BRIEFING

Energy cooperation with non-EU countries

European Parliament

EU energy partnerships: Saudi Arabia

SUMMARY

Since Russia invaded Ukraine, EU Member States have made serious efforts to reduce their dependence on Russian energy imports. To broaden the range of energy suppliers, the European Commission and EU national governments have signed new agreements with non-EU countries and strengthened their pledges with existing partners.

The Kingdom of Saudi Arabia is a member of the Gulf Cooperation Council (GCC) and the Organization of Petroleum Exporting Countries (OPEC). The economy of Saudi Arabia is the largest of all the GCC countries. It is dominated by petroleum, of which the country is by far the largest producer within OPEC. The country is among the top three petroleum producers in the world (the other two being the US and the Russian Federation) and is the largest exporter of crude oil in the world. It exports mainly to non-EU countries (China, Japan, India, and the US). Saudi Arabia's petroleum sector accounts for roughly 87 % of budget revenues, 42 % of gross domestic product (GDP), and 90 % of export earnings.

By 2030, the Saudi government is planning to replace crude oil, fuel oil, and diesel with natural gas and renewable energy for power generation. This would likely increase natural gas demand and investment in natural gas supply for a number of years. In February 2022, the EU-GCC Joint Cooperation Committee endorsed a joint cooperation programme for the 2022-2027 period, aiming to enhance the partnership between the EU and the GCC. Later, on 18 May 2022, the European Commission published a communication on a strategic partnership with the Gulf.

SAUDI ARABIA

Population (million)	36
Area (km²)	2 149 690
GDP (€ billion)	1 009
GDP growth (annual average growth rate in %)	5.1
Unemployment (% of total labour force)	5.6
Trade in goods (at current prices, € billion)	569

Data sources: UN (2022) accessed 5 September 2023 and Worldbank (2022) accessed 4 September 2023.

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Introduction

In 2020, the EU imported 57.5 % of the energy it consumed, and depended on Russia for almost a quarter of all its energy needs. More specifically, Russia was the EU's top supplier of natural gas (import dependency rate of 83.6 %, EU reliance on Russia 41.1 %), crude oil (import dependency 96.2 %, reliance on Russia 25.7 %) and hard coal (import dependency 10.5 %, reliance on Russia 52.7 %). Following the Russian invasion of Ukraine, EU institutions and Member States have taken decisive action to decrease their dependence on Russian energy exports.

In May 2022, the European Commission presented REPowerEU, a plan to make the EU independent from Russian fossil fuels well before 2030. The plan set out a series of measures to rapidly reduce dependence on Russian fossil fuels and speed up the green transition. Planned measures include saving energy, accelerating the transition to renewable energy and working with international partners to find alternative energy supplies (among others through the external energy strategy the EU adopted at the same time in May). In the context of that last measure, the Commission and the national governments have signed agreements with non-EU countries and strengthened pledges to increase energy trade with existing suppliers. As a result, 2022 saw increased LNG deliveries from the United States (US), as well as pipeline and LNG gas from Norway; an intensification of the EU's cooperation with Azerbaijan, especially on the Southern Gas Corridor; an exploration of the export potential of Canada and sub-Saharan African countries such as Nigeria, Senegal and Angola; political agreements with gas suppliers, such as Egypt and Israel, to increase LNG supplies; a renewed energy dialogue with Algeria; and continued cooperation with major producers in the Gulf, and Australia.

According to recent studies, other than affecting Moscow's energy revenues, this new level of cooperation – both among EU countries and between them and new or existing partners – has yielded multiple positive side effects, such as diversification of the EU's energy sourcing and enhanced innovation in the energy sector. For G7 countries, it has also led to the adoption of bold policies to accelerate the green energy transition, such as the Inflation Reduction Act in the US, the REPowerEU plan in Europe and the Green Transformation programme in Japan. From the perspective of the EU's partners, this cooperation means new or larger markets for their resources. The resulting extra revenues from the sale of oil and gas could improve their economic prospects, which is particularly important in the current economic juncture, characterised by inflation, rising government debt and the ramifications of the Russian invasion of Ukraine (e.g. food, fertilisers).

