



The Gulf's Evolving Energy Landscape

Saudi Arabia's Energy Policy and a Transition
to the Post-Oil Era

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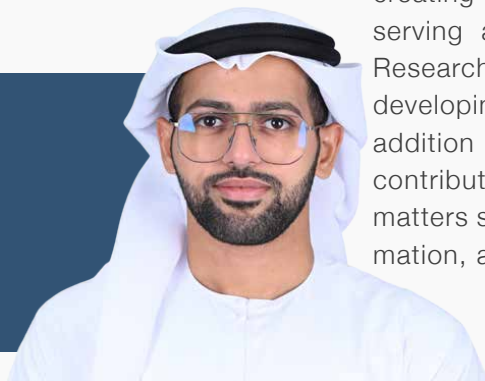
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Executive Summary



Saudi Arabia controls the world's second-largest recoverable oil reserves and is the largest economy by GDP in the Middle East. For years, the country's immense oil wealth, coupled with its geostrategic location at the crossroads of Europe, Asia, and Africa, enabled the ruling Al-Saud dynasty in Riyadh to exert tremendous religious, economic, and military influence over its neighbors. The oil age of the twentieth century brought the country to the forefront of geo-economics, not only contributing significantly to its GDP, export revenues, and government income, but also making it a key actor in ensuring the stability of the global economy. However, the Kingdom's preeminence has been challenged by the United States, which deployed cutting-edge shale oil extraction technology and became a net exporter in 2019. The volatility of oil prices and the finite nature of fossil fuel reserves have enabled Riyadh to begin a strategic push to diversify its economy.

Oil price wars, pandemic-induced economic downturn, the war in Ukraine, and shifts in the global balance of power have prompted the Saudi government to press forward with its "Vision 2030" transformation program to enact much-needed reforms, reduce the share of oil and gas revenues in the nation's budget, and kick-start the transition toward a greener and more responsive economy. Central to Vision 2030 is the goal of preparing the Saudi economy for a post-oil era, ensuring

long-term prosperity and stability. However, since the program itself depends on oil and gas revenues for finance, price volatility and global economic trends present serious obstacles to overcome—both on the demand and supply sides in the marketplace. Saudi Arabia also relies almost exclusively on oil and gas for power generation, another major challenge to its efforts to move away from hydrocarbons.

What follows presents several key findings based on a thorough evaluation of Vision 2030's track record in the energy realm over the past seven years. It is generally accepted that transitioning away from hydrocarbons will be an arduous task. This presents the need for an enhanced, more detailed action plan for Saudi Arabia's net-zero emissions target by 2060. However, the Kingdom currently lacks a set of consistent strategies, policies, and measures for the upcoming energy transition, coupled with the absence of a dedicated institutional mechanism for coordination and implementation. Challenges remain in localization of equipment and technologies, resistance from domestic interest groups, and insufficient government subsidies for innovation. The deteriorating geopolitical environment in the Middle East also makes it difficult to maintain a stable course that will support economic diversification. Amid a shifting geopolitical landscape, Saudi Arabia must also balance strategic priorities while diversifying its partnerships on the global stage.

The report finds that Vision 2030 is the most systematic response yet to calls for diversification and has been accompanied by cuts in government spending and plans for growth in non-oil sectors. However, the plan will nonetheless be difficult to implement, as it will require deep structural reforms, transparency, job creation in the private sector and balanced regional development. Somewhat ironically, Vision 2030 comes at a time when the Kingdom has boasted growing production and technological advancements in oil extraction, ensuring reserves for generations despite the global trend toward clean energy sources.

Government support is mostly granted to industries that are dependent on oil, Government support is mostly granted to

industries that are dependent on oil, Government support is mostly granted to industries that are dependent on oil, is difficulty in adopting renewables in hard-to-abate sectors like transport and construction. The need for fostering innovation and creativity in the energy sector, and the reallocation of subsidies to knowledge-based private sector companies, have not been greater. But the difficulty of meeting strategic requirements in the short term and the resistance of the oil industry's large interest groups exacerbate uncertainty about the comparative advantages of the clean energy sector. Based on secondary research, this report offers several policy recommendations to improve Saudi Arabia's approach to energy transition as part of its Vision 2030 program.

Recommendations

1. ***Improve coordination*** among the public sector bodies under Vision 2030 to achieve economic diversification, focusing on comprehensive goals with measurable indicators such as the Global Economic Diversification Index (2024).
2. ***Promote a self-reliant business environment*** by localizing, incentivizing, and encouraging the private sector to participate and play a larger role in the energy transition to renewables, with particular emphasis on improving the skills and competitiveness of Saudi nationals and reducing market entry barriers to attract foreign investment.
3. ***Divert revenues from higher oil prices to Vision 2030*** transformation projects in education and innovation, rather than hydrocarbon infrastructure or subsidies.
4. ***Maintain a working relationship with the U.S. government, as well as with China***, to achieve regional geopolitical stability, but avoid over-leaning on either side in the rising great power competition.
5. ***Continue oil production cuts in OPEC+*** and protect the Kingdom's market share in the Asia-Pacific against Iranian exports through foreign direct investment and supply chain integration with key customers.
6. ***By 2030, increase the share of renewables and nuclear in the energy mix to 50 percent*** to ensure a secure, environmentally sustainable, and competitive domestic energy market. Riyadh should set clear milestones, such as a 25 percent share from renewables by 2026, supported with realistic objectives for smart grid technologies and energy storage systems.

INTRODUCTION

As the world shifts toward a clean energy future, the Kingdom of Saudi Arabia (KSA) remains on the cusp of a social, economic, and renewable energy revolution. In preparation for an inevitable post-oil world, Saudi Arabia, which draws nearly 40 percent of its GDP from crude oil exports and is the world's second-largest oil producer, has responded by taking a comprehensive approach to diversify its economy and reduce the state's dependency on fossil fuels. This transformation dovetails with Saudi Arabia's ambitious Vision 2030 agenda, which aims to radically reform its economy from that of a textbook "rentier state" toward a system that embraces market values and boasts a robust private sector.

As the de facto leader of the Organization of the Petroleum Exporting Countries (OPEC), whose 13 members control more than 80 percent of the world's proven oil reserves, Saudi Arabia maintains significant leverage over the geopolitics of energy markets. Riyadh's ability to influence global energy markets often defines its bilateral relations with major global powers, including the United States and China, the world's top two energy consumers. However, rising oil prices, combined with a growing demand for cleaner energy sources, are expected to undercut OPEC's dominance in the world energy scene over the coming decades. Russia's ongoing war in Ukraine has further highlighted the vulnerability and potential for volatility in global energy markets. States reliant on fossil fuel imports have been forced to re-prioritize their national energy security agendas, while the disruption has underscored the urgent need for a global clean energy transition.

