

# Corporate Factsheet FAST FACTS

## ABOUT MASDAR

Masdar is one of the world's leading renewable energy companies, positioning the UAE at the forefront of the global energy transition. Since inception in 2006, Masdar has been a pioneer in clean energy, and today it is active in more than 40 countries, having invested or committed to invest in projects with a total value of over US\$30 billion. The combined capacity of these projects is more than 20 GW – enough to power 5.25 million homes. Altogether, these are expected to displace more than 30 million tonnes of carbon dioxide per year – equivalent to taking 6.5 million cars off the road.

Masdar's latest evolution sees it bringing together three UAE energy champions –

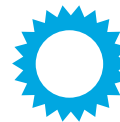


– as its shareholders, enabling the company to utilize their combined expertise to become a truly global clean energy powerhouse across renewables and now green hydrogen.

As the UAE takes on the responsibility of hosting the United Nations Conference of Parties 2023 (COP28), the supercharged Masdar will accelerate growth and reinforce the UAE's commitment to become one of the world's largest, and potentially the largest, investor in

renewable energy and green hydrogen, supporting countries around the world with their own decarbonization plans. In service of this, Masdar is targeting:

- A portfolio capacity of more than 100 GW by 2030, with ambitions to double that in the years to come



**100 GW**  
Capacity by 2030

- Production of 1 million tonnes of green hydrogen by 2030 through the new Masdar green hydrogen business



**1 million**  
Tonnes of green  
hydrogen by 2030

## ENERGY LEADERSHIP

Masdar, as the UAE's clean energy powerhouse, will drive clean energy growth, tackle climate challenges and accelerate an equitable energy transition. Transforming Masdar into the world's largest renewable energy company and global green hydrogen leader will also place the UAE at the forefront of the energy transition and highlight the UAE's pioneering leadership in the run-up to COP28 and beyond.



# FOUR PILLARS OF MASDAR



## Developing Renewable Energy

As a renewable energy developer, Masdar is building and investing in some of the world's most sophisticated commercially-driven clean energy projects in solar, wind, waste to energy, energy storage, and energy services. Masdar also delivers specialized small- and medium-sized renewable energy applications and operates projects in areas presenting unique energy and technology challenges. Masdar has utility-scale and off-grid projects in over 40 countries.



## Smart First-Mover in Green Hydrogen

Masdar has been active in hydrogen production and power generation as far back as 2008. Although plans then were ahead of their time, Masdar believes the time is now right to significantly accelerate investment in this technology, to advance the sector to diversify the UAE's economy and realize the global clean energy transition. Masdar is now collaborating with other developers and potential offtakers in the research, development, commercialization, and implementation of clean hydrogen and sustainable fuel businesses, which would have both local and regional applications.



## Driving Clean-Tech Innovation and Creative Solutions

Masdar is advancing clean-tech innovation and creative solutions by deploying the latest technologies at scale, enhancing their commercial viability and advancing the boundaries of what is achievable in the clean-tech space. Some such projects include:



### Sharjah Waste to Energy

The Middle East's first commercial-scale waste to energy project



### Hywind Scotland

The world's first utility-scale offshore wind farm and the first offshore wind farm connected to a smart battery system.



### Cirata Floating Solar Plant

To be Southeast Asia's largest floating PV plant when completed



### Shams 1

One of the world's largest concentrated solar power plants and the first of its kind in the MENA region.





## Fostering Inclusive Engagement and Delivering Impactful Platforms

As part of Masdar's wider commitment to equitable sustainability, it advances clean energy access, energy independence, and climate resilience for countless communities, helping secure a better future for all through its strategic platforms.



### Abu Dhabi Sustainability Week (ADSW)

Each year Masdar hosts Abu Dhabi Sustainability Week, one of the world's largest sustainability gatherings, which convenes policymakers, industry specialists, technology pioneers, and local community members to explore solutions to the world's most pressing sustainability challenges.



