approval by the Israeli government and the obtaining of an export license - provided it meets the terms of the government's gas exports decision.

Published by Globes, on May 18, 2014

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Egypt seeks alternative to Tamar gas

"Interfax": Egypt in talks with Norway's Hoegh LNG to lease a floating unit.

Paralleling plans to import natural gas from the Tamar field, Egypt is moving ahead on a plan that might reduce the need for Israeli gas. "Interfax Natural Gas Daily" reports that that Egypt is in talks with Norway's Hoegh LNG AS (OMX: HLNG) to lease the company's latest floating storage regasification unit (FSRU) in the third quarter of 2014. The FSRU is under construction at Hyundai Heavy Industries Ltd. shipyards in South Korea, and will have a production capacity of 4-5 billion cubic meters (BCM) a year.

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Cyprus will have to buy Israeli natural gas at 2.5 times the price in Israel.

Cyprus will have to buy Israeli natural gas at 2.5 times the price in Israel, according to the bid submitted by Leviathan partners **Noble Energy Inc.** (NYSE: **NBL**), **Delek Group Ltd.** (TASE: **DLEKG**) and Ratio Oil Exploration (1992) LP (TASE:**RATI.L**) in the tender published by the Cypriot Natural Gas Public Company (DEFA). The tender is for the supply of 0.7-0.95 billion cubic meters (BCM) of gas in 2017-25 (at the latest). Sources inform "Globes" that the bid by the partners in Leviathan is considered the favorite. They are offering gas at $15 per million BTU, compared with $6 per million BTU in current Israeli gas supply contracts.

There are two main reasons for the high price: the cost of laying a pipeline to Cyprus and because Cyprus is paying $20 or more per million BTU for alternative fuels, mostly diesel. The price of liquefied natural gas (LNG) in the eastern Mediterranean exceeded $18 per million BTU in the past year - the price paid by **Israel Electric Corporation** (IEC) (TASE:**ELEC.B22**).

At an energy conference in Cyprus last week, an independent Israeli consultant estimated that laying a pipeline to Cyprus would boost the price of natural gas by $2.50 per million BTU, and that the final price would be $10-18 per million BTU.

There are three other bidders in the tender, which was published in March: the Dutch Vitol Group; State Oil Company of Azerbaijan Republic (SOCAR); and Greek M&M Gas Co SA. Sources inform "Globes" that Vitol Group is the only one of the three companies that can currently promise to supply LNG during the relevant period, but at a higher cost than Israeli natural gas.

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Tamar and Leviathan look to Egypt gas link

An agreement with Union Fenosa could be followed by one with BG.

On Tuesday, the Tamar natural gas field licensees announced the signing of a letter of intent to sell 4.5 billion cubic meters (BCM) of gas a year to Spain's Union Fenosa SA (BMAD: UNF), which operates Egypt's natural gas export facility at Damietta. The deal, worth $1.3 billion annually, has many advantages for Tamar: the customer will be responsible for building the pipeline from Tamar's production platform, and the basic price, at $6.50 per million BTU, is linked to the Brent Crude price, which was the norm in Israel in previous years.

Union Fenosa outbid BG Group plc (NYSE; LSE: BG), which operates Egypt's other gas export facility at Ideko. Both plants are only partly operating, at the order of the Egyptian government, which has banned gas exports because of a severe domestic shortage. The government's decision has cost the two companies billions of dollars in lost income from the violation of long-term contracts with European and Asian customers.

BG Group wanted to buy more gas than Union Fenosa - 7 BCM a year, under a 15-20 year contract, which could have totaled $40 billion. Following its loss, it will now have to rely on gas from Leviathan, which will not begin flowing before late 2017.

However, before Leviathan's gas can flow, its licensees must meet some challenges, the most important of which is financing to develop the gas field. The main way to secure bank financing is with long-term supply contracts. The best thing is a contract like the one with **Israel Electric Corporation** (IEC) (TASE: **ELEC.B22**), but such a large and stable customer like IEC is hard to find in the Eastern Mediterranean.

Leviathan needs a contracts for a minimum of 5 BCM of gas a year (at $6 per million BTU) to secure the $5 billion in project financing for the gas field's first stage. The option for such a contract could be either with BG Group, or one of 10 Turkish groups. The partners in Leviathan will choose which party to negotiate with in Turkey within three months.

Weighing on all these agreements is political risk and the pervasive anti-Israel sentiment in the target countries, as well as economic questions. Jordan is a small customer, and it is highly doubtful if it would be willing to commit to buying all the gas it needs from an Israeli supplier. Building a pipeline to Turkey requires Cypriot approval, and negotiations with the Turkish consortium will probably be especially arduous and volatile. Economically, the Egyptian option seems the most logical.

This is where the political risk enters the picture. No agreement can be signed with a company operating in Egypt without the approval of the Egyptian government. Israeli sources believe that General Abdel-Fatah al-Sisi, if he is elected president this summer, will not raise obstacles, but experience has taught that Egypt cannot be relied on.

There is no need to elaborate on the tradition of honoring signed contracts in Egypt. Moreover, agreements signed with companies operating in Egypt are based on Egyptian weakness. At the moment, Israeli gas helps the Egyptian government, which is exposed to huge lawsuits from the energy majors operating in its territory, but, in the future, Israeli gas could become unnecessary.

Egypt has proven natural gas reserves that are twice the size of Israel's reserves, but it cannot develop the fields fast enough to meet domestic demand for gas, which is subsidized. The big question is what will happen if the Egyptians succeed in solving this crisis: will they allow Israel to continue delivering gas at the expense of tax revenues for the Egyptian exchequer? Israeli sources say that even under the most optimistic scenario, the Egyptians will be unable to overcome its gas shortage before the 2020s. They add that the Egyptian government is a partner in the LNG facilities, and should profit from them.

At the moment, BG Group and Union Fenosa's paramount interest is to guarantee a long-term supply of gas, and the Israeli gas companies have exploited this well. "It won't be a walk in the park," an Israeli source told "Globes", "but the letter of intent is a good first step."

Noble Energy Inc. (NYSE: **NBL**) and **Delek Group Ltd.** (TASE: **DLEKG**) are the main partners in both Tamar and Leviathan. Tamar's other partners are Isramco Negev 2 LP (TASE: **ISRA.L**) and Alon Natural Gas Exploration Ltd. (TASE: **ALGS**), and Leviathan's third partner in Ratio Oil Exploration (1992) LP (TASE:**RATI.L**).

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Charles Davidson: export sales agreements will support the field's development.

"The progress we have made recently regarding the Leviathan project offshore Israel has been remarkable, and we are close to executing a number of domestic and regional export sales agreements to support the field's development," said **Noble Energy Inc.** (NYSE: **NBL**) chairman and CEO Charles Davidson on the publication of the company's financial report for the first quarter of 2014.

Noble Energy said that natural gas sales from the Tamar field totaled 219 million cubic feet, and that the compression project at Ashdod more than half complete and on track to boost gas delivery from Tamar in mid-2015. It adds, "The first regional export sales agreements for Tamar and Leviathan were signed during the quarter (with customers in Jordan and the Palestinian Authority), with larger contracts expected to follow over the next several quarters. Significant progress has been made towards sanctioning the first phase of Leviathan with an agreement reached with the Israeli Anti-trust Authority and the receipt of a Development and Production Lease."

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Leviathan partners bid in $3b Cyprus gas tender

Cyprus is seeking 0.7-0.95 BCM of gas a year for 10 years from 2016/17.

The partners in the Leviathan natural gas field - **Noble Energy Inc.**(NYSE: **NBL**), **Delek Group Ltd.** (TASE: **DLEKG**), and Ratio Oil Exploration (1992) LP (TASE:**RATI.L**) - have bid in a $3 billion Cypriot tender for the supply of 0.7-0.95 billion cubic meters (BCM) of gas over ten years. The natural gas will used by the Vasilikos Power Station.

The tender by the Cypriot Natural Gas Public Company (DEFA) has two options: one is for the supply of gas from early 2016, and no later than the second half of 2017, through 2022, followed by three one-year options to extend; the second is for the supply of gas through 2025.

The tender will be closed on August 21, by which time the bidders must have financial closing for developing the Leviathan project and building a pipeline to Cyprus, and obtaining all regulatory permits.

The partners in Leviathan have a good chance of winning the tender, as they can only supply gas from the Tamar field, which Delek and Noble energy own with Isramco Negev 2 LP (TASE: **ISRA.L**) and Alon Natural Gas Exploration Ltd. (TASE: **ALGS**), during its nighttime surplus production. Israel is the only country that can deliver natural gas to Cyprus via pipeline or compressed natural gas (CNG). The Tamar partners have signed two foreign gas supply contracts this year: a $500 million contract with Jordan's Arab Potash Company and Jordan Bromine Company, and a $1.2 billion contract with the Palestinian Authority.

In today's notice to the Tel Aviv Stock Exchange (TASE), the partners in Leviathan said that, on April 7, Antitrust Authority director general David Gilo notified them that he would not take enforcement measures related to the sale of natural gas to Cyprus until his final decision on the joint sale of gas from Leviathan.

In January, Gilo said that if Delek and Noble Energy did not allow competition in the Israeli natural gas market, he was prepared to take them to court to secure some competition in the long term.

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Leviathan FLNG tender lands at yard doors

Shipbuilders have received an invitation to bid (ITB) for a floating LNG (FLNG) production unit that will serve the planned Leviathan project off Israel.

Yards have been given just over a month to reply with responses on what is expected to be a three-million-tonne-per-annum (mtpa)-plus size floater.

Those following the business closely expect Leviathan joint-venture partners Nobel Energy, Delek Drilling, Avner Oil and Ratio Oil to launch a front-end engineering and design (FEED) competition for a select number of yards and their engineering partners. A final investment decision (FID) has been pencilled in for the end of 2015.

Start-up likely in 2018

The partners have said previously that they are aiming for production to get underway from Leviathan in 2017. But observers say 2018 is now a more realistic start-up target.

The ITB, which was issued in the past 10 days, follows a request for expressions of interest, for which yards made their submissions several months ago. It kick-starts another new piece of FLNG business for yards to get their teeth into.

Last month, Australia's Woodside failed to firm up a memorandum of understanding (MOU) into a definitive $3bn agreement to buy a 25% interest in the petroleum licences that cover the Leviathan field. Reports indicated that certain tax issues still need to be sorted out.

Under this agreement, Woodside would be the operator of any LNG development of the field and Noble would remain the upstream operator. LNG would be sent for export and supplied to neighbouring countries, while some domestic gas would be sent to Israel.

Woodside has said previously that Leviathan could produce between 3.3 and 4.8 mtpa of LNG.

If concluded, this would rejig the project shareholding to leave Noble with a 30% stake, Woodside on 25%, Delek and Anver on 16.94% and Ratio with 11.12%.

ttp://www.tradewindsnews.com/weekly/article335345.ece5

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Leviathan in trouble

Four years after it was discovered the Leviathan gas field has run into trouble that threatens the chances for its timely development. Delek and Noble Energy are in disagreement on the export destinations. Turkey threatens to fill the pipeline with blood of innocent Palestinian children. The banks fear the government's intent to control gas prices and the stagnation in the electricity sector also endangers the local demand for gas.

"If you connect the pipeline between Israel and Turkey, gas will not flow in, but the blood of the innocent Palestinian children", said Turkey's Minister of Energy Tanner Yıldız. The Minister referred to the import of gas from the Leviathan field and he indicated that "in view of the atrocities in Gaza, it is out of the question." He added that any cooperation with Israel will be "only after you end the brutality in Palestine".

Almost four years after the discovery of the large Leviathan natural gas field, the economic euphoria has been replaced by a headache. Not just a simple headache, but a can of worms, national economic, regulatory and geopolitical. An entanglement that requires complex strategic moves between several synchronized bodies. At this time, a solution does not seem on the horizon. The result of the situation may be a choice between two bad options: gas and infrastructure shortages, or the institutionalization of the monopoly.

The Leviathan partnership, Delek Group, Noble Energy and Ratio Oil Exploration, are stuck, and with them the various regulatory bodies and the entire Israeli market. Bottom line, the main reason for the stagnation is seemingly the inability of the owners of the field to finance its development. How did that happen?

The cost of the development of the field started out at $3 billion. It included a floating gas treatment facility (FPSO) and a pipeline to connect the field with the shore. During the negotiations with Woodside for a 25% investment in Leviathan, the cost of the development went up to $5 billion and then to $6 billion. This raised a few eyebrows and questions whether the numbers were used as a tax ploy.

Either way, to finance such investment, double than that required to develop the Tamar field, Leviathan needs at least one anchor supply contract in the local market. The only customer that can provide such a contract is IEC, which has signed a long-term partnership with its "rival" Tamar (also owned by the Noble/Delek Group).

Only half the amount provided under the Tamar contract may be reopened for renewed bidding towards 2019. Therefore, Leviathan will also need a significant export contract.

But when it comes to gas exports, Leviathan suffered several blows. The first was the withdrawal of Woodside in May which not only damaged the project's reputation, but it also removed from the table the vision of building a floating LNG facility (FLNG) over the reservoir, allowing the sale of gas to the Asian markets. In the absence of a "major" (major player in the global gas industry), capable of bringing reliable clients for a 15-year supply contract, Leviathan now needs to locate on its own regional customers, backed up by sovereign guarantees.

