Scoping out corporate carbon neutrality

By Geoffrey Heal/New York

In the run-up to this year's United Nations Climate Change Conference in Glasgow (COP26), a growing number of companies hopped on the sustainability bandwagon, declaring commitments to achieve carbon neutrality – net-zero carbon-dioxide emissions – by mid-century. And among the many ambitious announcements to come out of COP26 is that almost 500 financial-services firms have "agreed to align $130 trillion – some 40% of the world's financial assets – with the climate goals set out in the Paris agreement, including limiting global warming to 1.5°C."

But many commentators have been sceptical about such proclamations, suggesting that they amount to greenwashing. Critics point to corporations' heavy reliance on "offsetting," which has become an increasingly important – and controversial – issue in the broader climate debate. So great is the confusion about what is real and what is not that the Taskforce on Scaling Voluntary Carbon Markets, led by UN

Special Envoy for Climate Action and Finance Mark Carney, has established a new governance committee to review corporate emissions pledges.

The sceptics are right to be concerned about the use of offsets. The world needs to get to net-zero by mid-century, and it cannot do that with offsets. Companies buy offsets precisely so that they can continue emitting greenhouse gases (GHGs) while claiming that their emissions are zero, net of the offsets. The very existence of an offset means that the purchaser's emissions are not zero.

But not all offsets are alike. The critics focus on offsets in which one company or country pays another to reduce emissions and then claims the reduction as its own. This is the kind of offset that cannot be allowed if the world as a whole is to get to zero emissions. There is a place, however, for offsets generated by removing GHGs from the atmosphere, for example by direct air capture or forest growth. If a company emits 100 tons of CO2 and then removes the same amount, its net emissions really are zero. If all companies do this, the world as a whole will achieve net-zero emissions.

True, the recourse to forestry requires a cautionary note. Growing trees raises issues of both additionality and permanence – additionality because it is hard to be sure that the forest growth would not have occurred anyway, and permanence because there is a risk that the forest will burn, a problem that has grown more visible and severe in recent years.

Still, offsets can play a positive role. The costs of reducing GHG emissions, and the willingness and ability to pay for such reductions, vary greatly from country to country, depending on the sources of its emissions and its stage of development. Some countries may not be willing or able to pay for an expensive reduction in emissions at home but could still pay for less costly reductions abroad. When this happens, an offset market can facilitate a reduction in emissions that would not otherwise have occurred, or that would not occur without a policy that penalises CO2 emissions.

In this case, offsets may be useful at least in moving the world closer to net-zero emissions. But to reach the finish line, they will have to be phased out at some point. There ultimately is no place for offsets in a zero-emissions world.

In the meantime, policymakers and business leaders would do well to attend to a related issue that has been neglected: the failure to distinguish between so-called scope-one, scope-two, and scope-three emissions. Scope one refers to emissions that arise from a company's own operations, whereas scope two applies to those associated with the production of electric power purchased by the company, and scope three to those arising from other parts of the supply chain, particularly from the consumption of the product.

Clearly, there is potential for massive double counting here if one adds up all the emissions across companies. If my company purchases electricity from a local utility, the associated emissions are scope two for me and scope one for the utility. If Exxon sells jet fuel to American Airlines for use in Boeing aircraft, the emissions are scope three for Exxon and Boeing, and scope one for American Airlines. These emissions are counted three times, which is anathema to any competent accounting system. Every scope-two or -three emission is someone else's scope-one emission.

Fortunately, such confusion is avoidable. If every company has reduced its scope-one emissions to zero, aggregate corporate emissions will be zero. It therefore makes sense for every company to focus only on this factor. If scope-one emissions are brought to zero, scope-two and scope-three emissions will take care of themselves.

This should help to simplify the general policy guidance and instructions given to companies: Focus on reducing your scope-one emissions. Plan on phasing out offsets over the long run. And continue to look for opportunities to remove GHGs from the atmosphere, as these reductions can still be counted against your own scope-one emissions. – Project Syndicate

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Electrification and urbanisation will drive growth in copper

The long-term growth drivers of copper

The green transformation will electrify the global economy as cars go electric and more homes in colder areas will switch from natural gas as heating source to that of air to water heat pumps. In warmer parts of the world we will continue to see an acceleration in air conditioners to cool homes. The main usage of refined copper is for electrical applications, but it is also used in housing (pipes and fittings), cars, telecommunication and industrial machines. Copper has the second highest thermal conductivity at room temperature among

pure metals and is thus the preferred metal used in electrical applications. As the world electrifies in the name of the green transformation and rapid urbanization continues in Asia, Africa, and South America, copper will continue to enjoy strong annual growth rates.

How to get exposure to copper?

