

Investment Dynamics in the Gulf – Frameworks for International Energy Investments

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Abstract

This research investigates the role of Gulf States in the development of renewable energy beyond the GCC, focusing on the investment patterns and frameworks used by major Gulf-based energy companies. A range of renewable energy projects were examined and compared using information from company reports, government sources, academic research, and project data. The analysis considers factors such as the countries targeted, the type of renewable energy developed, and the stated rationales behind these investments. The findings demonstrate that Gulf investment frameworks diverge significantly rather than Nord Anglia International School

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Abu Dhabi following a single model: the UAE relies heavily on state-funded bilateral aid and grants for small-scale solar microgrids in island and developing nations, while Saudi Arabia and commercial UAE arms pursue utility-scale, debt-financed independent power projects (IPPs) and equity stakes in mature or reform-oriented energy markets. Across both approaches, solar energy dominates project selection, and investments are driven by a dual strategy that balances long-term economic diversification and commercial returns with diplomatic engagement and energy-access goals.

Introduction

The global shift towards renewable energy has become increasingly important as countries face the effects of climate change, rising energy demand and the need to reduce their dependence on fossil fuels. This transition is particularly interesting in the Gulf Cooperation Council (GCC), where many economies have historically depended heavily on oil and gas. Despite this, Gulf countries have started investing in renewable energy, not only within their own borders but also in projects across other countries. This raises an important question about how countries that are major producers of fossil fuels are also becoming significant investors in the development of renewable energy.

Since 2013, countries such as the United Arab Emirates and Saudi Arabia have been involved in renewable energy projects internationally. Companies such as Masdar from the UAE and ACWA Power from Saudi Arabia have developed, financed, or taken stakes in solar, wind, and other renewable energy projects in countries outside the Gulf. These investments can provide benefits to the countries receiving them, such as increased renewable electricity generation, improved energy infrastructure and greater access to investment and technical expertise. At the same time, they can also support the Gulf states in diversifying their economies and developing a stronger position in the growing global renewable energy market (for the UAE, see Weatherby et al., 2018).

The UAE provides an interesting example of this change. Although the country remains a major oil producer, it has also developed a significant renewable energy sector and has used companies such as Masdar to develop and finance renewable projects internationally. For example, Masdar has been involved in projects across countries in Africa, Europe, North America, the Caribbean and the Pacific Islands. Similarly, Saudi Arabia has expanded its international renewable energy investments through ACWA Power, including large-scale solar and energy-storage projects in Uzbekistan and South Africa. These investments suggest that renewable energy is becoming an important part of the Gulf's international economic activity rather than being limited to domestic projects (Young, n.d.).

However, the reasons behind these investments are not necessarily limited to environmental concerns. Renewable energy can also provide economic opportunities as countries attempt to prepare for a future

where global energy markets may become less dependent on fossil fuels. Gulf states have substantial financial resources, experience in large-scale energy projects and access to established energy companies, which can give them an opportunity to participate in the expansion of renewable energy markets. Foreign policy may also play a part. Weatherby et al. (2018) describe renewable energy as a link between UAE foreign policy and its economic diversification and foreign investment, and Sim (2022) argues that competition among Gulf states is also reflected in the activities of their national energy companies in developing countries. At the same time, the countries receiving these investments may benefit from increased electricity supply and the development of their own renewable energy capacity.

There is also considerable variation between the countries receiving Gulf investment. Some countries have strong solar or wind potential but may lack the financial resources or technical expertise required to develop projects on a large scale. Others may already have renewable energy programmes but require additional investment to expand them. The financing of the projects also differs. Some are funded by grants or concessional loans from state development funds (Weatherby et al., 2018), others involve minority stakes in wind farms, and others are independent power projects built by a consortium or a single owner (see Table 1). This makes it useful to compare projects across different countries and financing structures rather than looking at Gulf investment as one single approach.

The academic reviews used for this research mostly look at developments inside the GCC, including projects, policies and technology (Alnaser & Alnaser, 2011; Abdmouleh et al., 2015; Elrahmani et al., 2021). In the sources found for this research, Gulf investment abroad is discussed mainly by policy institutions. Sim (2022) identifies Masdar, ACWA Power and Nebras Power as national energy champions with activities abroad. Weatherby et al. (2018) look at how the UAE uses renewable energy in aid and diplomacy. The Gulf Renewable Power Tracker at Columbia University records Gulf state-backed renewable investments around the world (Young, n.d.), and Bakshi (2026) maps the energy transition investments of Gulf sovereign wealth funds. As far as this research found, none of these compares individual projects by how they were financed, which this research does for a sample of projects by Masdar and ACWA Power.

This research therefore focuses on the renewable energy investments made by Gulf states abroad between 2013 and 2026. It examines the similarities and differences between the investment frameworks used by Gulf countries and considers the common energy-market themes found across the countries receiving these investments. The research uses data from renewable energy projects by Masdar and ACWA Power, supported by information from official sources, academic research and news articles. The projects were compared based on factors such as the type of renewable energy, location, investment, how the project was financed and the purpose of the project. By looking at specific projects and companies, the research aims to identify patterns in where Gulf investment is directed, the types of renewable energy involved and the motives of the investors and the needs of the recipient countries. The research finds that the frameworks differ more than they resemble each other. Thirteen of the 20 projects were paid for by the UAE government through grants or loans, and seven were commercial. Solar is the most common technology, and the choice of technology follows the financing. The beneficiary countries do not share one theme: the aid-funded projects mainly address the cost of imported fuel and energy access in island and remote places, while the commercial projects went to countries with renewable targets or national procurement programmes and to large wind markets. This can help provide a clearer understanding of how Gulf states are responding to the changing global energy market and how their role in renewable energy is developing alongside their traditional position in the fossil-fuel industry. The sample is small and taken from public documents, so the findings describe patterns and do not test causes.

