



# Breaking Germany's coal addiction

By Johan Rockstrom And Owen Gaffney /Berlin

Germany is about to break its coal addiction. Last year, the government created a 28-member “coal commission” – comprising scientists, politicians, environmental campaigners, trade unions, and utilities representatives – with the unenviable mandate of deciding when the country would get clean. Balancing pragmatic considerations with recognition of the reality of climate change, the commission has now set 2038 as the deadline for reaching zero coal, with the withdrawal beginning immediately.

The Wall Street Journal calls it the “world’s dumbest energy policy.” In fact, Germany’s shift is vital and long overdue. The real question is whether it will be enough to support meaningful progress in the global effort to mitigate climate change.

It is scientifically well established that if the world is to keep the average increase in global temperature “well below”

2C relative to pre-industrial levels – the “safe” limit enshrined in the 2015 Paris climate agreement – no more than another 500-800bn tonnes of carbon dioxide can be emitted. On current trends, this would take just 12-20 years.

Instead, the world needs to follow a trajectory called the “carbon law,” which requires reducing CO2 emissions by half each decade until, 30-40 years from now, we have achieved a carbon-free global economy. Growing evidence shows that adhering to the carbon law is technologically feasible and economically attractive. In this process, coal – the most polluting energy source – must be the first to go, exiting the global energy mix entirely by 2030-2035.

This will be particularly challenging for Germany, which, despite its reputation as a climate leader, has long had a dirty secret: the most polluting type of coal – lignite – remains the country’s single biggest source of electricity. Although renewables have penetrated 40% of the electricity market, coal still accounts for 38%.

A decision to phase out nuclear power, spurred by the 2011 Fukushima disaster, left Germany with a significant energy gap, filled partly by coal. Germany has built ten new coal-fired power plants since 2011, bringing its total to about 120. As a result, it is set to miss its 2020 emissions goal (a 40% reduction, compared to 1990), and, barring decisive action, it could miss its 2030 target (a 55% reduction) as well.

The coal commission’s plan – which still needs to be turned into legislation by Chancellor Angela Merkel and the Bundestag – would reduce Germany’s coal emissions from 42 gigawatts today to 30 GW by 2022, and to 17 GW by 2030. This is a cut of more than 50% over one decade, making it even more ambitious than the carbon law trajectory – but only if coal is not replaced by natural gas. Indeed, if the coal phase-out is going to work, it will need to happen alongside a rising carbon price.

In any case, 2038 is still a long way off. A sluggish exit from coal by Germany – the world’s fourth-largest economy –

could send a signal to other coal-dependent European Union countries that there is no rush. Countries like Hungary, Poland, and the Baltic states may even pursue a coal renaissance. This would further weaken the EU's climate leadership and its ability to reform its carbon-trading system. Confident that coal will continue to be burned in the long term, investors would keep the money flowing.

Moreover, because Germany's influence extends far beyond Europe, a weak stance on coal could trigger a domino effect – what we call the “road to hell” scenario. US President Donald Trump might cite Germany's slow action as proof of its double standards on climate change – and even attempt to use it to justify, however weakly, his effort to revive the US coal industry. Brazilian President Jair Bolsonaro might do likewise, as he distances his country from the Paris climate agreement.

Australia, where climate politics are tense and an election is pending, could also be tempted to increase coal use. China and India, too, could become more inclined to expand coal-fired power plants. With that, meeting the 2C threshold would become impossible, and the devastation of Hothouse Earth would potentially become inevitable.

But there is good reason to think this will not happen. Even if the 2038 deadline is not ambitious enough, the immediate pace of the coal phase-out follows the carbon law. If Germany implements what it has agreed on paper, one should not underestimate the symbolic value of a coal-dependent industrialised economy setting a clear end date for coal, and locking itself to a quantified phase-out plan. This, together with definitive shorter-term targets, would signal to investors that they can confidently invest in alternative energy sources.

This dynamic could well accelerate the timeline for Germany's exit from coal. A clause in the agreement creates the potential for an earlier exit from coal. After all, the best-performing major commodities in 2018 were European emissions allowances.

Designed to make coal less competitive, those allowances are expected to double in price in the next year or two. Hedge funds and other investors have already taken notice.

A deadline on German coal use would reinforce confidence that the value of allowances will keep increasing, creating a positive feedback loop of rising prices. Add to that a precipitous drop in the costs of wind and solar power, and it is not unrealistic to imagine that the markets will bring about a much faster departure from coal than any policy would.

Sometime in the 2020s, it will become cheaper to build new renewable systems than to continue running existing fossil-fuel plants in parts of Europe. At that point, there will be little chance of stopping the fastest energy transition in history. – Project Syndicate

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## **Thirst for oil threatens a pristine Arctic refuge**

Trump administration is hurriedly clearing way for exploration It is the last great stretch of nothingness in the United States, a vast landscape of mosses, sedges and shrubs that is home to migrating caribou and the winter dens of polar bears. But the Arctic National Wildlife Refuge – a federally protected place of austere beauty that during a recent flyover was painted white by heavy snowfall – is on the cusp of major change. The biggest untapped onshore trove of oil in North America is believed to lie beneath the refuge's coastal plain along the Beaufort Sea. For more than a generation, opposition to drilling has left the refuge largely unscathed, but now the Trump administration, working with Republicans in Congress and an influential and wealthy Alaska Native corporation, is clearing the way for oil exploration along the coast.