Copper has been rebranded as a *green metal* because of its importance for the green transformation and investors are increasingly asking us how to invest in copper. The most direct way is of course to invest in high grade copper futures on COMEX (part of CME Group) with the current active contract being the Mar 2022 contract (Saxo ticker: HGH2), but the contract has a contract value of around $106,537 at current level making it inaccessible to most retail investors. One could also invest through CFD on futures (Saxo ticker on the Mar 2022 is COPPERUSMAR22) where the investor could buy 100 pounds of copper instead of 25,000 pounds in the futures reducing the contract size to $425. However, getting exposure through CFDs and futures the investor must regularly roll the contract to the next active contract, and the investor could also incur financing cost increasing the drag on performance. The chart below shows the continuous futures contract on high grade copper since 2002.

Few miners offer pure exposure to copper

Another way to get exposure to copper that removes the difficulties of rolling futures or CFD contracts is to invest in mining companies that extract or refine copper. The table below shows 16 mining companies with exposure to copper with Codelco, the largest copper producer in the world, absent from the list as the Chilean miner is only listed in Chile and thus not investable for our clients. The copper mining industry has delivered a median total return in USD of 132.6% over the past five years beating the global equity up 105% in the same period. The rising copper prices the past year driven by

investors positioning themselves in *green metals* (defined as metals that will play a key role in the green transformation) which in turn has pushed up revenue in the industry by almost 40%. Sell-side analysts are generally bullish on copper miners with a median upside of 16% from current levels. In our view investors should select one or two copper miners to get exposure and avoid the ETFs on the industry as they are too broad-based and lack the pure exposure profile needed to play the copper market.

As the table also show, there is no such thing as pure exposure to copper except for futures, options and CFDs on the underlying copper. The miner with the highest revenue exposure to copper is Antofagasta with 84.8% revenue share from copper extraction and refining. Most copper miners also extract gold and silver as part of their copper operations. Out of the 16 copper miners in our list, only 6 of these miners have more than 50% of revenue coming from copper extraction and refining.

Outlook and risks

High grade copper futures have been range trading for more than half a year as slowing demand out of China due to a slowdown in housing construction has weighed on the demand side. On the positive side inventories have been tight in copper which has helped support the copper price and the global pipeline of new copper mines, but also potential tax charges in Chile and Peru (roughly around 40% of global supply) could negative impact supply and keep copper prices high. The annualized growth rate in global refined copper demand has been around 3% in the period 2009-2020.

China has for many years been the key driver of demand growth for copper, but going forward electrification (electric vehicles and air-to-water heat pumps and urbanization in India will begin to play a bigger marginal role on demand creating a more steady and diversified demand picture. In 2022, demand

outside China will be driven by construction, grid infrastructure, and transport. Another risk to copper demand is significantly higher interest rates next year as that would curtail growth in construction which is interest rate sensitive.

QatarEnergy, Pavilion Energy, Chevron launch GHG reporting methodology for delivered LNG cargoes

Doha: QatarEnergy, Pavilion Energy Trading & Supply Pte. Ltd.1 (Pavilion Energy), and Chevron U.S.A. Inc (Singapore branch) (Chevron) yesterday announced they have jointly published a quantification and reporting methodology to produce a statement of greenhouse gas emissions (SGE) for delivered LNG cargoes.

This is the first such published methodology that will be applied to sales and purchase agreements (SPAs), specifically the executed SPAs by Pavilion Energy with QatarEnergy and

Chevron. Intended for wide adoption, the methodology provides a calculation and reporting framework for greenhouse gas (GHG) emissions from wellhead-to-discharge terminal, based on industry standards.

The SGE Methodology was developed by a team of technical specialists representing Pavilion Energy, QatarEnergy and Chevron, supported by global sustainability consultancy Environmental Resources Management (ERM). It aims to create a common standard for the measurement, reporting and verification of GHG emissions associated with producing and delivering an LNG cargo to drive greater transparency and enable stronger action on GHG reduction measures.

Independent academic experts, commercial institutions and verification bodies have reviewed the SGE methodology. It complements key industry efforts being developed in parallel, specifically the Monitoring, Reporting and Verification (MRV) and GHG Neutral Framework by the International Group of LNG Importers (GIIGNL).

“We share a common and decisive vision with QatarEnergy and Chevron to advocate for transparency and accuracy of GHG emissions associated with delivered LNG cargoes,” said Alan Heng, Interim Group CEO of Pavilion Energy, “The SGE Methodology sets a strong tone for increased accountability of emissions along the LNG value chain, paving the way for more decarbonisation strategies towards a lower carbon future.”

Ahmad Saeed Al-Amoodi, QatarEnergy’s Executive Vice President of Surface Development and Sustainability, said: “This joint effort to develop a greenhouse gas quantification and reporting methodology is part of a series of projects and initiatives that reflect QatarEnergy’s commitment to reduce GHG emissions and to de-carbonize the LNG value chain. We are proud to join hands with our partners Pavilion Energy and Chevron in this landmark project.”

“We jointly developed this LNG carbon-footprinting methodology for delivered cargoes to help advance a standard for GHG product-level accounting,” said Bruce Niemeyer, Chevron’s vice president of strategy and sustainability. “This methodology is expected to enhance transparency, improve accuracy and build stakeholder confidence in data reliability to help advance net zero ambitions.”

