

# The Russian Nuclear Company The West Can't Live Without



When European countries want to decommission aging nuclear plants, they often call Nukem. There's only one catch.

*By Jonathan Tirone and Petra Sorge*

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Cutting the heart out of a nuclear power plant is a surgical procedure that only a few specialists are equipped to handle.

The process begins by launching plasma-torch-wielding robots into an empty pool surrounded by thick concrete walls. From there, the remote-controlled machines make circular cuts, as if slicing pineapple rings, through a 600-ton steel vessel that contains radiation generated over decades of splitting atoms. These rings are then diced into meter-long pieces and transported via secure convoy to radioactive waste repositories, where they are left to cool down – indefinitely.

Behind the scenes, scores of nuclear engineers, radiation safety experts and state regulators monitor this operation, which can cost upwards of a billion dollars and take years to plan and execute. The expertise needed to pull this off without error is why “there are only a handful of players” in the high-radiation decommissioning business, said Uniper SE’s Michael Baechler, who is supervising the dismantling of Sweden’s Barsebaeck Nuclear Power Plant.

Among the oldest and most experienced is Germany’s Nukem Technologies Engineering Services GmbH, which for decades has offered its unique services in Asia and Africa and across Europe. Nukem engineers helped contain radiation from the destroyed reactors in Chernobyl and Fukushima. They helped lead the clean-up of an atomic-fuel factory in Belgium. In France, the company devised ways to treat waste from the International Thermonuclear Experimental Reactor.

With researchers predicting that cleaning up after aging nuclear power plants will evolve into a \$125 billion global business in the near future, Nukem should be ideally positioned to capitalize on the moment.

Except for one thing: the company is wholly owned by Rosatom Corp., the Kremlin-controlled nuclear giant, putting it in the center of an uncomfortable standoff.

While Germany has been vocal in urging EU countries to stop importing Rosatom’s nuclear fuel, a highly specialized commodity used for power plants, of which Rosatom is the world’s biggest exporter, authorities do not want to prevent Nukem from doing business in Germany, according to three government officials who asked not to be identified in return for discussing private deliberations. As sanctions have not been implemented, doing so would violate EU competition laws, they said.

Located in the rolling hills and orchards just east of

Frankfurt, Nukem is a niche player in Rosatom's global empire. At the same time, it exposes the fault line running through the EU's approach to nuclear power. Unlike Russia, which has cultivated expertise across all of the industrial processes needed to convert and enrich uranium atoms into forms usable for generating energy, Europe's hodgepodge development of nuclear technologies has left states dependent on outside providers to fill gaps in production and services. Experts estimate it would take at least four or five years before the EU could match Rosatom's fuel-manufacturing capacity, but even if that process were sped up, it would require more time still to replicate its global reach and array of services.

Pressure to cut Rosatom out of European supply chains has mounted since Russian forces seized Europe's biggest nuclear power station outside the Ukrainian city of Zaporizhzhia and sent in Rosatom engineers to run it. The fact that it or Nukem, a subsidiary, haven't been sanctioned, "should raise some serious questions," said Darya Dolzikova, a researcher at the Royal United Services Institute. But more than a year later, it's still up to individual companies to decide whether to continue doing business with the energy giant. So far, many are proceeding as usual: Rosatom saw exports surge more than 20% in the year after Russia invaded Ukraine.

Unlike Germany's seizure of Russian storage and refining assets after the war, Nukem doesn't have as much fixed infrastructure to go after. If sanctions were to be imposed, Rosatom might simply close shop or move Nukem's headquarters to a friendlier jurisdiction.

This has left Nukem stuck in a strange kind of limbo, as customers interested in tapping its expertise are now faced with the choice of whether to work with a Kremlin-controlled company. Its experience is particularly valuable as its 120 mostly German engineers can work across the nuclear supply chain, a huge advantage in light of the fact that more young nuclear engineers study to build new installations than tear

down existing ones. The International Atomic Energy Agency in Vienna has warned of an acute shortage of decommissioning workers.

“In Europe,” said Mark Hibbs, an analyst at the Carnegie Endowment for International Peace who has been tracking the company for more than three decades, “Nukem presides over a large pool of know-how.”

