

# Spain to invest 1.5B euros in 'green hydrogen'



PHOTO COURTESY OF EC.EUROPA.EU

Spain will spend 1.5 billion euros (\$1.8 billion) from a European Union recovery fund to develop green hydrogen production over the next three years, Prime Minister Pedro Sanchez said Monday.

Spain will spend 1.5 billion euros (\$1.8 billion) from a European Union recovery fund to develop green hydrogen production over the next three years, Prime Minister Pedro Sanchez said Monday.

The goal is for Spain to become Europe's leading hydrogen producer using renewable sources instead of fossil fuels to curb greenhouse gas emissions and create jobs, he said.

"The Spanish government is firmly committed to green hydrogen," the Socialist premier said at a ceremony in Toledo, just south of Madrid.

His government expects the outlay will stimulate 8.9 billion

euros of mainly private-sector investment to develop the technology by 2030.

Madrid has already received over 500 “green hydrogen” project proposals from energy firms, a government statement said.

Creating “green” or emissions-free hydrogen is seen as a key step towards developing sustainable energy sources and slashing carbon emissions.

One reason for the strong interest in hydrogen technology is when used to fuel motors, the only emission is water vapour.

But it is expensive to produce and the electricity needed generates a lot of carbon dioxide emissions or other pollutants.

Green hydrogen is produced via electrolysis – an electrical current passing through water – with wind, solar or hydro-electric power providing the electricity.

Europe in particular is anxious to get a handle on the new and still costly fuel, having missed the boat on solar and battery technology, which is dominated by China.

Experts predict green hydrogen using renewable energy will soon plunge in cost and become cheaper than natural gas in many areas.

US engine maker Cummins announced Monday it would spend 50 million euros to build one of the world’s biggest electrolyser plants for the production of green hydrogen in Spain.

The plant, which will be built in the central region of Castilla-La Mancha, is expected to open in 2023.

“Spain offers a strong and dynamic local environment for hydrogen production, and we are excited to invest,” said Cummins chairman Tom Linebarger.

Spain is set to receive 140 billion euros – half in direct payments, half in loans – from the 750 billion-euro recovery plan adopted by EU leaders last year as the economy reeled under virus lockdown restrictions. (AFP)

---

## Climate change goals: green art of the possible



By Daniel Gros/Brussels

US President Joe Biden recently gathered 40 world leaders for a summit on combating climate change, a welcome sign of progress on forging a global strategy. But tackling global warming is a marathon, not a sprint. And while the recent increase in climate ambition from the United States and the European Union is welcome, more difficult choices lie ahead. Back in 2009, for example, the US led the global effort to achieve the Copenhagen Accord at the COP15 climate-change summit, which was attended by more than 100 world leaders. But

hopes of a meaningful US contribution were subsequently killed by bipartisan opposition in Congress, which balked at the perceived cost of reducing emissions.

Biden, who was then vice president, faces a similar problem today: how to make good on his pledges while knowing that Congress will not approve any serious climate measure. He has therefore chosen the path of least political resistance, which is why Biden's climate plan carefully avoids notions such as a "carbon tax" or a "cap-and-trade" emissions scheme, both of which are politically toxic in the US.

Biden's target of halving US emissions by 2030 sounds ambitious, but the substance is actually much less demanding. Governments invariably choose the benchmark year that makes the biggest headlines. The US has chosen 2005, because that represents the high-water mark for US emissions. Since then, emissions have already declined by about 25%, thanks to the substitution of shale gas for coal. Reducing emissions by 50% from 2005 levels requires a further fall of about 30%.

The EU also has chosen a convenient baseline, namely, its own peak emissions year of 1990. But its target of lowering emissions by 55% by 2030 entails a further reduction of over 40% from today's level.

Given that US per capita emissions are currently about twice the European level, achieving Biden's pledge would reduce them only to the EU's level of today by 2030. By that year, US per capita emissions would still be more than double those of the EU.

The key to the Biden administration achieving its 2030 target is its pledge to make the US power sector emissions-free by 2035. But this might be difficult to achieve, given that fossil fuels currently account for about 60% of US electricity (compared to about 34% in the EU).

Moreover, making one sector totally emissions-free while taking little action in other areas increases the cost of reaching the overall target. This is a mistake the EU previously tried to avoid when establishing its Emissions Trading System (ETS), which covers both industry and the power

sector.

The Biden plan boldly asserts that decarbonising the power sector “can be achieved through multiple cost-effective pathways.” This is difficult to believe. For starters, it took more than a decade of subsidies before renewables made a meaningful contribution to the overall energy mix in Europe.

The cost of renewables has fallen greatly over the last decade, in many cases by a factor of five, partly thanks to these subsidies setting in motion a cost-reduction process as demand for solar panels and batteries increased.

The Biden administration also says that carbon capture and storage can make a potentially important contribution. But CCS remains an expensive technology, with a much smaller potential for cost reductions.

US climate policy thus makes little sense from an economic point of view. Biden’s approach is instead best understood as a political strategy aimed at so-called battleground states such as Pennsylvania, where coal remains economically and politically important. A carbon price will become possible in the US only when the last coal mine has closed.

The European approach – with the ETS and its emissions allowances that can be traded across sectors and countries – looks much more sensible at first sight. But a closer look reveals similarities with Biden’s plan. When the ETS was created, industrial firms argued that sectors subject to international competition should receive their allowances for free to avoid so-called “carbon leakage.” Predictably, the risk of carbon leakage was found to exist in almost all industries. EU industry thus obtained most of the allowances for free. The ETS worked only because the EU’s power sector was treated differently, given that there is no international competition in this sector.

The implicit deal underpinning the ETS was thus that industry would be spared the pain of emissions reductions. The entire burden of adjustment fell on power generation, where an increasing supply of renewables made it possible to reduce emissions by about a quarter over the last decade. EU

industrial emissions have not fallen significantly. But this might change now that the price of emissions certificates, which for many years had remained in the single digits, has reached almost €50 (\$60) per ton.

Free allocation of emissions allowances also meant that the EU has had little justification for introducing a carbon border tax. Such a measure would be justified (and should be approved by the World Trade Organisation) only if the free allowances were abolished at the same time – but this is vehemently opposed by industry.

The underlying political deal is thus similar on both sides of the Atlantic: decarbonise the power sector first, while sheltering industry from higher costs. Europe's experience suggests that this can generate some modest progress in reducing emissions, but achieving the more ambitious targets ahead will require tougher choices. The US will not be able to rely on renewables providing all its power, and the EU will have to start putting pressure on its own industry. – Project Syndicate

? Daniel Gros is a member of the board and a distinguished fellow at the Centre for European Policy Studies.

---

**يحق للبنان مراجعة حدود  
منطقته البحرية... بارودي: على  
فريقي التفاوض الانطلاق من نقاط  
جديدة**



شهدت الجولة الاخيرة من المفاوضات غير المباشرة لترسيم الحدود البحرية الجنوبية تباينات في آراء الوفود المشاركة، حيث طالب الوفد الأميركي بان يكون التفاوض محصورا فقط بين الخط الإسرائيلي والخط اللبناني المودعين لدى الأمم المتحدة، أي ضمن المساحة البالغة 860 كيلومترا مربعا، وهو ما يرفضه لبنان ويعتبره معارضا لمبدأ التفاوض من دون شروط مسبقة.

وبينما تنشغل السلطات السياسية اللبنانية بخلافاتها، وهذه المرة حول ما إذا كان ينبغي للبنان تزويد الأمم المتحدة بإحداثيات جديدة تحدد المنطقة الاقتصادية الخالصة الخارجية للبلاد EEZ، تستمر اسرائيل بالعمل على تطوير حقولها النفطية البحرية. وهنا سؤالان يطرحهما المراقبون: هل يملك لبنان الحق في مراجعة حدود مناطقه الاقتصادية الخالصة وتحسينها وبالتالي تعديل لوائح إحداثياته وتقديمها الى الامم المتحدة؟ وإذا كان الأمر كذلك، هل ينبغي للبنان أن يقدم على ذلك في ظل الظروف الحالية؟

من المعروف ان لهذه المسألة أهمية كبيرة، ليس فقط لأنها تتعلق مباشرة بمحادثات الحدود البحرية اللبنانية مع إسرائيل، ولكن أيضاً لأنها تحدد التاريخ الذي سيتمكن فيه لبنان من بدء الحصول على فوائد ملموسة من أي هيدروكربونات موجودة تحت البحر داخل المنطقة الاقتصادية الخالصة، خصوصا مع الوضع الاقتصادي الصعب الذي يمر به. وبالفعل، يحق لبنان مراجعة حدود مناطقه الاقتصادية الخالصة وتحسينها وبالتالي تعديل لوائح إحداثياتها لدى الأمم

المتحدة، وهذا ليس منصوصاً عليه فقط في اتفاقية الأمم المتحدة لقانون البحار (UNCLOS)، ولكنه أيضاً محمي بموجب القانون الدولي العرفي (CIL) من خلال سوابق لا حصر لها لدول تسعى الى تحديد مطالبها البحرية والدفاع عنها، ولأسباب ليس أقلها أن التقدم التكنولوجي المستمر يسمح برسم خرائط دقيقة بشكل متزاي، وأيضاً المرسوم 6433 الصادر في العام 2011، والذي يركز عليه لبنان لإخبار الأمم المتحدة بتحديث حدوده مع اسرائيل، نص صراحة على إمكانية إجراء تحديثات مستقبلية. فالمادة 3 من المرسوم لا تترك مجالاً للتفسير على الإطلاق، حيث لحظت إمكانية مراجعة حدود المنطقة الاقتصادية الخالصة وتحسينها وبالتالي تعديل لوائح إحصائياتها عند توافر بيانات أكثر دقة ووفقاً للحاجة في ضوء المفاوضات مع دول الجوار المعنية. علاوة على ذلك، وعندما قدمت بعثة لبنان لدى الأمم المتحدة المطالبات المسموح بها بموجب المرسوم 6433، تضمنت رسالتها المصاحبة الحاجة لإجراء مسح تفصيلي، باستخدام نظام تحديد المواقع العالمي، للشاطئ الحدودي الجنوبي، بما في ذلك جميع الجزر والعقد، بهدف تحديث الخرائط الملاحية وخط الأساس وفقاً لذلك في المستقبل. وبالفعل، أجري هذا المسح وظهرت الحاجة الى تقديم احداثيات جديدة اكثر دقة.