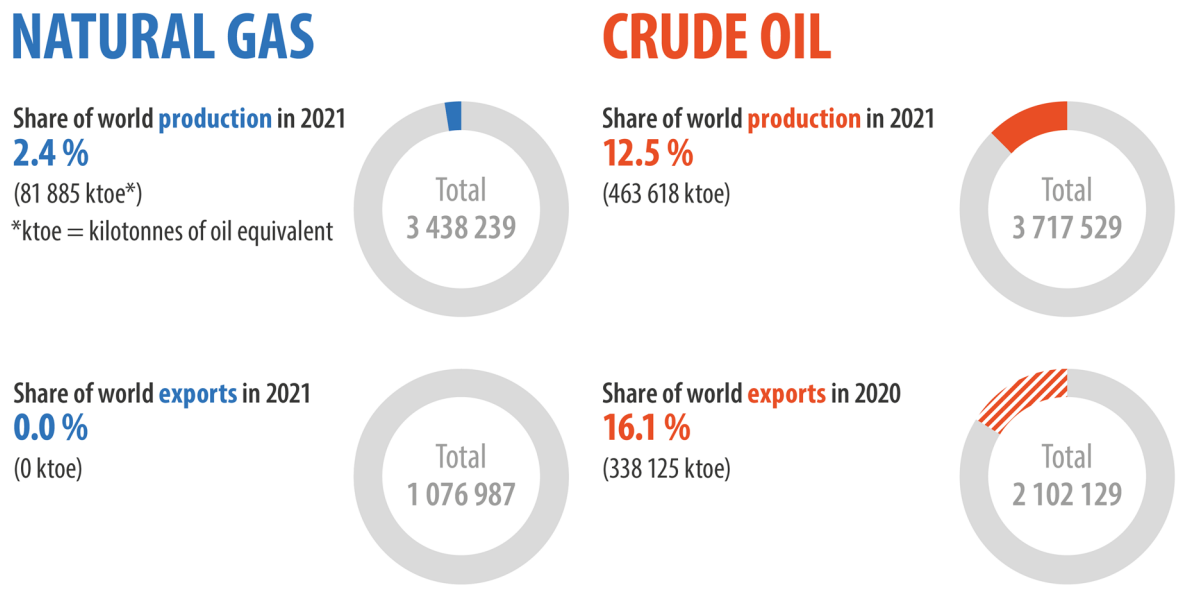
There are also risks associated with this new situation. The large increase in LNG imports demanded by the RePowerEU plan comes from a group of distant countries (e.g. United States and Qatar) resulting in an additional impact on the environment relating to the transportation of the LNG. In addition, increasing the supply to the EU deprives certain developing countries from gas, something that could – in the short term, at least – force them to rely more on the more polluting coal. Lastly, while rich hydrocarbon countries such as Norway, Saudi Arabia (see below) and Qatar have adopted multiple initiatives to speed up their energy transition, for other hydrocarbon exporters (e.g. Algeria, Azerbaijan), the promise to increase exports would presuppose important investments in gas and oil exploration and infrastructure, shifting important funds away from their own energy transitions and potentially increasing the risk of environmental hazards and disruptions in local communities.

In addition to risks relating to the green transition, this increase in LNG also carries significant fiscal implications for EU Member States, among other things because it requires a dedicated infrastructure, and because LNG prices are higher than those for pipeline gas (especially so in 2022). This comes at an unfortunate time, when many Member States' economies have been impacted by the COVID-19 pandemic and the related increase in sovereign debt.

Lastly, in third countries, extra revenue may reduce voters' willingness to demand accountability from their governments, enabling corruption and clientelism. The result could be to consolidate the power of authoritarian regimes with a mixed record on human and political rights, undermining the EU's aims to promote democracy and defend human rights.

Saudi Arabia's economy and energy

Figure 1 – Saudi Arabia's share of global production and exports of natural gas and crude oil



Data source: OECD, accessed 5 September 2023.

The Kingdom of Saudi Arabia occupies four-fifths of the Arabian Peninsula and is bordered by the Red Sea and the Persian Gulf. Saudi Arabia's economy is the largest of all the Arab countries. It is dominated by petroleum, of which the country is the largest producer by far within the Organization of the Petroleum Exporting Countries (OPEC). In fact, this industry is responsible for around 55 % of Saudi Arabia's GDP, with services coming second at 30 %.