But even without sanctions, traditional markets such as Lithuania and Finland have stopped working with Nukem and Rosatom, respectively. Others, including the Czech Republic, Slovakia and Bulgaria are diversifying away from Russian suppliers. On a day-to-day level, it’s gotten trickier to do business since the Russian invasion, said Nukem Chief Executive Officer Thomas Seipolt. Money transfers take longer, as does securing the authorizations needed to ship technologies across borders, and some customers have been hesitant to sign contracts, he said. A consulting arrangement “was paused and then cancelled following the start of the Ukraine conflict,” said Boris Schucht, chief executive officer of the fuel consortium Urenco. Due to the political situation, Nukem’s Seipolt noted, “the further development of the company” has “become uncertain.”

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## **The Climate Elephants in the Room**



May 19, 2023 PINELOPI KOUJIANOU GOLDBERG

As tempting as it is to rely on multilateralism to solve a shared global problem like climate change, the world simply does not have the time for such an approach. A far more pragmatic and effective strategy is to focus on the biggest polluters that contribute disproportionately to total greenhouse-gas emissions.

NEW HAVEN – Now that the falsehoods and obfuscation of climate denialism have finally been silenced, addressing climate change has become the world's top priority. But time is running out, and the International Monetary Fund warns that any further delays on implementing policies to mitigate global warming will only add to the economic cost of the transition to a low-emissions economy. Worse, we still lack a concrete, pragmatic strategy for tackling the problem. Although economists have made a robust case for why carbon taxes are the best solution, this option has proven politically infeasible, at least in those countries that account for some of the highest emissions (namely, the United States).

Commentators have also stressed that climate change is a shared problem involving important cross-border externalities that must be addressed through a multilateral approach to global coordination. But, as with carbon taxes, this argument



has fallen on deaf ears. And, given the current geopolitical climate and the increasing fragmentation of the global economy, there is little hope that the message will get through anytime soon.

Having committed to assisting developing economies as they confront climate change, the World Bank finds itself limited by the country-based model underlying its financing operations. It is earnestly weighing its options and considering how it could coordinate climate-related financing across borders. But while such efforts are well meaning and consistent with the spirit of multilateralism, they inevitably will delay concrete action. World Bank financing would have to be completely restructured, and coordinating action across multiple countries that have limited financial resources and often conflicting interests seems an impossible task. For example, while some developing economies are rich in fossil fuels, others are starved for energy sources.

Given these limitations, pragmatism dictates focusing on the biggest polluters. Global carbon dioxide emissions are concentrated among only a handful of countries and regions. China, the US, the European Union, Japan, and Russia collectively account for 63% of the total, and none of these top polluters is a low-income country anymore. China, the poorest of the group, represents around 30% of all emissions, making it by far the world's largest current polluter in absolute terms. But its government is taking steps to accelerate the transition to green energy – a winning strategy, given the country's abundance of rare earth metals.

India, the third-largest emitter, currently accounts for approximately 7% of global CO<sub>2</sub> emissions, and its size and growth trajectory imply that it could easily surpass China as the leading polluter, barring stronger climate policies. In fact, when it comes to helping developing countries decarbonize, considerable progress could be made simply by

targeting India alone. The big advantage of this strategy is that it would avoid the paralysis associated with attempts to adopt a multilateral approach in an increasingly fragmented world.

This does not mean that we should eschew projects aimed at climate mitigation or adaptation in other countries. But we would not need to wait until everyone is on board before doing anything. Those insisting on a multilateral approach should learn from the experience of the ultimate multilateral institution: the World Trade Organization. Its requirement that every single provision in every multilateral agreement gain unanimous support has left it increasingly paralyzed, prompting demands for institutional reform.

Of course, India is not low-hanging fruit. It is rich in coal and has little incentive (beyond the health of its citizens) to hasten the transition to green energy. In focusing on India, we would need to employ the carrot, not the stick.

Since the stick generally takes the form of pressure to implement carbon taxation, it is a non-starter. A tax would be ineffective, because it would incite massive domestic opposition (as has been the case in the US). It would also be morally objectionable, because it is unfair to ask a lower-middle-income country to bear the burden of reducing CO<sub>2</sub> emissions when rich countries (like the US) have failed to do the same. Moreover, even if China and India are now two of the world's biggest polluters, they bear little responsibility for the past, cumulative emissions that led to the current climate crisis.