في هذا السياق، يشير الخبير النفطي الدولي رودى بارودي الى انه "بينما يسعى المسؤولون الإسرائيليون الى التشكيك في حق لبنان في تحديث مطالبته، فإن اتفاقية المنطقة الاقتصادية الخالصة الخاصة ببلدهم والموقعة مع قبرص في تشرين الاول 2010، تستند إلى الإحداثيات الإسرائيلية التي نعرف الآن أنها غير صحيحة، وبالتالي سيتم رفضها من قِبل أي محكمة او تحكيم، كما تعترف صراحةً بحقيقة أنه بموجب CIL، فإن هذه الإحداثيات عرضة للتغيير. وتنص المادة 1 (هـ) من هذا الاتفاق على انه ومع مراعاة مبادئ القانون الدولي العرفي المتعلقة بتعيين حدود المنطقة الاقتصادية الخالصة بين الدول، يمكن مراجعة و/ أو تعديل الإحداثيات الجغرافية للنقطتين 1 أو 12 على النحو الآتي: في ضوء اتفاق مستقبلي بشأن ترسيم المنطقة الاقتصادية الخالصة من قِبل الدول الثلاث المعنية في ما يتعلق بكل من النقاط المذكورة. اضافة إلى ذلك، وفي تقديم لاحق أحادي الجانب إلى الأمم المتحدة، لم تشر بعثة إسرائيل إلى الهيئة العالمية إلى الأحكام ذات الصلة من المادة 1 (هـ) فقط، بل قامت أيضاً بإعادة اللغة نفسها، حرفياً تقريباً. حتى أن الطلب كرر ذكر "الدول الثلاث المعنية"، والتي في سياقها لا يمكن إلا أن تشير إلى لبنان كدولة ثالثة. بالتالي، يؤكد بارودي "حق لبنان في تقديم إحداثيات



جديدة". ويقول: "من الناحية الواقعية، فإن أي فريق أو طرف يجادل بخلاف ذلك فهو إما يعارض المصالح الفضلى للبنان الذي يحتاج إلى تطوير هذا المورد، واللبنانيين الذين يستحقون جني الثمار الاقتصادية التي ستنتج من هذا المورد، والجيش اللبناني الذي يقوم بجهد كبير في المحافظة على حقوق لبنان؛ وإما يجهل الحقائق والقواعد؛ أو يسعى وراء بعض المزايا السياسية والمالية أو الشخصية أو الحزبية. إذاً يحتاج الفريقان إلى الانطلاق من #نقاط جديدة لكي تثمر المفاوضات نتائج إيجابية. في هذا الإطار فإن لبنان سلم الأمم المتحدة في 14 تموز 2010 إحداثيات تبدأ على مسافة 61.5 متراً من رأس الناقورة. أما النقطة الإسرائيلية الأحادية الجانب كما قُدمت إلى الأمم المتحدة في 12 تموز 2011 فتبدأ أيضاً في منطقة خاطئة قبالة الشاطئ بمسافة 37.7 متراً من نقطة رأس الناقورة، ما ينبغي تصحيحهما كما اشرنا سابقاً".

عام 2011، وبعد أشهر قليلة من الاتفاق الإسرائيلي - القبرصي على ترسيم حدودهما وآخر طلب قدمه لبنان إلى الأمم المتحدة، تلقت الحكومة اللبنانية تقارير الخبراء والمشورة ومخططات من مكتب المملكة المتحدة الهيدروغرافي والذي يعتبر منذ فترة طويلة المعيار الذهبي لرسم الخرائط البحرية للمنطقة. ما وجده الخبراء هو أن كلاً من لبنان وإسرائيل استخدمتا إحداثيات خاطئة كنقطة انطلاق لحدودهما البحرية. فبينما يجب أن تكون هذه النقاط على الساحل، ارتكز البلدان على نقاط تبعد عشرات الأمتار عن الشاطئ. قد لا يبدو هذا كثيراً، ولكن عندما يصل فيه الخط المرسوم إلى البحر من نقطة البداية في غير محله إلى ما ينبغي أن يكون المفترق الثلاثي - حيث تلتقي المناطق الاقتصادية الخالصة لقبرص وإسرائيل ولبنان - يصل الخطأ إلى أميال بحرية عدة.

تعليقاً على هذا الموضوع يعتبر بارودي أنه "بحكم الأمر الواقع، استند كل من لبنان وإسرائيل في مطالبتهما البحرية السابقة إلى إحداثيات خاطئة، مما يجعل كل ما نتج عنها عفا عليه الزمن، أي ما يسميه الفرنسيون CADUC "كادوك" - أي لاغ وباطل بالنسبة لكليهما. ولا يمنح هذا فقط الحق في تحديث مطالبتهما أمام الأمم المتحدة، ولكنه يمنح أيضاً التزاماً بالقيام بذلك بناءً على المصلحة الوطنية لكل جانب. وإلى ذلك، تُظهر التجارب أنه، لا سيما مع وجود مثل هذه الأدلة على أن ادعاءات كل منهما كانت معيبة بشكل قاتل، إذا فشلت المحادثات الحالية وذهب البلدان إلى المحكمة أو التحكيم بشأن هذه القضية، فإن أول ما يُطلب منهما هو استبدالهما الخاطئ

للخرائط الموجودة في حوزتهما من خلال إجراء مسوحات وتحليلات مفصلة من أجل تحديد نقاط الخلاف بدقة". وبالمعنى التقني إذاً يؤكد بارودي انه "نعم، يجب على لبنان أن يتحرك بسرعة لتحديث المطالبات البحرية التي سبق أن قدمها الى الأمم المتحدة. لكن هناك اعتبارات أخرى يحتاج أيضاً إلى اخذها في الاعتبار. على سبيل المثال، في حين أن لبنان دولة ذات سيادة، لا يمكنه أن يتجاهل كلياً مواقف الجهات الخارجية. عندما تتعارض هذه المواقف مع رغباتها وحاجاتها، يجب أن يزن الإيجابيات والسلبيات ويقرر وفقاً لذلك. في هذه الحالة، سعى المسؤولون الإسرائيليون إلى ثني لبنان عن تحديث مزاعمه أو تأخير استئناف المحادثات المذكورة أعلاه بطريقة أو بأخرى، مما أثار احتمال أن يؤدي ذلك إلى إعاقة التقدم، وتفاقم التوترات، وإجبار لبنان على الانتظار فترة أطول لأي تطوير في حقله النفطية والغازية البحرية.

أما بالنسبة لما يدعو لبنان الى التنازل عن بعض حقوقه من أجل الاسراع في التوصل الى إتفاق يسمح له ببدء جني بعض الإيرادات من ثرواته، يرفض بارودي بشكل قاطع هذا الخيار، مؤكداً ان "المنطقة الحدودية تحتوي على بعض من أكثر المساحات البحرية الواعدة في لبنان، وعلى أي حال، ليس هناك ما يضمن أن التخلي عنها سيؤدي إلى تحقيق اختراق دبلوماسي، وحتى لو حدث ذلك، فإن الاستثمار الخارجي المطلوب لتنشيط صناعة الطاقة يعتمد على مجموعة أخرى كاملة من المتطلبات الأساسية، ليس أقلها الإصلاحات التي لم يتمكن أحد من تحقيقها".

بالإضافة إلى تحليل عام 2011، أجرى الجيش اللبناني دراسات مفصلة عززت موقف لبنان، وبالتوازي مع الإحداثيات المودعة حديثاً، قد تُسرّع جودة عمل الجيش عملية التفاوض من خلال إثبات أن الجانب اللبناني لن يهدد، ولن يتعرض للخداع. فيما لا أحد يتوقع أن تتخلى واشنطن عن علاقتها الوثيقة بإسرائيل، لكن نهج الجيش اللبناني في المفاوضات يشجع الأميركيين على أن يكونوا منصفين قدر الإمكان.

---

# New Trends on the Global Market of LNG Carriers



The Covid-19 pandemic has brought new challenges for the global gas industry, with the LNG shipping market not being an exception. Because of the Covid-19 pandemic, the market witnessed a reduction in the global gas demand in 2020, which resulted in a slowdown of the global LNG trade and lower-than-expected demand for LNG carriers. These developments, coupled with the commissioning of a large number of new carriers, led to the oversupply of LNG carriers in the shipping market. However, a recovery of LNG demand in early 2021 has raised a question: where is the LNG shipping market drifting, and whether in the short- and medium-term there will be enough LNG carriers on the market to transport liquefied natural gas.

The last three years witnessed the record commissioning of LNG carriers, with 134 LNG carriers coming on line. As a result, at the beginning of 2021, there were over 600 LNG carriers operating in the global market (Figure 1).

In the short- and medium-term, the global LNG shipping market is anticipated to be balanced due to the upcoming commissioning of new LNG carriers. At least 142 LNG carriers, ordered recently, are expected to come on line between 2021 and 2025. Out of the total number, 46 LNG carriers are to be commissioned in 2021 followed by 38 carriers in 2022. South Korean shipbuilders account for the majority of LNG carriers on the order book. Hyundai, Samsung and Daewoo are going to build 110 carriers, while the Russian firm Zvezda has orders for 15 carriers and China's Hudong for 11 carriers.

The ratio of global LNG exports to the number of LNG carriers gives an indication of the average volume of LNG transported by one LNG carrier throughout a specific year. A higher ratio indicates a tighter LNG shipping market. Over the last decade, the LNG shipping market has loosened, supported by the increasing availability of LNG carriers. From 2011 to 2020, the ratio fell from 0.73 to 0.59, which implies that in 2020 one LNG carrier transported on average 0.59 million tonnes per annum (mtpa) (Figure 2).