As the interest in clean energy technologies continues to gain momentum, global fossil fuel demand is projected to peak by 2030.^[1] While peak oil does not signal an end to future fossil fuel investment, it does undercut the potential of increased spending^[2]—especially as global investments in clean energy have increased by 40 percent since 2020.^[3] Nonetheless, production in Saudi Arabia's crude oil market is expected to increase at a compound annual growth rate (CAGR) of 3.1 percent in 2024, rising to 3.9 percent in 2028.^[4] During the 2021 Saudi Green Initiative Forum, the Kingdom's leadership announced its intention to achieve net zero emissions by 2060—a wholly transformative yet inevitable development for one of the world's largest oil producers.^[5] The National Renewable Energy Program (NREP), a key Vision 2030 initiative, aims to capitalize on the country's vast stretches of desert landscape and pursue a vigorous solar and wind power strategy to wean its population off fossil fuel consumption. This is especially critical, as Saudi Arabia uses about 25 percent of the oil it produces for domestic purposes. To meet its 2060 target, Saudi Arabia expanded its share of natural gas as an interim energy source from 58 percent in 2016 to 67 percent in 2023.

The Kingdom is doubling down on investments in extraction technologies. Riyadh is also developing a country-wide natural gas transmission network, which will prove pivotal in achieving a low-carbon future. The Kingdom has long sought to establish a nuclear power program as part of its long-term clean energy strategy. NREP has set the goal of deriving 50 percent of Saudi power generation from renewable energy sources by 2030—an ambitious target, considering that renewables accounted for only 0.29 percent of Saudi Arabia’s overall energy mix in 2022.

This report is organized into four comprehensive sections, each addressing critical aspects of Saudi Arabia's economic and energy landscape. The first section, “Saudi Arabia’s Economic Diversification Program,” delves into the historical role of oil in the Kingdom's economy, outlines the ambitious plan laid out in Vision 2030 and its goals for a post-oil era, explores the diversification of the energy sector, and discusses the challenges in transitioning away from Saudi Arabia’s traditional overreliance on oil. The second section, “Saudi Arabia’s Role in Energy Geopolitics,” examines Riyadh’s influential position within OPEC+, its complex relationships with key global players such as the U.S., Iran, and China, and the impact of the Ukraine war on its energy policies. The third section, “Saudi Arabia’s Energy Roadmap 2030,” provides an outlook on the oil market, evaluates the prospects for renewable energy, and considers the role of transition fuels like natural gas, hydrogen, and nuclear power. The final section presents targeted policy recommendations designed to guide Saudi Arabia toward sustainable economic growth and energy leadership in the coming decades.

Section 1. Saudi Arabia’s Economic Diversification Program

At its core, economic diversification involves altering the sources of a nation's income to decrease its reliance on specific goods, services, or resources, such as oil. Saudi Arabia is often characterized as a “rentier state” due to its heavy dependence on oil revenue, high public-sector employment, heavy government subsidies, and lack of political mobilization—a situation that can lead to prolonged economic instability if government revenues decline or major industries become uncompetitive. Despite various attempts by the government to promote economic diversification since the 1970s, many initiatives have faltered due to inadequate implementation or pushback from powerful interest groups.

The Vision 2030 reform plan, introduced in 2016, seeks to diversify the economy away from hydrocarbons and establish major subprograms, including the National Transformation Program, Fiscal Sustainability Program, Human Capability Development Program, Privatization Program, and National Industrial Development and Logistics Program to enhance the role of renewable energy sources, improve energy efficiency, and foster the growth of non-oil sectors. By diversifying its energy portfolio, Saudi Arabia seeks to mitigate economic vulnerabilities associated with overreliance on oil and position itself for a more sustainable and resilient future.

1.1 The Role of Oil in the Saudi Economy

At present, Saudi Arabia controls 17 percent of demonstrated global oil reserves, and holds the world’s sixth largest natural gas reserves,^[6] making it one of the most influential players in the global energy market. Its centrality to energy markets grants Riyadh significant political leverage, both within OPEC and on the international stage. As a result, oil has continued to play a dominant role in the Kingdom’s economy. Oil accounts for nearly 40 percent of Saudi Arabia’s GDP, while oil export revenues reached \$331 billion in 2022.^{[7][8]}

Saudi Arabia was ranked by the IMF as the fastest growing G20 economy, with overall growth reaching 8.7 percent in 2022^[9] because of strong oil outputs and steady growth within non-oil sectors. Expansion in oil activities grew by 15.4 percent in 2022, with the kingdom producing 12.1 million bpd in 2022, up 12 percent from 10.8 million bpd in 2021.^[10] However, Saudi Arabia’s GDP shrank by 0.8 percent in 2023 after oil production cuts. At present, GDP is once again expected to expand modestly by an estimated 1.9 percent in 2024—a very low overall growth rate, but with more pronounced growth in non-oil sectors in line with the goals of the Vision 2030 economic plan.

1.2 Vision 2030 and the Post-Oil Era

Launched in April 2016 under the guidance of Crown Prince Mohammed bin Salman (MBS), the ambitious Vision 2030 blueprint aims to reimagine the future of Saudi Arabia, shaping its destiny on its own terms. Vision 2030 is founded upon three pillars: a vital society, a thriving economy, and an ambitious nation. The initiative is centered around a comprehensive economic reform strategy that promises to improve the quality of life for Saudi citizens. By promoting culture and entertainment, reforming the education sector to align with the demands of the

21st century, and lowering the rate of unemployment, Vision 2030 seeks to foster Saudi Arabia’s competitive advantage in the post-oil, knowledge-based economies of the future.

1 :Objectives of the National Investment Strategy (NIS) by 2030

Increase the private sector's contribution to Saudi Arabia's GDP to	65%
Increase the contribution of Foreign Direct Investment (FDI) to GDP to	5.7%
Increase the contribution of non-oil exports to GDP from	16% TO 50%
Decrease unemployment rate to	7%
Source: Vision 2030 – National Investment Strategy	

The Vision 2030 agenda is driving much of Saudi Arabia’s current transformation, from liberalizing its formerly conservative society to galvanizing foreign investment through the creation of a business-friendly environment. To catalyze its almost non-existent tourism sector, Saudi Arabia began issuing tourist visas in 2019, kicking off a boom in tourism for the desert kingdom.

In 2021, the Saudi government launched its National Investment Strategy (NIS), the objectives of which are shown in Table 1, designed to support the growth and diversification of its economy and to help reach its Vision 2030 targets. Out of an estimated \$3.3 trillion in overall NIS investments, nearly \$1 trillion is expected to be invested in strategic sectors over the next decade, including manufacturing, renewable energy, transport and logistics, tourism, digital infrastructure, and healthcare.^{[11][12]}

Driven by Vision 2030’s plan to stimulate non-oil economic growth and increase the participation of Saudi citizens in the labor market, the Kingdom is aiming to transform into a global manufacturing and logistics hub with the goal of tripling its current industrial GDP to \$241.65 billion by 2030.^[13] The implementation of newly introduced tax incentives for investors, a reduction in regulatory obstacles, and the

enactment of legislation safeguarding investor rights have contributed to a 95 percent increase in new investment agreements and a 267 percent surge in new business licenses issued in 2022.^[14] Such achievements helped the kingdom rank 6th globally among emerging economies on the FDI Confidence Index 2023.^[15]