Decades of protections are unwinding with extraordinary speed as Republicans move to lock in drilling opportunities before the 2020 presidential election, according to interviews with over three dozen people and a review of internal government deliberations and federal documents. To that end, the Trump administration is on pace to finish an environmental impact assessment in half the usual time. An even shorter evaluation of the consequences of seismic testing is nearing completion. Within months, trucks weighing up to 90,000 pounds could be conducting the tests across the tundra as they try to pinpoint oil reserves. The fate of the refuge's coastal plain is in the hands of Ryan Zinke, the interior secretary, who has appointed top deputies with deep professional and political ties to Alaska to oversee its development. Congressional approval to open the area to oil exploration was inserted in tax overhaul legislation last December under the guise of generating revenue for the federal government, and by next year, the Interior Department expects to begin selling the first drilling leases.

The hurried timeline has created friction, with some specialists in the federal government concerned that environmental risks are being played down or ignored. And many outside scientists and environmentalists share the concerns, warning that plans for seismic testing and eventual drilling could harass, injure or kill polar bears and other wildlife. "It seems as though the administration is in a headlong rush to put the drill bit into the coastal plain," said David J. Hayes, a deputy interior secretary in the Obama and Clinton administrations. "Given the virgin territory of the refuge, with the unique wildlife dependency issues, I don't know how you do this in an artificially fast and truncated fashion." Mr. Zinke's Alaska-friendly appointees, who have long pushed for oil exploration in the coastal plain, say the fears are overstated. They point out that years ago, Congress left open the eventual possibility of allowing development there. Exploration is in the best interest of Alaskans, they say. "I

feel like there is a lot of expectations, hopes and dreams from people who I know and love that are riding on this," said Joe Balash, one of the appointees, who has worked in Alaskan political circles for two decades and now oversees the Bureau of Land Management.

An Alaska Native company, Arctic Slope Regional Corp., has been a major force behind the push and stands to enjoy a windfall if drilling proceeds. The corporation, which has been awarded more than \$7.5 billion in federal contracts in the past 10 years, expanded its lobbying under the Trump administration, records show, and Mr. Zinke appointed one of its executives to a top post. Known as A.S.R.C., it is among 13 regional businesses created in the 1970s to foster economic development among Alaska's indigenous population. It has myriad financial interests in the state's oil-rich North Slope region, which includes the refuge's coastal plain and Prudhoe Bay, home to one of the largest oil fields in North America. And it has been a key financial backer of Senator Lisa Murkowski, Republican of Alaska, who has been the drilling plan's biggest champion in Congress. Many Natives on the North Slope – including Inupiat who live in Kaktovik, the village inside the refuge – support oil development.

But a different Native group that lives south of the refuge, the Gwich'in, fears oil development would disturb the migration of porcupine caribou, animals it has hunted for centuries and still relies on for much of its food. Ms. Murkowski declined to comment, as did Alaska's other elected representatives in Washington. Mr. Zinke also declined to comment. But he told a Senate committee in March that he was "very bullish on the Arctic." A HISTORY OF FRUSTRATION The struggle over oil exploration in the Arctic National Wildlife Refuge has its roots 50 years ago in the discovery of petroleum reserves around Prudhoe Bay, west of the refuge. In 1980, when Congress voted to conserve much of the federal land in Alaska, drilling advocates pushed for oil and gas

development on the coastal plain. Then, as now, the move was supported by many Alaskans, who generally favor oil development, in part because some of the revenue is returned to them in the form of an annual dividend. The advocates were unsuccessful but had an opening: The 1980 bill allowed Congress to authorize oil and gas development at a later date. The 1.5-million-acre coastal plain, identified in Section 1002 of the legislation, has been known since as the 1002 Area. Despite the close ties, industry officials insist they are not getting a free pass.

"I'm not expecting a rubber stamp," said Kara Moriarty, the chief executive of the Alaska Oil and Gas Association, who has a framed photo with Mr. Zinke in her Anchorage office. "I'm expecting a very diligent and thorough process." But those who oppose drilling in the refuge, including many Democrats in Washington, suspect the Department of Interior is not being so diligent. Representative Raúl M. Grijalva, Democrat of Arizona, who will become chairman of the House Natural Resources Committee next month, said he would probably call a hearing about the Arctic development with the goal of slowing it down. "We can make sure that corners are not being cut," said Mr. Grijalva, who last week called for Mr. Zinke to resign because of ethics allegations against him, prompting a personal attack from the secretary. Scores of environmental organizations are also watching closely, ready to sue whenever an opportunity arises. "There's going to be damage, going to be long-lasting effects from what they do," said Geoffrey L. Haskett, president of the National Wildlife Refuge Association and a former Alaska regional director with the United States Fish and Wildlife Service, the managing agency of the refuge. "I just can't imagine that what we're going to see is going to be adequate," he added, referring to the environmental evaluations.

The decision to conduct an environmental assessment of the seismic testing proposal, a less rigorous review than a full



environmental impact statement, was especially troubling for many drilling opponents. They point to damage done to the tundra by seismic testing in the mid-1980s; some vehicle tracks from that work remain visible more than 30 years later. And they worry about the disruption of polar bears. Steven C. Amstrup, chief scientist with Polar Bears International, a conservation group, said the coastal plain in the refuge "is the most important maternal denning area" for the southern Beaufort Sea population. Dr. Amstrup, a former United States Geological Survey zoologist who has studied the bears for three decades, said his research had shown that the heat sensing technology used to detect dens would probably miss about half the dens, which would probably be disturbed during the seismic work. Jeff Hastings, chairman of SAExploration, part of the seismic-testing joint venture, said improved technology would prevent damage to the tundra this time around. He also said his company was working with the Interior Department on ways to protect the bears. CORPORATE MUSCLE When Mr. Zinke went in search of influential Alaskans to fill top posts in his Interior Department, he turned to people who had worked for elected officials in the state and for past Republican administrations in Washington. He also looked to A.S.R.C., a multibillion-dollar business that stands to gain the most financially if drilling commences in the 1002 Area.

