كتاب مفتوح إلى سعادة أمين عامّ الأمم المتّحدة أنتونيو غوتيريس

السيّد أنتونيو غوتيريس

الأمين العامّ

الأمم المتّحدة – الأمانة العامّة

نيويورك، NY10017

الولايات المتّحدة الأميركيّة

المرجع: النّزاعات على الحدود البحريّة في الحوض الشّرقي للمتوسّط: الأزمات والفرص

سعادة الأمين العامّ:

أتوّجه إليكم بكتابي هذا طالباً تدخّلكم الطّارئ في نزع فتيل الأزمة المتراكمة الّتي تؤثّر على المصالح الحيويّة وتطال بشكل مباشر دول ساحل الحوض الشّرقي للبحر الأبيض المتوسّط– وبشكل غير مباشر عشرات الدّول في أوروبا وآسيا وأفريقيا. ان مساعدتكم مطلوبة بشكل خاصّ للمساهمة في حلّ الخلاف حول الحدود البحريّة المتداخلة بين الدّول السّاحليّة تماشياً مع الأصول والإجراءات المنصوص عليها في اتّفاقيّات الأمم المتّحدة والقانون الدّولي.

تدركون ان هذه النّزاعات الحدوديّة الطّويلة الأمد قد تسبّبت بمواجهات عديدة بين الدّول في الماضي، كما أدّى عدد الأزمات الدّوليّة الحادّة الّتي تعصف حالياً بالمنطقة ومحيطها إلى زيادة التوتّرات لتصل إلى مستويات خطيرة. إضافةً إلى ذلك، فقد ساهم الاكتشاف الحديث نسبيّاً لمكامن ورواسب النّفط والغاز الوفيرة في المياه الإقليميّة لعدّة دول في الحوض الشّرقي للمتوسّط في رفع الرّهانات والمخاطر الاقتصاديّة المرتبطة بنزاعات الحدود البحريّة. ونتيجة لذلك، زاد العديد من القوى الكبرى – بما في ذلك الولايات المتحدة وبريطانيا وفرنسا من جهة وروسيا من جهة أخرى – من أنشطتها البحرية وغيرها من الأنشطة العسكرية في المنطقة. وتدركون ان وجود العشرات من السفن والطائرات الحربية في مساحة مغلقة نسبياً يسبّب زيادة الاحتكاكات، وبالتالي يعرّض عمليّة حفظ السلام والأمن في المنطقة للخطر ويعوق التنمية الاقتصادية للدول الساحلية المعنية وشعوبها.

أمرٌ واحد يمكن أن يوفّر فرصة لتحقيق الاستقرار الدائم الغائب عن الحوض الشّرقي للبحر المتوسّط منذ فترة طويلة ألا وهو مقاربة متكاملة متعدّدة الاختصاصات قائمة على استعمال "أفضل قانون" والاستفادة من "أفضل علم" ممّا يؤدي الى ترسيم الحدود البحرية المتنازع عليها بشكل عادل ومنصف. استخدمت الولايات المتحدة مساعيها الحميدة لتعزيز ودعم و/أو العمل كوسيط ودّي بهدف ترسيخ أشكال مختلفة من الحوار بين دول المنطقة. ويبدو أنها أحرزت بعضا من التقدم (خاصةً بين لبنان واسرائيل). صحيح ان هذا الجهد قد ساعد في احتواء التوترات المتصاعدة، ما زال يتعيّن علينا حلّ أيّ من النّزاعات الحدوديّة الرئيسية.

سعادتكم،

أعلم أنني أتحدث نيابةً عن ملايين الأشخاص الذين لم أقابلهم قط عندما أطلب بكل احترام تدخلكم الشخصي في هذه المرحلة الحاسمة والحسّاسة.خصوصا وان أفضل أمل يكمن في تسوية هذه المسائل الشائكة بفعالية بمشاركة أكبر من جانب الأممٍ المتحدة. وقد تختلف طريقة هذه المشاركة من حالة إلى أخرى وفقاً للظروف. لكن وبشكل عام، فان الأمم المتحدة ومؤسساتها هي من لديها السلطة القانونية والمعنوية لقيادة هذه العمليات إلى نهايات عادلة ونزيهة.

الدّول السّاحليّة السّبعة المعنيّة بموضوع ترسيم الحدود حاليّاً هي قبرص ومصر واليونان واسرائيل ولبنان وسوريا وتركيّا – كلّها دول أعضاء في منظّمة الأمم المتّحدة. (الدّولة الثامنة المعنية بالنّزاع، هي فلسطين، التي تتمتّع بحالة الدّولة المراقبة في الأمم المتّحدة كما تحظى باعتراف أكثر من ثلثي الدّول الأعضاء). في العام 1982 وقع كلّ من قبرص ومصر واليونان ولبنان على اتفاقية أمّا اسرائيل فهي فريق في .(UNCLOS) الأمم المتحدة لقانون البحار اتفاقية العام 1958 الخاصة بالبحر الإقليمي والمنطقة المتاخمة، واتفاقية العام 1958 الخاصة بالجرف القاري. كما قامت قبرص بالتوقيع والمصادقة على المعاهدة الأخيرة في حين وقع لكن لم يصادق عليها. فيما سوريا وتركيا ليستا طرفين في أي من معاهدات قانون البحار.

أكّدت محكمة العدل الدّوليّة – وهي الجهاز القضائي الأساسي لمنظّمة الأمم المتّحدة – في حالات عدّة أنّ قواعد ترسيم الحدود البحريّة الّتي تنصّ عليها اتفاقية الأمم المتحدة لقانون البحار تعكس القانون الدّولي العرفيّ، وبالتّالي فهي قابلة (UNCLOS) للتطبيق بشكل عامّ. لقد تطورت مجموعة من الاجتهادات القضائية

المتعلقة بترسيم الحدود البحرية من خلال أكثر من عشرين قرارًا اتخذتها المحاكم والهيئات القضائية الدولية وصدرت في خلال نصف القرن الماضي. تقدم هذه الاجتهادات دليلاً مفيداً للغاية للدول الساحلية لمساعدتها في حل نزاعاتها على الحدود البحرية.

بالإضافة إلى ذلك فقد اضحى المشهد العلمي في ايامنا هذه أكثر تحديدًا – وبالتالي أكثر قابلية للتنبؤ به –التكنولوجيّات والتقنيات الحديثة تؤدي الى رسم الخرائط بدّقة متناهية بحيث أنّه يمكن تقدير المتغيرات التّي كانت غير قابلة للتنبؤ بها في الماضي بدقّة مذهلة. ممّا يعني أن أي إجراءات قضائية دولية أو تحكيم أو أي وسيلة أخرى لتسوية النّزاعات المتعلقة بالحدود البحرية لا يكون مرجعها القوانين والقواعد المنشورة فقط، بل أيضًا العلم والتطور التكنولوجي. ونتيجة لذلك، يمكن للحكومات الآن أن تدخل في مثل هذه الإجراءات وهي تعرف تقريبًا ما ستؤول إليه النتائج مع إزالة الكثير من التخمينات التي قد تتسبب في تأجيل الأعمال أو تأخيرها.