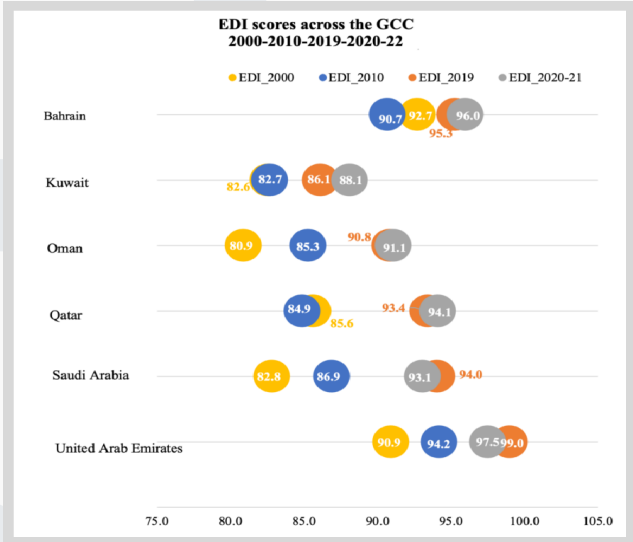
Likewise, the Kingdom’s industrial sector experienced a 23 percent year-over-year increase in investments in Q2 2023, reaching \$738 million.^[16] In addition to aiming to localize half of its defense spending by 2030—an initiative that not only enhances national security but also strengthens its non-oil economy and contributes to long-term economic diversification—the Kingdom is also vying to attract \$30 billion in mining investments for critical rare earth minerals by 2025 to support its burgeoning high-tech and defense industries. Amid a worldwide push to transition toward renewable energy, there is a significant demand for Saudi Arabia’s supply of critical minerals, which is valued at \$1.3 trillion.^[17] The Kingdom unveiled its “accelerated mining exploration” initiative in January 2022 to inaugurate “a new era” in its efforts to leverage its vast mineral reserves under the new mining investment law.^[18]

A looming concern, however, is the Kingdom’s industrial sector, which still relies heavily on petrochemicals. This sector currently consumes 47 percent of the total primary energy utilized in Saudi Arabia, placing a major drag on hydrocarbon diversification efforts.^[19] In order to ensure sustainable growth and develop a lower-carbon economy, the Kingdom is prioritizing investments in large-scale renewable energy projects, including solar and wind, to power its industrial operations. To further promote the expansion of clean energy, the Ministry of Industry and Mineral Resources, the Ministry of Energy, and the Non-Oil Revenues Development Centre have partnered to offer subsidies and other incentives, such as exemptions from customs, for renewable energy project developers seeking to do business inside the Kingdom.^[20]

Economic Diversification and the Role of the Public Investment Fund (PIF)

Today, with six years to reach its Vision 2030 goals, the private sector currently represents 43 percent of Saudi Arabia’s GDP.^[21] The initiative seeks to increase this share to 65 percent and attract more foreign direct investment—both of which will help drive employment opportunities for Saudi citizens. When Vision 2030 was announced in 2016, the unemployment rate among Saudi nationals stood at 11.6 percent,^[22] with a target to reduce it to 7 percent. By the first quarter of 2024, the rate had dropped to 7.6 percent^[23] demonstrating significant progress toward this goal and reflecting the success of ongoing economic reforms and labor market initiatives.

Figure 1: Global Economic Diversification Index (2024)



Source: Nasser Saidi & Associates, Mohammed Bin Rashid School of Government,

The Global Economic Diversification Index (EDI), as shown in Figure 1, provides a universal quantitative measure of the evolution of economic diversification based on publicly available indicators of output (GDP), international trade, and public revenue.^[24] Saudi Arabia has gained an impressive 10+ points between 2020-2022, compared to its EDI score in 2000. It is catching up quickly with its closest peers of Qatar, Bahrain, and the UAE, but remains below its pre-COVID levels.

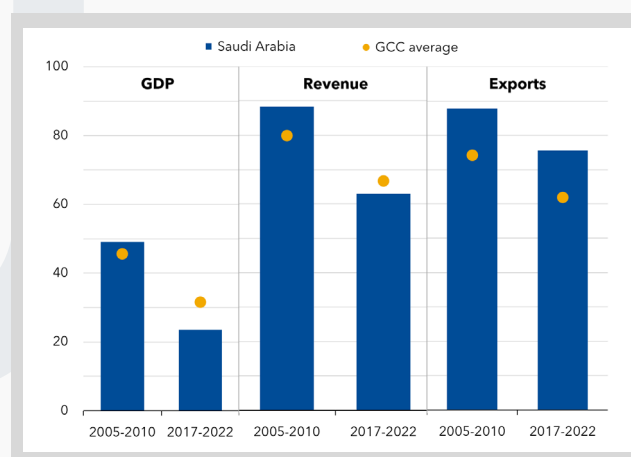
To encourage the privatization of key government sectors like healthcare and education, the government is slashing excessive bureaucratic regulations. Vision 2030 aims to shift the government's role as the provider of services to one in which Riyadh merely sets regulatory policy.^[25] By supporting the privatization of Saudi Arabia's social infrastructure, the government can reduce its expenditures and channel revenues into the development of a sustainable, non-oil economy.

1.3 Diversification of the Energy Sector

Saudi Arabia's National Industrial Development and Logistics Program coordinates investment in clean energy solutions to transition toward a low-carbon, more sustainable future.^[26] Indeed, Riyadh has sought to liberalize its investment strategy to alleviate the reliance on oil revenues and create a more diverse and sustainable economy—one of the pillars of Vision 2030. To the government's credit, non-oil sector activity in Saudi Arabia has steadily grown over the past decade. While the share of oil in GDP dropped from 49.2 percent in 2011 to 23.7 percent in 2021,^[27] non-oil output growth accelerated since 2021, averaging 4.8 percent in 2022 and between 5 and 6 percent in 2023.^[28] As shown in Figure 2, the share of hydrocarbon sector activity in GDP decreased by almost a quarter, mainly because of the private sector. The share of non-oil private sector businesses in GDP increased from 40 percent in 2016 to 43 percent by the end of 2022, with the goal of reaching 65 percent by 2030.^[29] Private sector activities account for almost one-third of the non-oil sector growth at present, but more is needed to support long-run economic prosperity.

Reducing the share of hydrocarbons in the Saudi energy mix remains a challenge. While transitioning toward clean energy, natural gas usage represented 58.4% of Saudi's total electricity generation in 2021.^[30]