Tara Sweeney, its former executive vice president for external affairs, is now assistant secretary for Indian affairs. With nearly \$2.7 billion in annual revenue, A.S.R.C. is the largest of the Alaska Native corporations and ranks 169th on Forbes' nationwide list of private companies by revenue. Still, A.S.R.C. has little name recognition outside Alaska, allowing it to attract relatively little attention while lobbying. But there are deep disagreements over A.S.R.C.'s role in the drilling campaign, and whether its corporate interests align with those of Native families who have lived off the land for generations. For decades, the Gwich'in have led the Native opposition to drilling, arguing that opening the 1002 Area

could affect the porcupine caribou, a major source of food and a spiritual touchstone. “We are asking to continue to live the way we always have,” said Bernadette Demientieff, the executive director of the Gwich’in Steering Committee, which opposes oil development in the refuge and recently joined with the Sierra Club to try to persuade banks to hold back financing for exploration. Matthew Rexford, the tribal administrator of Kaktovik and the president of Kaktovik Inupiat Group, said the drilling could be done responsibly and should go forward. Unlike the Gwich’in, Rexford’s village stands to benefit financially. “I have given this a lot of thought, and our community has given this a lot of thought,” he said. “We do feel it can be done in an environmentally safe and sound manner.”

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Luca D'Urbino

**The truth about big oil and**

# climate change

IN AMERICA, THE world's largest economy and its second biggest polluter, climate change is becoming hard to ignore. Extreme weather has grown more frequent. In November wildfires scorched California; last week Chicago was colder than parts of Mars. Scientists are sounding the alarm more urgently and people have noticed—73% of Americans polled by Yale University late last year said that climate change is real. The left of the Democratic Party wants to put a “Green New Deal” at the heart of the election in 2020. As expectations shift, the private sector is showing signs of adapting. Last year around 20 coal mines shut. Fund managers are prodding firms to become greener. Warren Buffett, no sucker for fads, is staking \$30bn on clean energy and Elon Musk plans to fill America's highways with electric cars.

Yet amid the clamour is a single, jarring truth. Demand for oil is rising and the energy industry, in America and globally, is planning multi-trillion-dollar investments to satisfy it. No firm embodies this strategy better than ExxonMobil, the giant that rivals admire and green activists love to hate. As our briefing explains, it plans to pump 25% more oil and gas in 2025 than in 2017. If the rest of the industry pursues even modest growth, the consequence for the climate could be disastrous.

ExxonMobil shows that the market cannot solve climate change by itself. Muscular government action is needed. Contrary to the fears of many Republicans (and hopes of some Democrats), that need not involve a bloated role for the state.

For much of the 20th century, the five oil majors—Chevron, ExxonMobil, Royal Dutch Shell, BP and Total—had more clout than some small countries. Although the majors' power has waned, they still account for 10% of global oil and gas output and 16% of upstream investment. They set the tone for smaller,

privately owned energy firms (which control another quarter of investment). And millions of pensioners and other savers rely on their profits. Of the 20 firms paying the biggest dividends in Europe and America, four are majors.

In 2000 BP promised to go “beyond petroleum” and, on the face of it, the majors have indeed changed. All say that they support the Paris agreement to limit climate change and all are investing in renewables such as solar. Shell recently said that it would curb emissions from its products. Yet ultimately you should judge companies by what they do, not what they say.

According to ExxonMobil, global oil and gas demand will rise by 13% by 2030. All of the majors, not just ExxonMobil, are expected to expand their output. Far from mothballing all their gasfields and gushers, the industry is investing in upstream projects from Texan shale to high-tech deep-water wells. Oil companies, directly and through trade groups, lobby against measures that would limit emissions. The trouble is that, according to an assessment by the IPCC, an intergovernmental climate-science body, oil and gas production needs to fall by about 20% by 2030 and by about 55% by 2050, in order to stop the Earth’s temperature rising by more than 1.5°C above its pre-industrial level.

It would be wrong to conclude that the energy firms must therefore be evil. They are responding to incentives set by society. The financial returns from oil are higher than those from renewables. For now, worldwide demand for oil is growing by 1-2% a year, similar to the average over the past five decades—and the typical major derives a minority of its stockmarket value from profits it will make after 2030. However much the majors are vilified by climate warriors, many of whom drive cars and take planes, it is not just legal for them to maximise profits, it is also a requirement that shareholders can enforce.

Some hope that the oil companies will gradually head in a new

direction, but that looks optimistic. It would be rash to rely on brilliant innovations to save the day. Global investment in renewables, at \$300bn a year, is dwarfed by what is being committed to fossil fuels. Even in the car industry, where scores of electric models are being launched, around 85% of vehicles are still expected to use internal-combustion engines in 2030.

So, too, the boom in ethical investing. Funds with \$32trn of assets have joined to put pressure on the world's biggest emitters. Fund managers, facing a collapse in their traditional business, are glad to sell green products which, helpfully, come with higher fees. But few big investment groups have dumped the shares of big energy firms. Despite much publicity, oil companies' recent commitments to green investors remain modest.

And do not expect much from the courts. Lawyers are bringing waves of actions accusing oil firms of everything from misleading the public to being liable for rising sea levels. Some think oil firms will suffer the same fate as tobacco firms, which faced huge settlements in the 1990s. They forget that big tobacco is still in business. In June a federal judge in California ruled that climate change was a matter for Congress and diplomacy, not judges.

