

# سليمان يتسلم من بارودي «دراسته عن الطاقة في المنطقة



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تسلم الرئيس ميشال سليمان، أمس، من الخبير الدولي في قطاع الطاقة رودي بارودي دراسته الأخيرة لهذا العام حول «وضع الطاقة في المنطقة» بعد الدراسة السابقة التي أعدّها في هذا الشأن عام 2008، وذلك خلال زيارة قام بها بارودي لسليمان في منزله في اليرزة.

وتركز البحث خلال اللقاء، على أهمية الاستكشاف والتنقيب عن الغاز والنفط في لبنان وخصوصاً البدء بالمسح البري بعد مدة زمنية فاقت الـ 60 عاماً منذ آخر عملية استكشاف، وضرورة عدم تضييع الفرص في هذا المجال للإفادة من هذه الثروة إلى أقصى حدّ.

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



## النفطية .

وشدد بارودي خلال اللقاء ، على «أهمية تعزيز العلاقات بين لبنان وقبرص في ملف النفط والغاز، وتنمية أواصر التعاون خصوصا في مجال الغاز السائل والتصدير إلى أسواق أوروبا الأقرب على الإطلاق لتسويق الغاز»، مشيدا بـ«النشاطات الجبارة التي تقوم بها هيئة إدارة قطاع البترول في لبنان»، وأكد أنه «لا بدّ من إحياء ما طالبنا به منذ نحو سنتين، بضرورة صوغ «إعلان بعبدا اقتصادي» يجمع كل الأفرقاء ليشبكوا الأيدي وينكبوا على إبعاد شبح الانهيار الاقتصادي عن لبنان وجبه كل التحديات والمشكلات التي تعوق نموّه وازدهاره، وبالتالي الاستفادة من كل الفرص المتاحة على أكثر من صعيد ولا سيما التنقيب عن «النفط والغاز في البر» وفي مياها الإقليمية

**بارودي: الجدول الزمني للإمتيازات البرية أقل من البحري**



قدّم 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 قدّم الكثير لتطوّر هذا " Christophe de Margerie  
القطاع وحاول التقريب في ما بين الدول"، مثمّنًا "رحيله وهو يقوم  
بمهامه كرئيس "توتال" إذ كان يحاول تذليل المزيد من الصعوبات  
التي يواجهها القطاع عموماً و"توتال" خصوصاً، وتحقيق إنجازات  
جديدة لشركته.

من جهة أخرى، شرح بارودي لـ"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:

أولاً: على الحكومة فصل القانون البري وآلياته عن عملية التنقيب -  
البحري.

ثانياً: إعداد خارطة طريق واضحة وشفافة للإمتيازات البرية -

وأضاف: يظهر أن مع نهاية العام الجاري، ستتوفر لدى غرفة البيانات  
حول D في وزارة الطاقة والمياه، كامل صور ودراسات 3 (Data Room)  
، Transitional Zone (الشاطئ) E & P باطن سطح الأرض لشركات ال-  
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 رداً 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 يُفترض أن يُحدّد لمدة ثلاث سنوات، ويمكن أن تشمل الإمتيازات في هذا المجال، بين ثلاثة وخمسة آبار على الأقل وبميزانية أقل من تلك المخصصة للآبار البحرية"، وأعطى مثالاً على ذلك، "خمسة ملايين دولار للآبار البرية، في مقابل 125 مليوناً 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 رُقّع، 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 إدارة قطاع البترول في لبنان" وتنظيمها للمؤتمر المنعقد في "بيروت، والذي سيطلق آفاقاً جديدة في عملية التنقيب عن النفط

## بواخر الغاز... صفقة جديدة؟



فيوليت غزال البلعة Arab Economic News

يواظب وزير الدولة السعودي لشؤون الخليج العربي ثامر السبهان على

إطلاق هجماته التويتريّة ضدّ "حزب الله". بالأمس، طاول "صمت الحكومة والشعب" ليزيد حجم العدوان الذي يُشنّ على مناخ هش قابل للإنفجار، رغم مساعي "ترميم" صورة السنة الأولى للعهد. في دائرة الإستهداف "حزب الله" و"حربه على المملكة بتوجيهات من أرباب الإرهاب العالمي".

من المقلب الآخر، ترى إدارة الرئيس دونالد ترامب وجوب معاقبة "حزب الله" على دوره الإرهابي. مبررات تطلب تفهمها لأنها أوجبت جرعة أخرى لعقوبات الـ2015 "بعدما أصبح الحزب يشكل تهديداً عالمياً يجب التصدي له بتجفيف منابعه المالية على مستوى العالم". كلام سمعه الوفد اللبناني الى واشنطن من مسؤولين أميركيين على هامش الاجتماعات السنوية لصندوق النقد والبنك الدوليين.

ما سيصدر من عقوبات بعد توقيع ترامب، سيكون البداية لرزمة واسعة وحازمة من الإجراءات ضدّ "حزب الله"، إذ لن تقتصر العقوبات على إستهداف قنوات التمويل من لبنان وإليه فحسب، بل على مستوى العالم. يُقال إنها ستطول تطويقه من كل الجهات تمهيداً لعقوبات نوعية تطلّ قياديه ومؤسساته والمتعاملين والمتعاونين معه.

أكثر من نصيحة وُجّهت إلى لبنان لـ"التكيّف مع العقوبات الأكثر تشدّداً، والهدف تحييد إقتصاده ومصارفه وحماية سمعتهما من العزلة المالية التي ستفرض على الحزب، لئلا تتكرّر تجربة "البنك اللبناني الكندي". فالإدارة الأميركية أكثر من راغبة في عدم إعفاء أي مصرف لبناني من إجراءاتها، إن شعرت أنه تجاوز العقوبات تحت أي عذر. مصارف لبنان تتوقع مسبقاً إشتداد الضغوط أكثر فأكثر، لكنها مصمّمة على الإمتثال للإجراءات بكثير من الحكمة والمسؤولية.

قد تكون زيارة وفد الكونغرس الذي ضمّ السيناتورين وليام سوريين بري ورودني فريلينغ هوشن إلى بيروت نهاية الأسبوع، إنذاراً أول واستباقاً لعقوبات "يُفترض الإلتزام بها". رسالة واضحة تكتمت عليها بيروت، لكنها أبلغت ما يُفترض الى سياسيين وعسكريين ومصرفيين.

تطورات متسارعة حطّت أثقالها على حكومة لم تجد سبيلاً بعد لإستعادة ثقة اللبنانيين. فهوية لبنان الإقتصادية ما زالت قيد البحث سعياً إلى ولادة رؤية جدية تحاكي تطلعات المجتمع وتعالج همومه وتطمئن هواجسه. تبحث الحكومة في سلة الإنجازات عما يقيها شرّ المفتوح من الملفات. تقايض الضرائب الجديدة بإقرار سلسلة الرتب والرواتب بعد

مسيرة شاقة. تقايض الفوضى المالية المزمنة بإقرار موازنة 2017 المصروفة وتواجه إستحقاق مشروع موازنة 2018 هذا الشهر. تقايض الفرص المهدورة في قطاع النفط والغاز لأكثر من ثلاث سنوات بنجاح دورة التراخيص الأولى رغم تراجع "شهية" الشركات.

في جلسته الأخيرة، وافق مجلس الوزراء على بناء 3 محطات للغاز في سلعاتا والزهراني ودير عمار (!) رغم أن إنتاج لبنان الكهربائي مستقرّ منذ 1996 على ما بين 2000 و2300 ميغاواط. إنجاز يذكرّ بخطة وضعتها "كهرباء فرنسا" خلال عهد الرئيس الشهيد رفيق الحريري عام 1996. يومها، عملت "توتال ألف" و"قطر للبترول" و"كيلوغ" في الزهراني، ليُمدّد بعدها بعامين خط LNG الأميركية لوضع باخرة الأنابيب إلى معملي الجيه والزوق ومنهما إلى البداوي. دخلت السياسة على خط الخطط، فعطّلت المشروع الرؤيوي الذي أخرج قطر فأخرج لبنان من حساباتها التصديرية لمشتقّ قابل لتشغيل معملين فقط هما الزهراني والبداوي. محاولة تكررّت دون جدوى بين 2003 و2004، حين تقدمت "تراكتابل" بخطة لوضع باخرة عائمة في الزهراني تمهيدا لمدّ أنابيب الغاز منها على طول الشاطئ، مروراً بالجيه والزوق وصولاً إلى البداوي.

من دون دراسة إقتصادية تحدّد الحاجات، قرّر مجلس الوزراء بناء ثلاث محطات للغاز خلافا لتجارب قريبة. فالكويت تنتج نحو 6 آلاف ميغاواط، بما يفوق إنتاج لبنان بثلاث مرات، وبدأت باخرة واحدة وهي في صدد بناء الثانية. وما بين أبوظبي ودبي نحو 9600 ميغاواط، بما يفوق إنتاج لبنان بأربع مرات، وتعمل الإمارات بباخرتين فقط. في الأردن، شيّدت "شل" مرفأ في العقبة وإستحضرت باخرة واحدة لإنتاج 2000 ميغاواط، تماماً كما قدرة لبنان. فهل في الأفق ما يؤشر إلى صفقة جديدة؟

لن يكون قرار مجلس الوزراء في محله، إلا إن قرّر تنفيذ المرحلة الثانية من توسيع معملي الزهراني والبداوي. "حينها، يكون مبرراً إستحضار باخرة لأحد المعملين فقط، لأن سلعاتا تفتقر إلى وجود محطة. فكيف تعمل البخرة بلا محطة؟"، يسأل الخبير الإستراتيجي في قطاع النفط والغاز رودي بارودي.