Figure 2: Dependence on Hydrocarbons in Saudi Arabia

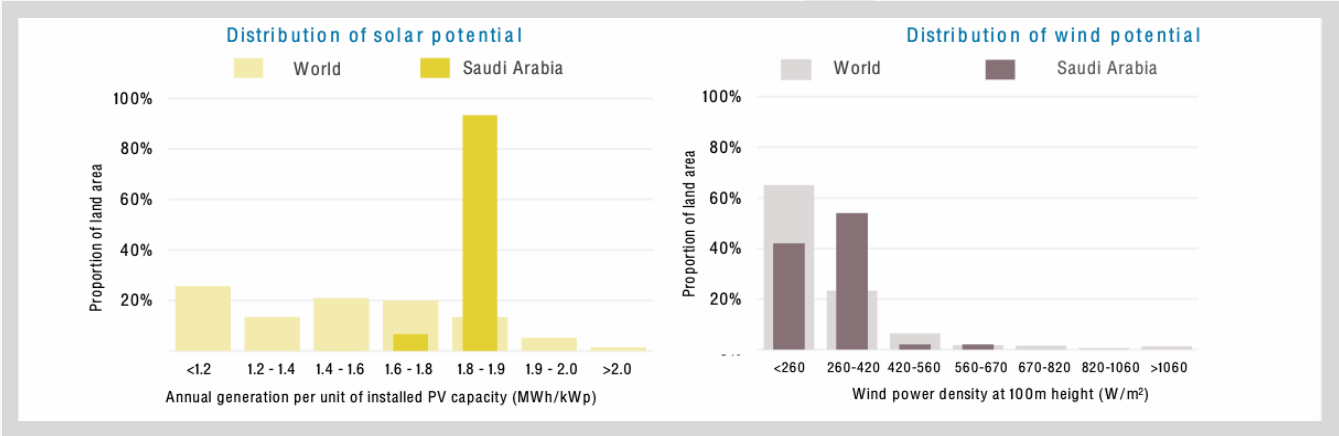


Source: IMF (2023)

The government has set a target of boosting its gas production by more than 50% from its 2021 level of approximately 10.1 billion standard cubic feet per day (scfd) by 2030.^[31] and building a natural gas transmission network that covers the entire country. The Saudi Basic Industries Corporation (SABIC) also gives the country a comparative advantage in developing its petrochemicals and mining sectors. Major oil and chemical companies across the world have partnered with the Saudi government by providing technical support to the Kingdom's extractive industries.

In terms of clean energy development, the country has made strides in incorporating renewable energy sources into its mix. According to the World Economic Forum (2023), Saudi Arabia ranks 57th out of 120 countries in the Energy Transition Index (ETI), though the Kingdom has improved its system performance and transition readiness by 11 percent over the past decade.^[32] The NREP has contributed significantly to the Kingdom's ability to transition, focusing on the development of solar and wind energy projects to augment the share of renewables in the overall energy grid. Additionally, the country has sought to develop a civilian nuclear capability as part of its long-term energy strategy. With its research nuclear reactor almost complete, the KSA pledged to allow greater oversight for atomic energy inspectors.^[33]

Figure 2: Dependence on Hydrocarbons in Saudi Arabia



Source: IRENA (2023)

While the share of renewables in Saudi Arabia’s power generation mix remains miniscule overall, it has nonetheless more than tripled, growing from 0.08 percent in 2019 to 0.29 percent in 2022.^[34] The NREP expects renewable energy resources to account for half of generated electricity by 2030,^[35] necessitating a meteoric increase from their present levels. However, the trends are positive; the Saudi Electricity Company’s (SEC) electricity generation capacity increased from 53.2 GW in 2019 to 83.5 GW in 2022.^[36] Graced with almost year-round sunlight and strong winds, the country has an enormous potential for renewables, as shown in Figure 3. Indeed, all the earmarked projects for renewables in 2022-2023 with a total capacity of 10 GW were based on solar and wind power.

1.4 Challenges to the Energy Transition

Despite tremendous progress, the Saudi energy transition program faces several obstacles that must be overcome. First, the net-zero emissions target of 2060 should be enhanced, detailed, and supported with action. To this end, some aspects of Riyadh’s strategy may need to be rethought; Vision 2030 sets a wide range of goals, some of which prove unfeasible under current conditions. The adoption of renewables in hard-to-abate sectors such as transport, construction, and cooling, for instance, will be particularly difficult to achieve. Localizing tech-

nology and equipment manufacturing to meet the Kingdom’s strategic goals in such a short timeframe will also require immense sums of money and coordination. Additionally, Saudi Arabia’s energy transition strategies, policies, and measures are not sufficiently systematic; going forward, they should be part of a comprehensive process that consists of improved formulation, execution, and assessment, as well as feedback from the field.

The Saudi government established the Saudi Green Initiative (SGI) in 2021 to reduce carbon emissions, but it has not published a special, systematic document or report to guide how the Kingdom achieves its climate goals. Nor does it have any institutional mechanism responsible for the overall coordination, implementation, and assessment of the energy transition. From the mid-2010s until 2023, the share of renewable energy was raised to 0.3 percent of total Saudi output; to then increase this share from 0.3 percent to 50 percent—a 166-fold increase—while reducing subsidies to disincentivize oil consumption alone will be a Herculean task. The Saudi government opposes lifting the gasoline price cap, citing the significance of maintaining social cohesion and making sure that costs for industries remain manageable; indeed, it spent \$253 billion, or 27 percent of its GDP, on subsidies for fossil fuels in 2022.^[37] Any credible action plan must address the reforms’ impact on

socio-economic stability, citizens' political identity, and the legitimacy of the ruling Al Saud family—not to mention creative ways to increase the share of renewables while reducing greenhouse gas (GHG) emissions and export of fossil fuels.

Ordinary Saudis who see their energy and petrol prices rise will not be the voices of discontent. After decades of development through easy access to cheap energy, the Saudi oil industry has formed a powerful interest group, complicating efforts to decrease its role in the economy. Because oil prices are far lower than the Saudi fiscal “break-even” point of \$96 per barrel, Aramco's net profits dropped in 2023,^[38] a worrying sign despite projections that oil will continue to play a major role in the world economy.^[39] Saudi Arabia's energy transition plan reduces the oil industry's footprint in the national economy, opens Aramco to further public scrutiny, and promotes Aramco's transformation from an oil producer to a multi-format global industrial group. However, it remains unclear if the clean energy sector will develop similar comparative advantages as the extractive sectors. Foreign multinationals with advanced technology and critical expertise may be reluctant to share their intellectual property and trade secrets with Saudi firms, due to concerns about the Kingdom's insufficient regulatory framework and competitive market environment, which are necessary to support and facilitate business operations and investments.

To overcome resistance from the energy sector, Saudi policymakers should institute reforms that foster innovation and creativity. Because of the government's heavy intervention, Saudi Arabia's economy suffers from few incentives to innovate and diversify within the public sector. It also disincentivizes Saudis from pursuing careers outside of the major state-controlled industries. According to the IMF, “the continued availability of public sector jobs discourages nationals from pursuing

entrepreneurship and private sector employment.”^[40] In short, Saudis have less of an incentive to fund their own businesses to compete in the local market if they can pursue stable and high-paying public sector work instead. Therefore, the government would benefit from reallocating subsidies away from the oil sector to knowledge-based, private sector companies until these firms can get off the ground.

Of course, the future of the knowledge-based economy depends on the Saudi citizens who fill the jobs of the future. Although the Saudi government invests significant sums in the country's education, its young labor force often takes up employment in the public sector offers. Large private companies such as the Saudi Electricity Corporation (SEC), the Saudi Telecommunications Corporation (STC), and the Saudi Basic Industries Corporation (SABIC) receive large subsidies to stay afloat. Crucially, with the financial assurance provided by subsidies, these megacorporations lack the incentive for transformation into more agile enterprises. To become more competitive and eventually turn a profit, these companies should attract more private capital. The Saudi government could spur innovation at home by courting foreign-owned enterprises and encouraging these companies to set up shop in the Kingdom.