The next 15 years will be critical for climate change. If innovators, investors, the courts and corporate self-interest cannot curb fossil fuels, then the burden must fall on the political system. In 2017 America said it would withdraw from the Paris agreement and the Trump administration has tried to resurrect the coal industry. Even so, climate could yet enter the political mainstream and win cross-party appeal. Polls suggest that moderate and younger Republicans care. A recent pledge by dozens of prominent economists spanned the partisan divide.

The key will be to show centrist voters that cutting emissions

is practical and will not leave them much worse off. Although the Democrats' emerging Green New Deal raises awareness, it almost certainly fails this test as it is based on a massive expansion of government spending and central planning (see Free exchange). The best policy, in America and beyond, is to tax carbon emissions, which ExxonMobil backs. The *gilets jaunes* in France show how hard that will be. Work will be needed on designing policies that can command popular support by giving the cash raised back to the public in the form of offsetting tax cuts. The fossil-fuel industry would get smaller, government would not get bigger and businesses would be free to adapt as they see fit—including, even, ExxonMobil.

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# ExxonMobil's drilling in context

As ExxonMobil approaches the end its drilling campaign, rumours about the results abounded this week as have the extravagance of some of the claims. So let's put what we know in context. What I present below is based on information, seismic data, satellite data, even hearsay, but we all need to be mindful that so far ExxonMobil has not made any announcements.

It appears that Delphine has not struck commercial quantities of gas, but it is likely to have encountered gas presence. Even though disappointing, given expectations, this does not mean that there is no gas in the reservoir. This can only be ascertained by evaluating the results from Delphine and potentially carrying out further drilling in the vicinity of this target. Seismic and satellite data show a strong potential for a substantial gas reservoir at this location. We need to wait and see what ExxonMobil announces.

The positive news is that there appears to be a gas discovery at Glafcos, but there are no indications of quantities, commerciality, etc. In fact, it appears that the target was penetrated only recently and there is some way to go before drilling of the complete reservoir column is completed. This will probably happen over the next week or so. Just to remind ourselves, the gas-bearing column at Zohr was about 630m deep. ExxonMobil will need to completely penetrate the reservoir in order to obtain the data required to evaluate its gas potential.

Despite articles to that effect, it is not likely that drilling has encountered oil. ExxonMobil's programme was not only designed on the basis of drilling for gas, but oil deposits, if any, would be at much greater depths, over 6000m

below seabed level, in comparison to gas reservoirs which are at about 3500-4000m below seabed level. In any case, gas reservoirs overlay oil. Oil does not come into it at present.

What's next

On completion of this drilling campaign ExxonMobil will probably spent time evaluating the results before it makes any announcements. This may take a few weeks, with any results expected to be released towards the end of February, and I will not be surprised if this is delayed to early March. It all depends on the complexity of the results from both Delphine and Glafcos.

As is usual with frontier type drilling, which is the case here, ExxonMobil will then follow completion of this drilling phase with evaluation of the results, and any other data available in and around block 10, and recalibration of its geological model before deciding how to proceed next. Certainly block 10 contains other potential drilling targets, not just Delphine and Glafcos. There is the much bigger Anthea and more. There may also be wider interest around block 10.

What is encouraging for Cyprus is that in ExxonMobil, Shell, Total and ENI we have some of the biggest international oil companies (IOCs) exploring in our EEZ. We also have Noble Energy that started this back in 2008. Moreover these companies cooperate with each other and share information they gain from their exploration activities, seismic campaigns and drilling, and geological models, thus maximising benefits and potential value of this data.

I hope that this process will show sufficiently encouraging results for ExxonMobil to continue with plans for further drilling at some future date. But make no mistake. With ExxonMobil's global exploration interests, and very possibly other more promising areas getting a higher priority, this process may take time, even years, not just a few months.



But there are also risks that we should be aware of. Should the results be disappointing and ExxonMobil decides to abandon its interest in block 10, this could have knock-on effects on the future of further exploration in Cyprus' EEZ. Based on seismic data, block 10 is the most promising of all licensed blocks. Disappointing results would reduce the likelihood of future significant discoveries and thus impact interest. However, based on what we know so far, I would like to hope that this is an unlikely outcome.

## Timing

In one of the articles published recently, it was claimed that the recent two-month extension to the liquefied natural gas (LNG) import terminal tender by the natural gas public company (Defa) is linked to a hope for gas discoveries at Glafcos and Delphine. The tender specifies that the LNG terminal should become operational within 2020, in order to avoid serious penalties from the EU due to the use of heavy fuel oil and the high levels of carbon emissions.

Even if a substantial discovery were to be made by ExxonMobil, it could not impact timing of the LNG import terminal.

Such a discovery would need to be followed by appraisal drilling to confirm gas volumes, requiring at least another year. It would then take another two years to reach a final investment decision and 3-4 years to construct the facilities. That would take us to 2025-2026 at the earliest.

There is no way that Defa's LNG project could wait that long! However, with the sale of Aphrodite gas to Shell's Idku LNG plant in Egypt reportedly getting closer, it would make sense to plan to build a small diameter pipeline to bring gas from Aphrodite for Cyprus' needs. Even if the price of gas at the platform is \$4/mmbtu, which is very high, the total cost of gas delivered to EAC using such a pipeline would be about \$6/mmbtu. This is substantially lower than the \$10-\$12/mmbtu that the gas from the LNG project would cost EAC.

The latter would lead to an increase in the cost of

electricity. The former would lead to a substantial reduction. Should the Aphrodite gas sale be completed, and we will know soon, this option must be considered seriously.

What is the goal

Going back to block 10 drilling, ExxonMobil is looking for substantial quantities of gas, not just from one gas-field but likely several, to support its ultimate plan to build a liquefaction plant in Cyprus for LNG exports. Commercial viability improves with the number of liquefaction trains. Two or three such trains, with a capacity of 5 million tonnes/yr each, will require gas quantities of the order of 15 trillion cubic feet (tcf).