The global LNG carrier fleet is renewed on a regular basis, with old carriers being scrapped and new ones continuously being added. The construction of LNG carriers has always been associated with the commissioning of new LNG liquefaction capacity. The building of LNG carriers in the mid-2000s was largely driven by the completion of LNG plants in Qatar, while in the late 2010s it was driven by the completion of LNG plants in Australia, U.S., and Russia. As a result, various groups of LNG carriers operate on the market depending on commissioning date. Currently, at least four (4) carriers in operation today were commissioned in the 1970s, 10 carriers in the 1980s, 54 carriers in the 1990s, 244 carriers in the 2000s, and 294 carriers commissioned in the 2010s.

The combined capacity of LNG carriers has also increased consistently. Over the last decade, capacity more than doubled – to 43 mtpa in 2020 – driven by the commissioning of a large

number of LNG carriers and higher capacity of new LNG carriers (Figure 3).

There are different types of LNG carriers depending on their capacity. Various factors have an impact on the choice of shipping companies to build and charter LNG carriers with specific capacity. The liquefaction and regasification capacity of LNG plants and terminals, depth of berths, movement through Suez and Panama canals or through Northern Sea Route, all play an important role in the vessel design. The larger the capacity of the involved LNG carriers, the less LNG shipments and carriers are needed for specific trade routes.

In this context, the largest group of LNG carriers is the one with capacity ranging from 166,000 million cubic metres (cbm) to 182,000 cbm, which comprises 219 carriers. Besides, 191 LNG carriers have capacity from 125,000 to 150,000 cbm, while 125 LNG carriers have capacity of 150,000 cbm up to 165,000 cbm. It is worth highlighting that Qatar's gas transportation company Nakilat owns all 45 Q-Flex and Q-Max LNG carriers operating in the world – with capacity of 210,000-217,000 cbm and 263,000-266,000 cbm, respectively – individually or jointly with international shipping companies. The average capacity of LNG carriers reached 71.2 kilotons (158,200 cbm) in 2020 compared to 54.4 kilotons (120,900 cbm) in 2000. Thus, the rising capacity of new LNG carriers leads to lower demand for new LNG carriers.

Various types of LNG carriers exist depending on the propulsion systems. Steam turbine LNG carriers, which dominated the LNG shipping market for many decades, remain the most popular ones, with 239 carriers operating on the global market. However, their dominance has been broken over the last decade, driven by the emergence of alternative, more efficient propulsion systems. Suffice to note that only 15 LNG carriers of this type were commissioned in the 2010s. Because of these new trends, today many of steam turbine LNG carriers,

especially the old ones, are being converted into FSU or FSRU (floating storage/ regasification unit). Since the mid-2000s, the global shipping industry developed alternative types of LNG carriers, driven by its aspiration to increase operational efficiency, decrease the consumption of bunker fuels, optimise the size of engine room, and expand cargo capacity. The first of them was a dual-fuel diesel electric (DFDE) propulsion system, which came on line in 2004. Later, the industry introduced other propulsion systems for LNG carriers, including tri-fuel diesel electric (TFDE), M-type, electronically controlled, gas injection (MEGI), diesel with re-liquefaction (DRL), in addition to some other types (Figure 4).

The anticipated increase in global liquefaction capacity, LNG trade and number of LNG shipments are key factors that will influence the LNG shipping market and incentivise market players to build new LNG carriers in the short- and medium-term. In this context, the GECF Member Countries will remain key players in the market. These countries have various policies towards the transportation of LNG. First, some of them do not own or operate LNG carriers. Second, others do not own but operate the fleet. Third, others own but do not operate LNG carriers. Finally, some of them both own and operate the fleet.

The planned expansion of LNG liquefaction capacity in some GECF Member Countries, mainly in Qatar and Russia, will have a huge impact on the LNG shipping market in the medium-term.

Today, the leader of the global LNG transport market is undoubtedly Qatar's Nakilat. It owns 69 LNG carriers, individually or jointly with other international shipping companies, with a combined capacity exceeding four mt. Other companies, such as Maran Gas from Greece, GasLog from Monaco, and MISC from Malaysia, lag far behind the Qatari company. Qatar plans to expand its LNG liquefaction capacity by 49 mtpa to 126 mtpa by 2027. Such huge additions to the country's LNG liquefaction capacity will require new LNG carrier fleet to transport LNG to the global markets. In this context, in 2020,

Qatar entered into agreements with global shipbuilders, mainly from South Korea, for over 100 new LNG carriers. These contracts will be worth nearly US\$20 billion, which means that it will be the largest LNG-shipbuilding programme in the industry's history. As a result, Qatar secured around 60% of the global LNG ship construction capacity through 2027. That could lead to the tightening of the LNG shipbuilding market, which should be taken into account by other shipping companies planning to order new LNG carriers.

Russia also has plans to expand its LNG liquefaction capacity, which will require additional LNG carrier fleet. The Russian shipping company Sovcomflot has already ordered 15 icebreaking LNG carriers for the Arctic LNG 2 project from the Russian Zvezda Shipbuilding Complex, with the South Korean Samsung Heavy Industries being a technology partner of Zvezda in this project. These LNG carriers will be delivered between 2023 and 2025. Sovcomflot will own one vessel individually and 14 other carriers jointly with its partner Novatek. These carriers will enable the delivery of LNG to buyers in Asia in 15 days through the Northern Sea Route, which reduces transportation costs and transit time by half, compared to the traditional Suez Canal route. This instance will be the first time a Russian shipbuilding company will construct LNG carriers.

**Dr Aydar Shakirov**  
**Gas Transportation and Storage Analyst**  
**Gas Market Analysis Department**

---

**New QFC member set to become  
global portfolio manager of**

# spot LNG



A Qatar Financial Centre (QFC) newcomer will establish its position as a global portfolio manager of spot LNG, or liquefied natural gas trades that will have immediate local knock-on effects, after Doha expands its LNG production from the present 110mn tonnes per annum.

This outcome is one among the “unsung” economic benefits that will follow North Field Expansion (NFE), which is also set to enhance the prospects of asset management industry in the country, the QFC said in an article.

The NFE project will not only bring up natural gas from underground, but also other valuable hydrocarbons for export and domestic use, it said, pointing out that associated hydrocarbons destined for export include 260,000 barrels per day of condensate and 11,000t/d of liquefied petroleum gas, valued at roughly \$3.05bn annually (using posted 2020 average prices).

“The additional income earned through hydrocarbon exports will increasingly make Qatar a destination for asset managers and other financial institutions,” the QFC said. As imports of construction inputs and machinery wane with most



infrastructure projects coming close to completion, Qatar's trade surplus is likely to register bigger in the years ahead. "Once NFE-related exports commence in late 2025, export earnings are destined to reach still higher. Whereas much of the immediate proceeds are destined to the Ministry of Finance and Qatar Investment Authority, there is a progressively stronger case for specialised asset managers to locate in Doha close to their future investors," QFC said.

In tandem, it said, financial institutions in the country will increasingly be called upon to provide a variety of sophisticated products to Qatari firms with a growing international footprint.

As Qatar's economy continues to grow at home in terms of complexity, and abroad with its varied connections, the financial sector is set to grow substantially.

As Qatar looks ahead, it is destined to leverage its natural gas-focused competitive cost advantages, global network, existing industrial base, innovative focus and high-profile investments to become an attractive and rewarding business destination.

The QFC plays a key part of the country's development journey, which it looks forward to supporting with vigour and indirectly offering firms on its platform noteworthy prospects.

The first certain phase concerns the North Field East that comprises an approximate \$28.75bn of investments – half of which has received a final investment decision as of February 2021.

Beyond that, Qatar Petroleum, or QP, is appraising different areas of the North Field to possibly award a subsequent expansion phase within the next three years.

The QP has made this NFE investment at an opportune time, which will allow it to capture more global LNG market share and gain footholds in new markets as many competitors pull back from major projects, according to the QFC article.

Another "unsung" benefit is the North field's expansion would drive local manufacturing opportunities. Additionally, there

will be 4,000t/y of ethane for use as feedstock in Qatar's growing petrochemicals sector. This hike equates to nearly 50% of existing 2020 export capacity, or 36.4% of current domestic base quantities.

A combination of these NFE ethane volumes and those from Barzan enables Qatar to produce in future a greater variety as well as more complex petrochemicals, such as those that will originate from the joint venture with Chevron Phillips (70% owned by QP) using the Middle East's largest 1.9mn t/y ethane cracker in Ras Laffan to start production in 2025.

This is critical to the local economy, according to Gulf Petrochemicals and Chemicals Association, which recently outlined that with oil at \$65 a barrel, crude producers can earn \$15 per barrel by refining their output and an extra \$30 a barrel on top of that by converting it into petrochemicals.

"As Qatar continues its drive to diversify economically, local manufacturing will play a key role," the QFC article said.