US mediator said to give Israel, Lebanon deadline to reach maritime agreement

A US mediator has reportedly informed Israel and Lebanon that if they cannot agree to a compromise over a disputed maritime region, he will end his involvement in the talks.

US envoy Amos Hochstein, who visited Israel this week, suggested to top Israeli officials that they need to get the deal done before the March 2022 parliamentary election in Lebanon, the Axios news site quoted Israeli officials as saying on Wednesday.

Hochstein was also in Beirut last month as he continues his efforts to restart the stalled talks.

Israel and Lebanon have no diplomatic relations and are technically in a state of war. They each claim about 860 square kilometers (330 square miles) of the Mediterranean Sea as being within their exclusive economic zones.

The Israel-born envoy to the US-mediated talks, a longtime close adviser to President Joe Biden, also told officials that he was not planning to resume the joint talks held at a UN base on the border. Instead, he would meet with each side independently and then offer a bridging proposal.

“Hochstein told us he is not going to present a proposal that both sides like, but the opposite – that both won’t like. But if three to four months from now he sees the parties are not willing to take the deal, he would drop the whole thing and won’t deal with this anymore,” a senior Israeli official told Axios.

Hochstein was looking to get both sides to make serious compromises, officials said, noting that both countries wanted to resolve the dispute despite tensions between them.

Lebanon has sunk deep into an economic and financial crisis that started in late 2019 – a culmination of decades of corruption and mismanagement by the political class. The small Mediterranean country is eager to resolve the border dispute with Israel, paving the way for potential lucrative oil and gas deals.

Hezbollah leader Hassan Nasrallah last month warned Israel

against unilaterally searching for natural gas in the disputed maritime region before any agreement between Lebanon and Israel is reached.

In a wide-ranging speech broadcast from an undisclosed location during a ceremony marking Prophet Muhammad's birthday, Nasrallah said that while he would leave it up to the Lebanese government to negotiate an end to the dispute, his group would not tolerate Israeli searches in the disputed region.

Accusing Israel of casting a "greedy" eye over Lebanon's natural resources, the terror leader said Israel was "mistaken if it thought it could extract these resources from the disputed area before negotiations are completed."

"The resistance is capable of acting and will do so against any Israeli actions in the disputed zone," Nasrallah said, accusing Israel of giving a company the go-ahead to begin explorations.

Maritime borders deal between Greece, Italy comes into effect

ANKARA

A deal drawing maritime borders between Greece and Italy came into effect on Monday, said Italian diplomatic sources.

The two countries exchanged the tools of ratification of the deal during an official visit by Greek Foreign Minister Nikos Dendias to Rome, said Italy’s Foreign Ministry in a statement.

During the meeting with Italian Foreign Minister Luigi Di Maio, cooperation in the fields of energy and economy, and regional developments, particularly concerning Libya and the Eastern Mediterranean, were also addressed, the statement added.

According to Italian official news agency ANSA, Dendias accused Turkey of “violations in the Eastern Mediterranean” and threatening Greece.

Turkey, while seeking to defend its fair share of maritime territory in the Eastern Mediterranean, has decried recent provocative Greek moves such as the militarization of Aegean islands that are demilitarized by a treaty, navigational alerts (Navtex) that violate longstanding pacts, and illegal encroachment on Turkey’s continental shelf.

Turkey, which has the longest continental coastline in the Eastern Mediterranean, has rejected the maritime boundary claims of Greece and the Greek Cypriot administration, stressing that these excessive claims violate the sovereign rights of both Turkey and the Turkish Cypriots.□□□□□□□

Turkish leaders have repeatedly stressed that Ankara is in favor of resolving all outstanding problems in the region —- including maritime disputes -— through international law, good neighborly relations, dialogue, and negotiations.□□□□□□□

Also, the implementation of the EU's National Recovery and Resilience Plan for handling the economic effects of the pandemic, cooperation against irregular migration, and EU's enlargement to the Western Balkans were discussed between the two ministers.

Dendias, on Tuesday, was received by the Vatican's Secretary of State Pietro Paroli.

In the meeting, bilateral and regional developments, ahead of Pope Francis' scheduled visit to Greece on Dec.4-6, were discussed, said the Greek Foreign Ministry.

Greece, a predominantly Orthodox country, has a minority of over 50,000 Catholics, excluding expatriates and migrants, who are mostly concentrated in islands in the Aegean and Ionian Sea.

La Cop26 di Glasgow: le linee guida per i Paesi del

Mediterraneo

Roudi Baroudi: un appuntamento fondamentale per definire strategie politiche economiche efficaci a contrastare il cambiamento climatico.

Il noto esperto a livello internazionale in campo energetico Roudi Baroudi, pone in evidenza una riflessione in concomitanza con l'imminente arrivo della conferenza sul cambiamento climatico delle Nazioni Unite (COP26) che si terrà quest'anno a Glasgow.