بموجب القانون الدولي المعاصر، ولاستعمال القواعد القانونية والعلمية التّي تطبّق على عمليّة ترسيم الحدود البحرية يمكن اعتبار أنّ ما مجموعه 12 حدًا بحريًا يغطي المساحات البحرية للدول السّاحلية السّبع في الحوض الشّرقي للبحر المتوسط. في الوقت الحالي، تمّ توقيع معاهدتين فقط لترسيم الحدود البحرية الثنائية في المنطقة:

1) الاتفاقية بين جمهورية قبرص وجمهورية مصر العربية بشأن تحديد المنطقة الاقتصادية الخالصة تاريخ 17 شباط/فبراير 2003 (دخلت حيز التنفيذ في 7 آذار/مارس 2004)؛

2) الاتفاق بين حكومة الكيان الصهيوني وحكومة جمهورية قبرص بشأن تحديد المنطقة الاقتصادية الخالصة تاريخ 17 كانون الأوّل/ديسمبر 2007) (دخل حيّز التّنفيذ في 25 شباط/فبراير 2011).

ممّا يعني أنّ ما لا يقل عن 10 حدود محتملة وأكثر من ست نقاط تقاطع ثلاثية (أو "نقاط ثلاثية") – أي أكثر من 83٪ من إجمالي المنطقة البحرية لشرق المتوسط - لا تزال دون حل و/ أو متنازع عليها.

اعتبارًا من شهر نيسان/أبريل 2019، أصبح للدول الساحلية السبع صناعات هيدروكربونية بحرية جميعها في الحوض الشّرقي للمتوسّط

نشطة، مع ما يقارب 238,135 كيلومترا مربعا من المياه التي تغطيها حوالي 231 كتلة نفط وغاز متاحة، تمثل أكثر بقليل من 51 ٪ من إجمالي المياه البحرية في المنطقة. ومن ضمن الكتل الحالية المعروضة حاليًا، يمكن تصنيف حوالي 36٪ منها على أنها "مثيرة للجدل القانوني" نظرًا لعدم اليقين فيما يتعلق بالمواقع الدقيقة للحدود البحرية.ونتيجةً لعدم حسم الغالبية العظمى من الحدود البحرية في الحوض الشّرقي للمتوسّط ، ستتأثّر التّنمية الاقتصادية المستقبلية الناتجة من اكتشافات الهيدروكربون في قاع البحر واستثماره سلبًا، ممّا يقلل من إجمالي الإيرادات للمنطقة. ككل يوجد 95 حدًّا (ملاحظة: بالنسبة للبحر الأبيض المتوسط بحريًّا ، منها 31 (أو 32٪) تمّ الاتفاق عليها، بينما 64 (أو 68٪) لا تزال دون حل و/أو متنازع عليها).

كما تعلمون جيدًا، وفقًا للمادة 33 من ميثاق الأمم المتحدة ، "على أطراف أي نزاع يحتمل أن يؤدي استمراره إلى تعريض عمليّة حفظ السلام والأمن الدوليين للخطر أن يسعوا أولاً وآخيراً إلى إيجاد حلّ عن طريق التفاوض أو التحقيق أو الوساطة أو التوفيق أو التحكيم أو التّسوية القضائيّة أو اللجوء إلى الوكالات أو التّرتيبات الإقليميّة أو غيرها من الوسائل السلميّة الّتي يختارونها".

نظرًا للحقوق والواجبات المذكورة بموجب المادة 33 ، وفي أعقاب السابقة الناجحة التي حددها سلفكم في تسهيل اتفاقية العام 2008 بين الغابون وغينيا الاستوائية لإحالة نزاعهما حول الحدود البحرية إلى محكمة العدل الدولية، أطلب منكم وبكلّ تواضع أن تفكروا في تعيين مستشار خاص والتعبير علنًا عن استعدادكم لبدء عملية وساطة للأمم المتحدة تهدف إلى حلّ النزاعات المماثلة في الحوض الشّرقي للبحر المتوسط. تعد مشاركتكم الشخصية و إقراركم ذو أهمية حيوية لمساعدة البلدان المعنيّة على النجاح في حل نزاعاتها الحدودية بشكل سلمي ووفقًا للقانون الدولي.

تجدر الإشارة أيضًا إلى أنّه رغم عدم كفاية الدور النشط للولايات المتحدة للتوصل إلى حل لجميع النزاعات الحدودية في الحوض الشّرقي للبحر المتوسّط ، إلا أن مشاركتها المستمرة ضرورية. خصوصا وأن الوساطة الأمريكية كانت مفيدة بشكل خاصّ في الحدّ من التوتّرات في إحدى أخطر العلاقات في المنطقة – العلاقة بين إسرائيل ولبنان – فإن دعمها لجهود الأمم المتحدة على جبهات أخرى يعتبر شرطاً مسبقاً لنجاح هذه الجهود.

من شأن الخطوات المذكورة أعلاه أن تساعد في غرس زخم جديد في العملية – والثقة بين الأطراف – في فترة حرجة، في وقت تتطلّب فيه الاكتشافات الحديثة لرواسب النفط والغاز في المناطق البحرية المتداخلة بين الدّول اتّخاذ قرارات استثمارية كبيرة من قبل المستثمرين الأجانب وشركات النفط الوطنية في البلدان المعنيّة. أدت الأنشطة الهيدروكربونية في قاع البحر في السنوات الأخيرة إلى سلسلة من الاكتشافات المهمة، من ضمنها اكتشافان هائلان: حقل غاز ليفياثان، اكتشف قبالة ساحل الأراضي الفلسطينيّة المحتلّة في شهر كانون الأوّل/ديسمبر 2010 واحتوائه على 22 تريليون قدم مكعب من احتياطي الغاز؛ وحقل غاز ظهر، اكتشف قبالة مصر في شهر آب/أغسطس 2015 وهو يحتوي على 30 مليون قدم مكعب. يقع كلا الحقلين، اللذين يخضعان لمرحلة التّطوير، على مسافة قريبة جدًّا بشكل عامّ من الحدود التي تحدّدها المعاهدات الثنائية المذكورة أعلاه.