This was exactly the scenario feared by Noble Energy, the drilling operator. Noble was interested in a partnership with Woodside, in contrast to its Leviathan business partner Yitzhak Tshuva [Delek Group]. In recent strategic discussions between the Leviathan partners, Noble expressed mistrust in the feasibility of long term, stable natural gas sales contracts in the Levant. Noble's feelings were recently backed up by the ongoing political unrest in the Middle East and in view of the upcoming changes in Noble's senior management.

Noble CEO, Chuck Davidson, who in the past 14 years has been leading Noble's operations in Israel, will in October be replaced by VP operations, David Stover, who will not have the sentiments for Noble's operations in Israel and may prefer to focus Noble's attention on the company's "safe" shale gas projects in the USA.

Tshuva, on the other hand, has a vision of the "new Middle East" and promised to supply the goods. In the past three months, he bid on the tender for the supply of gas to Cyprus, started negotiations to supply gas to Turkey and signed an agreement with his partners for the supply of gas to a BG LNG facility in Egypt. But as fast as the agreements were signed, the reality turned them around.

Afraid of Turkey's double game

The reconciliation with Turkey was affected by operation Protective Edge. The exploratory talks in Ankara were replaced by threats and provocations by the Turkish government. According to some, the Turks play a double game vis-à-vis Israel and use the Leviathan option to reduce the high price of gas they purchase from Russia and Iran.

As for Jordan, it needs Israel's cheap gas. However, it lacks a transmission infrastructure and the country sent the Israeli Ambassador home after the huge demonstrations in Jordan against the IDF actions in Gaza over the Gaza dispute facilities. Meanwhile, last week, Jordan inaugurated a facility for the import of LNG in Aqaba.

Egypt too, seeing the devastation in Gaza, may postpone somewhat its new government's willingness to agree in public to its involvement in the marketing of Israel's gas. Not to mention the possible repercussions of the international arbitrations case in Paris, led by EMG and IEC against the Egyptian government. This case, which is scheduled to end by the end of the year, deals with the breaking of the natural gas supply agreement from Egypt to Israel.

Even if the Leviathan partners were to succeed in resolving their differences of opinions and to reach a draft agreement for the marketing of gas through a Turkish/European consortium or through BG, there is no doubt that the financial institutions will require umbrella agreements backed by governments. Yossi Maimon's EMG required four years to secure such agreement. Leviathan only has 3 years and 8 months left to start flowing gas to Israel. Incidentally, Woodside's departure from the partnership has already had severe financial consequences, also without the political backing Woodside would have brought along. With the withdrawal of the Australian company, and without another strategic or financial investor in the near term, each of the partners will be required to bring larger amounts "from home" to finance Leviathan's development.

Noble is riding the wave of success of its shale gas projects and it could deal with the additional costs. Ratio will have hard time to bring in an additional $200 million. Delek that was in a rush with its $2 billion bond issue in the USA just 11 days before the Woodside deal broke, will have to go to a suspicious investors market and raise additional hundreds of millions of dollars.

It seems that the partners will change their financing strategy, turning it in to project finance, giving the financing over to a consortium of foreign banks to cover 70% of the required investment with the Leviathan reservoir as collateral. But with the involvement of the banks' credit risk assessment departments, Israel's weak regulatory system will be a much stronger factor in the calculation.

Sharpening the swords

With thick clouds covering the future of gas exports, everyone forgets that the Leviathan partnership is not even authorized to negotiate the marketing of gas. Three years ago, Anti-Trust Commissioner David

Gilo declared Leviathan a monopoly. Three months ago, at the end of lengthy negotiations during which the Commission debated how to deal with the emerging monopoly of the Delek/Noble group in the natural gas sector, Gilo announced a compromise: the "restraint of trade" declaration will be canceled, Delek and Noble will continue to hold onto Leviathan, but will be required to sell their holdings in the relatively small gas reserves Karish and Tanin to a new player in the industry. From the moment of its announcement, the arrangement attracted doubts as to its feasibility and the ability to bring competition into the gas sector. The reasons were, the quantity of gas in the small reserves (70MCM) compared to the size of Leviathan (600 BMC) and the continued right of the Leviathan owners to export gas from the small reserves instead of the new owners, In fact, |Karish and Tanin will have to compete against Tamar and Leviathan in the already limited local market.

If this were not enough, during the past year an inter-ministerial committee with officials from the Ministries of Finance and Energy has been working on natural gas pricing in the local market: whether there should be price control and if so, how to set the price. The committee did not need to see the impressive sales figures submitted by the Tamar partners in order to learn of the handsome profits made by the monopoly as a result of the scandalous supply contract between Tamar and IEC. This contract formed the basis for the price of gas for the rest of the market, in particular the IPPs who rolled the cost of the gas over to their customers.

The committee members ran into a problem when they had to reach a decision regarding the controlled price. If they were to decide on a relatively low gas price, the market may remain without a buyer for the Karish and Tanin reserves. No business person will commit to an investment of hundreds of dollars and risk competition against Tamar and Leviathan with one hand tied behind his back. Also, price control may keep additional foreign players at bay because they will not see the economic feasibility of exploration risks in the absence of fair competition. If, on the other hand, the government sets today's market price for gas as its controlled price, it will perpetuate the excess charge for gas by the Israeli customers and the results of the Shishinski committee will land in the pockets of Tshuva and Noble. Today, the financial damage of the excess charge for gas is estimated at NIS 1-2 billion per year. Tshuva, when faced with the need to accept the verdict of price control (after fighting it), he will prefer the second option over that of a fixed low price.

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Noble Energy delays $6b Leviathan investment

The final investment decision is now expected only in 2015.

US company **Noble Energy Inc.** (NYSE: **NBL**) is delaying its decision on a $6 billion investment in development of the Leviathan natural gas reservoir in light of the security situation, regulatory uncertainty, and a change in the company's global investment priorities. Sources inform "Globes" that the final investment decision, which was scheduled for the fourth quarter of 2014, is now expected only in 2015. Another question mark concerns the commencement date for oil drilling in the reservoir, previously scheduled for early 2015 following an earlier one-year postponement.

The fighting in the Gaza Strip comes on top of two prior developments that dampened the company's enthusiasm about development of Leviathan. First of all, higher priority is being assigned to development of two huge shale gas reservoirs in the US owned by Noble. Noble is also concerned about the uncertainty in the Israeli market on the question of price supervision for natural gas. The Ministry of Finance prices committee, which has been dealing with this issue for over a year, is set to decide in the coming weeks whether to impose supervision, as demanded by opposition MKs, headed by Shelly Yachimovich and Dov Khenin. The imposing of supervision will greatly affect the maximum gas price set by the state.

Noble officials met in recent days with their Israeli partners from **Delek Group Ltd.** (TASE: **DLEKG**), who expressed concern about another postponement or delay in the development of Leviathan. "Globes" previously revealed that development of the reservoir had been delayed by a full year due to regulatory uncertainty concerning the government's policy on natural gas exports.

Gas to be supplied within 3 years

As of now, there has not yet been any change in the timetable for development of Leviathan. Commencement of gas supplies from the reservoir is slated for late 2017 or early 2018. This development plan, first revealed in "Globes," is based on a floating production and storage and offloading (FPSO) facility to be anchored above the reservoir, which is located 130 km west of the Israeli seacoast, and which will be connected by a pipeline to the Israeli shore, and perhaps also to Egypt. Sources inform "Globes" that the international group that won the tender to construct the production facility for Leviathan received notice two weeks ago of a delay in the start of work on the venture. This group includes Bechtel, BW Offshore, and South Korean company Hyundai Heavy Industries, in whose shipyards the huge facility is to be constructed. The FPSO facility is due to produce 16 BCM of gas annually from Leviathan, 7 BCM of which is slated for the liquefaction facility of British Gas in Egypt and 9 BCM for the Israeli gas transportation system, including possible customers in Jordan and the Palestinian Authority.

The decision to build a floating production facility was taken in view of the uncertainly about the possibility of constructing a land-based facility. Only in the past few days was the outline plan for construction of land-based reception facilities for natural gas finally approved.

The Israeli partners in the Leviathan reservoir - Delek Group with a 45% share through the **Avner Oil and Gas LP** (TASE: **AVNR.L**) and**Delek Drilling Limited Partnership** (TASE: **DEDR.L**) partnerships and Ratio Oil Exploration (1992) LP (TASE:**RATI.L**) with a 15% share - are particularly sensitive to a possible delay, among other things because they are competing (without Noble) in a tender to supply natural gas to Cyprus, which wants the gas by mid-2017 at the latest. The Leviathan partners are also in advanced negotiations to sell gas to British Gas, which operates a gas liquefaction facility in Idku, Egypt, in a deal whose monetary value is likely to reach $30 billion. British Gas, which signed a letter of intent to purchase the gas, wants to advance the commencement date for gas supplies as much as possible, because the severe shortage of gas in Egypt is causing it huge losses.

Noble Energy said, "We are working strenuously to reach the required conditions that will allow the huge investment in developing Leviathan and hope to reach that point as swiftly as possible. The security situation is not relevant to this process."

Published by Globes, on July 30, 2014

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Leviathan gas estimate revised upwards

The best estimate of the amount of gas in Leviathan is now 21.93 TCF, 16% higher than previously estimated.

The estimate of the amount of gas in the Leviathan off the coast of Israel has again been revised upwards. The partners in the reserve report this morning that the amount of gas is 16% higher than previously estimated. According to an updated resources report by NSAI, the best estimate of the quantity of gas in Leviathan is 21.93 TCF (trillion cubic feet), which compares with 18.9 TCF in the company's previous resources report.

The estimated amount of condensate in the reserve has also been raised, from 34.1 million barrels to 39.4 million.

The rise in the resources estimate stems from a broader and deeper database on the Leviathan gas field, including new processing and analysis of the 3-D seismic surveys, and analysis of various laboratory tests of the rocks and fluids in the reserve.

The contingent resources report gives a low estimate of 16.58 TCF of gas for the reserve, 11% more than in the previous report, and a high estimate 26.52 TCF, 10% higher than in the previous report.

The Leviathan update brings Israel's proven gas reserves to 1,000 BCM.

Leviathan is owned by Noble Energy (39.66%), Delek Drilling (22.67%,**Avner Oil and Gas LP** (TASE: **AVNR.L**) (22.67%), and Ratio Oil Exploration (1992) LP (TASE:**RATI.L**) (15%).

Delek Drilling chairman and Avner CEO Gideon Tadmor said, "Today, we received excellent news for the Israeli energy industry, promising us energy independence for decades to come, and expansion of our export options, with all the economic and political advantages that that entails."

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Leviathan partners negotiating $30b BG deal

The sides have signed an MOU on the supply of gas to BG's LNG plant in Egypt.

The Israeli partners in the Leviathan gas reserve Avner Oil and Gas LP (TASE: AVNR.L), Delek Drilling and Ratio Oil Exploration (1992) LP (TASE:RATI.L) - reported this morning that a non-binding memorandum of understanding was signed at the weekend with BG Group (BG), in which the sides confirmed their intention of conducting negotiations on an agreement for the sale of natural gas to BG's liquefaction plant in Idku in Egypt.

British company BG Group explores for, produces, transports, liquefies and sells gas in more than twenty countries.

The estimated size of the proposed deal is the supply of seven BCM (billion cubic meters) of gas annually for 15 years. The value of the agreement is estimated at some $30 billion. Moreover, the sale will take place in Israel, close to the production point of gas from the reserve, so that BG rather than the Leviathan partners will have to construct a special pipeline. Gas will be supplied to BG from the floating gas production and storage installation, which will be connected to the liquefaction plant in Egypt via an undersea pipeline.

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Leviathan geologist: Split up the gas field and cartel

Joseph Langotsky and protest groups asked the Antitrust Authority to take parts of Leviathan away from Noble Energy and Delek.

Leviathan geologist Dr. Joseph (Yossi) Langotsky proposes splitting up the giant gas field into several licenses and producing natural gas separately and independently from each of them. Langostsky, considered the father of Israel's offshore deep water gas exploration, made the comments in a statement as part of a campaign against compromise arrangements on alleged cartel behavior.

Knesset Members Shelly Yachimovich (Labor) and Moshe Gafni (United Torah Judaism) and a long list of organizations today filed objections with Antitrust Authority director David Gilo to enforce an agreed order against **Noble Energy Inc.** (NYSE: **NBL**) and **Delek Group Ltd.** (TASE: **DLEKG**). The protestors are demanding that the regulator require Noble Energy and Delek controlling shareholder Yitzhak Tshuva to sell their rights in the Leviathan prospect, or split them between several consortia.

Langotsky wrote in a statement filed by the Movement for Quality Government objecting to the arrangements between Noble Energy and Delek, and the Antitrust Authority, "The significance of the extensive size of the Leviathan gas field as well as the fact that it is divided up into several sub-fields means that it can be split up to completely separate operating units with gas produced independently from each one of them. It seems that there is no geological or engineering reason preventing the production of gas from each part of separate fields."

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S&P Maalot: Leviathan gas deliveries only from 2018

Deliveries were originally set for 2016 but gas production will only begin in 2018.

