# التنقيب عن النفط بر"اً: احتمالات واعدة بكلفة أقل



بحر لبنان وبر"ه بانتظار الإفراج عنها.. مع ذلك يحضر الملف النفطي بصمت أحياناً وبصخب أحياناً أخرى، وفي كلتا الحالتين يبقى عالقا ...في الدهاليز السياسية

قبل إعلان رئيس مجلس الوزراء سعد الحريري استقالته، كانت الحكومة على أبواب إقرار أول عقد تلزيم في البلوكين 4 و 9 وذلك بعد إقفال دورة التراخيص الأولى في 12 تشرين الأول على عرضين مقدمين من ائتلاف يضم "ثلاث شركات إيني ونوفاتك وتوتال(. وكان من المفترض أن يبت مجلس الوزراء هذا الملف ويعطي وزارة الطاقة موافقته لتتمكن من التفاوض مع الشركات. علما أن المفاوضات مع تحالف الشركات المشاركة في دورة التراخيص الأولى للتنقيب عن النفط في المياه المشاركة في دورة التراخيص الأولى للتنقيب عن النفط في المياه

غير أن وزير الطاقة لم ينتظر تكليف الحكومة فوق ع دعوة الشركات المشاركة في دورة التراخيص الأولى معلنا ذلك بخطورة التبعات لتي تنجم من عدم المضي قدما في مسار الآلية المقر رة لاستكشاف الثروة النفطية. رغم خطوة الوزير، التي يراها كثيرون خطوة متسر عة، يبدو أن تحقيق حلم لبنان النفطي قد أرجئ في الوقت الراهن. صحيح أن الحريري قد تريت في ما خص الاستقالة، إلا أن الأوضاع لا تنبئ بانعقاد جلسة لمجلس الوزراء قريبا لحسم الملفات الكبيرة وعقد المصيرية

في ظلّ هذا الوضع هل يُعاد إلى الواجهة التنقيب عن النفط برّا ً؟! أبدى لبنان جاهزية تامّة لبتّ موضوع استخراج النفط في البرّ، وذلك من خال المسح الذي جرى على امتداد 6000 كيلومتر مربع منذ أكثر من ثلاثة أعوام. المعلومات الجيولوجية التي أصدرتها شركة «نيوس» تسمح بتقييم مخزون النفط والغاز في البر ّاللبناني بشكل مفس ّل. وقد أتاح المسح الثلاثي الأبعاد الحصول على مجموعة بيانات جيوفيزيائية لباطن الأرض التي يمكن للشركات لعالمية أن تحللها بغية تحديد أماكن وجود النفط والغاز وتطويرهما واستخراجهما. ومع ذلك لم تبتعد المناكفات السياسية من هذا لملف، فيما يستمر تخوف الخبراء من تكرار تجربة المماطلة المتمادية التي رافقت إقرار المرسومين المتعلقين باستخراج النفط في البحر وما رتسبه ذلك من المرسومين المتعلقين باستخراج النفط في البحر وما رتسبه ذلك من ضمور في هذا الملف وانكفاء لعدد كبير من الشركات الدولية التي لم تعد مهتمة بالغوص في الأعماق اللبنانية، وما تبعه من تسرع لناحية إجراء دورة تراخيص واحدة (فيما أجرت قبرص ثلاث دورات تراخيص ولم إجراء دورة تراخيص واحدة (فيما أجرت قبرص ثلاث دورات تراخيص ولم

### التنقيب البرسي أقل كلفة

بحسب الخبير النفطي والاقتصادي رودي بارودي، «فان تحاليل البيانات قد أظهرت تكاملاً في النظام البترولي من الناحية الجيولوجية فلماذا لا يباشر لبنان بإجراءات التنقيب البرسي؟ عمليات حفر الآبار النفطية التي حصلت في أربعينيات القرن الماضي ثبتت وجود مكامن نفطية، إضافة إلى الاستكشافات التي تمت في سوريا وفلسطين والتي يشكل لبنان استمرارا لها، كلها دلائل تؤكد وجود مكامن نفطية. إلى ذلك، كلفة التنقيب والتطوير في البرس، أقل من خُمس (5/1) الكلفة بحرا ، ما يشكل عنصر جذب لشركات متوسطة الحجم. من هنا لا بد من عدم المماطلة في هذا الملف الحيوي لتجنب تكرار تجربة البحر. فالاهتمام بالبرسي يؤدي إلى زيادة التنافس بين الشركات، ما يمعي الدولة قدرة تفاوضية أعلى تؤدي إلى تعظيم المنفعة، فضلاً عن سهولة مشاركتها في الأنشطة البترولية برساً بسبب المنفعة، فضلاً عن سهولة مشاركتها في الأنشطة البترولية برساً بسبب

### تاريخ التنقيب البرسي

ليس التنقيب عن البر" في لبنان أمرا مستجد"ا أ. بل إن التوقعات عن احتمال وجوده تعود إلى منتصف الأربعينيات، وقد بد أت حينها محاولات حفر بئر تجريبية في المنحدر الغربي في جبل تربل شمال مدينة طرابلس. آنذاك اكتشفت الشركة المنقلة موادل بترولية ثم طمرت البئر من دون أن تمعرف الأسباب. بين الأعوام 1948 و 1966 تم حفر سبع آبار غالبيتها في منطقة البقاع قبل أن يقفل هذا الملف بسبب الأوضاع السياسية من جهة، وعدم توفر إمكانات لإجراء الدراسات

اللازمة. ولكن، رغم الاكتشافات، والإثباتات لا يزال لبنان غائباً عن الساحة النفطية، فيما يرُفترض أن يكون معنياً بكل ما يحصل من حوله.