بمجرد تعيينكم لمستشار خاص، سيكون من المفيد أكثر إن تمكنتم من تسهيل عقد اجتماع وزاري متعدد الأطراف حول النزاعات الحدودية في في مقر الأمم المتحدة في نيويورك الحوض الشّرقي للبحر المتوسّط أو في مكتب الأمم المتحدة في جنيف أو في مركز اخر مناسب وملائم. ويمكن تنظيم اجتماعات تحضيرية للفرق الفنية التي تمثل البلدان المعنية قبل هذا الاجتماع الرفيع المستوى ، وهي عملية يمكن بعد ذلك تكرارها على شكل جلسات إضافية في المستقبل.

سعادة الأمين العامّ،

إن قيادتكم النشطة بهدف تأمين حلول مقبولة للاطراف فيما يتعلّق لن بالنزاعات حول الحدود البحرية في الحوض الشّرقي للمتوسط تساعد فقط في تعزيز احترام سيادة القانون الدولي، بل ستساهم أيضًا في تحقيق السلام الدائم وتحسين علاقات الجوار في المنطقة. إضافةً إلى ذلك، فإنّ الحلّ السّلمي لهذه النزاعات سيشكل أيضاً مصدر إلهام للبلدان التي تواجه تحديات مماثلة في جميع أنحاء العالم.

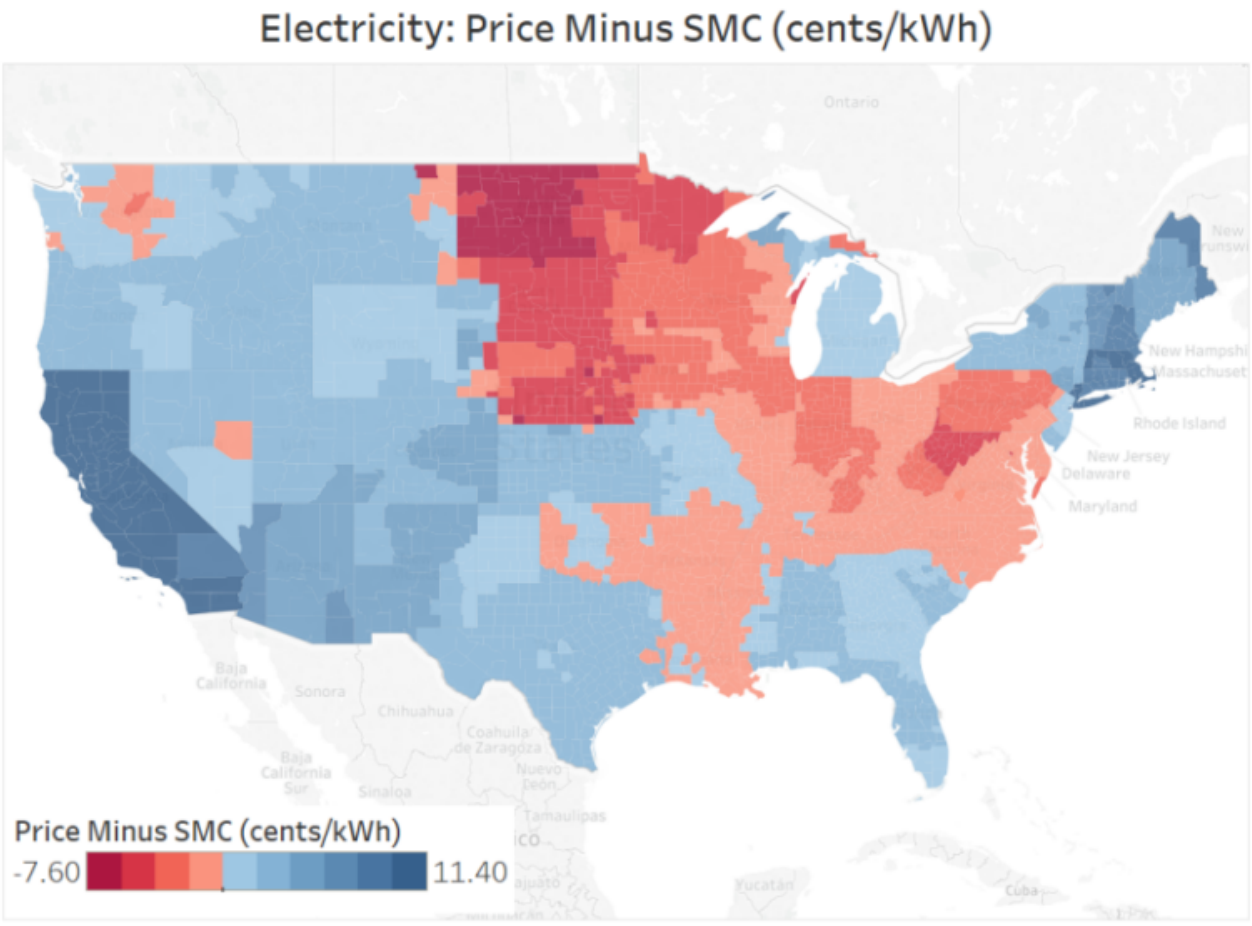
نشكر تفهّمكم سلفاً.

وتفضّلوا بقبول فائق الاحترام،

رودي بارودي

خبير اقتصادي وطاقوي

Energy Efficiency should target inefficient use, not all use



*Energy efficiency should not just be a matter of reducing energy consumption. As renewables grow pricing and profits should encourage renewable consumption. After all, renewables aren't a problem. And greater renewables consumption means less fossil fuels.**Yet consumer pricing models with a low fixed price + high variable rate are designed to discourage all consumption**, warns **James Bushnell of the Energy Institute at Haas**. He says we must recognise that **consuming energy is not, in and of itself, a bad thing**. Valuable goods and services are made and enjoyed using energy. We should**re-focus pricing to penalise the wasteful and inefficient**, while encouraging the clean.*

There are two duelling, strongly held, views on the definition of energy efficiency. **The idea of energy efficiency, at least to economists, is to overcome market failures that can lead to people consuming energy even when the full societal costs of the energy exceed their benefits**.

An alternative perspective also pervades policy circles. This perspective appears to be that people should **just use less energy, period**. To economists, this view is a perversion of the notion of energy efficiency. **Energy efficiency should be about the efficient use of energy, not the non-use of energy**.

Pricing electricity

One policy arena where these duelling views are colliding is electricity rate design. About a month ago I participated in a workshop at SMUD concerning a proposal to add a monthly fixed surcharge to homes that newly add rooftop solar. The logic behind the proposal was a familiar one to readers of the Haas blog site: many fixed utility distribution costs are recovered in variable, per kWh rates, and **solar homes avoid paying for those fixed costs when they generate their own electricity but stay connected to the system**. For SMUD, this is a financial concern: how to equitably recover the fixed costs of their infrastructure?