---

**East Mediterranean Maritime Borders: Lebanon vs. Israel: Whatever talks achieve both Lebanon and Israel need to update Maritime Boundaries**



Θαλάσσια σύνορα της Ανατολικής Μεσογείου

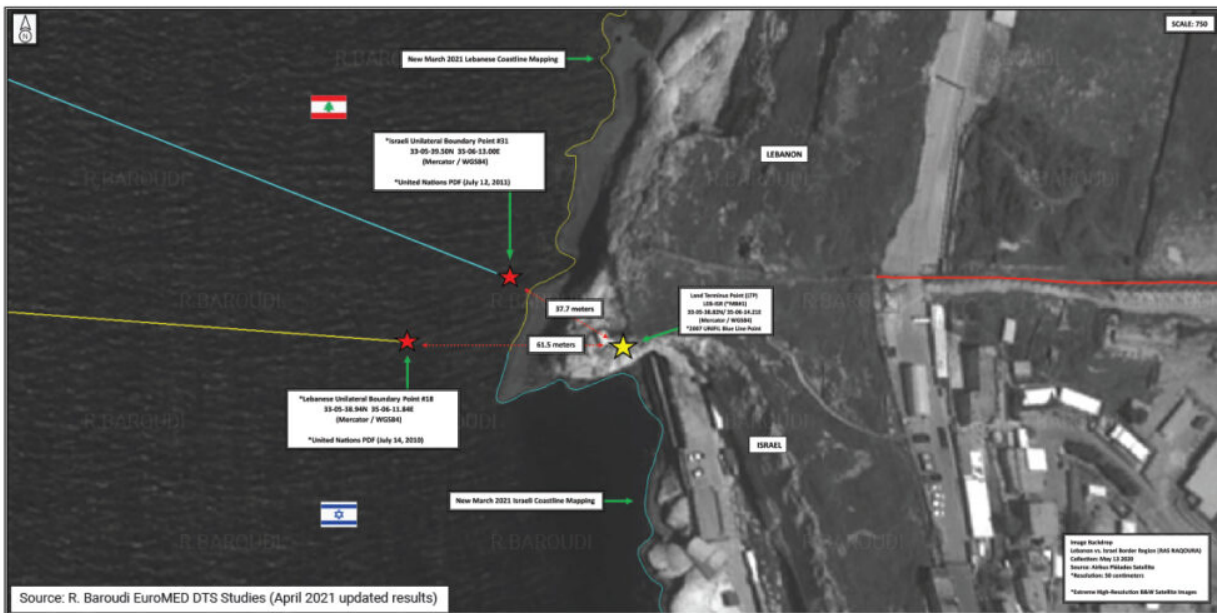
**Από τον Ρούντι Μπαρούντι**

Λίβανο VS Ισραήλ : Σε όποιες συνομιλίες και εάν καταλήξουν τόσο το Ισραήλ όσο και ο Λίβανος πρέπει να επικαροποιήσουν τα θαλάσσια σύνορα



## Lebanon and Israeli gazetted boundaries

Lebanese unilateral declared MB document (2010) vs Israeli unilateral declared document (2011)



Οι πολιτικοί κύκλοι του Λιβάνου ασχολούνται και πάλι, αυτή τη φορά σχετικά με το εάν ο Λίβανος πρέπει να καταθέσει στα Ηνωμένα Έθνη νέες συντεταγμένες που να ορίζουν την υπεράκτια αποκλειστική οικονομική ζώνη (ΑΟΖ) της χώρας.

Στην πραγματικότητα, δύο ερωτήσεις πρέπει να απαντηθούν:

- 1) Ο Λίβανος έχει το δικαίωμα να επικαιροποιήσει τους θαλάσσιους ισχυρισμούς του στον ΟΗΕ;
- 2) Εάν ναι, θα πρέπει ο Λίβανος να κάνει χρήση αυτού του δικαιώματος υπό τις παρούσες συνθήκες;

Το ζήτημα είναι κρίσιμο, όχι μόνο επειδή σχετίζεται άμεσα με τις συνομιλίες επί των θαλασσίων ζωνών οι οποίες επί τους παρόντος έχουν καθυστερήσει αλλά και επειδή επηρεάζει την ταχύτητα με την οποία μπορεί να αρχίσει να λαμβάνει απτά οφέλη από τυχόν υποθαλάσσιους υδρογονάνθρακες εντός της ΑΟΖ της .

Για να σας βοηθήσω, η πρώτη ερώτηση είναι η ευκολότερη. Το δικαίωμα του Λιβάνου να επικαιροποιηθεί τις συντεταγμένες στον ΟΗΕ όχι μόνο κατοχυρώνεται στη Σύμβαση των Ηνωμένων Εθνών για

το Δίκαιο της Θάλασσας (UNCLOS), αλλά προστατεύεται επίσης από το Διεθνές Εθιμικό Δίκαιο (CIL), και καθιερώθηκε από αμέτρητες προηγούμενες περιπτώσεις ως συνήθη πρακτική των χωρών που επιδιώκουν να καθορίσουν και να υπερασπιστούν τους θαλάσσιους ισχυρισμούς τους, κυρίως επειδή η συνεχής τεχνολογική πρόοδος επιτρέπει όλο και πιο ακριβή χαρτογράφηση. Είναι επίσης σημαντικό να σημειωθεί ότι το Προεδρικό Διάταγμα 6433 του 2010, σύμφωνα με το οποίο οι συντεταγμένες του Λιβάνου κατατέθηκαν για τελευταία φορά στον ΟΗΕ, προέβλεπε ρητά τη δυνατότητα μελλοντικών ενημερώσεων. Το άρθρο 3 δεν αφήνει κανένα περιθώριο παρερμηνείας: «Ανάλογα με τις ανάγκες, και υπό το πρίσμα των διαπραγματεύσεων με τα σχετικά γειτονικά κράτη, τα σύνορα της αποκλειστικής οικονομικής ζώνης μπορούν να οριστούν και να βελτιωθούν και, κατά συνέπεια, να τροποποιηθεί ο χάρτης των συντεταγμένων της, εάν γίνουν διαθέσιμα ακριβέστερα δεδομένα. Να μην υπάρχει αμφιβολία, και όπως θα δούμε παρακάτω, τέτοια δεδομένα έχουν καταστεί διαθέσιμα. Επιπλέον, όταν η Μόνιμη Αποστολή του Λιβάνου στα Ηνωμένα Έθνη κατέθεσε τους ισχυρισμούς που εγκρίθηκαν βάσει του διατάγματος 6433, η συνοδευτική επιστολή περιελάμβανε την ακόλουθη δήλωση: «Υπάρχει ανάγκη διεξαγωγής μιας λεπτομερούς έρευνας, χρησιμοποιώντας ένα παγκόσμιο σύστημα εντοπισμού θέσης, της ακτής που εφάπτεται στην νότιο όριο, συμπεριλαμβανομένων όλων των νησιών και των νησίδων με σκοπό την ενημέρωση των ναυτικών χαρτών και της γραμμής βάσης ανάλογα στο μέλλον.» Και πάλι, για να είμαστε απόλυτα σαφείς: έχουν διεξαχθεί τέτοιες έρευνες. Επίσης, ενώ οι Ισραηλινοί αξιωματούχοι έχουν επιδιώξει (όχι πολύ πειστικά) να αμφισβητήσουν το δικαίωμα του Λιβάνου να κατατεθεί τους ισχυρισμούς του, η συμφωνία οριοθέτησης ΑΟΖ του Οκτωβρίου 2010 της ίδιας της χώρας τους (η οποία βασίζεται σε ισραηλινές συντεταγμένες τις οποίες γνωρίζουμε τώρα ότι είναι λανθασμένες και, επομένως, θα απορριφθούν από οποιοδήποτε δικαστήριο) με την Κύπρο να αναγνωρίζει επίσης ρητά το γεγονός ότι σύμφωνα με το Εθιμικό Διεθνές Δίκαιο τέτοιες συντεταγμένες υπόκεινται σε αλλαγές. Το άρθρο 1 παράγραφος e, της εν λόγω συμφωνίας έχει ως εξής: «Λαμβάνοντας υπόψη τις αρχές του εθιμικού διεθνούς

δικαίου σχετικά με την οριοθέτηση της αποκλειστικής οικονομικής ζώνης μεταξύ κρατών, οι γεωγραφικές συντεταγμένες των σημείων 1 ή 12 θα μπορούσαν να αναθεωρηθούν ή και να τροποποιηθούν ως αναγκαία υπό το φως μιας μελλοντικής συμφωνίας σχετικά με την οριοθέτηση της Αποκλειστικής Οικονομικής Ζώνης από τα τρία ενδιαφερόμενα κράτη σε σχέση με καθένα από τα εν λόγω σημεία. ”

Επιπλέον, σε μια μεταγενέστερη μονομερή κατάθεση των συντεταγμένων στον ΟΗΕ, η αντιπροσωπεία του Ισραήλ στον παγκόσμιο οργανισμό όχι μόνο αναφέρεται στις «σχετικές διατάξεις του άρθρου 1 παράγραφος ε αλλά επίσης αναπαράγει τη γλώσσα, ουσιαστικά κατά λέξη. Ο ισχυρισμός μάλιστα επανειλημμένα ανέφερε «τα τρία ενδιαφερόμενα κράτη», το οποίο στο πλαίσιο μπορεί να δείξει μόνο τον Λίβανο ως το τρίτο κράτος.

Στο δικαίωμα του Λιβάνου να υποβάλει νέες συντεταγμένες, λοιπόν, η ετυμηγορία είναι αναπόφευκτη: έχει σίγουρα αυτό το δικαίωμα. Ρεαλιστικά, όποιος υποστηρίζει διαφορετικά είτε αντιτίθεται στα συμφέροντα του Λιβάνου (που χρειάζεται να αναπτύξει αυτούς τους πόρους), των Λιβανέζων (που αξίζουν να αποκομίσουν τις συνοδευτικές οικονομικές ανταμοιβές) και των Λιβανέζικων Ένοπλων Δυνάμεων (που επενδύουν σε μεγάλο βαθμό σε ένα θετικό αποτέλεσμα).

Απορριπώντας τα γεγονότα και τους κανόνες · ή επιδιώκοντας κάποιο άλλο πολιτικό, οικονομικό ή και άλλο προσωπικό κομματικό πλεονέκτημα.