عن الإطار القانوني، تقول المحامية والمتخصصة في قطاع النفط والغاز كرستينا أبي حيدر: »هنالك مشروع قانون للتنقيب البري وهو موجود لدى اللجان المختصة لكن إن لم يـُقرُّف في وقت قريب فلماذا لا ت ُعتمد القوانين المرعية الإجراء التي، بالرغم من قدمها، من الممكن أن تسد الفراغ إن أجريت التعديات اللازمة. القانون الجديد ينبغي أن يحتوي على نقاط قانونية هامّة إذا ما أردنا مواكبة التطور الاقتصادي والاجتماعي لا سيما في ما يتعلق بتنظيم عمل الشركات، ومسألة الإشغال الموقت للعقارات أثناء عملية الاستكشاف البرِّي، من ثم الاستملاك إذا تم اكتشاف حقل نفطي… كل هذه ا أ لمور تحتاج إلى مقاربة استباقية وسريعة. فالملكية الفردية مصونة في الدستور اللبناني فا يمكن نزعها إلا بموجب مرسوم منفعة عامّة ولقاء تعويض عادل. إلى ذلك، قد تظهر عقبات إضافية هي المحافظة على الأثار وعلى المواقع الطبيعية والمياه الجوفية والثروات الطبيعية الأخرى، كل هذه التحدّيات قد تعوق عمليات التنقيب أو تدمّر التراث الوطني لذا يجب سنّ قوانين وقائية وردعية «. وتتابع أبي حيدر «من غير الممكن الحديث عن النفط البرِّي دون ذكر دور البلديات كسلطة محلية منتخبة وعلى تماسّ مباشر مع المشاكل اليومية، لذلك من المفترض إيجاد منظومة تشريعية ترعاها لكونها المعني مباشرة بإدارة الثروات الطبيعية. ومن الضروري أن توضع القوانين الواضحة قبل البدء بأيِّ عملية تنقيب، مع دراسة التجارب السلبية والإيجابية في الدول الأخرى لنعرف كيف نستفيد منها ولن أخذ مثلا ً الأثر البيئي الذي تؤدي في تطبيقه البلديات دورا ً أساسيا ً. للأسف، حتى الساعة لم يُفتح النقاش في لبنان على نحو واسع وعميق حول دور البلديات، سواء على صعيد الآثار البيئية أو الاقتصادية أو الاجتماعية أو حتى إيجاد فرص عمل جديدة، و إيجاد مدخول جديد » . للبلديات ولاتحادات البلديات

وتضيف « أن التجارب العالمية تشجع الشركات الصغرى والمتوسطة في عملية التنقيب البرسي، ومن المفترض أن يحذو لبنان حذو الدول الأخرى التي تمتاز بخبرات عالية في إدارة مجال النفط والغاز السبرسي، و ألا يسمح للشركات الكبرى بأن تنفرد بهذا القطاع وتبتلعه، ولا يمكن لذلك أن يتم إلا من خلال مراقبة علمية ودقيقة لعمل الشركات المنقسبة«. منذ أكثر من أربعة أعوام يزعم المسؤولون

عن هذا القطاع أن عملية التنقيب عن النفط البري يمكن أن تبدأ في وقت قريب، بما أن العوائق التي تؤخر العمل بحرا غير موجودة. لكن يبدو أن هذا الوقت القريب لن يحين حتى من أجل وضع منهجية واضحة لطريقة العمل. فهل كل» العراقيل المفتعلة « أحيانا والظروف المستجدة أحيانا أخرى إشارة إلى أفضلية أن تبقى هذه الثروة مدفونة لئلا تتسبب في إغراقنا في المزيد من الفساد والمحاصمة؟

# بــارودي: الجــدول الــزمني للإمتيـازات البريـة أقـل مـن البحري



قد ّم الكثير لتطوّر القطاع وتقريب الدول" Margerie DE بارودي: الجدول الزمني للإمتيازات البرية أقل من البحري

المركزية- أعرب الخبير الإقتصادي في شؤون الطاقة رودي بارودي عن أسفه الشديد لغياب رئيس مجلس إدارة شركة "توتال" العالمية الرجل الذي قد م الكثير لتطوس هذا" Christophe de Margerie القطاع وحاول التقريب في ما بين الدول"، مثم منا "رحيله وهو يقوم بمهامه كرئيس "توتال" إذ كان يحاول تذليل المزيد من الصعوبات التي يواجهها القطاع عموما و"توتال" خصوصا ، وتحقيق إنجازات «تجديدة لشركته من جهة أخرى، شرح بارودي لــ"المركزية"، بعض النقاط المتعلقة بآلية التنقيب البري والبحري عن النفط والغاز في لبنان، وشدد في هذا السياق على أبرز المحاور التي تشكّل أولوية في هذه العملية، :وهي

أولا ً: على الحكومة فصل القانون البري وآلياته عن عملية التنقيب — .البحرى

. ثانيا ً: إعداد خارطة طريق واضحة وشفافة للإمتيازات البرية —

وأضاف: يظهر أن مع نهاية العام الجاري، ستتوفر لدى غرفة البيانات حول Dفي وزارة الطاقة والمياه، كامل صو َر ودراسات 3 ( Data Room) ، Transitional Zone (الشاطئ) E & P باطن سطح الأرض لشركات الــ وذلك من أجل شراء البيانات وفحصها قبل البدء بالإلتزامات البرية. الحالية فسيتم دمجها في مشروع المسح D أما الخطوط الزلزالية 2 ."الجوي، عبر قياسات متعددة

وقال ردا ً على سؤال: إن الجدول الزمني للإمتيازات البرية سيستغرق فترة زمنية أقل بكثير مما تتطلبه الإمتيازات البحرية، إذ في الإمكان البدء بالحفر (الإستكشاف) وتنفيذه في وقت أسرع مما هو عليه .في الآبار البحرية

وأكد أن "الإلتزام البري للشركات يرُفترض أن يرُحد ّد لمدة ثلاث سنوات، ويمكن أن تشمل الإمتيازات في هذا المجال، بين ثلاثة وخمسة آبار على الأقل وبميزانية أقل من تلك المخصصة للآبار البحرية"، وأعطى مثالا على ذلك، "خمسة ملايين دولار للآبار البرية، في مقابل 125 مليونا للآبار البحرية البعيدة من الشاطئ، أما المدة فتتراوح .بين شهرين وأربعة أشهر للأولى، في مقابل ستة أشهر وسنة للثانية

وفي المقلب الآخر، شدد بارودي على "ضرورة تقسيم المياه البحرية الخاضعة للولاية القضائية اللبنانية، إلى مناطق بشكل رُقع، على أن يتم الانتهاء من نموذج "اتفاقية الإستكشاف والإنتاج" في أسرع وقت، .بالتزامن مع مرسوم دفتر الشروط والإفادة من التراخيص البحرية