That leaves the carrot, which would come in the form of tax incentives or subsidies to support green energy. When paired with other policies, these can ease firms into adapting to higher environmental standards (such as those associated with a cap-and-trade program). But such policies are expensive, which means that tackling climate change will require richer

countries to help finance them. Whether or not India becomes the new China, it is still in our power to ensure that it does not become the new outside polluter.

<https://www.project-syndicate.org/commentary/climate-change-prioritize-top-emitters-over-multilateralism-by-pinelopi-koujianou-goldberg-2023-05>

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## **India's Russian oil buying hits record high, slashes Mideast, Africa share**



NEW DELHI, May 17 (Reuters) – India's oil imports from Russia rose to a fresh record high in April, further reducing the share of Middle Eastern and African grades to their lowest level in at least 22 years, data obtained from trade sources



showed.

Refiners in India, the world's third-biggest oil importer and consumer, are on a Russian oil-buying binge after some countries shunned purchases from Moscow over its invasion of Ukraine in February last year.

Asia's third-largest economy imported about 1.9 million barrels per day (bpd) of Russian oil in April, about 4.4% higher than the previous month, the data showed. That accounts for about two-fifths of the nation's overall purchases.

Higher imports from Russian raised the share of oil from the C.I.S. countries – Azerbaijan, Kazakhstan and Russia – to 43.6% of an overall 4.81 million bpd imported by India last month.

That narrowed the share of the Middle Eastern grades, which traditionally have accounted for the bulk of total oil imports, to about 44% and African oil to 3.4% last month, the data showed.

Russia remained the top oil supplier to India for the sixth-straight month in April, followed by Iraq and Saudi Arabia.

“Indian refiners have cut their spot purchases of Middle Eastern and West African grades as we are getting supply of Russian oil at lower prices,” said an Indian refining official at an Indian refinery.

Oil imports from Russia also rose as Indian Oil Corp (IOC.NS), the country's top refiner, raised the size of its annual import deal with Rosneft (ROSN.MM).

India's oil imports from Iraq in April declined by 3.1% from the previous month to a 4-month low of 928,400 bpd, while imports from Saudi Arabia fell by 11% to 723,800 bpd, the least in five months, the data showed.

Lower purchases of oil from the Middle East dragged OPEC's

share of India oil imports to a record low of 46%, the data showed.

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## **Uptick in Qatari LNG contributes to higher LNG imports in India, Pakistan in April: GECF**



Qatar – Uptick in LNG imports from Qatar contributed to higher LNG imports in India and Pakistan in April this year, GECF' latest data show.

In April 2023, Asia Pacific's LNG imports continued to recover and increased by 5% (1.05mn tonnes) y-o-y to 20.50mn tonnes,

which was slightly lower than the imports in April 2021.

China, India, Thailand, and Pakistan contributed to the bulk of the incremental increase in LNG imports and offset weaker imports in Japan. Asia Pacific's cumulative LNG imports from January to April this year rose by 3% (2.6mn tonnes) y-o-y to 89.12mn tonnes,

Doha-headquartered Gas Exporting Countries Forum said.

China's LNG imports continued to recover in April and recorded the highest year-on-year increase since September 2021. The rebound in economic and industrial activity boosted gas consumption, driving LNG imports higher.

Pipeline gas imports to the EU increased by 3% month-on-month, to reach 14 bcm in April.

Global LNG imports surged by 10% y-o-y to 34.4mn tonnes, setting a new record high for imports in April. The increase was driven by stronger LNG imports across all regions, especially in the Asia Pacific and Europe.

In Europe, the rise in LNG imports continues to compensate for the lower pipeline gas imports into the region.

Meanwhile, the rebound in gas consumption in China, opportunistic buying in India due to lower spot LNG prices, and declining gas production and pipeline gas imports in Thailand contributed to the increase in the Asia Pacific's LNG imports.

Furthermore, Philippines joined the ranks of LNG importers in April, GECF noted.

As of April, the restocking of gas storage sites has commenced. In the EU, the average level of gas in underground storage was 59.4bcm, which amounts to 57% of the region's storage capacity.

In the US, the level of underground gas storage increased to

55.6bcm, representing 42% of its capacity.

A slower stockbuild is expected in both the EU and US this summer due to the high levels of gas already in storage. The combined LNG in storage in Japan and South Korea was estimated at 9.8bcm.

