

Charles University
Faculty of Social Sciences

Study program: Area Studies



Marína Kováčová

Securing an International Role Through Energy: The Case of UAE

Zabezpečení mezinárodní role prostřednictvím energie: Příklad Spojených Arabských
Emirátů

Bachelor's thesis

Prague, 2024

Author: Marína Kováčová
Supervisor: Dr. Irena Kalhousová

Reference

KOVÁČOVÁ, Marína. *Securing an International Role Through Energy: The Case of UAE*. Praha: Univerzita Karlova, Fakulta sociálních věd, Institut Mezinárodních studií, 2024. 48. Vedoucí bakalářské práce Dr. Irena Kalhousová.

Abstrakt

Cieľom tejto bakalárskej práce je priblížiť energetickú politiku Spojených arabských emirátov (SAE) a prostredníctvom neorealistickej teórie medzinárodných vzťahov vysvetliť jej motiváciu. SAE disponujú jedným z najväčších globálnych uhl'ovodíkových kapitálov. Uplynulé roky ukázali, že krajina aj napriek svojmu ropnému a plynovému bohatstvu zintenzívňuje investície do obnoviteľnej tranzície a umocňuje udržateľné energetické politiky. Motivácia zmeny smerovania je v práci prisúdená záujmu o ukotvenie si ekonomickej a politickej bezpečnosti na medzinárodnej scéne. Práca je systematicky členená na dva hlavné celky, z ktorých prvý približuje teoretické ukotvenie tematiky v kontexte medzinárodných vzťahov a druhý ponúka empirické príklady konkrétnych politík, ktoré krajina implementuje. Zistené politiky súčasne prepájam s neorealizmom a poukazujem na ich dôležitosť v zahraničnej politike krajiny.

Klíčová slova

Spojené arabské emiráty, energetika, obnoviteľné zdroje, národný záujem, COP28, neorealizmus, politický pragmatizmus

Abstract

The aim of this bachelor thesis is to elucidate the energy policy of the United Arab Emirates (UAE) and to explain its motivation through the neorealist theory of international relations. The UAE possesses one of the largest global hydrocarbon capitals. Recent years have shown that despite its oil and gas wealth, the country is intensifying its investments in renewable transition and enhancing sustainable energy policies. This thesis attributes the motivation for such change in direction to the interest in anchoring economic and political security on the international stage. The thesis is systematically divided into two main parts, the first of which outlines the theoretical grounding of the topic in the context of international relations, while the second offers empirical examples of specific policies implemented by the country. I concurrently link the identified policies with neorealism and highlight their importance in the country's foreign policy.

Keywords

United Arab Emirates, Energy, Renewable Energy, National Interest, COP28, Neorealism, Political pragmatism

Character Count: 86 053

Declaration of authorship

I hereby declare that I am the sole author of this bachelor thesis and that I have not used any sources other than those listed in the bibliography and identified as references. I further declare that I have not submitted this thesis at any other institution in order to obtain a degree.

In Prague, 30 April 2024

Marína Kováčová

Acknowledgements

I would like to express my gratitude to my supervisor, Dr. Kalhousová, for her extremely valuable guidance and helpful feedback throughout the entire process of completing this thesis. Her professional expertise and patience have been crucial in enhancing my interest and shaping this thesis.

Contents

Introduction	7
Literature Review	8
Methodology and Research Approach	10
1. Theoretical Framework	10
1. 2 National Interest.....	10
1. 1 Energy security	11
1. 2 Energy Diplomacy	14
1. 3 Renewable Energy as a Tool	15
1. 4 International Relations Theories: Neorealism	16
2. The UAE's Foreign Energy Investments.....	18
2. 1 Green Foreign Politics	19
2. 1. 1 Nuclear	22
2. 1. 2 Low-Carbon Hydrogen	25
2. 1. 3 Solar	27
2. 1. 4 Wind.....	29
2. 2 Fossil Politics	31
2. 2. 1 Foreign Fossil Partnerships	33
Conclusion	35
Bibliography	38

Introduction

International events of the past years have been continuously underscoring the importance of energy security, diversification, and sustainability. Wartime events proved how the international political and economic *status quo* may easily be disturbed if the bilateral and multilateral ties between the states are either loose or unequal.¹ As a result, the international players and citizens had experienced numerous contemporary disruptions in the flow of everyday materials, namely energy, before finally fully acknowledging the importance of secure strategic partnerships as a form of resilience of sovereign states. Furthermore, as the climate change becomes part of everyday life, the debates of sustainable transitions were heard around the globe.² Recently, the world prominent leaders have been heard engaging in these conversations at the 28th Conference of the Parties to the UN Framework Convention on Climate Change (COP28) that took place in Dubai, United Arab Emirates (UAE) from November 30, 2023, until December 12, 2023. The chosen country of venue has stirred heated debates over its relevance and adequacy due to UAE's profound fossil-based wealth and reality.³

As the energy itself is one of the most impactful supplies that require green transformation, and the UAE seem to have become one of the major leaders in the international energy arena, this thesis is going to revolve around the topic of energy security, and more concretely, how energy may secure, or rather intensify, UAE's international role. Therefore, purpose of this bachelor thesis is to provide an answer to a research question phrased as followed – *Is the UAS's interest in the renewable energy motivated by ideology or pragmatism?* To answer this research question, I have chosen to employ neorealist international relations theory formulated by Kenneth Waltz's *Theory of International Politics* in 1979.⁴ I believe the state-centric understanding of security and national interest provides a suitable framework for analysis of

¹ Zsolt Becsi and Sajal Lahiri, "Bilateral War in a Multilateral World: Carrots and Sticks for Conflict Resolution," *Canadian Journal of Economics* 40, no. 4 (October 18, 2007): 1168–87, <https://doi.org/10.1111/j.1365-2966.2007.00447.x>.

² "Sustainability," December 19, 2023, <https://www.eea.europa.eu/en/topics/at-a-glance/sustainability>. and "Transitioning to Greener and More Sustainable Growth Models Can Provide a Massive Boost to Employment in Southeast Asia - OECD," n.d., <https://www.oecd.org/newsroom/transitioning-to-greener-and-more-sustainable-growth-models-can-provide-a-massive-boost-to-employment-in-southeast-asia.htm>. and "Africa Receives Only About 2% of Global Investments in Renewable Energy – Which Europe Can Help Remedy," World Economic Forum, September 17, 2023, <https://www.weforum.org/agenda/2023/09/africa-europe-green-transition-sdim23/>. And other

³ "UAE: Hosting COP28 Amid Longstanding Repression," *Human Rights Watch*, January 11, 2024, <https://www.hrw.org/news/2024/01/11/uae-hosting-cop28-amid-longstanding-repression>.

⁴ Waltz, Kenneth N. *Theory of International Politics*. Waveland Press, 2010

the UAE's behavior in the international energy politics. Furthermore, to support this argument through the optics of security, the neorealist defender John Mearsheimer claimed that "states that can access resources more easily, that have alternatives, that do not require that resource and that have leverages available to use against others are more independent."⁵ Following this neorealist logic, I aim to demonstrate that broad energy investments serve as such leverages and thus, make the UAE's international role ever more secure.

The stimulus for this topic came up with 28th Conference of the Parties to the UN Framework Convention on Climate Change in November and December 2023 which took place in Dubai, UAE. I, invested in security studies and current affairs, was thrilled to explore the implications that may arise from seemingly unrelated issue as the place of venue. Combining previous knowledge obtained through various courses focused on the region of the Middle East and energy security, I believe further examination of the UAE's energy security-related objectives is worth of attention precisely due their international relevance.

Literature Review

Due to the relatively novel and niche character of the topic, the amount of available literature is limited. Therefore, I oftentimes had to combine literature focused on fossil fuels with sources regarding renewable energy. However, I have done my best to assess them and use them relevantly only when the same argument about hydrocarbon energy could be applied to renewable energy resources. The available literature assessing the national interest and its implications for a country's behavior on the international scene, was very appropriate and plentiful. It aided me to comprehend the theoretical reasoning of the UAE's behavior utilizing neorealism. Thanks to Waltz, Mearsheimer, and Burchill, I was able to find an applicable theory that explained the country's behavior. However, due to the uniqueness of the topic, I was unable to gather academic works that would deal solely with the UAE, its national interest, energy, and renewables. I was, however, able to access works analyzing these topics either alone or in a specific combination. Therefore, as a result, this thesis provides a combination and analysis of the existent academic work, and news outlets. Despite limited available literature, I would like to highlight three sources that heavily influenced my thesis.

⁵ John J. Mearsheimer, *The Tragedy of Great Power Politics* (W. W. Norton & Company, 2014) 147.

Firstly, *Energy diplomacy in a time of energy transition* published by Steven Griffiths in *Energy Strategy Reviews*.⁶ The article's focus was paid to the UAE reality of a fossil power during an ongoing energy transition. Instead of analyzing the steps the country is taking to secure a renewable energy-oriented partnerships, Griffiths provides empirical research on hydrocarbon-oriented diplomacy in times of transition. His work has provided a great introduction to pragmatic nature of UAE's foreign policy. This coherent analysis has demonstrated that UAE is able to adapt to the changing atmosphere of energy transition whilst maintaining strategic partnerships in hydrocarbons. It could be argued that this way it complies with what is globally deemed as sustainable progress while sustaining its fossil capital.

Secondly, thanks to *Do renewable energies improve energy security in the long run*⁷ written by Emmanuel Hache, I have explored the topic of energy security a little further than the four A's, defined as availability, accessibility, acceptability, and affordability,⁸ and have obtained a good foundation for understanding what new energy strategies could mean in the context of energy transition. Hache suggests that "local and decentralized relations could add a new geopolitical layer to current traditional actors."⁹ As I have embarked on a journey of exploring the drivers and manners behind this new layer, his reasoning within the macroeconomic framework was an important reassurance about the relevance of the topic. By arguing that energy transformation would have big economic implications for the fossil-producers and thus result in modification of the national and regional balance, perhaps unintentionally, Hache has raised a question of how to maintain the existent fossil-invented balance in the post-fossil era.

Finally, for the majority of the empirical framework, I have been working with the esteemed media outlets such as Reuters, Financial Times, The Guardian, and others. Although it was oftentimes difficult to find the relevant information and not repeat what has already been stated, these media outlets positively surprised me by their extensive reporting on the topic, and furthermore, the existence of the abundant reporting confirmed my anticipated relevance of the topic I have chosen for my thesis.

⁶ Griffiths, Steven. "Energy Diplomacy in a Time of Energy Transition." *Energy strategy reviews* 26 (2019): 100386

⁷ Hache, Emmanuel. "Do Renewable Energies Improve Energy Security in the Long Run?" *International economics (Paris)* 156 (2018): 127–135.

⁸ Asia Pacific Energy Research Centre and 日本エネルギー経済研究所, *A Quest for Energy Security in the 21st Century: Resources and Constraints*, 2007.

⁹ Hache, Emmanuel. "Do Renewable Energies Improve Energy Security in the Long Run?"

Methodology and Research Approach

Combining neorealist theoretical framework with empirical evidence of concrete measures taken by UAE, this thesis aims to explore the topic of energy security within the Middle Eastern region, with significant heed paid to its renewable aspects. A desired outcome of this thesis is a coherent analysis of the current energy affairs in the UAE within international framework, and with international implications. In order to achieve this, neorealist theory will be employed. Due to the nature of this academic writing, the methodology used in analyzing my research question is qualitative research. Building on the neorealist theory in international relations and security, I aim to provide a consistent analysis of the topic-related reality. This bachelor's thesis is divided into two major sections: theoretical and empirical framework. Firstly, in the first chapter, brief introduction to the topic of energy security, securitization of renewable energy, and international relations theory of neorealism will be introduced and applied to the context of energy security. Secondly, in the following chapter, I will provide up-to-date relevant data about the energy-related security in the United Arab Emirates. Linking the ambitious Net Zero plans with undergoing investments into sustainable transition, I aim to provide an analysis of the renewable energy policy in the UAE. As a conclusion, I present the major outputs of the study as well as a suggestion for further research.

1. Theoretical Framework

This chapter sets out to explore the theoretical framework within which the thesis operates. Its aim is to provide coherent introduction to the topic of energy security, energy diplomacy, and international relations theories revolving around it. Firstly, it will discuss the concepts of energy security and renewable energy as its tool. Secondly, it is going to provide a brief introduction to the optics of the neo-realist school of thought. This chapter will serve as a theoretical context for analysis of the current energy-related developments and policies of the UAE.

1. 1 National Interest

National interest can be viewed as one of the crucial concepts in the international relations theory as it reflects the motivations and concerns of a country, and thus, shape its policy making. Neorealist school of thought views the concept as follows. In his analysis of neorealist perception of the national interest, Burchill argues that for Kenneth Waltz “the

national interest seems to operate like an automatic signal commanding state leaders when and where to move.”¹⁰ Thus, according to the neo-realists, not only domestic national policies, but, furthermore, the web of foreign partnerships is shaped by strategy fueled by the national interest. Although the nuances of national interest differ by state, the main objective of a state, according to the neo-realism, is to survive. Therefore, as it will be argued in the chapter dedicated to the neorealist theoretical framework, national interest shall include all the employable means to secure a country’s survival – whether through strategic partnerships on domestic soil and abroad, strategic financial investments, or other.¹¹

Additionally, Burchill states implies that “neo-realists believe political leaders have limited discretion in defining the national interest because it is a systemic given.” If we were to define the systemic given as something inevitable to happen, such definition would apply to the renewable transition triggered by the climate change.

Following the logic of the neorealist views and implications in the context, national interest is firstly shaped by the systemic given. Such systemic given could be demonstrated on the international push for the renewable transition due to climate change. Thus, an oil-dependent country’s national interest would be either to enhance the production of the hydrocarbons while it is still acceptable or diversify its energy politics to remain resilient to the changes that could negatively impact its global position and threaten its survival. Secondly, as this national interest shapes foreign policy, following the aforementioned logic, an oil-producing country shall aim to secure its energy reality through promoting hydrocarbons and/or developing renewables.