Research Context

The Gulf countries have started an energy transition and are carrying it out through large-scale renewable energy projects (Miniaoui, 2023). This research looks at what this means for countries outside the Gulf, through several projects. However, sources express different views on this. The UAE shows the tension between the two views. Its national oil company ADNOC has set a target of raising oil production capacity to 5 million barrels a day by 2027 (EIA, 2024), while Masdar builds and finances renewable energy projects at home and abroad.

Miniaoui (2023), writing for the Economic Research Forum (ERF), explains that the region faces several challenges in making a success of its energy transition investments, most notably its dependence on fossil fuels, a lack of infrastructure and technical expertise, high upfront costs and geopolitical tensions. At the same time, Miniaoui (2023) states that the GCC region presents significant opportunities for investing in the energy transition and notes that all GCC countries have announced goals for raising the share of renewable energy in their energy mix. Other writers question the motives behind Gulf renewable investment. Sim (2022) suggests that greenwashing, meaning attempts to use renewable credentials to keep social acceptance of hydrocarbon production, may partly explain why the region records the lowest level of renewable energy investment in the world (based on 2020 data), and Al-Saidi (2020) shows that alternative energy in the Gulf is also linked to non-economic factors such as prestige, modernity and soft power. These sources show that opinions differ on whether Gulf investment in renewable energy is beneficial or harmful.

Literature Review

The related literature can be broadly split into two groups. The first group of sources describes renewable energy development inside the GCC. W.E. Alnaser and N.W. Alnaser (2011) reviews the status of renewable energy in the six GCC countries. They explain that the GCC countries realized that depending on gas would not be the solution because of the shortage of the resource and its environmental impact, so they turned back to renewable energy. The paper lists the major renewable energy projects in each country, mainly solar and wind, and notes that nearly all GCC countries were planning large photovoltaic plants. This helps this research because it shows that the GCC countries' interest in solar and wind was partly driven by concerns about gas supply and its environmental impact. Abdul Waheed Bhutto, Aqeel Ahmed Bazmi, Gholamreza Zahedi, and Jiří Jaromír Klemeš (2014) review the progress of renewable energy implementation in the GCC countries. This helps this research because it gives background on how renewable energy was being implemented inside the GCC. Zeineb Abdmouleh, Rashid

A.M. Alammari, and Adel Gastli (2015) study renewable energy policy in all six GCC countries and make recommendations to decision-makers on how to promote renewable energy deployment. They summarize each country's targets and the main projects and measures started so far. They also note that, because of the region's oil and gas reserves, renewable energy projects in the GCC do not create adequate short-term financial returns, but that rising local energy demand makes developing them a strategic decision. This helps this research because it describes the domestic reasons for investing in renewable energy, which can be compared with the reasons for investing abroad. Hilal M S Al-Maamary, Hussein A Kazem, and Miqdam T Chaichan (2017) review the energy challenges facing the GCC states in the 21st century and the role of renewable energy. This helps this research because it describes the energy challenges that form the domestic background to Gulf renewable energy investment. Ahmed Elrahmani, Jameel Hannun, Fadwa Eljack, and Monzure-Khoda Kazi (2021) review the current and future renewable energy projects of each GCC country, the newest technologies that could be applied, and the policies and measures that are in place. They explain that the GCC countries are committed to raising the share of renewable energy in their energy mix to reduce their economic reliance on fossil fuels. This links to this study because it shows that renewable energy is part of the Gulf's economic strategy at home, which gives background for the investments abroad that this research examines.

The second group of sources looks at the reasons for Gulf renewable energy investment and at activity beyond the GCC. Weatherby, Eyler and Burchill (2018) examine how the UAE uses renewable energy in its foreign aid and diplomacy. They explain that the UAE-Pacific Partnership was run as a government assistance initiative through the Abu Dhabi Fund for Development, with Masdar as project developer, and that the fund also provides concessional loans for renewable projects in developing countries. This helps this research because it separates aid-based projects from commercial ones, which is the distinction used here to compare projects. Al-Saidi (2020) examines how the energy transition is being carried out in the Arabian Peninsula, through renewable megaprojects, the reorganization of the energy sector and nuclear energy. The paper highlights that alternative energy is linked to non-economic factors such as prestige, modernity and soft or symbolic power. This helps this research because it suggests that the reasons for Gulf

renewable investment are not only financial. Sim (2022) compares how the Gulf states have deployed renewable power and identifies Masdar, ACWA Power and Nebras Power as national energy champions that are active abroad. The article points to Uzbekistan, where ACWA Power and Masdar have won contracts, and Jordan, where Gulf companies hold a large share of installed capacity, and argues that competition among Gulf states is reflected in the activities of these companies in developing countries. This helps this research because it names the main companies and offers rivalry as one reason for their presence in particular markets.

Taken together, Alnaser and Alnaser (2011), Bhutto et al. (2014), Abdmouleh et al. (2015), Al-Maamary et al. (2017) and Elrahmani et al. (2021) describe renewable energy development inside the GCC, while Weatherby et al. (2018), Al-Saidi (2020) and Sim (2022) raise the motives and the foreign policy side of Gulf renewable energy. The Gulf Renewable Power Tracker (Young, n.d.) records projects abroad. As far as this research found, none of these compares individual projects by how they were financed, so this research compares projects by Masdar and ACWA Power by financing structure.

Methodology

What are the similar investment frameworks that Gulf States have employed since 2013 to make renewable energy investments abroad? What are the common energy market themes across beneficiary countries?

This research compares renewable energy projects as a set of case studies. A project was included if it met four conditions: it was developed, financed or part-owned by Masdar (UAE) or ACWA Power (Saudi Arabia), or by a consortium led by one of them; it is located outside the home country of the Gulf company involved; it uses solar or wind energy, including storage built with it; and it was agreed or commissioned between 2013 and 2026. Projects were identified from the public project lists of Masdar and ACWA Power and from the documents of the funds through which many of Masdar's projects were delivered, such as the UAE-Pacific Partnership Fund and the UAE-Caribbean Renewable Energy Fund. Domestic projects, including those of Omani companies in Oman, were excluded because the research question concerns investment abroad. Masdar is the main case and ACWA Power is a comparison case. The final sample contains the projects listed in Tables 1 and 2.