يحتاج لبنان باخرة واحدة. وإن نفذ المرحلة الثانية من الزهراني أو البداوي، يقرّ حينها خطة بواخر الغاز مؤقتاً (بين 5 و7 سنوات) إلى حين إستخراجه. قرار يحتاج حماية لئلا يلقي مصير قرار مجلس الوزراء مطلع نيسان/أبريل 2012 لإنشاء خط الغاز الساحلي إنفاذاً

لورقة سياسة قطاع أقرها منتصف 2010 لـ"بناء خطوط الغاز البرية على طول الساحل اللبناني (البرية بمعظمها والبحرية حيث يلزم)، لتغذي معامل الطاقة من البداوي حتى صور، لخفض كلفة التشغيل وتوفير البنى التحتية اللازمة في سياق إستراتيجي طويل الأمد سيستخدم لاحقا لتغذية القطاع الصناعي ولإطلاق توزيع الغاز على "والآليات السيارة التي تعمل على الغاز الطبيعي City Gas المنازل

خطط ومشاريع تهجر ذاكرة اللبنانيين وتقع في أدراج الوزارات. بين الثقة والضغوط، تسعى الحكومة إلى ما يتوَّج مسيرة السنة الأولى. لا بأس إن نجحت في تسجيل بعض النقاط، ولا ضير إن أخفقت في بعضها الآخر. عليها فقط أن تبعد الشبهات كي لا تُتهم بصفقات جديدة، وتجهد لترجمة سياساتها في قلب الإقتصاد.

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## **Et si l'embargo contre le Qatar virait à la guerre économique globale?**



Pierre Conesa, ancien responsable de la direction des affaires stratégiques au ministère de la Défense, livre son analyse de l'embargo organisé par l'Arabie saoudite et les Emirats arabes unis contre le Qatar. La crise pourrait prendre une ampleur internationale.

Attention, danger ! Les tensions entre le Qatar et ses voisins (Arabie saoudite et des Emirats arabes unis) pourraient dégénérer en véritable guerre économique, qui toucherait des entreprises du monde entier y compris françaises. Telle est l'analyse que livre à Challenges Pierre Conesa, ancien responsable de la direction des affaires stratégiques au ministère de la Défense et ancien directeur général de la société d'intelligence économique CEIS.

L'auteur de Docteur Saoud et Mister Djihad : la diplomatie religieuse de l'Arabie saoudite (préface d'Hubert Védrine, Robert Laffont, 2016) a réalisé une visite de quatre jours au



Qatar, sous embargo depuis le 5 juin. Il était convié sur place par un collectif d'hommes d'affaires non qatariens inquiets des suites économiques possibles de la crise régionale. Il a rencontré deux ministres, des responsables français et étrangers des différents groupes présents sur place, des expatriés et des Qatariens. Et le fruit de son enquête est inquiétant.

Dans les supermarchés, " la panique a duré 5 à 6 jours " assure le représentant d'une grande surface. Pour les denrées du quotidien, le Qatar s'est largement remis de l'embargo imposé par l'Arabie Saoudite, les Emirats, le Bahreïn et l'Egypte. Les fournisseurs turcs, iraniens, indiens, azerbaïdjanais et européens ont rapidement compensé les fruits et légumes saoudiens et les rayons des magasins sont pleins. Heureuse surprise, les produits sont même aujourd'hui moins chers et de meilleure qualité que ceux du royaume voisin. L'embargo pourrait se révéler à double tranchant : qui va dorénavant acheter les produits frais saoudiens ? Et la conséquence de cette réorganisation des circuits commerciaux pourraient avoir des conséquences au-delà de Riyad : Doha, par solidarité ou par paresse, achetait les produits étrangers réexportés par Dubaï, le grand hub des Emirats, à raison de 600 millions de dollars par mois. La cité marchande est dorénavant triplement pénalisée, puisque l'Iran, client fidèle autrefois, joue la carte qatarienne. Pour l'heure, le Qatar a quant à lui, eu l'intelligence de ne pas couper le Pipe Dolphin qui approvisionne Dubaï en gaz. Mais s'il venait à le faire, la ville se retrouverait brutalement sans lumière...

### Les chameaux bloqués aux frontières

Tous ces éléments tendent à montrer combien l'embargo lancé par les quatre pays alliés a été mal préparé. Alors que le roi d'Arabie venait tout juste de faire sa première visite d'Etat chez son petit voisin en décembre 2016, que le président américain terminait à peine de quitter Riyad en mai, l'ultimatum est tombé mélangeant toutes sortes d'exigences : fermeture de la chaîne Al Jazeera, expulsion de tous les

opposants, rupture des relations diplomatiques avec l'Iran, fermeture de la base turque, et enfin, cerise sur le gâteau, l'arrêt du « financement du terrorisme » à savoir le financement des Frères Musulmans. Le tout devait être exécuté sous dix jours et assorti de pénalités financières et de contrôles. Les mesures vexatoires se sont multipliées. Même les chameaux qatariens ont été bloqués à la frontière saoudienne ! Des conditions tellement surprenantes que ni le Koweït, ni Oman, autres pays membres du Conseil de coopération du Golfe, ne respectent l'embargo.

Pour autant, cette crise ne semble pas proche d'une résolution. Elle menace même de prendre une ampleur inattendue avec un retentissement international. Riyad a ainsi engagé une véritable guerre de communication par agences de relations publiques interposées, en défendant son image à Washington, Londres et Paris. Une bataille que le royaume veut étendre à Moscou, Beijing et même New Delhi... Il sera difficile cependant d'espérer une amélioration de la réputation des Saoud quand ils accusent leur petit voisin de « financer le terrorisme ».

### Pressions multiples

Surtout, les tensions pourraient dégénérer, si l'on n'y prend garde, en une véritable guerre économique. La tentation est grande dans l'entourage des décideurs du Golfe de passer à la vitesse supérieure en forçant directement ou indirectement les entreprises étrangères à choisir entre les protagonistes. En effet, les Emirats et l'Arabie Saoudite n'ont pas de moyens de pression économiques directs : les premiers ne représentent à peine 2% du commerce extérieur du Qatar et les quelques projets patronnés par le Conseil de coopération du Golfe sont déjà stoppés, à commencer par le TGV continental et la TVA commune. Dans l'autre sens, la Qatar national bank ne compte que 4% de dépôts saoudiens ou émiriens.

Résultat, faute de détenir eux-mêmes les capacités suffisantes, les forces en présence pourraient mettre sous pressions les sociétés étrangères. Cette menace apparaît dans les discours « officiels ». Le 13 juin 2017, l'Ambassadeur des

Emirats Arabes Unis à Washington Yousef Al-Otaiba a déclaré qu'Il ne prévoyait pas que la crise dévie vers « un conflit militaire, même si le Qatar refusait de plier ». Par contre, « il y aura une escalade de la pression économique... le Qatar investit des milliards de dollars aux États-Unis et en Europe, puis recycle les bénéfices pour soutenir le Hamas, les Frères musulmans et les groupes liés à Al-Qaïda »[i] . L'Ambassadeur des Emirats arabes unis à Moscou, Omar Ghobash, dans un discours à Londres[ii] a déclaré pour sa part que « l'expulsion du Qatar du Conseil de coopération du Golfe – souvent soulevée comme une possible sanction – n'était pas la seule sanction possible... Il existe certaines sanctions économiques que nous pouvons prendre et qui sont actuellement examinées...L'une d'entre elles serait d'imposer des conditions à nos propres partenaires commerciaux et de dire si vous souhaitez travailler avec nous, alors vous devez faire un choix commercial...Les Emirats Arabes Unis et l'Arabie saoudite pourraient demander à leurs partenaires commerciaux de choisir entre travailler avec eux ou avec Doha ». Une grande banque semble avoir déjà fait l'objet de pressions de ce genre.

