

The Abu Dhabi National Oil Company in a Changing World

Navigating the energy transition and safeguarding investors

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Executive Summary

This brief is part of the International Institute for Sustainable Development's (IISD's) and partners' analytical series on national oil companies' (NOCs') readiness for the Paris-aligned transition to renewable energy. Given the importance of NOCs in the energy transition and the United Arab Emirates' (UAE's) leading role as the host of the 28th United Nations Climate Change Conference (COP 28) in late 2023, this case study examines the Abu Dhabi National Oil Company (ADNOC) as one of the important players in a Paris-aligned transition.

ADNOC is one of the largest oil companies in the world and has big expansion plans. Historically, ADNOC and its subsidiaries have been owned entirely by the Emirati government, but in recent years, the company has been looking more and more to international equity, bond, and lending markets to fund its expansion. ADNOC may soon sell USD-denominated bonds on the international market. It has also been increasingly partnering with international oil companies and international service companies to carry out some project activities.

As ADNOC opens up to international markets, the level of potential exposure for international investors increases. This exposure creates a series of risks, both geopolitical and climate-related. In the case of ADNOC, the climate-related risks, in particular, might become increasingly relevant, especially the so-called transition risks arising from the general shift toward a low-carbon economy. In a scenario of increasing uptake of fossil fuel phasedown

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commitments by other countries, it would be in the UAE's self-interest to begin a managed energy transition as early as possible, in order to have the time to diversify its own economy effectively, protecting its people and businesses from the risks of political inaction.

NOCs account for half of the world's oil and gas production, control two thirds of global oil and gas reserves, and often play a key role in the economic development of their own countries. In order to limit global warming to 1.5°C above pre-industrial levels, there is no room for new oil and gas expansion, and existing production must decline by at least 65% by 2050. As such, if the world is to stay within the 1.5°C limit, NOCs must begin decarbonizing their activities, and investors have a key role to play in directing and incentivizing them to do so.

This case study pays specific attention to direct and indirect investment in ADNOC and the exposure of international investors. While the UAE government is the main owner and investor in ADNOC, many international investors hold equity stakes of up to 40% in various ADNOC subsidiaries. In addition, this case study examines the role of the world's biggest commercial banks, as well as partnerships between ADNOC, international oil companies, and international service companies, as well as ADNOC's ownership of assets under foreign jurisdictions.

While this case study shows how the UAE government and foreign investors are exposed to ADNOC risks, it also suggests steps forward in how the UAE government and international investors can mitigate their risk by engaging ADNOC in decarbonizing.

Introduction

The United Arab Emirates (UAE) is hosting the 28th United Nations Climate Change Conference (COP 28) in late 2023, which has put the spotlight on its largest national oil company (NOC), the Abu Dhabi National Oil Company (ADNOC). ADNOC is one of the largest oil companies in the world and has big expansion plans. Traditionally, ADNOC and its subsidiaries have been owned entirely by the Emirati government, but in recent years, it has been looking more and more to international equity, bond, and lending markets to fund its expansion. ADNOC may soon sell USD-denominated bonds on the international market. It has also been increasingly partnering with international oil companies (IOCs) and international service companies to carry out some project activities.

As ADNOC opens up to international markets, the level of potential exposure—direct and indirect—for international investors to the Emirati NOC increases. This creates a series of both geopolitical and climate risks. In the case of ADNOC, the climate-related risks, in particular, might become increasingly relevant, especially the so-called transition risks arising from the shift toward a low-carbon economy. Such risks extend more broadly to the country; in a scenario of increasing uptake of fossil fuel phasedown commitments by other countries, it would be in the UAE's self-interest to begin a managed energy transition as early as possible to give itself the time to diversify its economy effectively. These steps would protect its people and businesses from the risks of political inaction.



There may be an important human rights angle to this risk as well. In particular, United Nations human rights experts recently warned that an oil company that is expanding production—in this case, an NOC—and its investors are in violation of international human rights law¹ due to the negative impacts of the ensuing climate change on human lives. This warning should raise a flag to investors about potential legal risks. Investors therefore need to be aware of the risks arising and the tools available to them to mitigate and manage that risk.