That is the ultimate goal. And even then, success will depend on global markets and prices. These are not getting any easier as time passes. The relentless increase in renewable energy and shale gas mean that competition to secure a share of the global gas market is increasing.

We should not be disheartened if the results from this drilling campaign are not conclusive. But equally we should temper our expectations. Global gas markets are challenging and it takes time to get greenfield projects off the ground. However, if we were to discover the quantities of gas required to progress into major export projects, ExxonMobil, Shell, Total and ENI are some of the most capable companies to achieve this.

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# China LNG imports in Jan rise to another record amid high stocks

Reuters/Singapore

China's imports of liquefied natural gas (LNG) rose to another monthly record in January, even as the country grapples with high gas inventories amid a warmer-than-usual winter, according to shipping data and industry sources.

The world's second-largest LNG importer took 6.55mn tonnes of LNG in January, beating the previous record hit in December by nearly 2%, according to Refinitiv Eikon shipping data.

China's imports last year surged 41% from 2017 after gas shortages the previous winter prompted Chinese companies to stock up on supplies and pre-order cargoes, with Beijing continuing to push millions of households to switch to gas from coal for heating.

But the import growth is not wholly due to a rise in demand, said an industry source familiar with the Chinese market.

“When people see these numbers, they think Chinese demand is up... but actually it is causing a headache (for importers) as (they) have overbought and can’t find demand to absorb the cargoes,” the source said, declining to be identified as he was not authorised to speak with media.

China National Offshore Oil Corp (CNOOC) resold at least one LNG cargo in January and possibly another, an unusual move during what is typically a peak demand period and highlighting this year’s warmer weather, industry sources said.

Chinese traders are offering LNG cargoes to international buyers or selling into their domestic market at lower-than-expected prices, the first source said. The Lunar New Year holiday has also made the situation worse because factories are shutdown for a least a week, he said.

Wholesale LNG from small, land-based liquefaction plants fell to 3,500-3,950 yuan (\$519-\$586) a tonne on February 2, less than half levels of last year, according to Chinese gas-price monitoring agency yeslng.com.

Quotes at receiving terminals in East China’s Shandong and North China’s Tianjin last stood at 4,500 yuan (\$667) a tonne, down 17% and 5%, respectively, from late November, shortly after heating season started.

China’s gas demand growth should decelerate from the past two years, said James Taverner of energy consultancy IHS Markit.

“Coal-to-gas switching mandates are moderating due to... security of supply concerns, and weakening economic growth,” Taverner said.

There is also limited capacity in North China for further LNG ramp-up after big increases the past two years, he said. Trade tensions between the United States and China have also tightened financial conditions, dragging China’s growth last year to its weakest in 28 years.

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# SIEMENS

# ALSTOM

## **Siemens-Alstom's expected EU veto unleashes political backlash**

When Siemens AG and Alstom SA unveiled their rail merger in 2017, the former archrivals hailed the deal as a historic union, forming the basis of a European champion with the heft to take on an expansionist Chinese competitor.

The plan may well go down in history books, but not for the reasons the companies hoped.

Rather, the European Commission's likely rejection of the merger on antitrust grounds is generating a political backlash in Paris and Berlin against Europe's independent competition regulator.

French Finance Minister Bruno Le Maire has called for an overhaul of policy to make it easier for the region's companies to grow and take on aggressive Chinese rivals. German Chancellor Angela Merkel has also talked of loosening EU rules.

Le Maire raised his rhetoric last week when Competition Commissioner Margarethe Vestager got the backing of member-country regulators to block the deal

A formal decision may come as soon as this week.

“Alstom and Siemens are symbols of French and German industry,” said Marc Iveldi, a professor at the Toulouse School of Economics who studies competition issues.

“The case won’t be forgotten and there will likely be consequences.”

At the heart of the controversy is a fundamental disagreement over the role of Brussels in European business. On one side of the issue are powerful European officials like Vestager, who see themselves as umpires calling balls and strikes with a view of protecting consumers.

On the other are politicians, who fear rigid EU attitudes are hobbling Europe’s top corporate players from forming ever-larger combinations.

Vestager came under unprecedented political pressure to approve the tie-up. This has raised alarm bells that a move is on to rewrite the region’s laws in the face of mounting global protectionism.

“We should worry,” said John Fingleton, a consultant and former head of the U.K. and Irish competition authorities. “The political independence of mergers is under attack everywhere.”

The European Commission’s antitrust watchdog is one of the most feared on the planet and has regularly wrung hefty concessions from companies seeking mega-mergers by forcing them to sell off prized assets. Other would-be dealmakers have chosen to abandon transactions instead.

“The mission of the EU regulator isn’t industrial policy but

to ensure fair competition. It's looking out for the interests of consumers," said Sarah Guillou, an economist at SciencesPo in Paris.

Yet within Europe's biggest trading partners, strategic bulking up is underway. Some of the most valuable U.S. companies, from Microsoft Corp. and Alphabet Inc. to JPMorgan Chase & Co., have used M&A to expand over past decades.

The Chinese government has been busy playing matchmaker to transportation, technology and other businesses to spawn giants, including CRRC in 2015.

The EU's focus on enforcing merger rules at home risks doing "everything wrong" for businesses to succeed globally, Siemens Chief Executive Officer Joe Kaeser said in defending his rail deal.

European merger rules have been in place for nearly three decades.

The competition division looks at the threat deals pose to market share, prices and innovation. Companies can assuage concerns with remedies like asset sales, but its decisions are most often waved through by the EU's top political brass.