Oil

According to BP's 2021 Statistical Review of World Energy, at the end of 2020, Saudi Arabia held 17.2 % of the world's proven oil reserves (297.5 billion barrels), second to Venezuela (17.5 %). With almost 11 million barrels per day produced in 2021, the country was among the top three producers in the world (the other two being the US with 16.6 million barrels a day and the Russian Federation, also with around 11 million barrels a day).

Saudi Arabia is also the largest exporter of crude oil in the world. The main destinations for its crude petroleum exports are non-EU countries, including China (27.8 % in 2021), Japan (15.9 %), South Korea (13.5 %), India (11.5 %), and the US (5.64 %). In the EU, which in 2021 accounted for approximately 7.8 % of Saudi Arabia's exports, the main destinations are the Netherlands (5.7 %), Spain (2.3 %), France (2.2 %), Italy (1.9 %) and Germany (1.1 %).

Saudi Arabia's petroleum sector accounts for roughly 87 % of the country's budget revenues, 42 % of GDP, and 90 % of export earnings. The country has used the massive revenue it has received over time from petroleum exports to finance infrastructure development, health care, education and, more recently, its military.

Gas

As of January 2021, Saudi Arabia (including the Neutral Zone)[1] had proven natural gas reserves of 333 trillion cubic feet (Tcf), the sixth largest in the world behind Russia, Iran, Qatar, the US, and Turkmenistan.

Saudi Arabia's dry natural gas production increased by 30 % in the last decade, exceeding 4 Tcf in 2020. Furthermore, during that same period, there was a change in the mix of natural gas from fields associated with crude oil production (associated gas) and natural gas from fields not associated with oil production (non-associated gas). Indeed, from 2015 non-associated gas increased rapidly, while associated gas declined from more than 80 % of the country's natural gas production in 2016 to 50 % in 2020.

Going forward, by 2030, the Saudi government plans to replace crude oil, fuel oil and diesel with natural gas and renewable energy for power generation (see below). This is likely to increase internal, as well as external, natural gas demand for and investment in natural gas supply for the coming years.

Renewables

The Saudi government is promoting a 'circular carbon economy', where actions offset carbon emissions rather than reducing output (see textbox). The Kingdom set up the National Renewable Energy Program (NREP) to facilitate the pursuit of these goals. Through the programme, the Saudi government plans to transition 50 % of its domestic energy supply to renewable sources by 2030. The government conceived the Saudi Green Initiative (SGI) as a framework for the Kingdom's 'green transition', in line with the core aims of the comprehensive Vision 2030 strategy.[2]

A carbon offset broadly refers to a reduction in GHG emissions – or an increase in carbon storage (e.g. through land restoration or the planting of trees) – that is used to compensate for emissions that occur elsewhere.

Source: Stockholm Environment Institute.

The first utility-scale solar power source project, the 300 MW Sakaka PV IPP (Sakaka solar plant) in the Al Jouf province, was completed and successfully connected to the national grid in November 2019. It can provide power to 45 000 households in the Al Jouf province and offset more than 500 tonnes of carbon dioxide annually. On 30 November 2022, ACWA Power, a local utilities company, signed an agreement with a Water and Electricity Holding Company (Badeel) to build the world's largest single-site solar-power plant, in Al Shuaibah, Mecca province. The solar-power facility is expected to start operations by the end of 2025, with a generation capacity of 2 060 MW.

In addition to this project, ACWA Power and NEOM are preparing a green hydrogen facility powered by solar and wind energy. The plant is expected to produce 660 tonnes of green hydrogen per day, which is equivalent to today's total annual global production. The green hydrogen will be converted into liquid ammonium and then shipped to Asia, predominantly South Korea and Japan.

Wind energy, another locally abundant resource, is supplementing this solar push. The first wind farm in Saudi Arabia, the Dumat al-Jandal 400 MW wind farm, was connected to the national grid at the end of 2021 and began producing energy. It is the largest wind farm in the Middle East. It has the ability to power up to 70 000 households and offset 988 000 tonnes of carbon dioxide annually.

Recent developments

In 2021, Saudi Arabia recovered quickly from the recession induced by the COVID-19 pandemic in 2020. In 2021 and 2022, it benefited from increased energy demand and, following the Russian invasion of Ukraine, also from high global energy prices. As a result, in August 2022, the International Monetary Fund predicted that the country would grow fastest of all the major economies (+7.6 % in 2022). Moreover, in the coming years, the country's economic growth is expected to remain high, supported by the continued implementation of Vision 2030 policies. Pro-business reforms, meanwhile, should help to facilitate higher levels of domestic and foreign private investment in the energy and non-energy sectors.