1. 2 Energy security

As “control is ensured over the development of the market of energy resources”¹², both energy-producing and energy-consuming countries have long been implementing strategies regarding the energy and its stability. Even though the concept of energy security is “as old as fire” breaching to Lower Paleolithic Period, it was first professionally developed in the second

¹⁰ Scott Burchill, *The National Interest in International Relations Theory*, Palgrave Macmillan UK eBooks, 2005, 43.

¹¹ Brenda Shaffer, *Energy Politics* (University of Pennsylvania Press, 2009), p. 1

¹² Gordana Mišev, “Theoretical Domains of Exploring Energy Security as a Global Challenge in International Relations,” *Sociološki Pregled/Sociološki Pregled* 54, no. 1 (January 1, 2020): 167, <https://doi.org/10.5937/socpreg54-23847>.

half of the 20th century.¹³ The resource-wealth related events of the 1970s and the following years triggered a wave of closer attention paid to the role the energy represented in the global conflict dynamics. The region of the Middle East has been a cradle for conversations revolving around energy security due to the regional energy-related conflicts such as 1973 OPEC oil embargo during the Yom Kippur War, 1979 Iranian Revolution and the followed Iran-Iraq War and Iraqi invasion of Kuwait. The significance of the security, relevance, and power stemming from energy resources, is therefore a well-known concept to the countries of the Middle East.

Energy security encompasses continuous access to various energy forms at affordable prices, ensuring protection from shortages and blackouts, and low vulnerability of vital energy systems.¹⁴ Accordingly, the International Energy Agency defines energy security as “uninterrupted availability of energy sources at an affordable price.”¹⁵ The concept involves resource nationalism, secure energy supplies, diversification of sources, geopolitical changes, and environmental considerations. Gökgöz and Güvercin argue that “securing the energy sources and routes is crucial for the economic development of all countries and is one of the primary reasons of international conflicts, at all times.”¹⁶ Therefore, a close attention should be paid to its development. Over the past years, energy security has evolved to include human rights, individual security, and sustainable development, merging national security with broader concepts.¹⁷ As a result, the significance of this topic stems from the inherent reality that energy security holds profound importance as an integral aspect of every nation's economic landscape. Thus, “each country needs to develop its resources and policies relating to energy and related environmental contaminants for better future planning.”¹⁸ This is attributed to the foundational role energy plays as the cornerstone for the essential and uninterrupted operations across all sectors of industry and services in the contemporary world.¹⁹ Additionally to the risk of global energy markets interruptions, countries are nowadays facing challenges on domestic

¹³ Scott Victor Valentine, “Emerging Symbiosis: Renewable Energy and Energy Security,” *Renewable & Sustainable Energy Reviews* 15, no. 9 (December 1, 2011): 4572–78, <https://doi.org/10.1016/j.rser.2011.07.095>.

¹⁴ Aleh Cherp and Jessica Jewell, “The Concept of Energy Security: Beyond the Four As,” *Energy Policy* 75 (December 1, 2014): 415.

¹⁵ “Emergency Response and Energy Security - About - IEA,” IEA, n.d., <https://www.iea.org/about/emergency-response-and-energy-security>.

¹⁶ Gökgöz and Güvercin, “Energy Security and Efficiency Analysis of Renewable Technologies.”

¹⁷ Margaretha Wewerinke-Singh, “A Human Rights Approach to Energy: Realizing the Rights of Billions Within Ecological Limits,” *Review of European, Comparative & International Environmental Law* 31, no. 1 (August 3, 2021): 16–26, <https://doi.org/10.1111/reel.12412>.

¹⁸ Omid Nematollahi et al., “Energy Demands and Renewable Energy Resources in the Middle East,” *Renewable & Sustainable Energy Reviews* 54 (February 1, 2016): 2, <https://doi.org/10.1016/j.rser.2015.10.058>.

¹⁹ Oleksandr Chernyak, Ganna Kharlamova, and Andriy Stavytskyi, “Trends of International Energy Security Risk Index in European Countries,” *Baltic Journal of European Studies./Baltic Journal of European Studies* 8, no. 1 (June 1, 2018): 5–32, <https://doi.org/10.1515/bjes-2018-0002>.

levels, primarily in a form of exhaustion of domestic reserves.²⁰ Consequently, to be able to provide the fundamental energy supply domestically, and internationally, producing countries have been shifting their attention to more diversified forms of energy.

Recently, the International Energy Agency (IAE) has broadened the meaning of energy security to not only availability of resources, but also decreasing independence on imports and decreasing pressures on the environment.²¹ Thus, energy security also encompasses challenges like decarbonization, energy efficiency, renewables, and technological innovations, reflecting the interlink between energy and security. Furthermore, because some authors found the nature of IEA's four A's limiting in answering questions such as "Security for whom?", "Security for which values", and "Security from what threats?",²² Hughes introduced a four R's concept.²³ Hughes' four R's stand for "review (understanding the problem), reduce (using less energy), replace (shifting to more secure sources), and restrict (limiting the new demand to secure sources)."²⁴ Consequently, this theory of energy security could be applied to various geopolitical contexts – even energy transition, as it could result in a scenario, where "the regional balance and relative power of states could [...] be transformed, contributing to a distinct risk increase in certain geographic zones."²⁵

²⁰ Petar Stanojević and Gordana Mišev, "New Trends in the International Political Dynamics of Natural Gas Trade," *Međunarodni Problemi* 70, no. 3 (January 1, 2018): 305–36, <https://doi.org/10.2298/medjp1803305s>.

²¹ "The Oil and Gas Industry in Energy Transitions – Analysis - IEA," IEA, January 1, 2020, <https://www.iea.org/reports/the-oil-and-gas-industry-in-energy-transitions>.

²² Cherp, Aleh, and Jessica Jewell. "The Concept of Energy Security: Beyond the Four As." *Energy policy* 75, no. c (2014): 415.

²³ Larry Hughes. "The Four 'R's of Energy Security." *Energy policy* 37, no. 6 (2009): 2459–2461.

²⁴ Larry Hughes. "The Four 'R's of Energy Security." *Energy policy* 37, no. 6 (2009): 2459.

²⁵ Hache, Emmanuel. "Do Renewable Energies Improve Energy Security in the Long Run?" *International economics (Paris)* 156 (2018): 134.

1. 3 Energy Diplomacy

Whilst concept of energy diplomacy is yet to be officially defined, scholarly works often align in regard to its meaning. As Griffith put it, energy diplomacy “pertains to government-related activities that aim to ensure a country’s energy security while also promoting business opportunities related to the energy sector.”²⁶ As the strive for sustainability continues to spread around the globe through various international and civil initiatives (Kyoto Agreement, Paris Agreement, and others), diplomacy adapts to it. Consequently, with reflection to the present-day strive for sustainability, the concept of energy diplomacy is further explored and definition of a climate diplomacy as “process of managing international relations to address global climate change” is provided.²⁷ Since scholars often position “energy within the context of national security and strategic issues”²⁸, it is only pragmatic to use energy as a motive for international diplomacy and securitization. Said securitization is achieved through assertion of a state to an arena of interest and further bolstering of the state’s significance in it.

Goldthau and Witte argue that the objective of energy diplomacy is “to secure access to energy supplies abroad and to promote (mostly bilateral, that is government to government) cooperation in the energy sector.”²⁹ Furthermore, in the hydrocarbon reality, they argue that “the primary driver behind the conclusion of oil and gas deals is not necessarily maximizing business opportunities, but national security goals.”³⁰ The link between national security and energy supply is further emphasized by others.³¹ Scholars often disagree on the dynamics the renewable energy will bring to the global energy reality and authors who apply the formulas known from so-called fossil times, are often criticized for inappropriateness source. However, because of the lack of available research conducted solely about the renewable energy diplomacy and its tools, this thesis is going to combine existent renewable-oriented work available scholarship and the fossil-related literature I deem applicable to the post-fossil reality.

²⁶ Steve Griffiths, “Energy Diplomacy in a Time of Energy Transition,” *Energy Strategy Reviews* 26 (November 1, 2019): 2.

²⁷ Richard Kinley. Climate diplomacy after COP26. *IPPR Progress. Rev.* 28:4 (2022): 325

²⁸ Mirza Sadaqat Huda, “Renewable Energy Diplomacy and Transitions: An Environmental Peacebuilding Approach,” *Environmental Innovation and Societal Transitions* 50 (March 1, 2024): 4.

²⁹ Andreas Goldthau and Jan Martin Witte, *Global Energy Governance: The New Rules of the Game*, 2010: 27.

³⁰ *Ibid.*

³¹ Anna Herranz-Surrallés, “An Emerging EU Energy Diplomacy? Discursive Shifts, Enduring Practices,” *Journal of European Public Policy* 23, no. 9 (September 23, 2015): 1386–1405 and Santos Vieira De Jesus, Diego, 2013. *Lighting the fire: brazil’s energy diplomacy, 2003–2010’.* *Diplom. Statecraft* 24 (3), 499–515.

1. 4 Renewable Energy as a Tool

Renewable energy is energy generated from natural sources that can be replenished, such as the sun, wind, water, and the biomass. When utilized, it's sustainable qualities are reflected in the reduction of green-house emissions related with hydrocarbon-sourced energy. (Diesendorf 2007). Furthermore, as the recent international affairs have shown, it is an effective tool for diversification of a country's energy mix. Because of the swift expansion of population and shifts in climate patterns, there is an increasingly urgent demand for the integration of planning and designing renewable energy and systems. (Siddiqi a Anadon 2011) As Khan et al. rightfully note, "the worldwide shift towards renewable energy sources can be attributed, in part, to international efforts to address risks that arise from reliance on fossil fuels." (Khan, et al. 2023).

Over the past years, renewable energy has emerged as a crucial element in addressing energy security challenges. Firstly, its significance is enrooted in the global push for sustainable transition. As of February 2024, 192 parties have ratified the Kyoto Protocol, an international treaty aimed at combating climate change by reducing greenhouse gas emissions.³² Additionally, 195 Parties out of 198 Parties to the Convention are Parties to the Paris Agreement, an international treaty adopted under the UN Framework Convention on Climate Change.³³ It represents an effort to combat climate change by addressing greenhouse gas emissions mitigation, adaptation, and finance. As Onu and Mbohwa argue, the energy security "must become a top priority while envisaging sustainable energy economy for the near future."³⁴ According to Pu-yan Nie and Yong-cong Yang, "renewable energy strategies improve energy security by reducing the consumption of conventional energy and by reducing emissions."³⁵ The role of renewable energy has become pivotal as it reduces dependence on fossil fuels, enhances self-sufficiency, and fosters innovation hubs and technology exports. Furthermore, according to Gökgöz and Güvercin, renewable energy "brings the right ascension

³² United Nations Framework Convention on Climate Change. "Status of Ratification." Accessed April 23, 2024. <https://unfccc.int/process/the-kyoto-protocol/status-of-ratification>.

³³ United Nations Framework Convention on Climate Change. "Status of Ratification." Accessed April 23, 2024. <https://unfccc.int/process/the-paris-agreement/status-of-ratification>.

³⁴ Peter Onu and Charles Mbohwa, "Renewable Energy Technologies In Brief," *International Journal of Scientific and Technology Research* 8, no. 10 (October 25, 2019): 1283–89, <https://www.ijstr.org/paper-references.php?ref=IJSTR-1019-23174>.

³⁵ Pu-yan Nie and Yong-cong Yang, "Renewable Energy Strategies and Energy Security," *Journal of Renewable and Sustainable Energy* 8, no. 6 (November 1, 2016), <https://doi.org/10.1063/1.4967714>.

to four dimensions of energy security, which are availability, accessibility, acceptability, and affordability”.³⁶

Secondly, in the light of recent international relations developments taking place with climate crisis on the background, its importance has gradually become acknowledged globally. As Paltsev concludes, “Despite the uncertainty and backwards steps, there is no question that the balance of power in energy geopolitics is shifting from fossil fuels owners to countries that are developing low-carbon solutions.”³⁷ To prove this argument, Proskuryakova explores how major international hegemony like Germany, China, and Russia are increasing investments in renewables and related technologies to enhance energy security. Germany aims to diversify its energy mix by boosting renewables, while China focuses on diversifying energy imports and increasing domestic fuel production, including renewables. Russia relies on domestic fossil fuel production but also considers renewables for self-sufficiency. (Proskuryakova 2018) It appears it is only a matter of time, if not a reality already, until other super-powers follow the suit.

1.5 International Relations Theories: Neorealism

In order to analyze the UAE’s international position within the international energy security arena, this thesis is going to be built on the neorealist international theory. The primary focus on energy policy of neorealist approach is enrooted in the energy policies of states applied in the context of national interests and security.³⁸ The neorealist international theory formulated by Waltz and explored further by Grieco, Mearsheimer, and others, suggests that all forms of power are employed by the states to ensure their survival.³⁹ Largely working on the premises of fear of being swamped by others, according to neorealists, countries are expected to ensure their survival by accumulating more power.⁴⁰ In this way, such “power accumulation triggers insecurity in other states” and prevents them from threatening the country.⁴¹ As Kocs argues,

³⁶ Fazıl Gökgöz and Mustafa Taylan Güvercin, “Energy Security and Efficiency Analysis of Renewable Technologies,” in *Green Energy and Technology*, 2019, 163–83, https://doi.org/10.1007/978-3-030-27676-8_9.

³⁷ Sergey Paltsev, “The Complicated Geopolitics of Renewable Energy,” *Bulletin of the Atomic Scientists* 72, no. 6 (October 4, 2016): 390–95, <https://doi.org/10.1080/00963402.2016.1240476>.

³⁸ Oliver Daddow, *International Relations Theory: The Essentials*, 2013, https://openlibrary.org/books/OL28497627M/International_Relations_Theory.