But there is a larger societal issue that gets overlooked when we focus too much on just the financial viability of a distribution utility. **The larger question is: exactly what kind of behaviour do we want to discourage, or encourage, from consumers when we set electricity prices, and why?**

The SMUD proposal was, not surprisingly, roundly criticised and opposed by solar trade groups. Somewhat frustrating, but not surprising, was the vocal opposition from 350.org and other environmental groups as well. My frustration stems from my belief that **we have a much better chance at combating climate change if we direct our scarce resources away from rooftop solar toward more cost-effective solutions like grid-scale solar**. What was surprising to me, however, was how the conversation turned to the wisdom, even the ethics, of SMUD's general tariff structure, which has a higher monthly fixed charge, and lower variable prices, than most other California utilities.

Electricity prices: how high is too high?

The general tone of this part of the discussion was that **it was socially irresponsible for SMUD to charge a lower variable price of electricity, because it would encourage people to use more electricity**. The argument is often extended to support steeply rising increasing-block rate structures, such as exist in much of California, on the grounds that higher prices encourage conservation (i.e., discourage electricity use). This begs a question that I wish I had asked at the time, but didn't. **If lower electricity prices are "bad", and by implication higher electricity prices "good", then how high is too high?**

Social marginal costs

Economists have a framework for answering this question. It is called **marginal cost**. Because we, as a society, are worried about climate change and other environmental costs, we should include those in marginal cost as well. That's called **social marginal cost (the cost of producing the electricity plus the external damages done by it)**. Ideally marginal prices would be set at social marginal cost, so that **when a consumer turns on a light bulb, or charges their electric vehicle, the incremental amount they pay matches the incremental cost they impose on society**.

In a previous blog, **Severin Borenstein** talked about work we have been doing estimating the social marginal cost of electricity around the US, and comparing it to the marginal ($/kWh) price faced by residential customers. These social costs reflect the marginal wholesale cost of electricity and researchers' estimates of the environmental costs of generation. There is a striking diversity across the US in the relationship between marginal prices and social marginal cost, but one fact that stands out is that **marginal prices in California are among the highest in the country even though**

our marginal cost of electricity is among the cheapest and cleanest in the country.

Energy Efficiency: duelling definitions

Again, the idea of energy efficiency—at least as an economic concept—is **to overcome market failures that lead to people consuming energy even when the costs exceeded their benefits**. There are two types of market failures, broadly speaking: **either the energy price is "wrong" or the price is right but consumers don't respond correctly to it**.

The first failure is usually linked to externalities, like climate change, whose costs may not appear in the energy price, leading consumers to consume "too much" because the price, lacking the environmental cost, is "too low." The second failure can be attributed to a myriad of institutional breakdowns, like **landlords who don't have an incentive to invest in efficiency** for tenants, or behavioural factors such as **consumers misunderstanding or not wanting to spend the time understanding their electricity prices**.

But a corollary to the economic view of energy efficiency is that if true social costs are low, it's OK to consume more. In fact, **it's a bad idea, even wasteful, to devote scarce resources to reducing consumption if the costs of those investments exceed the benefits provided**. This is where electricity pricing comes into the picture. If we set electricity prices well above the costs of serving customers, we are encouraging consumers to take steps to reduce electricity consumption when the electricity cost savings outweigh the investment costs to the customer, but not to society. **Rational consumers will reduce their electricity consumption (or install rooftop solar) based upon these price distortions**.

Indeed, this is exactly what my colleagues at UC Davis, **Kevin Novan and Aaron Smith** find in their 2016 paper, **The Incentive**

to Over-invest in Energy Efficiency. They study air conditioner replacements in Sacramento and estimate that while the AC investments save about $11.50 per month in avoided social costs, they save the consumers who make the investments about $26.50 per month because of SMUD's rate structure where marginal prices exceed marginal social cost.

Considering the fact that marginal electricity prices are more than double the marginal cost of energy (including externalities) in much of California, any behavioural reluctance on the part of consumers to invest in energy efficiency could actually improve rather than reduce total benefits. **The customer's cost-benefit test for saving money needs to be passed by a wide margin before energy efficiency makes economic sense in places like California**. Unfortunately, as the above map illustrates, as a country, we are devoting funds to overcoming customer inertia in all the wrong places. **Energy efficiency program expenditures are highest in states with high prices and clean electricity, and low to non-existent in the states where electricity is dirty and more expensive**.

Less is more, no matter what?

One can argue with the specific numbers, but the general principle of marginal cost pricing is pretty compelling. If consumers want to consume energy and are willing to pay the societal cost to provide it, their consumption creates a benefit that economists call welfare. **If prices rise well above social marginal cost, then we are inefficiently discouraging the use of electricity**. Yet there are some who are not persuaded. They appear to think people should use less energy, period, regardless of whether costs are low or costs are high.

More consumption, so long as it's renewable

The inconsistency in the "less is more, no matter what" view of energy efficiency is becoming more obvious as the grid gets cleaner and we are hoping to electrify other sectors, like transportation and home heating. The former trend means that **the social marginal cost is getting cheaper, even while the total cost of providing electricity is getting more expensive** (including fixed costs like renewable capacity, the transmission system, etc.). In fact, there are times and places where electricity is effectively costless. **Do we really want to discourage consumption, even the charging of EVs, through high prices during times like these?**

It is interesting that some opponents of rate structures like monthly fixed charges also support increased time-varying prices. Support for the latter **implies a recognition that when costs are low it's OK to encourage consumption**. However, opposition to fixed charges when marginal prices are so far in excess of costs implies a rejection of the same principles of marginal cost pricing that would lead one to favour time varying prices.

The other area where the view of "less electricity is better" runs into trouble is when we consider what the alternatives to electricity consumption are. Those alternatives are increasingly gasoline or natural gas. **If marginal electricity is clean and cheap, we want people to shift from gasoline to electricity to power transportation**. But high electricity prices clearly undermine that transition.

So, what exactly are we trying to achieve with electricity prices? Once we deviate from the principle of marginal cost pricing, we risk making moral judgments about how other people perceive the benefits of consuming energy. Now I'm not against doing that. I quite enjoy judging other people, in fact. But

it’s a wobbly foundation to base public policy upon.

As a policy community we need to come to some common understanding about what energy efficiency is and should be. This means **recognising that consuming energy is not, in and of itself, a bad thing. Many fantastic goods and services are made and enjoyed using energy**. What is “bad” is wasting money and polluting the environment. Energy efficiency efforts should be focused on truly wasteful, inefficient consumption. When we place the marginal price of electricity excessively high, we are throwing out the good consumption with the bad and making the achievement of our ultimate goal of a prosperous, clean-energy society harder to reach.

