

Research on China-UAE Foreign Oil and Gas Cooperation from the Perspective of the Belt and Road Initiative

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Abstract. Amid Belt and Road energy connectivity and reshaped global energy security, Middle Eastern oil producers are vital for China's stable hydrocarbon supply and overseas energy industrial layout. Boasting rich reserves, stable opening policies and a prime location, the UAE is China's core Gulf strategic partner to diversify crude import risks. Using literature and case analysis, this paper employs official statistics from China Customs, the UAE Energy Ministry and ADNOC, plus EPC and long-term LNG projects of CNPC, Sinopec and Zhenhua Oil. It reviews 40 years of bilateral oil-gas cooperation and analyzes three mainstream cooperation models: crude trade, oilfield EPC and long-term LNG contracts. Their full-chain cooperation covers exploration, engineering, trade and green energy yet faces multiple hurdles: differentiated foreign ownership rules, Islamic commercial laws and local employment policies; volatile oil and LNG prices; lack of Arabic-petroleum interdisciplinary talents and cultural conflicts; and Red Sea and Gulf geopolitical risks. This paper proposes solutions on talent training, integrated fossil-low carbon industries (green hydrogen, CCUS) and comprehensive risk & compliance mechanisms, supporting Chinese firms' sustainable local operation, consolidating the Sino-UAE BRI energy partnership and providing references for China-Gulf energy cooperation.

Keywords: the Belt and Road Initiative, China-UAE cooperation, United Arab Emirates, international petroleum

1. Introduction

The global energy supply and demand landscape is undergoing profound restructuring, making energy security a core priority for all countries' macroeconomic governance and foreign trade. Fueled by the advancement of energy connectivity under the Belt and Road Initiative, cross-border oil and gas cooperation has evolved into a pillar industry underpinning bilateral economic and trade ties between China and the United Arab Emirates (UAE) [1]. Diplomatic relations between the two nations were formally established in 1984 and elevated to a comprehensive strategic partnership in 2018. Boasting world-leading proven oil and gas reserves, the UAE ranks as China's sixth-largest source of crude oil imports and serves as a pivotal energy cooperation anchor across the Middle East [2].

Most existing domestic academic research adopts a broad macro perspective covering the Gulf regional economy and energy collaboration, while targeted in-depth studies focusing exclusively on

the UAE remain scarce. Foreign literature mainly centers on the UAE's domestic energy policies and European and American capital layouts, lacking specialized analyses of practical challenges confronting Chinese oil enterprises operating in the UAE from the dual lenses of Islamic commercial law and local Arab culture.

From an interdisciplinary perspective integrating transnational petroleum trade and national regional economics, this paper draws on years of official customs oil and gas import and export statistics as well as typical EPC projects invested by Chinese firms. It sorts out foreign investment access regulations and top-tier energy policies of the UAE's petroleum sector, summarizes prominent bottlenecks hindering bilateral cooperation, and puts forward actionable optimization strategies. The findings offer practical guidance for domestic petroleum companies to mitigate compliance risks in UAE overseas investment and advance pragmatic Sino-UAE energy cooperation within the Belt and Road framework.

2. Overview of the UAE petroleum industry and energy-related policies

2.1. Oil and gas reserves and overall industrial layout of the UAE

The UAE's seven emirates hold massive oil and gas reserves, mainly in Abu Dhabi, ranking in the top ten worldwide [3]. ADNOC monopolizes upstream exploitation, with downstream refining and LNG centered at Ruwais. As shown in Figure 1, it targets 5 million barrels of daily crude output by 2027, bringing abundant project chances for Chinese contractors [4]. By 2022, China's direct investment in the UAE had reached \$11.88 billion, with over 62% in oil and gas, the highest share across the Middle East [5].