The EU argued that the Siemens-Alstom deal could come at a huge cost to customers in Europe. Chinese suppliers weren't likely to enter the region in the near future and the tie-up could lead to "high prices, less choice and less innovation."

"We've spent last the 20 years dismantling monopolies in telecoms and energy and in other areas built up to be national champions," said Fingleton, the former regulator. "We should learn from that."

France's Europe affairs minister said Sunday the bloc's competition rules were absurd and needed to be overhauled, citing the difficulties Alstom and Siemens are facing over

their planned rail business merger.

“I’m not criticizing the [European] Commission for applying the rules ... But these rules are absurd and were set up in the 20th century and we’re in 2019,” Nathalie Loiseau told LCI television.

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## A green new deal for Europe

By Massimiliano Santini And Fabrizio Tassinari /Florence

Jim Yong Kim abruptly resigned from his post as World Bank president recently, leaving a pillar of the international financial order without leadership or direction. Kim will join a private equity firm, where he believes he can “make the largest impact on major global issues like climate change.”

True, the private sector has an important role to play in mobilising funds for upgrading business models to address the threat posed by climate change. But governments and multilateral institutions remain indispensable to securing the



comprehensive economic transformation that is needed.

The scientific evidence for global warming is unequivocal. According to conservative estimates, an increase in global temperature of more than 1.5°C above pre-industrial levels by the end of the century would cause widespread environmental devastation. Increasingly severe weather conditions would destroy biodiversity and livelihoods, while straining resources. Rising sea levels would cause coastal towns to disappear. All of this would contribute to social instability and large-scale migration.

With the human population expected to reach 8.6bn by 2030 – a billion more than today – the only way to achieve our climate goals is to transform the way the world does business. And here, Europe is well-positioned to take the lead by implementing a Green New Deal.

The idea of a Green New Deal – defined as a “national, industrial, economic-mobilisation plan” that would bring about a rapid transition “away from fossil fuels and toward clean energy” – is not new. Even US President Barack Obama included the concept in his 2008 campaign platform.

Under Obama’s leadership, from 2009 to 2016, the United States led the fight against global warming. At home, this meant promoting clean and renewable energy and introducing incentives to spur carbon-reducing innovations in products and services. Internationally, the Obama administration was integral to concluding the 2015 Paris climate agreement.

But, under Obama’s successor, Donald Trump, the US has gone from climate-action leader to climate-change denier. Now, Democratic members of the new US Congress – especially freshman Representative Alexandria Ocasio-Cortez – are working to renew the push toward a green economy. Over the next two years, however, Congress will probably be largely preoccupied by a broader battle over the legitimacy of the Trump administration.

This means that Europe now has an ideal opportunity to lead the world’s green structural transformation, much as it has led on privacy rules and competition policy over the last two

decades. To that end, following the European Parliament elections in May, Europe's liberal and progressive parties and movements should work to implement a Green New Deal.

Success will require, first and foremost, broad public support for a green social contract. But, despite some momentum – for example, the Green Party's recent electoral success in the German states of Bavaria and Hesse – this will not be easy.

As the Yellow Vest protests in France demonstrate, people will not support making the world greener if it makes their daily lives harder. And there is no doubt that the structural transformation required by a Green New Deal for Europe would require vast funding that might otherwise be spent on programmes with more visible or immediate benefits.

Political leaders advocating a Green New Deal for Europe must therefore work hard to protect citizens' interests. As French President Emmanuel Macron put it in an open letter intended to calm the protesters, "Making the ecological transition allows us to reduce spending on fuel, heating, waste management, and transport. But to make this transition a success, we need to invest on a huge scale and support our fellow citizens from the most modest backgrounds."

Beyond practical pledges, political leaders must provide a convincing and even inspiring narrative to spur climate action. Cognitive scientists, such as George Lakoff, have long argued that people are more responsive to political arguments that are framed according to their own values (as opposed to those of the person making the argument). So, if liberal and progressive forces want a majority of the electorate to support the spending required to mount an effective response to global warming, they need to frame the Green New Deal – not unlike US President Franklin D Roosevelt's original New Deal in the 1930s – in terms of security.

People need to be protected from the instability that increasingly extreme weather will create, and they need support during the transition to greener (higher-quality) employment. Meanwhile, businesses need incentives to pursue the long-term opportunities created by the economic

transformation.

This unifying emphasis on long-term societal, personal, and economic security would contrast sharply with prevailing populist narratives, which frame security as an identity issue and thus tend to trigger emotional – and divisive – responses. And there is reason to believe that it could work. One of the key, albeit contested, legacies of Angela Merkel's chancellorship in Germany, for example, is her government's leadership of the *Energiewende*, or energy transformation, which gained traction after the 2011 Fukushima nuclear disaster raised questions about the long-term security of supplies.