³⁹ Edward A. Kolodziej, *Security and International Relations*, 2005, <https://doi.org/10.1017/cbo9780511614903>.

⁴⁰ Rahul Jaybhay, “A Neo-realist Theoretical Perspective in Energy Security,” *The Kootneeti* (blog), April 13, 2020, <https://thekootneeti.in/2020/04/13/neo-realist-perspective-energy-security/>.

⁴¹ Ibid.

“states must base their strategic behavior on the capabilities, not the intentions, of other states. They must begin from the assumption that other states' capabilities may someday be used against them.”⁴² Following this logic, states are expected to develop their own capabilities and to limit the advantages of other states.⁴³

A number of scholars argue that energy supply policy should be considered equally important as other economic tools, diplomatic tactics, and military power.⁴⁴ As Cesnakas claims, “if economic security prevails over military security, then energy security should prevail over military security as well, and become an important variable defining the state’s place in the international structure.”⁴⁵ As Wilson emphasizes, securitization is not an “inherent feature of energy politics.” However, if the international atmosphere should suggest that energy issues intersect with security interests of other governments, and if these interests are under some form of existential threat, it shall apply.⁴⁶ Therefore, under the threat of losing their position in the international arena, states are expected to use their natural resources to maintain their role and avoid being swamped. In her article, Proskuryakova examined the traditional international theories in regard to their relevance because of the latest developments in energy security. As she concluded, due to immense advances relating to renewable energy, all of these theories must be revisited as their specifics are based on presumption of world operating predominantly on hydrocarbon resources.⁴⁷ As some articles suggest, the balance of power and energy security within the international arena may severely change due to the growing use of renewable resources. However, working on the basic premises of energy capability being of material character and, therefore, could pose a threat or salvation to states, for the purposes of this thesis, use of energy of any kind is going to be of strategic nature. To support this argument, neorealist defender Arnold Wolfers views security as an asset the nations possess and furthers the argument by claiming the correlation between security and power. Wolfers defines power

⁴² Stephen A. Kocs, “Explaining the Strategic Behavior of States: International Law as System Structure,” *International Studies Quarterly* 38, no. 4 (December 1, 1994): 536, <https://doi.org/10.2307/2600864>.

⁴³ John J. Mearsheimer, “Back to the Future: Instability in Europe After the Cold War,” *International Security* 15, no. 1 (January 1, 1990): 12, <https://doi.org/10.2307/2538981>.

⁴⁴ Brenda Shaffer, *Energy Politics* (University of Pennsylvania Press, 2009), p. 1

⁴⁵ Giedrius Cesnakas, “Energy Resources in Foreign Policy: A Theoretical Approach,” *Baltic Journal of Law and Politics* 3, no. 1 (June 2010): 34

⁴⁶ Jeffrey D. Wilson, “A Securitisation Approach to International Energy Politics,” *Energy research & social science* 49 (2019): 117

⁴⁷ Liliana Proskuryakova, Ozcan Saritas, and Sergey Sivaev, “Global Water Trends and Future Scenarios for Sustainable Development: The Case of Russia,” *Journal of Cleaner Production* 170 (January 1, 2018): 867–79, <https://doi.org/10.1016/j.jclepro.2017.09.120>.

as the capability of controlling others, and he finds security in the absence of a threat to assets or fear of attack of those assets.⁴⁸

Additionally, under the neorealist framework, alliances are created to counter the distortion of the existing balance in scenario, where a single state cannot defend itself. Supporting this argument, Czechowska, Tyushka and Domachowska claim that “strategic partnerships are inherently related to security issues”.⁴⁹ As Renard argues, “it is hardly imaginable that a strategic partnership worth the name could afford not to put security issues at the center of its agenda.” (Renard 2016a, p. 33). Furthermore, in the case of a small state constantly threatened by the larger surrounding it, the small state tends to form alliances against the adversary.

All in all, neorealist approach insists that a state pragmatically does as a state needs to ensure its security. Since the energy supply can be used strategically to create a shield from adversary state and, furthermore, because the small countries are expected to form alliances with the stronger, it is fair to assess that countries are expected to form energy-related alliances to ensure their role in the international arena. Moreover, in the case of producing countries, energy wealth can be used as a tool for diplomatic coercion⁵⁰ and as Wolfers argues it enhance the country’s controlling capability.⁵¹ As stated above, since a robust set of theory-based literature focused on renewable energy securitization is lacking, this thesis is going to consider the renewable resources firstly as classic energy resources, and secondly as invisible ties to other states committed to sustainable transition in order to avoid threats from stronger adversary states.

2. The UAE’s Foreign Energy Investments

In this chapter, I aim to provide a complex energy-oriented foreign policy that the UAE has been implementing. By combining contrasting examples of sustainability-oriented projects with fossil-related projects, I will demonstrate not only the ambivalence of UAE’s foreign investments, but more importantly the country’s proven ability to adapt and strive for

⁴⁸ Arnold Wolfers, “National Security” as an Ambiguous Symbol, 1952. 481-483

⁴⁹ Lucyna Czechowska et al., *States, International Organizations and Strategic Partnerships* (Edward Elgar Publishing, 2019): 11.

⁵⁰ Llewelyn Hughes and Austin Long, 2015. “Is There an Oil Weapon? Security Implications of Changes in the Structure of the International Oil Market.” *International security* 39 (3): 152-189.

⁵¹ Arnold Wolfers, “National Security” as an Ambiguous Symbol, 1952. 481-483.

competition on various markets. This empirical chapter is divided into two parts. Firstly, I will present examples of sustainable energy-oriented international investments, or initiatives the UAE is part of, in order to demonstrate its evident assertion on the sustainable energy market. Secondly, I will provide a list of up-to-date fossil-based investments the UAE has recently pledged to make, or has already engaged in. The purpose of this sub-chapter is to demonstrate UAE's efforts in the hydrocarbon sector despite the national and global push for sustainable energy. This, along with the first sub-chapter will serve as an example of neorealist pragmatic reasoning of a small, fossil-rich state behavior in era of energy transition.

2. 1 Green Foreign Politics

The United Arab Emirates have been investing “way more” into renewable energy than oil, said the UAE's Energy and Infrastructure Minister, Suhail Al Mazrouei during United Nations Climate Change Conference, COP28, held in Dubai.⁵² The announcement of the place of venue stroke many by a surprise due to significant non-renewable energy oil wealth and indicators of unethical treatment of human beings.⁵³ Critics and activists all around the globe argued against a fossil-dependent country holding United Nations climate crisis-related talks. While these complaints are built on a reasonable foundation, the surprise factor of the decision should not have come across as a surprise. The COP's history has been written with fossil fuels – not only because of the CO₂ emissions released by the attending parties, but mostly due to the past places of venues that included fossil-wealthy Qatar (COP18 in 2012) and coal-reliant Poland (COP24 in 2018). As the plans for the future holders of COP suggest the upcoming conferences will take place in Azerbaijan, possessor of significant natural gas reserves in the Caspian Sea, and Brasil, the world's sixth largest Green House Gas emitter, it is fair to assess it is not the energy history that makes the best candidate.⁵⁴ A COP holder is chosen through a complex process that includes consensus-based decision of the parties to the conference, as well as other factors such as geographic location and the highest bid. Because COP28 was supposed to be held in Asia-Pacific region and, calculations

⁵² John Benny, “UAE Is Investing More in Renewable Energy Than in Oil, Energy Minister Says,” The National, December 4, 2023, <https://www.thenationalnews.com/business/energy/2023/12/04/uae-is-investing-more-in-renewable-energy-than-in-oil-energy-minister-says/>.

⁵³“UAE: Investigate Threats Against ‘UAE 5,’” Human Rights Watch, October 28, 2020, <https://www.hrw.org/news/2011/11/25/uae-investigate-threats-against-uae-5>; John Voo, “Why Is COP28 Being Held in the Oil-rich United Arab Emirates?,” Eco-Business, November 30, 2023, <https://www.eco-business.com/news/why-is-cop28-being-held-in-the-oil-rich-united-arab-emirates/>.

⁵⁴ “Brazil Climate Change Country Profile | Climate | U.S. Agency for International Development,” U.S. Agency For International Development, November 29, 2023, <https://www.usaid.gov/climate/country-profiles/brazil>.

according to the Financial Times analysis suggest, the UAE bid over \$200 bn into renewable energy, the winner of the competition was chosen amid the forthcoming criticism.⁵⁵

As the Financial Times analysis conducted in 2023 informs, the UAE has truly been investing heavily into international renewable energy efforts. According to the analysis, that included joint ventures, agreements, memoranda of understanding, and pledges, the UAE is expected to invest almost \$200 bn into renewable energy resources, predominantly into mixed renewable energy and wind.⁵⁶ Estimated two thirds of the UAE's international renewable investments will flow to the countries of developed world. The country that will receive the most foreign green-energy targeted investments is Turkey, with estimated \$30 bn of UAE capital. Due to Turkey's strategic location at the crossroads between the East and West, its involvement in NATO, and military strength, it could be argued that Turkish-Emirati partnership is of a strategic character. Not only on the global scale, but significantly on the regional one, which for wealthy, yet surrounded by larger possible adversaries, country, like the UAE, is a big strategic advantage. Through the shared enthusiasm for renewables, the UAE fulfils its national interest by securing an economic partnership with the world's 17th largest economy⁵⁷, building up a relationship with world's 11th biggest military⁵⁸, and befriending a regional strategic partner. Second largest receiver is the United States. Neorealist reasoning may, again, focus on the national interest of the UAE. This time, instead of regional significance, it could be argued that a partnership with a military superpower and the world's largest economy⁵⁹ and a proud defender of western values and democracy, reflects the UAE's security interest but also will to position itself alongside with the modern and developed countries. By securing a partnership – especially in the renewables-oriented cause, the UAE demonstrates it is no longer to be recognized as a country in a desert and showcases its will for progress. Third largest sum of foreign investment will be received by the Egypt (\$10 bn) – one of the global developing economies. Besides significant cash flows towards building secure partnerships with strong economies with energy magnates, such as United States and Saudi Arabia (solar-focused partnership worth approximately \$1 bn), the UAE has been directing its

⁵⁵ “The Cheque Book COP: UAE's \$200bn Bid for Climate Influence,” Financial Times, n.d., <https://www.ft.com/content/36a2f00d-eb7a-4057-bc31-6be6c4f01d16>.

⁵⁶ Ibid.

⁵⁷ “Overview,” World Bank, n.d., <https://www.worldbank.org/en/country/turkey/overview#2>.

⁵⁸ Sinéad Baker and Thibault Spirlet, “The World's Most Powerful Militaries in 2023, Ranked,” *Business Insider*, December 18, 2023, <https://www.businessinsider.com/ranked-world-most-powerful-militaries-2023-firepower-us-china-russia-2023-5#11-turkey-15>.

⁵⁹ Forbes India, “The Top 10 Largest Economies in the World in 2024,” Forbes India, April 10, 2024, <https://www.forbesindia.com/article/explainers/top-10-largest-economies-in-the-world/86159/1>.

capital to the aforementioned countries of the developing world. Additionally to significant amounts of money sourced through joint ventures expected to land in Egypt, Zambia and Zimbabwe, the UAE has introduced Africa50, an initiative aiming to aid developing countries of Africa to transit towards sustainable energy sources.⁶⁰ It could be argued, that in this case, the UAE does not seek to form a partnership with a strong economic or military ally. Contrastingly, it aims to lead the less capable countries towards progress – thanks to which they potentially could become at least partly energetically dependent on the UAE. Such reversed power dynamics showcase the UAE’s national interest in not only protecting itself from the potential adversaries, but also to secure a position as leader.

Thus, developing economies will receive up to one third of the investments, including \$4.5 bn to aid African countries finance renewable energy projects, \$50 bn worth deals with India, joint ventures in Indonesia and elsewhere aiming to triple investment in south-east Asia’s largest floating solar plant, and others. Furthermore, the UAE’s diplomatic officials and trade groups have reportedly been visiting countries “from Rwanda to Kosovo, Kenya to Colombia, with clean energy frequently discussed.”⁶¹ According to the official report of European Commission, it has similarly been engaging in energy-related conversations with the UAE “to explore how EU-UAE energy cooperation can create further economic opportunities and accelerate investments in clean technologies.”⁶² According to Ben Cahill, a fellow at Centre for Strategic and International Studies, “the UAE wants to move beyond just being an oil and gas producer towards being a global country with partners all around the world [...] climate is a big part of that.” Following this logic, climate-related activities showcase the UAE’s efforts to gain new influence in a world with undeniably altering climate. Furthermore, according to the head of global political strategy at Climate Action Network International, Harjeet Singh, such efforts are UAE’s attempts to “win over trust of developing nations that are still reliant on fossil fuels”⁶³

As the world’s oil and gas demands drop due to the actions on climate crisis, the UAE is among the states at risk of losing more than a half of their expected income from fossil

⁶⁰ Emea, “COP28 Build-Up: \$200 Billion From the UAE for Global Clean Energy Investments,” EMEA, November 30, 2023, <https://euromed-economists.org/cop28-build-up-200-billion-from-the-uae-for-global-clean-energy-investments/>.

⁶¹ Ibid.

⁶² “Energy Diplomacy: EU and UAE Boost Cooperation Ahead of COP28,” Energy, September 8, 2023, https://energy.ec.europa.eu/news/energy-diplomacy-eu-and-uae-boost-cooperation-ahead-cop28-2023-09-08_en.