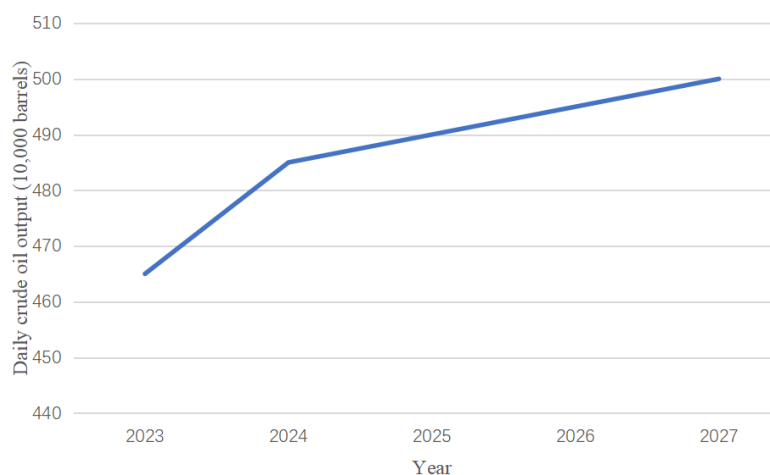


Figure 1. Changes of ADNOC crude oil daily production (2023-2027) [6]

2.2. Core contents and development orientation of the UAE energy strategy 2050

Launched in 2017 and updated at COP28 in 2023, the UAE Energy Strategy 2050 targets 50% clean energy, 38% natural gas and full carbon neutrality by 2050 [2]. It prioritizes expanding oil, crude and LNG capacity while developing PV, green hydrogen and CCUS, aiming for 1.4 million tons of annual green hydrogen by 2031 [7]. Aligned with China's Dual Carbon goals and Belt and Road green cooperation, it shifts bilateral collaboration to both fossil and renewable energy led by green hydrogen and desert solar power.

2.3. Laws and regulations on foreign investment access in the UAE petroleum industry

The UAE adopts a dual-track legal regime of federal laws and free zone rules with varied oil and gas foreign investment limits: Abu Dhabi caps onshore foreign stakes at 40% and offshore at 49%, while free zones permit full foreign ownership for oil equipment businesses [2]. Rooted in Sharia, local laws ban interest financing and enforce Emiratisation hiring quotas [3]. Tenders follow Western standards, requiring ADNOC-qualified supplier accreditation. Strict labor rules govern foreign staff; breaches bring heavy fines or shutdowns, creating major compliance hurdles for Chinese oil firms [2].

3. Current status and main cooperation modes of China-UAE oil and gas cooperation

Relying on the Belt and Road energy cooperation framework, China-UAE oil and gas cooperation has developed over 40 years and formed three mature cooperation forms: physical crude oil trade, general contracting of oilfield EPC projects, and long-term LNG sales and purchase agreements, covering the entire upstream, midstream and downstream industrial chains of oil and gas.

3.1. Development course and annual data of China-UAE crude oil import and export trade

China-UAE crude oil trade originated in the 1990s and entered a high-growth phase after the launch of the Belt and Road Initiative in 2013. According to annual statistics from the General Administration of Customs of China (Table 1), China imported 41.817 million tonnes of crude oil from the UAE in 2023 and 37.513 million tonnes in 2025. The total bilateral trade volume hit USD 101.838 billion in 2024, with energy product imports accounting for over 65% of total import volume [8].

Table 1. China's crude oil imports from the UAE (2023-2025) [8]

Year	China's crude oil imports from the UAE (10,000 tons)
2023	4181.7
2024	3920.5
2025	3751.3

China has remained the largest export destination for UAE crude oil, and the UAE serves as a stable supplementary source of Middle Eastern crude oil for China, diversifying geopolitical risks arising from China's over-reliance on crude oil imports from Saudi Arabia and Iraq [4]. Innovation in settlement mechanisms has become a new highlight of trade. In recent years, China and the UAE have gradually piloted cross-border settlement of crude oil using RMB and UAE dirham to break free from single US dollar settlement constraints. The proportion of RMB settlement in the UAE's crude oil exports to China grew steadily in 2023, strengthening the capacity of bilateral trade to resist exchange rate fluctuations [9].