Επόμενη ερώτηση: πρέπει ο Λίβανος να ασκήσει το δικαίωμά του σε αυτήν τη συγκεκριμένη συγκυρία;

Σε μια πρώτη ανάγνωση των δεδομένων, αυτή η απάντηση είναι σχεδόν εξίσου σαφής. Το 2011, λίγους μήνες μετά τη συμφωνία Ισραήλ-Κύπρου και την τελευταία κατάθεση των συντεταγμένων του Λιβάνου στον ΟΗΕ, η κυβέρνηση του Λιβάνου έλαβε ανάλυση

εμπειρογνωμόνων και αναλύσεις σχετικά με τα διαγράμματα του Υδρογραφικού Γραφείου του Ηνωμένου Βασιλείου – που θεωρείται από καιρό το χρυσό πρότυπο της θαλάσσιας χαρτογραφίας – για την περιοχή. Αυτό που βρήκαν οι ειδικοί είναι ότι τόσο ο Λίβανος όσο και το Ισραήλ είχαν χρησιμοποιήσει εσφαλμένες συντεταγμένες ως σημεία εκκίνησης για τα θαλάσσια σύνορά τους (βλ. Συνημμένο χάρτη): όπου τέτοια σημεία πρέπει να βρίσκονται στην ακτογραμμή, και οι δύο χώρες είχαν τοποθετήσει δεκάδες μέτρα υπεράκτια. Αυτό μπορεί να μην ακούγεται πολύ σημαντικό, αλλά τη στιγμή που μια γραμμή που χαράσσεται προς τη θάλασσα από ένα τόσο αδύνατο σημείο εκκίνησης φτάνει σε αυτό που θα έπρεπε να είναι η σύζευξη – όπου συναντώνται οι ΑΟΖ της Κύπρου, του Ισραήλ και του Λιβάνου – το σφάλμα μπορεί να ανέλθει σε αρκετά ναυτικά μίλια. Εξ υπαρχής, τόσο ο Λίβανος όσο και το Ισραήλ έχουν βασίσει τους προηγούμενους ναυτικούς ισχυρισμούς τους σε ελαττωματικές συντεταγμένες, κάτι που καθιστά τα πάντα που συνεπάγονται από αυτά ξεπερασμένα, αυτό που οι Γάλλοι θα αποκαλούσαν «caduc» – που σημαίνει άκυρο. Και στους δύο, αυτό παρέχει όχι μόνο δικαίωμα ενημέρωσης των αξιώσεών τους ενώπιον του ΟΗΕ, αλλά και υποχρέωση να το πράξει βάσει του συμφέροντος κάθε πλευράς. Επιπλέον, η πρόσφατη εμπειρία δείχνει ότι, ειδικά με τέτοια στοιχεία οι αντίστοιχοι ισχυρισμοί τους ήταν λάθος, εάν οι τρέχουσες συνομιλίες απέτυχαν και οι δύο χώρες πήγαν στο δικαστήριο ή σε διαιτησία για το ζήτημα, το πρώτο πράγμα που τους ζητήθηκε θα ήταν να αντικαταστήσουν το ελαττωματικούς χάρτες πραγματοποιώντας λεπτομερείς έρευνες και αναλύσεις για τον ακριβή προσδιορισμό τυχόν σημείων διαφωνίας. Από τεχνική άποψη, τότε, ναι, ο Λίβανος πρέπει σίγουρα να κινηθεί γρήγορα για να ενημερώσει για τις συντεταγμένες που είχε προηγουμένως καταθέσει στον ΟΗΕ. Αλλά και άλλες σκέψεις πρέπει επίσης να σταθμιστούν. Για παράδειγμα, ενώ ο Λίβανος είναι κυρίαρχη χώρα, δεν μπορεί να αγνοήσει εντελώς τις θέσεις εξωτερικών παραγόντων. Όταν αυτοί έρχονται σε αντίθεση με τις δικές του επιθυμίες και ανάγκες, πρέπει να σταθμίζει τα υπέρ και τα κατά και να αποφασίζει ανάλογα. Σε αυτήν την περίπτωση, Ισραηλινοί αξιωματούχοι προσπάθησαν να αποθαρρύνουν τον Λίβανο να

καταθέσει τις συντεταγμένες ή να καθυστερήσουν με άλλο τρόπο την επανάληψη των προαναφερθεισών συνομιλιών, αυξάνοντας την προοπτική ότι κάτι τέτοιο θα μπορούσε να αποτρέψει την πρόοδο, να επιδεινώσει τις εντάσεις και να αναγκάσει μια μεγαλύτερη αναμονή για οποιαδήποτε υπεράκτια ανάπτυξη πετρελαίου και φυσικού αερίου. Το τελευταίο σημείο θα μπορούσε να έχει ιδιαίτερη σημασία λόγω της σημασίας μιας ενεργειακής έκρηξης για τον πληθυσμό του Λιβάνου. Η οικονομία του Λιβάνου έχει συρρικνωθεί κατά περίπου 25% κατά το παρελθόν έτος, μετά την αθέτηση χρεών που οδήγησε στην κατάρρευση του νομίσματος και στις αυξήσεις των τιμών καταναλωτή που χαρακτηρίζονται ως υπερπληθωρισμός. Ακόμη χειρότερα, η πολιτική τάξη έχει δείξει λίγο στομάχι για τα είδη των μεταρρυθμίσεων που απαιτούνται για την εξασφάλιση διάσωσης από το Διεθνές Νομισματικό Ταμείο (ΔΝΤ). Το σημερινό υπουργικό συμβούλιο, με επικεφαλής τον πρωθυπουργό Χασάν Ντιάμπ, παραιτήθηκε πριν από επτά μήνες για μια έκρηξη στο λιμάνι της Βηρυτού που κατέστρεψε δεκάδες χιλιάδες σπίτια, οπότε λειτουργεί υπό την επίβλεψη. Ο διορισμένος διάδοχός του είναι επίσης ο προκάτοχός του, ο πρώην πρωθυπουργός Saad Hariri, ο οποίος παραιτήθηκε ο ίδιος ενόψει λαϊκών διαμαρτυριών που κατέλαβαν τη χώρα στα τέλη του 2019. Ενώ απολαμβάνει σημαντική υποστήριξη σε ορισμένες ξένες πρωτεύουσες, η εσωτερική θέση του Hariri μπορεί να χαρακτηριστεί μόνο ως αδύναμη, και το απλό γεγονός ότι δεν μπόρεσε να σχηματίσει υπουργικό συμβούλιο μετά από περισσότερο από μισό χρόνο αφήνει λίγη αμφιβολία ότι ακόμα κι αν το καταφέρει, θα είναι σε μεγάλο βαθμό ανίκανος να λάβει αποφασιστική δράση σε σημαντικά ζητήματα. Έχουμε λοιπόν ένα άλλο ερώτημα: πρέπει ο Λίβανος να παραιτηθεί από ορισμένα από τα δικαιώματά του για να επιταχύνει μια συμφωνία που του επιτρέπει να αρχίσει να κερδίζει κάποια απαραίτητα έσοδα από υπεράκτιους πόρους; Η απάντηση σε αυτό πρέπει να είναι ένα ηχηρό «όχι». Η συνοριακή περιοχή περιέχει μερικές από τις πιο υποσχόμενες υπεράκτιες εκτάσεις του Λιβάνου και, εν πάση περιπτώσει, δεν υπάρχει καμία εγγύηση ότι η παραίτησή της θα λειάνει το έδαφος για μια διπλωματική ανακάλυψη – και ακόμη και αν το έκανε, η εξωτερική επένδυση που απαιτείται για να



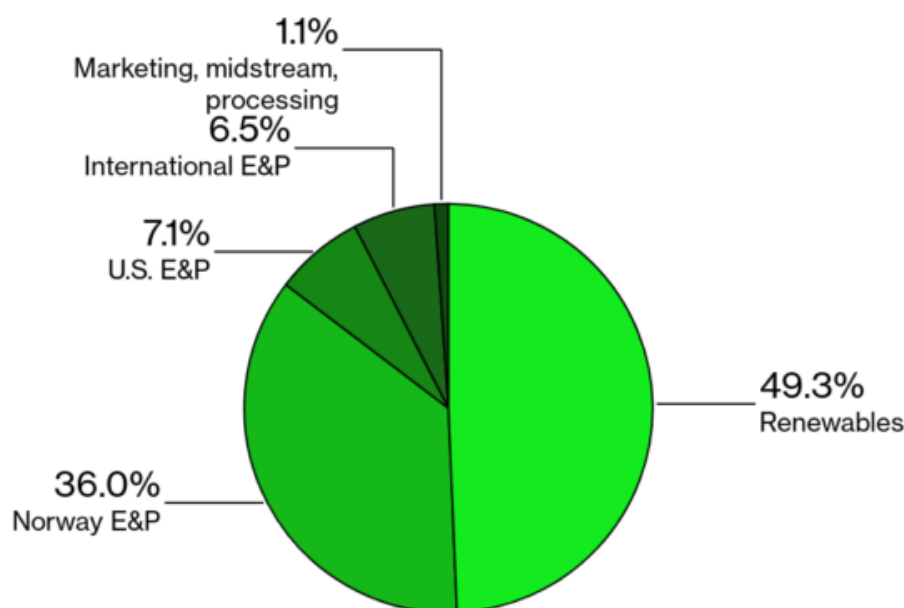
ανεβάσει μια ενεργειακή βιομηχανία και η εργασία εξαρτάται από μια ολόκληρη σειρά προϋποθέσεων, ιδίως από τις μεταρρυθμίσεις που κανείς δεν μπόρεσε να αντιληφθεί. Επίσης, εκτός από την ανάλυση του 2011, οι ένοπλες δυνάμεις του Λιβάνου πραγματοποίησαν δικές τους λεπτομερείς μελέτες, οι οποίες έχουν ενισχύσει σημαντικά τη θέση του Λιβάνου. Οι ανώτεροι αξιωματικοί της LAF έχουν επίσης απαλλαγεί από υψηλό βαθμό επαγγελματισμού στον διαμεσολαβητικό διάλογο των ΗΠΑ με τους Ισραηλινούς. Σε συνδυασμό με τις πρόσφατα κατατεθείσες συντεταγμένες, η ποιότητα του έργου της LAF ενδέχεται να επιταχύνει τη διαδικασία διαπραγμάτευσης αποδεικνύοντας ότι η λιβανική πλευρά δεν θα φουσκώσει, αλλά ούτε θα εκφοβιστεί ούτε θα εκνευριστεί. Κανείς δεν περιμένει ότι η Ουάσινγκτον θα εγκαταλείψει τη στενή σχέση της με το Ισραήλ, αλλά η προσέγγιση της LAF για όλες τις επιχειρήσεις, που δεν έχουν υποστεί απώλειες από τις αντιξοότητες της λιβανικής πολιτικής, ενθαρρύνει τους Αμερικανούς να είναι όσο το δυνατόν πιο συνεργάσιμοι. Και πάλι, η υπόθεση για έγκαιρη και αποφασιστική τροποποίηση της κατάθεσης των συντεταγμένων του Λιβάνου φαίνεται δικαιολογημένη, αλλά μόνο εάν το ζήτημα μπορεί να αναχαιτίσει τη δυσλειτουργική πολιτικής του Λιβάνου. Δεδομένης της ιστορίας της πολιτικής του Λιβάνου, είναι φυσικό ότι ακόμη και οι καλοί καλοί παίκτες θέλουν να διασφαλίσουν ότι έχουν επαρκή πολιτική κάλυψη πριν κάνουν οποιαδήποτε σημαντική κίνηση. Αν και αυτό είναι σίγουρα ένα βήμα συνέπειας, ωστόσο, τα πλεονεκτήματά του είναι τόσο προφανή που πρέπει να απαιτούν μόνο γραφειοκρατική ή και νομική πρωτοβουλία από τα κατάλληλα άτομα στο Υπουργείο Εξωτερικών. Το γεγονός ότι απαιτεί υψηλότερη εξουσιοδότηση δεν θα πρέπει να αποτελεί δικαιολογία για μια ακόμη αντιπαράθεση θάρρους ή δειλίας, που που έχουν αποξενώσει, απογοητεύσει, φτωχύνει και έχουν κυριολεκτικά σκοτώσει εκατοντάδες χιλιάδες Λιβανέζους τον τελευταίο μισό αιώνα. Αντίθετα, πρέπει να παρακινήσει τους αξιωματούχους να γίνουν δημιουργικοί για το πώς να σημειώσουν πρόοδο σήμερα χωρίς να αφήσουν τους ανθρώπους να αναβάλλουν για αύριο. Υπάρχουν τρόποι συμβιβασμού στη διαδικασία χωρίς να θυσιάσουμε τη λογοδοσία, την ακεραιότητα ή τη διαφάνεια και τα