Information on each project was collected from three kinds of source, in this order of preference: company and fund disclosures (project pages, press releases and fact sheets from Masdar, ACWA Power and the Abu Dhabi Fund for Development); documents from lenders, governments and international agencies where available; and trade and news reports. Each figure for capacity, cost, ownership share and year was checked against more than one source where possible. When sources differed, the company or fund disclosure was used and the difference was noted. Figures that could not be confirmed, such as the price of a stake that was not announced, are shown as ND (not disclosed) with a footnote. All capacities are given in megawatts. Project cost is recorded separately from the share held by the Gulf company, because a fund total or the cost of a whole project is not the amount a Gulf company invested. Two years are recorded for each project: the year the agreement or financing was concluded and the year the project was commissioned. Academic sources, listed in the Literature Review, were used for background on the Gulf and not for project figures.

To answer the first question, each project was classified by its financing structure, which this research uses to mean who pays for the project and on what terms. Five types were used. A grant is a project paid for by a state development fund, such as the Abu Dhabi Fund for Development, and delivered by a company such as Masdar. A concessional loan is a loan on easier terms than the market, also from a state development fund. A minority equity stake is a share bought in a project from another developer. A consortium independent power project is a new project that a Gulf company bids for and builds together with other investors. A wholly owned project is one owned by the Gulf company through its own project company. The projects were then compared by technology, location, capacity, cost and year. To answer the second question, the reasons given for each project in official descriptions, and the conditions of the receiving country, such as reliance on imported diesel, the size of its electricity grid and the strength of its solar or

wind resources, were recorded and counted to see which themes appeared most often.

The method has limits. Most project information comes from the companies and funds involved, which present their projects favourably and often leave out costs or ownership shares, so some comparisons rest on incomplete data. The projects were selected from public lists and are not a random sample, so the results describe patterns in these projects and do not show how Gulf investment behaves as a whole. Classifying a project by its financing structure also depends on how its funders describe it. These limits are reduced by comparing sources, marking undisclosed values and stating the classification rules above, but they cannot be removed.

Data Analysis

1. UAE

Table 1: UAE Investments

Investor	Recipient Country	Project Name	Amount Invested	Year Invested	Renewable Energy Domain	Installed Capacity (kW)
Masdar/ UAE-Pacific Partnership Fund	South Pacific Islands- Nauru	Nauru Solar	Not publicly disclosed	2016	Solar	500 kW solar PV plant
Masdar	Egypt	Al Wadi Al Jadeed Solar PV plants	Not publicly disclosed	2015	Solar	6,000 kW
Masdar	England	London Array	€2.2 billion (Masdar 20% stake)	2013	Wind	630,000 kW
Masdar	Montenegro	Krnovo Wind Farm	Not publicly disclosed	2018	Wind	72,000 kW
Masdar /UAE-Pacific Partnership Fund	South Pacific Islands- Kiribati	Kiribati:500kW Solar PV & Water Protection	Not publicly disclosed	2015	Solar	500kW solar PV plant
Masdar	Caribbean- Bahamas	Bahamas Caribbean Renewable Energy Fund	Funded under the US\$50m UAE-CREF	2019	Solar	925kW solar PV plant
Masdar /UAE-Pacific Partnership Fund	South Pacific Islands- Micronesia	FSM- Solar in Pohnpei	Not publicly disclosed	2016	Solar	2,300 kW
Masdar	Caribbean- St Vincent The Grenadines	Caribbean Renewable Energy Fund- Saint Vincent & the Grenadines	Not publicly disclosed / UAE-CREF	2019	Solar	600kW solar PV plant
Masdar	Seychelles	Ile de Romainville Solar Park	\$10.2 million funded by ADFD and PUC	2022	Solar	5,000 kW
Masdar	England	Dudgeon Offshore Wind	£525 million (Masdar 35%)	2014	Wind	402,000 kW

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Masdar /Abu Dhabi Government	Mauritania	The Sheikh Zayed Solar Power Plant	US\$31.99 million (UAE government grant)	2012	Solar	15,000 kWA
Masdar	Caribbean-Barbados	Barbados Caribbean Renewable Energy Fund	Not publicly disclosed / UAE-CREF	2019	Solar	500kW
Masdar /UAE-Pacific Partnership Fund	South Pacific Islands-Vanuatu	Vanuatu Port Vila 767kW Solar PV	Not publicly disclosed	2015	Solar	767kW Solar PV
Masdar	Egypt	Siwa Solar PV plant	Not publicly disclosed	2014	Solar	10,000 kW
Masdar	United States	Rocksprings Wind Farm	Not publicly disclosed	2019	Wind	149,000 kW
Masdar	South Pacific Islands - Tonga	Micro-grid connected PV plant in Tonga	Not publicly disclosed	2013	Solar	520 kW

UAE projects that have been developed by Masdar revolve mostly around renewable energy such as wind and solar. They have benefited many countries from the United States to South Pacific Islands. Their size ranges from 0.5 MW in the Pacific to 630 MW at the London Array offshore wind farm, in which Masdar holds a 20% stake. Masdar has been running projects for years, the earliest in the table being from 2013. The UAE has supported many projects to benefit other countries in renewable energy. However, the money behind these projects came from different places. Many of the smaller projects were paid for by two grant funds of USD 50 million each, the UAE-Pacific Partnership Fund and the UAE-Caribbean Renewable Energy Fund. Both were financed by the Abu Dhabi Fund for Development and delivered by Masdar (Weatherby et al., 2018). The USD