وقال: يبقى الأهم التوافق السياسي على هذا المشروع المستقبلي الضخم، والإفادة من دعوات رئيس المجلس المتكررة إلى الحوار .والحفاظ على الأمن والإقتصاد على السواء

وأخيراً ، أثنى بارودي على "الدور الرائد الذي تقوم به "هيئة

ادارة قطاع البترول في لبنان" وتنظيمها للمؤتمر المنعقد في "بيروت، والذي سيطلق آفاقا ً جديدة في عملية التنقيب عن النفط

# Roudi Baroudi's remarks on the sidelines of New York Times Athens Energy Forum NYT Conference 2017







February 2, 2017

My purpose here is to update you on progress at the eastern

end of the Mediterranean — namely some new steps taken by the government of Lebanon to gets its nascent energy sector off the ground.

As you may recall, Lebanon has wasted a lot of time in the past few years. Cyprus recently held its third licensing round, and others have gone even further: Israel, for instance, is already drilling, and while internal legal and policy battles have slowed some aspects, Israeli negotiators have aggressively pursued export or transit deals with other countries — including both Jordan and Turkey.

In Lebanon, things have been very different. A long-running political struggle left the presidency vacant for more than two years, the Parliament granted itself two extensions totaling almost three years without new elections, and the Prime Minister and Cabinet served in a de facto caretaker capacity because of widespread perceptions that they lacked legitimacy.

Even before this breakdown of the constitutional order, rival political camps were so mistrustful of one another — and so evenly matched — that little headway could be made because ach side blocked the other's initiatives.

Luckily, even with these paralyzing conditions in effect, some preparatory steps were taken. The Lebanese Petroleum Administration was established in 2012, and while dysfunctional politics delayed everything from the onset of its legal authority to the recruitment of qualified personnel, the LPA managed to lay much of the necessary groundwork. The idea was that once the politicians stopped bickering, all of the rules, regulations, and policies would already be in place, so the country would have the wherewithal to start playing catch-up.

I'm happy to report that there has been significant improvement. A new president has now been elected by

Parliament, and his genuine support — both in the legislature and among the general population — is more broad-based than many of his predecessors. A new Prime Minister has also been installed, and since this was part of the same deal that allowed the presidency to be filled, he and his Cabinet enjoy relatively strong acceptance. Perhaps most importantly, the long-delayed parliamentary elections are due to be held in June, and while the usual debate is taking place about the rules under which those polls should take place, there is general optimism that they will be held "on time".

Best of all, the Lebanese Petroleum Administration has taken this momentum as a signal to start activating the energy sector. Last month it took a decisive step in this direction by initiating the country's first licensing round, inviting bids for offshore exploration in five of the 10 blocks it has delineated in Lebanon's Exclusive Economic Zone (EEZ). Nonetheless, the process will not be a simple matter of "plug and play", but this time the obstacles are external.

Again, the LPA has done a lot to make sure all the necessary mechanisms are in place or ready for installation, including tender procedures and draft terms for the fiscal regime. And at least two of the five blocks being licensed should be relatively straightforward: Block 4 lies entirely within Lebanon's EEZ, directly off the coast, and Block 1 lies in the northwest corner of Lebanon's EEZ, where its demarcation has already been agreed with both Cyrus and Syria. Those interested in these blocks will know exactly what they're bidding on, and the successful bidders and their partners free to get on with the business of modern exploration work without other distractions.

Blocks 8, 9, and 10, on the other hand, are a different matter altogether because all three are in the south, where Lebanon's maritime claims overlap with those of Israel. At issue is a relatively small area of about 840 square kilometers, less than 5% of Lebanon's EEZ and an even smaller slice of

Israel's. Under normal circumstances, the conflicting claims would likely have been negotiated away with relative ease, but Lebanon and Israel have no diplomatic relations and have remained in a legal state of war — with frequent outbreaks of actual hostilities — for almost 70 years despite the 1949 armistice.

The situation is not irrecoverable, however, and both the United States and the United Nations have worked hard to broker a consensus by holding separate talks with Israeli and Lebanese officials. What is more, whatever the intractability of their other differences, on this score at least both sides have a clear and compelling interest in avoiding any kind of conflict that interferes with the development of their energy reserves. All of the region's emerging producer countries stand to make substantial revenue gains, allowing gamechanging investments in health, education, transport, and other areas whose impact will be felt for decades, even centuries.

It all comes down to mathematics: there is simply too much money at stake, meaning that in addition to the lives that would inevitably be lost, the direct financial and opportunity costs of another armed confrontation would be exponentially greater than the price-tags attached to bombs and missiles.

The numbers don't lie, so there is reason for optimism that the EEZ issue will be resolved before it impedes exploration activities. In addition, if and when cooler heads prevail and some kind of understanding on indirect cooperation (or even non-interference) is reached, the resulting dividends will go far beyond Dollars, Euros, Pounds or Shekels — and the effects will be felt far beyond the Mediterranean.

Cheap, clean, and reliable natural gas supplies from the Eastern Med would also significantly enhance energy security for Turkey, the European Union, and other countries. For Europe in particular, it would be a new lease on life,

restoring the competitiveness of the Continent's economy and providing consumers with lower prices for energy and a long list of other goods and services. And for both the MENA region and other parts of the world haunted by conflict or the threat thereof, an East Mediterranean gas boom made possible by sober diplomacy would set an encouraging — and highly lucrative — precedent.

These manifold and far-reaching benefits mean that numerous local and outside actors will want the same thing in the Eastern Med: stability. Cyprus, for instance, figures to be a linchpin for the entire regional gas economy, but it can only play that role to the fullest if it achieves reunification after more than 40 years of division. Each of the main external players on the island — Britain, Greece, and Turkey — also has good reason to want tensions reduced, and Russia's growing presence in the region (including investment offshore each of Cyprus, Syria, and Egypt) gives it a vested interest in a more predictable region. American companies are also present, and literally no one better understands what is at stake than the incoming US secretary of state, former ExxonMobil boss Rex Tillerson.