3.2. Typical EPC project contracts undertaken by Chinese-funded enterprises in the UAE oilfields

CNPC, Sinopec, Zhenhua Oil and China Petroleum Pipeline Bureau are major Chinese contractors undertaking landmark EPC oil and gas projects in the UAE [10]. CNPC has secured onshore and offshore oilfield assets, including Al Yasat, North East Bab and Umm Shaif. In 2025, the Pipeline

Bureau won ADNOC's USD 514 million Ruwais LNG pipeline deal, the biggest single Chinese energy infrastructure order recently [6]. Zhenhua Oil's self-developed leakage monitoring system entered Abu Dhabi's premium oilfields for the first time [11]. In 2022, Chinese firms sealed 101 UAE engineering contracts worth USD 4.799 billion, with oil and gas work taking up 71% of the total value [5].

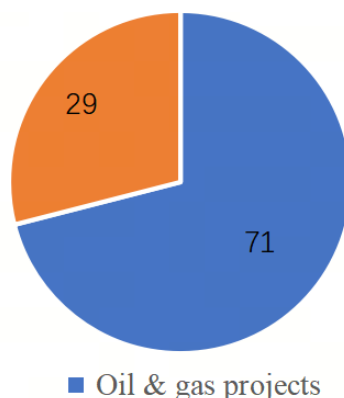


Figure 2. Proportion of contracted project amount of Chinese enterprises in the UAE (2022)

Figure 2 divides new contracted engineering projects undertaken by Chinese enterprises in the UAE in 2022 into oil & gas and other sectors, visually proving oil & gas engineering's dominant position in bilateral cooperation. In that year, Chinese firms secured \$4.799 billion of new contracts, among which oil & gas projects accounted for 71%, while non-oil & gas sectors, including construction, infrastructure and supporting services, only took up 29%. This industrial structure can be explained from three perspectives. First, the huge gap reflects the UAE's heavy reliance on its oil & gas industrial chain. ADNOC's long-term expansion plans create massive demand for overseas EPC contractors, whereas ordinary municipal projects in other emirates generate smaller orders. Second, it highlights Chinese oil engineering firms' competitive edges in integrated construction complying with international standards. Third, the 71% share embodies Belt and Road energy connectivity. Both sides prioritize energy infrastructure, building a win-win cycle of engineering contracting plus oil and gas trade to strengthen China's market standing in the Middle East.

3.3. LNG long-term cooperation model between China and ADNOC

Long-term LNG supply pacts are a fast-growing segment of China-UAE energy ties, using 10-15 year floating pricing tied to crude oil to hedge spot price volatility [12]. 2025 marked a milestone: ENN sealed countries' biggest 15-year LNG deal for an annual supply of 1 million tons, while CNOOC and Zhenhua Oil also signed long-term frameworks sourced from Ruwais LNG Park [10]. ADNOC's new Beijing office formalizes steady long-term LNG cooperation instead of sporadic spot trades [10].

4. Restricting factors for China-UAE foreign oil and gas cooperation

4.1. Business barriers brought by UAE labor laws and Islamic commercial systems

Stricter UAE Emiratisation rules force oil projects to hire local staff at much higher labor costs for Chinese investors [2]. Islamic commercial law bans interest loans, so firms have to use Sharia-compliant financing like leasing and profit-sharing, complicating funding arrangements [13].

Besides, ADNOC's rigorous supplier accreditation blocks many Chinese petroleum equipment makers, limiting local equipment procurement [14].

4.2. Impacts of cyclical fluctuations in international crude oil prices on project revenues

Crude oil and LNG prices are pegged to Brent, fluctuating sharply due to geopolitics, OPEC output policies and the global economy [2]. Low oil prices raise UAE royalties to squeeze Chinese oilfield profits, while high prices bring contract and tax revisions that raise EPC cost control pressure. Though long-term LNG deals ease volatility, spot price gaps still hurt firms' short-term cash flow.

4.3. Localized corporate management challenges caused by cross-linguistic and cross-cultural differences

Arabic's dominance creates a shortage of Chinese staff with both Arabic and petroleum expertise [1]. Islamic customs like Ramadan work-hour adjustments conflict with China's oilfield management, triggering labor conflicts and schedule delays. Most Chinese firms lack local legal teams, failing to keep up with the UAE's federal and free zone legal changes and facing hidden contractual compliance risks [14].