50 million is the size of each fund, shared between 11 Pacific countries and the Caribbean countries that received projects, and is not the cost of each project. In these projects Masdar acted as the developer for a state fund. In England, the United States and Montenegro, by contrast, Masdar bought shares in wind farms (see Table 1). Masdar's international renewable energy projects support countries with varying levels of economic development through clean energy infrastructure. Its projects span Europe, Africa, North America, the Caribbean, and the Pacific Islands, showing a geographically diverse investment portfolio. Rather than concentrating on one region, Masdar has worked in both developed countries, such as England and the United States, and developing nations, including Egypt, Mauritania, Seychelles, and numerous Small Island Developing States (SIDS). The type of project differs between the two groups (see Table 1). In England, the United States and Montenegro, Masdar bought shares in wind farms. The projects in Egypt, Mauritania, the Caribbean and the Pacific Islands were paid for by UAE grants, and the Seychelles solar park was financed through concessional loans from the Abu Dhabi Fund for Development (Masdar, n.d.-b; Weatherby et al., 2018). Masdar's own descriptions match this split. The Pacific and Caribbean projects are described as ways to reduce the high cost of imported fuel and to improve energy access (Masdar, 2014a), while the Dudgeon stake is described as a decision based on the UK being a major market for offshore wind (Masdar, 2014b). This suggests that Masdar works both as a developer of aid-funded projects and as a commercial investor.

A significant trend across the projects is the dominance of solar energy projects. Solar accounts for 12 of

the 16 projects in Table 1. All grant-funded projects in the sample are solar, while all four minority equity stakes are in wind farms, so the choice of technology closely matches the way the project was financed. Most of the projects listed (including those in Nauru, Kiribati, Micronesia, Vanuatu, Tonga, Seychelles, Mauritania, Egypt, Barbados, the Bahamas, and St. Vincent and the Grenadines) focus on installing solar photovoltaic (PV) systems. These projects range from relatively small facilities of 500 to 925 kW to larger developments such as the 10 MW Siwa plant in Egypt and the 15 MW Sheikh Zayed Solar Power Plant in Mauritania. Many of these installations were designed for remote island nations that rely heavily on imported diesel fuel. Masdar describes them as a way to reduce the high cost of diesel imports, and estimated that the five Pacific projects announced in January 2014 would save more than 1.2 million litres of diesel and avoid 3,030 tonnes of carbon dioxide a year (Masdar, 2014a).

The Dudgeon Offshore Wind Farm is an offshore wind energy project located in England. The wind farm lies about 32 kilometres off the north Norfolk coast. In September 2014, Masdar acquired a 35% stake in the wind farm from the Norwegian company Statoil for approximately £525 million. Statoil kept 35% and remained the operator, and the Norwegian company Statkraft owned the remaining 30%. It was Masdar's second major investment in UK offshore wind after London Array. Masdar said that its decision to join the project reflected its belief that the UK is a major market for offshore wind investment (Masdar, 2014b). The wind farm consists of 67 Siemens wind turbines, each with a capacity of 6 MW, giving the project a total installed capacity of 402 MW. Electricity generated by the turbines is transmitted to shore through subsea cables before being connected to the UK's national electricity grid. Masdar's 2014 announcement said the wind farm would supply about 410,000 UK households once complete (Masdar, 2014b). For this research, Dudgeon is an example of a minority equity stake in a large wind farm in a developed market, financed commercially and not through an aid fund (see Table 1).

The UAE-Caribbean Renewable Energy Fund (UAE-CREF) is a USD 50 million renewable energy initiative launched in 2017 to support clean energy projects in 16 Caribbean island nations. The fund is fully financed by the Abu Dhabi Fund for Development, and Masdar leads the design and implementation of the projects (Masdar, n.d.-a). Its aim is to increase renewable energy in island nations that rely heavily on imported fossil fuels for electricity generation. The first three projects, in the Bahamas, Barbados and Saint Vincent and the Grenadines, were inaugurated in March 2019. The Bahamas project is a 925 kW solar photovoltaic (PV) carport power plant at the Thomas A. Robinson National Stadium in Nassau, which converts sunlight directly into electricity using photovoltaic panels. It cost about US\$4 million (Tribune Business, 2019). The project contributes renewable electricity to the local power network, helping to diversify the Bahamas' energy mix and improve electricity supply through locally generated solar power. Masdar describes it as the country's first large-scale solar energy project, developed in partnership with the Bahamas Ministry of Environment and Housing, and expects it to displace about 310,000 litres of diesel a year (Masdar, 2019). For this research, the Caribbean projects are examples of grants, because the money comes from the Abu Dhabi Fund for Development and Masdar acts as developer (Weatherby et al., 2018).

Table 1 therefore shows that Masdar's projects were financed in different ways. Of the 16 UAE projects, 12 were grants, 1 was financed by a concessional loan, 4 were minority equity stakes in wind farms and 1 was a consortium project (Ibri III in Oman).

Ibri III in Oman is the one Masdar project in Table 1 that is a consortium independent power project. Masdar and its consortium partners, Al Khadra Partners, Korea Midland Power (KOMIPO) and OQ Alternative Energy, reached financial close on 16 January 2026 for a 500 MW solar photovoltaic plant with a 100 MWh battery energy storage system, which Masdar describes as the first utility-scale solar and battery storage project in Oman (Masdar, 2026). The project is being developed for Nama Power and Water Procurement, under a power purchase agreement signed in September 2025. The total project cost is around USD 300 million, and the financing comes from Natixis Corporate and Investment Banking and First Abu Dhabi Bank (Masdar, 2026). Masdar says the project supports Oman's Vision 2040 goal of generating 30% of its electricity from renewable sources by 2030. For this research, Ibri III is an example of a Gulf company investing in another country as part of a consortium that sells electricity under a power purchase agreement.

2. Saudi Arabia

Table 2: Saudi Arabia Investments

Investor	Recipient Country	Project Name	Amount Invested	Year Invested	Renewable Energy Domain	Installed Capacity (kW)
ACWA	Uzbekistan	Tashkent Solar PV and BESS	US\$533 million project funded	2024 (agreements signed in 2023)	Solar	200,000 kW solar photovoltaic power plant and 500 MWh battery energy storage system
ACWA (20.04% share)	South Africa	Bokpoort CSP IPP	US\$ 517 million total project cost (ACWA investment not publicly listed)	2013	Solar	50,000 kW (net) with 9 hours of thermal energy storage

Some of Saudi Arabia's major projects abroad are through ACWA Power, a Saudi-listed company in which the Public Investment Fund holds a 50% stake (Sim, 2022; Young, n.d.). ACWA Power's project portfolio has passed USD 100 billion across more than 14 countries (Argaam, 2025), and it describes Uzbekistan as its second-largest market for investments (ACWA Power, 2024). This research looks at two of these projects, in Uzbekistan and South Africa (Table 2). Both are solar projects and both include energy storage. They are used as a comparison with the UAE projects and do not represent ACWA Power's whole portfolio.

