Sanctions aren't stopping Russia's LNG ambitions



Despite the imposition of US and EU sanctions in the energy sector, new projects continue to flourish in Russia. Already the world's largest exporter of traditional natural gas, the country is gaining a foothold in the liquefied natural gas market. For the last 3 years, Russia's LNG capacity has been growing substantially.

Competition from Qatar, Australia, and the US, the world leaders in LNG exports, coupled with the impact of political tensions after the Ukraine crisis, have made Russia reconsider its traditional pipeline exports. After Lithuania and Poland built their own LNG terminals with gas from Norway, Qatar and most recently the US, Gazprom's conventional gas intake was significantly diminished in both countries. Despite Gazprom's cheaper price, Lithuania and Poland preferred to pay a premium for their LNG to reduce the dependency on Russia's energy

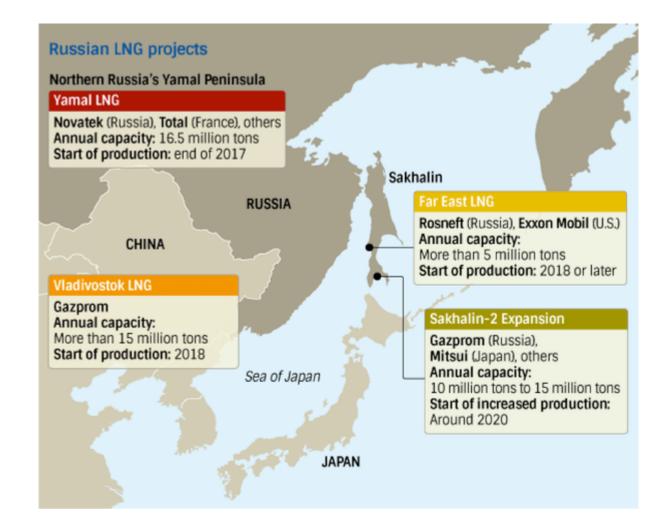
resources.

Gaining a foothold

Novatek, Rosneft and Gazprom each set out to develop their own unconventional gas resources. Novatek's Yamal LNG is Russia's most ambitious project. Based on the Kara Sea in the Arctic Circle, gas extraction is conducted under the permafrost, which makes it incredibly challenging. Funded by Russia's Novatek, France's Total, China National Petroleum Corporation, and China's Silk Road Fund, Yamal LNG is a \$27 billion facility that will start full operation in 2018. It will produce 16.5 million tonnes of LNG per year. Yamal LNG's gas plant will be finished in November. As a symbolic gesture, Russia will send the first shipments to China, which supported the project. Another four shipments will follow in December.

Rosneft is developing its Far East LNG project in Sakhalin, which aims to produce 5 million tonnes of LNG gas. Its goal is to deliver supplies to the Asia-Pacific region, in particular to Japan and South Korea.

Gazprom is pushing LNG as in-house transport fuels. Russia's gas giant signed agreements with Avtodor, the Russian highways state company, and Gazprom Gazomotornoye Toplivo, a Gazprom subsidiary, to grow a network of LNG and compressed natural gas filling stations for locomotives and trucks. Expanding its reach, Gazprom also launched small-scale LNG projects abroad in places like Vietnam, Belarus, Ghana and Bolivia.



Bypassing Western sanctions

The impact of Western sanctions on Russia's LNG development proved to be rather limited. Despite the restrictions on financial borrowing and export of Western technologies (e.g. drilling and hydraulic fracturing), Russia managed to keep its LNG projects afloat. Loopholes in the sanctions regime and new partners allowed Russia to bypass legal implications and to find new funding.

While both oil and gas exploration projects were prohibited under US sanctions, the EU sanctions exempted gas projects. This allowed European investors to further participate in the development of Russia's LNG gas plants. Both French Total and Dutch Shell preserved their 20% and 27% shares in the Yamal and Sakhalin projects, respectively.