4.4. Uncertainties of overseas investment arising from shifting Middle Eastern geopolitical situations

Located at the geopolitical hub connecting Europe, Asia and Africa, the Middle East faces continuous disturbances to its business environment stemming from Red Sea shipping crises, geopolitical games among Gulf powers and major-country energy competitions. When navigational risks in the Strait of Hormuz escalate, sea freight costs for UAE crude oil exports rise, impairing revenues of Chinese oil and gas trade businesses and ongoing construction projects. Adjustments to European and American energy policies targeting the Middle East indirectly slow down ADNOC's approval progress for foreign cooperation, extending review cycles for some ongoing projects [2].

5. Optimized countermeasures for promoting China-UAE oil and gas cooperation

5.1. Cultivate compound foreign talents proficient and improve local legal support

Chinese petroleum universities cooperate with UAE institutes to train talents mastering Arabic, petroleum engineering and local commercial laws [2, 14]. Chinese enterprises set up Abu Dhabi legal teams with local Islamic lawyers to conduct pre-contract legal checks. All Chinese staff must receive pre-departure training on UAE laws, religions and customs to adapt to local business environments [1].

5.2. Adjust investment mix and realize coordinated cooperation

Firms should adjust investment portfolios amid the UAE Energy Strategy 2050's green transition [2]. They can prioritize medium-small oilfield upgrades and LNG logistics to cut upstream risks, while expanding investment in green hydrogen, CCUS and desert solar. This creates dual-track fossil-renewable cooperation matching UAE hydrogen parks. China-UAE sovereign funds can also channel domestic green capital into the local green hydrogen industry chain [15].

5.3. Establish a project risk early warning mechanism aligned with local UAE regulatory rules

Companies should build a three-dimensional early warning system for oil prices, geopolitics and policies to adjust investment and purchase plans via official data [2, 14]. Before bidding, they shall differentiate federal and free zone laws, adopt tailored contracts and choose ADGM arbitration. Firms also need to join ADNOC's supplier list, certify domestic equipment locally and broaden local procurement channels.

6. Conclusion

Against the backdrop of simultaneous advancement of Belt and Road energy connectivity and global energy transition, this paper selects the UAE, China's core energy partner in the Middle East, as the research subject. It systematically sorts out the UAE's oil and gas resource endowments, industrial spatial layout, top-level plan of the UAE Energy Strategy 2050, as well as legal systems concerning foreign investment access, labor and commercial affairs in the hydrocarbon sector. Drawing on first-hand industrial data, including 2023–2025 crude import statistics, oil and gas EPC contracts of Chinese enterprises and long-term Sino-UAE LNG sales and purchase agreements, it summarizes three mature cooperation models: physical crude trade, oilfield EPC contracting and long-term LNG supply contracts. It clearly demonstrates that bilateral oil and gas cooperation has covered the entire upstream and downstream industrial chain and expanded into both traditional fossil fuels and green new energy.

Comprehensive analysis of industrial data, project cases and national institutional environments identifies four core obstacles hindering deeper cooperation. First, the UAE's dual-track foreign investment access rules, mandatory local employment policies and Islamic commercial financing systems form rigid business barriers, raising Chinese firms' compliance and labor costs. Second, volatile global oil and gas prices driven by geopolitical conflicts, OPEC output adjustments and macroeconomic downturns distort profit-sharing and squeeze Chinese project returns. Third, shortages of interdisciplinary talents proficient in Arabic and petroleum expertise, together with cultural and business norm gaps, create local management difficulties, while incomplete compliance systems easily trigger contractual disputes. Fourth, complicated regional geopolitics, maritime shipping risks and Western energy policy interventions heighten overseas investment uncertainties.

To address these bottlenecks, Chinese oil companies should adapt to local institutions, culture and energy transition trends via localized and diversified development supported by the Belt and Road Initiative through targeted talent training, integrated investment in fossil fuels, green hydrogen and PV, and multi-dimensional risk warning frameworks. This study has limitations due to limited public industrial data, mainly focusing on central SOEs with insufficient research on private and small-and-medium service providers. Future research can conduct micro-level enterprise surveys, update research aligned with the UAE's low-carbon policies, and enrich country-specific studies on China-Gulf energy cooperation under the Belt and Road Initiative.

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