According to GECF, gas and LNG spot prices in Europe and Asia continued their downward trend for the fourth consecutive month. In April, the Title Transfer Facility (TTF), which is the main reference virtual market for gas trading in Europe and Northeast Asia (NEA) LNG spot prices, averaged \$13.69/MMBtu and \$12.10/MMBtu, respectively, representing a 1% and 9% decrease compared to the previous month.

The TTF spot price was 57% lower y-o-y, while the NEA LNG spot price experienced a decline of 58% y-o-y. With the arrival of the shoulder season, the market witnessed a decrease in tightness as a result of ample storage levels and strong LNG supply.

However, in Asia, there was some emerging buying activity in anticipation of the summer season, which helped limit the decline in spot LNG prices, GECF said.

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**Sustainable food – not more  
of it – needed as global  
hunger soars**



LONDON – As global hunger swiftly rises – by more than a third last year – curbing it will require not growing more food but rethinking broader systems of trade and aid, farming’s heavy reliance on fossil fuels, food waste and meat eating, experts said.

Farmers today grow sufficient crops to feed twice the current population – but but nearly a third of food produced globally is spoiled or thrown away, said Philip Lybery, the chief executive of Compassion in World Farming International.

At the same time, grain that could feed billions of people is instead fed to factory-raised food animals – suggesting a reduction in meat consumption is one clear way to cut hunger, he said at a conference on global food systems in London last week.

In Europe alone, 60% of grain is now grown for animal food, said Tim Benton, a food systems expert at the London-based think tank Chatham House, which raises questions about whether scarce land could be better used.



As global leaders look for ways to keep food available and affordable, and prevent rising hunger, “it’s not about food scarcity because there’s no food scarcity,” Lybery noted.

## **Surging hunger**

Globally, hunger is surging, with 258 million people in nearly 60 countries facing acute food insecurity last year, a 33% jump from 2021, according to the Global Report on Food Crises 2023, released in March.

Problems are growing not just in traditional aid recipient countries such as Yemen, Somalia and Afghanistan but also in nations from Nigeria to the Democratic Republic of Congo, it showed.

The report, backed by agencies from the U.N. World Food Program to the World Bank, found that climate change impacts – from floods in Pakistan to drought in the Horn of Africa – were key contributors to the surge.

But conflicts – including Russia’s invasion of Ukraine, which slashed wheat exports from Ukraine and drove up the prices of energy and fossil fuel-based fertilizers – also played a major role, particularly in contributing to rising food prices.

“We depend more and more on a small number of countries for production of the major crops we depend on,” said Olivier De Schutter, co-chair of IPES-Food, an international expert panel on sustainable food systems.

That means when climate change slashes production in one or more key producers, or a conflict breaks out in one, “global supply chains are disrupted ... (and) the whole global food system is impacted.”

In the wake of the Ukraine invasion, food costs also rose as speculators, hedge funds and a handful of big agribusiness companies that control most global food trade made profits,

said De Schutter, who is also a U.N. special rapporteur on extreme poverty and human rights.

He suggested that finding ways to wean global agricultural production off its heavy reliance on fossil fuel-based fertilizers could be a key way to protect access to food from volatile oil and gas prices.

Helping poorer countries escape their often heavy debt burdens could also help them shore up their food security, allowing them to focus more on growing food for their own people rather than raising export crops to bring in the cash needed to service debt, De Schutter said.

## **Competing answers**

Benton, of Chatham House, said two very different views of how to achieve future security are now competing.

In the first, the assumption that the world will need 50% more food by 2050 – in part to meet growing demand for meat and dairy as poor countries grow richer – demands much more intensive production from limited agricultural land.

That view assumes agriculture in the future will become much more technological and centralized, with heavy use of drones, satellites and the “internet of things” driving smarter production – and likely resulting in fewer farm jobs.

The second view, however, envisions farmers shifting to more ecologically friendly, smaller-scale and less fossil fuel-intensive agriculture, with food demand not growing significantly because food waste is cut and meat-intensive diets decline.

“Everybody agrees food system transformation is needed” – just not what kind, said Molly Anderson, a food studies professor at Middlebury College in the United States.

Seth Watkins, a farmer in the U.S. state of Iowa, said at last week's food conference that he had seen first-hand how intensive farming systems were damaging soil health, raising questions about the long-term viability of farming, especially as climate change impacts worsen.

"Often (a focus on) technology holds us back from the sustainable solutions we need to fix our food system," he said, calling for a switch to more environmentally friendly and low-carbon ways of producing food.