Despite Western restrictions on capital, Russian energy companies still manage to attract European investments.

Italy's Saipem is set to be a subcontractor for Arctic LNG 2, Novatek's second gas plant on the Kara Sea. In 2015, Shell agreed to invest in the expansion of Gazprom's Sakhalin II, while in 2017, a Dutch company set up a joint venture with Gazprom to design and construct the Baltic LNG project in the Leningrad Region. However, Rosneft's Far East and Gazprom's Vladivostok LNG projects were delayed until 2020 due to a lack of funds and low fuel prices. Partnered with ExxonMobil in 2014, the Far East project was stalled due to looming Western sanctions over the Ukraine crisis. Recently, Rosneft announced that it may build the LNG plant using its own resources exclusively.

Russia's pivot to Asia and the Middle East lessened the country's dependence on Western lending. In March 2017, having difficulties raising funds from Western banks, Novatek sold a 9.9% stake to China's Silk Road Fund. Similarly, Rosneft turned to Chinese investors after Glencore and the Qatar Investment Authority cut their stakes. A 14% stake of Rosneft was bought by CEFC, China's Energy conglomerate, for \$9 billion. Recently, investors from Japan and the Middle East showed interest in Gazprom's Baltic and Novatek's Arctic 2 LNG projects.

Making strides in the LNG market

With the latest reports predicting 13% growth in the LNG market by 2025 and an overall 53% share in long-distance gas trade by 2040, Russia is under further pressure to develop its LNG projects on time. Currently, Russia exports 10.8 million tonnes and has a 4.2% market share.

Following the completion of the Arctic 2 LNG project, the country might challenge the dominance of Qatar, which currently occupies 30% of the market. By building the second gas plant on the Gydan peninsula, Russia could produce up to 70 million tonnes of LNG annually, just below Qatar's 77 million. The construction of Arctic 2 is slated to commence in 2019, with the first shipments due on the market in 2023.

Challenging Qatar's dominance in the LNG market would make Russia not only the world's largest exporter of conventional natural gas, but also of liquefied gas. The conditions for that are favourable. With funding from China and Saudi Arabia, Russia can bypass Western restrictions on capital. Russia's LNG exploration sites are strategically close to the Asian market. Located in the Far East, LNG would be easy to transport via sea to Japan and South Korea, the world's largest LNG importers.

Total to buy 10% stake in Russian LNG project

France's Total has agreed to take a 10 per cent stake in Arctic LNG 2, a liquefied natural gas project being developed by Russia's Novatek in the Siberian arctic.

Total did not specify the financial details, but the acquisition values the project at \$25.5bn, Novatek's chief executive Leonid Mikhelson said. He added that he was in talks with other companies to acquire other stakes and that Novatek intended to hold 60 per cent of the project.

Total, which already owns 19 per cent of Novatek and has a 20 per cent stake in Yamal LNG, a similar project launched this year, has an option to increase its Arctic LNG 2 stake to 15 per cent. The deal was signed during French president Emmanuel Macron's visit to Russia for talks with Vladimir Putin.

"Total is delighted to be part of this new world class LNG project alongside its partner Novatek, leveraging the positive experience acquired in the successful Yamal LNG project. This project fits into our strategic partnership with Novatek and

also with our sustained commitment to contribute to developing the vast gas resources in Russia's far north which will primarily be destined for the strongly growing Asian market," said Patrick Pouyanné, chairman and chief executive of Total.

"Arctic LNG 2 will contribute to our strategy of growth in LNG by developing competitive projects based on giant low costs resources."

When up and running, LNG 2 will have a production capacity of approximately 19.8m tons per year. Total said the final investment decision is expected in 2019, with plans to start up the first train by the end of 2023.

Mr Mikhelson said: "We are talking to a number of companies [about selling other stakes in the project]. Not empty chitchat but serious discussions."

Gazprom escapes EU fine in competition probe



The Russian gas giant has to revamp the way it sells gas to EU countries.