BP: Petrochemicals Drive U.S. Oil Demand Boom

By Tsvetana Paraskova – Jun 11, 2019, 11:00 AM CDT

The United States saw its crude oil and liquids demand jump in 2018 at its fastest pace in over a decade on the back of growing petrochemical plant capacity that uses increased volumes of ethane from shale, according to BP.

U.S. oil demand grew by 500,000 bpd, or 2.5 percent, to 20.46 million bpd last year, S&P Global Platts quoted BP as saying in its 2019 Statistical Review of World Energy.

Production of oil and natural gas liquids (NGL) from shale plays in the United States rose by 2.2 million bpd in 2018, according to BP's review.

"In case there was any doubt, the US shale revolution is alive and kicking," BP's chief economist Spencer Dale told reporters ahead of the presentation of the statistical review, as carried by Platts.

Petrochemicals are set to become the largest drivers of global oil demand, in front of cars, planes, and trucks, the International Energy Agency (IEA) said in a study in October 2018. Petrochemicals are expected to account for more than a third of the growth in global oil demand to 2030, and nearly half the growth to 2050, according to the IEA.

In the U.S., the petrochemical industry has benefited in recent years from greater feedstock availability and lower prices of ethane on the domestic market, the EIA said earlier this year.

U.S. exports of ethane surged from almost zero back in 2013 to an average of 260,000 bpd during the first 10 months of 2018, representing one-sixth of all U.S. hydrocarbon gas liquids exports.

In 2015, the United States became the world's top exporter of ethane—a key feedstock for petrochemical manufacturing—surpassing Norway, the only other country to export ethane, according to the EIA.

In September last year, the American Chemistry Council (ACC) estimated that since 2010, the U.S. chemical and plastics industry had announced 333 chemical industry projects valued at a combined US$202.4 billion.

By Tsvetana Paraskova for Oilprice.com

Erratic Weather Boosts Energy Demand, Denting Climate Goals: BP

LONDON – Extreme temperatures around the globe drove a sharp acceleration in energy demand and carbon emissions last year, oil giant BP said on Tuesday, issuing a stark warning that the world risks losing the battle against climate change.

And while 2018 saw another sharp pick up in renewable power such as wind and solar, continued growth in oil, gas and coal consumption meant that overall, the world's energy mix remained "depressingly" flat, BP Chief Economist Spencer Dale said in the company's benchmark 2019 Statistical Review of World Energy.

The 2.9% rise in energy demand in 2018, the fastest rate since 2010, deals a blow to global efforts to meet the 2015 U.N.-backed Paris climate agreement to limit global warming by sharply reducing carbon emissions by the end of the century.

China, India and the United States accounted for around two-thirds of the growth in energy demand. In the United States, demand rose by 3.5%, the fastest rate in 30 years following a decade of declines.

And as energy consumption grew, greenhouse gas emissions caused by burning of fossil fuels, which account for around two-thirds of total emissions, rose last year by 2%.

“It’s clear we’re on an unstable path with carbon emissions rising at their fastest rate since 2011,” Dale said in a briefing ahead of the release of the report.

London-based BP and its rival oil and gas companies have faced growing pressure from investors and climate activists to meet the Paris climate change goals.

Earlier this year, BP agreed to increase its disclosure on emissions, set targets to reduce them and show how future investments meet the Paris goals. But investors and activists say it needs to do more.

Energy consumption has historically been closely linked to economic growth.

But while global economic activity cooled last year, energy demand growth was driven by a sharp increase in abnormally hot and cold days around the world, particularly in China, the United States and India, which in turn led consumers to use more energy for cooling and heating.

Parts of the northern hemisphere were hit by freezing cold weather fronts last winter, only to face record temperatures in summer that resulted in vast fires and droughts.

In the United States, the combined number of heating and cooling days was the highest since the 1950s, BP said.

“There is a growing mismatch between societal demands for action on climate change and the actual pace of progress,” Dale said.

Primary energy growth (BP): https://tmsnrt.rs/2X6n1qQ

Oil production (BP): https://tmsnrt.rs/2R20i9H

Gas production increases (BP): https://tmsnrt.rs/2WYrT10

World Energy in 2018: https://tmsnrt.rs/2Wxyyea

FOSSIL FUELS RISE

The BP review showed an increase in oil and gas production, driven largely by a break-neck expansion of U.S. shale output.

While OPEC, Russia and other producers continue to cut back oil production in an effort to boost prices, U.S. drillers are rapidly increasing output, particularly from the prolific Permian basin in west Texas and New Mexico.

As a result, global oil supply rose 2.2 million barrels per day, more than double its historical average.

The U.S. boom also accounted for nearly half of an unprecedented increase in global natural gas supplies, which increased by 5% in 2018.

The increase in U.S. oil and gas production was the largest-ever annual increase by any country, BP said.

Renewable energy grew by 14.5%, nearing the record increase in 2017. The share of renewables in power generation nevertheless remained mostly unchanged, accounting for around one third.

(Reporting by Ron Bousso; editing by David Evans)

Saudi Arabia, Russia agree on joint private sector projects: Al-Falih

Saudi Arabia has agreed with Russia to launch several initiatives and set up joint investment and production projects by private sector firms in both countries, Energy Minister Khalid Al-Falih said on his Twitter account.

The move comes as part of Vision 2030 and the objectives of Russia's mega national projects.

Yesterday, during the sixth Saudi-Russian Intergovernmental Commission meeting held in Moscow, Al-Falih discussed comprehensive cooperation with his counterpart Alexander Novak.

According to Tass news, Al-Falih has said that Russian President Vladimir Putin is planning to visit Saudi Arabia in October.

Exxon Mobil proceeds with Argentina expansion project in Vaca Muerta basin

IRVING, Texas – Exxon Mobil is proceeding with a long-term oil development in Argentina's Bajo del Choique-La Invernada block. The project is expected to produce up to 55,000 boed within five years and will include 90 wells, a central production facility and export infrastructure connected to the Oldeval pipeline and refineries.

"We are encouraged by the excellent results of our Neuquén pilot project and look forward to increased production through this significant expansion," said Staale Gjervik, senior vice

president of unconventional at Exxon Mobil. “The reforms implemented by the federal and provincial governments have been critically important to enabling the development of the Vaca Muerta basin as one of the country’s main energy resources.”

If the expansion is successful, Exxon Mobil could invest in a second phase, which would produce up to 75,000 boed. Timing of the second phase depends on initial project performance and business and market conditions, among other factors.

“Exxon Mobil has been an active player in the Neuquén basin since 2010 and in Argentina for more than 100 years,” said Daniel De Nigris, Exxon Mobil’s lead country manager. “We will continue to work closely with the government and our partners and will use our expertise and capabilities to bring jobs and other benefits to local communities.”