Of course, there is still much for Beirut to address, including the structure and management of an effective and transparent Sovereign Wealth Fund to safeguard future energy revenues. There is also the matter of determining the true size of its offshore treasure, but all signs from exploration under way off Cyprus and Israel — plus the discovery of Egypt's massive Al-Zohr gasfield — suggest that Lebanon is on the verge of a historic windfall. In fact, some 2-D and 3-D studies already indicate that the country's hydrocarbon potential outstrips those of its immediate neighbors.

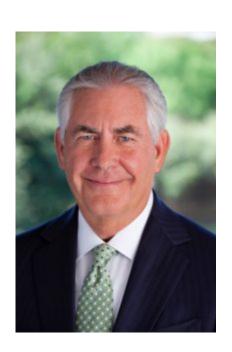
At this point, all Lebanon needs to do is play its cards right: avoid unnecessary confrontations with Israel, follow international best practice for safe and environmentally responsible oil and gas development, and protect the ensuing

revenues against nepotism, waste, and other forms of mismanagement. So long as it makes itself a stable platform, investment will come and a better future will almost certainly follow.

# Così Cipro unita aiuterebbe tutto il Mediterraneo











### il Giornale it mondo

Uno dei fattori chiave che hanno permesso a Donald Trump di vincere a novembre è stata l'enorme voglia di cambiare la politica interna.

Eppure la sua presidenza può offrire enormi opportunità anche per quanto riguarda la politica estera e Cipro, insieme al resto dei Paesi dell'Est Mediterraneo, potrebbero così essere tra i primi beneficiari della politica estera di Trump.

L'isola è divisa dal 1974, nonostante i vari tentativi di riunificazione. Trump non è il primo presidente a seminare speranze per Cipro unita, ma questa volta, dopo molti anni, ci sono seri motivi di credere che un accordo totale ed equo è possibile.

Prima di tutto la figura di Trump. È la prima volta che nella storia americana sale alla Casa Bianca qualcuno di così fondamentalmente diverso rispetto ai suoi predecessori. Molti studiosi si sono focalizzati sulle ripercussioni negative che la politica di Trump porterebbe, ma allo stesso modo sono in vista cambiamenti positivi.

Inoltre, a pesare in senso positivo, c'è la nomina del segretario di Stato. Benché Rex Tillerson abbia una scarsa esperienza nel governo, ha lavorato per dieci anni alla ExxonMobil, una compagnia con 75mila dipendenti, che opera in duecento Paesi. Prima ancora ha personalmente seguito e guidato il processo attraverso cui ExxonMobil ha raggiunto la sua invidiabile posizione in Russia, il più grande produttore di energia del mondo. Insomma, un curriculum che la dice lunga sulle sue capacità.

E non da ultimo c'è la tempistica. Cipro sta costruendo molto rapidamente il suo polo energetico regionale per l'est Mediterraneo. Dalle recenti attività di esplorazioni è stata confermata la presenza di depositi di gas naturale.

Questo sviluppo energetico di Cipro potrebbe essere un perno di vitale importanza, primo per la sua posizione geografica, insieme alla sua posizione geostrategica, e per il fatto di essere membro dell'Unione Europea e, non da ultimo, per lo sviluppo industriale della regione.

Molti protagonisti si sono già messi in gioco, incluso la ExxonMobil che, insieme al Qatar Petroleum, il più grande produttore di gas naturale, si è assicurata i diritti di esplorazione del Blocco 10 del Cyprus Exlusive Economic Zone. In campo c'è anche Rosneft, una delle compagnie di energia più importanti della Russia, e Soyuzneftegaz, un'altra compagnia russa.

In questo delicato momento storico, Cipro trarrebbe ovviamente grandi vantaggi da una riunificazione. Prima di tutto,

evidentemente, attrarrebbe più investitori. Se il riavvicinamento tra il presidente russo, Vladimir Putin, e il turco, Recep Tayyip Erdogan, continua così come sostengono molti osservatori, sarà più facile portare avanti una negoziazione positiva. E questo ci fa tornare alla nuova amministrazione americana. Sia l'Unione Europea che l'Onu si sono impegnate a cercare un'intesa su Cipro ma per superare l'ostacolo «dell'ultimo miglio» potrebbe venir richiesto un impegno americano più intenso.

Cipro unificata, che diventa un polo regionale dell'energia sarebbe così un vantaggio non solo per se stessa ma ridurrebbe le tensioni tra Ankara e Atene, e tutti i Paesi vicini del Mediterraneo avrebbero vantaggi dalla stabilità ritrovata, incluso più turismo e più investimenti.

Un discorso non certo facile da realizzare: il processo di unificazione non è facile da raggiungere. Ecco perché una volontà solida dei protagonisti è così fondamentale; le potenziali ricadute positive derivanti dal settore energetico di Cipro potrebbero essere così più forti delle rimanenti obiezioni. È quindi tempo di dare un'opportunità costruttiva e dare un regalo di pace prima a Cipro poi ai paesi del Mediterraneo.

#### Roudi Baroudi

Ceo della Energy & Environment Holding, basata in Qatar

# GECF sees oil price to range from \$70 to \$95 in long-term

GULF TIMES - Doha

Doha-based Gas Exporting Countries Forum (GECF) expects long-

term global oil price to range from \$70 to \$95 a barrel, while short-term prices are expected to remain "weak".

"Our projection of 2040 oil prices show that over the medium-to-long term, prices will likely range from \$70 to \$95 per barrel in constant (2015) dollars," GECF said in its maiden report 'Global Gas Outlook'. These price levels will support the most expensive sources of production such as Canadian oil sands, Venezuelan heavy crude and off shore deep-water African projects, it said.

The expected oil price range (\$70 to \$95) would mean that an expected pick-up in the global economy would sustain the new levels. Global gross domestic product growth is expected to be stronger between 2015 and 2020, at 3.1% per year, but would start to slow down to 2.9% after 2020 as non-OECD (Organisation for Economic Cooperation and Development) Asia, including China and some other major emerging but maturing economies, slow to a more sustainable long-term rate.