European Competition Commissioner Margrethe Vestager on Thursday stuck with her controversial decision not to fine Gazprom on charges that it abused its dominance to rip off consumers in Central and Eastern Europe.

Instead, the settlement announced Thursday will seek to change Gazprom's behavior through a set of legally-binding commitments.

"Our decision provides a tailor-made rulebook for Gazprom's future conduct," Vestager said. "It gives Gazprom customers in Central and Eastern Europe an effective tool to make sure the price they pay is competitive."

Under the deal, the Kremlin-backed firm agreed to make deep changes to the way it has historically done business in Central and Eastern Europe.

"I know some would have liked to see us fine Gazprom no matter the solution on the table," Vestager said, adding that the settlement achieves goals that the Commission "could not have gotten otherwise."

Gazprom agreed to change how it negotiates gas prices with countries in Central and Eastern Europe, in an effort to create a more competitive market. Customers will now have the right to ask for a price review if they believe they are paying Gazprom higher prices than on Western European gas hubs. If a deal isn't struck within 120 days, an arbitrator overseen by the EU "will then impose a competitive gas price."

Gazprom also agreed to drop clauses restricting customers' ability to sell gas across borders and create opportunities for more gas to flow to the Baltic states and Bulgaria.

The commitments are valid for eight years.

"Gazprom has accepted that it has to play by our common rules — at least if it wants to sell its gas in Europe," Vestager said.

Gazprom's Deputy CEO Alexander Medvedev said that the company was "satisfied with the commitments decision."

"We believe that today's decision is the most reasonable outcome for the well-functioning of the entire European gas market," he said.

The Commission can impose a fine of up to 10 percent of the company's annual turnover in case Gazprom breaks its commitments "without having to prove an infringement of EU antitrust rules." In Gazprom's case this could be as much as €6.8 billion, according to its 2015 results. It will also set up a monitoring system to ensure Gazprom sticks to the deal.

Opponents of the settlement argued that Gazprom should have been fined. They fear any commitments will be too weak to change Gazprom's behavior.

"We are disappointed that the years-long proceedings have ended with no fine for Gazprom, no compensation for affected companies, and with hardly any meaningful concessions on Gazprom's side," said a Polish diplomat. "This is particularly worrying in the context of the aggressive Russian policy against the EU and its member states. Today's decision sends a clear signal that the EU is coming to terms with years of Russian tactics of using Gazprom as an external policy tool against the [Central and Eastern European] region."

A leaked copy of the Commission's 2015 charges against Gazprom shows Brussels planned to hit the Russian company with significant fines for "intentionally" abusing a dominant position to harm governments and customers in Europe in what was an "obvious infringement" of EU rules.

But the Commission retreated from that hard stance.

Thursday's final announcement comes more than a year after Vestager first announced in March 2017 that she was considering settling the inquiry without a fine in return for Gazprom's commitment to improve how it does business in Central and Eastern Europe.

Lithuania, whose complaints kicked off the case in the first place, was generally pleased with the outcome, but the country's energy minister, Žygimantas Vaičiūnas pointed out that the settlement doesn't correct past wrongs.

"We cannot write off estimated losses of about €1.5 billion to our gas consumers, created by Gazprom abusing its dominant position on the market," he said in a statement. "We will continue to look for ways to make Gazprom to indemnify those losses."

The decision doesn't mean Gazprom won't face lawsuits. "It is for people who feel that they have suffered from Gazprom behavior to go to national courts and to seek compensation as it has just been confirmed by the EU court," Vestager said.

Commission investigators raided Gazprom's offices in 2011, although held off on formally charging the company amid a dramatic deterioration in relations between the EU and Russia over the latter's annexation of Crimea from Ukraine in 2014.

The Commission has not always followed up on threats to fine companies in the past, dropping cases against banks and cement-makers in recent years after they dispelled concerns set out in formal charges. When asked in 2017 to explain why she preferred settling, Vestager said: "We found it was most helpful for citizens to have Gazprom's future behavior changed."