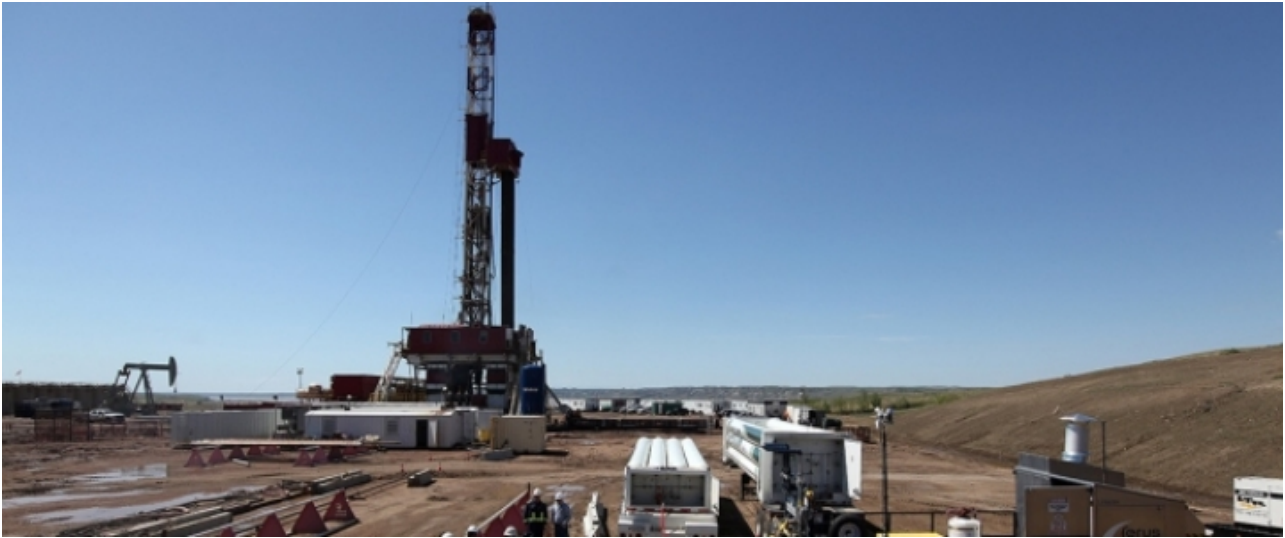
Other European countries have also demonstrated leadership on global climate action. The Danish government, for example, recently pledged to phase out the sale of all gasoline- and diesel-powered cars by the year 2030, and a broad political consensus sustains the goal of reaching a carbon neutral society by 2050.

But, to achieve a safer and more prosperous future, all of Europe – and, indeed, the world – needs to pull its weight. A transnational compact uniting Europe's liberal and progressive movements ahead of the European Parliament election can leverage the force produced by cross-partisan consensus and broaden popular support.

Europe desperately needs to take ownership of its future once again. A new vision centred on the Green New Deal can enable it to do just that. – Project Syndicate

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# US shale drillers resume rig cuts, shrugging off oil's rebound

Oil explorers cut drilling in US shale fields, shrugging off oil's rebound, as investors urge them to keep spending in check. American drillers idled 15 oil rigs last week, bringing the number of active equipment down to 847, the lowest since May, according to data released on Friday by oilfield-services provider Baker Hughes. Crude futures extended their rally in New York after the report was released, touching a two-month high of \$55.66 a barrel. A rebound in oil prices since Christmas Eve has yet to turn the sentiment of explorers who saw a late 2018 price plunge blow up spending plans and led them to tighten belts across the industry. The biggest rig cut among major US shale plays came from the Permian Basin of West Texas and New Mexico, where the count dropped by 3 this week, to 481. Helmerich & Payne Inc, the biggest US provider of land rigs, said demand for its most expensive equipment has softened for the start of this year because of uncertainty over oil prices and more prudent spending. "Discussions with several customers regarding capex outlook indicates a mix of increasing, decreasing, and flat spending budgets," chief

executive officer John Lindsay told analysts and investors this week on a conference call. “However, the consistent theme is discipline, principally keeping 2019 spending within cash flow.” Helmerich joined Halliburton Co and Schlumberger Ltd in slashing spending as their customers are under pressure from shareholders to keep budgets in check. North American explorers are expected to cut their rate of annual spending growth by half to 9%, analysts at Barclays Plc wrote last month in a note to investors. In kind, explorers have cut rig usage all but one week this year.

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## **Exxon, Chevron muscle up in Permian on rig-to-refinery play**

Bloomberg/Houston

Exxon Mobil Corp and Chevron Corp bided their time, watching

smaller independent drillers make the first moves in shale before placing their bets. Now they're all in.

The two US supermajors are investing heavily in Texas pipelines and processing facilities as they build out their rig-to-refinery approach to the Permian Basin, demonstrating how shale is becoming a core driver of the world's biggest oil companies' future growth.

Both Exxon and Chevron nearly doubled production from the Permian over the last 12 months and expect strong expansion to continue. For Chevron, the region will produce a fifth of all its oil by the mid-2020s. But rapid growth brings transportation and refining challenges. This is where the supermajors think they can steal a march on rivals, who have until now stolen the show in the world's premier shale field.

Exxon will "bring fundamental science and technology, bring large-scale efficient development and bring an integrated well-to-market approach" to the Permian, chief executive officer Darren Woods said during a call with analysts Friday. "We believe our approach will deliver the lowest-cost supply and give us a significant advantage over the rest of the industry."

The supermajors only produce about 9% of Permian oil so "have a long way to run," according to Raoul LeBlanc, a Houston-based analyst at IHS Markit. But they're coming on fast. At the start of 2017, they spent less than 5% of drilling and well completion capital in the Permian and by the end of 2018 they had jumped to 15%, he said.

While the Gulf Coast refining hub is the natural destination for Permian oil, processing all that crude is not so simple. For years, refiners upgraded facilities to handle heavy, high-sulphur oil from Venezuela, Canada and Mexico as US production waned. But the shale boom brought an abundance of light, low-sulphur crude that isn't optimal feedstock for heavy refineries.

So more capacity is needed. To handle surging Permian oil flows, Exxon is expanding capacity at its Beaumont refinery in Texas by 65%, a move that will make it North America's

biggest. The cost will be about \$1.1bn, according to analysts at Cowen & Co Exxon also signed off on a giant crude pipeline, developed with Plains All American Pipeline LP and Lotus Midstream LLC, that will ultimately carry 1mn barrels a day. Keeping pace, Chevron agreed to buy a Houston-area refinery from Brazil's Petrobras for \$350mn, the company's first refinery acquisition in decades. The ageing operation that mainly processes the light crude harvested from US shale will boost Chevron's Gulf Coast refining capacity by almost a third.