It won't happen in 2016 or in 2017; the Leviathan gas field will begin deliveries in 2018, stated **Standard & Poor's Maalot Ltd.** two week ago in report on the special purpose bonds issued by Tamar gas field partners **Avner Oil and Gas LP** (TASE: **AVNR.L**) and **Delek Drilling LP**(TASE: **DEDR.L**), the energy units of **Delek Group Ltd.** (TASE: **DLEKG**). . The report is ostensibly surprising. The original start of deliveries for Leviathan was set for 2016, but well operator **Noble Energy Inc.**(NYSE: **NBL**) pushed the date back a year, citing "regulatory uncertainty". Another delay may be in the offing.

Noble Energy said, "Our objective was and remains to develop the gas field in the fourth quarter of 2017."

Why, then, the difference in forecasts? Is there an explanation to bridge the differences?

Industry sources affiliated with Leviathan say that its run-up time will be longer than that of the Tamar field, because, while Tamar's production is by a fixed platform, Leviathan's production will be based on a floating production, storage and offloading (FPSO) ship. The sources say that an FPSO has a longer run-up time, so even if it begins operating in late 2017, commercial gas production will only begin in early 2018.

Meanwhile, there is nothing to do but record the new date in our diaries.

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Delek bond offering 5-fold oversubscribed

Avner and Delek Drilling have already received $10 billion in offers in their $2 billion debt offering.

Although the oil majors are not really interested in taking an active role in oil and gas exploration in Israel, foreign financial institutions have jumped on the Tamar natural gas discovery. Demand for the $2 billion bond offering by Delek Group Ltd. (TASE: DLEKG) units Avner Oil and Gas LP (TASE: AVNR.L) and Delek Drilling LP (TASE: DEDR.L) for a special purpose vehicle for the Tamar field has already exceeded $10 billion.

Most of the demand came from US and European investors, while Israeli institutions have reportedly placed orders for $1 billion, and orders from Asian investors amount to several hundred million dollars. As things are shaping up at the moment, a quarter of the offer will go to Israeli investors, and the rest to foreign investors.

The offering is scheduled to close tonight, Israel time.

The strong demand has already resulted in the interest rate on the bonds being less than the rates set by the underwriters - JPMorgan Chase & Co., Citigroup, and HSBC - when the offering began.

Avner and Delek Drilling each own 15.625% of the rights to the Tamar gas field and 22.67% of the rights to the Leviathan gas field (before the Woodside Petroleum Ltd. (ASX: WPL) deal). The companies will use the proceeds to repay $900 million in existing debt taken from HSBC and Barclays Bank to finance their share of Tamar's development.

Avner and Delek Drilling issued five bond series of $400 million each. The maturity of the shortest bond is December 2016 and the longest is December 2025. The average duration of the bonds is seven years, and their collateral is liens on their rights in Tamar. S&P gives the bonds an international rating of BBB- and an Israeli rating of AA.

Refinancing the debt will reduce Avner and Delek Drilling's financing cost for Tamar's development, compared with the current debt, leaving them with an additional $1.1 billion in cash. They will use this money for further development of Tamar and to finance their share in Leviathan's development, the first stage of which will cost $5 billion.

Avner and Delek Drilling's financial reports state that gas sales from Tamar totaled $1 billion in 2013. 62% of this income is from the gas supply contract with Israel Electric Corporation (IEC) (TASE:ELEC.B22), and the rest from contracts with independent power producers, manufacturers, and gas marketing companies. The average price is $5.80 per million BTU.

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Opportunities missed on Leviathan

The government made concessions on the Leviathan license because it lacked the legal authority to impose its will.

On Friday, Petroleum Council member Yonatan Friedman resigned because the council is a toothless entity that does not participate in important decisions by the Ministry of National Infrastructures. Friedman, an advisor to former Minister of National Infrastructures Uzi Landau, was furious that the council was not updated about nor participated in the process for granting the license note for Leviathan.

The Oil Law requires obtaining the Petroleum Council's approval for transferring even a tiny fraction of valueless royalties or licenses, but the council's members learned about documents defining the rights and duties of the partners in Israel's largest gas field for the next 30 years from the media. Ministry officials told Friedman to read the Oil Law (5712-1952), which states that the Petroleum Council is only a consultancy body to the minister.

Nonetheless, criticism of the Oil Law can be found among Ministry of National Infrastructures' officials, who say that without an up-to-date law and regulations, the ministry has become a weak and passive body that cannot promote a plan or clear vision for the future development of Israel's oil and gas industry.

The license to the partners in Leviathan -**Noble Energy Inc.** (NYSE: **NBL**), **Delek Group Ltd.** (TASE: **DLEKG**), and Ratio Oil Exploration (1992) LP (TASE:**RATI.L**) - was granted after marathon talks that lasted right up to the morning it was issued. The talks faced a deadline: on March 27, the partners were due to sign the farm-out agreement with Australia's **Woodside Petroleum Ltd.** (ASX: **WPL**) for the sale of 25% of the license. That agreement was not signed.

It is much less well known that the deadline was artificial. Even if the agreement had been signed, the Oil Law gives the Petroleum Commissioner the right to wait two years from the announcement of a discovery before issuing a license. But Petroleum Commissioner Alexander Varshavsky preferred to cut to the chase and close the matter. During the critical meeting in the negotiations, he took a pragmatic position that sometimes contradicted the position of the ministry's legal advisers when he thought that they were insisting on immaterial matters.

The license that was published was praised by Ministry of National Infrastructures critics, but even the officials who wrote the license admitted that the government made concessions to Leviathan's licensees on substantive issues, because it lacked the legal authority to impose its will.

Hewers of wood and drawers of water

One of the innovations involved the development of an Israeli oil and gas industry. $3.5 billion was invested in developing the Tamar gas field, but the engineering work went to foreign companies because Israel has no oil and gas services industry. In a modern version of "hewers of wood and drawers of water", Israeli mainly provided catering, security, and helicopter services.

$5 billion will be invested to develop the first stage of Leviathan alone. A comprehensive study by the Ministry of National Infrastructures found that there is a global norm of requiring energy companies to give preference to local companies. The result was a chapter in the Leviathan license devoted to the development of a local oil and gas services industry. The plan is based on three pillars: guaranteeing equality and even preference for Israeli companies in tenders; a commitment by the developers to buy and promote Israeli knowhow and hire Israelis at the facilities that will be built.

As expected, Leviathan's licensees objected to this chapter, on the grounds that it was in their own interest to promote a domestic oil and gas industry and the demand was unnecessary. Unfortunately, the authority to require energy companies to buy local content appears in the Gas Industry Law, but not in the Oil Law, which was enacted in 1952. The Ministry of National Infrastructures' legal advisers therefore believed that on such a substantive issue as encouraging a local oil and gas industry, the Petroleum Commissioner did not have the legal authority to enforce his plans.

The ministry's legal advisers preferred to focus on extracting a $100 million bank guarantee from Leviathan's licensees, and leaving the Petroleum Commissioner with only a promise to promote an Israeli oil and gas industry. The ministry now hopes that the creative and innovative Israeli market will close the gap and gain a foothold in the development of the country's gas fields without government aid.

The Petroleum Council said in response, "The Petroleum Council is an advisory council that operates under the Oil Law, fulfilling its duties set out in the law and advising the minister and the petroleum commissioner on matters mentioned in the law. Granting a holding is not one of the issued mentioned in the law. The council convenes often enough, in accordance with the requests submitted to it."

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The Antitrust Authority has ordered the two companies to sell the Karish and Tanin fields.

Antitrust Authority director general David Gilo has published the agreement with the partners in the Leviathan gas field to create a new competitor to the current gas fields. This removes the final obstacle to the signing of the farm-out agreement by Noble Energy Inc. (NYSE: NBL), Delek Group Ltd. (TASE: DLEKG), and Ratio Oil Exploration (1992) LP (TASE:RATI.L) to sell 25% of the rights in the Leviathan gas field to Australia's Woodside Petroleum Ltd. (ASX: WPL) for $2.71 billion in Jerusalem this evening.

The Antitrust Authority's directive orders Delek and Noble Energy to sell to another party the Karish and Tanin gas fields, including the oil rights in the fields, and states that the fields' natural gas will only be sold in the domestic market by the buyer.

The directive also requires the sellers to grant the buyer of the fields an option to receive 15.2 billion cubic meters (BCM) of natural gas at a reduced price from Leviathan, if the aggregate proven reserves at Karish and Tanin are less than 70 BCM that Delek and Noble Energy must sell. Karish and Tanin have a high probability of finding an additional 27 BCM of gas in the future.

The directive states that the deadline forIsrael Electric Corporation (IEC) (TASE:ELEC.B22), the largest natural gas customer, to announce that it is exercising its option purchases of a substantial quantity of gas, will be extended, in order to allow the buyer of the gas fields to compete with the current gas fields for an IEC contract and for contracts with other customers in Israel.

The agreed-upon directive, which requires court approval, was reached in view of the enforcement measures that Gilo initiated against the partners in the Leviathan field, which he alleged were violating section 2 of the Restraint of Trade Law. This claim was based on Delek and Noble Energy's acquisition of stakes in Leviathan at the same time as their holdings in the Tamar gas field and other gas assets.

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Woodside

Leviathan partners plump for pipeline option

Without Woodside, the Leviathan partners have a weaker hand with Turkey and Egypt.

Analysts and Tel Aviv Stock Exchange (TASE) investors were indifferent to the announcement by Australia's Woodside Petroleum Ltd. (ASX: WPL) that it had pulled out of the Leviathan deal. The share prices of Leviathan partners Delek Group Ltd. (TASE: DLEKG) and its energy units Avner Oil and Gas LP (TASE: AVNR.L), and Ratio Oil Exploration (1992) LP (TASE:RATI.L) all fell in response to the cancellation of the farm-out deal. It can be assumed that had this announcement come a year ago, the impact on the shares would have been devastating.

Cancellation of the Woodside deal finds Delek with pretty good alternatives for the sale of natural gas and with enough capital to finance its share of Leviathan's development, due to the successful bond issue early this month and the sale of non-gas assets. The condition of Ratio, which owns 15% of Leviathan, is far less certain.

"We're continuing as usual," said Noble Energy chairman and CEO Charles Davidson, but the repercussions of the cancellation could be severe and painful, even if Leviathan's development goes ahead as planned in the short term. The gas field's marketing risks have shot up. The chances of closing a long-term gas supply contract in Asia at high prices have plummeted without the abilities and customers that Woodside would have brought to a deal.

Without the Woodside option, the Leviathan partners have a weaker hand in negotiations with customers and governments in Turkey and Egypt. It is enough for one more channel to fall apart to undermine confidence in Leviathan's development model. For the Israeli market, this is not just a blow to its image caused by the walkout of a foreign investor, but it is also the loss of the only company that could replace Noble Energy. It seems that Israel's total dependence on Noble Energy will only deepen.

The cancellation was no surprise given discord over the deal lately, topped by Woodside CEO Peter Coleman's theatrical walkout from the signing ceremony at the Sherover Promenade in Jerusalem.

A brief reminder: Delek controlling shareholder Yitzhak Tshuva and his partners brought Woodside to Israel in the belief that they lacked the capabilities to develop Leviathan on their own. They sought an energy major to inject capital and expertise and to bring Far Eastern customers who were prepared to pay top dollar for Israeli gas. Two years ago, everyone was talking about the need to build a huge liquefied natural gas (LNG) plant. The Tzemach Committee on gas exports recommendations were tailored to the size of this plant, which is now irrelevant.

In retrospect, it seems that the seeds of separation were sowed when the memorandum of understanding was signed in December 2012. Tshuva and his Israeli partners at Ratio were not pleased by the deal that Woodside offered, and it seems that the deal was forced on them by their American partner. This dissatisfaction was translated into the creation of an alternative market for Leviathan's gas.

Contacts with large customers in Turkey, Egypt, and Jordan were originally intended to assist in the effort to secure from Woodside a better deal. But this effort, handled by Delek Drilling CEO Yossi Abu, was so successful that Tshuva fell in love with the new option and set aside the dream of selling LNG to China and Japan. The turnaround was completed when Noble Energy also came on board and announced that the sale of gas via pipeline to regional markets was its preferred option.

Personal relations also contributed the failure of the deal. Delek executives' refusal to meet Woodside representatives for six months deeply insulted the Australians. Tshuva felt their response in his exchange with Coleman on the balcony of the King David Hotel in Jerusalem. Coleman told Tshuva to stay out of his business, and left the partners in Leviathan in the lurch.

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Leviathan without Woodside

Leader Capital Markets: Regional development lowers costs and raises risks.

Analysts have been reacting this morning to the news that Australian company Woodside Petroleum has withdrawn its intention to buy 25% of the rights in the Leviathan gas field off Israel's coast for $2.71 billion.

IBI Investment House analyst Guil Bashan who specializes in the energy sector told "Globes," "We are not talking about such terrible news. Beyond the level of sentiment that can have a certain disappointment, the possibility has opened up for more regional development with a higher value than Woodside was bringing to the planned agreement. Valuations from the beginning did not take into account the Woodside deal. Therefore, there is no harm done to the value of the field nor to its development capability because the main development is focusing on the pipeline to markets nearby which Noble Energy can implement."