### Conflit de (nouvelle) génération

Dernier élément qui rend difficile la résolution de la crise : elle est la première voulue par une nouvelle génération de décideurs, tous convaincus qu'ils sont l'avenir de leur pays. Le Qatarien Sheikh Tamim bin Hamad al Thani (36 ans), ancien de l'académie royale militaire de Sandhurst (Royaume Uni), au pouvoir depuis juin 2013, auteur de la « Qatar National Vision 2030 », a mis un point d'honneur à multiplier les appuis extérieurs et variés par une diplomatie de « soft power ». Un affranchissement qui ne plaît pas à ses puissants voisins. Mais l'embargo conduit à consolider le sentiment national au sein de sa population, victime expiatoire. Al Thani semble très populaire, y compris aux yeux des expatriés. De plus il n'a pas cédé à la provocation de ses voisins et a habilement joué du droit international contre l'embargo, qui est jugé illégal par l'OMC. Face à lui : le Saoudien Mohamed Bin

Salman, dit MBS (32 ans), est doté d'un modeste diplôme juridique de l'Université Islamique de Riyad, mais il tient fermement à imposer ses prérogatives de Prince héritier, titre officiellement accordé le 21 juin, en marchant sur la tête de son cousin Mohamed Ben Nayef. Il est considéré comme le responsable de la catastrophique guerre au Yémen. A 56 ans, l'Emirien Sheikh Mohamed bin Zayed al Nahyan est le plus âgé manifeste, lui, une phobie épidermique de l'islamisme sous tous ses aspects, chiite iranien, Frères musulmans, salafiste ou djihadiste sunnite, dès lors qu'ils s'invitent sur le terrain du pouvoir temporel. Aucun de ces nouveaux dirigeants ne peut céder puisque chacun y joue sa légitimité. La crise va donc durer et probablement provoquer des effets inattendus.

Pierre Conesa

[i] Wall Street journal, 12 juin 2017)

[ii]

<https://www.theguardian.com/world/2017/jun/28/uae-ambassador-threatens-further-sanctions-against-qatar>

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## Gulf crisis and gas: Why Qatar is boosting output



Qatar may be under economic siege but it pulled an ace from up its sleeve on 4 July by announcing that it will bolster liquid natural gas production by some 30 percent.

The move will secure Doha's position for years to come as the world's top exporter of LNG.

Naser Tamimi, a Qatari energy analyst, told MEE: "It is a very significant announcement as it will put huge pressure on the LNG projects underway in countries with higher extraction costs. It is also signals that Qatar is fighting for market share."

The announcement is also seen as a shot across the bows of Saudi Arabia and the UAE, the leads in the embargo, that Qatar is not buckling under the pressure.

Roudi Baroudi, the chief executive of Energy & Environment Holding, an independent consultancy in Doha, said: "The bottom line is this was a business decision. If politics had an impact, it was in the timing: it's possible that the move was accelerated in order to signal the country's resolve and ensure that if the siege persists, more revenues will be available to help soften the blow."

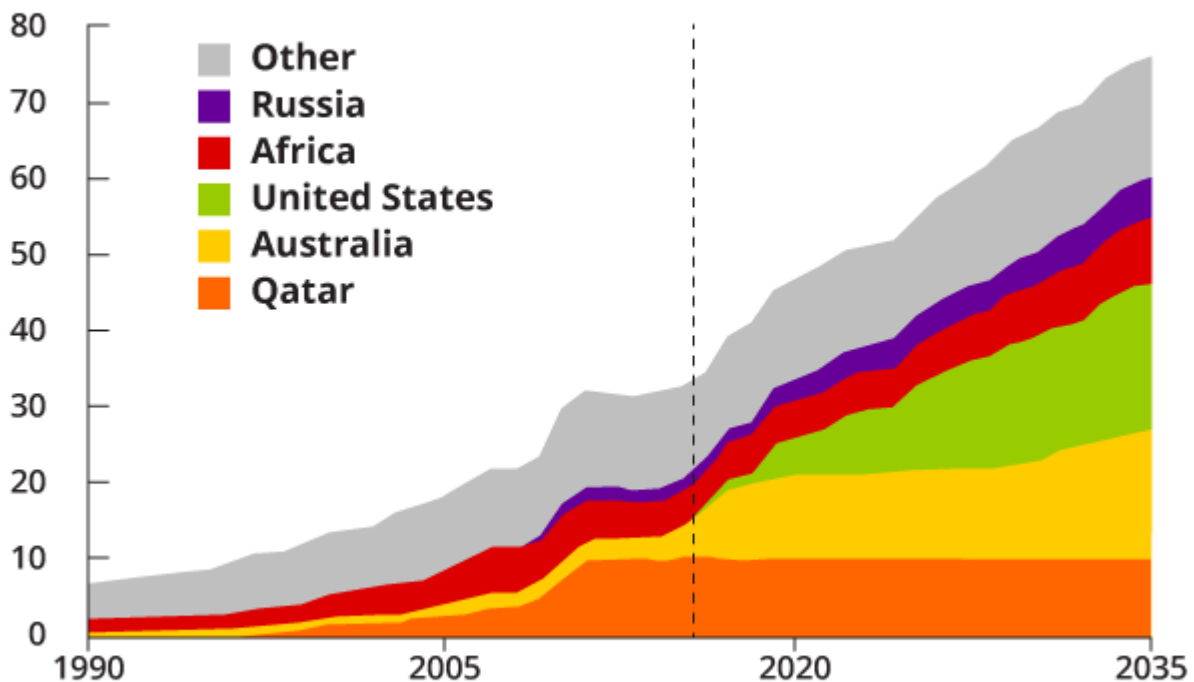
## **The Australia-US-Qatar tussle**

Qatar had indicated earlier this year that it would increase LNG output by 15 million tonnes (MT) but it has more than doubled that figure to 33 MT. It brings annual production up from the current world-record of 77 MT to 100 MT.

Analysts have generally downplayed the timing of the announcement, which coincides with Doha rejecting the demands of Riyadh and its allies.

## Liquid natural gas: Top suppliers 1990 -2035

*Billion cubic feet  
per day*



Source: BP/2017 Energy Outlook



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But the move clearly shows that, at a global level, Qatar wields power when it comes to LNG. Claudio Steuer, director of SyEnergy, a UK-based energy consultancy focused on natural gas and LNG value chains, said: "Qatar's timing is impeccable to exploit the weakness in the current US LNG business model, and pre-empt competition from Russia, Iran, East Africa and East Mediterranean."

Australia is scheduled to become the world's largest LNG supplier during the next two years, but it's anticipated that Qatar will then be back on top by 2022 once new production from its huge offshore North Field begins producing.

The US is also increasing its output and expected to become the world's third-largest LNG exporter by 2020, now that LNG export terminals have come online and the Trump administration

is pushing energy exports.

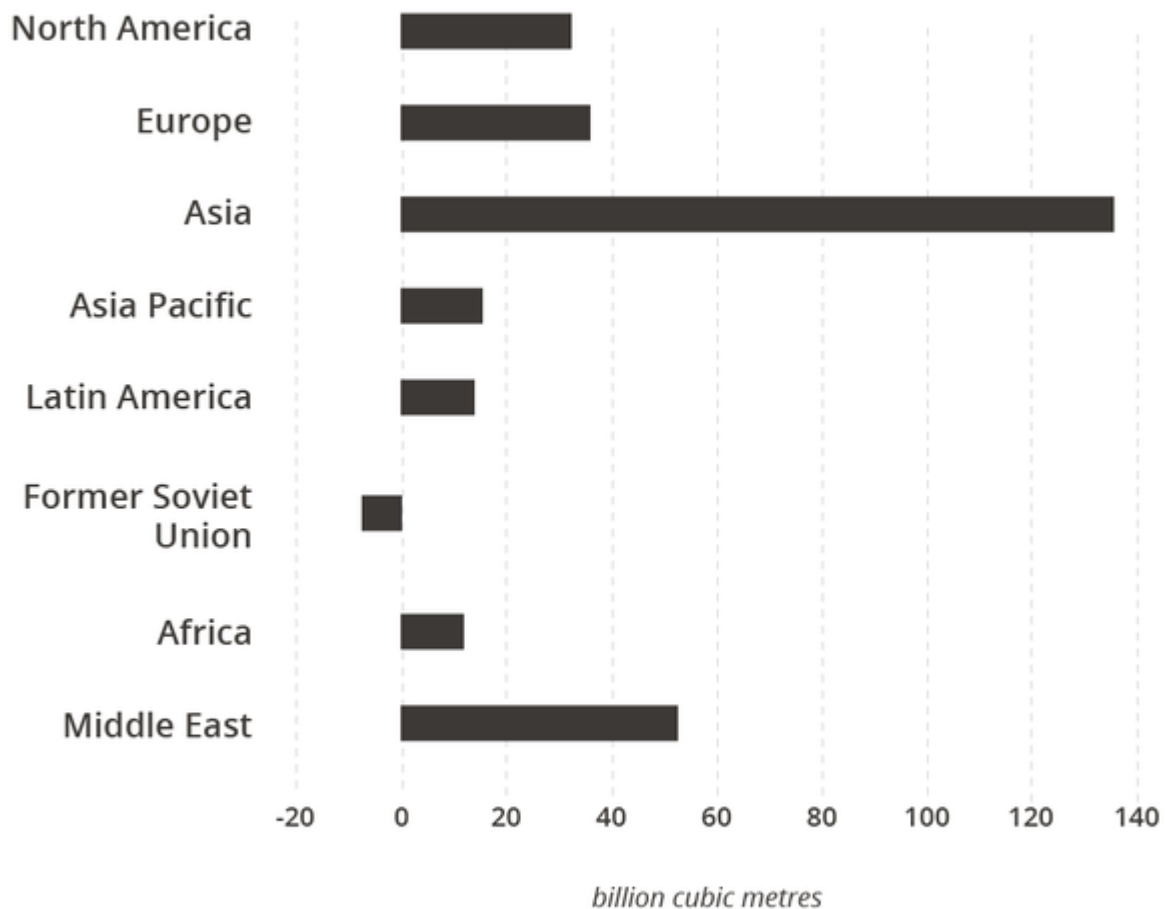
Qatar's increase will ward off such competition, primarily due to lower extraction costs in the North Field and at its liquefaction facilities, especially when compared with fracking in the US.