At the same time, the energy transition is not without its challenges. Experts note that the current initiatives give priority to pro-export projects (such as hydrogen and carbon capture technology), while domestic energy transitions (focusing on renewable power and energy efficiency) are

deprioritised. The result could be to transform the Saudi Arabian economy into a green energy exporter, while maintaining hydrocarbons at the centre of its economy, without changing existing economic rigidities. There are also challenges proper to each initiative. For example, the move to green hydrogen production in the country entails a high cost of production (with high capital costs, limited economies of scale, high cost of electrolysis, and limited access to water resources), as well as political and regulatory barriers (a lack of regulations and infrastructure, especially for storage and transport) and regional political instability. On a larger scale, the implementation of the Vision 2030 programme itself, the cornerstone of the energy sector reorganisation, is a complex endeavour. In a mid-term review exercise in 2020, experts noted that while the reforms had delivered fiscal stabilisation and some social reforms, they still lacked results in terms of generating employment and transforming the private sector into a growth engine.

Other experts have noted two additional categories of potential impact. Currently the Saudi state ensures political acquiescence by distributing the wealth generated by oil sales to its citizens in the form of subsidies, jobs, infrastructure and public services. By re-organising public spending and opening the economy to greater competition in the form of market forces, Vision 2030 could upend this economic order and the wider social contract it underpins. Similarly, the various reforms under Vision 2030 could undermine the power of institutions such as the Shariah courts, the Ministry of Education and the Committee for Promoting Virtue and Preventing Vice, which currently greatly influence everyday life and could oppose those changes fiercely.

Energy cooperation with Saudi Arabia

Trade between the EU and Saudi Arabia takes place within the framework of the Gulf Cooperation Council (GCC – see box). EU-GCC cooperation, in turn, is based on a 1988 Cooperation Agreement. Since then, political consultations at the highest level have been taking place on a regular basis, as well as regular senior officials' meetings and ministerial meetings. Negotiations for a EU-GCC free trade association began in 1990, but were halted in 2008.[3] Cooperation between the EU and the GCC includes areas such as energy technology, the sharing of expertise on the regional integration of energy markets, renewables, energy efficiency, carbon capture and storage, and the sustainable use of gas. To this end, an EU-GCC energy expert group was formed in the early 1990s and has met several times.

Gulf Cooperation Council

The GCC is a regional organisation, with six members: the Kingdom of Bahrain, the State of Kuwait, the Sultanate of Oman, the State of Qatar, the Kingdom of Saudi Arabia and the United Arab Emirates. Set up in 1981, its objectives are to enhance coordination, integration and inter-connection among its members.

To advance dialogue and cooperation with the GCC countries on strategic areas of mutual interest, the EU funds various projects in the region, such as the EU-GCC Clean Energy Network, the EU-GCC Dialogue on Economic Diversification, and Enhanced EU-GCC political dialogue, cooperation and outreach.

While cooperation on energy advances, the EU institutions have also been critical of the relationship between the EU and Saudi Arabia. During its last term, Parliament awarded the Sakharov Prize for Freedom of Thought to Raif Badawi, a blogger from Saudi Arabia who served a 10-year prison sentence for insulting Islam. In October 2020, Parliament adopted a resolution on the situation of Ethiopian migrants in detention centres in Saudi Arabia, strongly condemning their ill-treatment and the violation of their human rights. Parliament's resolution of July 2021 on the death penalty in Saudi Arabia condemned the country's ongoing execution of child offenders. Parliament repeated its opposition to the death penalty in another recent resolution on the universal decriminalisation of homosexuality in the light of recent developments in Uganda. In it, Parliament took the opportunity to highlight the link between respect for LGBTIQ persons' human rights and the sustainable development goals (to which Saudi Arabia is a signatory) and to point out that any discriminatory practice, particularly one envisaging the death penalty, is in radical opposition to these goals. Lastly, in its February 2021 resolution on the humanitarian and political situation in Yemen, Parliament was critical of Saudi Arabia's role in the conflict.