Decisions made now are crucial because "it's our own regeneration or extinction we're talking about," Watkins said.

Susan Chomba, director of the Vital Landscapes in Africa program for the World Resources Institute, said efforts to cut food waste were particularly crucial as key farm resources from available land to water grow scarcer.

"No matter how much we try to produce, if we can't address what is lost and wasted it's a counterproductive process," she said in an interview.

A range of powerful vested interests stand in the way of shifting food systems to effectively manage growing hunger, climate threats and ecological decline, the analysts said.

Worsening disinformation and a rise in authoritarian governments around the world also are acting as a brake on change, they said.

But with hunger growing fast and new challenges appearing – from an expected drought-spawning El Nino weather pattern emerging this June to new conflict in Sudan, adding to humanitarian burdens – public discontent and pressures on politicians for change are also likely to increase.

"Because we're not tackling the environmental crisis, the disruptions we see are going to get bigger and bigger," warned

# Climate change continues to cause uncertainties for commodity prices



It can alter rainfall patterns, increase temperatures, and cause extreme weather events. Climate played a major role in commodity price volatility last year and looks like doing so again in 2023.

Scorching heatwaves in the northern hemisphere hit production of wheat in the US and Europe in 2022, and climate change means that catastrophic weather events are becoming more frequent.

These include La Niña, which is stretching into an unprecedented third consecutive year and will be detrimental to global food security.

to maize and soybean production in the first half of 2023, in addition to other crops like sugar and coffee, according to Economist Intelligence Unit (EIU).

Wheat, which was heavily affected by war-related supply disruptions in 2022, faces significant climate risks. In the US large swathes of the southern plains remain under drought conditions, and crops are in unusually poor condition heading into winter dormancy. Extremely dry, occasionally frosty weather in Argentina is causing damage across major producing provinces there, but Russia and Australia are on course for a second consecutive year of bumper crops, which, for the moment, is alleviating concerns about production in the western hemisphere.

Weather will loom large in energy markets as well, EIU noted. Europe's heatwave drove up demand last summer, causing gas and electricity prices to spike, especially as winds dropped to levels insufficient to generate enough power to meet Europe's electricity needs while drought affected hydropower generation in many countries.

These dry conditions, together with rising water temperatures, also hit nuclear power generation.

In addition, the severity of Europe's current energy crunch depends largely on how cold temperatures fall over the winter, not just in 2022/23 but in 2023/24 as well.

"The colder the winter, the more countries will have to draw down stockpiles built up over 2022. Below-normal temperatures will not only raise the spectre of energy rationing, but also put upward pressure on prices over the summer as Europe scrambles to refill reserves—this time without Russian supplies," EIU said.

Obviously, climate change can have significant impacts on commodity prices by affecting their production, transportation, and demand for various goods.

Climate change can impact commodity prices by affecting crop yields, energy prices, water availability, and transportation costs.

It can alter rainfall patterns, increase temperatures, and



cause extreme weather events like droughts and floods, which can reduce crop yields.

This can lead to lower supply and higher prices for commodities like wheat, corn, soybeans, and other agricultural products.

Climate change can also impact energy prices by affecting the production and transportation of oil, natural gas, and other energy resources.

For example, extreme weather events can disrupt oil and gas production and transportation infrastructure, leading to supply disruptions and higher prices.

Changes in rainfall patterns and increased water scarcity due to climate change can impact the availability of water for agricultural production and energy generation. This can result in higher prices for water-intensive commodities like meat, dairy, and processed foods.

Climate change can also affect transportation costs, particularly for goods that rely on sea or river transportation.

Rising sea levels and changes in ocean currents can disrupt shipping routes and increase shipping costs, which can lead to higher prices for imported goods. e weather events like droughts and floods, which can reduce crop yields

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**إطلاق شركة أدنوك في سوق أبو ظبي للأوراق المالية يوم الاثنين طرح عام أولي بقيمة 2.5 مليار**

# دولار. الخبير الدولي رودى بارودى لوكالة الصحافة الفرنسية: "الغاز الطبيعي المسال هو أهم وقود انتقالي في عملية الابتعاد عن الوقود الأحفوري".



ستطلق وحدة الغاز التي تم تشكيلها مؤخرًا من قبل شركة الطاقة الحكومية الإماراتية أدنوك في سوق أبوظبي للأوراق المالية يوم الاثنين طرح عام أولي بقيمة 2.5 مليار دولار.