ADNOC is only one of many NOCs that investors should be monitoring. NOCs account for half of the world's oil and gas production, control two thirds of global oil and gas reserves, and often play a key role in the economic development of their own countries.² In order to limit global warming to 1.5°C above pre-industrial levels, there is no room for new oil and gas expansion, and existing production needs to decline by at least 65% by 2050.³ As such, if the world is to stay within the 1.5°C limit, NOCs must begin decarbonizing their activities, and investors have a key role to play in directing and incentivizing them to do so. This brief forms part of IISD's and its partners' larger stream of work on NOCs' transition readiness, as well as the role of investors engaging with NOCs.⁴ We focus on ADNOC here because of its increasing openness to international investors, as well as the timeliness of the UAE hosting COP 28.

In this brief, we pay specific attention to the exposure of international investors to ADNOC. The analysis covers investor ownership of equity shares in the company and its subsidiaries, as well as indirect financing through the world's biggest commercial banks, partnerships between ADNOC and IOCs and international service companies, and ADNOC's ownership of assets under foreign jurisdictions. These all represent avenues through which the UAE government and foreign investors are exposed to ADNOC risks—but also, opportunities for them to positively engage with ADNOC in terms of transparency and decarbonization efforts.

About ADNOC

Founded in 1971, ADNOC is the UAE's biggest state-owned oil company, fully owned by the Abu Dhabi government.⁵ Although the UAE has other NOCs, notably the Emirates National Oil Company (ENOC), owned by the government of Dubai, ADNOC is by far the largest, producing about 50 times more oil per day than ENOC.⁶ The UAE has the sixth-largest oil reserves in the world and the seventh-largest gas reserves.⁷

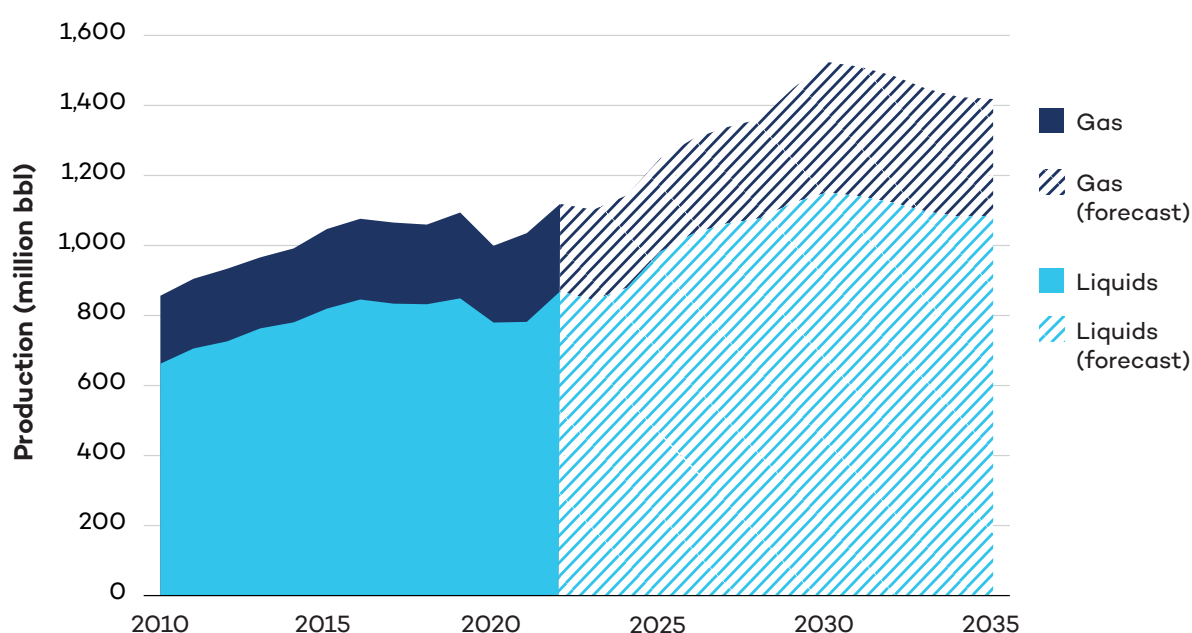
ADNOC is the world's 11th biggest oil and gas producer, with more than a billion barrels of oil equivalent (BBOE) produced in 2021. In accordance with government priorities, the company has big short-term expansion plans, including the imminent addition to its portfolio of new fields that contain 7.6 BBOE—the third-biggest oil and gas expansion in the world.⁸ Figure 1 shows how ADNOC's oil and gas production had been increasing until 2015 and then roughly stabilized over the past 8 years. The company's expansion plans forecast a sharp increase in production between now and 2030.