In July 2024, ACWA Power signed financing agreements for the Tashkent Riverside project in Uzbekistan, a Solar PV and Battery Energy Storage System (BESS) project with a total value of USD 533 million (ACWA Power, 2024). The project focuses on renewable solar energy and includes a 200 MW solar photovoltaic power plant alongside a 500 MWh battery energy storage system, which ACWA Power describes as the largest in Central Asia. Six lenders provided USD 386 million of debt, more than two-thirds of the cost: the European Bank for Reconstruction and Development, the Islamic Development Bank, DEG, Proparco, Standard Chartered and KfW IPEX-Bank (ACWA Power, 2024). The project company is fully owned by ACWA Power, and the plant will sell electricity to the National Electric Grid of Uzbekistan under a 25-year power purchase agreement (NS Energy, 2024). By combining large-scale solar power generation with energy storage, the project helps increase the reliability of renewable electricity, and it supports Uzbekistan's goal of generating 40% of its electricity from renewable sources by 2030 (ACWA Power, 2024). For this research, Tashkent is an example of a wholly owned project, financed mostly by debt from development and commercial banks.

The Bokpoort Concentrated Solar Power Independent Power Producer (CSP IPP) project in South Africa reached financial close in June 2013 and began commercial operation in the first quarter of 2016 (ACWA Power, n.d.). The project cost USD 517 million. It was developed by a consortium led by ACWA Power, which holds 20.04% of the project company, with other investors holding the rest (ACWA Power, n.d.). The project uses concentrated solar power (CSP) technology and has a net electricity generation capacity of 50 MWe. A key feature of the plant is its nine-hour thermal energy storage system, which stores heat collected during the day and enables electricity generation after sunset or when solar radiation is low. This allows the plant to provide a more consistent supply of electricity compared to solar projects that rely solely on daylight. Bokpoort was built under South Africa's Renewable Energy

Independent Power Producer Procurement Programme and sells electricity to the national utility Eskom under a 20-year power purchase agreement (ACWA Power, n.d.). At its launch in March 2016, the South African government described it as a milestone for the country's electricity supply security and CO₂ reduction (SAnews, 2016). For this research, Bokpoort is an example of a minority stake in a consortium independent power project.

Table 2 therefore shows two commercial projects. Unlike the grant projects in Table 1, both are independent power projects that sell electricity to a national utility under a long-term power purchase agreement, 25 years in Uzbekistan and 20 years in South Africa, and both include energy storage. They differ in ownership: ACWA Power owns the Tashkent project company fully and holds 20.04% of Bokpoort.

Discussion

What are the similar investment frameworks that Gulf States have employed in the last few years to make renewable energy investments abroad? What are the common energy market themes across beneficiary countries?

The findings show that the investment frameworks used by Gulf States differ more than they resemble each other. The 20 projects in Tables 1 and 2 fall into five types. Twelve were grants paid for by the UAE government and delivered by Masdar, nine of them through funds financed by the Abu Dhabi Fund for Development, and one, the Seychelles solar park, was financed through the same fund's concessional loans. Four were equity stakes in wind farms: London Array, Dudgeon and Krnovo, where Masdar's share is 20%, 35% and 49%, and Rocksprings, where the share is not disclosed. Two were consortium independent power projects (Ibri III and Bokpoort), and one, Tashkent Riverside, is owned by ACWA Power through its own project company. Thirteen of the 20 projects were therefore paid for by the UAE government through grants or loans, and seven were commercial. What the projects have in common is the kind of company and the presence of partners. Masdar is owned by Abu Dhabi government entities and the Public Investment Fund holds 50% of ACWA Power (Sim, 2022; Young, n.d.), and every project involved an outside funder or co-owner, such as a development fund, another developer or a group of lenders. This fits the argument that Gulf states use state-linked companies as instruments of economic diversification and international influence (Sim, 2022; Weatherby et al., 2018). It does not support the idea that the frameworks are highly similar. Nor does it support the idea that Gulf companies only finance new infrastructure, because two of the seven commercial projects, Krnovo and Rocksprings, were purchases of wind farms that were already operating.

The two ACWA Power projects are both commercial. Tashkent Riverside is owned by ACWA Power through a project company, with USD 386 million of its USD 533 million cost covered by debt from six lenders (ACWA Power, 2024), and ACWA Power holds 20.04% of Bokpoort (ACWA Power, n.d.). Both sell electricity to a national utility under a long-term power purchase agreement (NS Energy, 2024; ACWA Power, n.d.). In this sample, the contrast with the UAE is that ACWA Power's projects are commercial, while Masdar's include a large aid-funded group. Two projects cannot show whether ACWA Power also has an aid-funded side, so this comparison is a first look and not a conclusion.

A second significant finding is that the choice of technology follows the way a project was financed. Solar accounts for 15 of the 20 projects and wind for 5. All grant-funded projects in the sample are solar, and all four equity stakes are in wind farms. The grant projects were built on island and rural grids that depend on diesel, and Masdar describes them as a way to reduce the high cost of imported diesel (Masdar, 2014c). The equity stakes were bought in wind farms in markets that already had developers, such as the United Kingdom, which Masdar described as a major market for offshore wind (Masdar, 2014b). Storage appears in five projects: St Vincent and the Grenadines (2019), the Seychelles (2022), Tashkent Riverside (2024), Ibri III (2026) and Bokpoort, which stores heat. This suggests that the preference for solar in this sample comes from the aid programmes. It does not show that Gulf investors choose commercially mature, low-risk technologies, which this sample cannot test.