وقد شهدت أسهم شركة أدنوك للغاز ، التي دخلت حيز التشغيل في بداية هذا العام ، زيادة كبيرة في الاكتتاب حتى بعد توسيع الطرح من 4.0 إلى 5.0 في المائة من رأس المال المصدر في استجابة للاهتمام القوي من قبل الاسواق.

تم تحديد السعر النهائي للسهم عند 2.37 درهم (0.65 دولار) للسهم ، حيث جمع حوالي 2.5 مليار دولار ما يعني رسملة سوقية بنحو 50 مليار دولار.

ويعتبر غاز أدنوك الأكثر نشاطا في بورصة أبو طبي حتى الآن ، اذ تجاوز الاكتتاب 50 مرة ، وهو أكبر طلب على الإطلاق لطرح عام أولي في منطقة الشرق الأوسط وشمال إفريقيا ، متجاوزًا الرقم القياسي العالمي لشركة أرامكو السعودية البالغ 29.4 مليار دولار قبل ما يزيد قليلاً عن ثلاث سنوات .

يأتي الاكتتاب العام الأولي المنظم بسرعة من أدنوك ، إحدى أكبر شركات النفط في العالم ، في أعقاب التدافع العام الماضي على موارد الغاز البديلة بعد الغزو الروسي لأوكرانيا ، ويأتي في الوقت الذي تبحث فيه البلدان عن وقود أنظف للتخفيف من ظاهرة الاحتباس الحراري .

وفي هذا المجال قال مستشار الطاقة رودي بارودي ، الذي يرأس شركة الطاقة والبيئة القابضة ومقرها قطر ، إنه يتوقع زيادة الطلب عند بدء تداول الأسهم .

واضاف بارودي لوكالة فرانس برس " كل الأسباب تجعلنا نتوقع أن الزيادة الهائلة في الاكتتاب التي رأيناها ستنتقل إلى اهتمام قوي . " عندما يتم طرح الأسهم علنا .

وتحتفظ شركة بترول أبوظبي الوطنية ، المصدر الرئيسي للإيرادات في الإمارات العربية المتحدة ، بحصة 90 بالمئة في الشركة التابعة التي تشكلت من وحدات معالجة الغاز والغاز الطبيعي المسال والغاز الصناعي التابعة لها .

يُوصف الغاز بأنه أنظف من أنواع الوقود الأحفوري الأخرى حيث تسعى البلدان في جميع أنحاء العالم للحد من انبعاثاتها .

وقال البارودي إن الغاز الطبيعي المسال هو "أهم وقود انتقالي في عملية الابتعاد عن الوقود الاحفوري ."

من الغاز (bcm) في عام 2021 ، أنتجت الإمارات 57 مليار متر مكعب BP الطبيعي ، أو حوالي 1.4٪ من الإنتاج العالمي ، وفقاً لمراجعة الإحصائية للطاقة العالمية .

وقالت المجلة الإحصائية إن الإمارات صدرت في العام نفسه 8.8 مليار متر مكعب من الغاز الطبيعي المسال ، أي 1.7 بالمئة من صادرات الغاز الطبيعي المسال العالمية .

وقال بارودي: "مع تسارع وتيرة الجهود العالمية لمكافحة تغير

المناخ ، من المتوقع على نطاق واسع أن ينمو دور الغاز الطبيعي بشكل عام

تتمتع أدنوك بسمعة طيبة ، لذلك كان من المتوقع أن يجذب الاكتتاب العام في أدنوك للغاز اهتمامًا كبيرًا

**UAE's ADNOC Gas to Start Trading in \$2.5bn IPO. International Energy Expert, Roudi Baroudi told AFP: "LNG is Most Important Transition Fuel in the move away from hydrocarbons".**



UAE state energy company ADNOC's recently formed gas unit will launch on the Abu Dhabi stock market on Monday in a \$2.5 billion initial public offering aimed at tapping high demand for the fuel.

Shares in ADNOC Gas, which only became operational at the start of this year, were heavily oversubscribed even after the offering was expanded from 4.0 to 5.0 percent of issued share capital in response to strong interest.

The final price was set at 2.37 dirhams (\$0.65) per share, towards the top of its range, raising about \$2.5 billion and implying a market capitalisation of around \$50 billion.