The company's planned production and capacity increase was brought forward from 2030 to 2027⁹ as a response to what ADNOC regards as the “transition risk” of undersupply for energy markets due to perceived long-term under-investment in hydrocarbons.¹⁰ More than



half of the production increase is coming from offshore fields, including expanding the Upper Zakum, Lower Zakum, Umm Shaif, and Belbazem fields in the UAE.¹¹ Although ADNOC, like other oil companies, is dealing with naturally declining production in its existing fields, the planned expansion goes well over what would be needed to maintain production at a constant level. This planned expansion is at odds with the need to reduce oil and gas extraction in order to meet Paris Agreement goals.¹² According to Urgewald, 90% of the planned 7.6 BBOE expansion would have to remain in the ground to stay within the 1.5°C limit since it was approved after 2021, the date past which the International Energy Agency has said no new oil and gas production projects should be approved to align with 1.5°C.¹³

Figure 1. ADNOC’s oil and gas historical production (2010–2022) and production forecast (2023–2035)



Source: Data extracted by the authors on September 12, 2023, using Rystad UCube.¹⁴

When it comes to ADNOC’s own energy transition goals, the company was ranked 96th in the World Benchmarking Alliance’s 2023 Oil and Gas Benchmark out of 100 leading oil and gas companies that together represent 80% of global oil and gas production.¹⁵ The World Benchmarking Alliance ranked ADNOC that low for several reasons: (i) the company’s failure to attach a base year to its 25% by 2030 emissions intensity reduction target and net-zero commitment or include Scope 3 emissions^b in those targets; (ii) a lack of short- or mid-term emissions reduction targets or financial information, (iii) a lack of transparency in publishing any emissions data, and (iv) its lack of commitment to stopping oil and gas exploration.

^b Whereas Scope 1 concerns direct greenhouse gas emissions from sources that are owned or controlled by a company, Scope 2 emissions are indirect emissions from the generation of electricity purchased by the company, and Scope 3 are all other indirect emissions that occur in the value chain of the company. For the oil and gas sector, Scope 3 emissions include those produced by the downstream combustion of the oil and gas produced by the company.



According to an Oxford Institute for New Economic Thinking evaluation, ADNOC is the third most misaligned producer in terms of absolute oil production overshoot, after Rosneft and the Iraq National Oil Company.¹⁶ In July 2023, ADNOC announced a commitment to bring forward its net-zero commitments from 2050 to 2045, but once again, the target fails to include the company's Scope 3 emissions.¹⁷

ADNOC's purchase in 2021 of minority stakes in Masdar's^c renewable energy business (24%) and green hydrogen business (43%) point to an attempt by the NOC to diversify into clean energy while continuing its oil extraction and transport operations as before.¹⁸ It is clear from the World Benchmarking Alliance's evaluation that not only does ADNOC have a long way to go toward decarbonizing, but it also needs to improve its transparency so that investors and others can evaluate the company's progress toward its energy transition goals.

