New US LNG export plans threatened as trade war drags on



(Bloomberg) — Terms of Trade is a daily newsletter that untangles a world embroiled in trade wars. Sign up here.

Liquefied natural gas may have dodged the latest round of Chinese tariffs on U.S. goods, but plans for new American terminals to ship the fuel abroad are under threat as the trade war escalates.

Tellurian Inc. and other developers will probably delay final investment decisions on multibillion-dollar U.S. LNG export projects to 2020 from this year as the tensions complicate negotiations with potential Chinese gas buyers, according to Bank of America Corp. While LNG isn't among the goods Beijing

will target in retaliatory levies that take effect next month, a 25% duty imposed in June still stands, raised from 10% previously.

The trade dispute is intensifying as roughly a dozen companies look to become part of the so-called second wave of U.S. LNG export terminals expected to start up in the next few years. Smaller developers face intense competition from deep-pocketed oil giants like Exxon Mobil Corp., Qatar Petroleum and Royal Dutch Shell Plc, which didn't need to sign long-term contracts before greenlighting their projects. A collapse in global gas prices amid a glut of supply from the U.S. to Australia is also pressuring the industry.

For an investment decision on Tellurian's \$28 billion Driftwood project in Louisiana, "we see delays as likely given current pricing headwinds, no resolution yet on the U.S.-China trade war, and minimal contract announcements in recent months," Bank of America analysts led by Julien Dumoulin-Smith wrote Friday in a note to clients. Joi Lecznar, a spokeswoman for Tellurian, said the company is still targeting a final investment decision this year.

Liquefied Natural Gas Ltd. will also likely push back a final investment decision on its Magnolia terminal in Louisiana to 2020 because of growing competition, and NextDecade Corp. may delay a decision on its Rio Grande project in Texas to next year, according to Cowen Inc. Toni Beck, a spokeswoman for NextDecade, said the company is still planning a final investment decision in 2019. LNG Ltd. declined to comment.

Shares of Tellurian fell as much as 19% Friday, the most since March, after surging earlier in the month. NextDecade dropped as much as 13%, while LNG Ltd. slipped 2.6%.

While China is a fast-growing market for gas, it hasn't imported any U.S. LNG since February, according to vessel tracking data compiled by Bloomberg. The Asian nation has

received 62 American cargoes since 2016, putting it behind South Korea, Mexico and Japan.

Exports of U.S. shale gas have surged since 2016, when Cheniere Energy Inc. started up the Sabine Pass terminal in Louisiana, the first to ship LNG from the lower 48 states. The nation is now the world's third-largest supplier of the fuel, after Australia and Qatar. Though two new U.S. terminals are about to begin exporting and more are under construction, failure to resolve the trade tensions could slow the industry's rapid growth.

"There's increased competition from players that don't really need third-party financing. China definitely didn't make it easier," Cowen analyst Jason Gabelman said in a telephone interview on Thursday.

With cargoes to China effectively halted and deliveries to Europe easing as low prices there reduce the incentive to ship U.S. gas farther afield, South America is soaking up much of the excess supply. So far this year, Argentina, Brazil, Chile and Colombia are snapping up the most U.S. LNG on record.

LNG developers may not be the only gas players hurt by the trade rift. It's also threatening U.S. gas producers relying on exports to ease the shale glut, particularly in the Permian Basin, where prices for the fuel dipped below zero earlier this year as pipeline bottlenecks forced drillers to pay others to take their supply.

For beleaguered U.S. gas drillers, "it's another negative," said John Kilduff, partner at Again Capital LLC, a New York-based hedge fund.

—With assistance from Kevin Varley.

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https://finance.yahoo.com/news/u-lng-export-plans-threatened-090000072.html

West African oil hits sweet spot as shipping upgrades to cleaner fuel



LONDON (Reuters) — African states like Chad and Cameroon are shaping up to be big winners from new rules to cut sulfur emissions from ships, providing just the right type of oil to produce cleaner fuels.

Only around 1% of the world's crude oil exports are heavy and

sweet varieties, ideal for refining into fuel with a maximum 0.5% sulfur content mandated by International Maritime Organization (IMO) rules coming into force worldwide on Jan. 1.