The evidence also highlights patterns among the beneficiary countries. The official descriptions give the

cost of imported fuel as the most common reason, in 11 of the 20 projects, and it appears only in the grant and loan projects: the Pacific and Caribbean islands, the Seychelles and Mauritania. The island projects share one condition, a dependence on diesel and very high power costs (Masdar, 2014c; Masdar, 2019). Energy access in remote or poorly supplied areas is the reason given for the projects in Egypt and Mauritania. A host-country target or procurement programme is named in seven projects, four of them commercial (Krnovo, Ibri III, Tashkent Riverside and Bokpoort), and a commercial market opportunity is named only for the equity stakes in Dudgeon, Krnovo and Rocksprings. Grid reliability or storage is named in five projects, three of them commercial, and a climate or emissions benefit in eight. There is therefore no single common theme. Aid-funded projects go to places with expensive imported fuel or weak grids, while commercial projects go to countries that have set renewable targets and buy power through national programmes or utilities, or to large wind markets. This describes the 20 projects and does not test why Gulf investors chose them.

Another important finding is that Gulf States appear to combine commercial objectives with broader strategic and diplomatic interests. The projects range from solar plants of

0.5 MW in the Pacific to Dudgeon, a 402 MW offshore wind farm whose total cost was about £1.5 billion (Masdar, 2014b). This range is consistent with a dual investment strategy: smaller projects strengthen diplomatic relationships and development cooperation in vulnerable countries, while larger projects provide long-term financial returns and establish positions within major international energy markets. The sources describe the first group as foreign aid (Weatherby et al., 2018) and the second as commercial decisions (Masdar, 2014b). This research cannot measure diplomatic benefits directly, so this is an interpretation. In this sample the dual pattern appears for the UAE only. It can lead to describing Gulf renewable investment as part of a broader strategy of economic diversification, energy diplomacy and the expansion of international economic influence.

The UAE has funded projects in several small island countries for a number of reasons, particularly to support renewable energy and strengthen economic and diplomatic relationships. Through Masdar and the Abu Dhabi Fund for Development, the UAE has funded solar and wind projects in countries such as Nauru, Kiribati, Samoa, the Bahamas, Barbados, and Saint Vincent and the Grenadines. These projects can help island nations reduce their dependence on expensive imported diesel, lower energy costs, improve energy security, and respond to climate change.

Another possible factor could be the favorable tax and investment environments found in some small island countries. Some island jurisdictions have historically used tax incentives to attract international investment, so this could potentially make them more attractive to foreign investors, including the UAE. However, the rules of the two funds do not support this explanation for the grant projects. The Pacific fund was set up in response to a call at a 2012 Pacific Leaders' Meeting of the International Renewable Energy Agency, and countries applied directly to the UAE Ministry of Foreign Affairs for untied grants (United Nations, n.d.). The Caribbean fund was open to the 16 Caribbean island states that the United Nations classifies as small island developing states, with one grant per country (ECP Americas, n.d.). Eligibility therefore depended on island status and on applying, not on a country's tax regime, and the money was a grant and not an investment expected to earn a return. Tax advantages are therefore an unlikely reason for these projects. This research did not test tax regimes for the commercial projects.

Another reason these projects may be attractive is that they allow the UAE to build stronger international relationships with smaller countries. By providing funding for renewable-energy projects, the UAE can develop partnerships with governments that may become valuable in the future. UAE officials have said that renewable energy investment around the world builds a framework for broader commercial engagement later (Weatherby et al., 2018). These projects can also improve the UAE's reputation as a leader in clean energy and sustainable development. Masdar states that the Caribbean fund aims to reduce reliance on imported fuel, increase energy access and enhance climate resilience (Masdar, n.d.-a), and that the first Pacific projects would save diesel and cut carbon dioxide emissions (Masdar, 2014a). The stated aims are therefore economic and environmental, while the diplomatic benefits are an interpretation that the sources support but this research cannot measure.

Limitations and Areas for Future Research

This research provides some clear pathways for further research, driven by the inherent limitations of the present work. The sample is small: it covers 20 projects by two companies, Masdar and ACWA Power, chosen from public project lists and fund documents, so the findings describe patterns in these projects and do not show how all Gulf investment behaves. Most of the information comes from the companies and funds themselves, which present their projects favourably, and several costs and ownership shares were not disclosed and are marked ND in the tables. The classification by financing structure also depends on how the funders describe each project. For example, the sources for the projects in Egypt and Mauritania describe the money only as a UAE grant, so the role of the Abu Dhabi Fund for Development is confirmed for the Pacific, Caribbean and Seychelles projects but not for those three. The projects range from 2013 to 2026 and were agreed under different conditions, so this research does not trace a trend over time. Finally, the reasons for the investments come from official descriptions, and the diplomatic and reputational benefits discussed above are interpretations that this research did not measure.

Omani projects inside Oman were excluded because they are not investment abroad. Oman appears in this research only as a host, through Ibri III, a project by a Masdar-led consortium. This research did not search for Omani investment outside Oman, so it cannot say whether Omani companies follow the same patterns. The Gulf Renewable Power Tracker lists one project abroad linked to Oman, a 105 MW biomass project in South Korea in 2015 (Young, n.d.), which would also fall outside this research because it does not use solar or wind.

Although this research provides an overview of renewable energy investment by Gulf States, there are opportunities to expand the research further. One area for future research would be to examine Oman, Qatar, Kuwait and Bahrain in greater detail. The research focused on two companies, Masdar from the UAE and ACWA Power from Saudi Arabia, so the renewable energy investment strategies of the other GCC members were not studied. The Gulf Renewable Power Tracker lists projects abroad linked to Qatar (a 66 MW solar project in Jordan by Nebras Power), Kuwait (a 500 MW solar project in Pakistan by Enertech Holding, listed for 2016) and Bahrain (a 2,000 MW solar project in Egypt, listed for 2015) (Young, n.d.), and Sim (2022) describes Qatar's Nebras Power as a national energy champion with about 6.5 GW of generating capacity abroad in 2022. Investigating these countries could provide a more complete comparison of the GCC and show whether the investment patterns identified in this research are common across the region or are more specific to certain countries.