In 2015, the Neuquén provincial government granted Exxon Mobil a 35-year concession in Vaca Muerta for the Bajo del Choique-La Invernada block. Exxon Mobil began an exploration pilot program the following year and now has three producing wells, and three additional wells moving into production. A production facility, gas pipeline and oil terminal have been in operation since 2017 and were recently connected to the Pacific Gas pipeline by a 16-in pipeline.

Bajo del Choique-La Invernada is a 99,000-acre block, located 58 mi northwest of Añelo and 114 mi northwest of Neuquén city. Exxon Mobil Exploration Argentina is operator and holds 90% interest in partnership with Gas y Petróleo del Neuquén, which holds 10% interest. Exxon Mobil Exploration Argentina is leading its unconventional operations in the Neuquén basin under a joint venture agreement with Qatar Petroleum, which has 30% interest in Exxon Mobil’s upstream affiliates in Argentina.

Prime Minister agrees legally binding net-zero emissions target for 2050

Announced on Tuesday night (11 June), the Prime Minister revealed that the statutory instrument to amend the Climate Change Act of 2008 to account for a net-zero target by 2050 will be laid in Parliament on Wednesday.

Prime Minister Theresa May said: “Now is the time to go further and faster to safeguard the environment for our children. This country led the world in innovation during the Industrial Revolution, and now we must lead the world to a cleaner, greener form of growth.

“Standing by is not an option. Reaching net zero by 2050 is an ambitious target, but it is crucial that we achieve it to ensure we protect our planet for future generations.”

The move comes just over a month after the Committee on Climate Change (CCC) published its recommendations to Government on legislating for a net-zero carbon economy. The body's advice includes bringing the ban on new petrol and diesel car sales forward to 2035; quadrupling the UK's renewable energy generation capacity; improving biodiversity across 20,000 hectares of land annually and deploying carbon capture and storage (CCS) at scale.

Crucially, the CCC believes that reaching net-zero by 2050 can be done using between 1-2% of GDP in 2050. This is the same level of funding currently allocated to work related to compliance with the Climate Change Act.

Devil in the detail

How the UK actually plans to reach net-zero emissions will need to be set out. Chancellor of the Exchequer Philip Hammond claimed that spending cuts for schools, hospitals and the police force would be needed to fund total decarbonisation of the UK economy, which he estimated at £1trn.

The *Financial Times reported* last week (4 June) that the cabinet has accepted a request by Hammond that 88 megatonnes (million tonnes) of emissions from the 2013 to 2017 carbon budget should be carried forward to give the UK more leeway in meeting future targets. The decision flies in the face of advice issued by the CCC when it urged ministers not to take advantage of the existing rule.

Under the Climate Change Act, the UK is currently targeting an 80% reduction in emissions by 2050 against a 1990 baseline, following similar advice from the CCC in the past. However, the current Act only accounts for international aviation and shipping on a territorial basis. Under the proposed new strategy, the net-zero target would encompass *all* sectors, including shipping and aviation.

One deviation from the recommendations is the use of

international carbon credits. The UK Government has confirmed that they will retain the ability to use these credits to offset emissions within an appropriate monitoring, reporting and verification framework.

The UK Government also looks set to stick with its original phase-out date for new diesel and petrol vehicles. However, MPs have confirmed a bid host COP26.

The Government's target will also tap into the growing influence of youth climate strikes. A Youth Steering Group will be led by DCMS and the British Youth Council to advise the Government on priorities for climate change, waste and recycling and biodiversity loss. They will start their review in July.

The legislation means the UK will become the first G7 nation to enshrine a net-zero target, and will conduct assessments within the next five years to push for other countries to set similar targets. A key ambition of this assessment is to ensure that UK industries to not face unfair competition from foreign businesses neglecting climate impacts.

Rapid turnaround

It also follows months of calls from MPs and businesses alike to enshrine a net-zero target into UK law – a discussion that has been amplified by the recent climate school strikes and Extinction Rebellion protests.

The announcement from the Government comes just hours after the Business, Energy and Industrial Strategy (BEIS) committee's chair Rachel Reeves MP introduced a new bill for legislating on net-zero to the House on Tuesday afternoon (11 June).

The bill, which followed the CCC's recommendations and included all international aviation and shipping, was broadly welcomed across the house – particularly by groups such as the

Environmental Audit Committee (EAC).

Path to net-zero

The UK Government first requested advice from the CCC on how best to legislate for a net-zero carbon economy last Autumn, in the wake of the Intergovernmental Panel on Climate Change's (IPCC) landmark report on global warming.

The report shed light on the vast difference in economic, social and environmental impacts between the Paris Agreement's agreed 1.5C and 2C pathways for the first time, revealing that the 0.5C difference would significantly worsen the risks of drought, floods, extreme heat and poverty for hundreds of millions of people. In order to limit warming to 1.5C, the paper concluded, global emissions would need to be cut by 45% by 2030 before reaching zero in 2050.

In the wake of the report, Scotland has already legislated to hit net-zero by 2045, while Wales has legislated for a 95% cut to national emissions by the same deadline. On a global level, efforts to reduce emissions have seen a 1C drop in the temperature rise being forecast by the end of the century – from 4C to around 3C.

From a business perspective, several of the UK's largest corporates have also set their own pre-2050 net-zero or 1.5C targets in light of the IPCC's claims, including the likes of BT, Skanska UK, Ecotricity and Aldi UK and Ireland. This trend can be seen across the global business community too, with modular flooring firm Interface, engineering and electronics giant Bosch and container shipping giant Maersk among the global cohort of so-called "zeronauts".

Businesses from all sectors and of all sizes have also been aiming to drive change outside of their own operations by lobbying the UK Government to legislate for net-zero. Last month, a coalition of 128 UK-based businesses, industry networks and investors wrote to Ministers demanding that a

net-zero target for 2050 is legislated “immediately” and were told such moves would be made “in a timeframe which reflects the urgency of the issue”.

Commenting on the introduction of the legally binding target, Secretary of State for Business, Energy and Industrial Strategy Greg Clark said: “We want to continue our global leadership and that’s why we are introducing a legally binding net zero target to end the UK’s contribution to global warming entirely by 2050. The report we commissioned from the Committee on Climate Change makes clear that we have laid the foundations to achieve a net zero emissions economy, and that it is necessary and feasible.

“Almost 400,000 people are already employed in the low-carbon sector and its supply chains across the country. Through our modern Industrial Strategy we’re investing in clean growth to ensure we reap the rewards and create two million high quality jobs by 2030.”

A green reaction round-up will be published on the edie website shortly.