Bashan added, "Ratio is the most disappointed from the deal mainly from the point of view of financing because it will now need to raise equity sources in order to meet its part in developing the field."

Leumi Capital Market senior analyst Ella Fried said that, "**Delek Group Ltd's.** (TASE: **DLEKG**) recent debt raising at very convenient interest rates leaves it well placed to develop Leviathan . The financing risk has risen slightly and regional development raises the risk. So there is no great influence on Delek Group but Ratio will be under financing pressure in the initial stage."

Psagot Investment House Ltd. analyst Noam Pinko stressed that the deal fell because of a strategic decision to concentrate on the regional market and not due to any fault of the government. "Woodside's advantage is only in FLNG floating liquid gas and it does not mean that there won't be any liquid gas. The services of other companies can be used like the Tamar agreement with South Korea's Daewoo. From the financing point of view, Woodside would have put more than a billion dollars in but it won't be a problem to finance Leviathan due to the frenzied demand in Delek's recent overseas offering. Furthermore, the Delek partnerships can sell a small piece of the field to a financial rather than strategic player to meet the equity required to develop the field, and probably at a higher price than agreed with Woodside. Regarding Ratio, it will have to bring in a partner. Delek is indicating that everything is fine, and the value is higher than that given to Woodside."

Leader Capital Markets analyst Elad Kraus said, "The first point is the financing issue. Woodside was supposed to assit greatly in financing Leviathan's development. From the development point of view the regional market has now opened up and on this Leviathan's development will be based. The cost of development will be lower but the risk will rise without the flexibility of liquid gas that can be sold anywhere."

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Woodside foot-dragging sank Leviathan deal

Woodside wanted to delay Leviathan development until all the necessary permits were obtained.

The desire of **Woodside Petroleum Ltd.** (ASX: **WPL**) to delay a decision on investing hundreds of millions of dollars in the development of the Leviathan gas field is the direct cause of the cancellation of the farm out deal with the partners in it. Sources inform "Globes" that the partners in Leviathan **- Noble Energy Inc.** (NYSE: **NBL**), **Delek Group Ltd.** (TASE: **DLEKG**), and Ratio Oil Exploration (1992) LP (TASE:**RATI.L**) **-** asked Woodside to commit to paying its share of the hundreds of millions of dollars they planned to spend this year to complete the gas field's development under the timetable they promised.

However, Woodside wanted to delay a decision on the expenditures until all the necessary permits were obtained, including an export license. The partners objected to this request, and warned that without the investment now, deals with customers in Israel, Cyprus, and other countries were liable to be lost. Leviathan's $5 billion development plan is based on a floating production, storage and offloading (FPSO) ship above the gas field to which customers in Israel, Cyprus, Turkey, and Egypt will be connected by pipeline. The partners in Leviathan reiterated that development must be completed no later than the fourth quarter of 2017.

Delek controlling shareholder Yitzhak Tshuva today reacted with equanimity to Woodside's announcement on Tuesday that it was cancelling its intention of acquiring 25% of the rights in Leviathan for up to $2.71 billion. "We are going full steam ahead to develop the gas field under the planned timetable," said Tshuva at the TASE opening today to mark the start of trading in the bonds issued by Delek units **Avner Oil and Gas LP** (TASE: **AVNR.L**) and **Delek Drilling LP**(TASE: **DEDR.L**) to finance their share of Leviathan's development.

Noble Energy chairman and CEO Charles Davidson responded similarly, saying, "While we have not been able to reach a mutually acceptable agreement with Woodside, we continue to move forward with our partners and the Israel government with plans to develop this world-class asset for the benefit of all stakeholders." He added, "Perhaps the most dramatic changes have been associated with the growth in the regional markets. The emergence of these regional markets, which are accessible through pipeline outlet, has pushed the need for LNG into a later phase of development versus our earlier plans."

Energy market sources told "Globes" that the partners in Leviathan feel a sense of relief about the cancellation, after the volatile and friction-filled negotiations.

In a statement to the Australian Stock Market today, Woodside CEO Peter Coleman said, "All parties have worked very hard to secure an outcome which would be commercially acceptable, but after many months of negotiations it is time to acknowledge we will not get there under the current proposal."

Despite the disputes about how to develop Leviathan were apparently the main cause of the breakdown of the deal, analysts opted to take satisfaction that Woodside decided not to enter a region full of geopolitical risk, like the Israeli market. Credit Suisse analyst Mark Samter said, "You would have wanted a very high hurdle rate for investment in Israel given the uncertainties that surround it."

Woodside's spokesman said that the company was prepared to resume talks in the future to acquire a stake in Leviathan if there were material changes to the investment conditions.

"Reuters" quotes Coleman as saying in April that the shift to export more of the gas by pipeline instead of LNG made it less worthwhile for Woodside to invest in on existing terms.

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Woodside backs out of $2.7b Israeli gas field deal

Australian company's flipflop leaves Leviathan without a partner with experience in LNG.

Woodside Petroleum, Australia's top gas producer, has ditched long-awaited plans to buy a stake worth up to $2.7 billion in Israel's Leviathan gas project, as the venture focuses on exporting by pipeline.

Woodside's decision to end an agreement to buy a 25 percent stake in the project leaves the partners without the expertise in liquefied natural gas (LNG) that was key to helping Israel expand its gas export options beyond the Middle East to Asia.

"All parties have worked very hard to secure an outcome which would be commercially acceptable, but after many months of negotiations it is time to acknowledge we will not get there under the current proposal," Woodside Chief Executive Peter Coleman said in a statement.

The leader of the project, Texas-based Noble Energy Inc., said while talks with Woodside had fallen through, development of Leviathan would go ahead with support from the Israeli government and the existing partners.

Plans for Leviathan had changed significantly over the past two years, Noble said, as demand for gas had grown in countries around Israel and in southern Europe, effectively ruling out the need for Woodside's experience, at least in the near-term.

"The emergence of these regional markets, which are accessible through pipeline outlet, has pushed the need for LNG into a later phase of development versus our earlier plans," Noble Chairman and CEO Charles Davidson said in a statement. Noble said it was aiming for first production in late 2017. The shift to export more of the gas by pipeline instead of LNG made it less worthwhile for Woodside to invest in on existing terms, Coleman said in April.

At the same time, the company has been in dispute with the Israeli government over the tax treatment of a $1.2 billion down payment on the project.

Investors applauded the move to abandon an investment in a region fraught with geopolitical risk and in a country that has never developed such a large gas field, sending Woodside's shares up as much as 1.4 percent on the decision.

"You would have wanted a very high hurdle rate for investment in Israel given the uncertainties that surround it," said Credit Suisse analyst Mark Samter.

Woodside left the door open to renegotiating a deal with the project stakeholders - Noble and Israeli firms Delek Drilling , Avner and Ratio Oil - if there were "material changes" to the investment conditions.

Leviathan, a large field with 540 billion cubic meters (19 trillion cubic feet) of gas reserves, had been seen as critical to Woodside's growth prospects amid delays in bringing on new production from assets closer to home, including the Browse and Greater Sunrise LNG projects.

Analysts said Woodside's buoyant share price, strong cash position and lack of near-term growth options suggested it would look for acquisitions.

"We do believe they'll be on the M&A path going forward. Clearly there is a hole in their growth profile at the moment," said UBS analyst Nik Burns.

There has been speculation Woodside may be interested in Oil Search, which has just started exporting LNG from Papua New Guinea, after Woodside recently missed out on buying a stake in some undeveloped gas fields in PNG.

However, Oil Search at A$13 billion ($12 billion) is trading on a fat price-to-earnings multiple of 20, compared to 13 for its peers, which would make paying a premium on top of that hard to justify, analysts and bankers said.

LNG opportunities in North America, and oil and gas exploration assets in Africa and the Middle East could attract Woodside, analysts said, based on recent comments by Coleman ruling out parts of South America and anywhere that's icy cold.

Investors expect the company to shed more light on its strategy at a full-day briefing on Thursday.

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Noble CEO: We'll develop Leviathan without Woodside

Charles Davidson has been the main supporter of the sale of 25% of Leviathan to Woodside.

The partners in Leviathan are prepared to develop the gas field without Australia's Woodside Petroleum Ltd. (ASX: WPL), says Noble Energy Inc. (NYSE: NBL) chairman and CEO Charles Davidson. This is an extraordinary statement by him, given that until now he has been the main supporter of the sale of 25% of Leviathan to Woodside for $2.71 billion.

Woodside walkout not lethal to Leviathan

"The Sydney Morning Herald" reports that Davidson told investors in the US, "We would like to have them as a partner as part of the project, but right now, with all of the other things that have been cleared out, we and our existing partners are moving forward, and we're starting to take steps to make sure that we can deliver this project."

Noble Energy, **Delek Group Ltd.** (TASE:**DLEKG**), and Ratio Oil Exploration (1992) LP (TASE:**RATI.L**) were due to sign the farm-out deal with Woodside on March 27, but the latter cancelled at the last minute because of disagreements with the Israel Tax Authority over accelerated amortization of the acquisition of the rights in Leviathan.

"Globes" reported that the parties reached a compromise on the accelerated amortization, but, in the past few days, Woodside representatives have raised new demands, mainly about compensation from future regulatory changes.

There is also considerable personal tension between Delek controlling shareholder Yitzhak Tshuva and Woodside CEO Peter Coleman. Tshuva was deeply insulted when Coleman did not turn up at the gala signing ceremony prepared in his honor in Jerusalem and parted from Coleman with harsh words.

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Local Market Development

Natural gas stuck in the pipeline: factories are in no hurry to connect

According to estimates, the industry's conversion to natural gas industry could lead to savings of NIS 2 billion annually and will considerably reduce air pollution, but the industry is slow to connect and government agencies are at loggerheads about their regulatory roles.

For years, Assaf Harofeh hospital, has been using fuel oil for its energy use. A few months ago a new gas pipeline was laid, not far from the hospital, at an investment of millions of dollars. Conversion to natural gas will allow Assaf Harofeh to save millions of dollars and reduce air pollution in surrounding areas, but the hospital is in no hurry. Only the Kaplan hospital in Rehovot is planning to convert to natural gas. In the center of the country more than 100 enterprises and institutions are potential natural gas consumers. Any such plant can save $ 2-3 million per year by buying cheaper natural gas instead of fuel oil and diesel. The Manufacturers Association of Israel estimates that conversion to gas in Israel will lead to savings of NIS 2 billion a year, improve the industry's competitiveness in exports and lead to a considerable reduction in air pollution.

Industries are afraid to commit.

The conversion rate of industrial enterprises, malls, hospitals, schools, etc. has been extremely slow. So far, since November 2009, when Super NG was awarded the gas distribution franchise for small and medium size customers in the central district, the company has only finalized 5-6 customer agreements for the purchase of natural gas. The first customer, the Angel Bakery, will be connecting to the pipeline in the middle of 2015, half a year after the planned date.

The situation in the South of the country is not much better. According to the schedule of the Natural Gas Authority, almost all the industrial zones in the South of the country should already be connected to the natural gas pipeline. In reality, only three industrial parks are connected: Ofakim, Yeruham and Naot Hovav.

In a recent hearing by the Knesset (parliament) Economics Committee, a representative of the Manufacturers Association mentioned that none of the factories are adhering to their business plan and that all the economic calculations have to be redone. The gas distribution companies that were certain that within 3-4 years will complete connecting all the industrial zones, have only built several dozen kilometers of pipeline.

A conversation with "Globes" reveals that the delays also caused by fears of the factory owners: the natural gas agreement requires a commitment to purchase a minimum amount of gas for five years, while fuel and cooking gas can be acquired overnight, without any long-term obligations. The conversion also requires an initial investment by the factories ranging from NIS 1 million to 2 million. Furthermore, there is a lack of awareness and a general indifference. "There are billions of shekels lying on the floor and companies only have to pick them up-but it just doesn't interest anybody," says an entrepreneur dealing in conversions. "The problem with the CEO's of industries, hospitals and hotels is that they don't feel any expectation from their Board of Directors to reduce energy costs for the company. We are dealing with herd behavior here. "

Who owns the sector?

But the failure of the gas conversion project is also due to excess regulations and lack of "ownership" of the sector. For over a year, lengthy discussions have taken place between the Ministry of National Infrastructures and the Ministry of the Economy, which of the two ministries has the responsibility to issue safety certifications to factories converting to natural gas. Each Ministry is trying to push the responsibility to the other. The government's Deputy Attorney General, Adv. Avi Licht was asked to reach a decision on the issue. He ruled that the responsibility rests with the Ministry of infrastructure, but he admitted that he is not at peace with this ruling.

In a recent hearing before the Knesset Economic Committee, Licht said that "the Ministry of Infrastructure is in charge of the entire production chain. However, there is no existing control platform, so I suggested to keep the supervision with the Ministry of Economy. The solution is not a legal one. This should be a professional decision and I don't have the know how to say which is better. The dispute between the two ministries has caused stagnation. My decision was supposed to release the bottleneck. Maybe the decision is not good, but it is according to the law. In my opinion, the government has to decide with ministry should take the lead on the issue."

The official responsible for safety in the National Gas Authority, Yasha Yarobovsky, explained in the hearing that his office has only three engineers with responsibility for the safety of hundreds of end-users. On the other hand, Economy Minister Naftali Bennett has charged the Israel Standards Institution with the responsibility to carry out safety inspections although the Institution has no expertise in these issues.