Compared with other NOCs, ADNOC presents a profile of high climate impact and high national dependence (with nearly 70% of national government revenues coming from the oil and gas sector, the vast majority of which come from ADNOC),¹⁹ fairly high production costs (due to maturing production and moving toward higher-cost fields), and very low international openness.²⁰ However, the seemingly closed-off nature of ADNOC has been changing rapidly over the past few years, with the company progressively opening up to international investors and financing institutions. This trend is on the rise as ADNOC eyes more foreign investment to help meet its ever-ambitious expansion targets.²¹

The high importance of fossil fuel revenues and ADNOC to the UAE economy means it is very much in the UAE's national interest to take the energy transition seriously. With demand for oil and gas both projected to peak before 2030²² and more and more countries adopting commitments and agreements on phasing down all fossil fuels,²³ the UAE needs to be preparing its business model and ADNOC for transition now since it takes a long time to diversify effectively.

Equity Investors in ADNOC

ADNOC is not a monolith. Rather, it is a group of at least 15 companies. Although the parent company is entirely owned by the Abu Dhabi government, many international investors hold equity shares in various ADNOC subsidiaries—although, in all cases, ADNOC retains the controlling stake. Figure 2 provides an overview of ADNOC's subsidiaries across its various segments of operation.

On the upstream side, for example, 60% of ADNOC Onshore is owned by ADNOC, with the balance owned by international partners Total, BP, CNPC, INPEX/JODCO, ZhenHua Oil, and GS Energy.²⁴ Occidental Petroleum has a 40% stake in ADNOC Sour Gas.²⁵ Al Dhafra Petroleum, another ADNOC subsidiary, is a joint venture between ADNOC (60%), the Korean National Oil Corporation, and the Korean National Oil Consortium (40%).²⁶ Baker Hughes owns 5% of ADNOC Drilling.²⁷ Al Yasat Petroleum is a joint venture between ADNOC (60%) and the China National Petroleum Company (40%).²⁸ Looking at stakes in concessions rather than equity stakes in companies, ADNOC Sour Gas has awarded

^c Masdar is a UAE-government-owned renewable energy company founded in 2006.