This will enable Doha to gain market share in countries with rising LNG demand, particularly in Asia, currently the destination for two-thirds of its LNG exports.

"Despite the strong US propaganda, the current US LNG projects costs and business model are not competitive in the growing southeast Asian markets," said Steuer.

He said that as things stand, the high costs of American LNG extraction only becomes competitive at oil prices of more than \$60 to \$70 a barrel, which will limit the scale of the expected surge of LNG supplies from the US. By way of comparison, oil prices have ranged from \$40 to \$50 a barrel during the past year.

## Change in worldwide demand, 2015 – 2020



Source: Nexant



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Trevor Sikorski, head of gas and carbon at Energy Aspects, says that US gas producers will need around \$8 to \$8.50 per million British Thermal Unit (BTU) – a standard unit used for gas – to cover their capital expenditure costs and enjoy a return on their investment.

The Qataris, he said, will want a similar figure to cover investment in their new liquefaction trains – the part of an LNG plant which reduces the volume of the gas by chilling it to liquid form.



“But US costs are a dollar or two higher than what Qatar pays. If it’s a race to the bottom on prices, the US will lose.”

## The risks ahead

But Qatar does face one risk: finding long-term buyers of its LNG to secure funding to underwrite the expansion.

Previous LNG projects were greenlit on the expectation of gas prices being double the current \$5 to \$6 per million BTU. Now, they’re struggling.

Qatar has managed to launch out projects, like the RasGas Train 6 – one of 13 liquefaction trains operated by state-owned RasGas and Qatargas – without long-term buyers to guarantee capital expenditures, which eases financing conditions.

Instead it operated on a “merchant basis” that reassures financiers with forecasts of rising demand.

That gamble paid off for Qatar in 2009, when RasGas 6 came online. In 2011 it was given a further boost when it used spare capacity to meet a sudden demand in LNG from Japan after the Fukushima nuclear disaster.

“They’ve taken that risk before and it worked well. If anyone can take that risk it is the Qataris,” said Sikorski.

Riyadh and Abu Dhabi will not be able to use leverage with international oil companies (IOCs) to prevent investment in Qatar. Majors like Royal Dutch Shell, Total and ExxonMobil – already heavily involved in Qatar – have already signalled their neutrality in the GCC crisis.

“I do not see any major show stoppers for Qatar in wanting to ramp up production,” said Steuer, “as all major oil and gas engineering and service providers would welcome the opportunity to secure new business in Qatar.”

The LNG expansion strengthens Qatar's ties with major oil companies while signalling to buyers that Doha can keep taps turned on, despite the crisis.

"Above all else, Qatar Petroleum must be sure it can keep its customers supplied," said Baroudi. "And they're not taking that step alone: they have partnered with some genuine heavyweights of the industry."

## **A blow to Saudi Arabia?**

Opinion is divided as to whether Qatar's announcement raises the regional stakes in the global shift away from oil to gas.

Saudi Arabia and the Emirates, which are not gas exporters, will struggle to match Doha's output.

Shaybah, base for Saudi Aramco's LNG plant and oil production in Saudi Arabia's Empty Quarter in 2016 (AFP)

LNG is considered a cleaner fuel than oil. Major economies such as China, India and South Korea have been moving from coal power plants to gas to reduce pollution.

Steuer said: "As gas is the only fossil fuel with sustainable long-term prospects for the next 25 years, this only reinforces the current tensions involving Saudi Arabia and Qatar.

"As oil demand and prices decline, the economic power is gradually shifting away from oil-rich nations to gas and LNG rich nations. This game changes the balance of political and economic power in the Middle East."

Oil prices are key to balancing the budgets of Saudi Arabia and the UAE. Each needs target prices of \$90 and \$60 per barrel respectively in 2017 to balance the books, according to the Institute of International Finance.

Asia is considered the battleground between Qatar and Saudi Arabia for energy exports.

"I think the Saudis will lose more than the Qataris, as the Qataris depend on gas and condensate more than oil, which is not their main export," said Tamimi. Oil accounts for around 50 percent of Saudi Arabia's GDP and 85 percent of its export earnings, according to OPEC.

In December 2016, Russia overtook Saudi Arabia as the world's largest oil producer. Moscow has also been expanding its market share in China, the world's largest oil importer and third-biggest LNG importer.

"Saudi Arabia used to have 20 percent share of the Chinese market, in 2011, but in the first five months of 2017 it's down to 11 percent," said Tamimi. "It will be difficult or maybe impossible to regain that."

But while Qatar's LNG increase is equivalent to around 10 percent of global LNG capacity, Sikorski thinks it is "a bit of a stretch" to say that gas will replace oil dependency.

"To me this is a case of, 'Look GCC, we [Qatar] are not dependent on you to make our economy work, we can expand our gas exports if you try to squeeze us, and we will continue to make a lot of money on that.' That was the message to me, rather than saying LNG is the future and oil is dead."



Paul Cochrane

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# Gas and the Gulf crisis: How Qatar could gain the upper hand



Asian markets, military allies and a crucial pipeline all offer Doha leverage against its adversaries amid the current crisis

The blockade of Qatar, led by Saudi Arabia and the United Arab Emirates, has already had an economic impact.

Qatar, the world's second largest producer of helium, has stopped production at its two plants as it cannot export gas by land. Qatar Airways can no longer fly to 18 destinations. Qatari banks are feeling the pinch, particularly the Qatar

National Bank (QNB), the region's largest by assets, and Doha Bank: both have extensive networks across countries which are members of the Gulf Cooperation Council (GCC).

Ratings agency Standard & Poor's (S&P) downgraded Qatar's credit rating from AA to A- on 8 June. It could put it on credit watch negative, a sign that the crisis could impact investment and economic growth. Moody's followed suit, placing Qatar's AA long-term foreign and local currency Issuer Default Ratings (IDRs) on rating watch negative.

Doha is unlikely to buckle soon. It has plenty of financial muscle, not least in its sovereign wealth fund, the Qatar Investment Authority (QIA), which holds an estimated \$213.7 billion, according to the Institute of International Finance. The seed capital for that fund comes from Qatar's oil and gas exports.

Energy receipts account for half of Qatar's GDP, 85 percent of its export earnings and 70 percent of its government revenue. The crisis may affect the emirate's medium- to long-term energy contracts, as buyers diversify their imports to be less reliant on Qatari gas.

Roudi Baroudi is CEO of Energy & Environment Holding (EEH), an independent consultancy (the principal holder in EEH is Sheikh Jabor bin Yusef bin Jassim al-Thani, director general of the General Secretariat for Development Planning). He says that when it comes to oil, the advantage is with the Riyadh-led group: Saudi Arabia recently overtook Russia as the world's biggest producer; the UAE is also in the top 10.

"When it comes to gas, however, Qatar holds more and better cards," Baroudi adds.

Doha can use energy as a diplomatic tool to its advantage: how it does this will be crucial as to its attempts to ride out the current storm.

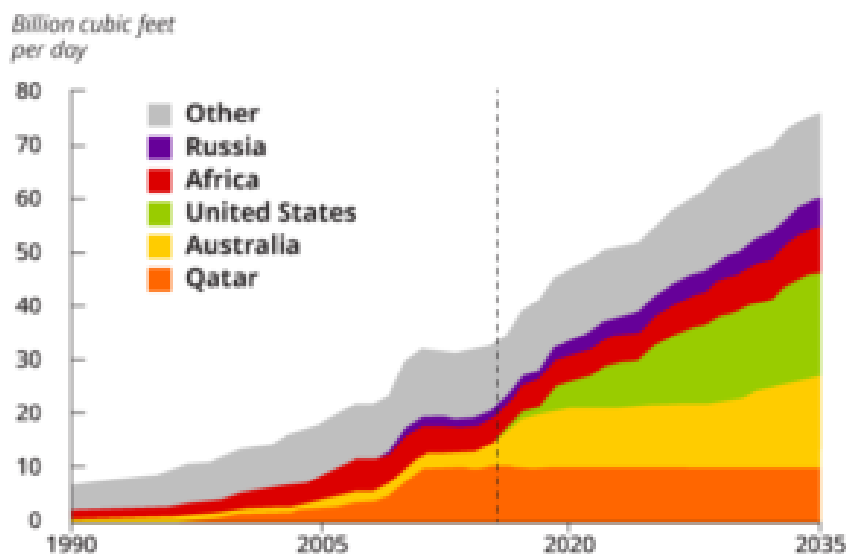
How will Qatar ship its exports?

Qatar is the world's largest liquefied natural gas (LNG) exporter, accounting for nearly one-third of global trade, at 77.8 million tonnes (MT) in 2016, according to the International Gas Union. So far there have been no interruptions to Qatari extraction or exports via the 60-plus LNG carriers that belong to the Qatar Gas Transport Company (Nakilat in Arabic).