⁶³ Ibid.

fuels.⁶⁴ According to the Carbon Tracker analysis, the UAE risks 60% of its total government revenues due to reduced oil and gas demand stemming from a moderate-paced energy transition.⁶⁵ This chapter aims to demonstrate the pragmatic strategic steps the UAE has been taking to ensure the stability of its energy-related revenues – this time, however, coming from renewables. The Guardian’s analysis claims that the UAE has the world’s “third biggest net zero-busting plans for oil and gas expansion in the world [...] surpassed only by Saudi Arabia and Qatar.”⁶⁶ Following sub-chapters will focus on the concrete so-called net zero-bursting plans in different renewable energy branches, and the investments the UAE has made in them by sectors. This part focuses on renewable energy sources including nuclear, hydrogen, solar, wind, and other green efforts such as carbon capture.

2. 1. 1 Nuclear

Past decades have seen a radical downfall of investments into nuclear energy.⁶⁷ This could in part be credited to extreme rise of availability of fossil fuels, their inexpensive character and accessibility that fulfils the aims of energy security strategies. Furthermore, nuclear energy has become stigmatized due to a number of nuclear-related catastrophes from the past century that included Chernobyl, Three Mile Island, Tokaimura and other accidents. As a result, the global superpowers have been hesitant towards policies favoring nuclear energy production and focused on other sources – predominantly hydrocarbon-based.

However, the recent years have seen a rise of popularization of the nuclear energy as a safe and sustainable source of electricity. According to the World Nuclear Association, around 30 countries are considering, planning, or starting a nuclear program and around further 20 have at some point expressed an interest in it.⁶⁸ Although the UAE does not possess a rich nuclear power history, unlike other major international players (such as the United States and

⁶⁴ Euronews, “UAE Among Petrostates That Risk Losing Half Their Income as Fossil Fuel Demand Drops,” *Euronews*, December 1, 2023, <https://www.euronews.com/green/2023/12/01/uae-among-petrostates-that-risk-losing-half-their-income-as-fossil-fuel-demand-drops>.

⁶⁵ Carbon Tracker, “PetroStates of Decline: Oil and Gas Producers Face Growing Fiscal Risks as the Energy Transition Unfolds - Carbon Tracker Initiative,” Carbon Tracker Initiative, April 16, 2024, <https://carbontracker.org/reports/petrostates-of-decline/>.

⁶⁶ Damian Carrington, “Revealed: UAE Plans Huge Oil and Gas Expansion as It Hosts UN Climate Summit,” *The Guardian*, April 4, 2023, <https://www.theguardian.com/environment/2023/apr/04/revealed-uae-plans-huge-oil-and-gas-expansion-as-it-hosts-un-climate-summit>.

⁶⁷ Paul Day, „Investors are turning bullish on nuclear“, *Reuters*, November 12, 2023 <https://www.reuters.com/business/energy/investors-are-turning-bullish-nuclear-2023-11-16/>.

⁶⁸ “Emerging Nuclear Energy Countries | New Nuclear Build Countries - World Nuclear Association,” n.d., <https://world-nuclear.org/information-library/country-profiles/others/emerging-nuclear-energy-countries.aspx>.

France), it has shown a growing interest in the sector. According to the data published by the World Nuclear Association, it has accepted a \$20 bn bid from South Korean consortium to build four commercial nuclear power reactors by 2020 at Barakah, Abu Dhabi.⁶⁹ Francois Foulon, Professor, Chair of Nuclear Engineering and Director of the Emirates Nuclear Technology Center at Khalifa University stated “major drivers for the UAE to pursue nuclear power have been its reliability, 24-hour availability, and baseload low carbon power.

Over the past months, the UAE has been seen considering foreign investments into nuclear plants development. According to The Guardian report, a UAE investor has been approached to invest in Sizewell C nuclear power plant project in Suffolk after the removal of Chinese-owned China General Nuclear Power Group from the project due to security concerns.⁷⁰ Since Sino-Anglo geopolitical tensions have opened the door for investments worth \$126.2 m, a foreign investor is expected to fill the gap with capital.⁷¹ According to The Times, Dubai’s very own Mubadala Investment Company, an owner of Masdar Sustainable city and investor in various businesses ranging from real estate business in China, pharma industry in France to raw materials digital trading platform in Switzerland, has been approached to take part in the deal, with the verdict expected in 2024.⁷² However, the Guardian’s source close to Mubadala Investment Company has said it would not be interested in the project.⁷³ If such investment shall occur, the UAE would not only be a part of the western sustainable transition movement, furthermore, it would secure its place among the global super-powers as it would replace the Chinese investment in the project. For a small country in the middle East, such replacement could be very meaningful. I believe this could be an effective demonstration of national interest – slowly, but surely, the UAE aims to not only be militarily and financially secure, it aims to be recognised as a noteworthy actor on many fronts.

⁶⁹“Nuclear Power United Arab Emirates | UAE Nuclear Energy | Abu Dhabi | Dubai - World Nuclear Association,” n.d., <https://world-nuclear.org/information-library/country-profiles/countries-t-z/united-arab-emirates.aspx>.

⁷⁰ Alex Lawson, “UAE Approached to Invest in Sizewell C Nuclear Power Plant,” The Guardian, November 27, 2023, <https://www.theguardian.com/business/2023/nov/27/uae-approached-to-invest-sizewell-c-nuclear-power-plant>.

⁷¹ Alfie Shaw and Alfie Shaw, “UK Government Considers Abu Dhabi Investment in Sizewell C,” Power Technology, November 27, 2023, <https://www.power-technology.com/news/uk-government-considering-abu-dhabi-investors-for-sizewell-c/>.

⁷² George Grylls and Alex Ralph, “Sizewell C Stake Seized From China May Go to UAE,” The Times, November 27, 2023, <https://www.thetimes.co.uk/article/uae-state-energy-company-china-stake-sizewell-c-q7vk8jbttd>.

⁷³ Alex Lawson, “UAE Approached to Invest in Sizewell C Nuclear Power Plant,” The Guardian, November 27, 2023, <https://www.theguardian.com/business/2023/nov/27/uae-approached-to-invest-sizewell-c-nuclear-power-plant>.

Furthermore, the UAE has reportedly been signalling an interest in European nuclear energy investments.⁷⁴ During a session of the UAE-France Strategic Dialogue, importance of peaceful nuclear energy has been emphasized along with “a conclusion of multiple memoranda of understanding and areas of research and development, capacity building, and nuclear industrial cooperation in the areas of maintenance & engineering services, as well as collaboration between the French and Emirate supply chains.”⁷⁵ The planned aforementioned memorandum of understanding between EDF, French-owned electric utility company, and ENEC, Emirates Nuclear Energy Corporation, is expected to “elevate the strategic partnership between the two entities through sharing global expertise and the latest advancements in the nuclear energy sector, as well as exploring the production of clean hydrogen powered by carbon-free nuclear energy.”⁷⁶

By fulfilling the goals set with one of the world’s key nuclear players, France, the UAE could gain enough expertise in the nuclear sector and, moreover, deepen a strategic partnership with one of the European strongest international stakeholders. Furthermore, if the UAE was to invest in the Sizewell C in the UK, it would not only obtain 20% ownership of the said powerplant, but it would also fulfil this equation’s role of China. As UAE pragmatically adapts to the changing climate (both political and environmental), such investments would mean an assertion on the international nuclear energy market. The UAE has already been marked as the leading nuclear power in the Arab Gulf region⁷⁷, these strategic partnerships along with own nuclear plants developments could help making it a global nuclear power.

⁷⁴ Alexander Cornwell, Maha El Dahan, “UAE signals interest in European nuclear energy investments, sources say”, Reuters, March 29, 2024, <https://www.reuters.com/business/energy/uae-signals-interest-european-nuclear-energy-investments-sources-say-2024-03-29/>

⁷⁵ Ministère de l’Europe et des Affaires étrangères, “15th Session of the UAE-France Strategic Dialogue Discusses Growing Cooperation Between UAE & France (19.06.23),” France Diplomacy - Ministry for Europe and Foreign Affairs, n.d., <https://www.diplomatie.gouv.fr/en/country-files/united-arab-emirates/events/article/15th-session-of-the-uae-france-strategic-dialogue-discusses-growing-cooperation>.

⁷⁶ Rohma Sadaqat, “ENEC and EDF to Sign MoU on Research and Development - News | Khaleej Times,” Khaleej Times, June 30, 2021, <https://www.khaleejtimes.com/local-business/enec-and-edf-to-sign-mou-on-research-and-development>.

⁷⁷ Amnah Ibraheem, “The nuclear-energy option in the Arab Gulf states”, International Institute for strategic Studies, November 9, 2022. <https://www.iiss.org/online-analysis/online-analysis/2022/11/the-nuclear-energy-option-in-the-arab-gulf-states/>

2. 1. 2 Low-Carbon Hydrogen

In a world without fossil fuels, hydrogen is likely to be the most important energy resource after renewables, and possibly, nuclear power.⁷⁸ According to Nicholas Crawford, Research Associate at International Institute for Strategic Studies (IISS), there are three reasons why hydrogen plays a critical part in the post-fossil world. Firstly, it successfully replaces fossil fuels in sectors, where renewables are not suitable (such as heavy-duty vehicles, air traffic, steel and cement industries, and others). Secondly, countries already using hydrogen need to switch to low-carbon hydrogen. Finally, due to high population density in many European and East Asian countries, most of the renewable energy will likely be consumed through energy grids. Therefore, off-grid sectors will need to import energy resources. Hydrogen or hydrogen-based fuels seem to solve this issue as a commodity easy to transfer and to be stored.⁷⁹ There are seven types of hydrogen – all classified by color: grey hydrogen, blue, and turquoise (sourced from natural gas), green hydrogen sourced through renewable energies, pink hydrogen (obtained through processed nuclear energy), yellow hydrogen (sourced from solar energy), and black hydrogen (obtained from coal). According to the IISS analysis, the UAE has plans to produce large volumes of blue hydrogen.⁸⁰

The Emirati National Hydrogen Strategy, introduced in July 2023, presents an ambitious hydrogen action plan the UAE plans to implement. In its introduction, Suhail Mohamed Al Mazrouei, the Minister for Energy and Infrastructure, states: “Low carbon hydrogen represents a significant economic opportunity to maintain the UAE’s position as a strategic energy producer, exporter, and leader in the global energy market as the world undertakes the transition to a decarbonized energy system.”⁸¹ Additionally, according to Al Mazrouei, Emirati natural gas resources, Carbon Capture, Utilization, and Storage capacity, strategic location of the country are conditions that position the UAE to develop and utilize low carbon hydrogen, and “to play a leading role in the global hydrogen economy”.⁸²

⁷⁸ Nicholas Crawford, Hydrogen: future energy interdependence, International Institute for Strategic Studies. December 16, 2021. <https://www.iiss.org/online-analysis/online-analysis/2021/12/hydrogen-and-future-energy-interdependence/>

⁷⁹ Ibid.

⁸⁰ Ibid.

⁸¹ “National Hydrogen Strategy | the Official Portal of the UAE Government,” n.d., <https://u.ae/en/about-the-uae/strategies-initiatives-and-awards/strategies-plans-and-visions/environment-and-energy/national-hydrogen-strategy>.

⁸² Ibid.

Additionally to producing its own blue hydrogen, Masdar, Arabic for ‘source’ and Emirati sustainability flagship project, has been heavily invested in developing green hydrogen power abroad. It is reported to have signed landmark agreements to develop green hydrogen plants in Egypt by 2030 and is said to have plans to develop offshore wind and green hydrogen projects in Azerbaijan⁸³, Japan, and Germany.⁸⁴ Another sphere yet to be discovered by the UAE is green hydrogen. Thanks to a deal between Masdar and Emirates Steel Arkan, the pilot project for decarbonizing the hard-to-abate steel sector will be commissioned in 2024.⁸⁵ Furthermore, after signing a collaboration agreement with Engie, global player in low-carbon energy, and Fertigllobe, Dubai’s nitrogen fertilizer and ammonia producer and distributor, the UAE is set to further explore the possibilities of green hydrogen development.⁸⁶ This partnership is not solely a project of parties interested in sustainable development as Masdar’s ownership lies in the hands of the mentioned Mubadala Investment Company and Fertigllobe’s majority shareholder is ADNOC, Abu Dhabi National Oil Company.⁸⁷ ADNOC director and CEO, Sultan al Jaber, holds the role of Minister of Industry and Advanced Technology, chairman of Masdar, and is UAE’s Special Envoy for Climate Change. Furthermore, he was the COP28 president.

All in all, the UAE has been focusing significant attention of its sustainable transition efforts towards low-carbon hydrogen projects. Additionally to exploring the realm of low-carbon hydrogen domestically, it has established itself as a clean hydrogen investor abroad. As these efforts caught international attention, the UAE has been marked as “potential leader in hydrogen production, storage, and transportation.”⁸⁸ This way, it secures its place in the process of renewable transition, and perhaps even aims to be irreplaceable in the post-carbon future, as

⁸³ “Project by Project, Masdar Is Establishing Itself as a Global Power in the Shift to Clean Energy,” July 24, 2023, <https://impact.economist.com/sustainability/net-zero-and-energy/a-global-power-in-the-shift-to-clean-energy>.

⁸⁴ Yana Popkostova, *The Power Shift*, International Institute for Strategic Studies, March 2023:12.

⁸⁵ Fareed Rahman, “Masdar and Emirates Steel Arkan Team up to Develop Green Hydrogen Project in Abu Dhabi,” *The National*, November 22, 2023, <https://www.thenationalnews.com/climate/road-to-net-zero/2023/11/22/masdar-and-emirates-steel-arkan-team-up-to-develop-green-hydrogen-project-in-abu-dhabi/>.

⁸⁶ *Ibid.*

⁸⁷ “ADNOC to Acquire OCI’s Stake in Fertigllobe,” ADNOC, n.d., <https://www.adnoc.ac/en/news-and-media/press-releases/2023/adnoc-to-acquire-ocis-stake-in-fertigllobe>.