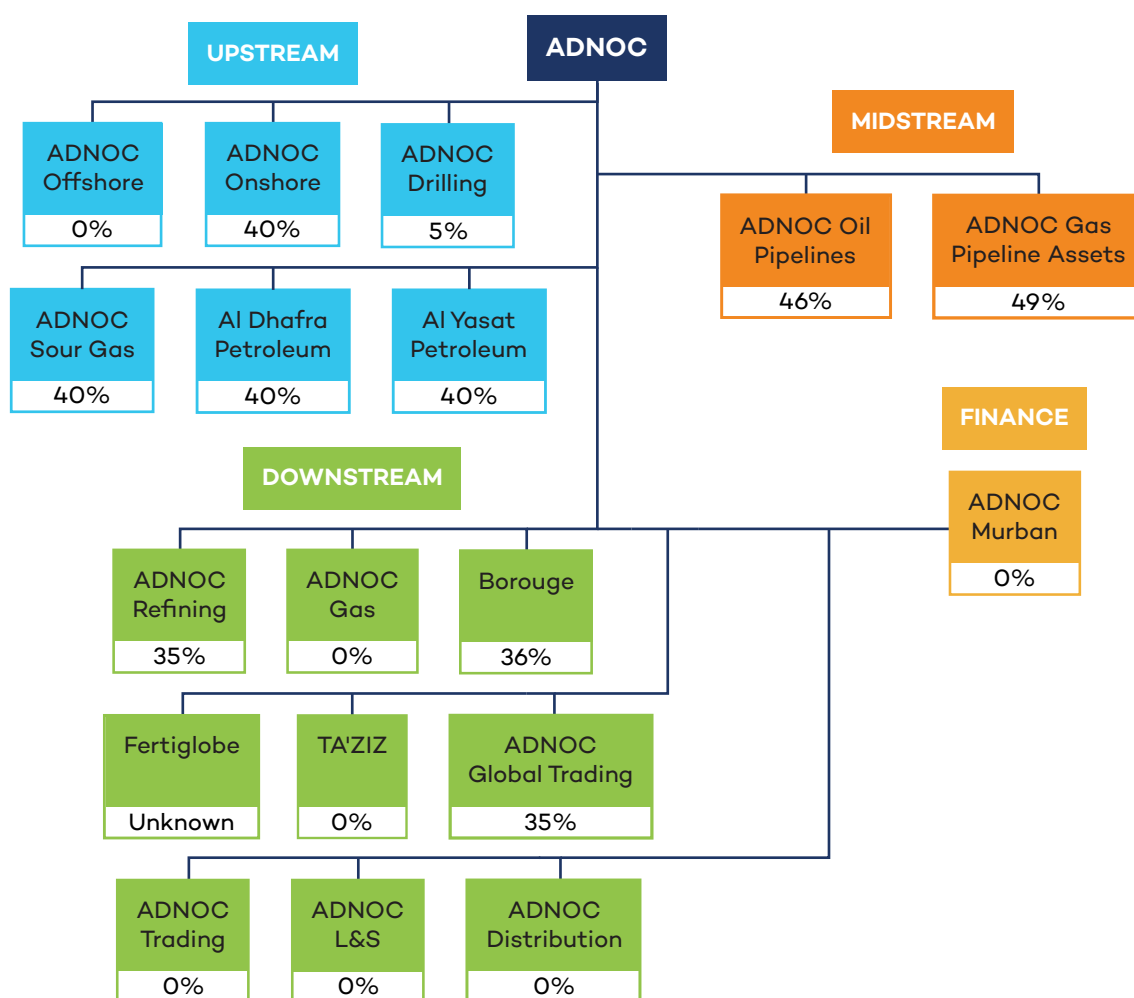


minority stakes in the Ghasha ultra-sour gas concession to OMV, Eni, and Wintershall.²⁹ Meanwhile, ADNOC Offshore has awarded stakes in various concessions to Total, Eni, INPEX, and Cepsa.³⁰

Midstream, BlackRock, and KKR Global Infrastructure hold a 40% stake in ADNOC Oil Pipelines, while GIC, Singapore’s sovereign wealth fund, holds 6%.³¹ A consortium that includes Global Infrastructure Partners, Brookfield, GIC, Ontario Teachers’ Pension Plan, NH Investment & Securities of South Korea, and Snam holds a 49% stake in ADNOC Gas Pipeline Assets.³²

Downstream, ADNOC Refining is a joint venture between ADNOC, Eni, and OMV, who hold 65%, 20%, and 15% stakes, respectively.³³ Borouge, a petrochemical company that is an ADNOC subsidiary, is partly owned by Borealis (36%),³⁴ while Fertigllobe, an ADNOC subsidiary fertilizer company, is a “strategic partnership” between OCI and ADNOC.³⁵ ADNOC Global Trading is a joint venture between ADNOC, Eni, and OMV, who hold 65%, 20%, and 15%, respectively.³⁶ Certain assets of ADNOC Gas are held in joint ventures with BP, Total, Mitsui, Shell, and PTTEP.³⁷ AW Shipping is a joint venture between ADNOC L&S and Wanhua Chemical (Singapore) Pte Ltd.³⁸

Figure 2. Share of international ownership of ADNOC subsidiaries



Source: ADNOC website.³⁹



Certain ADNOC subsidiaries are partially listed on the Abu Dhabi Securities Exchange: ADNOC Drilling (11%),⁴⁰ ADNOC Gas (5%),⁴¹ ADNOC Distribution (unclear),⁴² and ADNOC L&S (15%).⁴³

ADNOC may soon sell USD-denominated bonds on the international market. In January 2022, it created a new entity, ADNOC Murban, to become its primary vehicle for selling debt.⁴⁴ However, these plans were put on hold following Russia’s invasion of Ukraine, and while it appears that the scheme may be revived, no bonds have yet been issued.⁴⁵

Partnerships Between ADNOC and IOCs or International Service Companies

NOCs often partner with IOCs for exploration and development, as well as operations in deep water or other challenging environments. ADNOC is no exception, with extensive partnerships with IOCs across the full value chain, which are separate from the IOCs’ equity stakes in ADNOC subsidiaries. It has signed strategic partnership agreements or Memoranda of Understanding with Total,⁴⁶ ExxonMobil,⁴⁷ Eni,⁴⁸ OMV,⁴⁹ Wintershall,⁵⁰ and BP.⁵¹ In addition, ADNOC Offshore has strategic partnerships with Cepsa, OMV, CNPC, Eni, ExxonMobil, ONGC/Falcon, INPEX/JODCO, and Total.⁵²