The regulations will tighten limits from the 3.5% sulfur levels allowed now, aiming to improve human health by reducing air pollution.

West African oil, mostly outside the continent's top exporter Nigeria, is set to provide the "Holy Grail" for these IMO 2020 fuels, according to market research firm ClipperData.

Nearly three-quarters of the world's exports of heavy sweet crude — defined as oil with less than 0.5% sulfur content — come from the region, with Angolan Dalia, Chadian Doba Blend and Cameroonian Lokele alone making up most of that portion.

(Graphic: Heavy sweet crude exports link: here(2).png)

"The new environmental regulation starts in January, but preparation has already begun. Refiners need to ready their supply streams and learn how to best prepare for a low sulfur future," said Josh Lowell, senior energy analyst at ClipperData.

"Even though trading houses and refiners are keeping their strategy and timing close to their chest, it's clear certain West African grades really stand to benefit."

Prices for the coveted oil are already soaring.

According to price reporting agency Argus, Doba has vaulted to 75 cents above dated Brent this month from 60 cents below at the beginning of 2018, while Dalia went from a 60 cent discount to a \$2.50 premium over the same period.

By Wednesday, traders said Angolan state oil company Sonangol was offering Dalia at \$3.00 above dated Brent and similar grade Girassol at \$3.20.

"Outages from Iran and Venezuela after U.S. sanctions, ramped up Chinese demand and the IMO rules around the corner — all these factors have been quite supportive for medium to heavy sweet grades," one seller of Angolan crude told Reuters.

Because much of Angola's oil is bound to flow to China per term agreements, interest has mounted in grades trading more freely on the market.

Oil from landlocked Chad, piped south-westward and exported by sea via Cameroon, has increased in volume since new fields came online this year and is being increasingly snapped up in the world's key refining hubs.

"Recent flows of Doba have seen it head to suppliers already providing very low-sulfur fuel oil (VLSF0) to the market," analytics firm Vortexa said.

"Going forward, we expect continued demand from the Fujairah and Rotterdam bunkering and blending hubs, as well as from the U.S. Atlantic coast."

Industry sources say trading giant Vitol bagged all three cargoes of Doba scheduled for export in August, with at least one bound for Fujairah in the United Arab Emirates, where refinery re-tooling is underway ahead of the rules, also known as IMO 2020.

The rule changes are requiring massive investment as refiners cut sulfur content in their output. ExxonMobil completed a \$1 billion unit at its Antwerp refinery last year to upgrade high-sulfur fuel into various types of diesel, including the variant mandated by the IMO 2020 rules.

Germany's Uniper upgraded its plant in Fujairah earlier this year to produce fuel oil with a content of 0.1% to 0.5% sulfur, while Vitol's Fujairah refinery is already producing compliant fuels.

In a sign that the quest is afoot for comparable grades further afield, cargoes of Argentinian Escalante and Brazilian Ostra grades were also bound for Fujairah this month for the first time ever, according to Refinitiv Eikon data.

Likewise, the bunkering hub at Singapore took on more cargoes of heavy sweet Australian crude at record prices since March than in all previous years combined.

https://www.reuters.com/article/us-shipping-imo/west-african-o il-hits-sweet-spot-as-shipping-upgrades-to-cleaner-fuelidUSKCN1VC16C

Humbled Noble Group seeks to rebuild LNG, energy businesses: sources



SINGAPORE (Reuters) — Noble Group Holdings (Noble Holdings) plans to rebuild its liquefied natural gas (LNG) and core energy businesses and develop rare earths as it seeks new life as a niche, Asia-focused commodity trader, sources aware of the matter said.

"We have enough credit lines to expand the LNG business. In our restructuring, we made sure we had ample credit facilities, so we could build the business that we lost," said one senior executive with the company, which took over assets of the under-liquidation Noble Group Ltd (NOBG.SI).

Noble Holdings has now set up a Singapore desk for LNG by hiring a former trader from Australia's Origin Energy (ORG.AX), expanding its four-person LNG team in London, industry sources told Reuters.