In the medium term, the cost of producing the most expensive (marginal) barrel is an important component for oil price projection although the cost of production varies significantly depending on the geology of the production basin, the technology employed and the fi scal terms applied to producers by host governments. GECF said oil price forecasts are predicated on the same determining factor that shape today's oil prices including economic growth, the interplay between global oil supply and demand, industry production costs, geopolitical events and the behaviour of the Organisation of the Petroleum Exporting Countries (Opec). In the short term, GECF said it expects oil prices to remain "weak" due to a more "pessimistic" economic perspective than previously anticipated and to the absence of a strong decline in non-Opec output.

Forecasting that oil demand growth to grow moderately, it said global demand for oil and other liquids would increase to over 98mn barrels per day (mbpd) in 2020 from 93mbpd. "Oil demand

continue to rise until it peaks at 106.5mbpd in 2035 and then stabilises around 106mbpd through 2040," it said, adding the largest decline in demand for oil and other liquids is expected to occur in the power sector, where it faces strong competition from other fuels including natural gas, renewables and nuclear.

## Qatar's Energy Acumen Spells Prosperity at Home and Stable Prices Around the World





by Roudi Baroudi

Qatar's growing stature on the international stage did not come about by accident, but rather as the product of a concerted effort to acquire a larger and more constructive role in the region and around the world. This greater capacity to exert positive influences has been made possible by the country's enormous gas reserves, but even these would not have sufficed without both effective management of those resources and many years of astute diplomacy.

There were never any guarantees that the story would have a happy ending. The first oil well, "Dukhan l," was drilled in

1939, but Qatar did not gain full independence from Britain until 1971, and its flagship oil company, Qatar Petroleum (QP), was not formed until 1974. Like many resource-rich countries emerging from the era of colonialism, Qatar lacked many of the institutions and mechanisms required for effective governance, so for many years it did not derive maximum benefit from the production and export of crude.

Near the end of the 20th centm;y, however, the country and its territorial waters were found to be sitting atop huge deposits of natural gas in what would become known as the North Field. The colossal North Field covers an area of some 6,000 square kilometres, making it the single largest non-associated gas reservoir on the planet. Coupled with a new leadership that had the vision to make far-seeing investments, this gas has offered Qatar an opportunity to more than make up for lost time. As of 2014, the country's gas reserves were estimated at more than 25 trillion cubic metres, surpassed only by Russia and Iran and equivalent to a whopping 14 percent of the world total.

It was foresight, though, not just raw reserves, that made Qatar what it is today Not content with the country being "just" another major producer of fossil fuels, the ruling family threw its weight behind financial investments and technological choices that would make Qatar a global leader in several facets of the gas business. Accordingly, billions of dollars were spent to expand production, acquire the world's most advanced liquefied natural gas (LNG) trains, and build a fleet of ultra-modern LNG carriers to serve customers around the globe. As a result, Qatar now leads all nations in exports of LNG. In addition, the country has been the foremost partner pioneering of research, development commercialisation of gas-toliquids (GTL) technologies, including a jet-fuel blend that reduces both emissions and operating costs.

Even more than natural resources, then, it is sound judgement that has transformed Qatar into the worlds wealthiest nationstate on a per capita basis, winning it a choice seat at the table when major power discuss the most pressing matter of the day It has used this influence to promote both economic and political stability, striving to forge bilateral and multilateral relationships with which to address shared concerns like war/occupation, poverty, and the environment.

This level of economic and diplomatic ambition requires across-the-board engagement and, when appropriate, strong leadership. Therefore, in addition to having Joined the Organisation of Petroleum Exporting Countries just a year after OPEC's founding in 1960, Qatar also plays a central role in the Gas Exporting Countries Forum (GECF) set up in 2001, having hosted the GECF's Executive Office and Secretariat since 2009.

### GTL capital of the world

The GECF was established to promote the interests of the world's leading gas producers by holding regular meetings to find common ground and develop solutions for shared challenges, but its selection of Doha to serve as headquarters re!lected a different priority, that of improving ties and coordination with consumer nations. As a country that maintains warm relations with governments on both sides of several diplomatic divides, Qatar and its robust finances have been instrumental in initiating and sustaining useful discussions of issues affecting the international gas market, providing a platform of stability that has allowed the development of a healthy and prosperous energy market that benefits all stakeholders.

Despite the volatility of the hydrocarbon markets and their relationship to international politics, Doha, in particular with its energy policy, has been a focal point of cooperation among producers and consumers with a view toward adopting new standards, regularizing markets and prices, and ensuring both stability and sustainability of supply so that demand is met in a mutually beneficial manner. The resulting safe and

sustainable energy !lows, with fewer interruptions due to wars or other forms of instability, yields a variety of certainties that serve the interests of all countries. So it was that in less than a decade, a tiny country of just 2 million inhabitants became the most important force for maintaining global security and price stability for all forms of natural gas. Given the ever-increasing importance of natural gas in the global energy mix, this also means that Qatar contributes mightily to economic growth and !lourishing energy initiatives in virtually all comers of the world.

In addition, Qatar has employed skilful political leadership in urging its fellow gas producers to think long and hard about the difference between oil and gas prices. Oil remains the benchmark, as all other energy prices usually rise and fall under its influence. Qatar continues to study the causes that have led to gaps in the price relationship between oil and gas, and how collective action can both restore the link and achieve parity between the two. Given the many environmental and other advantages that gas offers over traditional energy sources — including being non-toxic, near-perfect combustion, no soil contamination, and an enviable safety record — greater parity would seem to be in the interests of all concerned, including the planet itself.

The GTL venture is a prime example of innovation designed to ensure that more and more applications can use cheaper, cleaner-burning natural gas. Qatar is carving out yet another niche for itself, this time as "GTL capital of the world." Only two other countries — South Africa and Malaysia — possess similar facilities, and Qatar's access to affordable feedstock will give it significant advantages for years to come. By 2016, national production of GTL will amount to 174,000 barrels a day, radically increasing supplies available to help airlines, local public transport and utilities to reduce their carbon footprints.