Table 1. Companies investing in or partnering with ADNOC or its subsidiaries

Stage of the value chain	IOCs	Other international companies and financiers involved
Exploration and drilling	Total, BP, CNPC, OMV, Cepsa, INPEX, Zhenhua Oil, GS Energy, Occidental, Wintershall, KNOC, PTTEP, Eni, Exxon, ONGC	Baker Hughes, GE Oil & Gas, Sea Owl, Bergen University, Amec Foster Wheeler
Refining	Eni, OMV	Samsung
Pipelines		BlackRock, KKR Global Infrastructure, Royal Boskalis Westminster
Downstream, distribution, and trading	Eni, OMV, Mitsui, BP, Total, GS Energy, Cepsa	Borealis, OCI, Wanhua Chemical, Wood Group PLC, BASF, Linde, Adani, Reliance, Rongsheng Petro-chemical, Adani
Liquefied natural gas		McDermott, Atlantic Gulf & Pacific
Carbon capture and underground storage	Total, Eni	

Source: ADNOC website.⁵³

ADNOC has awarded exploration rights to consortia involving Eni,⁵⁴ PTTEP,⁵⁵ Occidental,⁵⁶ and INPEX⁵⁷ and signed a technical evaluation agreement with Occidental and OMV to



explore offshore fields.⁵⁸ It also signed a technical agreement with Occidental to develop the al-Hail and Ghasha oil fields.⁵⁹

ADNOC also has partnerships with international service companies. For example, the UK Wood Group PLC signed an agreement with ADNOC to perform pre-front-end engineering and design work for a world-scale blue ammonia production facility in Ruwais, Abu Dhabi.⁶⁰ ADNOC awarded a front-end engineering and design contract to McDermott International for work on a huge liquefied natural gas export terminal in UAE.⁶¹ ADNOC Refining awarded two major contracts to Samsung to introduce crude oil processing flexibility and recover water and power at the Ruwais oil refinery.⁶² In 2021, ADNOC signed an agreement with Baker Hughes to collaborate on artificial intelligence products for improved efficiency in upstream oil and gas operations.⁶³ SeaOwl signed an agreement with ADNOC for the design of remotely operated vessels capable of transporting vehicles, equipment, and supplies to and from offshore sites.⁶⁴ ADNOC contracted Reliance to construct a new chemicals production facility.⁶⁵ ADNOC also has partnerships with Rongsheng Petrochemical Co,⁶⁶ Bergen University,⁶⁷ Borealis,⁶⁸ Adani,⁶⁹ BASF,⁷⁰ Linde,⁷¹ Cepsa,⁷² Royal Boskalis Westminster,⁷³ Amec Foster Wheeler,⁷⁴ and GE Oil & Gas (which is now part of Baker Hughes).⁷⁵ Some of these companies, like McDermott International, are privately owned, albeit financed by major banks, while others, like Baker Hughes, are owned by investors. The companies partnering with or investing in ADNOC are summarized in Table 1 and classified according to the value chain stage the connection refers to.