"The company has always had an LNG team but activities were wound down for a while and are now starting back up," one of the sources said, declining to be named as the person was not authorized to speak with the media.

Three LNG traders including two co-heads of the team had left Noble in 2016 to join rival Glencore (GLEN.L). It also sold its U.S. gas and power business to another rival, Mercuria.

The new Singapore LNG desk will focus on trading, the source said. The restart of the desk has not been previously reported.

"We've been in a process to prove to the market that Noble is a viable enterprise and can continue to fulfill contracts," the company executive said, using a 3-year trade finance facility of \$700 million secured as part of its restructure.

Noble, once Asia's biggest commodity trader, saw its market value all but wiped out from \$6 billion in February 2015 after Iceberg Research issued reports accusing it of inflating its assets.

To rescue itself, Noble sold billions of dollars of assets, took hefty writedowns and cut hundreds of jobs over the last few years, although it defended its accounting practices.

As Noble faced insolvency protection, shareholders approved a \$3.5 billion debt restructuring deal that completed in December and left them owning just 20 percent, with creditors taking majority control.

Noble Holdings, whose portfolio comprises a trading division dealing in energy coal, LNG, base metals and other products, declined comment. Another division houses its investments in alumina company Jamalco and U.S. based oil and gas producer Harbour Energy and other businesses.

The company is also recruiting for roles including analysts for base metals and coke, and a sales trader to market energy products in Japan, sources said.

Technology metals or rare earths are expected to be a focus area for Noble Holdings, which through its subsidiary took a

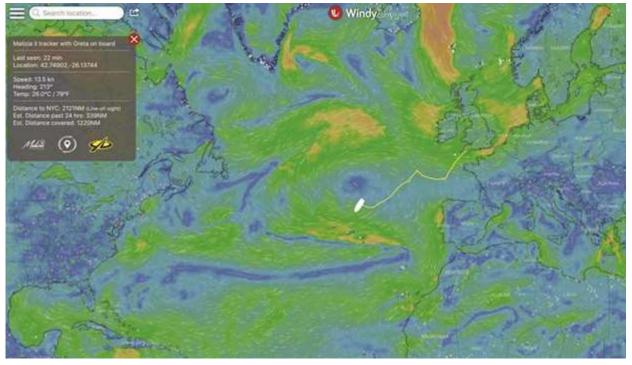
small stake in ambitious Australian rare earths developer Arafura Resources (ARU.AX) this year. The executive said Noble Holdings is eyeing other opportunities in the sector.

In the first half of 2019, Noble Holdings reported a net profit of \$46.4 million. Employing about 280 staff, it has been gradually building up its trading teams by hiring in Singapore and Hong Kong.

In December, Singapore authorities blocked the listing of the restructured company amid a regulatory probe.

https://www.reuters.com/article/us-noble-group-strategy-exclusive/exclusive-humbled-noble-group-seeks-to-rebuild-lng-energy-businesses-sources-idUSKCN1VB0VF

Planetary thinking



By Erik Berglof London

The Swedish climate truthsayer Greta Thunberg has set sail for the United States in a zero-emissions racing yacht to generate waves in a different part of the world — including at next month's United Nations Climate Action Summit in New York. She will arrive in America at a time of growing transatlantic awareness of the threat posed by climate change. But whether shifts in public opinion will translate into concrete action remains to be seen.

Taking sustainability seriously means that we can no longer ignore our planetary boundaries. We need to start designing tools and policies to make all aspects of society more sustainable, before the costs of doing so become so large as to impoverish us. This has increasingly become a task not just for academics who specialise in the field, but for scholars and researchers generally. Sustainability should now be the lens through which we approach all policy-related empirical questions. We need challenge-driven, mission-oriented research, and that calls for a broad multidisciplinary effort. To that end, Michael Grubb of the University of Cambridge, along with two co-authors, made a monumental contribution with his 2014 book Planetary Economics: Energy, Climate Change, and the Three Domains of Sustainable Development. Grubb marshals a broad range of tools from within the economics discipline to chart the way to a sustainable society. That framework will need to be broadened beyond economics, but it provides a useful starting point.