The natural gas industry is growing and globalizing as demand expands and new technologies like GTL enable and inspire creative new ways to customize compatible products and

services. Simultaneously, Qatar's backing of a positive global energy dialogue,

reliable production and massive investment in todays fuel of choice are bringing more stability and security of supply to regional and global markets because in the gas industry, volumes and prices are defined primarily by long-term contracts, consumers and supplies. In 2006, Qatar and two of its neighbors, Oman and the UAE, completed the first cross-border regional gas pipeline, linking the North Field to customers in Abu Dhabi, Dubai and Oman. This tri-nation subsea gas pipeline project was an unprecedented achievement and so set a fitting example of strategic inter-energy connecting grids.

The impacts go far beyond the energy business. For example, has worked very sucessfully to foster environments for strategic partnerships, and to achieve greater energy security while improving climate protection in the discovery, development and production of cleaner and more efficient fuels. This combination imparts enormous value to society by inspiring confidence in the strength and durability of the national economy and the policies pursued by the government, both at home and abroad. Better fuels mean higher standards of living, greater social stability, and a cleaner environment. The revenues and cost savings can be a gamechanger in reducing poverty, and the Qatari government has worked to ensure that thegas industry operates with due regard for social, moral and environmental impacts. On this last score, achieving a truly open global market for gas is perhaps the single greatest step government and industry can take to achieve genuinely significant levels of de-carbonization in the coming years.

Even as I write, the world is rapidly moving toward commercialization of energy technologies independent of carbon, such as photovoltaics and fuel cells. These will take time to mature, particularly in terms of applications requiring large mobile energy supplies, so gas will be the

natural bridge that joins the carbon and post-carbon eras.

For now, the oil and gas industry continues to decide the future of our world economy, and energy and capital complement one other. Therefore, the emerging primacy of gas will only solidify Qatar's position as a global energy titan, and continue to fuel its diversification as an emerging business and logistics hub in today's highly competitive world. And if recent history is any guide, the same resources will help fund investments that make the country a player in tomorrow's world as well.

قد م إلى سليمان دراسته الأخيرة حول "الطاقة في المنطقة" بــارودي: "إعلان بعبــدا اقتصادي" يجنسب الإنهيـار



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المركزية- تسلَّم الرئيس العماد ميشال سليمان من الخبير الدولي في قطاع الطاقة رودي بارودي دراسته الأخيرة لهذا العام حول "وضع الطاقة في المنطقة" بعد الدراسة السابقة التي أعدَّها في هذا الشأن عام 2008، وذلك خلال زيارة قام بها بارودي للرئيس سليمان في منزله في اليرزة قبل ظهر اليوم.

وتركز البحث في خلال اللقاء، على أهمية الإستكشاف والتنقيب عن الغاز والنفط في لبنان وخصوصا ً البدء بالمسح البري بعد مدة زمنية فاقت الـ60 عاما ً منذ آخر عملية استكشاف، وضرورة عدم تضييع الفرص في هذا المجال للإفادة من هذه الثروة إلى أقصى حد ".

وكانت مناسبة شكر فيها بارودي للرئيس سليمان محافظته على الثروة النفطية اللبنانية طوال عهده في سدة الرئاسة، ومتابعته الحثيثة لتطورات هذا الملف عبر مواكبة الإتصالات الجارية مع الدول المعنية بالتنقيب في المياه الإقليمية، سعيا ً إلى حفظ حقوق لبنان في حصته النفطية.

وشدد بارودي في خلال اللقاء، على "أهمية تعزيز العلاقات بين لبنان وقبرص في ملف النفط والغاز، وتنمية أواصر التعاون خصوصاً في مجال الغاز السائل والتصدير إلى أسواق أوروبا الأقرب على الإطلاق لتسويق الغاز"، مشيداً بـ"النشاطات الجبارة التي تقوم بها هيئة إدارة قطاع البترول في لبنان".

وأكد أنه "لا بد" من إحياء ما طالبنا به منذ نحو سنتين، بضرورة صوغ "إعلان بعبدا اقتصادي" يجمع كل الأفرقاء ليشبكوا الأيدي وينكبوا على إبعاد شبح الإنهيار الإقتصادي عن لبنان وجبه كل التحديات والمشكلات التي تعوق نمو"ه وازدهاره، وبالتالي الإفادة من كل الفرص المتاحة على أكثر من صعيد ولا سيما التنقيب عن النفط والغاز في البر" وفي مياهنا الإقليمية".

# Uncrossing wires — An emergency rescue plan for Lebanon's electricity sector





Lebanon's electricity sector faces severe difficulties on multiple levels, making it an unsustainable burden on the economy in general and the state budget in particular. Problems extend across all stages of the business process, from production to distribution, even billing and collection, despite the latter having been franchised out to private companies.

Promising proposals — including some very comprehensive ones — to address these issues have been drawn up by and for successive ministers of energy and water, including the latest policy plan approved by the Council of Ministers in June 2010.

These plans can work, but only when the required political decisions are taken to revive this vital sector by insulating it against personal and private interests, be they direct or indirect. Only in this way can we honor both the spirit and the letter of legislation already passed by Parliament by getting on with the implementation stage.

Several matters require urgent attention, including financial and administrative difficulties that have held up construction of a planned 435-MW generating station at Deir Ammar and a similar facility at Zahrani, the combined output of which would provide the country with at least a bare minimum of its

power needs. Specifically, the Council for Reconstruction and Development should be tasked with securing the necessary funds from supporting institutions so that implementation can start immediately.

### The politics of electricity

The national interest demands that this be done as quickly and as cleanly as possible, because the last thing Lebanon needs is a dispute with a contractor that leads to court proceedings and/or arbitration that could take years to unfold. It is clear that franchising measures adopted by the Ministry of Energy and Water are tainted with a lot of gaps.

Easing Lebanon's chronic power shortages also calls for urgent action to expedite the delivery and installation of new generating units at the Jiyyeh and Zouk plants. Timing is everything in such cases, because every day of delay increases the financial drain and other burdens on all consumers, from households and schools to companies and government offices. This directly undermines the productivity and competitiveness of the national economy, restricting GDP growth and soaking up resources.

Even more importantly, preventing future crises and enabling long overdue reforms demands that oversight be exercised by a duly constituted Electricity Regulatory Authority. Such a body has been created by legislation but successive governments have failed to appoint its five member leadership commission, as called for under Law No. 462 of 2002, preventing the authority from exercising its powers. There is an urgent need to appoint the Electricity Regulatory Authority, as more than 14 years have passed since the issuance of the law calling for its formation, without any legal or legitimate reason being provided for this delay.