ADNOC Gas is the biggest flotation yet on the Abu Dhabi stock exchange, which opens at 9:30 am (0530 GMT).

At more than 50 times oversubscribed, it is the biggest demand ever seen for an initial public offering in the Middle East and North Africa, outstripping oil firm Saudi Aramco's world-record \$29.4 billion listing just over three years ago.

The rapidly organised IPO from ADNOC, one of the world's biggest oil firms, follows last year's scramble for alternative gas resources after Russia's invasion of Ukraine, and comes as countries search for cleaner fuels to mitigate global warming.

Energy consultant Roudi Baroudi, who heads the Qatar-based Energy and Environment Holding firm, said he expected brisk demand when the shares start trading.

"There is every reason to expect that the massive oversubscription we saw will carry over into strong interest when the shares are floated publicly," Baroudi told AFP.

– 'Transition fuel' –

Abu Dhabi National Oil Company, the United Arab Emirates' key revenue-earner, retains a 90 percent stake in the subsidiary



formed from its former gas processing, LNG and industrial gas units.

Gas is being touted as cleaner than other fossil fuels as countries around the world strive to reduce their emissions.

Baroudi said Liquefied Natural Gas (LNG) was “the most important transition fuel in the move away from hydrocarbons”.

In 2021, the UAE produced 57 billion cubic metres (bcm) of natural gas, or about 1.4 percent of global output, according to the BP Statistical Review of World Energy.

That same year, the Emirates exported 8.8 bcm of LNG, 1.7 percent of world LNG exports, the Statistical Review said.

“As global efforts to battle climate change gain pace, the role of natural gas in general... is widely expected to grow,” Baroudi said.

“ADNOC enjoys a solid reputation, so it was to be expected that the ADNOC Gas IPO would attract strong interest.”

ADNOC Gas could be the first in a series of share offerings in Abu Dhabi this year.

At least eight companies are expected to follow in fields ranging from technology to asset management and regenerative medicine, Bloomberg said, citing Sameh Al Qubaisi, director general of economic affairs at Abu Dhabi’s Department of Economic Development.

<https://www.digitaljournal.com/business/uaes-adnoc-gas-to-start-trading-in-2-5bn-ipo/article>

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# Aramco Weighs LNG Exports as Hydrogen Talks Prove Tough



*Saudi Aramco is weighing exports of liquefied natural gas instead of blue hydrogen, as talks with potential buyers of the latter fuel prove tough.*

The world's biggest oil company is investing billions of dollars in gas production. It's priority is to meet rising demand within Saudi Arabia and then convert what's left over into blue hydrogen, a fuel seen as important for the energy transition because the carbon emitted when it's made is meant to be captured.

Yet existing technology means blue hydrogen could cost the equivalent of around \$250 a barrel of oil, Aramco's chief executive officer said on Tuesday.

"It is very difficult to identify any off-take agreement in Europe" for blue hydrogen, Amin Nasser said on a call with analysts on Tuesday. "Even the customers in Japan and Korea

are waiting for government incentives. Until they get these incentives, it'll be costly for them to pursue that blue hydrogen."

The company won't make a final investment decision to build hydrogen export facilities without first signing supply deals, he said. It's so far sent test shipments in the form of ammonia to South Korea and Japan.

"This is a very expensive program," Nasser said. "It's a lot of capital and you need customers. So we will not sanction a project without securing an off-take agreement."

The kingdom has some of the world's biggest gas reserves but barely exploited them in the past. Demand for gas has boomed recently, especially since Russia invaded Ukraine and cut supplies to Europe in retaliation against sanctions.

Much of Saudi Arabia's additional gas will come from Jafurah, one of the world's largest untapped fields. It aims to spend tens of billions of dollars developing it and has started discussions with investors in midstream projects such as pipelines, said Nasser.

Sinopec and TotalEnergies SE are among companies considering investing in those projects, Bloomberg reported this month.

Nasser spoke shortly after Aramco reported a net profit of \$31.9 billion for the first quarter and announced a plan to increase its \$76 billion annual dividend.

It had decided to prioritize blue hydrogen because it's seen as a cleaner fuel than LNG, Nasser said.

Still, even if Aramco doesn't export LNG from Saudi Arabia, it's keen on investing in foreign terminals, including in the US and Australia.

"We have started discussions with our partners globally on LNG opportunities," he said, confirming a Bloomberg report from

March.