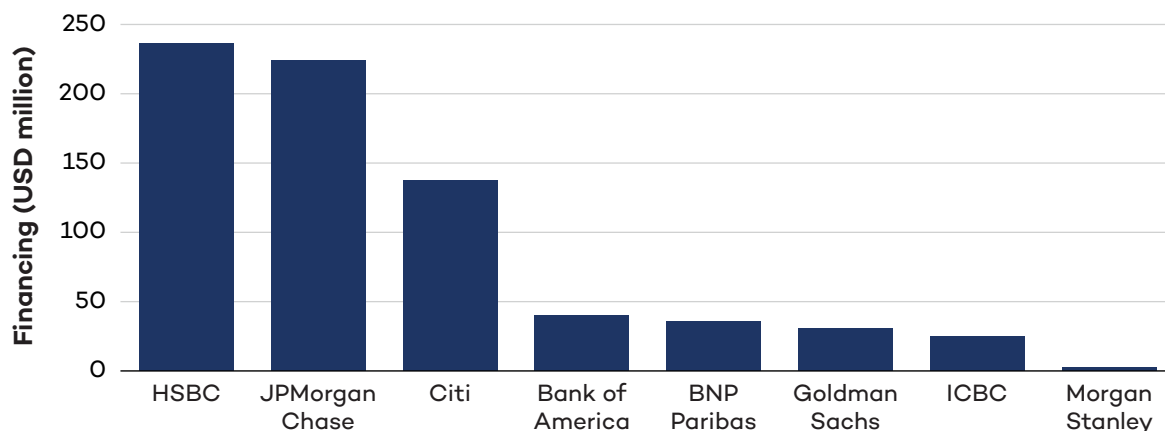
Banks

International investors are also exposed to ADNOC's fate through their holdings in banks financing the company. According to the latest *Banking on Climate Chaos* report,⁷⁶ between 2016 and 2022, some of the world's biggest commercial banks have financed ADNOC and its subsidiaries for a total of over USD 14 billion. The financing banks include JP Morgan Chase, Citi, Bank of America, BNP Paribas, Morgan Stanley, HSBC, Goldman Sachs, and Bank of China. Of this, half of the financing was directed at ADNOC directly, while the remaining half benefited ADNOC through its subsidiaries, including Abu Dhabi Crude Oil Pipeline LLC, ADNOC Drilling, ADNOC Distribution, and ADNOC Refining. Figure 3 outlines some of these financing streams for the largest international banks.

Even though HSBC changed its policy in 2022 to end financing of new oil and gas projects, it continues to finance oil and gas companies that are expanding oil and gas production at the corporate level.⁷⁷



Figure 3. Total investment in ADNOC and its subsidiaries by some of the world’s major banks (2016–2022)

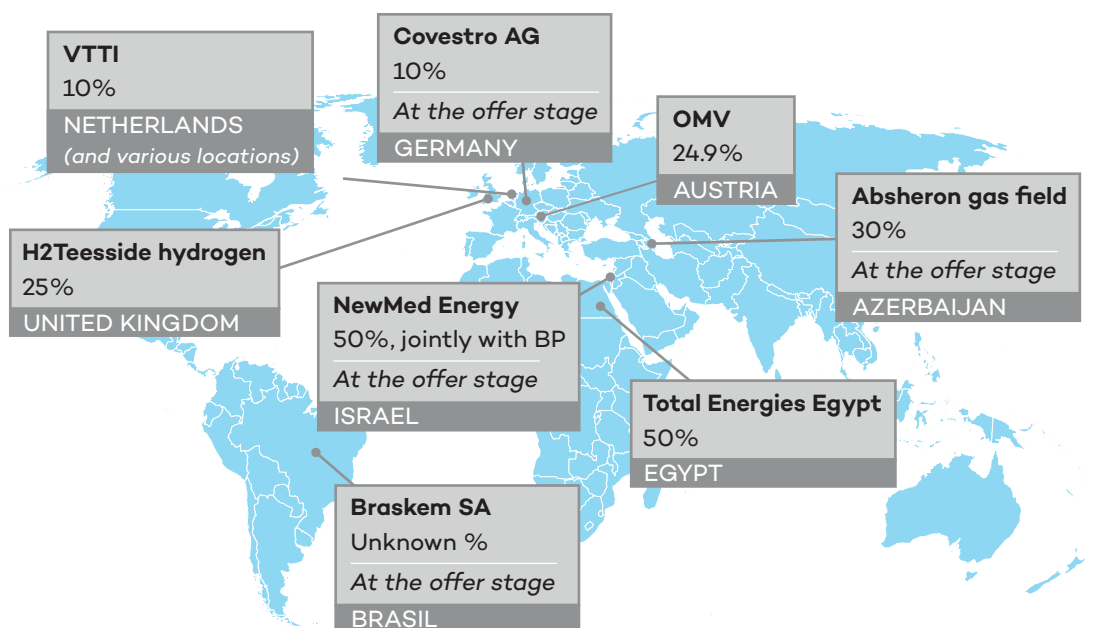


Source: Authors’ own calculations, based on the data from the *Banking on Climate Chaos* report.⁷⁸