⁸⁸ Benoy P Jacob, “UAE Leads a Wave of Hydrogen Fuel Projects in the GCC,” *Esgtimes*, January 8, 2024, <https://www.esgimes.in/energy/hydrogen/uae-leads-a-wave-of-hydrogen-fuel-projects-in-the-gcc/>.

hydrogen is broadly regarded as a “central element for energy transition”⁸⁹. Consequently, the UAE’s national interest of becoming a key actor in the future is secured by such investments.

2. 1. 3 Solar

As a country located in the Middle Eastern region, the UAE’s geographic location and the amount of sunshine the country gets provide fertile soil for solar energy deployment. This favorable predisposition was recognized by a number of the Gulf states including Saudi Arabia, and Kuwait. In the UAE, this reality provided an opportunity for installation of numerous domestic solar power plants that include Noor Abu Dhabi, and Mohammed bin Rashid Al Maktoum Solar Park, and the world’s largest single-site solar power plant – Al Dhafra Solar PV.⁹⁰ This leading role, however, may soon be surpassed by Saudi Arabian solar project in the making.⁹¹ According to The Economist, Emirati Masdar is a leading power in solar energy as it “launched the Middle East’s first concentrated solar plant Shams, in Abu Dhabi, paving the way for similar projects in the region.”⁹²

Domestic efforts were soon followed by global ones reflected in several bilateral agreements and international partnerships. To provide an example of such endeavor, it is worth to mention a bilateral cooperation through a joint venture between the UAE’s Masdar and Indonesia’s state-owned electric utility PLN, in constructing Cirata, the first floating solar plant in Indonesia and the largest floating solar farm in Southeast Asia.⁹³ Furthermore, Masdar has acquired a 47.5 percent stake in the leading Solar Photovoltaics developer in Indonesia, named Solar Radiance.⁹⁴ Outside of Indonesia, the UAE has financially supported three solar power projects in Uzbekistan and played an active role in developing Azerbaijan’s Garadagh Solar PV, that could cater electricity to 110,000 homes and its total cost is estimated to be \$1

⁸⁹ Bernd Müller, “How Important Is Hydrogen for the Energy Transition?,” Paul Scherrer Institut (PSI), March 4, 2024, <https://www.psi.ch/en/media/our-research/how-important-is-hydrogen-for-the-energy-transition>.

⁹⁰ “Largest Solar Power Stations in UAE | Photovoltaic Parks in UAE | PV Farms,” List.Solar, n.d., <https://list.solar/plants/largest-plants/united-arab-emirate/>.

⁹¹ Naser W. Alnaser and W.E. Alnaser, “The Impact of the Rise of Using Solar Energy in GCC Countries,” *Renewable Energy and Environmental Sustainability* 4 (January 1, 2019): 7, <https://doi.org/10.1051/rees/2019004>.

⁹² “Project by Project, Masdar Is Establishing Itself as a Global Power in the Shift to Clean Energy,” July 24, 2023.

⁹³ James Guild, “How The UAE Is Making a Splash in Indonesia’s Clean Energy Sector,” *The Diplomat*, January 18, 2024, <https://thediplomat.com/2024/01/how-the-uae-is-making-a-splash-in-indonesias-clean-energy-sector/>.

⁹⁴ Nukeygraphic Indonesia, “Home | PT Masdar Mitra Solar Radiance,” Solar Radiance, n.d., <https://www.solar-radiance.co.id/en>.

bn.⁹⁵ This was not only a milestone for Azerbaijan, but also for Masdar as Garadagh Solar PV was its first foreign investment-based independent solar power plant.⁹⁶ Garadagh Solar Park was unveiled by Sultan Al Jaber, head of ADNOC and COP28, just months before the COP28 commenced.⁹⁷

According to the analysis conducted by the Financial Times, Jaber’s trip north to land a high-profile renewable energy business deal was a proof of “transactional approach of the UAE” to COP28.⁹⁸ Thus, to develop this argument, the UAE has been utilizing its COP28 hosting status to promote itself as a renewable energy leader, and therefore consequently closing deals that will pay off in the Net Zero reality.

⁹⁵ “The Cheque Book COP: UAE’s \$200bn Bid for Climate Influence,” Financial Times, n.d., <https://www.ft.com/content/36a2f00d-eb7a-4057-bc31-6be6c4f01d16>.

⁹⁶ Arab News, “UAE’s Masdar Launches Its First Foreign Investment-based Solar Plant in Azerbaijan,” *Arab News*, March 16, 2022, <https://www.arabnews.com/node/2043601/business-economy>.

⁹⁷ “The Cheque Book COP: UAE’s \$200bn Bid for Climate Influence,” n.d.

⁹⁸ <https://www.ft.com/content/36a2f00d-eb7a-4057-bc31-6be6c4f01d16>

2. 1. 4 Wind

The UAE ‘s domestic Wind Program has been launched by Masdar in 2023.⁹⁹ Despite concerns due to low winds in the country¹⁰⁰, ever since then it has argued it has been providing enough energy to power 23,000 homes¹⁰¹ – approximately 10 percent of the total amount of households in the country.¹⁰² After establishing its large scale project based in Abu Dhabi and Fujairah, the country has moved outside of its territory to prove its interest in the green transition, and renewable energy resources. The projects it has chosen range geographically from the Middle Eastern region to Europe.

Turkish-Emirati agreement worth \$50.7 bn signed in 2023, is supposed to give direct \$30 bn out of total to the renewable energy development.¹⁰³ This investment is said to finance predominantly offshore wind projects and wind turbines that shall make up to 5,500 megawatts of wind energy. Additionally to the investments in the Middle East, the Emirati wind-oriented capital has landed in Mlawa Wind Farm, Grajewo Wind Farm, and other locations in Poland.¹⁰⁴ The bilateral partnership between the UAE and Poland is set to provide green energy for 223,000 households and take part in development of technologies enabling use of solar and wind power simultaneously.¹⁰⁵

Western and Southern Europe was not left unseen. Masdar has established a \$16.2 bn alliance with Iberdrola, Spanish renewable energy leader.¹⁰⁶ This capital is to be used in the off-shore wind and green hydrogen investments abroad, namely in Germany, the United States, Indonesia, Kazakhstan, and Great Britain. Under the agreement signed on the sidelines of the COP28, Masdar is to acquire 49 percent stake in the Iberdrola-developed East Anglia Three

⁹⁹ “Masdar | UAE Wind Program,” n.d., <https://masdar.ae/en/renewables/our-projects/uae-wind-program>.

¹⁰⁰ Sonal Patel and Sonal Patel, “UAE Launches 104-MW Wind Project Despite Low Winds,” *POWER Magazine*, November 1, 2023, <https://www.powermag.com/uae-launches-104-mw-wind-project-despite-low-winds/>.

¹⁰¹ Ibid.

¹⁰² Statista, “Number of Homes in the UAE 2015-2020,” September 28, 2023, <https://www.statista.com/statistics/1287843/uae-number-of-homes/>.

¹⁰³ “Road Map for Energy Investment With UAE Outlined,” *Azernews.Az*, February 1, 2024, <https://www.azernews.az/region/221108.html>.

¹⁰⁴ Masdar, “Masdar Expands European presence with Acquisition of 1GW Renewable Portfolio in Poland,” *PR News*, December 4, 2023, <https://www.prnewswire.com/in/news-releases/masdar-expands-european-presence-with-acquisition-of-1gw-renewable-portfolio-in-poland-302004875.html>.

¹⁰⁵ Masdar Chief Executive Officer Mohamed Jameel Al Ramahi said:, “Masdar | Masdar Expands European Presence With Acquisition of 1GW Renewable Portfolio in Poland,” n.d., <https://masdar.ae/en/news/newsroom/masdar-expands-european-presence-with-acquisition-of-1gw-renewable-portfolio>.

¹⁰⁶ Pietro Lombardi, Iberdrola and Masdar to invest \$16 billion in green energy, Reuters, December 5 2023. <https://www.reuters.com/business/energy/iberdrola-masdar-invest-16-bln-green-energy-2023-12-05/>

wind farm.¹⁰⁷ Emirati wind portfolio in Great Britain furthermore includes Hywind, Scotland's first floating wind farm and Dogger Bank South¹⁰⁸, one of the world's largest planned offshore wind farms, which is set to power up to 3,000,000 British households. Masdar holds 49 percent stake in the project.¹⁰⁹

To sum up, Emirati interest in the wind energy has been reflected in both domestic and foreign investments. However, because of the lack of heavy winds in the UAE, the country has been investing quite significantly into sustainable wind energy abroad. Moreover, as demonstrated above, it has formed at least two strategic partnerships, with Turkey and Spain, through which it has been conducting energy diplomacy and consequent pragmatic investments. This way, its web of partnerships and influence stretches across East and West and thanks to its geographical diversification becomes even more secure and stable.

¹⁰⁷ "UAE Makes Second Major UK Wind Farm Deal Expanding Renewable Energy Role," *The Maritime Executive*, December 6, 2023, <https://maritime-executive.com/article/uae-makes-second-major-uk-wind-farm-deal-expanding-renewable-energy-role>.

¹⁰⁸ *Ibid.*

¹⁰⁹ Masdar, "Masdar Joins Forces with RWE in £11 billion Investment to Co-develop Massive 3GW Offshore Wind Projects in UK," *PR News*, December 1, 2023, <https://www.prnewswire.com/in/news-releases/masdar-joins-forces-with-rwe-in-11-billion-investment-to-co-develop-massive-3gw-offshore-wind-projects-in-uk-302003569.html>.

2. 2 Fossil Politics

According to the historical analysis conducted by X, “oil and gas are not only energy sources but also a means of power.”¹¹⁰ This chapter and its sub-chapter aim to provide latest developments within the fossil-related investments the UAE has been conducting to support the argument of fossils, energy security, and power correlation. With production of almost four million barrels per day, the UAE ranks as the 8th biggest oil producer in the world.¹¹¹ Exporting approximately 66% of its oil production, the UAE has made \$105 bn in crude petroleum in 2022. The primary destinations of its exports were Japan, China, India, Thailand, and Singapore.¹¹² By investing into renewables in the West, the UAE secures its national interest of influence and power in post-fossil reality. On the other hand, by further immersing itself on the hydrocarbon market, the UAE makes sure its resources and partnerships are diversified, and, therefore, more secure. Despite the global sustainable switch, in which the UAE plays a significant role, the ADNOC fossil investments have been “gaining momentum”.¹¹³ Analysis conducted by Global Witness, an international NGO investigating links between conflicts, natural resources, poverty, and human rights, estimates the UAE’s carbon footprint is to be 40.5 percent higher in 2030 than currently.¹¹⁴ Such endeavor is in direct contrast to the Paris Agreement, and consequently, COP28, that promote emissions fall by 43 percent in order to reach the 1.5 degrees Celsius climate heating cap.¹¹⁵

Despite hosting the talks within the COP28 in Dubai, the UAE’s very own ADNOC has announced an over five years investment worth \$150 bn to enable “accelerated growth strategy” for oil and gas production.¹¹⁶ Furthermore according to the Guardian and the Centre

¹¹⁰ Kiliç-Pala, Pinar Buket. “Approaches in Energy Exclusive Security: Theories of Energy Security and the Dominance of Realism.” *Politics & policy (Statesboro, Ga.)* 49, no. 3 (2021): 788.

¹¹¹ “United Arab Emirates Oil Reserves, Production and Consumption Statistics - Worldometer,” n.d., <https://www.worldometers.info/oil/united-arab-emirates-oil/>.

¹¹² “Crude Petroleum in United Arab Emirates | the Observatory of Economic Complexity,” The Observatory of Economic Complexity, n.d., <https://oec.world/en/profile/bilateral-product/crude-petroleum/reporter/are>.

¹¹³ Nishant Ugal, “Adnoc Awards Key Offshore Contract to UAE Player as Expansion Projects Gain Momentum,” *Upstream*, January 15, 2024, <https://www.upstreamonline.com/field-development/adnoc-awards-key-offshore-contract-to-uae-player-as-expansion-projects-gain-momentum/2-1-1583162>.

¹¹⁴ “COP28 Oil Company (ADNOC) Emissions to Increase by 40 Percent by 2030 in Exact Opposite Way for Climate Goal | Global Witness,” Global Witness, n.d., <https://www.globalwitness.org/en/press-releases/cop28-oil-company-adnoc-emissions-heading-exact-opposite-way-climate-goal/>.

¹¹⁵ United Nations, Implementation must accelerate to increase ambition across all fronts, taking an all-of-society approach to make progress towards the Paris Agreement goals and respond to the climate crisis, finds technical report on first global stocktake, September 8, 2023. [https://unfccc.int/news/implementation-must-accelerate-to-increase-ambition-across-all-fronts-taking-an-all-of-](https://unfccc.int/news/implementation-must-accelerate-to-increase-ambition-across-all-fronts-taking-an-all-of-society#:~:text=‘To%20keep%201.5%20within%20reach%20we%20must%20act%20with%20‘ambition%20and%20urgency’%20to%20reduce%20emissions%20by%2043%25%20by%202030.)

[society#:~:text=‘To%20keep%201.5%20within%20reach%20we%20must%20act%20with%20‘ambition%20and%20urgency’%20to%20reduce%20emissions%20by%2043%25%20by%202030.](https://unfccc.int/news/implementation-must-accelerate-to-increase-ambition-across-all-fronts-taking-an-all-of-society#:~:text=‘To%20keep%201.5%20within%20reach%20we%20must%20act%20with%20‘ambition%20and%20urgency’%20to%20reduce%20emissions%20by%2043%25%20by%202030.)