The failure to fully implement Law 462 has prompted the legislature to pass Law 288, which alters Article 7 of Law 462

by adding the following paragraph: "Temporarily, for a period of two years, and until the appointment of members of the Authority and giving them their tasks, the production permissions and licenses will be granted by a decision of the Council of Ministers upon a proposal of the Ministers of Energy and Water, and Finance."

The establishment and empowerment of structures similar to the Electricity Regulatory Authority has been crucial to developing and implementing advanced energy and consumer-protection strategies in jurisdictions around the world — including Europe and our own Euro-Med region — so it remains a mystery why some parties insist on denying this proven setup to Lebanon and the Lebanese.

And as though all that were not sufficient to bring development of the sector to a standstill, a new board of directors has not been assigned for Électricité du Liban (EDL), the country's state owned power company, since 2005. This has sharply curtailed or even eliminated follow up on the completion of major projects designed to help meet minimum requirements, and committed Lebanon to huge amounts of money.

Then there is the matter of the fuel required for the generating stations at Zahrani and Deir Ammar. Based on the advice of Électricité de France (EDF) and under the terms of the national energy strategy developed in 1992–1993, both facilities were designed and built to operate primarily on natural gas rather than diesel oil. This would impart several benefits, including lower production costs, less environmental impact and longer service lives for generating units.

Once again, however, political bickering and clashes of personality have prevented full implementation of the plan, in this case by failing to secure the necessary gas supplies. As a result, both plants have been run almost exclusively on oil derivatives, obviating some of their design advantages and burdening the treasury with massive bills for fuel that is

dearer, dirtier and less efficient.

An agreement was signed in 2009 to finally link Deir Ammar with the Arab Gas Pipeline, built to carry Egyptian gas to customers in Israel, Jordan, Lebanon and Syria, but the deal was never fully implemented. And in light of mounting instability in the region since 2011, it is highly unlikely that Lebanon will see any benefit from this for the foreseeable future: Egypt has been unable to meet its existing supply obligations for the past three years, and badly needed repairs and maintenance cannot be carried out on Syrian sections of the pipeline through which any Lebanese imports would have to traverse.

### Regasification, regulation

Since operation of the electricity plants in Zaharani and Bedawi that relied on natural gas has become impossible without the presence of gas pipelines, and the natural gas liquefaction near the production facilities has become indispensable and irreplaceable, it is imperative for the Lebanese state to start buying, renting or establishing a floating station(s) for liquified natural gas storage, and for its regasification — necessary for the two power plants in Zahrani and Deir Ammar. A floating storage regasification unit (FSRU) would need to be established in each, even if that required the expansion of the port, or the establishment of breakwaters to protect the station from marine factors.

The procurement of the two FSRU stations would allow enormous savings on the price of fuel, significantly reducing the need for public financial support for EDL. It also would substantially reduce the utility's debt ratio; a crucial requirement because the potential impact of government and EDL measures to improve bill collection remains limited. This would lead to the reduction of financial transfers to the EDL mitigating the debt to GDP ratio, particularly since the capability of the government and EDL to collect bills and

prevent electricity theft or attacks to the grid remains limited, reducing the ability to rein in the deficit.

Initially at least, both floating stations should be rented or leased, provided that the awarded contractor or promoter has both the requisite international experience and a demonstrated ability to supply the natural gas in addition to the stations simultaneously. This would translate into substantial cost savings for the control and supervision of the facilities. Any such agreement also should follow the "key in hand" method, which would leave the financing of construction to the contractor, reducing the risk to the state and allowing it to start paying only when it has taken delivery of fully operational facilities. And since we know in advance the amount of fuel required by the power plants, the contract should stipulate the dates, quantities and costs of gas deliveries. This formula has been tried and tested in several jurisdictions, including Dubai, Jordan and Kuwait, and there is no reason why it would not work in Lebanon.

Until steps are taken to regularize the electricity sector by implementing existing legislation, and until the almost year long vacancy in Lebanon's presidency is filled, it is advisable that oversight be exercised jointly by the Parliament and the Council of Ministers.

No individual, though, no matter how influential, can make this happen without securing the trust and cooperation of others. Some features of the Lebanese political landscape are difficult to agree on, but this one is not. National pride, political responsibility and basic common sense dictate that we act quickly to end the mismanagement of this problem. Only then can we start eliminating all forms of waste, alleviating the losses of the state and meeting the needs of power hungry homes and businesses.

# دعا "اغتنام دعوة بري إلى التلاقـي للحـوار الإقتصادي بارودي: للإسـراع فـي تثـبيت حقوق لبنان النفطية

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المركزية- فيما لبنان لم يطلق بعد صفارة البدء بالتنقيب عن النفط والغاز في المنطقة الإقتصادية الخالصة، صدر في الأيام الأخيرة كلام عن رئيس مجلس النواب نبيه بري مفاده أن إسرائيل تسرق الغاز اللبناني، الأمر الذي من المفترض أن يحث المسؤولين المعنيين على التعجيل في إتمام هذا الملف من جوانبه كافة، لأن الوقت ليس لصالح لبنان.

الخبير الدولي في شؤون النفط رودي بارودي شدد على وجوب تثبيت الحدود مع دول المنطقة كافة، لكنه لفت إلى أن "المشكلة تكمن في عدم توقيع ثلاث دول في المنطقة هي تركيا وسوريا وإسرائيل، معاهدة الأمم المتحدة لقانون البحر حتى اليوم، والتي تحد ّد لكل دولة المنطقة الإقتصادية الخالصة، وما لدى لبنان اليوم هو تقريبا ً 20 ألف كلم2 في البحر".

وأضاف في حديث لــ"المركزية": من أصل 854 كلم2 من المنطقة المتنازع عليها مع إسرائيل، تمكن لبنان عبر الوسيط الاميركي، من تثبيت سيادته على ما يقارب 530 كلم2، لكن تم ذلك على وقع خلافات حول ترسيم مساحات أخرى بين لبنان وإسرائيل، ولبنان وسوريا، وبين تركيا وقبرص.