Ownership of International Assets

It is worth noting that ADNOC also owns international assets outside Abu Dhabi’s national borders. Some of these assets are located in the Middle East region, including ADNOC’s recent acquisition of a 50% stake in TotalEnergies Egypt⁷⁹ and its proposal for a joint acquisition with BP of 50% of Israeli offshore natural gas producer NewMed Energy.⁸⁰

Figure 4. Examples of assets owned by ADNOC internationally (ADNOC percent ownership in parenthesis as of August 2023)



Source: Based on authors’ research from a variety of sources.



Other assets are outside of the region, including in European and South American jurisdictions. In August 2023, ADNOC announced that it would acquire a 30% equity stake in the Absheron gas field in Azerbaijan.⁸¹ In 2019, ADNOC acquired a 10% stake in VTTI, a global owner of 15 hydrocarbon storage terminals in more than 10 countries, including the Netherlands and the United States.⁸² In 2022, ADNOC acquired 24.9% of Austrian oil and gas group OMV⁸³ and joined BP's United Kingdom hydrogen project H2Teesside with a 25% stake in the design stage of the project.⁸⁴ This year, ADNOC has made a joint offer together with the U.S.-based asset manager Apollo to buy the Brazilian petrochemical producer Braskem SA⁸⁵ and has approached German plastics and chemicals maker Covestro AG with a takeover proposal.⁸⁶

These international asset purchases open ADNOC up to the possibility of litigation, as some of these assets fall within jurisdictions open to climate-based litigation.⁸⁷ While investors themselves may not be the ones initiating climate litigation, investor support in the form of cooperation, data sharing, and other disclosures could be instrumental to prosecutors and state litigators. In any case, investors are indirectly exposed to the litigation risks that such assets might involve.

Recommendations

In light of the incompatibility of new oil and gas expansion plans with safe climate targets and increasing transition risks, there are expectations on ADNOC to

- prepare baseline information on the state of readiness of the company to transition to a low-carbon economy;
- disclose its 2030 planned energy mix and low-carbon CapEX shares;
- strive to reduce energy demand and shift toward a sustainable energy supply, which includes supporting renewable energy production, sustainable fuels and gases, and electric vehicle charging infrastructure;
- ramp up both interim and long-term targets for reductions of Scopes 1–3 emissions, which should include both absolute targets and emissions intensity targets; and
- adequately plan for a just transition in order to protect oil and gas workers, communities, and suppliers.

As we highlighted in our other two related pieces,⁸⁸ international investors are exposed to some of the NOCs and have corresponding opportunities for engagement. This is the case for ADNOC as well.

- Investors, including the UAE government as ADNOC's main owner and international investors, should
 - require ADNOC to adhere to climate disclosure requirements and improve its transparency in accordance with best international practices. This should include annual disclosure of its “greenhouse gas data, net zero targets and the plans for, and progress towards, meeting those targets, and other relevant information against its baseline along with comparable data to enable effective tracking of progress toward their net zero targets.”⁸⁹



- incorporate “no new oil and gas fields and/or related infrastructure” into their engagement with ADNOC, banks that finance ADNOC, and companies that invest in or partner with ADNOC about their net-zero transition plans. This engagement should be time-bound, have appropriate milestones to assess progress and escalation steps, and include a willingness to exercise an exit option if there is a lack of progress.
- Banks should
 - rule out the provision of asset or project finance for ADNOC for new oil and gas fields and/or related infrastructure such as pipelines.
 - publish a plan to restrict financing at the corporate level for new oil and gas. This can include
 - i. a commitment to require existing clients, including ADNOC, to publish net-zero transition plans by a specific date, setting out detailed expectations for their content and specifying that these plans must prohibit the development of new oil and gas fields; and
 - ii. a commitment to exclude oil and gas companies with expansion plans, such as ADNOC’s current plans, as their future clients.



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