In addition to adopting innovative technologies, Riyadh must enhance the energy efficiency of its current systems and processes to successfully pursue the objectives laid out in Vision 2030. Reducing energy consumption and the country's peak load will not only ease the financial burden on national budgets, but also enhance the competitiveness of industries and services, generate employment opportunities, alleviate fuel poverty, and improve the overall reliability of Saudi Arabia's electricity grid.^[41] Achieving cost-effectiveness in the shift to renewable energy necessitates widespread improvements to existing infrastructures

and electrification of various end uses. Although the expansion of energy-intensive industries since the 1970s has led to a decline in energy productivity, the government has emphasized prioritizing energy efficiency through the Saudi Energy Efficiency Center since 2010. Total energy consumption remained steady in 2015 but subsequently declined by an average of 1.4 percent per year, largely due to the removal of subsidies, lower economic growth, and the global economic shutdown caused by the COVID-19 pandemic. In 2021, energy consumption intensity decreased by 2.74 percent, highlighting the need for the Saudi government to further reduce energy subsidies.

Section 2: Saudi Arabia's Role in Energy Geopolitics

Due to its extensive oil reserves and ample spare capacity, Saudi Arabia holds a distinctive position in global energy geopolitics. The country assumes a crucial leadership and swing voter role in the OPEC+ group, showcasing its significant influence over international markets. Due to its unique leverage, and despite occasional turbulence, its security relationship with the United States remains essential for the geopolitical interests of both nations. Saudi Arabia strategically aligns its foreign policy goals with its oil strategy, particularly in countering Iran's influence in the Middle East as well as balancing between the United States and its adversaries, Russia and China. Indeed, the Kingdom's growing energy partnership with the latter reflects its capacity to forge new alliances and navigate around existing ones.

2.1 The Saudi Role in OPEC+

The Organization of the Petroleum Exporting Countries is an international organization that influences global oil prices in the interests of member countries. It is the textbook definition of a cartel: a group of independent businesses who collude on market conditions in

order to keep prices high. Although these practices are illegal within most countries, OPEC's members are protected by sovereign immunity and cannot be held accountable for anti-competitive practices. Consequently, OPEC maintains considerable leverage over the global energy market today, as its thirteen members control 80.5 percent of the world's proven oil reserves.^[42] By coordinating production levels, the organization can directly impact energy prices through the availability of supply, underscoring its importance as a dominant player in the global energy market.

Saudi Arabia is OPEC's top crude oil producer and the organization's de facto leader. The Kingdom is one of the few members within OPEC+ that can absorb financial hits through voluntary production cuts. For this reason, Riyadh often acts as the "conductor" of the oil market, switching between cuts and hikes in order to suit budgetary and geopolitical objectives. Due to its sizable proven reserves, Saudi Arabia has historically maintained the classic role of a "swing" producer, able to quickly ramp up or down production at a minimal cost in order to absorb supply and demand shifts in the market.

Although OPEC insists that its policies encourage market stability—and indeed, the organization's actions have sometimes played that role in the past—this goal is clearly secondary to the foremost objective of maintaining high prices. Recent OPEC+ voluntary production cuts confirm this. In July 2023, Saudi Arabia introduced additional unilateral production cuts equivalent to 1 million bpd, keeping prices high despite pleas from the United States to increase global oil supplies amid global inflationary pressures.

While maintaining high oil prices has been very lucrative for the OPEC+ member states, radical price-fixing may undercut their dominance in the long run. The 2021-2023 global energy crisis has

already forced nations who rely on oil imports to re-strategize their energy security policies and push for energy independence by investing in alternative energy sources—especially renewables, which may offer a reliable energy supply at prices not set by foreign powers.

2.2 A Lasting Relationship with the United States

U.S.-Saudi relations are mutually beneficial and rest on two shared interests: oil and regional security. Currently, the U.S. sources only 12 percent of its already limited oil imports from OPEC nations, with the majority of this from Saudi Arabia.^[43] America's oil imports from Saudi Arabia have decreased at a steady pace over the last two decades, falling to 400,000 bpd on average in 2023 from more than 2.2 million bpd in 2003.^[44] In an attempt to drive down the cost of oil, the United States has steadily increased its domestic production, much of this through new technologies such as hydraulic fracturing, or "fracking." As a result of this expansion, the United States has become the world's largest oil producer, reaching 13.2 million bpd in October 2023.^[45] Likewise, the growth of domestic shale oil production in conjunction with projections for further record-breaking oil production in 2024 will continue to decrease America's dependence on foreign oil imports and empower Washington to challenge OPEC's grip on the global oil market.

Nonetheless, Saudi Arabia remains a critical regional partner for the United States, with its vast hydrocarbon resources playing a key role in global energy security—an area of significant interest for the U.S. Saudi Arabia's influence on global oil prices, a major political issue in America, underscores the importance of this relationship. However, the partnership has not been without its challenges, including periods of tension over issues such as human rights, regional conflicts, and policy disagreements. Despite these turbulent moments, maintaining close

strategic ties with the Kingdom has consistently been a priority for U.S. foreign policy, given Saudi Arabia's capacity as an influential swing producer in global oil markets.

Bordered by the Red Sea and the Gulf, Saudi Arabia is also situated in one of the world's most geographically critical commercial crossroads—both in terms of commercial goods and for the transport of fossil fuels. Ensuring the safe passage of merchant shipping through the Strait of Hormuz, which connects the Gulf to the Gulf of Oman, is paramount for the stability of the global economy. More than one-fifth of the world's oil supply, or 21 million barrels, passes through the Strait of Hormuz each day.^[46] Saudi Arabia transports the highest volume of crude oil through the Strait, averaging more than 6 million bpd during the first half of 2023^[47]—though it can divert flows by using a 746-mile pipeline across the Kingdom to a terminal on the Red Sea if the need arises.^[48]

Saudi Arabia benefits significantly from the presence of U.S. forces in the region. Years of increased tensions between the United States and Iran, which has threatened to blockade the Strait in response to crippling economic sanctions from the West, have led to a continual buildup of U.S. military presence in the Gulf. U.S. policymakers hope that deploying additional American firepower to the region will deter Tehran and ensure the free flow of international trade. The U.S. currently has over 40,000 troops deployed throughout the Middle East—2,700 of which are stationed inside Saudi Arabia^[49]—with the objective of protecting its regional forces and interests from Iranian aggression. If the United States reaches a proposed bilateral defense cooperation agreement with Saudi Arabia, which was initially tied to Israeli-Saudi normalization, it could help cement its role as a bulwark against China's growing ambitions to play "kingmaker" in the region.

2.3 *Balancing a Renewed Relationship with Iran*

A principal element in Saudi Arabia's foreign policy since 1979 has been containing Iran's power throughout the Middle East. Since the Islamic Revolution brought the clerical government of Ayatollah Ruhollah Khomeini to power, Iran has actively challenged Saudi Arabia's legitimacy as the spiritual leader of the Islamic world. The rivalry intensified during the Iran-Iraq War, during which Riyadh strengthened its security relationship with the United States to pursue the goal of countering Iran. Over the past 13 years, Iran and Saudi Arabia have engaged in a series of proxy wars across the Middle East. The two states also vie for control in strategic choke points and alliances across the broader region, including in Sudan, Ethiopia, and Eritrea.