Further research could also examine whether the differences in the size and economic structure of each Gulf State influence how much they invest in renewable energy abroad. For example, comparing the investment strategies of countries with different levels of financial resources, domestic energy production and renewable energy targets could help explain why some Gulf States have developed larger international renewable energy portfolios than others. Ownership may also matter. Sim (2022) notes that ACWA Power was founded by private Saudi investors in 2002 and the Public Investment Fund became a shareholder only after 2013, while Masdar and Nebras Power were fully state-owned.

Another opportunity would be to expand the number of projects studied and collect more detailed quantitative data. A larger dataset, for example one that starts from the Gulf Renewable Power Tracker (Young, n.d.), could include comparing the total value of investments, installed renewable capacity, expected electricity generation and changes in carbon emissions across different projects. With 20 projects, no statistical test was attempted. A larger dataset would allow future research to identify stronger statistical relationships between the characteristics of a country and the type or scale of Gulf investment it receives.

Future research could also test the motives suggested in the Discussion. This research relied on official descriptions, so it could not measure the diplomatic or reputational benefits of the grant projects, or test whether tax regimes matter for the commercial projects. Interviews with officials and developers, or a comparison of the countries that received grants with the eligible countries that did not, could show how recipients were chosen and what each side gained.

Finally, future research could examine how these investments develop over a longer period of time. Many

renewable energy projects are long-term investments, so their economic and environmental effects may not be fully visible when they are first developed, and some are very recent, such as Ibri III, which reached financial close in January 2026 (Masdar, 2026). Studying the performance of projects several years after completion could therefore provide a clearer understanding of their impact on energy security, economic development and renewable energy capacity. Expanding the research in these areas would provide a broader picture of the GCC's changing role in the global renewable energy market.

Conclusion

Overall, this research shows that the investment frameworks used by Gulf States abroad differ more than they resemble each other. Of the 20 projects studied, 13 were paid for by the UAE government through grants or loans and delivered by Masdar, and 7 were commercial: equity stakes in wind farms, consortium projects and one wholly owned project. What the projects share is the kind of company and the presence of partners. Masdar and ACWA Power are both state-linked, and every project involved an outside funder or co-owner, such as a development fund, another developer or a group of lenders.

The choice of technology followed the way a project was financed. Solar accounts for 15 of the 20 projects and nearly all of the grant projects, while all four equity stakes are in wind farms. Storage, which helps keep the supply of renewable electricity steady, appears in five projects, three of them commercial. The beneficiary countries do not share one theme. The reason most often given for the aid-funded projects was the cost of imported fuel, together with energy access in remote areas, while the commercial projects went to countries with renewable targets or national procurement programmes and to large wind markets.

The evidence is consistent with Gulf States combining economic aims with diplomatic ones, but this research could not measure the diplomatic benefits, so they remain an interpretation. The two ACWA Power projects are both commercial, so the aid-funded pattern appears only for the UAE in this sample.

In conclusion, the findings describe 20 projects chosen from public documents and do not show how all Gulf investment behaves. They suggest that Gulf States are developing a role in the global renewable energy sector that exists alongside, rather than immediately replacing, their traditional position in the fossil-fuel industry, and that treating Gulf renewable investment as one framework hides the difference between aid and commercial investment.

References

- [1] Abdmouleh, Zeineb, et al. "Recommendations on Renewable Energy Policies for the GCC Countries." *Renewable and Sustainable Energy Reviews*, vol. 50, 2015, pp. 1181-91, <https://doi.org/10.1016/j.rser.2015.05.057>.
- [2] ACWA Power. "ACWA Power Signs Financing Agreements for USD533 Million Tashkent Riverside Project in Uzbekistan." ACWA Power, 1 July 2024,
- [3] [https://acwapower.com/en/media-center/latest-news/acwa-power-signs-financing-agreements](https://acwapower.com/en/media-center/latest-news/acwa-power-signs-financing-agreements-for-usd533-million-tashkent-riverside-project-in-uzbekistan/)
- [4] [-for-usd533-million-tashkent-riverside-project-in-uzbekistan/](https://acwapower.com/en/media-center/latest-news/acwa-power-signs-financing-agreements-for-usd533-million-tashkent-riverside-project-in-uzbekistan/).
- [5] ACWA Power. "Bokpoort CSP IPP." ACWA Power, <https://acwapower.com/en/projects/bokpoort-csp-ipp/>. Accessed 18 Oct. 2026.
- [6] Al-Maamary, Hilal M. S., et al. "Renewable Energy and GCC States Energy Challenges in the 21st Century: A Review." *International Journal of Computation and Applied Sciences*, vol. 2, no. 1, 2017, pp. 11-18, <https://doi.org/10.24842/1611/0018>.
- [7] Alnaser, Waheeb E., and Naser W. Alnaser. "The Status of Renewable Energy in the GCC Countries." *Renewable and Sustainable Energy Reviews*, vol. 15, no. 6, 2011, pp. 3074-98.
- [8] Al-Saidi, Mohammad. "From Economic to Extrinsic Values of Sustainable Energy: Prestige, Neo-Rentierism, and Geopolitics of the Energy Transition in the Arabian Peninsula." *Energies*, vol. 13, no. 21, 2020, article 5545.