EU settles seven-year Gazprom dispute without imposing fine



The EU has settled a seven-year dispute with Gazprom after the Russian state-controlled energy giant agreed to change its operations in central and eastern Europe.

The deal, announced on Thursday by the EU's competition commissioner, Margrethe Vestager, comes at a time of tensions between Russia and Europe over Ukraine, Syria and the poisoning of the Skripals in Salisbury, which has taken British-Russian relations to a new low. Meanwhile there is division within the EU over the construction of the Nord Stream 2 pipeline between Russia and Germany.

Vestager sought to isolate the case from the political turmoil. "This case is not about Russia, this case is about European consumers and European businesses and making the market serve them," she said. "This is about what rules to play by, no matter your flag, no matter your ownership."

Under the terms of the deal, Gazprom will be banned from imposing restrictions on how its customers in central and eastern Europe use gas. Bulgaria, the Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland and Slovakia will no longer

be banned from exporting gas to another country.

The deal aims to answer concerns that customers in five countries were being over-charged for their gas. From now on, customers in Bulgaria, Estonia, Latvia, Lithuania and Poland have the right to demand a price in line with those in Germany and the Netherlands.

If Gazprom fails to respond, these customers can take their complaint to an arbitration body in the EU, which is empowered to impose a lower price.

Some governments are unhappy about the commission's decision not to fine Gazprom for its past behaviour. Lithuania's prime minister, Saulius Skvernelis, described the proposed settlement as "strange", Reuters reported.

Acknowledging that some would have liked to have seen Gazprom fined, Vestager said that option was not in the best interests of European consumers.

"With today's decision, Gazprom has accepted that it has to play by our common European rules, at least if it wants to sell its gas in Europe. It has accepted to play by a rulebook that is tailor-made to ensure that European customers can benefit from the free flow of gas this very day."

She said failure to comply could lead to a fine of up to 10% of global turnover, a step that can be taken without another lengthy legal investigation.

"This is not empty theory," she said. "In 2013 we fined Microsoft over half a billion euros when the company broke its obligation. In other words, the case doesn't stop with today's decision. Rather, it is the enforcement of the Gazprom obligations that starts today."

Gazprom's deputy chief executive, Alexander Medvedev, said he was satisfied with the settlement, describing it as "the most

reasonable outcome for the well-functioning of the entire European gas market".

TANAP to deliver first commercial gas on June 30



- The project came in under budget from the original \$11.7 billion down to \$7.99 billion

First commercial gas from the Trans Anatolian Natural Gas Pipeline Project (TANAP) to Turkey will begin transit by June 30, Saltuk Duzyol, TANAP's general manager said on Tuesday.

TANAP, which will carry Azeri gas to Turkey and then onto Europe, is currently 93.5 percent complete, Duzyol confirmed at TANAP's Eskisehir Measurement and Compressor station where Turkey receives Azeri gas.

"Phase 0, which starts from the Turkey-Georgia border and ends in Turkey's Eskisehir province is almost completed," Duzyol said and added that the second part of the project — Phase 1 — starts from Eskisehir and continues to the Ipsala district of Edirne on the Turkey-Greece border, where TANAP will be connected to the Trans Adriatic Pipeline (TAP), the pipeline that will bring Azeri gas to European markets.

"We completed 80.7 percent of Phase 1. When we finish building this phase, we will wait for TAP. The percentage of the total completion of TANAP is currently 93.5 percent," he said.

Phase 0, which started testing on Jan. 23, is still ongoing but from June 30 commercial gas transfer will start, Duzyol said.

The TANAP project has seen the employment of around 13,000 and currently has around 7,000 employed. The project had 82 million man-hours worked and the equivalent length of 175 million kilometers driven.

The project has also revealed many unexpected surprises during its construction phase, Duzyol said, disclosing that nine species of bugs were discovered along with a new plant species, previously unknown to the scientific community.

"We also discovered 154 archeological sites during the route selection and construction," he added.