Baroudi definisce questo appuntamento memorabile e storico in particolare per i paesi del bacino del Mar Mediterraneo, Italia compresa. Fa osservare che l'aumento delle temperature e la crisi climatica globale è in atto e gli eventi dell'estate 2021 ne sono la testimonianza reale.

Il fenomeno degli incendi, per esempio, si manifesta con dimensioni e intensità insolite rispetto al passato ed anche nel caso di attività dolosa l'aridità circostante e le alte

temperature hanno favorito la propagazione violenta nelle aree colpite generando numerose morti, danni alle proprietà e distruzioni dei terreni agricoli coltivati. In casi come quello della Turchia seguiti da forti inondazioni dovute a piogge torrenziali dopo pochi giorni.

Questi fenomeni non sono più eventi sporadici localizzati in determinate aree, ma costituiscono una vera e propria testimonianza della catastrofe climatica in atto.

Questo ci impone di moltiplicare gli sforzi e sperare di poter invertire la tendenza prima che raggiunga un punto di non ritorno. Se non andremo in questa direzione, continua Baroudi:" la nostra specie dovrà affrontare un futuro sempre più complesso con più incendi, innalzamento del livello del mare, accelerazione dell'acidificazione degli oceani, calo degli stock ittici, tempeste più violente, siccità più lunghe e intense, raccolti compromessi, milioni di rifugiati climatici e fame di massa".

Svariati paesi del Mediterraneo, specialmente appartenenti ad Asia ed Africa hanno già situazioni complesse dal punto di vista territoriale per via della posizione geografica (Sud Italia incluso), inoltre i paesi con meno disponibilità economica fanno ancora molta fatica nella conversione ad impianti con minor impatto ambientale.

Nonostante questo scenario apocalittico, incalza Baroudi, non tutto è perduto. L'Unione europea ha compiuto progressi importanti rispetto alla maggior parte del resto del mondo e sta adottando delle politiche più stringenti sulle emissioni.

Anche gli Stati Uniti stanno intensificando i propri sforzi dopo quattro anni di cambio rotta sotto l'amministrazione Trump. In tutto il mondo, finalmente, si sta avendo maggiore consapevolezza del problema in maniera più trasversale dal pubblico al privato.

Alla COP26, i leader ed i referenti politici dei paesi

partecipanti dovrebbero lavorare costruttivamente ed ascoltare scienziati ed attivisti che chiedono un'azione più rapida ed efficace, inclusa una maggiore assistenza finanziaria per aiutare i paesi meno fortunati a unirsi seriamente alla lotta per il cambiamento climatico.

I programmi che i paesi del Mediterraneo porteranno a Glasgow saranno cruciali perché, nonostante la situazione in atto, la maggior parte di questi stati ha un vantaggio territoriale: ampi spazi e condizioni quasi ideali per le turbine eoliche offshore. Uno studio recente, che utilizza una varietà di tecnologie per elaborare dati previsionali, stima il potenziale combinato di energia eolica di tutti i 23 paesi euro mediterranei (in modo alquanto prudente) a quasi 1,5 milioni di megawatt. Si consideri che l'intera industria nucleare mondiale ha una capacità di circa 400.000 MW, ovvero meno di un terzo di quella che il Mediterraneo potrebbe produrre solamente con impianti eolici. Senza calcolare l'impiego di altre tecnologie: l'idrocinetica sia fluviale che marina (onde e maree), geotermica (on e offshore) e solare (200.000-300.000 MW).

Questa strategia darebbe una propulsione allo sviluppo di molti paesi che oggi hanno uno scarso accesso all'energia elettrica a prezzi accessibili, inoltre l'indotto relativo alle costruzioni degli impianti darebbe nuovi posti di lavoro oltre a molteplici benefici: la possibilità di sostituire i vecchi impianti di produzione più inquinanti, ridurre gradualmente l'importazione di carburanti fossile, rivendere nella rete l'eccesso di produzione energetica ed investire il ricavato in infrastrutture, politiche sociali o ulteriori impianti green.

Uno sviluppo omogeneo delle rinnovabili favorirebbe la transizione progressiva dai combustibili fossili, riducendo le emissioni di carbonio che causano il cambiamento climatico e quindi facendo gli interessi di tutti, ovunque.

Queste proiezioni positive non si avvereranno mai per osmosi. Molti paesi nel Mediterraneo hanno bisogno di assistenza finanziaria e tecnica per mettere in pratica i progetti di conversione. L'accordo di Parigi includeva impegni economici da parte degli stati più ricchi per finanziare i paesi più bisognosi, ma molti governi non hanno rispettato l'accordo. Questo è controproducente, proprio come la mancata distribuzione del vaccino contro il COVID ai paesi del Sud del mondo, un errore imperdonabile che non solo determina la morte di persone innocenti, ma crea anche terreno fertile per nuove varianti del virus. Se la transizione verso un'energia più pulita creasse difficoltà alle popolazioni già svantaggiate, potrebbe venire a mancare il sostegno popolare verso questo percorso, con conseguenze terribili per tutti noi. Se lasciato incontrollato, il cambiamento climatico potrebbe provocare morte e distruzione ovunque creando flussi migratori ingestibili.