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# BP ventures back into oil frontiers to boost output



By Ron Bousso

LONDON (Reuters) – BP is ramping up oil exploration and drilling activity in frontier prospects as the energy giant tries to stem a decline in its oil and gas output after years of focusing on a shift to renewables to cut carbon emissions.

The move comes as companies try to balance pressure to slash climate-warming pollution against a desire to capitalise on soaring profits from oil and gas sales, even as governments work to tame energy prices following Russia's invasion of Ukraine.

BP said that on Monday it started drilling a wildcat, or exploratory, well far off the east coast of Canada which could open a new oil province in one of the world's most remote locations.

The Stena IceMax drilling ship arrived on Sunday at the site of the Ephesus well in the Orphan basin some 400 kilometres offshore, according to ship tracking data.

Early seismic testing shows the Orphan basin may hold up to 5 billion barrels of oil equivalent (boe), one company source said. BP has drilled for oil there in the past with no success, but continues its search for resources.

It also holds a 35% stake in the nearby Bay du Nord offshore acreage operated by Norway's Equinor, which is considering developing the block after making several discoveries there.

In addition BP has revived in recent weeks plans to develop a complex oil reservoir in the Gulf of Mexico named Kaskida that was shelved a decade ago due technical challenges. The new technology it will use to do so, if successful, could help unlock other similar resources around the world, it said.

GRAPHIC: BP's spending  
<https://www.reuters.com/graphics/BP-SPENDING/egpbyezxwvq/chart.png>

## STRATEGY SHIFT

BP largely abandoned exploration of new oil and gas frontiers after Chief Executive Officer Bernard Looney in 2020 announced plans to reduce its oil and gas output by 40% by 2030 as part of an ambitious climate strategy.

Instead, BP focused on searching for small reservoirs in basins where it operates such as the Gulf of Mexico, the North Sea and Angola that can be easily and quickly linked to existing platforms.



But Looney decided in February to scale back plans to cut oil and gas output – already down some 10% from 2019 levels – in response to investor pressure, now aiming to cut output by 25% by 2030 to 2 million boe per day.

The focus has once again shifted to discovering, developing and acquiring new resources to offset a 3% to 5% natural decline of fields as reservoirs are depleted.

BP will reach its lower production target mostly through selling ageing oil and gas assets by 2030, while maintaining its underlying production by investing in new fields, Looney said in February.

The group has 15 oil and gas projects, including in Canada, Brazil, Senegal and Mauritania, which it is considering developing after 2025 to sustain its production, Chief Financial Officer Murray Auchincloss told Reuters.

In recent weeks, it has announced plans to acquire a stake from Shell in Australia's giant Browse gas project, and is also in talks, together with Abu Dhabi's national oil company, to buy a 50% stake in Israeli gas producer NewMed Energy.

While investing more in oil and gas, BP in February said it was also increasing spending on low-carbon fuels and renewables.

## KASKIDA

BP now expects to make a final decision on the development of its 100% owned Kaskida reservoir by the second half of 2024, with the field expected to start production by the end of the decade, Auchincloss said.

The Kaskida prospect was discovered in 2006 some 250 miles southwest of New Orleans by the Deepwater Horizon drilling rig, on which 4 years later a deadly blast occurred, leading to the largest oil spill in U.S. history.

The field, which holds an estimated 4 billion barrels of oil, was the heart of a large BP project to develop technology to drill in high pressure and high temperature offshore reservoirs.

The so-called Project 20K aimed to design and develop drilling rigs, subsea production system and blowout prevention equipment to produce oil and gas in reservoirs with extreme conditions of pressure of up to 20,000 pounds per square inch and temperatures as high as 350°F (175°C).

The project was however put on hold in 2013 due to its high costs and technical challenges.

BP has now decided to revive it thanks to improvements in geological analytics and drilling technology, Auchincloss said.

“We always kept Kaskida as an option, and it looks like its time has now come,” he told Reuters.

BP believes that the Kaskida prospect will allow it to unlock other, similar geological reservoirs in the Gulf of Mexico, where it is one of the largest producers, he added.

The group is the front-runner in a licensing round for the Keathley Canyon lease, which contains already-discovered resources that could be used to expand the Kaskida project, according to an internal memo seen by Reuters.

(This story has been refiled to add a dropped word in paragraph 3)

(Reporting by Ron Bousso; Editing by Jan Harvey)