The gas infrastructure developers say that the government ministries attitude to shirk away from responsibility is a reflection of the overregulation of the sector that has reached absurd dimensions. "Safety is the tail that wags the dog," said CEO Supergas Eyal Hankin: "if safety considerations were the determining factor in transportation, no vehicle would move here because there will always be car accidents. The demand that the Natural Gas Authority certify the gas connections is like demanding that the electricity regulator certify every PC or home TV set. We will not be able to convert any factory to gas in this country. Why do we need certification from the authorities? Supergas has been supplying thousands of factories with gas since 1953 without any incidents."

Knesset Committee Chairman, MK [Member of Knesset] Braverman remarked: "Each Ministry is busy justifying its position and the natural gas does not reach the factories. This is a disgrace. We are destroying the industry because there is no Administration. We are in the fourth world, because even in a third world country this couldn't have happened."

The infrastructure Ministry said in response: "one of the major challenges facing the construction of the network is the coordination with local authorities and numerous infrastructure organizations. Various institutions oppose, as a rule, the establishment of a distribution infrastructure in their areas of responsibility and delay their planning. These objections form a major obstacle in the planning process, for issuing permits and building the distribution network."

"In order to remove these barriers and to shorten the time involved in the construction of the infrastructure, the Ministry of Infrastructures' Natural Gas Authority closely follows the planning and licensing processes in the regional planning committees and assists with the process vis a vis the local authorities and the various infrastructure bodies. In addition, the Ministry's Director General (DG) is working closely with the DG of the Ministry of Transportation to remove barriers to the development of the distribution network.

"Currently, ten plants are connected to the Southern distribution network. Six of these are already using natural gas, the remaining four have not yet completed the entire process. By the end of the year, seven plants are expected to connect to the network: four in the South, two in the Central area and one in the Hadera region. The goal is to connect some 400 factories to the regional distribution networks. In 2013, total gas consumption in the industrial sector was 1.5.BCM".

A surprise to factories in the South: the Gas Authority has decided to increase the connection fees to the regional distribution companies

If the above were not sufficient, a recent decision has taken the factories connected to the network by surprise: the Gas Authority has decided to raise the fee to the gas distribution companies. The decision dating back to May 2012 was for an increase in the tariff from NIS .037 per cubic meters to NIS .051 cents. But last month the Authority announced unexpectedly that it had decided to raise the tariff to NIS .07 per cubic meters.

According to industry sources, the increased fee can cause a medium size plant additional annual expenses valued at hundreds of thousands of NIS., millions over the course of several years. Factory owners in the South who have been dealing with the challenges of the rocket attacks from Gaza are especially upset that they were not given time to appear and give their comments to the hearing. The Gas Authority issued the ruling on July 22 and gave the industry two weeks to submit comments.

The Natural Gas Authority's decision was based on the desire to provide incentives to the Southern natural gas distribution company to expand its activities, using the option to update the tariff five years after granting the license. However, according to Moti Siegel of the Ruppin College that opened a new natural gas curriculum, no stimulus is required. "The distribution companies are working hard to connect as many industries as fast as possible because they have debts to the bank in the tens of millions. If there is a problem, it is in the overregulation and statutory requirements."

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Noble sees Gaza conflict causing lower Tamar sales

COO David Stover says the regional situation will cause gas sales to fall slightly.

"The third quarter estimate also included a reduced assumption for natural gas sales in Israel as a result of the ongoing conflict," said Noble (NYSE: **NBL**) in its guidance for the next quarter published with its second quarter results.

Talking to analysts after the results were published Noble Energy COO David Stover who becomes CEO later this year said, "The Tamar field showed strong performance in the first half of 2014 and was unable to operate for just a total of 30 minutes. We see higher sales in the third quarter although as said with a slight moderation in our estimates as a result of the regional situation."

Stover added that contrary to reports on the subject no agreement to sell gas to Spanish company Union Fenosa will be signed before the end of the year. According to a Memorandum of Understanding (MOU) signed in May, Tamar will supply 4.4 BCM of gas annually, about 50% of the gas in Tamar, over 15 years - worth an overall $20 billion. Noble has also signed an MOU with BG to supply 7 BCM annually from Leviathan. Both deals will be delivered by pipeline (built by the customers) to the companies' Egyptian FLNG installations for sale to Asia.

Stover added, "We are close to signing deals for Leviathan with other customers."

If Noble Energy and its partner **Delek Group Ltd.** (TASE: **DLEKG**) fulfill their development plan then gas production from Israel's fields will increase from its current 1 BCM annually to 3.6 BCM by 2017/2018 when the Leviathan field will come on-stream.to increase capacity by 25%.

Published by Globes, July 27, 2014

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Tamar partners to lay 3rd pipeline

The $300 million pipeline will double delivery capacity to 20-22 BCM a year.

The delivery of natural gas from the Tamar field will be doubled to 20-22 billion cubic meters (BCM) a year when a third pipeline from the field northwest of Haifa to the production platform offshore from Ashdod is built. The third pipeline will be able to deliver 6 BCM of gas a year to the Israeli market and the same amount to Egypt's liquefied natural gas (LNG) plant in Damietta, if the partners sign the gas supply contract with the plant's operator, Spain's Union Fenosa SA (BMAD: UNF).

The pipeline will cost an estimated $200-300 million to build, and could be completed in 2016-17.

Belying previous reports, it turns out that boosting Tamar's capacity does not depend on turning Yam Tethys's depleted Mari B field into an operational storage facility. The Tamar field, which was hooked up to the Israeli coast in March 2013, can currently supply 10 BCM of gas annually, the maximum capacity of the pipeline from the production platform to the onshore terminal at Ashdod. The double 150-kilometer pipeline connecting the production platform from wellhead has a capacity of 12 BCM a year.

Delek Group Ltd. (TASE: **DLEKG**) and **Noble Energy Inc.** (NYSE: **NBL**) control Tamar and own Yam Tethys. Their partners in Tamar are Isramco Negev 2 LP (TASE: **ISRA.L**) and Alon Natural Gas Exploration Ltd. (TASE: **ALGS**).

The report by the foreign consultant and the prospectus published by Delek units **Avner Oil and Gas LP** (TASE: **AVNR.L**) and **Delek Drilling LP** (TASE: **DEDR.L**) for their bond offering last week state that the compressors that will be installed at the Ashdod terminal will boost Tamar's production capacity by 50-60%. However, the consultant's report also states that in view of the limited capacity of the pipeline from the wellhead to the production platform, only the laying of a third pipeline will allow the gas field's full production potential with the compressors to be realized. The compressors will be installed by mid-2015, after a cost overrun from $216 million to $262.3 million.

The report states that the partners in Tamar will have to invest $3 billion more in the coming years to develop the field's next stages. This will double the initial investment of $3.05 billion. Tamar's current stage of development, based on five production wells, can pump only half the possible production capacity (5.7 trillion cubic feet or 28.3 BCM). Any additional production requires development of the field's second and third stages, at an investment of $2.9 billion by 2043. This payment includes $300 million that the Tamar partners will pay Yam Tethys for use of its facilities. This cost was anticipated and planned for.

Published by Globes, May 14, 2014

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Residents win fight against onshore Leviathan terminal

Gas from the Leviathan field will be piped to a production, storage and offloading ship.

The Leviathan gas field will be connected to the coast without an onshore terminal, according to the development plan that the field's operator, **Noble Energy Inc.** (NYSE: **NBL**), filed with the planning commissions. "Globes" is revealing the plan, which states that all handling of Leviathan's gas will be carried out offshore, as local residents at the proposed sites of the terminals had demanded.

As in the Tamar gas field, gas from Leviathan will be produced from well heads placed on the seabed, at a depth of 1,750 meters, from which the gas will flow to a floating production, storage and offloading (FPSO) ship anchored 7.7 kilometers away. From there, the gas will flow through a 110-kilometer pipeline to a decompression facility that will stand in 80-meters of water 11 kilometers offshore from Dor Beach.

The gas will then flow via pipeline to a one-acre onshore entry site, and then another six kilometers to the hook-up with **Israel National Gas Lines Ltd.'s** pipeline south of Fureidis. A small valve station will be built at the connection point to control the gas flow into the national pipeline network.

This is a major victory for the residents of Hefer Valley and the Carmel Coast, who opposed the construction of gas terminals in the area.

Meanwhile, the government is pursuing its national outline plan for onshore gas terminals, initiated in 2010, even though it is unclear if and when there will ever be a need for them. Prime Minister Benjamin Netanyahu appointed Prime Minister's Office director general Harel Locker to oversee personally the project's progress, which was described as strategically important.

The plan, prepared by a team headed by architect Gideon Lerman, proposes the construction of two large facilities each covering 200 dunam (50 acres) near Kibbutz Ein Hahoresh in Hefer Valley, adjacent to the Hagit Power Station. The plan is currently in the examination stage of the thousands of objections submitted by residents of Hefer Valley and the Carmel Coast after the National Planning and Building Commission approved the plan for deposit by a vote of 13:6 in November 2013.

The Leviathan development plan "proves that the State of Israel has invested tens of millions to date to plan an irrelevant plan," says an opponent.

During a recent meeting, Noble Energy representatives told Hefer Valley residents that the company had no plans to build an onshore gas handling facility, because it would require the construction of compressors at the well heads, due to the drop in pressure after several years of production. Compressors would require the company to change the gas handling method.

Hefer Valley Regional Council head Rani Idan told "Globes", "For a long time, we warned the government that the plan for onshore gas handling facilities would cost millions, and that this was money going down the drain. The gas companies should handle and refine all the gas at sea to compress it and maintain the high pressure for the gas to reach shore. That is why we are still stunned by the fact that the government continues to plan and demand 260 dunam (66 acres) for handling and refining facilities in Hefer Valley. What's the logic? Why pour money into plans, planning, committees, and bureaucratic processes, when everything is irrelevant? It's a pity that whoever planned the gas facilities used an obsolete concept, and did not allow the planners to consider offshore facilities, restricting them to the land and shallow water."

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Haifa Port submits lowest bid in Leviathan tender

State-owned Haifa Port submitted a lower bid than the private Israel Shipyards.

Government-owned Haifa Port Company Ltd. has submitted a lower bid than privately-owned Israel Shipyards Ltd. in the tender to provide port services for Leviathan.

A source involved in the project said thatNoble Energy Inc. (NYSE: NBL), which is responsible for the gas field's development, was surprised by Haifa Port's low bid and from the professionalism of the presentation. He added, however, that prices at Israeli ports are much higher than the prices for similar services at Cypriot ports, even when taking into account Haifa's greater distance to Leviathan than Cyprus.

The partners in Leviathan - Noble Energy, Delek Group Ltd. (TASE:DLEKG), and Ratio Oil Exploration (1992) LP (TASE:RATI.L) - are seeking space at an Israeli port for the loading and unloading of ships and the storage of the masses of equipment needed to develop the giant gas field. The development work is scheduled to begin by the end of the year, and take five years at a cost of at least $5 billion.

For this purpose, Noble Energy asked Haifa Port and Israel Shipyards for quotes for renting a 200-meter quay for five years. The estimated cost of the deal is NIS 50-100 million. Noble Energy previously rented space at Israel Shipyards for the development of the Tamar gas field under a three-year lease that recently expired.

Industry sources estimate that Haifa Port's very low bid reflects its financial troubles resulting from the departure of Zim Integrated Shipping Services Ltd. Israel Shipyards cut its bid and included additional services beyond provide a quay and basic services needed by Leviathan's partners. Sources inform ''Globes'' that Israel Shipyards has received other offers for its space if it does not lease the space to Leviathan.

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2.5 TCF gas potential seen in Oz license

The offshore licensees include Israel Opportunity, Lapidoth Heletz, Coleridge Oil and Gas, and Teddy Sagi.

The Oz prospect licensees today published a prospective resources report for the license, which states that it potentially contains large quantities of natural gas. The prospective resources report by Netherland Sewell & Associates Ltd. (NSAI), which wrote the reports for the Tamar and Leviathan fields, among others, estimates that Oz has 2.5 trillion cubic feet (TCF) of gas and 255 million barrels of oil.

The report states that best estimate (P2) for the prospect's gas targets is 2.5 TCF with a geologic probability of success of 23-27%. The low estimate (P1) is 1 TCF and the high estimate (P3) is 6.2 TCF.

The report states that the best estimate of the total prospective resources is 255 million barrels of oil with a geologic probability of success of 16-18%. The low estimate is 93 million barrels of oil, and the high estimate is 607 million barrels.

For the sake of comparison, 30 TCF of natural gas have been discovered offshore to date. The largest fields are Tamar, with 9 TCF of gas, and Leviathan, with 19 TCF.

The Oz license (formerly the Benjamin license) covers 400 square kilometers, 50 kilometers west of Tel Aviv. The licensees include**Lapidoth Heletz LP** (TASE: **LPHL**) (41.5%), **Israel Opportunity Energy Resources LP** (TASE: **ISOP.L**) (10%), Coleridge Oil and Gas Exploration Israel LP (12%), and Teddy Sagi's Frendum Investment Ltd. (21.5%).