Matt Mace & Sarah George

Global emissions climbed at highest rate in seven years in 2018, BP says

Global carbon emissions jumped the most in seven years in 2018 as energy demand surged, according to BP's annual review of world energy, indicating the world is falling behind in its efforts to rein in climate change.

The report, one of the most closely watched surveys of global energy trends, found that primary demand rose at the fastest pace this decade in 2018 even though economic growth weakened. China, India and the U.S. were responsible for two thirds of the 2.9% increase in consumption.

Urgency is building around the world to contain a global increase in the temperature, which has risen 1 degree Celsius since the start of the industrial revolution and is on track to at least double that increase by the end of the century. It marks the quickest change in the climate since the end of the last ice age some 10,000 years ago.

"At a time when society is increasing concerns about climate change and the need for action, energy demand and carbon emissions are growing at their fastest rate for years," BP Chief Economist Spencer Dale said at a briefing in London.

Much of the gains were driven by more volatile weather

patterns. An increase in the number of days that were either unusually hot or cold boosted energy use for heating and cooling, Dale said. As a result, global CO2 emissions rose for a third straight year, a trend likely to stick for the time being.

Almost 200 nations pledged to take steps to limit warming to well below 2 degrees through the Paris Agreement on climate change in 2015. Their aim was to limit the superstorms, droughts and famine predicted to happen more frequently with runaway climate change.

Even the dirtiest fossil fuel for power generation is increasing. Both consumption and production of coal advanced at their fastest rate for five years, driven by the need for developing economies across Asia to connect millions of homes to a reliable source of electricity. That's despite coal's share of primary energy falling to just over a quarter of primary energy and 17 gigawatts of plants burning the fuel being retired.

BP's report contained some more hopeful trends. Renewable energy consumption jumped 15% in 2018, near the record advance from a year earlier. China, again at the forefront, is adding more renewable energy than the world's most developed nations in the OECD combined, BP said.

Growth in output from wind, solar, geothermal, biomass and burning waste accounted for about a third of the increase in total power generation, or the same as the increase in coal.

"Renewables can't grow quickly enough," Dale said.

5 extreme trends that will affect oil in the next 5 years

Opinion by**Theo Priestley**
The Oil & Gas industry is synonymous with the word ‘extreme’ but in many ways that term doesn’t translate well when it comes to keeping up with the latest of technology trends.

While the environments that the energy industry operate in might be considered so, the ability to tap into emerging trends is on the opposite side of the spectrum compared to other industries like Manufacturing.

So what should the oil and gas and energy industries be looking toward in the future to maintain its own extreme, competitive advantage?

Internet of Things (IOT) and Edge Computing – Connecting the Sea for Extreme Operational Efficiency

An industry buzzword that’s been around for a while now. IOT

is picking up pace with the interest from the energy sector as it looks to harness data from an array of sensors whether from tidal, wind, or traditional oil and gas pipelines.

The attraction of receiving real-time, operational data from machines and large, inaccessible equipment is huge as companies seek to minimise or predict failure, and maximise efficiencies and uptime.

But let’s scrutinise the promise of IOT further, because it’s not as easy as it appears to extract the value required.

For example, there are approximately 3,500,000km of pipeline across the World on and offshore. Beneath the waves an estimated 70% are already at or beyond design life.

While on land both WiFi and 5G are touted as the standard for connecting IOT-enabled devices, and for harvesting data in real-time the reality facing the energy industry is that 70% of the World’s surface is water, and those technologies don’t work subsurface which would enable the internet of things in the extreme environments they operate in.

This applies for smart cities also where existing infrastructure is buried below ground.

Asset integrity management is a big concern for the oil industry today as costs soar towards an asset’s end of life while production declines, and this doesn’t take into account the reputational cost and damage of having a major failure subsea, the environmental impact and costs associated with loss of production and revenue.

Many installations are in late life but with little understanding of actual pipeline condition and integrity meaning a loss in revenue and production if longevity cannot be extended.

This is a critical use case of IOT technology, especially

Subsea Internet of Things where the retrofitting of wireless monitoring devices and sensors can greatly increase the amount of data required for effective decision making at this level; data including pressure, temperature, fatigue, corrosion, and vibration and flow from sensors which form part of an Edge network of devices which can not only communicate with each other in real-time but offer analytical capabilities meaning the cost of data transfer from thousands of meters below the surface is greatly reduced for efficiency.

Blockchain – Asset Management taken to the Extreme

Asset integrity is only one key aspect of maintaining an efficient, productive and compliant energy network. Asset management at this scale is a headache for many engineers, CTOs and CFOs responsible for production.

How can you track thousands of components, their lifespans, their repairs and replacements, the costs associated and third party invoices effectively and in a way which can't be altered or mismanaged?

Blockchain offers an answer. Although the underlying aspect of Blockchain is purely a distributed ledger and therefore a backbone infrastructure technology (and in reality, very boring) the fact that an asset's lifecycle, service and test records can be recorded and traced on blockchain offers greatly enhanced transparency and auditability.

If a critical component is purchased, everything about that item has already been recorded, from the materials used, their original source, down to who manufactured it, and who signed off on the quality testing.

From that point on, where the part is used, what it is used for, when it was operational, any failures recorded, any repairs recorded, to its eventual decommissioning is stored on the digital ledger, completely immutable to change or alteration.

Digital Twins – Using IOT and Real-Time Data for Extreme Visualisation

The concept of a Digital Twin along with the Internet of Things again is not a new concept. A Digital Twin refers to the digital replica of physical assets (physical twin), processes, people, places, systems and devices that can be used for various purposes.

The digital representation provides both the elements and the dynamics of how an Internet of things device operates and lives throughout its life cycle.

The idea of creating a digital representation of an asset or device combined with the real-time sensor data can be extremely inviting for many industries and the energy sector is no exception.

Being able to visualise an entire installation, down to pumps, motors, pipes, valves, compressors, turbines and much more, along with real-time data associated with their operation can be an engineer’s dream however the balance in question is being able to receive that information at critical moments in a timely and meaningful way.

This is fine for where remedial work or understanding the behaviour of a component or machine where time is not critical is perfect for the application of this technology.

Walking through the exploded view of a huge turbine using virtual or augmented reality works very well in scenarios where there are no time constraints.

But every engineer knows that you simply can’t beat being presented with a dashboard in real-time.

For all new technologies, context is absolutely key in the correct implementation and the energy sector is no exception to this rule.

However, many Digital Twin initiatives fall short simply because they do not take into account subsea infrastructure, and operational decisions are being based on only half the picture.

Remember to take into account real-time data from your offshore structures.

Virtual/ Augmented Reality – Bringing Data Closer to the User in Extreme Conditions

Imagine being able to walk through a pipeline installation without physically being there.