διακυβεύματα είναι τόσο υψηλά που η εύρεση μιας τέτοιας φόρμουλας θα αξίζει ό, τι προσπάθεια απαιτεί. Και για μια φορά, ο λαός του Λιβάνου μπορεί να πιστεύει ότι οι ηγέτες του ενεργούν για καθαρά εθνικούς λόγους και όχι προσωπικούς.

## How an Oil Company Becomes a Renewables Company

### How to Earn \$2.6 Billion

Equinor 1Q 2021 earnings by segment



Source: Equinor, Bloomberg

Note: E&P is exploration and production. Earnings omit \$53 million loss from "other" **Bloomberg Green**

Last week a raft of oil majors released their first-quarter results, with companies like Royal Dutch Shell Plc showing a return to pre-pandemic profit levels. At the same time, some of the majors increased their energy transition commitments: as my Bloomberg Intelligence colleagues Salih Yilmaz and Will Hares noted on Twitter, Spanish firm Repsol SA devoted 40% of

its capital expenditure to low-carbon projects, and France's Total SE stated plans to increase its renewable energy capacity five-fold over the next four years.

There are energy-transition commitments, though, and then there are energy-transition results. And on the latter side, one company shines: Norway's state-owned oil producer, Equinor ASA. It posted more than \$2.6 billion of earnings in the first quarter of 2021, 49% of which was from renewable energy. Last quarter, Equinor earned more from renewables than it did from oil and gas exploration and production.

But Equinor's results are more than evidence of a successful renewable-energy strategy. They're also a sign of the challenge ahead for other oil majors with similar ambitions.

Equinor's capital gains in renewables came from "farm downs," i.e. the selling of assets at various stages of development to new owners. (Another term for farm down is "asset rotation," which I discussed last week.) Equinor divested a 50% interest in two U.S. offshore wind projects and a 10% interest in two U.K. offshore wind farms. While asset rotation is slowing down in the power utility sector, it seems to be working fine for Equinor.

More interesting than the farming down itself is who Equinor is farming down to: two other European oil majors! BP Plc is buying into the U.S. projects, and Italy's Eni SpA is buying into the U.K. projects—or in other words, BP and Eni are paying Equinor for the privilege of taking on the earlier stages of developing offshore wind.

Therein lies the challenge for Big Oil's energy transition plans. Equinor's way to benefit from renewable-energy assets is, essentially, to put in the early work of developing them—and then reap the cash benefits of selling them to others.

Importantly, early wind development is more time-dependent and expertise-dependent than it is capital-dependent. Equinor's

U.S. wind assets are the result of its success in the country's 2018 offshore-lease auction, when it won stakes with a bid of \$135 million. In its latest earnings statement, the company says BP paid \$1.2 billion for those same assets, netting the Norwegian company \$1 billion on the deal.

Equinor is a special creature in a few ways. First, one of the reasons it could be an early developer of U.S. offshore wind is that it has decades of experience developing and operating offshore oil and gas assets. Other oil majors (in particular BP) can claim the same expertise, but Equinor seems particularly adept at it.

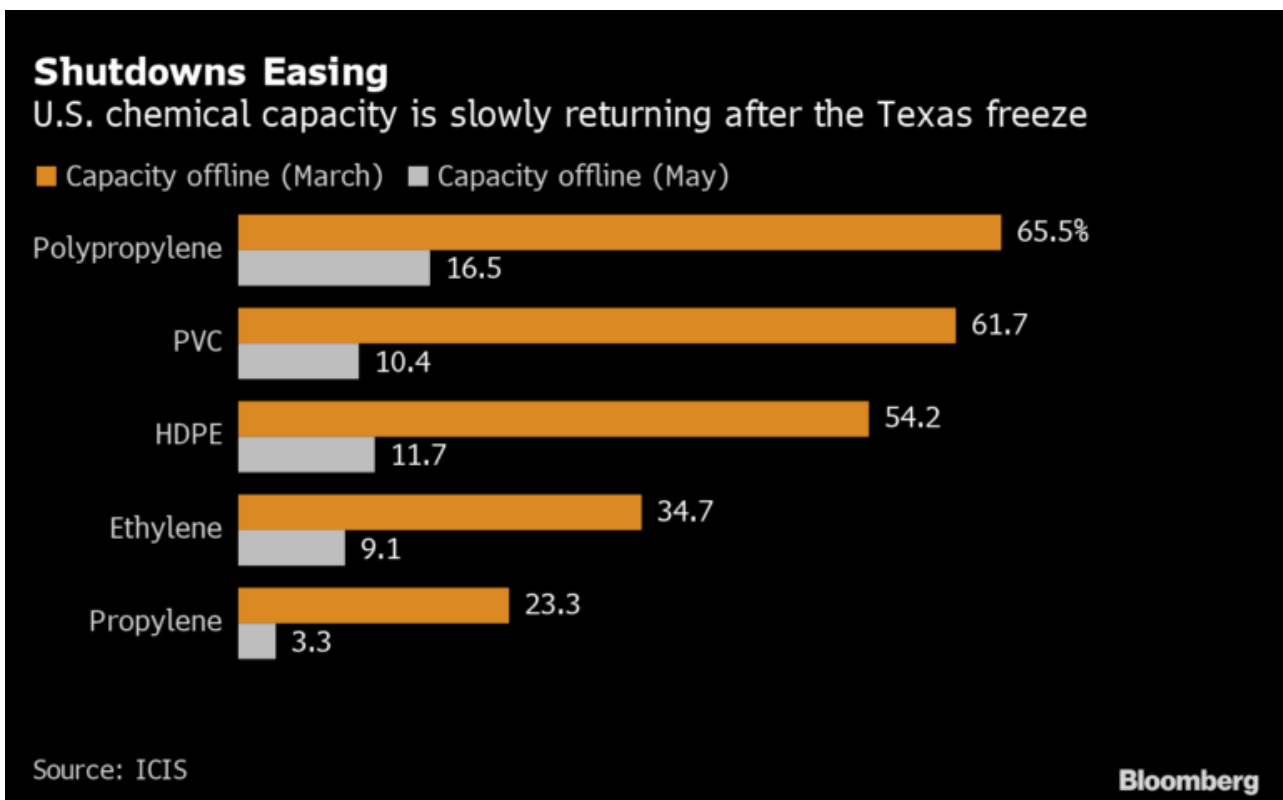
Second, the company is two-thirds owned by the Kingdom of Norway, with Norway's Government Pension Fund Global, also known as Norges Bank, owning another 3.59% of the company via Folketrygdfondet, which is authorized to invest 85% of its funds in Norwegian companies. Not only is the government a particularly patient and committed shareholder, it also has a hand in its portfolio companies' strategies. The Folketrygdfondet "has an interest in an orderly transition in line with the Paris Agreement" and expects that its portfolio companies "integrate climate change considerations into policies and strategy."

So to recap: Norway reinvests its state-oil company's revenues back into said oil company, while also helping drive said oil company's energy transition strategy. As Equinor's first-quarter results show, all of this effort and coordination has made it possible for an oil company to get half its revenues from renewable energy, at least for now. Other oil majors reaching for that same brass ring will have their work cut out for them, certainly—and may continue to resort to buying assets from each other in their quest to get there.

*Nathaniel Bullard is BloombergNEF's Chief Content Officer.*

---

# Big Oil's Chemical Profits Show Inflationary Double Whammy



(Bloomberg) – Drive down any highway in the world and you’ll see countless reminders that the price of Big Oil’s primary product is rising. What’s less obvious is how the inflationary pressures from transport fuel are being amplified by another part of this sprawling industry – chemicals.

The cost of the building blocks for everything from plastics to paint has surged over the past year. That’s great for companies like Exxon Mobil Corp. and Royal Dutch Shell Plc, whose petrochemical units just earned their biggest profit in years.

But it’s unwelcome news for consumers as commodities from

copper to lumber are already testing record highs. The price of materials like PVC and ethylene, staples of construction and manufacturing, have risen to the highest in at least seven years on a combination of pandemic-driven demand, the broader post-Covid recovery and once-in-a generation supply disruptions.

“The demand is coming from food, packaging, medical goods, protective equipment,” said Oswald Clint, senior research analysts at Sanford C Bernstein Ltd. “Does it add to inflation? Yes.”

Oil has advanced steadily this year, coming within a whisker of \$70 a barrel in London this week. Yet even as higher crude prices boosted earnings from the oil majors’ exploration and production units, the performance of their petrochemical businesses really stood out.