The "three domains" in the book's subtitle concern human behaviour, and how it can be influenced through regulation, traditional market-based pricing, and innovation. Transforming a system requires action in all three areas. For example, better regulation can change human behaviour in a way that reduces prices and spurs innovation, in turn yielding even better regulation and lower costs.

Unfortunately, these three traditional domains within economics have each evolved separately, developing their own languages, evidence, policy recommendations, professional societies, and journals. The goal of a "planetary economics"

is to integrate the domains within a single community, whose sole objective is to build a civilisation that can exist within Earth's boundaries.

This is already happening on the margins. Evolutionary and institutional economists are talking to organisational and behavioural economists about how individual social and economic choices make up complex systems over time. Complexity economists like W Brian Arthur have been studying such questions for decades. And, in parallel, "Solow Residual" economists have drawn on all three domains to make sense of unexplained factors in economic growth.

But this multidisciplinary intermingling is not happening nearly fast enough. What we need is a new field of planetary social science to unite different perspectives, conceptual frameworks, and analytical tools — from political science, sociology, anthropology, and psychology. Just as we cannot ignore the climate science, nor can we ignore the geopolitical and security challenges that will confront a warming planet.

Beyond the participation of individual consumers, private corporations, and civil society, building a sustainable global economy will require active state intervention. Governments urgently must adjust regulatory frameworks, reset market incentives, and expand the hard and soft infrastructure needed for innovation to thrive. Moreover, policymakers should be prepared to take calculated risks, and to recalibrate policies based on feedback.

The sub-discipline that has perhaps come closest to integrating other disciplines, including medicine and environmental science, is public health. In Survival: One Health, One Planet, One Future, George R Lueddeke, the chair of the One Health Education Task Force, shows how public health can be incorporated into a wide range of fields to address individual, population, and ecosystem health.

Another crucial area, of course, is education. In 2015, the international community adopted the UN's 2030 Agenda and the 17 Sustainable Development Goals, one of which (SDG 4) regards high-quality universal education as a key to building

"peaceful, just, and inclusive societies." Yet progress toward this goal, particularly in developing countries, is being hampered by inequality, poverty, financial shortfalls, extremism, and armed conflict.

In advanced economies, education systems need to prepare students for a world that is undergoing fundamental social, economic, and technological change. Young people today will need the skills not just to cope with the ongoing transformation, but to lead it. That means education policy, too, must become challenge-driven. In practical terms, every university should consider creating a compulsory course on systems thinking and cross-disciplinary approaches.

Meanwhile, public- and private-sector organisations around the world are being asked to integrate the SDGs into their daily operations. In Survival, 17 organisations, ranging from the US Centres for Disease Control and Prevention to the World Wildlife Fund, tell Lueddeke how they are adopting a more multidisciplinary approach. But, in general, it is clear that many — if not most — countries have yet to consider the costs of implementing the SDGs fully. Without their active participation, success is unlikely.

In fact, most national finance ministries have not fully bought into the 2030 Agenda. In advocating sustainability, we must not create new vulnerabilities in the form of overindebtedness. Recent experience shows that financial crises can rapidly undermine economic and political achievements, sometimes reversing decades of development or jeopardising future economic growth and stability.

As Greta Thunberg steps onto new shores, those in power should consider their responsibility to all generations. We urgently need to create the conditions for the emergence of a planetary social science that can inform our policy decisions. Ultimately, the planet will carry on. But whether humanity survives will depend on the leadership shown today, and on the systems of governance and scholarship that we build for the future. There is nothing like the prospect of extinction to focus the mind. — Project Syndicate

* Erik Berglof is professor and Director of the Institute of Global Affairs at the London School of Economics and Political Science.

Britain and Italy are now the terrible twins of Europe



By Martin Kettle London

For most of the time since 1945, the politics and government of Britain and Italy have seemed like polar opposites. True, both were important European powers. True too, each had a place among the world's major economies. Even now, Britain and Italy will be among the select group of economically powerful nations whose leaders will gather in the Second Empire splendour of Biarritz's Hotel du Palais this weekend for the latest G7 summit.