¹¹⁶ “UAE Energy Group Adnoc to Lift Spending on Decarbonisation Projects,” Financial Times, n.d., <https://www.ft.com/content/0abc5980-d4f9-4ea8-842a-81b1f2502b94>.

for Climate Reporting report, head of ADNOC and COP28, Sultan Al Jaber, let himself be heard “There is no science out there, or no scenario out there, that says that the phase-out of fossil fuel is what’s going to achieve 1.5C.”¹¹⁷ Thus, the UAE has been continuously investing¹¹⁸ in oil and gas projects such as Hail and Ghasha¹¹⁹ gas fields, occasionally framing them as tools towards green transition. Moreover, according to Al Jaber, such phase-out would not allow sustainable development “unless you want to take the world back into caves.”¹²⁰ After being challenged by the former UN special envoy for climate change, Mary Robinson, about the further investments into fossils, Al Jaber accused her of reading biased and wrong media”.¹²¹ Some time later, Al Jaber reportedly spoken to fellow petroleum producers that “for too long, this industry has been viewed as part of the problem.”¹²² Al Jaber’s controversial statements are in direct contrast with the goals established in Paris Agreement and the ones that shall be pursued by the United Nations’ COP. This fact was acknowledged by over 130 lawmakers and activists who protested his chairing of COP28.¹²³

The UAE has been accused of using COP28 to promote its oil and gas increase strategy multiple times. These statements were, however, finally factually supported by the documents leaked by the UK-registered Centre for Climate Reporting just before the COP28.¹²⁴ Besides containing notes to brief Al Jaber before talks with international strategic partners such as China, Azerbaijan, and Brazil, these documents contained suggestions of establishment or continuity of fossil-related bilateral partnerships. Such partnerships include China, petrochemicals supply to Egypt, jet-fuel supply to Kenya, and others.¹²⁵

¹¹⁷ Damian Carrington and Ben Stockton, “Cop28 President Says There Is ‘No Science’ Behind Demands for Phase-out of Fossil Fuels,” *The Guardian*, December 4, 2023, <https://www.theguardian.com/environment/2023/dec/03/back-into-caves-cop28-president-dismisses-phase-out-of-fossil-fuels>.

¹¹⁸ See Nick Ferris and Nick Ferris, “Exclusive: COP28 Host UAE to Extract Nearly 40 Billion Barrels of Oil and Gas Over 70 Years,” *Energy Monitor*, November 13, 2023, <https://www.energymonitor.ai/sectors/industry/exclusive-cop28-host-uae-to-extract-nearly-40-billion-barrels-of-oil-and-gas-over-70-years/?cf-view>.

“Overview,” n.d., <https://www.adnoc.ae/en/our-projects/hail-ghasha/ghasha-mega-project>.

¹²⁰ Ibid.

¹²¹ Ibid.

¹²² “UAE Oil Giant’s Two Missions: A Greener Image and ‘Accelerated Growth,’” *POLITICO*, November 10, 2023, <https://www.politico.com/news/2023/11/10/how-an-oil-giant-sought-to-green-its-image-before-a-high-stakes-climate-summit-00126495>.

¹²³ Zia Weise, “COP28 Chief Under Fire From EU and US Lawmakers Over Oil Ties,” *POLITICO*, May 23, 2023, <https://www.politico.eu/article/sultan-al-aber-united-nations-cop28-chief-under-fire-for-oil-ties-from-eu-and-us-lawmakers/>.

¹²⁴ Lawrence, “COP28 President Secretly Used Climate Summit Role to Push Oil Trade With Foreign Government Officials – Centre for Climate Reporting,” Centre for Climate Reporting, March 25, 2024, <https://climate-reporting.org/cop28-president-oil-climate/>.

¹²⁵ Ibid.

All in all, even though the UAE has committed to achieve Net Zero by 2050, the Emirati government makes no reference to the role of the fossil fuels in the outline of the plan. Instead, it has been, as demonstrated above, investing heavily into renewable energy domestically and world-wide. Such behavior in combination with Al Jaber statements about no scientific evidence of fossils' impact on climate crisis worsening is deemed unacceptable by climate specialists. According to Greg Muttitt, a senior associate at the International Institute for Sustainable Development, "there is overwhelming scientific evidence that achieving the Paris goals leaves no room for new fossil fuel projects, and that existing fossil fuel production and use needs to be wound down rapidly."¹²⁶ Furthermore, according to Harjeet Singh, head of global political strategy at Climate Action Network International, "the UAE has been attempting to win over the trust of developing nations that were still reliant on fossil fuels whilst, at the same time, bringing fossil fuel producers into the heart of COP28 discussions."¹²⁷ He added that such endeavor might pave a way for an agreement that, "paradoxically, keeps the fossil fuel industry afloat, whilst simultaneously positioning the UAE as a climate leader through support for renewable energy projects."¹²⁸

2. 2. 1 Foreign Fossil Partnerships

Additionally to the ADNOC commitment to spend \$150 bn "as part of an effort to expand its oil and gas operations, which last year dumped more planet-warming gases into the atmosphere than over 130 countries,"¹²⁹ the UAE has been deeply invested in securing international fossil-oriented partnerships home and abroad. According to the Urgewald analysis, aside from ADNOC, there are another ten fossil fuel companies expanding in the UAE (Eni, TotalEnergies, INPEX, ExxonMobil, CNPC, Wintershall Dea, British Petroleum (bp), OMV, and LUKOIL).¹³⁰ Most of them are linked with stable, or increasing, oil and gas

¹²⁶ Nick Ferris and Nick Ferris, "Exclusive: COP28 Host UAE to Extract Nearly 40 Billion Barrels of Oil and Gas Over 70 Years," *Energy Monitor*, November 13, 2023, <https://www.energymonitor.ai/sectors/industry/exclusive-cop28-host-uae-to-extract-nearly-40-billion-barrels-of-oil-and-gas-over-70-years/?cf-view>. w

¹²⁷ Emea, "COP28 Build-Up: \$200 Billion From the UAE for Global Clean Energy Investments," EMEA, November 30, 2023, <https://euromed-economists.org/cop28-build-up-200-billion-from-the-uae-for-global-clean-energy-investments/>.

¹²⁸ Ibid.

¹²⁹ "UAE Oil Giant's Two Missions: A Greener Image and 'Accelerated Growth,'" POLITICO, November 10, 2023, <https://www.politico.com/news/2023/11/10/how-an-oil-giant-sought-to-green-its-image-before-a-high-stakes-climate-summit-00126495>.

¹³⁰ https://www.urgewald.org/sites/default/files/media-files/Joint_Report_ADNOC_and_Its_International_Partners_COP28.pdf 11

production. Eni, one of the world's biggest polluters¹³¹, reportedly plans to increase its upstream production by 2025. According to the Reclaim Finance report, this means that Eni will have surpassed the level required to align with the International Energy Agency's Net Zero Emission Scenario by 71%.¹³² Similarly, the French and oil frontrunner, Total Energies, is considered to be the biggest developer of new oil and gas resources today.¹³³ In May 2023, ADNOC and TotalEnergies signed a liquefied natural gas contract worth approximately \$1 to \$1.2 billion.¹³⁴ Recently, ADNOC has allegedly been considering acquiring bp? due to its long underperformance.¹³⁵ Such talks have reportedly, however, been terminated. Indisputably, the UAE tries to exploit its fossil fuel potential while there is still heavy demand for oil and gas.¹³⁶ According to Reuters undisclosed sources, ADNOC is eyeing LNG assets in Africa and "is considering buying Galp's (Portuguese energy corporation) 10% stake in a multi-billion-dollar natural gas project in the Rovuma basin off the coast of Mozambique."¹³⁷ Both companies declined to answer whether the allegations were true.

ADNOC's fossil portfolio has been further broadened by the acquirement of 30% equity stake in Azerbaijan's Absheron gas and condensate field in the Caspian Sea in August 2023.¹³⁸ The 30% share comes from French TotalEnergies (15%) and Azeri state oil company SOCAR (15%) partial ownership.¹³⁹ In November 2023, ADNOC made new bid for stake in Braskem, Brazil's major petrochemical producer.¹⁴⁰ According to the Reuters report, such bid would be worth \$10.5 bn in equity value.¹⁴¹ Moreover, ADNOC has been in talks with the Austrian OMV regarding creation of \$20 bn chemicals giant. Such deal would include a merger of petrochemicals group Borealis (owned by ADNOC and OMG in 25:75 split) and Bourouge (owned by ADNOC and Borealis in 54:36 split).¹⁴² Finally, bp and the UAE agreed on a 50%

¹³¹ <https://cdn.cdp.net/cdp-production/cms/reports/documents/000/002/327/original/Carbon-Majors-Report-2017.pdf>

¹³² Assessment of oil and gas companies climate strategy by Reclaim Finance: <https://reclaimfinance.org/site/wp-content/uploads/2023/04/20230413-briefing-climate-strategy-assessment-eni.pdf>

¹³³ https://www.urgewald.org/sites/default/files/media-files/Joint_Report-ADNOC_and_Its_International_Partners_COP28.pdf

¹³⁴ <https://www.ouest-france.fr/economie/entreprises/total/totalenergies-signe-un-accord-dun-milliard-de-dollars-avec-la-compagnie-gaziere-emiratie-8937c31a-e82f-11ed-9f96-7435dd7f56b8>

¹³⁵ <https://www.reuters.com/markets/deals/uacs-adnoc-recently-eyed-bp-takeover-target-sources-say-2024-04-11/>

¹³⁶ <https://www.reuters.com/markets/commodities/abu-dhabis-oil-champion-adnoc-bets-global-expansion-2023-10-09/>

¹³⁷ Ibid.

¹³⁸ <https://www.reuters.com/markets/deals/abu-dhabis-adnoc-acquire-30-stake-absheron-gas-field-2023-08-04/>

¹³⁹ Ibid.

¹⁴⁰ <https://www.reuters.com/markets/deals/adnoc-makes-fresh-bid-buy-stake-brazils-braskem-2023-11-09/>

¹⁴¹ Ibid.

¹⁴² <https://www.reuters.com/markets/deals/omv-enter-talks-with-adnoc-form-chemicals-jv-2023-07-14/>

ownership gas deal in Israel worth \$2 bn. However, the deal is postponed due to the ongoing war in Gaza.¹⁴³

All in all, as demonstrated in this chapter, the Abu Dhabi's ADNOC has been continuously either investing in fossil expansion or participating in talks regarding it. Such endeavor has been taking place in the background of the COP28 groundwork and the UAE's numerous and ambitious effort to express self-investment in the renewable transition. By investing in the Eastern hemisphere, and hydrocarbons – while the world is still heavily dependent on them – the UAE secures its international role in the still prevalent fossil reality. This could be explained by its aim, stemming from national interest, to be established on as many fronts as possible. Thanks to encouraging fossil-related investments, it pragmatically uses its oil and gas wealth, while it is still available or acceptable.

Conclusion

The UAE positions itself as one of the Middle East's and even global biggest investors in renewable energy among the petrostates. In contrast, however, oil and gas producers only account for mere one percent of total clean energy investment globally.¹⁴⁴ Furthermore, the UAE remains at the eighth place on the global oil reserves and production rankings. Its ambivalent energy nature is reflected in the demonstrated heavy renewable energy (solar, nuclear, wind, hydrogen) investments through Masdar Company domestically and abroad, but is also in showcased fossil-related investments conducted by the government-owned ADNOC again, both domestically and abroad. The country's contradicting energy policies have been mirrored in the organization of COP28 taking place in Dubai in 2023 in two major ways. Firstly, the appointed chair of the conference, Sultan Ahmed Al Jaber, has long been holding the office as the head of Abu Dhabi National Oil Company (ADNOC). Contrastingly, he has been chosen to become a chairman of the Masdar, the Emirati flagship renewable energy project and the Minister of Industry and Advanced Technology. Secondly, according to the leaked information, Al Jaber has been utilizing the COP28 talks in favor of enclosing fossil-related deals. Such talks were taking place on the background of closing international hydrogen deals between the

¹⁴³ Hannah Ziady, "BP And UAE Suspend \$2 Billion Gas Deal in Israel as Gaza War Drags On," *CNN*, March 13, 2024, <https://edition.cnn.com/2024/03/13/business/bp-abu-dhabi-newmed-energy/index.html>.

¹⁴⁴ "An Oil and Gas COP," *Financial Times*, n.d., <https://www.ft.com/content/502f722b-8455-4ac0-ac2e-c3a6755247b1>.

UAE and partner countries. Moreover, Al Jaber, when confronted regarding the issue, claimed there is no evidence that phasing out on fossil fuels would lead the world towards renewable future.

As demonstrated above, the UAE has been actively participating in research and development of renewable energy through various domestic and foreign investments, climate diplomacy, and strategic partnerships whilst sustaining, or rather enhancing, its hydrocarbon-dominated *status quo*. This can be credited to its outstanding ability to adapt to the changes of both environmental and international political climate due to its abundant fossil-sourced capital. A global push for a renewable transition and a vision of a new market brings up new opportunities for a capital-rich country despite its decades long petrostate legacy. Using the neorealist theoretical framework this thesis argues the Emirati investments and renewable energy efforts are of purely pragmatic character. Firstly, as the globe shifts toward new sustainable energy sources, Emirati politics reflect these needs in becoming a global renewable energy player. Its ambition to remain a global energy magnate persists regardless of the nature of the energy. Secondly, Emirati international politics in the developing countries mirror the efforts of the UAE to become a global energy super-power. By securing their position as energy supplier, they not only gain future capital, confidence of partners, but again, relevance in the post-fossil world.

To support these arguments, examples of renewable and fossil energy investments were offered. As the Emirati investment range stretches across continents and material, this thesis has found one important intersection in all – national interest. The national interest is arguably demonstrated in the variability of the energy policy. Firstly, the UAE asserts itself on the market in partnership with the world's military hegemons, such as the USA. Secondly, the UAE utilizes energy to secure a partnership with regional hegemons, such as Turkey. Thirdly, the UAE's assertion on the foreign market is demonstrated on its initiatives in Africa, though which I argue, the UAE aims to gain power over the developing countries. Therefore, it is fair to assess that although the character of investments differs, the UAE uses its energy policy to fulfill its national interest and gain power and security in various arenas.