Prior to 2023, the atmosphere in the bilateral relationship was tense, if not outright hostile. Iran threatened Saudi Arabia's energy security, regional presence, and its strategic relationship with Washington. In September 2019, drones from Iran struck the Abqaiq facility and Khurais Oil Field. And for decades, Iran has pursued a nuclear capability, which would pose an existential threat to the Kingdom.^[50] Despite these concerns, Saudi Arabia was opposed to the Joint Comprehensive Plan of Action (JCPOA) in 2015, under which Iran agreed to dismantle its nuclear program and give international inspectors access to its facilities in exchange for relief from economic sanctions.^[51] The deal was meant to reduce the prospects for conflict between Iran and its regional rivals, but the sanctions relief that it provided Tehran made it extremely controversial, both within the United States and within the Gulf states, which had largely been left out of the negotiations. When U.S. President Donald Trump abruptly withdrew from the JCPOA in 2018, claiming that the deal "failed to curtail Iran's missile program and regional influence," the reaction from Riyadh was largely positive.^[52]

Ironically, despite their fierce rivalry, Saudi Arabia and Iran have oil-dependent economies that share a need for high prices to finance their governments. By lowering oil prices, Saudi Arabia could pressure Tehran—but cannot use it without also hurting itself. When the United States pulled out of the JCPOA and re-imposed sanctions against Iran, Saudi Arabia increased its oil production from 10.1 million bpd to 11.1 million, leading oil prices to fall from \$70 per barrel in July to \$50 per barrel by December 2018.^[53] However, as the U.S. issued temporary sanctions-waivers to allow major consumers to import Iranian oil, Saudi Arabia once again joined the OPEC+ effort to cut production by 1.5 million bpd to increase prices.^[54] Despite Trump's requests for Saudi Arabia to raise oil output, the Kingdom responded more so to its customers' continued business with Iran than the U.S. requests. When Trump's successor, incumbent President Joe Biden, entered office, he also failed to secure an increase in oil production from Riyadh amid tightening market conditions. Biden employed hostile rhetoric toward Saudi Arabia during his campaign, and Biden administration officials also expressed frustration with Riyadh after it continued to cooperate with Russia in OPEC+ following the latter's invasion of Ukraine in February 2022.^[55] Seeing an opportunity after the Saudi decision to voluntarily cut oil production by 1 million bpd, Iran increased its production from 2.6 million bpd to over 3.1 million bpd in 2023, gaining an economic windfall amid growing international pressure.^[56]

Aside from energy geopolitics, Saudi Arabia is concerned that Washington is less committed to its Gulf partners' security than in the past.^[57] Sensing an opportunity to expand its regional clout, China has attempted to bolster its influence in the region at Washington's expense; in a sign of its newfound influence, it brokered a diplomatic reconciliation between Saudi Arabia and Iran in March 2023. This diplomatic push endeared it self to both sides of the Gulf,

increased its footprint and secured Chinese access to critical energy sources for the foreseeable future. Officials from Riyadh and Tehran met on several occasions to continue the positive momentum, and both countries joined the BRICS group on January 1, 2024.

However, amidst shifting geopolitical sands in the Middle East, especially in the aftermath of the Gaza War and heightened tensions between Israel and Iran, an end to the inter-Gulf rivalry seems as far away as ever. Since Riyadh's increasingly transactional deal-making scheme toward the United States might threaten its access to crucial defense hardware, it sees a continued interest in bolstering its strategic and economic partnership with Beijing.

2.4 A Growing Relationship with China

China is Saudi Arabia's largest oil consumer and overall trade partner. Saudi Arabia provides 15 percent of Chinese oil imports,^[58] and although Russia has displaced Saudi Arabia as the largest supplier of oil to China, oil shipments from the Kingdom have increased by 4.7 percent per annum since 2022. Despite the OPEC+ announcement of production cuts, Saudi oil exports to China are set to increase in 2024, due to new refineries and additional oil quotas of around 3 million bpd.^[59]

China is a major economic partner for Saudi Arabia, but until recently, the bilateral relationship remained functional, rather than strategic. China has long eschewed any form of political involvement in the Middle East, preferring instead to build strong commercial relations with all sides.^[60] Riyadh has also historically held a strong aversion to communism, and it did not establish official diplomatic relations with Beijing until the end of the Cold War in 1990. Only afterwards did Saudi Arabia become a major oil exporter to China and retained the position as China's top provider of oil for

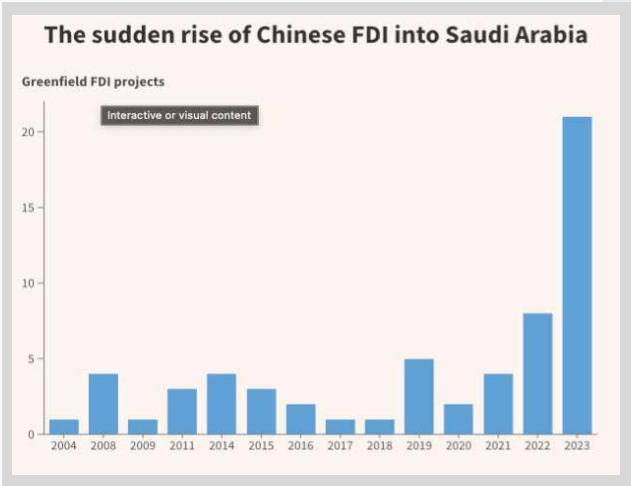
many years until Russia's invasion of Ukraine. As a major energy importer, China benefited from price wars between Saudi Arabia, Iran, and Russia, as well as the oil glut.^[61]

In 2020, Crown Prince Mohammed bin Salman visited China as part of his Asia tour and stated that "China has the right to take anti-terrorism and de-extremism measures to safeguard national security"—an implicit recognition that Riyadh would look the other way as China continued its crackdown on Uyghur Muslims in Xinjiang.^[62] The Crown Prince's comment signaled the importance Saudi elites ascribed to the Sino-Saudi relationship, putting the state's economic and strategic interests before religious considerations. And Riyadh's bet on Chinese goodwill has paid out; to support its economic diversification, Saudi Arabia secured \$5.5 billion in investments and contracts through China's Belt and Road Initiative (BRI).^[63]

Recent Chinese investments encompass renewable energy, agriculture, real estate, minerals, logistics, tourism, and healthcare. Chinese electric vehicle manufacturers have been warmly received in Saudi Arabia, in stark contrast to the cool reception they faced in North America and Europe.^[64] The Arab-China Business Conference, held in Riyadh in June 2023, concluded with \$25 billion worth of investment deals and several MoUs struck between Saudi Arabia and China.^[65] The industrial production sector drew more attention within the energy transition and export strategy; China's Oriental Energy Co. and the Kingdom's Ajlan & Bros Holding Group Co. signed an agreement to explore areas of collaboration in manufacturing worth \$7.5 billion, while the Saudi Ministry of Investment signed a deal with China's state-owned CRRC Group to develop opportunities covering project development and manufacturing of renewable energy and sustainable mobility worth \$2 billion.^[66] Chinese EV companies have also formed partnerships with local firms to enter the

Saudi market, including EV start-up Eno-vate, which has entered a joint venture with Sumou Holding to establish a \$500 million manufacturing plant within Saudi Arabia.[67]

Figure 4: Chinese FDI into Saudi Arabia



Source: FDI Intelligence

China has also declared its interest in helping Saudi Arabia develop nuclear energy. The China National Nuclear Corporation is in the bidding process for the first multibillion-dollar contract to construct a nuclear power plant near the Saudi border with Qatar and the UAE. Additionally, Saudi Arabia used two unidentified Chinese entities to construct a yellowcake extraction facility to begin processing its uranium ore deposits.^[68] This nuclear cooperation signals an alternative to Riyadh’s long-term partnership with the United States, which has long insisted on stringent safeguards that would ensure its control over Saudi Arabia’s nuclear fuel cycle.