"It is in a great location and that allows us to integrate increasing light crude production out of West Texas," chief executive officer Mike Wirth said on a call with analysts.

For the sceptics, it's about time. While smaller rivals were experimenting with fracking technology and buying up drilling rights in the now-prolific basin early in the decade, Exxon and Chevron didn't really get going until years later.

Although Exxon's inaugural foray into shale happened in 2010 with the \$35bn purchase of XTO Energy Inc, that was a gas deal. The real money was in oil, spurring Exxon to spend a further \$6.6bn in 2017 to amass Permian drilling rights from the Bass family.

As for Chevron, the California-based driller inherited a commanding 2.2mn acres of drilling rights, the second-largest behind Occidental Petroleum Corp's, from its 2001 takeover of Texaco Inc.

Both companies have gone through steep learning curves, picking up techniques from smaller rivals. Still, there are worries they haven't yet caught up.

"There are concerns that you are perhaps not as leading-edge as we might want you to be in terms of your Permian performance on a returns basis," Paul Sankey, a New York-based analyst at Mizuho Securities USA LLC, said to Chevron's Wirth on the call.

Wirth responded by saying returns are "very, very strong."



## **The great oil paradox: Too many good crudes, not enough bad ones**

The shale boom has created a world awash with crude, putting a lid on prices and markedly reducing U.S. dependence on imported energy. But there's a growing problem: America is producing the wrong kind of oil.

Texas and other shale-rich states are spewing a gusher of high-quality crude – light-sweet in the industry parlance – feeding a growing glut that's bending the global oil industry out of shape.

Refiners who invested billions to turn a profit from processing cheap low-quality crude are paying unheard of



premiums to find the heavy-sour grades they need. The mismatch is better news for such OPEC producers as Iraq and Saudi Arabia, who don't produce much light-sweet, but pump plenty of the dirtier stuff.

The crisis in Venezuela, together with OPEC output cuts, will exacerbate the mismatch. The South American producer exports some of the world's heaviest oil and the Trump administration sanctions announced this week will make processing and exporting crude far more difficult. American refiners are scrambling for alternative supplies at very short notice.

"We still have some holes in our supply plan" over the next 30 days, Gary Simmons, a senior executive at Valero Energy Corp., the largest refiner in the U.S., told investors on Thursday. "We are not taking anything from Venezuela."

Crude isn't the same everywhere: the kind pumped from the shale wells of West Texas resembles cooking oil – thin and easy to refine. In Venezuela's Orinoco region, it looks more like marmalade, thick and hard to process. Density isn't the only difference – the sulfur content is also important, dividing the market into sweet and sour crude. Heavy crude tends to have more sulfur than light crude.

As Saudi Arabia, Russia and Canada cut production, and American sanctions force Venezuelan and Iranian exports lower, the market for low-quality crude is feeling the impact.

"The strength in the physical crude market continues, led by sour crude shortages," said Amrita Sen, chief oil analyst at consultant Energy Aspects Ltd. in London, echoing a widely held view within the market.

For consumers and politicians focused on the headline oil price for Brent and West Texas Intermediate, the most popular benchmarks, it may not matter much. Car drivers could even benefit, because too much light-sweet crude often leads to too much gasoline, and lower prices. On the flip side, truckers

may find themselves short-charged, as refiners prefer heavy-sour crude to make diesel.

To oil traders in the physical market, it provides opportunities to profit from the changing price spreads between different crude varieties.

Few oil executives see the market changing anytime soon. The supply and demand balance could deteriorate further as OPEC deepens output cuts next month – Saudi Arabia has warned it will reduce production even further in February. Saudi oil exports into the U.S. last week fell to the second-lowest level in nearly a decade.

“OPEC cuts will sustain the tightness of heavy-sour crude,” Alex Beard, the head of oil at commodities trading giant Glencore Plc.

At the same time, U.S. shale production keeps growing, feeding the glut of light-sweet crude. The proportion of light crude in U.S. total petroleum output has risen to nearly 57 per cent, up from 51 per cent in early 2017, according to Bloomberg calculations based on U.S. Energy Information Administration data.

In the physical market, oil price differentials for some important varieties of heavy-sour crude – including Russia’s main export grade, Urals, and Mars Blend from the U.S. Gulf of Mexico – are at the strongest levels in five years, according to data compiled by Bloomberg.

Mars crude on Tuesday traded at a US\$5.85 premium to U.S. benchmark West Texas Intermediate, compared with a discount of US\$1.60 a barrel a year ago. Earlier this month, Heavy Louisiana Sweet crude traded at a rare premium to its sister variety Light Louisiana Sweet.

“OPEC is having the impact that they wanted in the physical market, which is tightening,” Marco Dunand, chief executive

officer of commodities trader Mercuria Energy Group Ltd.

Heavy-sour crude is becoming so expensive – and gasoline refining margins are so low – that some U.S. refiners are running their most sophisticated kit at low rates in an effort to save money. Others are likely to follow.

The cracking margin for heavy-sour crude for the most sophisticated refineries in the Gulf of Mexico has fallen to about US\$2.50 per barrel in recent days, compared with a five-year average of US\$12 a barrel, according to data from consultant Oil Analytics Ltd.

The global refinery has no option but to adapt almost in real time. Valero is “changing the way it’s sourcing crude on a weekly, daily basis to try to get the best netback we can on the plants,” Joe Gorder, chief executive officer, told investors on Thursday.