Both the EU and Saudi Arabia are part of the G20 forum for international economic cooperation. While the forums are typically attended by finance ministers and central bank governors, there are also dedicated energy ministerial forums in which the EU and Saudi Arabia promote their energy priorities and cooperate. These priorities currently include the clean energy transition, technological innovation and access to sustainable modern energy, and open, transparent and flexible energy markets.

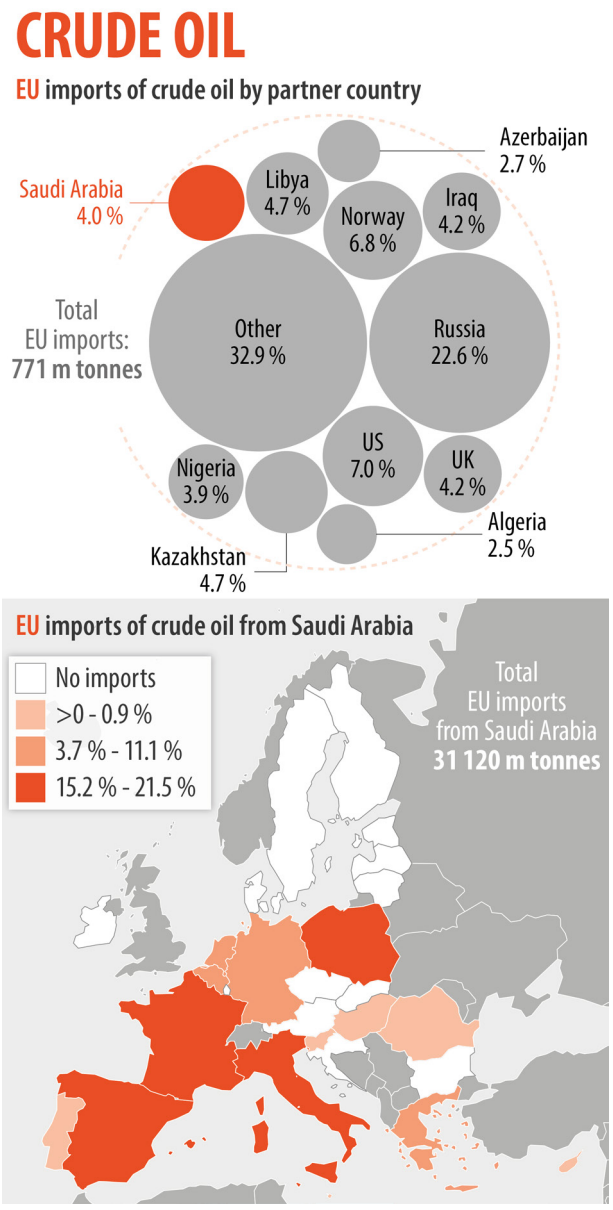
The EU is Saudi Arabia's second trading partner, with 14.8 % of Saudi Arabia's global trade (China is first with 18.7 %). Saudi Arabia is the EU's 17th trading partner in goods, with total trade of €40 billion and an EU market share of 1.1 %.

Saudi Arabia mainly imports machinery and equipment from the EU while it mainly exports oil and petrochemicals to the EU. Companies from EU Member States are working in Saudi Arabia in several strategic sectors, established in the Saudi Vision 2030, such as developing the metro lines in Riyadh, energy and environment projects, tourism and culture, construction, industrial machinery, and pharmaceuticals. Bilateral EU-Saudi Arabia trade consultations took place in 2021 for the first time.

EU level

In February 2022, the EU-GCC Joint Cooperation Committee endorsed a joint cooperation programme for the 2022-2027 period, aiming to enhance the partnership between the EU and the GCC. Later the same year, on 18 May 2022, the European Commission published a communication to the Parliament and Council on 'A strategic partnership with the Gulf'.[4] The Commission noted that a stronger partnership with the Gulf region has a key role to play in the implementation of the European REPowerEU strategy and the accompanying external energy strategy. This includes such important topics such as an increase of liquefied natural gas (LNG) supplies, measures to stabilise oil markets, cooperation on hydrogen, energy efficiency, and faster deployment of renewable energy. Moreover, given the increasing role played by nuclear energy in the GCC countries, the EU could envisage enhancing collaboration on nuclear safety and nuclear emergency preparedness and response, including on public health consequences of intentional or unintentional chemical, biological, radiological and nuclear threats.