وقال بارودي: على الحكومة أولا ً أخذ ما أعلنه الرئيس بري في اليومين الأخيرين على محمل الجد وعدم التهاون في هذا الموضوع، وإجراء الإتصالات اللازمة للتثبت من المعلومات حول سرقة إسرائيل للغاز اللبناني، وبالتالي رفع شكوى إلى الأمم المتحدة في القضية، واتخاذ الإجراءات الكفيلة بمنع إسرائيل من ذلك. وثانيا استكمال الإجراءات وإقرار القوانين اللازمة ولا سيما قانون الإستكشاف البري، والإسراع في تثبيت حقوق لبنان النفطية، خصوصا أن لا مبرر للتأخير في البدء باستكشاف اليابسة ولا مشكلة في ذلك، علما أن ه الأقل كلفة على الإطلاق مقارنة بالإستكشاف البحري.

وإذ حيا جهود الرئيس بري في هذا المجال، شاكرا متابعته الحثيثة لهذا الملف لتجنيب لبنان إضاعة هذه الفرصة الذهبية، دعا بارودي جميع السياسيين إلى الإفادة من فسحة الحوار والتلاقي التي دعا إليها بري مطلع العام المقبل لتذليل الخلافات السياسية، واغتنامها للتحاور والتوافق على إزالة العقبات الإقتصادية وحلحلة مسائل هامة عالقة وأولها ملف التنقيب عن النفط والغاز، والإتفاق على البدء باستكشافهما برا وبحرا .

## « LE LIBAN DOIT PROFITER DE LA BAISSE DES PRIX DU BRUT POUR LANCER L'EXPLORATION »





les récentes déconvenues de Chypre — où Total et Eni ont coup sur coup annoncé des résultats de forage négatifs — sont-elles un mauvais signe pour le bassin levantin de la Méditerranée en général, et le Liban en particulier ?

Je ne pense pas que cela remette en cause le potentiel de ce bassin, même si Chypre a peut-être été trop pressé de faire de grandes annonces avant de valider la présence de réserves importantes. Total, qui a des décennies de présence dans la région, reste positionnée sur Chypre, et Eni va continuer ses forages dans les blocs dont elle a obtenu la concession. Pour l'instant, le fait que le bloc 12, attribué à Noble Energy, ne contienne que 4,5 TCF (milliards de pieds cubes) de gaz au lieu des 7 espérés a remis en cause le projet de construction d'une usine de liquéfaction du gaz à Vassilikos. Mais Chypre, et tout le bassin levantin (hors Grèce), peut devenir l'un des principaux fournisseurs en gaz de l'Europe. Il pourrait assurer 20 à 23 % des besoins de ce marché qui cherche à diversifier ses approvisionnements, assurés aujourd'hui à 55 % par la Russie.

Le statu quo continue de prévaloir sur le plan libanais où le processus d'attribution de licences d'exploration est suspendu depuis novembre 2013. La chute des prix du brut ne va-t-elle pas accentuer encore le retard de Beyrouth par rapport à Chypre et Israël en repoussant la date du redémarrage de l'appel d'offres ?

Si l'on réfléchit en termes de production, la baisse des prix

internationaux ralentit en effet les activités. C'est la raison pour laquelle Total a estimé qu'il valait mieux ne pas se lancer dans une phase commerciale à Chypre. En revanche, sait bien que c'est le moment de poursuivre l'exploration, car les coûts opérationnels et les coûts d'équipements sont au plus bas. C'est le même raisonnement que devrait tenir le Liban. Il doit saisir l'opportunité que représente la chute des cours pour lancer la phase d'exploration en attribuant des licences, sachant que les compagnies auront ensuite trois à cinq ans pour proposer des programmes de production. La priorité doit être de forer. D'abord dans l'idée d'approvisionner le pays pour ses propres besoins énergétiques, et ensuite pour réfléchir à une éventuelle stratégie d'exportation vers l'Europe. N'oublions pas que, juridiquement, ce marché est à 70 kilomètres du Liban. C'est un véritable atout. Il faut cependant préalable transformer les estimations en matière de réserves en certitudes. Sachant que, tout autour du Liban, il existe des champs gaziers et pétroliers, il n'y a aucune raison de ne pas en trouver ici.

Le niveau des prix du brut devrait-il favoriser le lancement de l'exploration terrestre au Liban ?

Israël vient de lancer la prospection sur le Golan. La Syrie a des réserves prouvées de 2,5 milliards de barils de brut. Le Liban n'a quant à lui toujours pas de loi pour encadrer l'exploration onshore. C'est pourtant le moment de la lancer. La production reste intéressante, même aux niveaux actuels du marché, car les coûts d'exploitation des gisements terrestres sont bien moins chers que ceux des gisements offshores.

(Lire aussi : Le pétrole bon marché, cadeau inespéré pour les consommateurs libanais ?)

Cette capacité de réactivité suppose une vision stratégique et une impulsion politique...

Les deux décrets nécessaires au lancement de l'appel d'offres (sur la délimitation des dix blocs composant la zone économique spéciale et le contrat devant lier l'État aux compagnies) sont prêts et font déjà l'objet d'un accord politique. La loi sur la fiscalité est en cours de finalisation et je ne pense pas qu'elle pose de problèmes majeurs. Ce qui manque, c'est le consensus politique pour redémarrer le processus. Au-delà, le pays doit se doter d'une stratégie nationale en matière énergétique. Et, là encore, le Liban devrait saisir l'opportunité de la baisse des coûts du brut pour réaliser les investissements indispensables en matière d'infrastructures. Je pense en particulier à la nécessité d'alimenter les centrales électriques du pays en gaz. Cela passe par la construction d'un gazoduc le long du littoral dont le coût serait réduit aujourd'hui de 30 à 40 %. faudrait aussi louer une centrale flottante regazéification du gaz naturel liquéfié en attendant de trouver du gaz au large du Liban. Selon mes calculs, l'économie réalisée — coût de location de la barge compris serait de 600 à 900 millions de dollars par an pour le Trésor, sachant qu'à 90 dollars le baril, les pertes d'Électricité du Liban étaient de deux milliards de dollars par an.