In the past, that was where the similarities began to ebb away. In politics, Britain was famously stable while Italy was

infamously not. British governments were domestically strong, while Italian governments were weak and short-lived.

In Britain, leftwing politics was rooted in industrial unionism, while Italy possessed the largest, most modernminded and most alluring communist party in the West. When Britain looked in the mirror it saw the embodiment of probity and practicality, while Italy was all too often synonymous with crime and corruption. While Britain maintained its autonomy by refusing to join the eurozone, Italy enthusiastically embraced its upper mid-table place in the EU and its membership of the single currency was shamelessly engineered.

Today, the political comparison is marked not by divergence but by an increasing convergence. Politically, Britain is becoming more like Italy. Like Italy, Britain is increasingly hard to govern country that makes less and less effort to address its underlying economic, social and political problems. Instead, like Italy, Britain appears to be drifting steadily to the right under skilful populist leaders whom the political institutions are proving unable to control. The collapse of Italy's populist coalition this week is not, at first sight, an event with many British resonances. Both parties in the coalition are recent creations, a far cry from a Conservative party that traces its history deep into the 19th century. The rightwing Lega is the latest iteration of the old anti-migrant Lega Nord, which dated from only 1991, while the Five Star Movement is more recent still, a root-andbranch anti-establishment party. Yet the division that brought down the coalition and led to prime minister Giuseppe Conte's resignation on Tuesday has real echoes of the battles in the Conservative party.

Like Theresa May, Conte was forced to quit because the Lega, under Matteo Salvini, has created a position in which it thinks it can win an election. That is precisely the belief that fires Boris Johnson. Salvini's mix of anti-immigrant braggadocio, confrontational hostility to the EU in general, and to Germany in particular, plus his readiness to borrow and

increase the deficit, and his intention, if elected, to slash taxes, has its reflections in Priti Patel's potentially brutal migration controls, Johnson's sabre-rattling approach to May's withdrawal agreement and the UK government's election-mode fiscal liberality.

None of this is to pretend that Britain and Italy are marching to exactly the same political drum. But if Angela Merkel, who hosted Johnson's first European trip as prime minister on Wednesday, were to be asked privately to nominate her most unwelcome EU leader colleagues, it is a fair bet that Johnson and Salvini would come top of her current list, above even Hungary's Viktor Orbán.

The Italian and British rightwing populist leaders, egged on by Donald Trump's administration in Washington, represent a deliberate challenge to traditional politics in general and to the EU's future in particular. Until recently, the visit of a British prime minister to the German chancellor was a ritual reaffirmation of commitment to stability. Not any more, and not on Wednesday. It is an alarming thought — though it should not be overplayed either — that Wednesday's was almost certainly the most destabilising Anglo-German summit since Munich in 1938.

To add the words "except Italy" to every generalisation about Europe would become tiresome, historian AJP Taylor once said. From now on, he added, the words should therefore be taken as read. Many of us grew up looking at Italy's place in Europe in that way. Cooler and more stylish than us, certainly, but also more corrupt and more unshakeably right wing, Italy seemed to follow its own unique and inimitable route through European modernity.

For much of the postwar era, this way of looking at Italy made some sense. Compared with centralised France and Britain, Italy was a devolved state. Power lay in the cities and the regions, where Rome's writ did not run. Compared with Germany and Scandinavia, Italy was economically protectionist, inefficient and institutionally rotten. While the citizens of most countries in Europe liked to think that they obeyed the

laws, paid their taxes and provided for their poor, many Italians picked and chose which rules to follow, joked about paying their taxes and were often overtly hostile to the impoverished south of the country, as Salvini is today to African and Arab migrants.

For a while, it was possible to believe that, if there were convergence between the two, it would be Italy that managed to change, adapting itself to the liberal democratic capitalist habits of the EU. But that hasn't happened. Italy's exceptionalism is now, if anything, more pronounced. Under Johnson, Britain is accelerating in a similar direction of its own. Since the fall of the Syriza government in Greece, Italy and Brexit Britain together pose the most direct challenges to the EU's legal, budgetary and human rights underpinnings.