In a complex and unstable world, furthering the economic relationship with China also through the BRICS+ alliance is also useful for Saudi Arabia, which is keen to navigate an increasingly multipolar order while diversifying its economy away from oil. Trade between China and Saudi Arabia stood at more than \$106 billion in 2022, almost double the value of U.S.-Saudi trade.^[69] A key motivator for the increasing economic collaboration between the two countries is the pursuit of strategic independence from the West

and the desire to diversify risks to its security by safeguarding against potential shifts in U.S. policies toward the Gulf region following the U.S. presidential election in 2024. As demonstrated in the China-mediated diplomatic reconciliation with Iran, Riyadh appreciates Beijing’s relatively neutral, benign stance toward the Middle East, and is committed to expanding its cooperation where the two sides have mutual interests.

2.5 The Impact of the War in Ukraine

Russia’s 2022 invasion of Ukraine has had immense ripple effects on global geopolitics, energy markets, and diplomatic relations. Given that Saudi Arabia is a major player in the global oil market, the disruption in geopolitical stability naturally led to a shift in Riyadh’s foreign policy-making. Saudi Arabia’s relationships with other world powers—the United States, the EU, Russia, and China—were also affected by the evolving dynamics of the conflict, as nations reassessed their positions based on the trajectory of the war.

The war crystallized the divide between the West and the emerging nations of the Global South. The shift in the center of global economic gravity to the Indo-Pacific region and the decline in the historic dominance of the United States raise anxieties in the Middle East, where non-aligned, hedging middle powers like Saudi Arabia have attempted to find a balance between belligerents in the Ukraine conflict and their supporters. The Arab nations have also been incensed by the U.S. position on the ongoing war between Israel and Hamas, which they regard as hypocritical due to America’s unflinching support for Israel and its fierce condemnation of Russia.

The Saudi government has attempted to mediate between Russia and Ukraine, emphasizing its own interest in de-escalation and economic pragmatism. Indeed, Riyadh broadly continues to cooperate with Russia in OPEC+ and has refused to join Western sanctions on Moscow. Its

position throughout the conflict has been pragmatic and relatively independent.^[70] Although the peace summit Saudi Arabia hosted in Jeddah in August 2023 did not produce any breakthroughs, the conference highlighted Saudi Arabia's increasing influence as an impartial mediator among a diverse set of nations, in effect forming a second Non-Aligned Movement.^[71]

Aside from preserving its strategic autonomy, Saudi Arabia seeks to diversify its economy by “friend-shoring” and by de-risking its economy against bottlenecks formed because of the war. According to Faisal Al Ibrahim, the Saudi Minister of Economy and Planning, Riyadh assesses the value of membership to BRICS on an “economic basis” to “secure supply of the imports needed for manufacturing, access export markets more easily, and boost non-oil exports.”^[72]

The war also accelerated the search for alternative methods of payment to the U.S. dollar in international trade. In November 2023, China and Saudi Arabia signed a currency swap agreement worth 50 billion yuan (\$6.93 billion) for the use of local currencies in bilateral trade over the coming three years.^[73] If Saudi Arabia decides to trade its oil with China in yuan rather than U.S. dollars, it would add momentum to the current “petro-yuan” trading between China and Russia.^[74] Currently, Saudi-related SWIFT banking transactions in yuan are not even 1 percent of Russia's, but the potential to disrupt the dollar's dominance is obvious. Although the yuan accounts for only 2.4 percent of global payments, further commitment by Saudi Arabia and network effects can accelerate its adoption in the Global South.

Section 3: Saudi Arabia's Energy Roadmap 2030

Within this complex geopolitical landscape, the outlook of the global oil market will play a pivotal role in shaping

the economic trajectory of nations worldwide—Saudi Arabia perhaps more than most. As a major player in international oil markets, Saudi Arabia is closely attuned to these dynamics. With a record-high demand for oil, projected growth in production, and expectations of fluctuating prices, the Kingdom envisions a promising future, though it must address the looming challenge of a global shift toward sustainable energy. While short-term prospects appear robust, the long-term viability of oil as a primary source of revenue is less certain, given the increasing global demand for alternative energy sources.

3.1 The Oil Market Outlook

The importance of oil is reflected in global demand, which has reached a record high of 107.7 million bpd in 2023, according to the International Energy Agency (IEA).^[75] Overall economic output is expected to increase across the globe as states continue to recover from the COVID-19 pandemic, and Saudi output of GDP is expected to grow at a compounded annual growth rate (CAGR) of 3.23 percent between 2023 and 2028. Within the next five years, prices are expected to fluctuate significantly around the average of \$78 to \$83 per barrel, according to the IEA. However, higher prices belie the gradual shift toward alternative energy sources that will eventually depress demand for oil.

In the short term, Saudi Arabia will likely continue to expand its oil production. Although reserves will decline significantly as the country's industrial sector develops, Saudi Arabia has more than enough oil and gas for the foreseeable future. Given this positive outlook, policymakers in Riyadh assert that the volume of available reserves in the country is not a significant concern, especially with technological advancements that allow for increasingly precise discoveries of oil fields and extraction.^[76] Of course, significant challenges remain. The shift toward sustainable energy sources and

equipment that utilize alternative forms of energy is a major issue. The countries of the European Union, traditionally one of Saudi Arabia's largest export markets, intend to achieve carbon neutrality by 2050, with most of the world following soon after. For Saudi Arabia, the implication is simple: that the demand for oil will reduce drastically, with an accompanying drop in prices and government revenues. At present, non-oil commodities account for only 16 percent of the Kingdom's exports, but it seeks to increase the contribution of the non-oil sector in exports by 50 percent by 2030, raising its share of non-oil exports to 24 percent of total exports.

3.2 *Embracing Renewables*

According to the World Economic Forum, Saudi Arabia's agenda as part of Vision 2030 is to gradually increase the share of renewable energy in the energy mix, and to eventually reach the Kingdom's net zero goals by 2060. Currently, Saudi Arabia produces 26.3 GW of electricity per year. The residential sector is the leading consumer of power, with peak hours at noon and after sunset. The country has largely adopted "smart meters," placing them in residential, commercial, and industrial sectors to monitor and manage electricity consumption more efficiently to ensure the nation remains on the right path toward greater efficiency in energy use.