Roudi Baroudi conclude esortando la COP26 a produrre nuovi programmi di finanziamento da parte dei paesi ricchi verso quelli più poveri senza creare situazioni di assistenzialismo. Ci sono moltissime risorse a disposizione e c'è poco tempo per agire, quindi gli stati finanziatori non possono permettersi di sbagliare. I prestiti agevolati andranno messi a disposizione per i paesi più virtuosi che garantiranno la finalizzazione dei progetti. L'unico modo per farlo è articolare una strategia coerente per eseguire progetti rilevanti e fattibili con tempi e budget ben definiti. In particolare, i governi regionali devono dissipare i timori giustificati che, i fondi destinati ai progetti per le energie rinnovabili o ad altri strumenti di de carbonizzazione, andranno invece a riempire le tasche di funzionari locali corrotti.

Queste sono le linee guida che deve seguire quest'anno la conferenza di Glasgow. La lotta ai cambiamenti climatici è ampiamente considerata come la sfida più importante che la

nostra specie abbia mai affrontato e la capacità della regione di proteggersi e di esercitare il proprio peso sarà in bilico alla COP26. I paesi che si presentano con piani ben sviluppati per progetti concreti avranno la strada spianata per varie forme di finanziamento. Coloro che non lo faranno saranno inevitabilmente tagliati fuori.

OPEC+ Softens View of Market Tightness

OPEC+ technical experts downgraded their expectations for how tight global oil markets will be this quarter, a week before ministers meet to decide production policy.

The global oil-supply deficit will be just 300,000 barrels a day on average in the fourth quarter, the coalition’s Joint

Technical Committee concluded on Thursday, according to delegates. That's much smaller than the 1.1 million barrel daily shortfall shown in figures initially presented to the panel, which revised its view using fresher data on demand, delegates said.

The Organization of Petroleum Exporting Countries and its partners gather on Nov. 4 to review their plans to gradually restore some more of the production they halted during the pandemic. The revision to the supply and demand figures could give support to the cautious position espoused by cartel-leader Saudi Arabia, which has resisted calls to increase output more quickly.

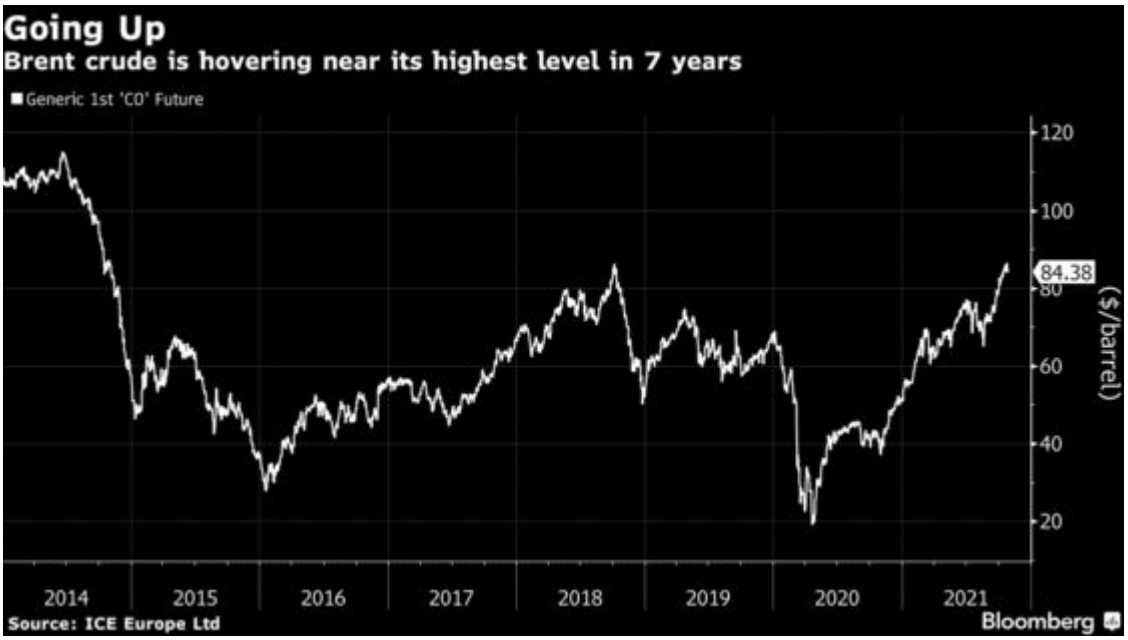
While crude's rally to a seven-year high has spurred the White House to seek additional supplies, the kingdom has warned that demand remains vulnerable to ongoing outbreaks of the coronavirus. Brent futures neared $87 a barrel on Monday, but have since eased by a few dollars.