But as a result of the crisis, state-owned firms Nakilat, Qatar Petroleum and Industries Qatar have all been downgraded.

Much of Qatar's liquefied natural gas is shipped by tanker. While there have been no reports of oil shipments being interrupted, there is concern about Qatari routes to Asia, the key buyer for the bulk of its oil as well as much of the Gulf's exports.

#### Liquid natural gas: Top suppliers 1990 -2035



Source: BP 2017 Energy Outlook

M&E

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Historically, Asian buyers demand a mixture of crude oil from the Gulf: usually the taker would depart the emirate with Qatari oil, then stop to refuel and add Saudi, Emirati and Omani grade crude, usually at UAE ports.

Karim Nassif, associate director at Standard & Poor's in Dubai, says: "If they are not allowed to stop and refuel as some reports suggest, then this could affect the buyers who may be anticipating a variety of crude grades."

The Daily Telegraph reported that two LNG ships bound for the UK were re-routed due to the crisis, but Baroudi says this is not an issue. "If the reports are true, it's just a by-product of how international companies are coping with the Saudi-led embargo by playing it safe."

"Say Company A was planning to deliver LNG from Qatar to the UAE, but the latter now bans Qatari ships from docking and unloading. Company A's response may well be to send an LNG carrier based in a third country to make the delivery instead, then reroute one or more others to make sure all customers are supplied."

Naser Tamimi, an independent Qatari energy expert, says that the same scenario applies to the possibility of Egypt stopping Qatari tankers using the Suez Canal; or raising fees for Qatari vessels. "The Qataris could get around it through tankers registered elsewhere, like the Marshall Islands," says Baroudi, "or divert some of their cargo going to Europe via South Africa."

He says that such moves could add about half a dollar to the cost of each British Thermal Unit (BTU) – but that the Qataris could cope with that, even if they had to absorb the cost instead of the consumer.

Around 70 percent of Qatar's LNG exports are under long-term contracts – typically of around 15 years – so production and payments are secure. The remaining exports are on short-term or spot prices that are dictated by the international markets.

Sources within the shipping industry speculate that some deals may have been called off or delayed: there have been reports from insurance and petrochemical companies that 17 LNG vessels

are now moored off Qatar's Ras Laffan LNG port – a much higher number than the usual six or seven vessels.

Will Asian markets look elsewhere?

The bulk of Qatar's LNG is destined for east Asia – and analysts say that that is unlikely to end soon.

Theodore Karasik, senior adviser at Washington-based consultancy Gulf State Analytics, says: "Qatari LNG is not affected by the sanctions and blockades, simply because GCC states require good relations with east Asian partners."

He said that if Saudi Arabia and UAE were to interrupt LNG exports to Asia, then those customers may not want to invest in the programmes intended to transform the economies of the UAE or Saudi Arabia, such as the 2030 Visions strategies.

His opinion is echoed by Baroudi. "The Asian markets aren't going anywhere. Asian countries need – and know they need – long-term relations with stable producers, and by this measure Qatar is in a class by itself. The same applies for consumer nations elsewhere, so even if the crisis were to escalate, and right now it appears to be settling down, then any interruption would be a short-term phenomenon.

"Qatari LNG simply cannot be replaced. Australia [LNG] will begin to have an impact on international markets by the end of the decade, but that just means an added degree of market competition, not replacement."

But Tamimi thinks the crisis could prompt Asian buyers to diversify their energy portfolios and lessen their dependency on Qatari gas. "They are under pressure now, and in a global context with an LNG glut," he says.

"All Qatar customers are asking for better deals, and Qatar's market share is decreasing compared to 2013 because of competition from Australia, Indonesia and also Malaysia. The



crisis is a reminder to everyone in Asia that the Middle East is not stable, that everything could change within days.”

Will Qatar shut down a key pipeline?

One scenario that would deepen the crisis still further is a lockdown of the Dolphin gas pipeline, which runs between Qatar and some of its fiercest critics.

While two-thirds of Qatari LNG is bound for Asia and Europe, around 10 percent is destined for the Middle East. Two export markets, Kuwait and Turkey, are secure due to better political relations.

But the other two – Egypt and the UAE – are among those nations currently blockading Qatar. If Riyadh and the UAE raise the ante, then it might raise questions about the pipeline’s future.

Egypt gets two-thirds of its gas needs, some 4.4 MT in 2016, from Qatar on short-term and spot prices. Cairo is firmly in the Saudi camp – but has not halted gas shipments.

Baroudi says: “Since the crisis erupted, Egypt has continued to accept shipments of Qatari gas on vessels flying other flags. The 300,000 Egyptians who live and work in Qatar have carried on as before.

“Neither country wants to burn its bridges for no good reason,” he says, “especially Egypt, which only recently staved off bankruptcy because of Qatari financial largesse,” a reference to the \$6 billion Qatar provided in the wake of the 2011 Egyptian uprising.

But it is the Dolphin pipeline, which carries Qatari gas to the UAE and Oman, that is the most contentious issue. The UAE imports 17.7 billion cubic metres (BCM) of natural gas from Qatar, according to the BP Statistical Review 2016, equivalent to more than a quarter of the UAE’s gas supply.

Nassif says: "The Qataris have indicated that the supply of gas through Dolphin to the UAE and Oman will continue. We have no concerns at present of any armageddon scenario of Qatar changing its stance on this."

Either side would lose significantly if the gas was stopped, especially during the summer when power generation is at its peak to keep the air conditioning on. Halting supply would be the Gulf equivalent of Russia turning off the gas to Ukraine in January 2009.

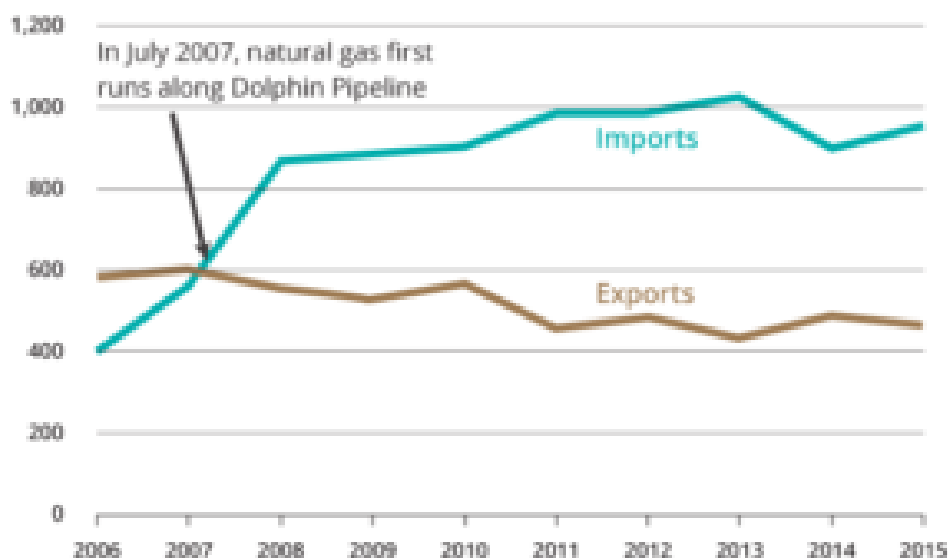
"The UAE would immediately face extensive blackouts without it," says Baroudi. "They would be shooting themselves in the foot if they were to interfere with gas shipments, and Qatar views the pipeline as a permanent fixture, not something to be manipulated for the sake of short-term political gain."

"As a result, neither side has any interest in changing the status quo – and neither has communicated any consideration of such a step."

Analysts say that both sides have contingency plans should the Dolphin pipeline shut down – but, says Tamimi, the UAE will find it hard to compensate for the loss of Qatari gas.

## United Arab Emirates natural gas imports and exports

*Billion cubic feet*



Source: OPEC Annual Statistics Bulletin 2016

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“They’ll have to import LNG as no one can send it by pipeline. That will cost three times the price they’re getting from the Qataris. There is no official price but it is estimated at \$1.6 to \$1.7 per BTU, so around \$1.1 billion [in total].

“If the UAE wants to stop the Qatari imports, they’d have to pay three times that amount at the current price as LNG is linked to the price of oil.”

A stoppage on either side would also violate bilateral agreements. “If the UAE violates it, the Qataris can sue them and vice versa. If the Qataris do it, it would also send a bad message to their customers, to use gas for political reasons.”

Such a move by Qatar would also undermine its strategy of saying it has been unfairly treated by the GCC and is abiding commercial contracts – unlike the UAE and Saudi Arabia, as Qatar Airways CEO Akbar Al-Baker told the press.

Will there be a land grab by Saudi?

Analysts have not ruled out further sanctions by the UAE and

Saudi amid the current crisis. Any move on blocking energy exports, including the Dolphin pipeline, would be viewed as a serious escalation by Doha as it would cripple its economy.

One hypothetical scenario being actively debated at a political level, according to analysts, is an all-encompassing blockade of Qatar as part of Riyadh's and the UAE's plans to re-organise the Gulf Cooperation Council – and, unless there is a change of regime in Doha, kick out Qatar (let's call it a "Qatexit").