Israel Opportunity chairman Rony Halman said that the report's data were better than the estimates on the basis of which the company decided to acquire a stake in the license. "The Levant Basin is rich in gas, and we are investing our best efforts in developing and promoting exploration activity in Israel and Cyprus. We hope to find more gas fields in the Levant basin, and to help foster the energy industry in our region. It should be remembered, however, that this is a high-risk industry, which requires professionalism and stamina."

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On the high seas with Tamar's defenders

"Globes" goes aboard an Israel Navy patrol boat protecting Israel's gas rigs.

A string of orders are rapidly given, and even the most attentive outsider would struggle to keep apace. The orders are heard throughout the deck, hull, and in the command center of the Israel Navy's Shaldag patrol boat; the communications system is in excellent operating order. The 11-man crew comprises trained sailors, who have already memorized the combat doctrine and experienced at sea, obey immediately. Within seconds, they don ceramic flack jackets, upgraded helmets, and man their stations. They are well trained and have fire in their eyes; they know the importance of the mission to protect Israel's natural gas infrastructures that drive the economy.

Navy wants $600m for ships to protect gas rigs

The Shaldag is the warhorse of the Navy's patrol operations, with a top speed of 42 knots. This is high speed on the water and critical for a patrol boats, whose crews are required to respond instantaneously to developments on the high seas: the morning intelligence update for Patrol Squadron 916 at the Ashdod Naval Base mentioned several unpleasant "gifts" that terrorist organizations in Gaza are preparing: fire from shore at Israeli ships; an explosive boat steered by a suicide terrorist; and a general alert about intentions to attack the Tamar production platform or Mari B rig.

You have to be there, more than ten nautical miles offshore, to understand how small is the distance and determined terrorist from Gaza has to cover to attack one of the platforms. Only there, a few hundred meters from the two huge platforms that rise from the sea, is it possible to grasp just how difficult, but how critical, it is to protect them.

The sky is clear, the sea is calm, and the Shaldag patrols between the Mari B rig and the Tamar platform. Even after hundreds of hours at sea, the sailors on the bridge are still excited by two dolphins that breached alongside the fast-moving warship leaving a white wake behind it. But military operations leave little time for excitement at dolphins or other animals: two Wasps,-small patrol boats of the Ashdod Patrol Squadron, which are headed to link up for training with a Navy missile corvette at sea, simulate terrorist suicide boats, giving the Shaldag crew an impromptu exercise of an attack that they must frustrate - immediately. There is no time for questions or thought: the machine gun is armed and manned, the combat center already understands the picture and knows where the targets are.

The crew on the bridge give orders quickly, the most important of which is something like, "Hold on tight." Hold on to what? Whatever is at hand, on the condition that it is lashed down and holding it does not inadvertently release a burst of bullets at someone.

Our forces are safe

Five to ten seconds more - but who is counting? - and the Shaldag makes a high-speed starboard turn at an angle that resembles an amusement park rollercoaster, highlighting the need to listen carefully to the sailors' voices. The "battle" is conducted fast, and the next hard maneuver is just seconds away. One dummy target has already been destroyed in this naval exercise. The machine gun points to the next target, which is heading straight for the Shaldag at high speed, riding in its wake. The machine gunner puts the target in his sights, shouting "fire, fire, fire", and says that he saw direct hits. The "attack" is foiled, and all our forces are safe.

"If a yachtsman is fishing for pleasure, taking the sun, and all this is happening around us, he'll think that we're children fooling around and causing trouble because we feel like, because that is what children do. Go tell him that this is life," says 36-year old Lt.-Col. A., who quickly sends the two Wasps on their way to their training mission with the missile corvettes on the high seas. The Wasps will simulate a swarm-style attack for missile corvette's crew, an attack involving multiple vessels simultaneously attacking the ship from multiple directions. This is not an unreasonable scenario in the security reality offshore from southern Israel. "There was already an attempt to carry out such an attack three years ago in the Gaza sector. We were alert and we knew how to function well to emerge safely from it," says Lt. Col. A. Yes, this is real life.

A hot sector

The southern sector is the Navy's hottest sector: it has to enforce the Gaza blockade; hundreds of vessels offshore from the Gaza Strip, mostly fishing boats under the cover of which terrorists gather intelligence for planning attacks against military and civilian targets; the gas infrastructures that are critical for the economy; and the backdrop of unceasing attempts to smuggle arms into Gaza by sea. The Shaldag's sailors feel that Gazans hate them, because they enforce the naval blockade.

Hatred of the sailors has heightened in recent weeks, because they disrupted arms smuggling from Sinai. Lt. Col. A. was on a Dvora Mark III class patrol boat that did the job that night, and he gives a first-hand account. "We closely monitored them. We saw two Gazan boats enter Egyptian waters, and reach a beach in Sinai. Later, loaded with equipment they headed back to Gaza camouflaged as fishing boats.

"We can identify the fishermen. Except for the boats, which could be used for fishing, there was no sign that they were engaged in fishing, and the men on board did not act like fishermen. They knew what they were doing. They were very determined, and they tried to evade us by maneuvering between dozens of other Palestinian boats sailing in the area."The incident began to develop, and we continued our constant monitoring. It was clear to us beyond a doubt that this was smuggling. A few hundred meters from the Gaza coast, we opened accurate fire at them from a few kilometers using the Typhoon cannon on deck."

A few hours later, the Palestinians reported that four men were wounded in the attack. Lt. Col. A. reported that two targets had been destroyed without question. "When so much munitions explodes, you can see it from kilometers away, even with the maked eye. I was there and I saw two fireballs that lasted until the dawn. How do you feel after such an incident? You feel great because we did the job," he says.

"Now I know that we're an even bigger target for them. They see us as the bad guys who hurt them. Here, everything is as personal as it can get. That is why such an incident and understanding its significance put us on higher alert. We're simply careful."

Sensitive and explosive

The guiding light of all this naval patrolling activity is the monitor of the Navy's central command system developed by its computer division. Navy chief of staff Rear Admiral Yaron Levy's eyes shine when he talks about it. "Even senior US Navy officers are excited by it. Believe me, if we could sell this to foreign navies, we'd solve many of the IDF's financial problems," he says.

"The system fits the Navy's most up-to-date needs like a glove, thanks to ability to indicate the precise location of every vessel in Israeli waters at any given moment, mark threatening vessels in red, unidentified vessels in purple, and identified and unthreatening vessels in green. It has many other features that help the Navy control Israel's waters, which is double the size of the country's land area. Of course we cannot tell you everything.

To give a sense of the system, even a waterski rider a few hundred meters from shore is marked on the system's screens, and will be closely monitored to check his intentions. "Israel's shores are covered by radar. That is the only way to ensure that the country's commerce will continue as usual, since 60% of Israel's GDP depends on it," says Levy. "At any given moment, there are between 300 and 1,300 vessels in our waters. We identify all of them, and if necessary, we check them."

"There is no such thing as an unidentified vessel that approaches one of the platforms. If that were to happen, I'll have failed in my mission to protect a defined buffer zone. Our mission is to secure this place, which is the Israeli economy's energy artery, and we do this round-the-clock in full coordination with the platforms' staff. We update them about alerts, and they participate in training and exercises. After all, in the event of a combined incident, we'll be working together," says Lt.-Col. A. He admits that the job requires especially strong nerves to sleep well at night.

Vessels that approach within seven miles of the platforms will be intercepted by one of the Navy's patrol boats. The intruder will be ordered to leave, and if it refuses, warning shots will be fired. This happens on a daily basis, because Gaza fishermen like to insist on their right to fish wherever they feel like it. "If we were not in the sector, the Palestinian fishermen would sail directly to the platforms to fish beneath them. With motorized vessels, they could reach the platforms within minutes. They don't go there only because we're in the field. They sometimes sail toward the platforms like a swarm of zealots to take them over. Sometimes, Egyptian boats direct their bows toward the platforms. If we don't stop them, they will be there. It's no laughing matter. These are gas platforms and you don't have to plan an al-Qaeda style mega-attack; a single spark is enough. Everything is sensitive and explosive."

In the coming months, the Navy will decide on the procurement of new ships to expand its defense capabilities for the gas infrastructures in the Mediterranean and in Israel's exclusive economic zone. The Navy will reportedly procure three or four new patrol boats customized to its updated operational specifications.

However, four years will pass from the order for the ships and other equipment until they become operational. "Our present forces are small," says Levy "Nonetheless, with these forces, we do ten times more than navies bigger than us do. The new ships that we'll procure will be the strong arm in the defensive response that we're preparing for the critical infrastructures and the exclusive economic zone."

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Leviathan partners promise Israeli jobs

The partners will promote Israeli jobs in all stages of Leviathan's development and operations.

The partners in the Leviathan natural gas field will promise to operate under a multiyear plan to promote Israeli jobs, according to their license from the Ministry of National Infrastructures. The partners - Noble Energy Inc. (NYSE: NBL), Delek Group Ltd. (TASE:DLEKG), Ratio Oil Exploration (1992) LP (TASE:RATI.L) and, shortly, Woodside Petroleum Ltd. (ASX: WPL) - will undertake to employ a minimum number of Israelis in every part of the project - development, production, operations, and maintenance - and increase the number every year.

"The plan will state, as much as possible, numerical indices for increasing the proportion of skilled Israelis, including senior workers, out of the total number of skilled workers employed in this activity throughout the operating period of the license," states the license. The partners in Leviathan will also train skilled Israeli workers.

The partners in Leviathan will invest $10-15 billion to develop the gas field, which will be managed by Noble Energy of the US and Australia's Woodside.

The full text of the license will be published today. It regulates the relations between the partners in Leviathan during the estimated 30-40 years of the gas field's life span. The license includes a chapter on promoting the employment of Israelis, a chapter that did not appear in Delek and Noble Energy's licenses for the Tamar and Yam Tethys's Mari B gas fields. More than $4 billion was invested in developing those gas fields, but they employed only a negligible number of Israelis in the development stages.

Noble Energy currently employs many Israelis on Tamar's offshore production and delivery systems to the coast. In the past year, the company also expanded its participation in training programs for Israelis in the oil and gas industry, including collaboration with the Ruppin Academic College.

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Electricity

Dorad power station ready to switch to diesel

The power station near Ashkelon is working at full capacity despite rocket fire.

Private power station Dorad Energy in Ashkelon is preparing to switch to producing energy from diesel instead of natural gas. Sources inform "Globes" that the preparations follow instructions received from the Israel Electric Corporation (IEC) (TASE: ELEC.B22) system management division station managers.

Dorad, which was inaugurated last April, is the largest private power station in Israel, and roughly a billion dollars was invested in its construction. The station can produce up to 850 megawatts, which is 7% of Israel's total energy industry production capacity.

The station's operational model allows it to transition on short notice to producing energy using diesel instead of natural gas - this is in case of malfunction, or damage to natural gas supply lines.

The station, which is located near Ashkelon, has been working at full capacity over recent days, despite the heavy rocket fire in the area.

It should be made clear that the instruction from IEC is only in the event of a supply problem. For the time being, supply of gas from the Tamar field continues normally.

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Energy minister signs commercial license for Dorad private power plant

With capacity of some 840 megawatts, the Dorad Energy Ltd. facility will generate electricity using natural gas.

Energy and Water Minister Silvan Shalom signed on Monday a commercial production and delivery license for Israel's largest private power plant, which will begin operating in the coming days.

With a capacity of about 840 megawatts – equivalent to approximately 6 percent of the country's electricity production – the Dorad Energy Ltd.

facility will generate electricity using natural gas. Located in Ashkelon, the Dorad plant will produce the electricity using a natural-gas combine cycle structure with 12 turbines, the company said.

The signing occurred after the High Court of Justice ordered that the minister grant the license on Sunday, following an urgent appeal filed by Dorad to the court last week. Shalom had allegedly delayed doing so as a result of a recent Haifa Labor Court ruling serving to safeguard the Israel Electric Corporation.

"Granting the license for production and delivery to the Dorad power station, to generate electricity through natural gas, is an important step for promoting competition in the electricity sector in Israel," Shalom said upon signing the license. "Despite the difficulties and pitfalls along the way, I'm glad that we have succeeded in granting the licenses to the Dorad station.

This is another significant step toward lowering electricity rates to the consumer and reducing air pollution, which the ministry is promoting."

Select turbines from the Dorad power plant temporarily supplied electricity to the national grid during the summer of 2013 to prevent a situation where the season's electricity reserves would become critically low.

In terms of natural-gas private power suppliers in Israel, Dorad's grid connection is second only to the 440- MW OPC Rotem plant, which came online earlier in summer 2013. An even larger, 870-MW Dalia Power Energies plant in the Shfela is scheduled to be grid connected by around summer 2015.

"I am proud to be a partner in the process of constructing the largest private power plant in Israel, founded with a desire to change the rules of the electricity sector and improve them," Dorad CEO Eli Assouline said.

Dorad Energy is a jointly owned by Eilat-Ashkelon Infrastructure Services (37.5%), Turkish company Zorlu (25%), Adelcom (18.75%) and U. Dori Engineering Works (18.75%).

The company will be selling all of its power output directly to private companies and government agencies, such as the Defense Ministry, Mekorot, Israel Aerospace Industries, Fattal Hotels, Keter Plastics, Isrotel, Strauss, Osem, Tamares Hotels, the Cargal Group, Seven Stars Mall, Bank Leumi and Tnuva.