He said the total value of contracts signed for the project to date is \$5 billion.

Project cost is under budget

Duzyol lauded the project management and the procurement process as a success in bringing the costs of the project under budget.

The estimated investment cost was \$11.7 billion at the start of the project, he explained adding that, and "We have

successfully pulled this figure down to \$7.99 billion with the procurement process and project management we have successfully provided. I am proud to say that this is a huge financial success."

He disclosed that project partners awarded \$3.75 billion in credit from international financial institutions and the European Union provided \$10.2 million in grant aid.

The stakeholder numbers for the project have also increased from three to four.

"The Southern Gas Corridor Company (SGC) had previously a 58 percent share but transferred a 7 percent stake to SOCAR Turkey. Currently, the SGC holds 51 percent, Turkey's BOTAS 30 percent, BP 12 percent and SOCAR Turkey 7 percent," he explained.

Duzyol also stressed that the TANAP pipeline could also be used to transfer gas from the Eastern Mediterranean or Iraq, conditional on sufficient demand and agreements.

TANAP's initial capacity per year will be 16 billion cubic meters from which Turkey will withdraw 6 billion cubic meters while the remaining 10 billion cubic meters will be delivered to Europe.

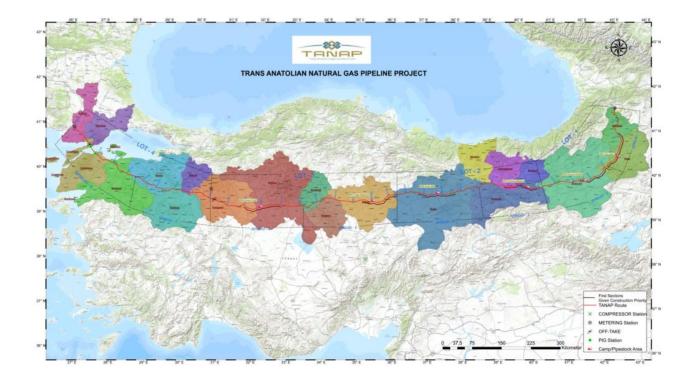
TANAP project to enter into service in June: Turkish minister



The Trans-Anatolian Natural Gas Pipeline (TANAP) project will enter into service as of June 12, Energy and Natural Resources Minister Berat Albayrak said on May 11.

"The opening ceremony will be held with the attendance of Turkish President Recep Tayyip Erdoğan and Azerbaijan President Ilham Aliyev on June 12," Albayrak said during his speech at a sector meeting in the northwestern province of Bursa.

Project officials announced in April that the first gas would be pumped on June 30.



TANAP, running from the eastern province of Ardahan on the border with Georgia towards borders with Greece and Bulgaria, is the central and longest section of the Southern Gas Corridor (SGC). The main aim of the SGC is to connect the giant Shah Deniz gas field in Azerbaijan to Europe through the South Caucasus Pipeline (SCP), TANAP, and the Trans Adriatic Pipeline (TAP). The SCP runs from Azerbaijan to Turkey through Georgia and the TAP starts in Greece and runs to Italy through Albania and the Adriatic Sea.

The initial capacity of TANAP is expected to be 16 billion cubic meters (bcm) of gas per year, gradually increasing to 31 bcm. Around 6 bcm of gas will be delivered to Turkey and the remaining volume will be supplied to Europe.

Albayrak also said Turkey would start its first solo oil and gas deep-sea drilling in the Mediterranean before the end of this summer.