- [9] Argaam. "ACWA Power's Project Portfolio Tops \$100B in over 14 Countries." Argaam, 12 May 2025, <https://www.argaam.com/en/article/articledetail/id/1812688>.
- [10] Bakshi, Parul. Mapping Gulf Sovereign Wealth Funds in the Global Energy Transition: Capital, Technology, and Diplomacy. Observer Research Foundation Middle East, 23 Feb. 2026, <https://orfm.org/research/mapping-gulf-sovereign-wealth-funds-in-the-global-energy-transition-on-capital-technology-and-diplomacy/>.
- [11] Bhutto, Abdul Waheed, et al. "A Review of Progress in Renewable Energy Implementation in the Gulf Cooperation Council Countries." *Journal of Cleaner Production*, vol. 71, 2014, pp. 168-80, <https://doi.org/10.1016/j.jclepro.2013.12.073>.
- [12] ECP Americas. "UAE Backs Renewables in the Caribbean." ECP Americas, <https://ecpamericas.org/newsletters/uae-backs-renewables-in-the-caribbean/>. Accessed 18 Oct. 2026.
- [13] EIA. "United Arab Emirates Invests to Meet 2027 Crude Oil Production Capacity Goal." *Today in Energy*, U.S. Energy Information Administration, 5 Feb. 2024, <https://www.eia.gov/todayinenergy/detail.php?id=61365>.
- [14] Elrahmani, Ahmed, et al. "Status of Renewable Energy in the GCC Region and Future Opportunities." *Current Opinion in Chemical Engineering*, vol. 31, 2021, article 100664, <https://doi.org/10.1016/j.coche.2020.100664>.
- [15] Masdar. "5 Pacific Countries to Receive Grants from UAE's \$50m Renewable Energy Fund." Masdar, 20 Jan. 2014,
- [16] [https://masdar.ae/en/news/newsroom/5-pacific-countries-to-receive-grants-from-uaes-\\$50m-renewable-energy-fund](https://masdar.ae/en/news/newsroom/5-pacific-countries-to-receive-grants-from-uaes-$50m-renewable-energy-fund).
- [17] Masdar. Ile de Romainville Solar Park. Masdar,
- [18] <https://masdar.ae/-/media/corporate-revamp/projects/downloads/ile-de-romainville-solar-park>
- [19] [/2023/ile-de-romainville-solar-park_en.pdf](/2023/ile-de-romainville-solar-park_en.pdf). Accessed 18 Oct. 2026.
- [20] Masdar. "Masdar and Consortium Partners Achieve Financial Close for Oman's First Utility-Scale Solar and Battery Storage Project." Masdar, 16 Jan. 2026, <https://masdar.ae/en/news/newsroom/masdar-and-consortium-partners-achieve-financial-close-for-oman>.
- [21] Masdar. "Masdar Delivers Samoa's First Wind Farm." Masdar, 28 Aug. 2014, <https://masdar.ae/en/news/newsroom/masdar-delivers-samoas-first-wind-farm>.
- [22] Masdar. "Masdar Invests in Offshore Wind Farm; Expanding Its Presence in the UK Wind Energy Market." Masdar, 22 Sept. 2014,
- [23] <https://masdar.ae/en/news/newsroom/masdar-invests-in-offshore-wind-farm-expanding-its-presence-in-the-uk-wind-energy-market>.
- [24] Masdar. "Three Major Solar Projects Inaugurated in the Caribbean." Masdar, 19 Mar. 2019, [https://masdar.ae/en/news/newsroom/uae-inaugurates-three-major-projects-under-us\\$50-million-caribbean-renewable-energy-fund](https://masdar.ae/en/news/newsroom/uae-inaugurates-three-major-projects-under-us$50-million-caribbean-renewable-energy-fund).
- [25] Masdar. UAE-Caribbean Renewable Energy Fund. Masdar,
- [26] https://masdar.ae/-/media/corporate/projects/downloads/uae-caribbean-energy-fund/uae-caribbean-renewable-energy-fund_v4.pdf. Accessed 18 Oct. 2026.
- [27] McKenzie, Natario. "Govt Seeks to Replicate 925kw Solar Car Park." *The Tribune*, 19 Mar. 2019, <https://tribune242.com/news/2019/mar/19/govt-seeks-replicate-925kw-solar-car-park>.

- [28] Miniaoui, H  la. "Challenges of GCC Investment in the Energy Transition." ERF Policy Portal, Economic Research Forum, 26 Dec. 2023,
- [29] <https://theforum.erf.org.eg/2023/12/25/challenges-of-gcc-investment-in-the-energy-transition>.
- [30] NS Energy. "ACWA Power Secures Financing for Tashkent Riverside Project in Uzbekistan." NS Energy, 2 July 2024,
- [31] [https://www.nsenergybusiness.com/news/acwa-power-secures-financing-for-tashkent-riverside](https://www.nsenergybusiness.com/news/acwa-power-secures-financing-for-tashkent-riverside-project-in-uzbekistan/)
- [32] [-project-in-uzbekistan/](https://www.nsenergybusiness.com/news/acwa-power-secures-financing-for-tashkent-riverside-project-in-uzbekistan/).
- [33] SAnews. "R5bn Solar Plant Opens in Northern Cape." SAnews, South African Government News Agency, 15 Mar. 2016, <https://www.sanews.gov.za/node/30287>.
- [34] Sim, Li-Chen. "Renewable Power Policies in the Arab Gulf States." Middle East Institute, 8 Feb. 2022, <https://mei.edu/publication/renewable-power-policies-arab-gulf-states/>.
- [35] United Nations. "UAE-Pacific Partnership Fund." Sustainable Development Goals Partnerships Platform, United Nations, <https://sdgs.un.org/partnerships/uae-pacific-partnership-fund>. Accessed 18 Oct. 2026.
- [36] Weatherby, Courtney, et al. UAE Energy Diplomacy: Exporting Renewable Energy to the Global South. Stimson Center and TRENDS Research & Advisory, 2018,
- [37] [https://www.stimson.org/wp-content/files/file-attachments/UAE%20Energy%20Diplomacy_0.p](https://www.stimson.org/wp-content/files/file-attachments/UAE%20Energy%20Diplomacy_0.pdf)
[df](https://www.stimson.org/wp-content/files/file-attachments/UAE%20Energy%20Diplomacy_0.pdf).
- [38] Young, Karen E. Gulf Renewable Power Tracker. Center on Global Energy Policy, Columbia University, <https://www.energypolicy.columbia.edu/the-gulf-renewable-projects-tracker/>. Accessed 18 Oct. 2026.