An extension of this scenario is an outright land grab by Saudi Arabia of Qatar's energy assets. These would then fund Deputy Crown Prince Mohammed bin Salman's Vision 2030 strategy to diversify the kingdom's economy.

Karasik says: "Arguably the national transformation plan and Vision 2030 may not be going so well. In addition the (\$2 trillion) Saudi Aramco IPO may not achieve its fully stated value. If this is the case, then Saudi is going to need an injection of wealth and will have to do it fast.

"In other words, Riyadh may look for a piggy bank to rob."

Such a move by Riyadh would be armageddon for the Qatari royal family. The emir of Qatar would be forced to stand down – as Emirati real estate mogul and media pundit Khalaf al-Habtoor has suggested – or Riyadh could take control of the kingdom.

Baroudi believes that the crisis is settling down and will soon be resolved. Other analysts have pointed to the recent \$12 billion US fighter jet deal with Qatar, indicating that Riyadh and the UAE will not get their way. The Al-Udeid US air base, which is the headquarters of Central Command, covers 20 countries in the region.

Turkish troops, who arrived in Qatar for training exercises this week, could also help turn the heat down, now that the two countries have signed a defence pact. Ankara has the

region's largest standing army, with its presence near the Saudi border (Qatar's only land border) considered a deterrent.

But other analysts see no sign of tension ebbing soon. They flag how the descendants of Ibn Abd al-Wahhab – the founding father of Wahhabism, both Saudi and Qatar's dominant theology – have distanced themselves from the emirate's ruling family, undermining its legitimacy. The rhetoric against Qatar from Riyadh and the UAE continues unabated. Last week, the UAE called on the US to move the Al Udeid air base out of Qatar.

"There are no more black swans in our world," says Karasik. "This idea [of a land grab] is something people are starting to talk about."

The views expressed in this article belong to the author and do not necessarily reflect the editorial policy of Middle East Eye.

*Paul Cochrane*

*Tuesday 20 June 2017 07:49 UTC*

*Middle East EYE*

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**Energy and Environmental  
Economist, Roudi Baroudi  
joins Power House Energy  
Advisory Panel**



PowerHouse Energy Group Plc (AIM: PHE), the company focused on ultra high temperature gasification waste to energy systems, and the creation of Distributed Modular Gasification© (“DMG”), are delighted to announce the appointment of Roudi Baroudi to its recently established Advisory Panel.

Roudi is a global energy expert with over 37 years experience of international public and private companies across oil & gas, petrochemicals, power, energy-sector reform, energy security, carbon trading mechanisms and infrastructure. In addition, he is currently a member of the United Nations Economic Commission for Europe’s Group of Experts of Gas – this is a body established to facilitate dialogue on promoting safe, clean and sustainable solutions for natural gas production.

With a wealth of international experience he has worked on project and program development with the World Bank, the IMF, the European Commission USAID and the Arab Fund for Economic and Social Development. Mr Baroudi is a regular lecturer on global energy affairs and is also the author and co-author of a number of books, article studies and research reports on political, economic and climate change as well as other energy associated matters.

It should be noted that none of the Advisory Panelists are Directors of the Company, and while management, and the Board, will seek their counsel on particular matters pertaining to their individual expertise, the governance and decision making authority for the Company rests solely with the Board of Directors.

Keith Allaun, Executive Chairman of PowerHouse, said: "I believe it is a very strong validation of PowerHouse's potential that we are able to attract someone of the calibre of Roudi to assist the Company.

"The tremendous advantages afforded the Company by such an experienced Advisory Panel cannot be overstated and we are very pleased to welcome Roudi to the team. The members of this panel, investing their time and commitment to our success, will help the Company achieve its commercial goals in segments of the market, and geographies, in which we are well suited to operate.

"I am honoured that each of these industry luminaries has agreed to serve our objective of ubiquitous DMG. With their assistance, we believe PowerHouse and DMG have a very bright future."

Further information on Roudi Baroudi

Roudi Baroudi has more than 37 years of international public-and private-sector experience in the fields of oil and gas, petrochemicals, power, energy-sector reform, energy security, environment, carbon-trading mechanisms, privatization and infrastructure.

Mr. Baroudi's transactional practice began when he joined an energy firm in Pittsburgh, Pennsylvania, U.S.A., in 1978. His practice relates principally to the energy, high technology, renewable and green electricity, and life sciences sectors of the economy, and involves contract and legal negotiations and

investment vehicles, business combinations, divestitures and operations, as well as various forms of corporate and government finance.

His international experience includes project and program development with the World Bank, the IMF, the European Commission, state-to-state protocols, USAID, the Arab Fund for Economic and Social Development, and Italian Bilateral Protocols, as well as multilateral agency financing in the United States, the Middle East, Central Asia, Japan and Europe, many of which have involved negotiations between and among private and publicly owned concerns and national governments or state enterprises.

Mr. Baroudi has helped to formulate energy and environment policies in the Euro Mediterranean and North Africa region and for the Middle East area. He participated in the preparations of the Euro-Med Energy Free Trade Zone, and in the Euro-Med Regional and Euro-Med Government negotiations. He also has had a

role in energy and transportation policies, advising both the European Commission and its Mediterranean partners between the Barcelona and Trieste Declarations of 1995-1996 and 2004. In addition, Mr. Baroudi was a founding member of the Rome Euro-Mediterranean Energy Platform (REMEP).

In particular, his work and research on integration have focused on energy and transportation networks and related projects, including natural gas and electricity rings affecting both EU and non-EU member states bordering the Mediterranean. His expertise is regularly sought by the United Nations Economic

Commission for Europe (UNECE), which invites him to participate in the expert working party on topics such as gas savings, underground gas storage, and sustainable energy development.

Mr. Baroudi has done extensive work in energy, security and



economic development, industrial programs which have helped bring about energy and economic advances related to private sector power development, electricity market unbundling, gas market reform, political reform and deregulation. He also has done extensive work on international oil and gas ventures, including petroleum development and exploration, as well as government legislation.

Mr. Baroudi has held a variety of influential positions. In 1999, he was elected secretary general of the World Energy Council – Lebanon Member Committee, a position he held until January 2013. He is also a member of the Association Française des Techniciens et Professionnels du Pétrole (French Association of Petroleum Professionals and Technical Experts). Mr. Baroudi is a former senior adviser to the Arab Electricity Regulatory Forum (AREF), a member of the Energy Institute, (UK), and a member of the International Association for Energy Economics (IAEE) in the U.S.A. Mr. Baroudi also serves on several boards of directors of different companies and international joint ventures.

Mr. Baroudi is the author or co-author of numerous books, articles, studies, and research reports on political, economic, climate change and other matters associated with energy. His insights on these and related issues are frequently sought by local and international companies, governments, media and television outlets. He is also a regular lecturer on global energy and transportation affairs.

In addition to the foregoing, Mr. Baroudi is currently a member of the United Nations Economic Commission for Europe's Group of Experts of Gas, a body established to facilitate multi-stakeholder dialogue on promoting safe, clean, and sustainable solutions for the production, distribution and consumption of natural gas in the world's single-largest energy market.

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#### About PowerHouse Energy

PowerHouse is the holding company of the G3-UHt Ultra High Temperature Gasification Waste-to-Energy system, and the creator of Distributed Modular Gasification© ("DMG")

The Company is focused on technologies to enable energy recovery from municipal waste streams that would otherwise be directed to landfills and incinerators; or from renewable and alternative fuels such as biomass, tyres, and plastics to create syngas for power generation, high-quality hydrogen, or potentially reformed into liquid fuels for transportation. DMG allows for easy, economical, deployment and scaling of an environmentally sound solution to the growing challenges of waste elimination, electricity demand, and distributed hydrogen production.

PowerHouse is quoted on the London Stock Exchange's AIM Market. The Company is incorporated in the United Kingdom.

For more information see [www.powerhouseenergy.net](http://www.powerhouseenergy.net)

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# Qatar-UK Business and Investment Forum



Britain's Prime Minister Theresa May attends the Qatar-UK Business and Investment Forum in Birmingham, March 28, 2017.  
REUTERS/Darren Staples



Participants returning from the recent Qatar-UK Business and Investment Forum in Britain say its highlighting of numerous opportunities to expand economic relations between the two countries should help to allay concerns about the impact of Brexit.

The forum took place in London and Birmingham on March 27 and

28, just before the United Kingdom invoked Article 50 of the Treaty on European Union, officially notifying the EU of its intention to leave the bloc. The prospect of an end to unfettered British access to European markets has underlined the need for the UK to develop its bilateral trade and investment ties with other countries around the world.

Energy expert Roudi Baroudi, CEO of Doha-based Energy and Environment Holding, an independent consultancy, took part in the London activities. He says that while the general mood in Britain's business community is one of uncertainty, the forum could not have come at a better time.

"In many ways, Qatar and Britain are made for each other, and not just because of the historical links between the two," he explained. "Now more than ever, British companies and investors will need to find new partners outside Europe, and Qatar has spent much of the past decade transforming itself into a global player with increasingly diverse relationships with key economies around the world. It's a perfect fit."