In the first three months of this year, Exxon made \$1.4 billion from chemicals, more than in any quarter since at least 2014, when oil prices were above \$100 a barrel. More than a fifth of Shell’s \$3.23 billion of adjusted net income for the period came from the division, the highest in four years.

### Global Winners

It’s not just the oil majors seeing sales surge. Chemicals was the fastest growing unit at Indian conglomerate Reliance Industries Ltd. in the first three months of 2021, compared with the prior quarter.

Other winners from the boom include Brazil’s Braskem SA, Indorama Ventures PCL from Thailand, Celanese Corp., Dow Inc. and LyondellBasell Industries NV in the U.S., and Saudi Basic Industries Corp., according to Jason Miner, Bloomberg Intelligence chemicals analyst.

“It’s a story of the strength of the intermediates,” Shell

chief financial officer Jessica Uhl told investors on April 29, referring to compounds that are derived from basic petrochemical feedstocks. Demand is growing as the economy recovers, notably in Asia, she said.

For example, the price of styrene monomer – used in medical devices and latex – surpassed \$1,000 a ton in the first quarter, Uhl said. The average price of the chemical at the port of Rotterdam in the Netherlands was about \$700 a ton in 2020, according to data compiled by Bloomberg.

The global vaccination drive and large stimulus packages are boosting consumer sentiment and demand from health care, packaging, consumer durables, textiles and automobiles, Reliance said in its earnings presentation last week. Demand for polymers and polyesters has been particularly strong in India, it said.

#### Trouble in Texas

This isn't just a story about strong demand. The chemicals industry is also just coming back from several major supply disruptions.

Back-to-back hurricanes on the U.S. Gulf Coast last year were followed by unusually cold weather in February, which knocked out much of the electricity grid in Texas and forced giant petrochemical facilities to shut down. Two months later, many are still not back working at full-capacity.

The region has become a dominant player in the world's plastics trade thanks to natural gas liquids – a cheap petrochemical feedstock – coming out of the Texas shale boom. For example, North America is the world's biggest producer of high-density polyethylene, used in everything from shampoo bottles to snowboards. It's also the largest exporter of PVC.

"The big freeze sent a shockwave through global petrochemical markets," Vienna-based consultant JBC Energy GmbH said in a

note. While almost all of the plants that were disabled by the weather have been brought back online, inventories of many chemicals are still low, keeping prices elevated, it said.

The price of ethylene, the chemical building block for everything from plastics to solvents, reached a seven-year high of 59.5 cents a pound in March, according to ICIS, a data and analytics provider. PVC reached a record high of \$1,625 a ton that month.

Even recycled plastic is in high demand, with the price of polyethylene terephthalate, or PET, used for drinks bottles and packaged food, reaching a 10-year high of 1,250 euros (\$1,519) a metric ton in northwest Europe on Wednesday, according to S&P Global Platts. The price remained at that level Friday.

“If you were able to get back up and running quickly after the storm” you found a marketplace desperate for your product that “would almost pay any price to get it,” said Jeremy Pafford, head of North America at ICIS.

The tight supply and demand balance for many chemicals looks set to continue in the second quarter, Exxon Chief Executive Officer Darren Woods said on a call with analysts last week. Dow and LyondellBasell have said they are currently selling everything they produce and don’t anticipate being able to restock inventories until the third or fourth quarter.

To manufacture enough chemicals to satisfy customer demand and start building up its stockpiles again, the U.S. needs “four dull months” without any further disruption, said Pafford.

But hurricane season is just around the corner, and the global economy does not have time on its side.

The world is expected to see a surge in spending in the coming months as many countries end their lockdowns and cooped-up consumers dip into their savings or stimulus checks. That



could happen alongside the continuation of pandemic-driven trends such as high demand for plastic medical goods as new strains of Covid-19 trigger fresh outbreaks around the world.

“Demand for personal protective equipment is unlikely to fade soon,” said Armaan Ashraf, an analyst at consultant FGE. “E-commerce, retail, durable goods demand is also likely to remain strong through the rest of this year as well.”

(Updates PET price in 17th paragraph)

©2021 Bloomberg L.P.

---

## **Saudi cuts oil prices for Asia as India battles virus**



Bloomberg / Dubai

Saudi Arabia lowered oil prices for customers in its main market of Asia as a surge in coronavirus cases crimps demand in India, the world's third-largest crude importer.

The kingdom's state energy firm, Saudi Aramco, reduced pricing for June shipments to the continent by between 10 and 30 cents per barrel.

The key Arab Light grade for Asia was cut to \$1.70 a barrel above the benchmark from \$1.80 for May. That's the first reduction in official selling prices for the grade since December, signalling weakness in Asian oil markets.

The reductions had been anticipated in the market. Aramco had been expected to lower Arab Light's premium by 20 cents, according to a Bloomberg survey of seven traders and refiners.

Saudi Energy Minister Prince Abdulaziz bin Salman has urged fellow members of Opec+ to be cautious as the group eases supply cuts started last year when the pandemic was hammering energy markets. The 23-nation alliance plans to increase daily output by just over 2mn barrels through to July, beginning with 600,000 this month. That would still leave production roughly 5mn barrels a day below pre-pandemic levels.

Aramco raised pricing to the US by 20 cents a barrel for all grades. The nation is adding jobs amid economic growth and a push for widespread vaccinations. The company cut pricing for all shipments to Northwestern Europe and the Mediterranean, where efforts to bolster the economy and ease lockdowns have met with mixed results.

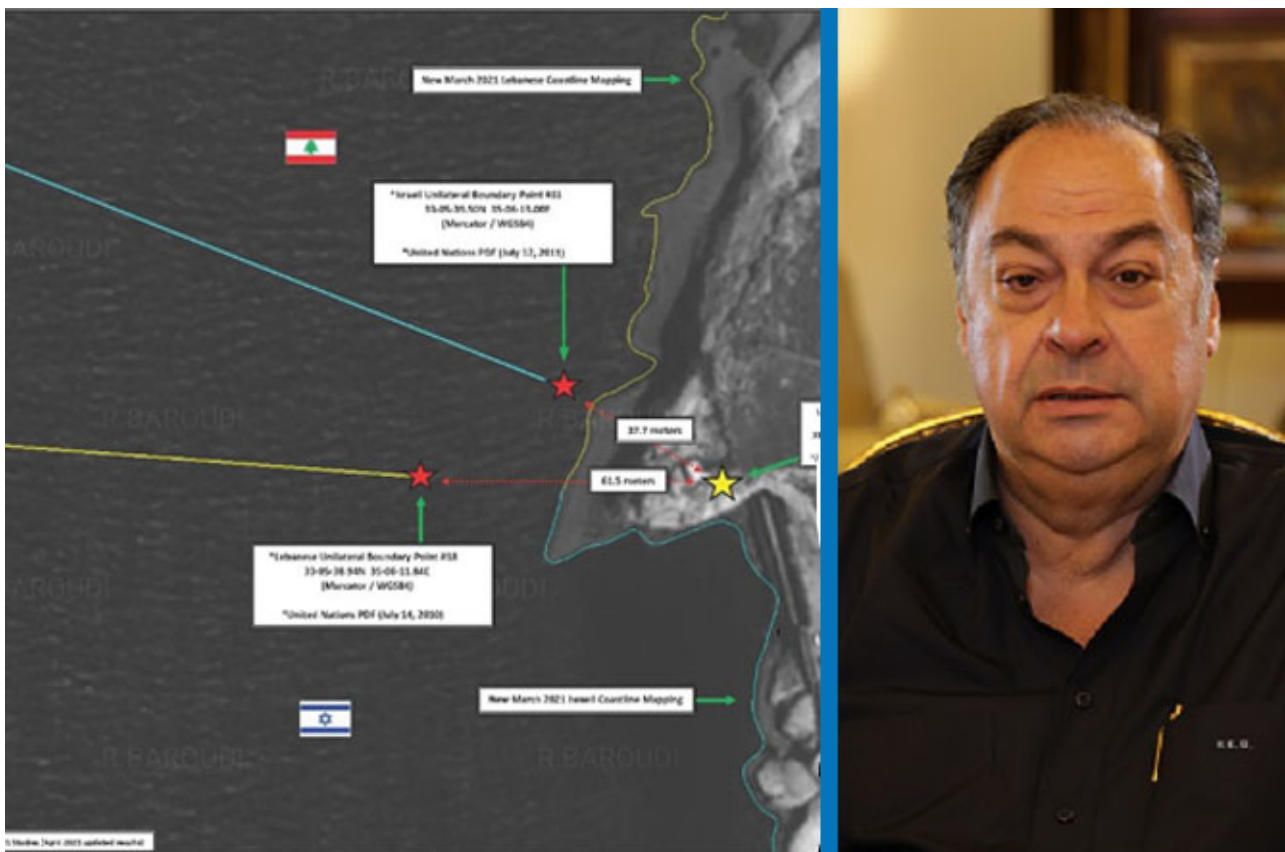
Brent crude has climbed almost 35% this year, closing in on \$70 a barrel as vaccination rollouts enable the US, Europe and some other major economies to reopen. Aramco chief executive officer Amin Nasser said on Tuesday he's more optimistic about the outlook for oil.

Still, the pandemic has rapidly worsened in India since the start of April. The country is now reporting around 400,000 cases every day.

Most Middle Eastern countries set monthly prices as a premium or discount to a benchmark. Aramco's OSPs serve as a

bellwether for oil markets and often lead the pricing trend in the region. Abu Dhabi issued its first OSP based on trading in crude futures this month, a step in its efforts to establish its oil as the regional benchmark.