For the avoidance of doubt, precise parallels between Italy and Britain, or Salvini and Johnson, should not be pushed too far. There remain many profound differences between the two national conjunctures. But their rightward trajectories, their preoccupation with winning votes on the right not the centre, and their mastery of the black arts of political campaigning in the digital age all come from the same soil. Those who have argued for many years for Britain to become more like Germany or Sweden have to wake up to what is happening. Italy and Britain, an improbable political duo if ever there was one, have become the terrible twins of Europe. — Guardian News and Media

Greece mulling defense deal extension with US



Athens is looking to extend the US-Greece defense agreement, also known as the Souda Agreement, by a year when US Secretary of State Mike Pompeo visits in October or November, it emerged after Wednesday's meeting between Prime Minister Kyriakos Mitsotakis and US House Appropriations Committee Chairwoman Nita Lowey at the Maximos Mansion in Athens.

Meanwhile, the prospect of a meeting next month between Mitsotakis and US President Donald Trump was also reportedly discussed.

Lowey also met with Foreign Minister Nikos Dendias and his deputy Antonis Diamataris for talks that reportedly focused on areas of the US-Greece Strategic Dialogue and efforts to promote common interests in the Eastern Mediterranean region.

In a tweet, US Ambassador to Greece Geoffrey Pyatt, who was at both meetings, said the discussion with Dendias focused on "progress in all areas of the US-Greece Strategic Dialogue and the commitment of both our governments to do even more to promote common interests in the EastMed and strengthen Greece as regional pillar of stability."

As for the meeting between Mitsotakis and Trump, this could reportedly take place on the sidelines of the United Nations General Assembly in New York in late September. Pyatt reportedly said that the timing is right for such a meeting.

Meanwhile, Mitsotakis begins his tour of European capitals on Friday, starting in Paris for talks with French President Emmanuel Macron.

The prime minister is expected to tout the momentum of New Democracy's election victory, which has been reflected in the positive reaction of markets, as well as the notion that his government is a pillar of stability in the European south.

The bottom line is to restore confidence in Greece and to convey the message that it is no longer a "problematic" country in Europe, but one that is ready to undertake and support EU initiatives — among them Macron's green agenda and the strengthening of European defense cooperation.

By getting this message across, Mitsotakis aims to pave the way for discussions on the primary surpluses Greece has agreed to achieve.

He is expected to provide reassurances that the targets for 2019 and 2020 will be met, but also that his reform package to stimulate the Greek economy will allow for a new outlook as of 2021.

Turkish navtex sparks fresh tension with Cyprus



Tensions are expected to heighten again in the Eastern Mediterranean after Turkey issued another navigational telex (Navtex) Wednesday reserving areas within Cyprus' exclusive economic zone (EEZ) for renewed exploratory activities by its Barbaros seismic vessel.

Ankara reserved an area spanning blocks 2, 9 and 13 of Cyprus' EEZ which it claims belong to the Turkish Cypriots in the occupied north of the island.

Cyprus has already licensed blocks 2 and 9 to South Korean energy company Kogas and Italy's Eni while France's Total was recently also given rights to these blocks.

Moreover, Paris has signaled its willingness to send frigates to the region to safeguard its interests. As yet no license has been awarded for Block 13.

Cyprus reacted to Ankara's move by issuing its own navtex calling on the Barbaros to refrain from illegal activity within its territorial waters.

Meanwhile, Turkish F-16 jets conducted two overflights

Wednesday over the Aegean islet of Agathonisi and one over Farmakonisi.

US Exim Bank seeks vote on \$5bn loan to Mozambique LNG project



The US Export-Import (Exim) Bank said on Thursday its board intends to vote on a \$5-billion direct loan for the development of a liquefied natural gas (LNG) project in Mozambique, the bank's biggest export financing deal in years.

The government export lender said it has notified the US Congress of the transaction, which will be ready for a final board vote in 35 days.

If approved, the transaction would support US exports of goods and services for the engineering, procurement and construction of the onshore LNG plant and related facilities on the Afungi Peninsula in northern Mozambique.

Exim said over the five-year construction period the financing could support 16 400 American jobs among suppliers in Texas, Pennsylvania, Georgia, New York, Tennessee, Florida and the District of Columbia.