Imagine being able to walk through a huge wind turbine and all its internal components and seeing them operate in real-time.

Imagine being a diver meters below the surface of the ocean, and having information relayed and overlaid in real-time via your mask or helmet from wireless sensors instead of holding a display and attaching it to a wired sensor installation.

Imagine this same capability for an ROV operator and control screen.

All this is possible with augmented and virtual reality. While the technology itself struggles to find a foothold in the real world of the consumer, on an industrial scale it is flourishing as it finds new ways to present information to a user that frees their capacity to do other tasks, or instructs them on how to repair or monitor complex machinery in extreme conditions without the need for manuals or guides.

Artificial Intelligence – Extreme decision making made possible

No industry can escape the rise of the machines, or the capabilities that machine learning and advanced algorithms can bring to automating decision making and making sense of petabytes of data in an instant.

As time becomes as much a critical commodity as revenue, A.I. can aid in the analysis of real-time energy production and asset lifecycles, GIS data for site planning, aiding in faster operational decision making, invoicing and order to cash automation, predictive maintenance of assets and the planning of repairs with minimal interruption to production, automation of ROV equipment without the need for operators, the list can be endless if applied correctly.

Again, it’s key here to reiterate that this trend goes hand in hand with edge computing, and the movement and processing of data and critical information at the source (in most cases, at sensor level) rather than at the datawarehouse will become the norm and most efficient method of implementation in the future.

What we must bear in mind is that A.I. is nothing more than algorithms that can learn from their inputs and adapt, and for that to happen it needs to be given the right data to make those decisions in the types of scenarios listed.

The oil and gas industry has a big task ahead before thinking about the implementation of machine learning solutions; how can it get that data out from installations and equipment in extreme conditions such as subsea locations?

What data is absolutely critical to make an A.I. solution viable and is it available? How ‘clean’ is that data the organisation holds? The old saying ‘Garbage In/ Garbage Out’ has never been truer than today when discussing the potential of A.I.

There we have it, 5 extreme trends for the next 5 years to think about. But perhaps there is a sixth trend when you consider all five at once, because in combination they are extremely powerful and interconnected, and every one is about the underlying value that can be extracted from the data generated by the business.

And they do say that ‘data’ is the new oil after all….

Theo Priestley is the Chief Marketing Officer at WFS Technologies, and a world renowned technology futurist.

OPEC Still Gridlocked on Meeting Date Amid Iran-Saudi Schism

With just two weeks remaining before they’re supposed to gather in Vienna, OPEC and its allies are still struggling to settle on a meeting date. It’s the latest example of how bitter geopolitical rivalry between Saudi Arabia and Iran can cause gridlock in the cartel.

The Organization of Petroleum Exporting Countries and its partners, an alliance that spans 24 oil-producing nations, must choose whether to extend production cuts into the second half of the year or end a pact that has put a floor under prices. It’s a decision of growing urgency as a deteriorating global economy and entrenched trade war batter crude prices.

Yet for the past three weeks they’ve been fruitlessly juggling

dates after Russia, the biggest non-OPEC producer in the coalition, sought to shift the meeting to early July. Now, as countries that initially resisted Russia's proposal give it their support, delegates familiar with the matter say opposition comes from just one nation: Iran.

It's almost certainly no coincidence that this intransigence comes as its longtime foe, Saudi Arabia, and other OPEC nations take the Islamic Republic's market share while its crude exports are squeezed by U.S. sanctions.

"This seems to be about flexing muscles, marking territory," said Helima Croft, chief commodities strategist at RBC Capital Markets in New York. "Digging lines in the sand because you can."

Iranian crude production has tumbled to the lowest in three decades as President Donald Trump pressures the country to renegotiate an accord on its nuclear program, data compiled by Bloomberg show. Meanwhile the Saudis, a religious and political adversary of Tehran, have aided Trump by raising their own crude production.

As tensions mount, hostilities have flared in the Persian Gulf, where Saudi oil tankers and pipeline infrastructure have suffered attacks that the kingdom has blamed on Iran.

Despite the political friction, OPEC is still broadly holding together on oil-supply policy. Even though Saudi Arabia has boosted crude production, it's still abiding by output limits agreed with the rest of the group at the end of last year, and wants these to be renewed when the cartel meets, whenever that may be.

Whether the group decides to gather at the end of this month or in July, there are currently no challenges to reaching an agreement, with the high level of stockpiles in the U.S. underscoring the need for a cuts extension at least until the end of the year, United Arab Emirates Energy Minister Suhail

Al Mazrouei said at an event in Montreal on Tuesday.

“What’s amazing about this dispute is that it has little to do with the actual content of the agreement — a rollover seems almost certain,” said Croft.

Power Shift

When Russia last month proposed changing the date of the meeting — originally planned for June 25-26 — because of a domestic scheduling conflict, it seemed another case of OPEC’s new ally demonstrating its influence. A previous gathering intended for April was scrapped at Moscow’s request.

Ever since the partnership between OPEC and its erstwhile competitors was struck in late 2016, Russia has typically secured beneficial terms. Saudi Arabia, OPEC’s biggest member, promptly supported Russia’s request on the change of meeting dates.

“It might look like a minor scheduling issue, but actually it’s a symptom of the shifting balance of power that’s been underway since 2016, ” said Derek Brower, a director at consultant RS Energy Group Inc. “Not just diary power, but actual pricing power is now decided by Russia and OPEC’s Gulf producers.”

Riyadh and Moscow may also prevail in the dispute over dates, which they’re seeking to push to July 3-4. Countries that initially opposed Russia’s request, such as Algeria and Nigeria, appear to have fallen in line, delegates say. Algeria dropped its objections after presidential elections in the country planned for July 4 were delayed, they said.

Sole Objector

That just leaves Iran, which insists that the original plan to convene on June 25-26 should stand. In a letter to OPEC’s Vienna-based secretariat, the Islamic Republic cited its own

schedule commitments for rejecting the date move, delegates said.

Venezuelan Oil Minister Manuel Quevedo, who this year holds OPEC's rotating presidency, is making another attempt this week to persuade Tehran to accept the change after failing to win over Iranian Oil Minister Bijan Zanganeh, said the delegates.

What happens if he fails is unclear. A compromise of holding the meeting for OPEC members on June 25 as originally planned, and moving the gathering for non-OPEC producers to July, has been considered, delegates said.

However, OPEC's rules require consensus for the date of a conference to be altered, and without Iran's blessing the upcoming gathering will – at least theoretically – remain set for June 25.

As both Saudi Arabia and Russia now cite a conflict with commitments surrounding the Group of 20 summit in Japan taking place in late June, how they would respond if the dates aren't amended is uncertain.

"It's a fiasco," said Brower.