To sum up, in this thesis, I aimed to demonstrate neorealism showcased in the renewable energy efforts of the United Arab Emirates. In no way do I wish to understate the country's efforts in the renewable transition. Their impacts despite the initial motives could be significant in the post-fossil future. However, as this thesis set off to demonstrate their purely pragmatic nature, which I believe, has been achieved through concrete examples, it is fair to conclude the Emirati sustainable energy initiatives are not of ideological, but rather of a pragmatic character.

As long as the UAE's renewable efforts, although noteworthy, will continue being outrun by the hydrocarbon-motivated politics and investments, the argument of Emirati renewable energy-related pragmatism will remain in place. Thus, Emirati energy pragmatism can be seen in its strive for survival as an energy hegemon, and can be defined by self-investment in the fossil industry while ensuring a place at the post-fossil table. Such drive for international relevance can stem from numerous aspects of Emirati reality. Firstly, it could be argued these efforts are capital-ridden and are purely of economic character. Secondly, it could be argued such endeavors bear broader political-economic implications for a country that strives to become an international player in numerous fields, whether it's art and culture, sports, or renewable energy. Thirdly, it could be credited to the UAE's strategic location that on the one hand, favors its role as an energy hegemon yet on the other, surrounded by the larger countries, threatens the country's security (such as Saudi Arabia and Iran). I have not done extensive research on the three scenarios, and their existence springs from my speculations. However, it is fair to deduce that because energy transfers to capital and capital transfers to broad power, the UAE's pragmatic motivations for their conflicting energy policies help the country to secure its international role in various arenas.

Bibliography

- “COP28 Build-Up: \$200 Billion From the UAE for Global Clean Energy Investments.”
EMEA, November 30, 2023. <https://euromed-economists.org/cop28-build-up-200-billion-from-the-uae-for-global-clean-energy-investments/>.
- “COP28 Build-Up: \$200 Billion From the UAE for Global Clean Energy Investments.”
EMEA, November 30, 2023. <https://euromed-economists.org/cop28-build-up-200-billion-from-the-uae-for-global-clean-energy-investments/>.
- “Emerging Nuclear Energy Countries | New Nuclear Build Countries - World Nuclear Association,” n.d. <https://world-nuclear.org/information-library/country-profiles/others/emerging-nuclear-energy-countries.aspx>.
- “Exclusive: COP28 Host UAE to Extract Nearly 40 Billion Barrels of Oil and Gas Over 70 Years.” Energy Monitor, November 13, 2023. <https://www.energymonitor.ai/sectors/industry/exclusive-cop28-host-uae-to-extract-nearly-40-billion-barrels-of-oil-and-gas-over-70-years/?cf-view>.
- “Masdar | UAE Wind Program,” n.d. <https://masdar.ae/en/renewables/our-projects/uae-wind-program>.
- “Masdar Joins Forces with RWE in £11 billion Investment to Co-develop Massive 3GW Offshore Wind Projects in UK.” PR News, December 1, 2023. <https://www.prnewswire.com/in/news-releases/masdar-joins-forces-with-rwe-in-11-billion-investment-to-co-develop-massive-3gw-offshore-wind-projects-in-uk-302003569.html>.
- “National Hydrogen Strategy | the Official Portal of the UAE Government,” n.d. <https://u.ae/en/about-the-uae/strategies-initiatives-and-awards/strategies-plans-and-visions/environment-and-energy/national-hydrogen-strategy>.
- “Nuclear Power United Arab Emirates | UAE Nuclear Energy | Abu Dhabi | Dubai - World Nuclear Association,” n.d. <https://world-nuclear.org/information-library/country-profiles/countries-t-z/united-arab-emirates.aspx>.
- “Overview,” n.d. <https://www.adnoc.ae/en/our-projects/hail-ghasha/ghasha-mega-project>.
- “Overview,” n.d. <https://www.adnoc.ae/en/our-projects/hail-ghasha/ghasha-mega-project>.
- “Project by Project, Masdar Is Establishing Itself as a Global Power in the Shift to Clean Energy,” July 24, 2023. <https://impact.economist.com/sustainability/net-zero-and-energy/a-global-power-in-the-shift-to-clean-energy>.

“Project by Project, Masdar Is Establishing Itself as a Global Power in the Shift to Clean Energy,” July 24, 2023. <https://impact.economist.com/sustainability/net-zero-and-energy/a-global-power-in-the-shift-to-clean-energy>.

“Project by Project, Masdar Is Establishing Itself as a Global Power in the Shift to Clean Energy,” July 24, 2023. <https://impact.economist.com/sustainability/net-zero-and-energy/a-global-power-in-the-shift-to-clean-energy>.

“Sustainability,” December 19, 2023. <https://www.eea.europa.eu/en/topics/at-a-glance/sustainability>.

“Transitioning to Greener and More Sustainable Growth Models Can Provide a Massive Boost to Employment in Southeast Asia - OECD,” n.d. <https://www.oecd.org/newsroom/transitioning-to-greener-and-more-sustainable-growth-models-can-provide-a-massive-boost-to-employment-in-southeast-asia.htm>.

“UAE Approached to Invest in Sizewell C Nuclear Power Plant.” The Guardian, November 27, 2023. <https://www.theguardian.com/business/2023/nov/27/uae-approached-to-invest-sizewell-c-nuclear-power-plant>.

“United Arab Emirates Oil Reserves, Production and Consumption Statistics - Worldometer,” n.d. <https://www.worldometers.info/oil/united-arab-emirates-oil/>.

ADNOC. “ADNOC to Acquire OCI’s Stake in Fertiglobe,” n.d. <https://www.adnoc.ae/en/news-and-media/press-releases/2023/adnoc-to-acquire-ocis-stake-in-fertiglobe>.

Alnaser, Naser W., and W.E. Alnaser. “The Impact of the Rise of Using Solar Energy in GCC Countries.” *Renewable Energy and Environmental Sustainability* 4 (January 1, 2019): 7. <https://doi.org/10.1051/rees/2019004>.

Arab News. “UAE’s Masdar Launches Its First Foreign Investment-based Solar Plant in Azerbaijan.” Arab News, March 16, 2022. <https://www.arabnews.com/node/2043601/business-economy>.

Azernews.Az. “Road Map for Energy Investment With UAE Outlined,” February 1, 2024. <https://www.azernews.az/region/221108.html>.

Baker, Sinéad, and Thibault Spirlet. “The World’s Most Powerful Militaries in 2023, Ranked.” Business Insider, December 18, 2023. <https://www.businessinsider.com/ranked-world-most-powerful-militaries-2023-firepower-us-china-russia-2023-5#11-turkey-15>.

- Becsi, Zsolt, and Sajal Lahiri. "Bilateral War in a Multilateral World: Carrots and Sticks for Conflict Resolution." *Canadian Journal of Economics* 40, no. 4 (October 18, 2007): 1168–87. <https://doi.org/10.1111/j.1365-2966.2007.00447.x>.
- Benny, John. "UAE Is Investing More in Renewable Energy Than in Oil, Energy Minister Says." *The National*, December 4, 2023. <https://www.thenationalnews.com/business/energy/2023/12/04/uae-is-investing-more-in-renewable-energy-than-in-oil-energy-minister-says/>.
- Burchill, Scott. *The National Interest in International Relations Theory*. Palgrave Macmillan UK eBooks, 2005. <https://doi.org/10.1057/9780230005778>.
- Carbon Tracker. "PetroStates of Decline: Oil and Gas Producers Face Growing Fiscal Risks as the Energy Transition Unfolds - Carbon Tracker Initiative." Carbon Tracker Initiative, April 16, 2024. <https://carbontracker.org/reports/petrostates-of-decline/>.
- Carrington, Damian, and Ben Stockton. "Cop28 President Says There Is 'No Science' Behind Demands for Phase-out of Fossil Fuels." *The Guardian*, December 4, 2023. <https://www.theguardian.com/environment/2023/dec/03/back-into-caves-cop28-president-dismisses-phase-out-of-fossil-fuels>.
- Carrington, Damian. "Revealed: UAE Plans Huge Oil and Gas Expansion as It Hosts UN Climate Summit." *The Guardian*, April 4, 2023. <https://www.theguardian.com/environment/2023/apr/04/revealed-uae-plans-huge-oil-and-gas-expansion-as-it-hosts-un-climate-summit>.
- Centre, Asia Pacific Energy Research, and 日本エネルギー経済研究所. *A Quest for Energy Security in the 21st Century: Resources and Constraints*, 2007.
- Cesnakas, Giedrius. "Energy Resources in Foreign Policy: A Theoretical Approach," *Baltic Journal of Law and Politics* 3, no. 1 (June 2010): 30-52
- Chernyak, Oleksandr, Ganna Kharlamova, and Andriy Stavytskyi. "Trends of International Energy Security Risk Index in European Countries." *Baltic Journal of European Studies*. *Baltic Journal of European Studies* 8, no. 1 (June 1, 2018): 5–32. <https://doi.org/10.1515/bjes-2018-0002>.
- Cherp, Aleh, and Jessica Jewell. "The Concept of Energy Security: Beyond the Four As." *Energy Policy* 75 (December 1, 2014): 415–21. <https://doi.org/10.1016/j.enpol.2014.09.005>.
- Cornwell, Alexander, and Dahan, Maha El. "UAE signals interest in European nuclear energy investments, sources say", *Reuters*, March 29, 2024,

<https://www.reuters.com/business/energy/uae-signals-interest-european-nuclear-energy-investments-sources-say-2024-03-29/>

Crawford, Nicholas. "Hydrogen: future energy interdependence, International Institute for Strategic Studies. December 16, 2021. <https://www.iiss.org/online-analysis/online-analysis/2021/12/hydrogen-and-future-energy-interdependence/>

Czechowska, Lucyna, Andriy Tyushka, Agata Domachowska, Karolina Gawron-Tabor, and Joanna Piechowiak-Lamparska. *States, International Organizations and Strategic Partnerships*. Edward Elgar Publishing, 2019.

Daddow, Oliver. *International Relations Theory: The Essentials*, 2013. https://openlibrary.org/books/OL28497627M/International_Relations_Theory.

Day, Paul. „Investors are turning bullish on nuclear“. Reuters. November 12, 2023.

<https://www.reuters.com/business/energy/investors-are-turning-bullish-nuclear-2023-11-16/>.

Emea. "COP28 Build-Up: \$200 Billion From the UAE for Global Clean Energy Investments." EMEA, November 30, 2023. <https://euromed-economists.org/cop28-build-up-200-billion-from-the-uae-for-global-clean-energy-investments/>.

Energy. "Energy Diplomacy: EU and UAE Boost Cooperation Ahead of COP28," September 8, 2023. https://energy.ec.europa.eu/news/energy-diplomacy-eu-and-uae-boost-cooperation-ahead-cop28-2023-09-08_en.

Euronews. "UAE Among Petrostates That Risk Losing Half Their Income as Fossil Fuel Demand Drops." Euronews, December 1, 2023. <https://www.euronews.com/green/2023/12/01/uae-among-petrostates-that-risk-losing-half-their-income-as-fossil-fuel-demand-drops>.

Ferris, Nick, and Nick Ferris. "Exclusive: COP28 Host UAE to Extract Nearly 40 Billion Barrels of Oil and Gas Over 70 Years." *Energy Monitor*, November 13, 2023. <https://www.energymonitor.ai/sectors/industry/exclusive-cop28-host-uae-to-extract-nearly-40-billion-barrels-of-oil-and-gas-over-70-years/?cf-view>.

Financial Times. "An Oil and Gas COP," n.d. <https://www.ft.com/content/502f722b-8455-4ac0-ac2e-c3a6755247b1>.

Financial Times. "The Cheque Book COP: UAE's \$200bn Bid for Climate Influence," n.d. <https://www.ft.com/content/36a2f00d-eb7a-4057-bc31-6be6c4f01d16>.

Financial Times. "The Cheque Book COP: UAE's \$200bn Bid for Climate Influence," n.d. <https://www.ft.com/content/36a2f00d-eb7a-4057-bc31-6be6c4f01d16>.

- Financial Times. “The Cheque Book COP: UAE’s \$200bn Bid for Climate Influence,” n.d. <https://www.ft.com/content/36a2f00d-eb7a-4057-bc31-6be6c4f01d16>.
- Financial Times. “UAE Energy Group Adnoc to Lift Spending on Decarbonisation Projects,” n.d. <https://www.ft.com/content/0abc5980-d4f9-4ea8-842a-81b1f2502b94>.
- Global Witness. “COP28 Oil Company (ADNOC) Emissions to Increase by 40 Percent by 2030 in Exact Opposite Way for Climate Goal | Global Witness,” n.d. <https://www.globalwitness.org/en/press-releases/cop28-oil-company-adnoc-emissions-heading-exact-opposite-way-climate-goal/>.
- Goldthau, Andreas, and Jan Martin Witte. *Global Energy Governance: The New Rules of the Game*, 2010. <http://ci.nii.ac.jp/ncid/BB01090440>.
- Gökgöz, Fazıl, and Mustafa Taylan Güvercin. “Energy Security and Efficiency Analysis of Renewable Technologies.” In *Green Energy and Technology*, 163–83, 2019. https://doi.org/10.1007/978-3-030-27676-8_9.
- Griffiths, Steve. “Energy Diplomacy in a Time of Energy Transition.” *Energy Strategy Reviews* 26 (November 1, 2019): 100386. <https://doi.org/10.1016/j.esr.2019.100386>.
- Grylls, George, and Alex Ralph. “Sizewell C Stake Seized From China May Go to UAE.” *The Times*, November 27, 2023. <https://www.thetimes.co.uk/article/uae-state-energy-company-china-stake-sizewell-c-q7vk8jbttd>.
- Guild, James. “How The UAE Is Making a Splash in Indonesia’s Clean Energy Sector.” *The Diplomat*, January 18, 2024. <https://thediplomat.com/2024/01/how-the-uae-is-making-a-splash-in-indonesias-clean-energy-sector/>.
- Hache, Emmanuel. “Do Renewable Energies Improve Energy Security in the Long Run?” *International economics (Paris)* 156 (2018): 127–135.
- Herranz-Surrallés, Anna. “An Emerging EU Energy Diplomacy? Discursive Shifts, Enduring Practices.” *Journal of European Public Policy* 23, no. 9 (September 23, 2015): 1386–1405. <https://doi.org/10.1080/13501763.2015.1083044>.
- Huda, Mirza Sadaqat. “Renewable Energy Diplomacy and Transitions: An Environmental Peacebuilding Approach.” *Environmental Innovation and Societal Transitions* 50 (March 1, 2024): 100815. <https://doi.org/10.1016/j.eist.2024.100815>.
- Hughes, Larry. “The Four ‘R’s of Energy Security.” *Energy policy* 37, no. 6 (2009): 2459–2461.