It estimated interest and fee income from the transaction of more than \$600-million from a consortium led by Occidental Petroleum Corp.'s recently acquired Anadarko Petroleum Co.

US exports to supply the project, however, face competition from financing offered by foreign export credit agencies.

The project would be the single biggest financing deal since Exim's full lending powers were restored in May with the confirmation of three new board members. That ended a drought of nearly four years in which the bank could not approve loans and guarantees of more than \$10-million due to a protracted fight in Congress over its future.

The bank, seen by some conservatives as providing taxpayer-backed "corporate welfare" and "crony capitalism," was unable to finance major infrastructure projects like the Mozambique LNG plant and commercial aircraft built by Boeing. It needs Congress to renew its charter before September 30 to keep operating.

US President **Donald Trump**'s administration views the bank as a tool to boost US exports in an increasingly competitive trade environment.

"This critical project is not only a win for American companies and workers, supporting over 10 000 jobs in the US, but also for the people of Mozambique as well," US Commerce Secretary **Wilbur Ross** said in a statement.

Exim said the Mozambique LNG project would begin to develop the Rovuma Basin, one of he world's most extensive untapped reserves of natural gas, with a major impact on Mozambique's economy.

Tesla in talks with LG Chem on battery supply in China



Reuters Seoul/Shanghai

US electric vehicle maker Tesla Inc is in advanced talks with South Korea's LG Chem Ltd to source batteries for vehicles to be made in its Shanghai plant, a person familiar with the matter said.

The move represents a push by Tesla to diversify sources of the key component for its electric vehicles from its exclusive supplier, Japan's Panasonic Corp.

Another source said LG Chem agreed to supply batteries for Tesla's China plant, without elaborating.

LG Chem is expanding its China battery capacities and modifying some manufacturing facilities in Nanjing to make a different type of auto battery, according to the first source. The company currently mainly makes pouch-type auto batteries, but as a major battery maker, it is not hard for it to revamp facilities to make cylindrical auto batteries that Tesla uses, the source and separate people familiar with the matter added. The source said Tesla is still likely to use Panasonic batteries in the initial phase of production and source from other suppliers including local names in the future. A third person said Tesla may source batteries from CATL later, as the Chinese battery maker does not have much experience in making cylindrical batteries used by Tesla.

All of the sources declined to be identified because of the confidentiality of the deal.

Tesla did not immediately respond to Reuters' request for comment.

LG Chem and CATL declined to comment. Tesla chief executive Elon Musk said in November the US company would manufacture all its battery modules and packs at the Shanghai factory, which will make Model 3 and Model Y cars, and planned to diversify its sources.

LG Chem has signed battery material supply agreements with China's Huayou and Tianqi, as the South Korean battery maker is trying to expand its foothold in China.

It said it would set up a joint venture with a unit of China's Geely on batteries.

China has scrapped its so-called "white list" of recommended battery suppliers, which did not include foreign firms when it was first published in 2015 to spur a domestic battery sector, a decision foreign companies said could open up the world's biggest market for electric vehicle batteries.

Panasonic has said it could supply batteries to Tesla's Chinese plant either from Japan, the United States or China

The real obstacle to climate action



By Kemal Dervis And Sebastian Strauss/Washington, DC

Climate change is probably the biggest threat facing humanity today. According to the United Nations Intergovernmental Panel on Climate Change, the world must cut its carbon dioxide emissions to net zero by 2050 in order to prevent global warming of 1.5°C, or likely more, above pre-industrial levels in this century. The challenge calls for drastic immediate action, because the infrastructure investments the world makes today will determine the carbon intensity of its growth path for decades.

Yet despite widespread recognition of the size and urgency of the climate challenge, emissions continue to increase, land is "under growing human pressure," and the Amazon has never been more threatened.

Much of the early climate debate revolved around whether the

world should take drastic immediate action to mitigate global warming, or adopt a more gradual approach. The gradualists argued with some success that drastic immediate measures would impose heavy short-term economic costs.

But three recent developments have altered the course of the debate. First, the various feedback loops triggered by global warming now threaten to cause greater and more imminent damage than previously thought.