"We're not out of the doldrums of Covid," Saudi Energy Minister Prince Abdulaziz bin Salman said in a Bloomberg television interview on Oct. 24. "One needs to be careful also of taking things for granted when the crisis has been somewhat contained, but is not necessarily over."

The 23-nation OPEC+ alliance, jointly led by the Saudis and Russia, is reviving shuttered supplies in modest increments of 400,000 barrels a day each month. It's expected to ratify another such hike when ministers convene on-line next week.

The JTC also adopted a more bearish outlook for 2022, because of stronger-than-expected growth in non-OPEC supply. There will be an average surplus of 1.6 million barrels a day next year, the committee concluded, compared with preliminary estimates of 1.3 million a day.

As Oil Races Toward $100, Consumers Tell OPEC+ Enough Is Enough



For the past year, oil consuming countries have become increasingly anxious at crude's resurgence: first to $50 a barrel, then $75 and now to more than $85. And when Vladimir Putin, one of the leaders of the OPEC+ cartel, warned that $100 a barrel was a distinct possibility, the alarm bells really started ringing.

Now, as quickening inflation pushes some central banks towards earlier-than-expected rate of interest hikes, the U.S. India, Japan and different consuming international locations are placing the strongest diplomatic strain on the cartel in years.

Behind closed doorways, an intense marketing campaign is being waged to influence OPEC+ to hurry up its output will increase, in line with a number of diplomats and business insiders

concerned within the contacts. The cartel, which meets just about on Nov. 4 to assessment coverage, is at the moment boosting output at a price of 400,000 barrels a day every month.

The personal efforts come on prime of current public appeals. The Biden administration is more and more alarmed by rising gasoline costs which have reached a 7-year excessive, and has been calling on OPEC+ for weeks to pump extra oil. Japan, the world's fourth-largest oil client, took the uncommon step of including its voice to these calls in late October – a primary for Tokyo since 2008. India, the third-largest client, has additionally requested for extra crude. China has been silent in public, however is equally vocal in personal, diplomats stated.

"We found ourselves in an energy crisis," Amos Hochstein, the highest U.S. power diplomat, stated this week, reflecting a view broadly held view by large oil consuming nations. "Producers should ensure that oil markets and gas markets are balanced."
U.S., Japanese and Indian officers have spoken privately amongst themselves and likewise reached out to different large customers and oil-producing international locations. The calls began round three weeks in the past, however have intensified in current days after costs handed $85 a barrel.

The Japanese "government is currently asking oil-producing countries to increase production in the Middle East," in line with Tsutomu Sugimori, chairman of the Petroleum Association of Japan. "As the petroleum industry, we hope oil-producing countries, including OPEC, will take appropriate steps so as not to hinder a full-fledged recovery of the world's economy."

So far, Saudi Arabia and others have refused to go faster, arguing the month-to-month 400,000 barrel-a-day additions are sufficient to fulfill the urge for food for oil in a world financial system nonetheless nursing the injuries of the pandemic.

“We are not yet out of the woods,” Saudi Energy Minister Prince Abdulaziz bin Salman stated on Bloomberg Television final week. “We need to be careful. The crisis is contained but is not necessarily over.”

The prince’s feedback have been echoed in personal and public by others inside the OPEC+, an alliance of nations accounting for almost two-thirds of the world’s oil provide. Azerbaijan Energy Minister Parviz Shahbazov stated for instance there wasn’t a must rush quicker output will increase. “We have agreed on a very wise and smart program for months to come,” he stated.

Saudi Arabia will most likely get its approach if it pushes to stay with a 400,000 barrel-a-day hike subsequent. For many OPEC+ officers they’re being made a scapegoat for a disaster they didn’t create. The downside, they argue, is just not oil however hovering pure gasoline and coal costs, which in flip have boosted electrical energy costs. Even if the cartel was to go quicker, that wouldn’t resolve these shortages, they stated.

Some within the group who can be open to doing extra, nevertheless, if Saudi Arabia took the lead, a number of OPEC+ delegates stated, asking to not be named earlier than the assembly takes place.

Shifting Mood

For most of this 12 months oil-consuming nations accepted OPEC+ was doing sufficient. But after oil costs rose from $70 to greater than $85 a barrel and crude inventories in industrialized international locations declined sharply over the past couple of months, the temper has shifted. Now officers from consuming international locations consider the oil market is under-supplied.

Many consuming international locations have been reluctant to name extra overtly for additional oil manufacturing simply

earlier than a serious UN local weather change summit in Glasgow, Scotland, referred to as COP26. But even that notion downside is beginning to fade. Jake Sullivan, the U.S. mational safety advisor, defined that Washington might combat in opposition to local weather change and guarantee there's sufficient power to gasoline financial progress within the quick future.