Baroudi says that while much of the media focus in recent years has been on Qatari investments in British assets of over £ 60 Billion, there also is great potential for funds flowing the other way, and from European and other countries as well.

"Qatar offers an incredibly attractive climate for British and other foreign investors, everything from high standards of regulation and transparency to impressive sociopolitical stability and world-class credit ratings," he enthused. "And this is not to mention the fact that it has the world's third largest natural gas reserves and highest per capita GDP, both of which rightly inspire great confidence."

"On top of all that, the government welcomes foreign investment with open arms and on business-friendly terms, and its development program is proceeding at a torrid pace, especially in terms of infrastructure and tourism," he added.

“There are opportunities for everyone – architecture, engineering and construction firms, project managers, retailers, hotels and restaurants, and anyone who deals in the expertise, equipment and materials required to carry out such projects.”

Indeed, Qatar is in the midst of a construction boom driven by its far-reaching Vision 2030 development plan and its hosting of the 2022 FIFA World Cup. The centerpieces include extensive upgrades of the ports country’s road, rail, water, and sewage networks, as well as several new stadiums to accommodate the world’s most widely anticipated sporting event.

All this is taking place, too, despite less-than-ideal exogenous conditions. Public finances have slightly deteriorated because of falling global commodity prices, and 2016 saw the Qatari government run its first budget shortfall in 15 years. Given the virtually bottomless revenue well supplied by the country’s gas reserves, however, many analysts dismiss the current fiscal situation as a temporary aberration. In addition, the Finance Ministry has won accolades for its prudent management of the impact from falling oil and gas prices, and currents forecast predict a return to surplus in 2019 if prices continue to recover.

Baroudi said he was not worried about Brexit, arguing that British businesspeople were savvy enough to reorient their activities to find new markets for their exports and new destinations for their investments. As for Qatari investors, he noted that they have been diversifying into British and other assets for a long time, so they know the market well.

As for the interactions he witnessed at the Qatar-UK forum, he said they indicated a “true sense of partnership” among and between the two countries’ business and investment communities.

“From what I saw there was great understanding of both the challenges that lay ahead and their potential to spur greater cooperation and therefore generate more opportunities,” he

concluded. “And the word is getting out. These are people who do their homework, many are already aware that Qatar’s capital markets are growing by leaps and bounds, and if they’re not, the Qatar Financial Center Authority is letting them know with a series of roadshows to increase awareness and generate greater outside interest.”

The QFCA recently sent a high-powered delegation to Germany, and several other stops are planned for Asia, North America, and other European countries later this year.

Overall, Baroudi concluded, “the combination of pro-growth economic policies, a constructive foreign policy, and significant investments in other countries has helped to make Qatar a genuine player on the world stage, both politically and economically. And now that Britain is looking beyond Europe a little more, the outlook couldn’t be better.”

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## **Why Europe’s energy policy has been a strategic success story**

For Europe, it has been a rough year, or perhaps more accurately a rough decade. The terrorist attacks in London, Madrid, and elsewhere have taken a toll, as did the Iraq and Afghanistan wars. But things really got tough beginning with the Great Recession—and its prolonged duration for Europe, including grave economic crises in much of the southern part of the continent. That was followed by Vladimir Putin’s aggression against Ukraine, as well as the intensification of the Syrian, Libyan, and Yemeni conflicts with their tragic human consequences, including massive displacement of people

and the greatest flow of refugees since World War II. The recent attacks in Paris and Brussels have added to the gloom and fear. This recent history, together with the advent of nationalistic and inward-looking policies in virtually all European Union member states, makes it easy to get despondent—and worry that the entire European project is failing.

To be sure, these are not the best of times. Europe is perceived by some, including Republican presidential candidate Donald Trump, as failing to invest enough in its own security, since NATO allies spend less than 1.4 percent of GDP on their armed forces while the United States spends twice that. However, we must not lose sight of the key structural advantages—and the important policy successes—that have brought Europe where it is today. For example, Europe's recent progress in energy policy has been significant—good not only for economic and energy resilience, but also for NATO's collective handling of the revanchist Russia threat.

[W]e must not lose sight of the key structural advantages—and the important policy successes—that have brought Europe where it is today.

For many years, analysts and policymakers have debated the question of Europe's dependence on natural gas from Russia. Today, this problem is largely solved. Russia provides only one-third of Europe's gas. Importantly, Europe's internal infrastructure for transporting natural gas in all desired directions has improved greatly. So have its available storage options, as well as its possibilities to import alternatives either by pipeline or in the form of liquefied natural gas. As a result, almost all member states are currently well-positioned to withstand even a worst-case scenario.

Indeed, European Commission analyses show that even a multi-month long supply disruption could be addressed, albeit at real economic cost, by diversification and fuel switching.

Progress in energy efficiency and renewable energy investments also help. There is more to do to enhance European energy security, but much has been done already. The Europeans have shown that, with ups and downs, they can address energy security themselves.

Already this energy success has contributed to a strategic success. Europe has been heavily criticized for not standing up more firmly to Russia in response to the annexation of Crimea and the conflict in eastern Ukraine. In fact, all EU member states have agreed to keep economic sanctions in place against Moscow. In addition, lifting the sanctions has been firmly attached to the implementation of the Minsk II agreement—and despite recent cracks in European solidarity, we hope that this stance will hold going forward.

The notion that Europe is weak and dependent on Russian natural gas is a relic from the past.

The notion that Europe is weak and dependent on Russian natural gas is a relic from the past. Europe has a strong regulatory framework with which commercial entities, including Gazprom, have to abide. For those who doubt the impact of these regulations, just ask Google or Microsoft. With the end of so-called destination clauses, natural gas can be re-sold whenever required, as long as sufficient infrastructure is in place. Just last year, Germany re-exported over 30 billion cubic meters of gas, mostly Russian, in particular to Central and Eastern Europe (including Ukraine). That volume exceeds the annual consumption of every European state with the exceptions of Germany, Italy, France, and Britain.

In theory, Europe could even substantially wean itself off Russian gas if need be. To be sure, that would come at a major expense: over 200 billion euros of additional investments over a period of two years or more, and then an annual 35 billion euros, according to some calculations. That will almost surely not happen. But as a way of bounding the worst-case scenario,



it is still informative. One might say that Europe has escalation dominance over Russia; the latter needs to export to Europe more than Europe need Russian hydrocarbons.

The internal energy market is not finished, but Europe's energy security has significantly improved in recent years. Even though world markets are currently awash in resources, there is no time for complacency, and European leaders should finish the job, foremost by safeguarding the swift construction of the so-called Projects of Common Interest (key energy infrastructure projects that address the remaining bottlenecks in the EU market), so that the U.S. State Department can take new infrastructure projects like Nord Stream 2 off its priority list, and make energy policy another true European success story. It is already much of the way there, and Western security is the better for it.

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## **Perspectives – Energy Policies in the United States and Europe: Divergence or Convergence?**



Are United States and Europe, leaders in the developed world, diverging or converging on national energy policies? The question is important since common policies are more likely to set global standards. But there is no single answer because the answer differs depending on which part of the energy sector one is talking about. Accordingly, I will try to answer the question sector by sector starting with oil and proceeding through natural gas, non-hydro renewable and energy efficiency, and ending with climate change. It should be noted that oil is used almost exclusively in the transportation sector; natural gas for electricity production and heating; and non-hydro renewables for electricity production. Energy efficiency and climate change involve both the transportation and electricity sectors.

## **Oil**

With respect to oil, there is a broad convergence of objectives and a growing convergence of policies to achieve those objectives between the U.S. and Europe. Both are net oil importers in the aggregate, although individual U.S. states such as Louisiana or European countries such as Norway may be net oil exporters. Both are therefore concerned about protecting themselves from the effects of large price changes and supply disruptions in the short-term and becoming less dependent on foreign suppliers in the long-term. The U.S. and Europe both have strategic petroleum reserves and coordinate policy responses bi-laterally and through the International

Energy Agency in Paris.

Since the 1970s the U.S. has become increasingly exposed to more price spikes and supply disruptions relative to Europe as its oil consumption has steadily risen and its domestic production has steadily declined. Over the last five years, however, these trends have reversed due the economic recession, increases in U.S. corporate average fuel economy standards (CAFE) and the opening up of new domestic oil reserves through hydraulic fracturing or “fracking.” The resulting flattening of U.S. oil demand and fall in U.S. oil imports have brought the U.S. oil market more into line with Europe’s. This convergence will be further enhanced as more efficient and less oil-dependent vehicles like the Toyota Prius gain market share on both sides of the Atlantic. The one area where the U.S. remains behind Europe is in using fuel taxes to raise revenue and encourage efficiency.

The U.S. and Europe also face a common challenge in dealing with China, India and other developing countries whose oil consumption and imports are rising rapidly. Both developed countries have an interest in helping developing countries gain access to newly discovered oil reserves in Africa, the Arctic and other remote areas in an environmentally sustainable manner, keeping maritime and terrestrial oil supply lanes open, and managing price shocks and supply disruptions with minimum damage to their economies. Coordination of responses to oil spills, cooperation in protecting choke points like the Malacca Straits from terrorist attacks, and assistance to developing countries in building their strategic oil reserves are three excellent candidates for transatlantic cooperation. The Arctic Council provides a model of how such cooperation might be structured.