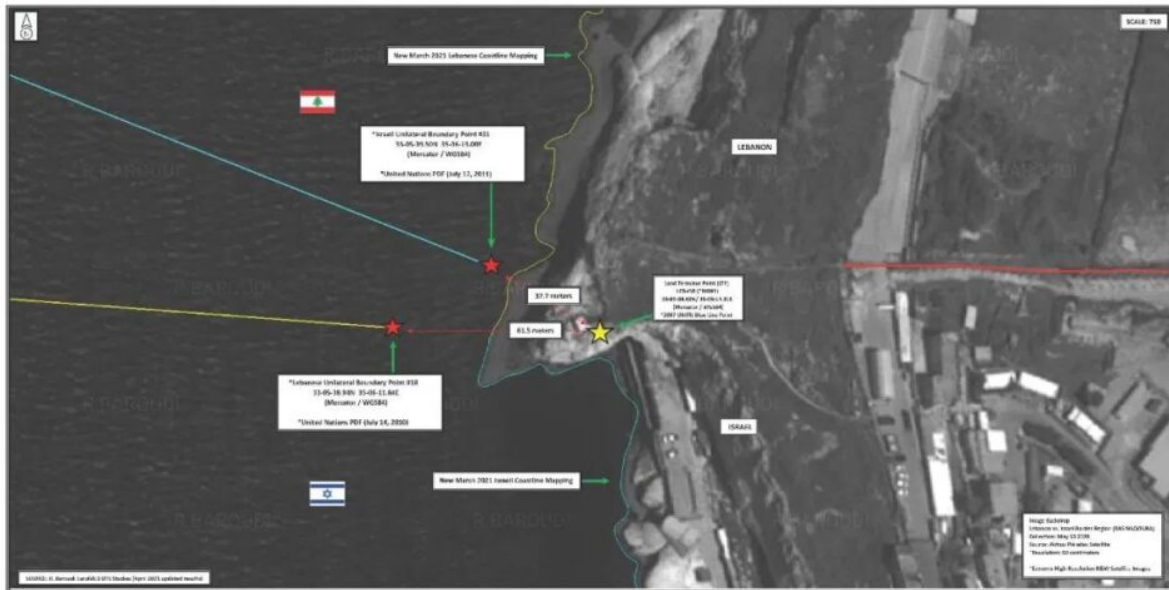
## Lebanon vs. Israel both need to update Maritime Boundaries





## Lebanon and Israeli gazetted boundaries

Lebanese unilateral declared MB document (2010) vs Israeli unilateral declared document (2011)



*Lebanon vs. Israel both need to update Maritime Boundaries* – Lebanese political circles are in a tangle once again, this time over whether Lebanon should provide the United Nations with new coordinates defining the country's offshore Exclusive Economic Zone (EEZ). In reality, two questions need answering:

- 1) Does Lebanon have the right to update its maritime claims to the UN?
- 2) If so, should Lebanon avail itself of that right in the present circumstances?

The issue is of critical importance, not only because it relates directly to Lebanon's (currently stalled) maritime boundary talks with Israel, but also because it stands to impact the speed with which it can begin to obtain tangible benefits from any undersea hydrocarbons within its EEZ.

Helpfully, the first question is the easiest. Lebanon's right to update its territorial submissions to the UN is not only enshrined in the UN Convention on the Law of the Sea (UNCLOS), but also protected by Customary International Law (CIL), and

established by innumerable precedents as a standard practice of countries seeking to define and defend their maritime claims, not least because continual technological advance allows increasingly accurate mapping.

It is important to note, too, that Presidential Decree 6433 of 2010, under which Lebanon's claim was last expressed to the UN, expressly envisaged the possibility of future updates. Article 3 leaves no room for interpretation whatsoever, reading: "As needed, and in the light of negotiations with the relevant neighboring States, the borders of the exclusive economic zone may be refined and improved and, consequently, the list of its coordinates amended, if more precise data becomes available." Lest there be any doubt, and as we will see below, such data has become available.

What is more, when Lebanon's Permanent Mission to the UN submitted the claims authorized under Decree 6433, its accompanying letter included the following advisory: "There is a need to conduct a detailed survey, using a global positioning system, of the shore contiguous to the southern limit, including all islands and spurs, with a view to updating the nautical charts and the baseline accordingly in the future." Again, to be perfectly clear: such survey work has been conducted.

Also, while Israeli officials have sought (not very convincingly) to question Lebanon's right to update its claim, their country's own October 2010 EEZ agreement (itself based on Israeli coordinates which we now know to be incorrect and which would therefore be rejected by any court or tribunal) with Cyprus also expressly recognizes the fact that under CIL, such coordinates are subject to change. Article 1 (e) of that agreement reads as follows: "Taking into consideration the principles of customary international law relating to the delimitation of the Exclusive Economic Zone between States,

the geographical coordinates of points 1 or 12 could be reviewed and/or modified as necessary in light of a future agreement regarding the delimitation of the Exclusive Economic Zone by the three States concerned with respect to each of the said points.”

In addition, in a subsequent unilateral submission to the UN, Israel’s own mission to the world body not only referred to “the relevant provisions of Article 1 (e)”, but also reproduced the language, virtually verbatim. The submission even repeated mention of “the three States concerned”, which in context can only indicate Lebanon as the third state.

On Lebanon’s right to submit new coordinates, then, the verdict is inescapable: it definitely has that right. Realistically, anyone who argues otherwise is either opposed to the best interests of Lebanon (which needs to develop this resource), the Lebanese (who deserve to reap the attendant economic rewards), and the Lebanese Armed Forces (which are heavily invested in a positive outcome); ignorant of the facts and the rules; or pursuing some other political, financial, and/or other personal/partisan advantage.

Next question: should Lebanon exercise its right at this particular juncture?

On the surface, this answer is almost as clear. In 2011, just months after the Israel-Cyprus deal and Lebanon’s last submission to the UN, the Lebanese government received expert analysis and advice regarding the United Kingdom Hydrographic Office charts – long considered the gold standard of maritime cartography – for the area. What the experts found is that both Lebanon and Israel had used erroneous coordinates as starting points for their maritime boundaries (please see attached map): where such points should be situated at the shoreline, both countries had placed them dozens of meters offshore. This may not sound like much, but by the time a line drawn out to sea from such a misplaced starting point reaches

what should be the trijunction – where the EEZs of Cyprus, Israel, and Lebanon meet – the error could amount to several nautical miles.

Ipsa facto, both Lebanon and Israel have based their previous maritime claims on faulty coordinates, which makes everything that flows from them obsolete, what the French would call “caduc” – meaning null and void. To both, this imparts not only a right to update their claims before the UN, but also an obligation to do so based on each side’s own best interest. In addition, recent experience demonstrates that, especially with such evidence that their respective claims were fatally flawed, if the current talks failed and the two countries went to court or arbitration over the issue, the first thing asked of them would be to replace their faulty maps by carrying out detailed surveys and analyses in order to precisely determine any points of contention.

In the technical sense, then, yes, Lebanon should definitely move quickly to update the maritime claims it has previously submitted to the UN. But other considerations also need to be weighed.

For instance, while Lebanon is a sovereign country, it cannot afford to entirely ignore the positions of outside actors. When these run contrary to its own wants and needs, it must weigh the pros and cons and decide accordingly. In this instance, Israeli officials have sought to discourage Lebanon from updating its claims or otherwise delaying the resumption of the aforementioned talks, raising the prospect that doing so could forestall progress, worsening tensions and forcing a longer wait for any offshore oil and gas development.

The latter point could be of particular significance because of what an energy boom could mean for the Lebanese population. Lebanon’s economy has shrunk by an estimated 25% over the past year, following a debt default that led to the collapse of its currency and consumer price increases that qualify as

hyperinflation. Worse, the political class has demonstrated little stomach for the kinds of reforms required to secure a bailout by the International Monetary Fund (IMF).

The current Cabinet, led by Prime Minister Hassan Diab, resigned seven months ago over an explosion at the Port of Beirut that damaged or destroyed tens of thousands of homes, so it operates in a caretaker capacity. His designated successor is also his predecessor, former Prime Minister Saad Hariri, who himself resigned in the face of popular protests that gripped the country in late 2019. While he enjoys considerable support in certain foreign capitals, Hariri's domestic position can only be described as weak, and the mere fact that he has been unable to form a Cabinet after more than half a year leaves little doubt that even if he succeeds, he largely will be incapable of decisive action on significant issues.

So we have another question: should Lebanon forego some of its rights in order to hasten an agreement that allows it to start earning some badly needed revenues from offshore resources?

The answer to that should be a resounding "no". The border area contains some of Lebanon's most promising offshore acreage, and in any event, there is no guarantee that giving it up would grease the wheels for a diplomatic breakthrough – and even if did, the outside investment required to get an energy industry up and running depends on a whole other set of prerequisites, not least the reforms that no one has been able to see through.

Also, in addition to the 2011 analysis, the Lebanese Armed Forces have carried out detailed studies of their own, which have significantly strengthened the Lebanese position. Senior LAF officers also have acquitted themselves with a high degree of professionalism in their US-mediated dialogue with the Israelis. In tandem with newly deposited coordinates, the quality of the LAF's work might actually hasten the



negotiating process by demonstrating that the Lebanese side will not bluster, but nor will it be bullied or bamboozled. No one expects that Washington will abandon its close relationship with Israel, but the LAF's all-business approach, unsullied by the vagaries of Lebanese politics, encourages the Americans to be as even-handed as possible.

Again, the case for a timely and assertive amendment of Lebanon's maritime submission seems airtight, but only if the issue can be inoculated against Lebanon's dysfunctional politics.

Given the history of Lebanese politics, it is natural that even good-faith actors want to ensure they have sufficient political cover before making any important move. While this is certainly a step of consequence, however, its merits are so obvious that it should require only a bureaucratic and/or legal decision by the appropriate people at the Foreign Ministry. The fact that it requires higher authorization should not be an excuse for yet another chicken-and-egg standoff along the lines of those that have alienated, frustrated, impoverished, and quite literally killed hundreds of thousands of Lebanese over the past half-century.

Rather, it should spur officials to get creative about how to make progress today without hanging people out to dry tomorrow. There are ways to compromise on procedure without sacrificing accountability, integrity, or transparency, and the stakes are so high that finding such a formula will be worth whatever effort it requires. And for once, the people of Lebanon might be able to believe their leaders are acting for purely national reasons, not personal ones.



*Roudi Baroudi has more than 40 years of experience in the energy business and has helped design policy for major international oil companies, sovereign governments, and multilateral institutions. He currently serves as CEO of Energy and Environment Holding, an independent consultancy based in Doha, Qatar.*