Figure 2 – EU imports of crude oil, including from Saudi Arabia (2021)



Data source: Eurostat, accessed 4 September 2023.

Member State level

Over the last few years, several EU Member States have increased their cooperation with Saudi Arabia in the field of energy. Below are a few examples of recent developments.

On 11 March 2021, the Energy Minister of Saudi Arabia, HRH Abdulaziz bin Salman Al Saud, and Peter Altmaier, then German Minister for Economic Affairs and Energy, signed a memorandum of understanding to promote bilateral cooperation in the production, processing, application, and transportation of renewable and low-carbon hydrogen.

In July 2022, in the context of the official visit of Saudi Arabian Crown Prince Mohammed bin Salman to Greece, a memorandum of understanding for cooperation in several areas relating to the energy sector was signed between the two countries. The memorandum sets out a framework for cooperation in the fields of renewable energy, electrical interconnection, electricity exports to the EU, clean hydrogen and its transfer to the EU, energy efficiency, and the oil, gas and petrochemical industry. It also covers the adoption of a circular economy approach to carbon, and technologies to reduce the effects of climate change, such as carbon capture, reuse, transport and storage, and the direct capture of carbon from the air.[5]

In November 2022, the Saudi Arabian national oil company (Aramco) agreed on three transactions with Polish refiner and fuel retailer PKN ORLEN. As part of the transaction, Aramco acquired 30 % equity stakes of in a refinery in Gdansk, in an associated wholesale business, and a 50 % stake in a aircraft fuel marketing joint venture with BP Europa SE, which operates in seven airports in Poland. Aramco and PKN ORLEN have also entered into a crude oil sales agreement, according to which Aramco will supply approximately 45 % of PKN ORLEN's crude oil requirements. In addition to these investments, Aramco, SABIC and PKN ORLEN have signed a joint development agreement to assess the technical and economic feasibility of a potential petrochemical project in the Polish city of Gdansk.

In February 2023, France and Saudi Arabia signed a memorandum of understanding to establish a framework for collaboration in the energy sector. It addresses cooperation between the two countries in the fields of electricity, renewables, and energy efficiency. It also covers storage, smart grids, oil and gas and their derivatives, as well as refining, petrochemicals, and the distribution and marketing sector.

MAIN REFERENCES

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Popkostova Y., The Power Shift. The impact of the low carbon transition on the oil and gas economy. European Union Institute for Security Studies, March 2023.

US Energy Information Administration, Country Analysis Executive Summary– Saudi Arabia, June 2022.

ENDNOTES

1 A territory of 5 700 km² along the Gulf was shared by Kuwait and Saudi Arabia as a neutral zone until a political boundary was agreed on in 1969. Each of the two countries now administers half of the territory (referred to as the Neutral, or Partitioned, Zone), but they continue to share equally the revenues from oil production in the entire area.

2 Vision 2030, designed and promoted by Mohammed bin Salman, Saudi crown prince and prime minister (since 2022) is a comprehensive strategy which aims to decrease the Kingdom's reliance on fossil fuels (and their price volatility). The strategy is based on a 2015 McKinsey report entitled 'Saudi Arabia beyond oil' and consists of several initiatives, including privatising entire sectors of the economy, raising non-oil revenues, cutting subsidies, courting investors at home and abroad, and streamlining government services.

3 While there was no official communication on the reasons behind this decision, potential issues cited at the time included allegations that the Gulf States were subsidising sectors for import substitution (notably petrochemicals), as well as the addition of non-trade elements to the agreements, such as the issue of human rights, and other political demands.

4 For more information on the strategic partnership, see B. Immenkamp, R. Bendini and P. Srour-Gandon, A strategic partnership with the Gulf, EPRS, European Parliament, December 2022.

5 Direct air capture (DAC) technologies extract CO_2 directly from the atmosphere. The CO_2 can be stored permanently in deep geological formations. Benefits of DAC as a CO_2 removal option include high storage permanence when associated with geological storage and a limited land and water footprint. In September 2022, there were 18 such plants operating worldwide, capturing almost 0.01 Mt CO_2/year. The US has a 1 Mt CO_2/year capture plant in an advanced state of development.

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