## **Natural Gas**

With respect to natural gas, there is between the U.S. and Europe, a convergence of policy goals, but a divergence of

means for achieving those goal. Both have an interest in securing reliable long-term natural gas supplies, avoiding excessive reliance on a single source of supply, and using natural gas as a transition fuel towards a low-carbon future. The U.S. has been better placed to achieve those objectives than Europe throughout the post-war period, and the gap between the two has recently widened due to the “fracking” revolution in the U.S. Europe remains uncomfortably dependent on a single supplier, Russia-based Gazprom, for its natural gas supplies and continues to pay prices pegged to the oil price under long-term contracts. In contrast, U.S. is benefitting from a surge of cheap gas from fracking that has driven gas prices to their lowest level in decades and has put the U.S. in a position to be a net gas exporter (the U.S. price per mmBTU (one million BTUs) is around \$3.50; European prices are in the eight to twelve dollar range).

This low price has had the added benefit of attracting billions of dollars of new investment in the U.S. from petrochemical and other industries using natural gas as a feedstock. It has also helped to enable the U.S. to reduce its dependence on coal for electricity production from over fifty percent to thirty two percent (as of April 2012) and to increase its use of gas for that purpose from approximately twenty percent to thirty-two percent (also as of April 2012). This fuel-shifting has in turn reduced U.S. carbon emissions, with the result that the U.S. was one of only two countries in the OECD to actually reduce its CO<sub>2</sub> emissions last year (the other being Germany).

Europe has the potential of narrowing this gap by exploiting its own reserves of shale gas and by renegotiating its contracts with Gazprom to delink gas from oil prices. Neither will be easy. Europe combines greater population density and a strong green movement with exaggerated public concerns about the environmental consequences of fracking. As the U.S. gains experience in how to reduce the negative environmental impacts

from fracking operations and how to strike the right balance between economic and environmental objectives, Europeans are likely to become more comfortable with at least limited fracking. Poland and other Eastern European countries are prepared to move more quickly, but early results have been disappointing. Gazprom, which is already experiencing erosion in its market share, knows that it will have to give ground on pricing, but will do so only grudgingly.

As in the case of oil, the U.S. and Europe have a strong interest in cooperating to help China, India and other developing countries use natural gas to achieve common objectives. In particular, continued exploitation of abundant coal reserves in China and India for electricity production will make it almost impossible to protect the global climate from serious disruption. Both the U.S. and Europe have a vital interest in helping those countries switch from coal to gas in the electricity sector to mitigate climate change. In the longer-term, all countries will need to develop non-carbon energy sources, but in the meantime natural gas is a critical transition fuel.

### **Non-hydro Renewables**

With respect to non-hydro renewables, there is a basic convergence of policy objectives between the U.S. and Europe, but a substantial divergence in meeting those objectives, this time in Europe's favor. Europe, and particularly Germany, is well ahead of the U.S. in developing wind and solar resources, largely because its combination of high feed-in tariffs, ambitious targets for the percentage of electricity produced from renewable sources (EU 20% by 2020 and Germany 25% by 2020), and government support for green technology development. These European stratagems have proved far more effective than short-term and undependable U.S. federal tax credits and state subsidies and a kaleidoscope of state renewable portfolio standards in the States. Low natural prices in the U.S. have also

disadvantaged U.S. renewable energy developers relative to European counterparts.

The gap in non-hydro renewable energy penetration between the U.S. and Europe is likely to narrow somewhat over the coming decade as the U.S. develops a more consistent and effective policy framework (a federal renewable portfolio standard, multi-year tax incentives, new transmission lines from high prairie wind production sites to consumption centers) and U.S. natural gas prices rise from their current level of approximately \$3.50 per mmBTU to \$5 per mmBTU or more. The gap, however, will not be eliminated absent a change in U.S. climate policy. The long-overdue cornerstone of such a change would be putting a meaningful price on carbon. Another Sandy or two may be required to bring this about.

As with oil and natural gas, the U.S. and Europe face a common challenge from China on non-hydro renewables. The Chinese renewable energy industry has experienced explosive growth over the last ten years, and China is now the world's largest and lowest cost producer of solar photovoltaic (PV) modules. This rapid expansion of the Chinese solar PV industry, driven in large part by central and provincial government subsidies, has put tremendous pressure on U.S. and European PV module producers, which have been unable to compete on price. A number of U.S. producers have gone out of business and Siemens has withdrawn from the market.

The U.S. and EU have responded to this situation by bringing major trade cases against China, both bi-laterally and through the WTO. China has responded by bringing cases against U.S. and European suppliers of polysilicon, alleging discrimination in favor of domestic suppliers. This trade war cries out for a negotiated solution involving U.S., European and Chinese governments and companies since all producers are suffering losses caused by global over-capacity, and all have an interest in an orderly expansion of the solar PV market consistent with trade rules. Close transatlantic cooperation

will be essential to crafting such a solution.

## **Energy Efficiency**

With respect to energy efficiency, both the U.S. and Europe recognize that improving the efficiency of energy production, distribution and use is the lowest-cost way of reducing energy demand and carbon emissions. Throughout the post-war period, however, Europe has been far more efficient in the distribution and use of energy than the U.S. as a result of historical, cultural and ideological factors. European countries introduced high fuel taxes and electricity tariffs decades ago to raise revenue and reduce dependence on imported energy. The resulting high energy prices have had the collateral benefit of depressing demand and encouraging investment in energy efficiency.

Europe has a tradition of deferring to state power and high population density; the U.S. a tradition of individual autonomy, distrust of state power and dispersed settlement, all of which have encouraged urban sprawl and high individual mobility supported by low energy prices. Europeans are generally comfortable with state intervention in the market to achieve public goals; many Americans have a deep-seated ideological aversion to such intervention and regard it as a threat to the "American way of life." The result of these differences is that Europeans use roughly half the energy per capita as Americans and pay roughly twice as much per British Thermal Unit (BTU).

Fortunately the U.S. is beginning to narrow the gap with Europe on energy efficiency as it follows the example of California, which has an average annual per capita electricity consumption of about 7,000 kilowatt hours compared with about 6,000 for Germany and about 13,000 for the rest of the U.S. In the electricity sector, minimum energy efficiency standards for appliances and other products at the federal level, stricter building codes at the state level and LEED

(Leadership in Energy and Environmental Design) requirements developed by the U. S. Green Building Council are all improving end-use efficiency, particularly in new buildings. In the transportation sector, higher CAFE standards, more efficient diesel engines and growing sales of hybrid vehicles are likewise improving end-use efficiency. One area where the U.S. remains far behind Europe is the use of combined heat and power technologies for district heating and power generation.

## **Climate Change**

On climate change, the U.S. is deeply divided in a manner that Europe is not. A majority of Americans, particularly those living in big cities and “blue states” such as California, New York and Massachusetts, regard climate change as a serious problem and believe that the U.S. should do more to address it. A substantial minority, however, particularly those living in rural areas and “red,” energy producing states, believe that the threat of climate change is exaggerated and may even be a hoax perpetrated by liberal elites to gain control of the U.S. economy and make it more like “socialist Europe.”

This minority relies on the opinions of “climate skeptics” disseminated through Fox News, talk radio and other conservative media outlets. Most members of this minority, which is centered in Appalachia and the other areas governed by the old Confederacy, used to be Southern Democrats but have now become Republicans in response to the civil rights revolution of the 1960s. The result of this shift is that climate change has become a partisan issue dividing Democrats and Republicans.

The blocking power of conservative Republican members of Congress representing this minority has made it impossible for legislation putting a price on carbon either through a cap-and-trade system such as the one contained in the Waxman-Markey bill passed by the House before the 2010 elections or



through a carbon tax to be passed by Congress today. (Waxman Markey would be roundly defeated in the current House). It is interesting to note that American industry has for the most part dropped its opposition to putting a price on carbon – Waxman Markey was largely drafted by Jim Rogers, Chairman of Duke Energy, with the support of the Edison Electric Institute, and Rex Tillotson, the Chairman of Exxon-Mobil. We are now left with the Jacobins of the Right and their representatives in Congress.

In the aftermath of hurricane Sandy and the re-election of President Obama, the U.S. will move further towards Europe on climate change, however slowly. Blue states like California and cities like Chicago, Los Angeles, New York, Seattle and Portland are already setting emissions targets similar to Europe's. The Obama administration's Copenhagen target of a 17% reduction in emissions from 2005 levels by 2020 can be accomplished through the aggressive exercise of existing authority under the Clean Air Act. Unfortunately German commitments to phase out nuclear power plants could help narrow the gap in the reverse direction. Whatever progress is made in the U.S. and Europe, however, will be overwhelmed by emissions growth in China and other rapidly growing developing countries. Therefore the world is already committed to a significant increase in average surface temperature by 2100 (estimated by the Executive Director of the International Energy Agency at six degrees Celsius).