Oil at \$100 not to hurt world economy as much as in 2011



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A general view of the Amuay refinery complex which belongs to the Venezuelan state oil company PDVSA in Punto Fijo, Venezuela (file). The global economic impact of oil hitting \$100 a barrel won't be as big as when that happened in 2011 thanks to changes in the US. An analysis by Bloomberg Economics estimated that oil touching the triple-digit mark would shave 0.4% off US gross domestic product in 2020, compared with a baseline price of \$75 a barrel. Yet that's less of a hit than in the past because overall price levels have risen, the amount of energy required to produce a unit of economic output has slipped and the US has become less of an oil importer thanks to its shale industry. That mutes the effect of oil price shocks on the world's biggest economy, and in turn on other countries. As such, "\$100 oil won't feel like it did in 2011," and will actually feel "more like \$79" a barrel, economists Jamie Murray, Ziad Daoud, Carl Riccadonna and Tom Orlik found. "With the US still firing on close to all cylinders, the rest of the world would suffer less as well — global output would be down by 0.2% in 2020." The economists also estimated that oil would have to hit \$200 a barrel before seriously stymieing the global economy.

Goldman Tells Big Oil: Take the Gas Risk, Demand Will Follow

The world's largest energy producers will probably start hitting the gas on new projects, according to Goldman Sachs Group Inc.

Suppliers are better placed than buyers to bear the cost and risk of new liquefied natural gas projects, and may drive the next wave of investment, the bank said in a note. While the industry's aware of the need for more output, the traditional model, where financing for new LNG capacity is dependent on binding sales agreements, has become an impediment, Goldman said.

The oversupplied LNG market is at risk of swinging into a deficit early in the next decade if new projects aren't commissioned soon enough to meet increasing global demand. Large energy companies — including Royal Dutch Shell Plc and BP Plc, which have projects in the pipeline — will probably drive investments, according to Goldman.

"Natural gas is gaining market share relative to other fossil fuels, but new sources of supply must be developed to sustain this trend post 2020," analysts including Christian Lelong said in the May 15 note. "A greater willingness to take on price risk should reduce the historical dependency on longterm contracts and leave producers firmly in the driving seat."

Many consumers lack the risk appetite for long-term LNG supply agreements because the visibility on downstream demand is limited, particularly in the power sector given the rise of renewables, the New York-based bank said. Producers, which have stronger balance sheets, are better placed to mitigate these risks, according to Goldman.

Gas buyers are delaying decisions and declining to go into long-term contracts, even as key markets including China and India need to clean up their air, said Charif Souki, chairman of U.S. LNG developer Tellurian Inc., in an interview at the Flame gas conference in Amsterdam.

"U.S. gas can be delivered to Asia very efficiently," and so can low-cost Russian gas, Souki said. The fuel is a very attractive way for Asia to shift to cleaner energy, and buyers will need to convince sellers to invest in new capacity, he said.

Gas 'spaghetti' past prompts Australia cost-cut teamwork



The energy industry in Australia, looking back on an era of waste and profligacy, is now preaching the gospel of thrift and collaboration as it tries to attract more investment in an age of fiscal discipline.

Firms like Royal Dutch Shell Plc are bemoaning the erosion of shareholder value from the go-it-alone mentality during the \$200bn splurge on Australian LNG projects over the past decade. Rivals Chevron Corp and Woodside Petroleum Ltd have proposed a massive offshore pipeline in Western Australia, which could be shared by several companies.

That approach contrasts with the "spaghetti junction" of crisscrossing pipelines built in the past decade as ventures approached projects independently, according to energy analyst Martin Wilkes. The hand-wringing and newfound spirit of collaboration come as Australia, on the cusp of becoming the world's biggest LNG exporter, tries to convince purse-holders in faraway headquarters to green-light more projects while investors call for more restrained spending.

"Everyone in the industry is feeling the scars from the lack of cooperation," Graeme Bethune, a consultant with

EnergyQuest, said in Adelaide. "They were quite extraordinary circumstances with \$100 oil prices driving a slew of greenfield projects. I would hope that egos have been suppressed now. Boards are going to be much more critical on any bullish, go-it- alone proposals."