"Our view is that the global recovery should not be imperiled by a mismatch between supply and demand," Sullivan stated on board Air Force One whereas en path to Rome for this week's Group of 20 summit. "And action needs to be taken," he stated, revealing that American diplomats have been in contact with "the largest consuming countries in the world to include China as well as India, Japan, Korea, the Europeans, and others."

President Joe Biden "will have those conversations at the G-20," Sullivan stated. "We will see what comes as a result of those conversations."

Making the most of our energy wealth

Lebanon is presented with the most serious challenges it has faced in the past decade. The economy is struggling, the internal security situation is deteriorating and the country's neighbors pose real threats. In these circumstances the very fact that the country continues to operate can be seen as a success. And amidst everything, there are opportunities – not just in newfound offshore oil and gas but also within the country's ingenious population.

As we head into 2013, what can be done to help the country unite, to overcome its challenges and ultimately to grow? Over the course of this week, eight influential figures will address seven important topics, each suggesting one proposal to help the country move forward. In this article, the World Energy Council's Roudi Baroudi calls for measures to protect the country's offshore oil and gas from corruption.

My one hope for Lebanon in 2013 is that all of its various political leaders and factions take and/or allow the necessary steps for sound and sustainable development of the country's newly promising energy sector.

Why? Because virtually all of the measures involved a) are just common sense; b) require little or no investment of

scarce public resources; and c) happen to be the same changes required to reform, rebuild and genuinely reconcile Lebanon as a whole.

On the overall energy front, the first change would have to be one of mindset. For too long, the sector has been treated by officials, their relatives and their cronies as a cash-cow for themselves rather than as an essential ingredient in building and operating a modern nation-state. From heavy industry to the average family, everyone is affected by the chronic power shortfall. We are more than a decade into the 21st century: doing homework by candlelight should be the stuff of tales told by grandparents, not the current experiences of schoolchildren also learning to use computers. Imagine if those tasked with formulating and implementing energy policy were concerned at last with basic public goals: namely, how best to deliver affordable, reliable and sustainable energy (electricity, LPG "cooking gas", gasoline, diesel oil, fuel oil) to all Lebanese.

In turn, this new attitude could quickly convince Lebanese politicians of the need to follow the law by forming a regulatory authority for electricity, and one for the nascent oil and gas industry as well. This would go hand in hand with a government newly determined to ensure transparency, for instance by disseminating all available general information and specific knowledge about the process(es) by which the future of the oil and gas sector is being planned and managed.

The same enlightened leadership would seek out and adopt the best practices at every stage of its oil and gas venture, starting at the beginning. For example, Lebanon should spend its taxpayers' money wisely by restricting its paid advertising to globally recognized industry publications and highly regarded professional and financial publications like the Economist and the Financial Times, and using the websites of the World Bank and the European Commission – for free – in order to ensure the broadest possible international awareness

of the country’s hydrocarbon potential. The government could then consult the latter two bodies and other reputable institutions to help understand the experiences of other emerging energy powers and avoid making the same costly mistakes.

Thus animated, not just by the need to closely monitor oil and gas developments, but also by its duty to keep the public informed, the Ministry of Energy and Water would secure timely and professional analysis of the seismic studies immediately following their completion – then, based on these findings, publish the next steps approved by the government in order to pursue development of the fields.

In addition, with the seismic results in hand, the ministry could commission a well-known and qualified international consulting firm to prepare a comprehensive energy master-plan encompassing the entire industry and each of its sub-sectors. The electricity subsector component would be based on a long-term, least-cost expansion of generation and transmission which would take into account feasible grid interconnections with other countries in the region, the role of renewable energy, and integration of the environmental and climate change dimensions to demonstrate Lebanon’s strategy for reducing its carbon footprints in its production and use of energy.

When it comes to the implementation of specific projects, the ministry would act diligently to ensure not only that all necessary environmental impact studies were being carried out, but also that the implementation of mitigating measures was done in accordance with both international best practice and the requisite environmental and social guidelines applicable in Lebanon.

The same spirit of respecting the law and pursuing the national interest also would cause Lebanese politicians, whatever their party loyalties, to avidly support the

continued reform of the judiciary, an acceleration of nominations to fill judicial vacancies, and other measures designed to strengthen the rule of law. All of these steps would magnify the impact of the others by helping to ensure that pieces of legislation passed by Lebanon's Parliament are no longer regarded as idle suggestions to be ignored at will.

All of the foregoing – flowing from the original wish that Lebanon's main political actors would stop obstructing oil and gas progress – would ensure a dynamic and profitable energy sector capable of alleviating many national problems, especially poverty. Properly managed, oil and gas would supply ample revenues for decades to come, providing the Lebanese state and Lebanese society with the resources they need to finally end the twin evils of systematic inequality and sectarian resentment.

If we really want our grandchildren not to be doing their homework by candlelight, then real change is needed. With simple steps and more enlightened leadership, we can start to make it happen in 2013.