- Human Rights Watch. "UAE: Hosting COP28 Amid Longstanding Repression," January 11, 2024. <https://www.hrw.org/news/2024/01/11/uae-hosting-cop28-amid-longstanding-repression>.
- Human Rights Watch. "UAE: Investigate Threats Against 'UAE 5,'" October 28, 2020. <https://www.hrw.org/news/2011/11/25/uae-investigate-threats-against-uae-5>.
- Ibraheem, Amnah. "The nuclear-energy option in the Arab Gulf states", International Institute for strategic Studies. November 9, 2022. <https://www.iiss.org/online-analysis/online-analysis/2022/11/the-nuclear-energy-option-in-the-arab-gulf-states/>
- IEA. "Emergency Response and Energy Security - About - IEA," n.d. <https://www.iea.org/about/emergency-response-and-energy-security>.
- IEA. "The Oil and Gas Industry in Energy Transitions – Analysis - IEA," January 1, 2020. <https://www.iea.org/reports/the-oil-and-gas-industry-in-energy-transitions>.
- India, Forbes. "The Top 10 Largest Economies in the World in 2024." Forbes India, April 10, 2024. <https://www.forbesindia.com/article/explainers/top-10-largest-economies-in-the-world/86159/1>.
- Indonesia, Nukegraphic. "Home | PT Masdar Mitra Solar Radiance." Solar Radiance, n.d. <https://www.solar-radiance.co.id/en>.
- Jacob, Benoy P. "UAE Leads a Wave of Hydrogen Fuel Projects in the GCC." Esgtimes, January 8, 2024. <https://www.esgtimes.in/energy/hydrogen/uae-leads-a-wave-of-hydrogen-fuel-projects-in-the-gcc/>.
- Jaybhay, Rahul. "A Neo-realist Theoretical Perspective in Energy Security." The Kootneeti (blog), April 13, 2020. <https://thekootneeti.in/2020/04/13/neo-realist-perspective-energy-security/>.
- Kilinc-Pala, Pinar Buket. "Approaches in Energy Exclusive Security: Theories of Energy Security and the Dominance of Realism." *Politics & policy (Statesboro, Ga.)* 49, no. 3 (2021): 788.
- Kocs, Stephen A. "Explaining the Strategic Behavior of States: International Law as System Structure." *International Studies Quarterly* 38, no. 4 (December 1, 1994): 535. <https://doi.org/10.2307/2600864>.
- Kolodziej, Edward A. *Security and International Relations*, 2005. <https://doi.org/10.1017/cbo9780511614903>.
- Lawrence. "COP28 President Secretly Used Climate Summit Role to Push Oil Trade With Foreign Government Officials – Centre for Climate Reporting." Centre for Climate Reporting, March 25, 2024. <https://climate-reporting.org/cop28-president-oil-climate/>.

- Lawson, Alex. "UAE Approached to Invest in Sizewell C Nuclear Power Plant." *The Guardian*, November 27, 2023. <https://www.theguardian.com/business/2023/nov/27/uae-approached-to-invest-sizewell-c-nuclear-power-plant>.
- List.Solar. "Largest Solar Power Stations in UAE | Photovoltaic Parks in UAE | PV Farms," n.d. <https://list.solar/plants/largest-plants/united-arab-emirate/>.
- Masdar Chief Executive Officer Mohamed Jameel Al Ramahi said: "Masdar | Masdar Expands European Presence With Acquisition of 1GW Renewable Portfolio in Poland," n.d. <https://masdar.ae/en/news/newsroom/masdar-expands-european-presence-with-acquisition-of-1gw-renewable-portfolio>.
- Masdar. "Masdar Expands European presence with Acquisition of 1GW Renewable Portfolio in Poland." PR News, December 4, 2023. <https://www.prnewswire.com/in/news-releases/masdar-expands-european-presence-with-acquisition-of-1gw-renewable-portfolio-in-poland-302004875.html>.
- Mather, Nancy, Candace S. Bos, and Nalan Babür. "Perceptions and Knowledge of Preservice and Inservice Teachers About Early Literacy Instruction." *Journal of Learning Disabilities* 34, no. 5 (September 1, 2001): 472–82. <https://doi.org/10.1177/002221940103400508>.
- Mearsheimer, John J. "Back to the Future: Instability in Europe After the Cold War." *International Security* 15, no. 1 (January 1, 1990): 5. <https://doi.org/10.2307/2538981>.
- Mearsheimer, John J. *The Tragedy of Great Power Politics*. W. W. Norton & Company, 2014.
- Ministère de l'Europe et des Affaires étrangères. "15th Session of the UAE-France Strategic Dialogue Discusses Growing Cooperation Between UAE & France (19.06.23)." France Diplomacy - Ministry for Europe and Foreign Affairs, n.d. <https://www.diplomatie.gouv.fr/en/country-files/united-arab-emirates/events/article/15th-session-of-the-uae-france-strategic-dialogue-discusses-growing-cooperation>.
- Mišev, Gordana. "Theoretical Domains of Exploring Energy Security as a Global Challenge in International Relations." *Sociološki Pregled/Sociološki Pregled* 54, no. 1 (January 1, 2020): 149–73. <https://doi.org/10.5937/socpreg54-23847>.

- Müller, Bernd. “How Important Is Hydrogen for the Energy Transition?” Paul Scherrer Institut (PSI), March 4, 2024. <https://www.psi.ch/en/media/our-research/how-important-is-hydrogen-for-the-energy-transition>.
- Nematollahi, Omid, Hadi Hoghooghi, Mehdi Rasti, and Ahmad Sedaghat. “Energy Demands and Renewable Energy Resources in the Middle East.” *Renewable & Sustainable Energy Reviews* 54 (February 1, 2016): 1172–81. <https://doi.org/10.1016/j.rser.2015.10.058>.
- Nie, Pu-yan, and Yong-cong Yang. “Renewable Energy Strategies and Energy Security.” *Journal of Renewable and Sustainable Energy* 8, no. 6 (November 1, 2016). <https://doi.org/10.1063/1.4967714>.
- Onu, Peter, and Charles Mbohwa. “Renewable Energy Technologies In Brief.” *International Journal of Scientific and Technology Research* 8, no. 10 (October 25, 2019): 1283–89. <https://www.ijstr.org/paper-references.php?ref=IJSTR-1019-23174>.
- Paltsev, Sergey. “The Complicated Geopolitics of Renewable Energy.” *Bulletin of the Atomic Scientists* 72, no. 6 (October 4, 2016): 390–95. <https://doi.org/10.1080/00963402.2016.1240476>.
- Patel, Sonal, and Sonal Patel. “UAE Launches 104-MW Wind Project Despite Low Winds.” *POWER Magazine*, November 1, 2023. <https://www.powermag.com/uae-launches-104-mw-wind-project-despite-low-winds/>.
- Pietro Lombardi, Iberdrola and Masdar to invest \$16 billion in green energy, Reuters, December 5 2023. <https://www.reuters.com/business/energy/iberdrola-masdar-invest-16-bln-green-energy-2023-12-05/>
- POLITICO. “UAE Oil Giant’s Two Missions: A Greener Image and ‘Accelerated Growth,’” November 10, 2023. <https://www.politico.com/news/2023/11/10/how-an-oil-giant-sought-to-green-its-image-before-a-high-stakes-climate-summit-00126495>.
- POLITICO. “UAE Oil Giant’s Two Missions: A Greener Image and ‘Accelerated Growth,’” November 10, 2023. <https://www.politico.com/news/2023/11/10/how-an-oil-giant-sought-to-green-its-image-before-a-high-stakes-climate-summit-00126495>.
- Proskuryakova, Liliana, Ozcan Saritas, and Sergey Sivaev. “Global Water Trends and Future Scenarios for Sustainable Development: The Case of Russia.” *Journal of Cleaner Production* 170 (January 1, 2018): 867–79. <https://doi.org/10.1016/j.jclepro.2017.09.120>.
- Rahman, Fareed. “Masdar and Emirates Steel Arkan Team up to Develop Green Hydrogen Project in Abu Dhabi.” *The National*, November 22,

2023. <https://www.thenationalnews.com/climate/road-to-net-zero/2023/11/22/masdar-and-emirates-steel-arkan-team-up-to-develop-green-hydrogen-project-in-abu-dhabi/>.

Sadaqat, Rohma. “ENEC and EDF to Sign MoU on Research and Development - News | Khaleej Times.” *Khaleej Times*, June 30, 2021. <https://www.khaleejtimes.com/local-business/enec-and-edf-to-sign-mou-on-research-and-development>.

Santos Vieira De Jesus, Diego, 2013. *Lighting the fire: Brazil’s energy diplomacy, 2003–2010’*. *Diplom. Statecraft* 24 (3), 499–515.

Shaffer, Brenda. *Energy Politics* (University of Pennsylvania Press, 2009), p. 1

Shaw, Alfie, and Alfie Shaw. “UK Government Considers Abu Dhabi Investment in Sizewell C.” *Power Technology*, November 27, 2023. <https://www.power-technology.com/news/uk-government-considering-abu-dhabi-investors-for-sizewell-c/>.

Stanojević, Petar, and Gordana Mišev. “New Trends in the International Political Dynamics of Natural Gas Trade.” *Međunarodni Problemi* 70, no. 3 (January 1, 2018): 305–36. <https://doi.org/10.2298/medjp1803305s>.

Statista. “Number of Homes in the UAE 2015-2020,” September 28, 2023. <https://www.statista.com/statistics/1287843/uae-number-of-homes/>.

The Maritime Executive. “UAE Makes Second Major UK Wind Farm Deal Expanding Renewable Energy Role,” December 6, 2023. <https://maritime-executive.com/article/uae-makes-second-major-uk-wind-farm-deal-expanding-renewable-energy-role>.

The Observatory of Economic Complexity. “Crude Petroleum in United Arab Emirates | the Observatory of Economic Complexity,” n.d. <https://oec.world/en/profile/bilateral-product/crude-petroleum/reporter/are>.

U.S. Agency For International Development. “Brazil Climate Change Country Profile | Climate | U.S. Agency for International Development,” November 29, 2023. <https://www.usaid.gov/climate/country-profiles/brazil>.

Ugal, Nishant. “Adnoc Awards Key Offshore Contract to UAE Player as Expansion Projects Gain Momentum.” *Upstream*, January 15, 2024. <https://www.upstreamonline.com/field-development/adnoc-awards-key-offshore-contract-to-uae-player-as-expansion-projects-gain-momentum/2-1-1583162>.

United Nations, *Implementation must accelerate to increase ambition across all fronts, taking an all-of-society approach to make progress towards the Paris Agreement goals and respond to the climate crisis, finds technical report on first global stocktake,*

September 8, 2023. <https://unfccc.int/news/implementation-must-accelerate-to-increase-ambition-across-all-fronts-taking-an-all-of-society#:~:text=‘To%20keep%201.5%20within%20reach%20we%20must%20act%20with%20‘ambition%20and%20urgency’%20to%20reduce%20emissions%20by%2043%25%20by%202030.>

- Valentine, Scott Victor. “Emerging Symbiosis: Renewable Energy and Energy Security.” *Renewable & Sustainable Energy Reviews* 15, no. 9 (December 1, 2011): 4572–78. <https://doi.org/10.1016/j.rser.2011.07.095>.
- Voo, John. “Why Is COP28 Being Held in the Oil-rich United Arab Emirates?” *Eco-Business*, November 30, 2023. <https://www.eco-business.com/news/why-is-cop28-being-held-in-the-oil-rich-united-arab-emirates/>.
- Waltz, Kenneth N. *Theory of International Politics*. Waveland Press, 2010.
- Weise, Zia. “COP28 Chief Under Fire From EU and US Lawmakers Over Oil Ties.” *POLITICO*, May 23, 2023. <https://www.politico.eu/article/sultan-al-aber-united-nations-cop28-chief-under-fire-for-oil-ties-from-eu-and-us-lawmakers/>.
- Weldes, Jutta. “Constructing National Interests.” *European Journal of International Relations* 2, no. 3 (September 1, 1996): 275–318. <https://doi.org/10.1177/1354066196002003001>.
- Wilson, Jeffrey D. “A Securitisation Approach to International Energy Politics.” *Energy research & social science* 49 (2019): 114-125
- Wolfers, Arnold. “National Security” as an Ambiguous Symbol, 1952.
- World Economic Forum. “Africa Receives Only About 2% of Global Investments in Renewable Energy – Which Europe Can Help Remedy,” September 17, 2023. <https://www.weforum.org/agenda/2023/09/africa-europe-green-transition-sdim23/>.
- World Bank. “Overview,” n.d. <https://www.worldbank.org/en/country/turkey/overview#2>.
- Yana Popkostova, *The Power Shift*, International Institute for Strategic Studies, March, 2023:12.
- Ziady, Hannah. “BP And UAE Suspend \$2 Billion Gas Deal in Israel as Gaza War Drags On.” *CNN*, March 13, 2024. <https://edition.cnn.com/2024/03/13/business/bp-abu-dhabi-newmed-energy/index.html>.