Solar power is also at the forefront of Saudi Arabia's renewable energy outlook. The Kingdom has vast expanses of desert and an abundance of sunlight, making solar energy a relatively straightforward option to facilitate the transition toward clean energy. Vision 2030 outlines the path for developing large-scale solar projects, including photovoltaic (PV) and concentrated solar power (CSP) installations.^[77] In 2023, French energy giant Total Energies acquired financing for its first solar power plant in Saudi Arabia, which will generate 119 MW of power and commence operations in 2025.

Wind is a second cheaper alternative that the Kingdom can leverage to enhance its electricity generation capacity. The Vision 2030 plan calls for the country to install 9.5 GW of wind power by 2030.^[78] A study evaluating the suitability of land mass for wind power generation found four regions within Saudi Arabia suitable for wind generation, including the Red Sea Coastline, as well as the Northern, Eastern, and Central regions. Indeed, the favorable regions totaled 327,337 km², presenting excellent opportunities for short and long-term development. The government recently launched a 400-MW wind farm in Dumat Al-Jandal and has plans to scale production to facilitate the shift toward renewable energy use.

3.3 *Transition Fuels: Natural Gas, Hydrogen, Nuclear*

Even as the world recognizes the need to reduce reliance on fossil fuels, many countries have turned to cleaner "transition fuels" to bridge between heavy-polluting energy sources and fully green energy production. In this vein, the expanded utilization of natural gas, a relatively clean source of power compared to oil, is central to Saudi Arabia's transition to net-zero emissions. Saudi Arabia's abundant supply of natural gas guarantees a cushion for the economy as oil is phased out, ensuring that the Kingdom's overall economic activities remain minimally disrupted. The energy roadmap outlines a plan for increased natural gas production and utilization within the Kingdom, including investments in extraction technologies and the development of natural gas pipelines and terminals.

In 2022, the share of oil in Saudi Arabia's domestic energy consumption had decreased to 33 percent, and natural gas raised to 67 percent, largely because of Saudi Aramco's investments in gas production and power. The roadmap also positions hydrogen as a key resource in the Kingdom's transition to a sustainable energy mix. Saudi Arabia's abundant sunlight is crucial for producing green

hydrogen, as solar energy is used to power the electrolysis process that splits water into hydrogen and oxygen, creating a renewable and sustainable source of hydrogen fuel. Though hydrogen has a complex extraction process and can be difficult to manufacture efficiently, the Kingdom has prioritized research and large-scale green hydrogen and ammonia production, positioning it to drive the global hydrogen economy forward.^[79]

Finally, nuclear energy has been a subject of debate for decades. While it has the potential to produce clean energy, the toxic nature of depleted uranium and its potential weaponization pose major safety concerns. This has led to the slow adoption of this form of energy in Saudi Arabia. However, recent technological advancements and robust safety regulations have made nuclear energy an attractive source of clean power. Moreover, unlike solar and wind, which are dependent on weather conditions, nuclear power can provide energy around the clock, making it a safe choice for reliable energy supply and a useful complement to renewable sources. As part of its efforts to establish nuclear power plants, Riyadh established the King Abdullah City for Atomic and Renewable Energy (KA-CARE) and the Nuclear and Radiological Regulatory Commission (NRRC).^[80] At the same time, it has committed to adhere to the International Atomic Energy Agency's (IAEA) regulations to ensure compliance with global standards, placing it on the path to nuclear power generation and sustainability.

Section 4: Policy Recommendations

To effectively navigate the complexities of economic diversification and energy transition, Saudi Arabia should adopt a strategic framework of policy recommendations that align with its Vision 2030 goals. The following recommendations aim to address the inherent challenges of reducing the country's dependency on oil, fostering sustainable growth, and enhancing the Kingdom's role in global energy geo-

politics. By implementing targeted policies, Saudi Arabia can secure its economic future, drive innovation in renewable energy, and maintain stability and leadership in an evolving global landscape.

- 1. Better coordinate the process of economic diversification by streamlining processes to make it more accessible with a more user-friendly interface, providing clear steps and contacts to foreign investors.** The Vision 2030 plan includes myriad goals covering many different fields, and a special institution should be established to ensure the effectiveness and efficiency of the whole process. The national investment strategy (NIS) should be updated with a stronger target for 2030. The process should have comprehensive, harmonized, and measurable indicators, such as in the Global Economic Diversification Index (2024), to measure progress.
- 2. Revenues from higher oil prices should be diverted to Vision 2030 transformation projects.** Subsidies for fossil fuels exacerbate the economic crisis, both by draining the government budget and making it more difficult to compete against the public sector. Rather than implementing stimulus packages that contribute to growing debt, the Ministry of Energy should improve the gradual implementation of carbon trading in the market. To reduce carbon dioxide emissions, it should rigorously implement a new carbon credit scheme that considers the marginal utility of each type of fossil fuel. Additionally, the MoE should enforce energy performance contracts in buildings, elevate minimum energy efficiency standards for production chains, and promote public-private partnerships (PPP) in digital technologies to enhance overall energy efficiency.

3. Localize, incentivize, and encourage the private sector to participate and play a larger role in the energy transition to renewables.

To lower barriers to market entry, attract FDI, and improve the government's fiscal position, Saudi Arabia must continue to restructure, deregulate, and privatize the Saudi Electric Company, National Grid Company, and SABIC. It should expand its grid interconnection with the other GCC states to North Africa—and potentially Europe—by 2030. Throughout this process, the Kingdom must maintain the agility to effectively manage crises and protect the grid's digital infrastructure against potential cyber intrusions.

4. Foster a more self-reliant business environment to develop the private sector. The private sector will play an important role during the diversification process and contribute to a more stable economy in the future. If it wants to create a more self-reliant and independent business environment, Saudi Arabia should increase financial, social, and professional incentives for its citizens to join private businesses. There should also be more focus on the types of skills that are needed in the private sector to improve the competitiveness of its nationals. To build the human capital critical for a post-oil economy, Saudi Arabia should incentivize nationals to receive in-state postgraduate education and link it to professional development and career advancement.

5. Maintain a working relationship with the United States and China to achieve regional geopolitical stability. Saudi Arabia should continue to work with the U.S. government to maintain its security relationship in exchange for balancing the oil market and receiving support

for the transition to clean energy. Additionally, it should strengthen its relationship with China to maintain its influence in oil markets. Parallel to these efforts, Saudi Arabia should request assistance from Beijing to stand up its civilian nuclear program.

6. Maintain oil production cuts in OPEC+ and protect market share in the Asia-Pacific against a potential resurgent Iran through FDI and supply chain integration. Saudi Arabia should develop a working relationship with Washington to continue to supply U.S. refineries with heavy-grade oil until the end of 2024. It should also increase economic cooperation with China in non-oil sectors as well.

7. By 2030, increase the share of renewables and nuclear in the energy mix to 50 percent to ensure a secure, efficient, technology-oriented, environmentally sustainable, and competitive domestic energy market. To begin, Riyadh must clarify the assumptions behind the objectives laid out in Vision 2030. Saudi Arabia should aim to increase the share of electric vehicles to 15 percent by adopting policy choices to incentivize fuel-efficient cars and continue to build new solar, wind, and nuclear power plants.

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