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What green artificial intelligence needs

Long before the real-world effects of climate change became so abundantly obvious, the data painted a bleak picture – in painful detail – of the scale of the problem. For decades, carefully collected data on weather patterns and sea temperatures were fed into models that analysed, predicted, and explained the effects of human activities on our climate. And now that we know the alarming answer, one of the biggest questions we face in the next few decades is how data-driven approaches can be used to overcome the climate crisis.

Data and technologies like artificial intelligence (AI) are expected to play a very large role. But that will happen only if we make major changes in data management. We will need to move away from the commercial proprietary models that currently predominate in large developed economies. While the digital world might seem like a climate-friendly world (it is better to Zoom to work than to drive there), digital and Internet activity already accounts for around 3.7% of total greenhouse-gas (GHG) emissions, which is about the same as air travel. In the United States, data centres account for around 2% of total electricity use.

The figures for AI are much worse. According to one estimate, the process of training a machine-learning algorithm emits a staggering 626,000lb (284,000kg) of carbon dioxide – five times the lifetime fuel use of the average car, and 60 times more than a transatlantic flight. With the rapid growth of AI, these emissions are expected to rise sharply. And Blockchain, the technology behind Bitcoin, is perhaps the worst offender of all. On its own, Bitcoin mining (the computing process used to verify transactions) leaves a carbon footprint roughly equivalent to that of New Zealand.

Fortunately, there are also many ways that AI can be used to cut CO2 emissions, with the biggest opportunities in buildings, electricity, transport, and farming. The electricity sector, which accounts for around one-third of GHG emissions, advanced the furthest. The relatively small cohort of big companies that dominate the sector have recognised that AI is particularly useful for optimising electricity grids, which have complex inputs – including the intermittent contribution of renewables like wind power – and complex usage patterns. Similarly, one of Google DeepMind's AI projects aims to improve the prediction of wind patterns and thus the usability of wind power, enabling "optimal hourly delivery commitments to the power grid a full day in advance."

Using similar techniques, AI can also help to anticipate vehicle traffic flows or bring greater precision to agricultural management, such as by predicting weather patterns or pest infestations.

But Big Tech itself has been slow to engage seriously with the climate crisis. For example, Apple, under pressure to keep delivering new generations of iPhones or iPads, used to be notoriously uninterested in environmental issues, even though it – like other hardware firms – contributes heavily to the problem of e-waste. Facebook, too, was long silent on the issue, before creating an online Climate Science Information Center late last year. And until the launch of the $10bn Bezos Earth Fund in 2020, Amazon and its leadership also was missing in action. These recent developments are welcome, but what took so long?

Big Tech's belated response reflects the deeper problem with using AI to help the world get to net-zero emissions. There is a wealth of data – the fuel that powers all AI systems – about what is happening in energy grids, buildings, and transportation systems, but it is almost all proprietary and jealously guarded within companies. To make the most of this critical resource – such as by training new generations of AI – these data sets will need to be opened up, standardised, and shared.

Work on this is already underway. The C40 Knowledge Hub offers an interactive dashboard to track global emissions; NGOs like Carbon Tracker use satellite data to map coal emissions; and the Icebreaker One project aims to help investors track the full carbon impact of their decisions. But these initiatives are still small-scale, fragmented, and limited by the data that are available.

Freeing up much more data ultimately will require an act of political will. With local or regional "data commons," AIs could be commissioned to help whole cities or countries cut their emissions. As a widely circulated 2019 paper by David Rolnick of the University of Pennsylvania and 21 other machine-learning experts demonstrates, there is no shortage of ideas for how this technology can be brought to bear.

But that brings us to a second major challenge: Who will own or govern these data and algorithms? Right now, no one has a good, complete answer. Over the next decade, we will need to devise new and different kinds of data trusts to curate and share data in a variety of contexts.

For example, in sectors like transport and energy, public-private partnerships (for example, to gather "smart-meter" data) are probably the best approach, whereas in areas like research, purely public bodies will be more appropriate. The lack of such institutions is one reason why so many "smart-city" projects fail. Whether it is Google's Sidewalk Labs in Toronto or Replica in Portland, they are unable to persuade the public that they are trustworthy.

We will also need new rules of the road. One option is to make data sharing a default condition for securing an operating license. Private entities that provide electricity, oversee 5G networks, use city streets (such as ride-hailing companies), or seek local planning permission would be required to provide relevant data in a suitably standardised, anonymised, and machine-readable form.

These are just a few of the structural changes that are needed to get the tech sector on the right side of the fight against climate change. The failure to mobilise the power of AI

reflects both the dominance of data-harvesting business models and a deep imbalance in our public institutional structures. The European Union, for example, has major financial agencies like the European Investment Bank but no comparable institutions that specialise in orchestrating the flow of data and knowledge. We have the International Monetary Fund and the World Bank, but no equivalent World Data Fund.

This problem is not insoluble. But first, it must be acknowledged and taken seriously. Perhaps then a tiny fraction of the massive financing being channelled into green investments will be directed toward funding the basic data and knowledge plumbing that we so urgently need. — Project Syndicate

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