Published by Globes, May 12, 2014

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IEC seeks clarifications on emissions reduction plan

The project is in doubt, after the Yogev Committee proposed suspending parts of it.

Israel Electric Corporation (IEC) (TASE: ELEC.B22) CEO Eli Glickman has asked the government for instructions whether the utility should continue investing billions of shekels to reduce emissions from its coal-fired power stations at Hadera and Ashkelon.

The future of the project, in which IEC has already spent NIS 2 billion, is in question, after the Yogev Committee on electricity reform recommened suspending parts of the project. In addition, the Public Utilities Authority (Electricity) has told IEC that it recognizes only 70% of the project's investment upon completion, and that the rest of the amount will only be recognized subject to an external review.

In a letter to the director generals at the Ministry of National Infrastructures, the Ministry of Environmental Protection, and the Government Companies Authority, and to the Public Utilities Authority's chairwoman, Glickman asked whether in view of contradictory guidelines from different agencies whether the project to expand the Orot Rabin Power Station at Hadera to four units should be halted immediately, and if the project to build two new units at the Rothenberg Power Station in Ashkelon should be suspended.

Glickman says that halting these projects would result in the laying off of more than 600 untenured employees by IEC's projects division.

IEC is due to invest over NIS 8 billion to reduce emissions of hazardous particles by installing filters and other equipment at the two power stations. The work is going on round the clock. Last week, the World Health Organization reported that Ashkelon is one of the most polluted cities in the West.

Despite IEC's difficult financial position, it has prioritized the emissions reduction project, after, in 2010, former Minister of Environmental Protection Gilad Erdan issued a personal directive against IEC officers, and threatened them with criminal lawsuits if the coal-fired power stations did not meet minimum emissions level from 2016. The directive's deadline was recently postponed to June 30, 2018, because the Egyptian natural gas crisis delayed the project.

IEC has spent NIS 1.4 billion to date to convert two of the six power units at Orot Rabin to natural gas and NIS 700 million to convert two of the four units at Rothenberg. The work at Orot Rabin is due to be completed in early 2016, and at Rothenberg in mid-2017. Scrubbers have already been installed at the other two units Rothenberg, and an agreement has been signed for the supply of nitrogen oxide reduction equipment. Nonetheless, the Yogev Committee's interim report recommends stopping the project at these units.

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Israel's natural gas demand will be lower because of a proposal to suspend the Hadera Power Station's conversion to gas.

Israel's natural gas demand will be lower than estimated, mainly because of a recommendation to suspend the conversion of the Orot Rabin Power Station in Hadera to gas. This is one of the recommendations of the Yogev Committee on the reform of the electricity market and **Israel Electric Corporation** (IEC) (TASE:**ELEC.B22**). Conversion of the power station at Hadera to gas would have increased gas consumption by 1.5-2 billion cubic meters (BCM) a year.

Another consideration that may affect the gas consumption projection update is the slower than expected growth in electricity consumption: consumption was unexpectedly 2.8% less in 2013 than in 2012. There are also many delays in hooking up factories to the natural gas pipeline, especially in central Israel. In addition, the conversion of vehicles to natural gas is progressing more slowly than projected.

The projected natural gas demand, which is the basis for planning by the government, analysts, and gas industry developers, is based on one of ten scenarios prepared by the Tzemach Committee on government policy for the development of Israel's natural gas market and exports. The scenario chosen assumed that electricity consumption would grow by 3.1% a year and that demand for gas by industry would grow by 1.3% a year.

Israel's demand for gas of 7-8 BCM a year is fully met by the Tamar field, which can supply up to 10 BCM a year. Tamar's production capacity will increase by 20% when the gas compressors on the pipeline are installed in the summer of 2015. All of the gas that the Tamar field's pipeline can delivery is already sold to domestic customers.

Under the chosen scenario, Israel's gas consumption will exceed 10 BCM a year in 2016, and reach 13.3 BCM in 2020 and 17 BCM in 2025. If it is decided to update the gas consumption forecast, Tamar will have to supply 2 BCM less of gas in 2020 and 5 BCM less in 2025. The Leviathan licensees (which include some Tamar licensees) will compete for this smaller market with the licensees of the Tanin and Karish gas fields, when they are developed.

The Ministry of National Infrastructures said in response, "The economy's demand forecasts (including for electricity and gas) are periodically reviewed and updated. The Yogev Committee's draft recommendations include a proposal to establish a team to examine cancelling the conversion of the Orot Rabin Power Station to natural gas. If an when a decision is made on this matter, the drawing up of a new natural gas consumption forecast, which will include all the relevant variables, including electricity consumption forecasts in line with GNP, the weather, energy conservation, and renewable energy, will be examined."

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MISCELLANEOUS

Veolia sells Israel water, waste and energy activities

Global fund manager Oaktree Capital Management is buying the activities.

France's Veolia Environnement SA (Euronext: VE) has signed an agreement for the sale of its water, waste and energy activities in Israel to Los Angeles-based global investment fund manager Oaktree Capital Management L.P.

Veolia said the deal will reduce its debt by €250 million and is part of its strategy to refocus the Group geographically and to concentrate on areas where it can seize less capital intensive opportunities.

Closing of the deal requires approval of the Israel Antitrust Authority and change of control authorizations common in such transactions. Veolia hopes to close the deal by the fourth quarter of 2014.

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Electricity regulator accused of smothering wind energy

Legal battles over rates have stalled progress on establishing Israel's first wind farms.

The electricity market in Israel is operating out of the courtroom these days. Engineers and planners have been replaced with legal teams, who work hard to flood the High Court of Justice with petitions: Etgal, **Enlight Renewable Energy Solutions Ltd.** (TASE:**ENLT**), Tzomet Energia, Dunham Capital - these are just a few names of companies that have already submitted, or plan to submit, petitions to the High Court in the coming days. The petitions are a direct result of the uncertainty created by the electricity industry regulator.

Bank financing arrangements cannot be signed, and new solar fields cannot be connected to the grid - all until further notice. The Ministry of Finance and other government ministries place responsibility for the situation on Haifa District Labor Court president Judge Rami Cohen, who announced a freeze in the electricity market two months ago, with the goal of preventing the government from continuing to advance unilateral initiatives that weaken the **Israel Electric Corporation** (IEC) (TASE: **ELEC.B22**) workers' bargaining power. According to the developers, however, the primary culprit is the Public Utilities Authority (Electricity).

This is the case, for instance, in the field of wind energy: only a petition to the High Court of Justice against the Public Utilities Authority (Electricity) made it possible for the first large wind turbine project in Israel to get underway. Shlomo Shmeltzer's **Afcon Industries Ltd.** (TASE: **AFIN**) and partner Dr. Eli Ben Dov recently announced the completion of financing for the joint venture to establish eleven turbines in Ramat Sirin and fourteen turbines in Ma'ale Gilboa. NIS 200 million will be invested in the project, 80% of which will be financed by **Bank Hapoalim** (TASE: **POLI**).

Moments before the deal was closed, the developers petitioned the high court, after it became clear that the electricity rate that the Public Utilities Authority (Electricity) had set (in other words, the rate they would be paid for the electricity produced by the wind farm for the next 20 years) had been reduced by the authority from NIS 0.5177/kWh to NIS 0.4675/kWh. The petition worked: the Public Utilities Authority (Electricity) agreed to a compromise of 0.4851/kWh, an amount that allowed Afcon and Ben Dov to move forward. The venture began 10 years ago, by the way, a fact that illustrates just how difficult it is to launch green energy initiatives in Israel.

But will the first project built in Israel also be the last? At least for the foreseeable future? The wind-energy developers warn that this is exactly what will happen if the Public Utilities Authority (Electricity) does not back down on its stated intention to cut the promised rate by 15%. The Electricity Authority, on the other hand, is not moved by the threats. They are convinced that these are the usual empty threats that are sounded every time the authority tries to cut a rate, which also includes a subsidy, paid for by all the electricity consumers. The truth seems to lie somewhere in the middle.

On April 8, the Public Utilities Authority (Electricity) announced its decision to update the rates for large wind farms (with capacities greater than 50kW). The original rate set in 2011 is NIS 0.4322, but the Public Utilities Authority (Electricity) decided to reduce it to less than NIS 0.40. The authority explained that the update is necessary if the level of profitability that the rate guarantees the developers is to be preserved - 14% on capital. Since the original rate was set, the authority explained, turbine prices around the world fell by an average 12%, while, at the same time, turbine efficiency increased by an average 10%. Based on accounting calculations, the conclusion is that in order for the profitability rate to remain around 14%, the rate paid per kilowatt of energy needs to be reduced by 15%.

The response from the developers was furious. According to one of the companies, what changed was not the price of turbines, but the Public Utilities Authority's (Electricity) guiding principles of setting a goal of cutting the rate no matter what. Other developers accuse the authority of nothing short of manipulation, and presenting distorted and misleading data. "There is some sort of malicious intent here. Some negative determination to run fast and cut before the first wind facility has even been built," says former

Israel Military Industries Ltd.(IMI) CEO Shlomo Milo, who today heads the Tailwind Group, which provides services to wind-energy developers.

The developers' claims may be divided into two. First, they are furious about the authority's decision to link the rates to Bloomberg's turbine price index. This is a private company that charges an annual $50,000 membership fee for access to its data. Eurocom Group member company **Enlight Renewable Energy Solutions Ltd.**(TASE:**ENLT**) petitioned the High Court and demanded that the Public Utilities Authority (Electricity) reveal the data upon which the Bloomberg index is based, for the sake of transparency.

Another foreign company that asked not to be mentioned by name says, "This is an unacceptable dismantling of the central authority for which the Public Utilities Authority (Electricity) was set up, where the authority is transferred to a foreign business entity. Bloomberg is not obligated to impartiality standards and its index does not reflect Israel's unique characteristics."

The developers also claim that the authority ignored data that did not suit its needs. For example, the Bloomberg index went up 20% since the beginning of the year. The cost of wind turbines is $0.82 per watt installed, compared with the original rate of $1.1 in 2011. But the figure for the 2011 rate was taken from a different index.

The developers say that in analyzing turbine prices based on the revised rate index, it becomes clear that their prices actually went up since 2011. A table of comparisons by country that the Electricity Authority presented is also warped, according to the developers: in eleven of the fourteen countries presented in the table, there was no change in wind rates, while in only three of the countries were rates cut - between 26% and 60%.

Furthermore, the developers claim that the Public Utilities Authority (Electricity) is ignoring the unique difficulties in the Israeli market, where they are forced to absorb high land and sea freight costs and where there is a shortage of skilled manpower and suitable equipment for establishing wind turbines. And, finally, nothing is possible without the environmental groups that took care to obligate the developers to undertake additional expenses, such as setting up special night radar, which cost about a million dollars, to limit damage to bats.

The Public Utilities Authority (Electricity) claims that this is an attempt to distance the conversation from the data. Even without Bloomberg, numerous surveys and reports have piled up at the Electricity Authority, conducted by independent entities - among them the International Energy Agency (IEA) and the US Department of Energy - that point to a drop in turbine prices.

The Public Utilities Authority (Electricity) does not understand the claim that the index has risen since the hearing was publicized - then the rate will also rise, they say. The claims about mixed data from various indices stem from the fact that type of turbines the developers are using changed, and instead of the old generation of wind turbines, there are today new, modern turbines, with higher production capacities - turbines whose prices have dropped significantly. And, as for the unique characteristics of the Israeli market, the Public Utilities Authority (Electricity) has an answer for that too: turbine cost is the only component of the rate that changed. The other costs, such as transportation, construction, maintenance and operation costs even adding radar to protect against bats at night - these factors have already been priced into the rate.

In order to find out who's right, it seems we will have to wait quite some time. Only the Ramat Sirin and Ma'aleh Gilboa wind farms will be built in Israel in the next two years, and it seems there is only one other large wind project on the horizon, in Emek Habacha. Meanwhile, we'll see you in court.

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Oil shale firm hopes to advance pilot project, pledging complete transparency

Adam Teva V'Din: Environmental regulations on drilling projects are still insufficient.

While plunging 300 meters into the shale rock of the Shfela basin has long been criticized as a risky endeavor to the area's residents, the company aiming to extract the oil wedged within these sediments promises an environmentally sound process that provides complete transparency.

Jerusalem-based Israel Energy Initiatives (IEI), a subsidiary of the New Jersey firm Genie Energy, has for many years been aiming to prove the usability of the approximately 40 billion barrels of oil found in the shale rock layer of the Shfela basin. Although IEI completed its exploratory trial stage in 2011, progression toward a fullfledged pilot program has been delayed for the past few years as a result of environmental opposition, as well as changes in relevant regulations.

"There's the promise of energy independence and a commercial value that will bear fruit to the tune of at least NIS 10b. a year," IEI CEO Relik Shafir told *The Jerusalem Post*. "This is a resource that belongs to the people – the people need to know that it's there. And we need to see if it can be produced in its way to the benefit of Israel."

In just a month and a half – August 4 – the company's pilot project plans will once again resurface on the table of the Jerusalem District Committee for Planning and Building, at which time decisions will be made as to how and in what capacity the project can move forward.