Second, the cost of clean energy has declined much faster than previously assumed. According to the International Renewable Energy Agency, renewable-energy sources are already the cheapest power option in much of the world, with solar and wind technologies leading the way. Moreover, the cost of "greening" could fall even faster in the future through learning-by-doing. This is also likely to be the case in urban design, transportation, agriculture, and forest protection, all of which need to undergo a green transition.

Finally, the immediate negative externalities of the world's current high-carbon growth model, such as air pollution, are now better recognised as adding to the short-term cost of climate change. Reducing them would therefore partially offset the upfront cost of mitigation.

These shifts greatly strengthen the case for pursuing much faster and bolder forms of mitigation. As the 2014 New Climate Economy Report concluded, there need not be a tradeoff between growth and forceful climate action, even in the short term.

So, why is more not being done? For starters, although the green transition may have a small net aggregate cost, it is certain to generate losers (as well as winners). And as is often the case with such transitions (for example with trade liberalisation), the gains will be spread across large parts of the population, while the losses will be more concentrated on specific groups, making them more visible and politically disruptive.

When advocating policies that result in aggregate welfare gains, economists often fail to give enough consideration to their likely distributional impact. Instead, they often

implicitly assume that the winners will compensate the losers. But if such compensation does not actually occur, the losers are left worse off and can often block change, as the "yellow vest" protesters (gilets jaunes) have done since 2018, when the French government proposed a new climate-friendly fuel tax.

The de facto coalition that is currently resisting climate action consists of the vested interests that own carbon-intensive assets (such as oil companies) and the mostly lower-income groups that would be short-term losers in a rapid transition. Compensating the latter and isolating the former is politically essential.

Unfortunately, it is not clear whether, say, the young German urbanites who voted for the Greens in the European Parliament elections this year would happily compensate the older auto workers — let alone Polish coal miners — who would suffer in a rapid transition. And complicating matters further, the groups at risk of short-term losses from green policies are often bearing the brunt of digitisation and globalisation, too.

Another hurdle to bold action is that climate protection constitutes an "additive" global public good, because there is only one atmosphere and the emissions of any one country add to global greenhouse-gas concentrations as much as those of any other country. This causes the free-rider problem of "carbon leakage." Europe may well reduce its emissions in line with (or even beyond) the aims of the 2015 Paris climate agreement, but if India and China's emissions keep increasing — or if Brazil allows the Amazon to collapse — those efforts will have been futile.

Clearly, the whole world would benefit from a co-operative solution. But without a binding international agreement or a supranational authority that can impose global green policies, few countries have an incentive to engage in sufficient mitigation efforts — leaving everyone worse off.

One possible measure to deter free riding is a carbon border tax, as recently proposed by the incoming president of the European Commission, Ursula von der Leyen. Governments that

tax carbon could levy a border tax equal to the implicit subsidy given to their "dirty" exports by governments who do not have such a tax. This would effectively impose a kind of shadow carbon price on free riders, prompting them to produce fewer carbon-intensive goods.

Provided that it is non-discriminatory, such border pricing would enhance global welfare and be compatible with World Trade Organisation rules. But calculating the appropriate tax would be very difficult in practice. It would, for example, necessitate calculating the tax equivalent of regulatory ceilings. The measure may also invite countries like the United States to retaliate with distortive measures, making it somewhat perilous. Moreover, the tax would likely have regressive distributional consequences, hurting poor countries the most. A better strategy, then, is to increase green investment in developing countries substantially, with multilateral development banks catalysing private financing in addition to their own funds.

Distributional issues — not aggregate costs — are the real obstacle to the ambitious policies needed to avert possibly catastrophic climate change. Similar challenges, at both the national and international level, also affect the transitions entailed by the so-called Fourth Industrial Revolution.

Neo-nationalist populists are already feeding on the fears created by disruptive change. Ambitious carbonisation could further fan these flames if it is not accompanied by social policies that effectively ease the process. Progressives everywhere must therefore unite in support not only of a rapid green transition, but of one that is politically feasible and desirable for the vast majority of citizens — even in the short run. — Project Syndicate

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