Chevron proposed building a massive pipeline that would connect the Scarborough, Thebe and Exmouth fields, which lie hundreds of kilometres off the coast of northwest Australia, to the existing Wheatstone, Pluto and North West Shelf LNG plants, which sit along a 200-kilometer stretch of the coast. The plan would minimize duplication and would have superior economics over individual point-to-point concepts, Nigel Hearne, Chevron's managing director for the country, said in a speech on Tuesday at the annual conference of the Australian Petroleum Production & Exploration Association.

Woodside, which owns stakes in all three of those LNG plants and in two of the fields, supports the plan for shared infrastructure, chief executive officer Peter Coleman said at the same event in Adelaide.

Collaboration along those lines was missing last decade when energy companies were planning the slate of LNG plants that have been coming online in recent years.

In Queensland, three separate LNG plants built adjacent to each other shared virtually no infrastructure such as jetties and storage tanks. In northern Australia, two gas fields that are connected to each other are being developed in two separate projects, one using a floating liquefaction plant and one using a 900-kilometer (560-mile) pipeline to the shore.

And in Western Australia, gas pipelines splay out west and east from offshore fields, crisscrossing each other as they connect to four different liquefaction plants located on the mainland and an island. The developments in Western Australia and Queensland cost about \$36bn more than they would have if companies had collaborated from the beginning, according to a 2016 study by Wilkes, a Perth-based principal adviser at RISC

Advisory.

"Real collaboration happens at the start of projects," Wilkes said in an interview on Wednesday in Adelaide. "And had real collaboration occurred, you wouldn't have the spaghetti junction on the West Coast."

Failure to collaborate eroded shareholder value in the projects, Shell Australia chairwoman Zoe Yujnovich said in a speech at the conference. Australian companies will have to overcome that history to convince investors to fund drilling projects needed to keep LNG plants full.

"Unless we can improve the attractiveness of our projects to investors, the spectre of growing 'ullage' in LNG trains may fast become an unmanaged reality," she said, using an industry term for unused space in a storage tank. "And that is not a situation that will be easily recovered."

Shale's Public Enemy No. 1 Says Short the Permian and Eagle Ford

(Bloomberg) — The geologist who earned the wrath of shale drillers a decade ago with forecasts that natural gas was about to run out is now warning that the Permian Basin has just seven years of proven oil reserves left.

Arthur Berman, a former Amoco scientist who now works as an industry consultant near Houston, said the Permian region of Texas and New Mexico that currently pumps more oil than any other North American field won't last for long. And the Eagle Ford shale about 350 miles (560 kilometers) away in South Texas isn't looking good either.

Berman's grim outlook, based on analyses of reserves and production data from more than a dozen prominent shale drillers, flies in the face predictions from the U.S. Energy Department, Chevron Corp. and others that the Permian is becoming one of the dominant forces in global crude markets.

Permian output already exceeds that of three-fourths of OPEC members.

"The best years are behind us," Berman told a gathering of engineers, geologists, lawyers and financiers at the Texas Energy Council's annual gathering in Dallas on Thursday. "The growth is done."

Berman came to prominence as a shale skeptic and peak-oil advocate during the first decade of the new century, when intensive fracking and sideways drilling techniques were just beginning to unlock vast reserves of gas from shale fields in Texas and Louisiana. At the time, his dire warnings that shale gas was mostly hype drew the ire of fracking pioneers including Devon Energy Corp. and Chesapeake Energy Corp.

In 2009, Devon's exploration chief Dave Hager — who has since risen to CEO — published an op-ed piece in an Oklahoma City newspaper to refute Berman's thesis. In it, Hager likened shale to a World Series-winning home run and said Berman "is in the stands speculating on whether the slugger is on steroids."

Berman on Thursday said investors banking on shale fields to make major contributions to future global crude supplies will be disappointed: "The reserves are respectable but they ain't great and ain't going to save the world."

Still, he hasn't sold the stock of shale driller EOG Resources Inc. that he inherited from his deceased father "because they're a pretty good company."

His parting advice to the assembled was, "Conserve what you've

got, learn to live with less, open your eyes and enjoy the rest of your day." No one participated in the Q and A session.