Stressing that an impermeable, 200-meter layer of rock separates the shale and the area's aquifer, and that the drilling will entail on site, underground oil-heating, IEI has promised that the drilling will not damage the environment.

The potential 40 billion barrels of hydrocarbons in IEI's license zone are located between 200 to 400 meters below the surface, enmeshed between 70-million-year-old fossils. To eventually produce oil on a commercial scale, the company must drill a production pipeline surrounded by a ring of heating wells, which gradually heat the rock over the course of nine months to 300° C and thereby transform it into lightweight oil on site.

During the exploratory phase, the company extracted the shale without using heaters, and sent the oily rock to laboratories in Ben-Gurion University and the US for analysis.

The pilot phase would consist of one drilling site and production facility in a portion of IEI's license zone, through which the company would aim to extract about 500 barrels of oil – 2 barrels per day. For the sake of comparison, Shafir pointed out that Israel currently consumes about 275,000 barrels of imported oil daily.

Only after the successful completion of a pilot project could a demonstration phase, followed by a full commercial phase, move forward.

IEI has faced opposition along the way due to the fact that their technology has yet to be proven anywhere in the world. Focusing in particular on this issue, Adam Teva V'Din (Israel Union for Environmental Defense), filed a High Court petition in August 2010 arguing the technology has not been proven, and yet it is subject only to the archaic Petroleum Law from 1952, which lacks the strict environmental constraints associated with other construction plans.

While the government did not decide to subject hydrocarbon drilling plans to the country's planning and building laws, the Energy, Water and National Infrastructures Ministry instead issued regulations that tightened construction guidelines and environmental protocols for such projects, in April 2012.

"[Drilling] does not have the latitude it had before," Shafir said. "Since we're Israeli citizens as well, I think the public interest is kept, and we went along with this."

Adam Teva V'Din representatives, however, argued the new regulations are not strong enough.

"They don't give the environmental considerations enough place at all," said Keren Halperin- Museri, deputy director of Adam Teva V'Din.

The regulations, Halperin- Museri stressed, have only created a "middle pathway," in which drilling companies must ask for an exploration permit from district planning committees, who then operate under the new regulation rather than under national planning and building laws.

"It is true that it's better to have these regulations than having nothing at all," she said.

Adam Teva V'Din attorneys filed a second petition to the High Court in June 2012 detailing why they felt the new regulations were insufficient, with regards to all hydrocarbon drilling projects, but also including a specific section on the oil shale project in question, Halperin-Museri explained. Because the first and second petitions therefore had some overlap, Adam Teva V'Din agreed to withdraw the first petition at an October 2012 hearing, and combine the contents of the two in the second one, Halperin-Museri said.

At the December 2012 hearing that followed, Halperin- Museri said she and her colleagues at Adam Teva V'Din did not have the opportunity to go into enough detail about the oil shale case specifically. Yet the judges determined the regulations did not present enough of a problem to justify their cancellation, she said.

While Shafir agreed the regulations do not have quite as much power as planning and building laws, he stressed the regulations did direct the Energy Ministry to take part in enhanced consultations with the Environment Ministry – so much so, that the requisite environmental impact assessment directives took a year to generate. The judges, Shafir stressed, decreed that the issuance of directives would be a balanced process taking public interest into consideration.

One of the biggest problems, according to Halperin-Museri, is the fact that the Petroleum Law mandates that if during a pilot project a drilling firm finds a quantity of oil that the Energy Ministry deems valuable, then the company is obligated to produce the oil on a commercial scale.

Following the December 2012 hearing, the Energy Ministry was tasked with delivering environmental impact assessment directives to IEI, with the approval of the Environmental Protection Ministry. IEI received these directives after a year, in April 2013, Shafir said.

Among the many components of the directive provided to IEI were instructions to determine a suitable alternative to the originally proposed Ela Valley location for the pilot project, Shafir said.

They have identified what they feel would be a reasonable alternative to Ela along Road 35, which the company is calling "Tarkumiya" and overlaps with the probable production zone, should the project continue to a commercial phase. While the site is still within the Israel-proper side of the Green Line, it is located close to the Tarkumiya checkpoint.

Although the Tarkumiya area requires drilling significantly deeper, Shafir said this alternative is located in an industrial area and essentially not a tourism area. About 2.5km. away from the closest village, no residents would have any direct contact with the site, and a hill precludes any noise or landscape eyesores, he said.

"The only one ever seen riding a bicycle there is me," Shafir said.

In terms of environmental sensitivity to inhabitants, IEI determined this alternative would be optimal.

Also in the assessment, the company evaluated how heating the rock would impact the area's geology, such as interaction with the aquifer.

"This is one of the worries of the environmentalists," Shafir said. "Had we not understood geology and petrophysics, this would have been our worry as well because it would mean we would lose the oil."

In the pilot program, the heating rods require about nine months to heat up the rock to the necessary 300° for oil extraction, and because the rock itself is a poor conducting element, the heating would only have "a limited effect in the area being heated," Shafir said.

Although confident – and having received the support of numerous geologists – the heat would not crack the impermeable layer of rock, Shafir said the upward pressure of the aquifer is so high that water would only be able to shoot upward through such cracks, rather than oil spilling downward.

Shafir said proof would be delivered in the pilot stage, and in doing so compared the process to an in situ thermal remediation technology belonging to the company TerraTherma, invented by IEI's now chief scientist, Dr. Harold Vinegar. Similar subsurface heating technologies are used by this TerraTherma in order to clean up organic underground contaminants, and the resultant impacts are all well documented, he said.

Shafir also referred to six in-situ oil shale pilot programs in Colorado and one in Alberta, which have proven their ability to produce, as well as the original in-situ production that occurred in Sweden years ago, with an only 20-meter impermeable rock barrier.

Calling this example "living proof of the effectiveness of the sealed layer," Shafir said that no hydrogeologist would support claims of interaction between Israel's shale layer and aquifer, separated by 10 times the amount of rock.

Yet none of these pilots occurred under exactly the same environmental conditions that apply to the Shfela basin, and no one has tried out the technology on a commercial level, Halperin-Museri argued. Acknowledging that interaction between oil shale layer and the aquifer below is not certain, Halperin-Museri said she and her colleagues feel such a risk is not worth taking.

Although Shafir agreed no such commercial venture has ever taken place, he said if the same attitude had been applied to the TerraTherma technology, many contaminated land sites could have never been cleaned.

At the Jerusalem District Committee for Planning and Building meeting on August 4, IEI will likely find out whether they can proceed with the Ela Valley pilot project, the Tarkumiya version or no project at all.

"It is a legitimate and respectable solution to move it to a less geologically agreeable area so as to take the inhabitants' consideration into the decision-making process, simply because if I were there or you were there, you would not like it either," Shafir said.

Acknowledging Tarkumiya is farther from residences, Halperin-Museri said the new spot may be more environmentally sensitive, due to its proximity to Beit Guvrin – the national park recently declared a UNESCO World Heritage Site.

To these concerns, Shafir responded the Tarkumiya site is six kilometers from Beit Guvrin. Whereas, the BG Bond industrial plant is located only 350 meters from Kibbutz Beit Guvrin.

If the Tarkumiya alternative is chosen, IEI will need to submit a detailed environmental impact assessment of that area after receiving new directives, which would take a few months, Shafir predicted. An objection period of roughly 45 days would then follow, during which Shafir said he expects to receive several thousand objections. A final vote on the plans would likely occur no earlier than the beginning of spring 2015, he estimated.

If IEI receives a nod in its favor, it would then need to acquire authorizations from dozens of authorities, outline a detailed engineering plan and only then could start drilling the pilot program by around summer 2015, Shafir said. The pilot program would last three years until the end of production, followed by a cooling period, he explained.

"If as we go along we find everything works well as projected, then we start going toward industrial production on a very slow path," he said.

Such a project could only succeed on a commercial level, however, if the government deems it an official national project, due to the coordination needed among so many state agencies, according to Shafir.

Even if IEI was to receive the affirmation of every committee and authority necessary along the way, industrial production would not be able to begin before a decade's time, Shafir said.

While in principle Adam Teva V'Din is against moving forward with the project as it stands, Halperin-Museri said she would not be unequivocally against all such projects – if the legislative process occurred differently.

There is no justification to advance this project before Israel has a clear national energy strategy, which would determine how much of each fuel type the country will need in the future, Halperin-Museri explained. If such a national energy strategy determined that Israel would in fact still require the amount of oil offered by this project, only then should the plans be evaluated – under national planning laws, she added.

"Then we will decide if it makes sense," Halperin-Museri said.

To these demands, Shafir responded, "This is like saying that until we have a constitution, no legal proceeding should take place."No matter what decisions are made, Shafir said he advocates complete transparency all the way through and promised that absolutely no information would be hidden from the public.

"We look at this as a body of knowledge that needs to be presented to the public in the most trustworthy way, and let the public be educated and take its own stand," he said.

Along these lines, Shafir praised Adam Teva V'Din for working to legitimately protect the public interest.

"It is important that they exist within our society, and they are the watchdogs," he said. "They did their work."

"I think that we're in a good position that they had forced the state to take the environmental point of view very seriously," Shafir added. "Now it's a question for scientists and engineers to ascertain what is the balance of the benefits and environmental implications for the well-being of the state and people."

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Cypriot sources confirm CNOOC Delek, Noble talks

Representatives of China's CNOOC were in Cyprus last month for talks.

Cypriot sources have confirmed "Globes" report that energy giant China National Offshore Oil Corp. (CNOOC) is in talks to buy 30-40% of the Aphrodite gas field in Cyprus.

Noble Energy owns 70% of the rights of the field, which is in Cyprus's Block 12, and **Delek Group Ltd.** (TASE: **DLEKG**) energy exploration units **Avner Oil and Gas LP** (TASE: **AVNR.L**) and **Delek Drilling Limited Partnership** (TASE:**DEDR.L**) own 15% each.

The Cypriot sources said that CNOOC representatives were in Cyprus last month for talks on the matter.

The Aphrodite field, which borders on Israel's Pelagic licenses, an area north of Leviathan, has an estimated 4.1 trillion cubic feet of natural gas, enough to justify developing a Floating Liquid Natural Gas (FLNG), which would allow the Chinese company to export gas to Chinese companies. But ultimately the Leviathan partners preferred Australian company Woodside Petroleum Ltd. (ASX: WPL) and its greater experience in FLNG projects.

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Woodside in Cyprus talks with Delek and Noble Energy

Despite withdrawing from the Leviathan deal, Woodside is in talks over Block 12.

Australian energy exploration company Woodside Petroleum Ltd. (ASX: WPL) continues to conduct talks to become a partner **Noble Energy Inc.** (NYSE: **NBL**) and **Delek Group Ltd.** (TASE: **DLEKG**) Cypriot license despite having withdrawn from buying rights in Israel's giant Leviathan field.
Woodside believes that the Cypriot field is very suitable for developing a Floating Liquid Natural Gas (FLNG) installation the same solution it was unsuccessfully attempting to promote as the preferred

option for Leviathan.

Noble Energy and Woodside, managed by CEO Peter Coleman, declined to comment on the report. Noble Energy holds 70% of the rights to Cyprus's Block 12, which borders on Israel's Pelagic licenses, an area north of Leviathan. In 2011, Delek units **Avner Oil and Gas LP**(TASE: **AVNR.L**) and **Delek Drilling Limited Partnership** (TASE: **DEDR.L**) realized an option to buy 30% of the rights from Noble who shortly afterwards signed a revenue division agreement with the Cypriot government.

In early 2012, Noble discovered an estimated 5.2 TCF of gas in Block 12's Aphrodite field. This is half the size of Tamar and a quarter the size of Leviathan. The estimate was lowered by NSAI to 4.1 TCF last year. Woodside had planned to buy 25% of Leviathan for $2.71 billion but withdrew due to disagreements over export priorities following Noble, Delek and Ratio's preference for a regional pipeline rather than an FLNG for exports to East Asia.

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Israel-Lebanon deadlocked over offshore border

The dispute is delaying publication of an oil and gas exploration tender for Lebanon's Block 9.

Talks on solving the dispute between Israel and Lebanon over the border of their exclusive economic zones (EEZ) are on the rocks. US Department of State Deputy Assistant Secretary for Energy Diplomacy Amos Hochstein, who is mediating the talks, met Lebanese president and top government leaders, except for Speaker of the Parliament Nabih Berri, on a visit early this month.

Israel and Lebanon dispute the point at which their EEZs meet Cyprus's EEZ. Israel and Lebanon give different positions several kilometers apart for this meeting point, creating an 850-square kilometer triangle with its apex is the Israel-Lebanon border at the Mediterranean shore at Rosh Hanikra.

The US proposal, first raised in November 2013, is to continue the border (known as the Blue Line, drawn by the UN, after Israel withdrew from southern Lebanon in 2000) into the sea. This border would be deemed temporary, until a permanent solution is found. Lebanon says that the proposal "is a good starting point that needs fine tuning."

The dispute is delaying publication of an oil and gas exploration tender for Lebanon's Block 9, which could have more than seven trillion cubic feet of natural gas. The April 10 deadline for submitting bids in tenders for five Lebanese blocks has been postponed until August, partly because some Lebanese government officials want to double the number of exploration blocks to ten. Most oil majors have said that they intend to participate in some of the tenders, despite Lebanon's political instability.

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