### Zayed Sustainability Prize (ZSP)

In tribute to the legacy of the late UAE founding father Sheikh Zayed bin Sultan Al Nahyan – a visionary champion of global sustainability – Masdar hosts ZSP at ADSW. It celebrates achievements across five distinct categories: Health, Food, Energy, Water, and Global High Schools. Since its establishment in 2008, ZSP has directly and indirectly impacted over 378 million lives.



### Youth 4 Sustainability (Y4S)

Launched under the patronage of His Highness Sheikh Khaled bin Mohamed bin Zayed Al Nahyan, Y4S is a Masdar global platform supporting young professionals and students. It aims to nurture the next generation of sustainability leaders by providing training and real-world experience through its offerings like the Future Sustainability Leaders, Sustainability Ambassadors, and the Y4S Skillup Program.



WOMEN IN SUSTAINABILITY,  
ENVIRONMENT AND  
RENEWABLE ENERGY

### Women in Sustainability, Environment and Renewable Energy (WiSER)

WiSER is a global platform dedicated to inspiring women to play an active role in addressing global sustainability challenges. Established by Masdar, it convenes influential figures from business, government, and academia to advance the global dialogue on sustainability and inclusion. Its educational and mentorship programs for young professional women aim to provide leadership skills through the lens of sustainability.

# MASDAR CLEAN ENERGY OVERVIEW

Masdar's Clean Energy division is a leading developer and operator of utility-scale renewable energy projects, applications providing energy access to communities away from the electricity grid, and energy services consultancy.

Since 2006, Masdar has been a catalyst for renewable energy and clean-tech innovation in the MENA region and countries around the world – working with governments, businesses, and non-governmental organizations. Masdar is a global renewable energy leader and one of the largest developers of off-grid solutions in the world.

## KEY UAE PROJECTS

### OPERATIONAL



#### Masdar City 10 MW PV Plant and 1 MW Rooftop Installation

The Masdar City 10 MW Solar Photovoltaic Plant was the first grid-connected renewable energy project in the UAE and the largest of its kind in the Middle East when inaugurated in 2009. The power plant and rooftop solar panels installed on the Mohamed bin Zayed University of Artificial Intelligence campus buildings power Masdar City and supply the national grid. Combined, they produce approximately 19,100 MWh of electricity annually, displacing 15,000 tonnes of CO<sub>2</sub> emissions per year, enough to power 500 homes annually.



**19,100 MWh**

Approximate annual electricity produced



**15,000**

Tonnes of CO<sub>2</sub> emissions displaced per year



#### Shams, Abu Dhabi (100 MW CSP plant)

In March 2013, Masdar inaugurated Shams, one of the world's largest concentrated solar power (CSP) plants and the first of its kind in the Middle East & North Africa (MENA) region. Masdar partnered with Total and Abengoa to deliver the 100 megawatt (MW) solar thermal project. In January 2016, Masdar purchased Abengoa's stake in the project. In October 2018, Abu Dhabi Retirement Pensions and Benefits Fund (ADRPBF) purchased a 29% stake in Shams. Masdar remains the majority shareholder with a 51% stake.



**100 MW**

Total energy production capacity



**51 %**

Masdar remains the majority shareholder





### Mohammed bin Rashid Al Maktoum Solar Park, Phase 3

A Masdar-led consortium was selected to develop the 800 MW third phase of the Mohammed bin Rashid Al Maktoum Solar Park in Dubai. At the time, the consortium's winning tariff of 2.99 US cents per kilowatt hour was the lowest price quoted for solar power generation in the world. Phase 3 was constructed in three stages: the first 200 MW was completed in 2018; the second 300 MW was completed in 2019; and the final 300 MW in 2020. The 800 MW facility powers 240,000 homes in Dubai, offsetting around 1,400,000 tonnes of CO<sub>2</sub> emissions per year.



**800 MW**

Total energy production capacity



**240,000**

Homes powered



### Sharjah Waste to Energy Project

The Emirates Waste to Energy Company, a joint venture between BEEAH and Masdar, has developed a cutting-edge waste to energy plant in Sharjah. Diverting around 300,000 tonnes of solid waste from landfill each year, contributing to the UAE's waste diversion goals. It produces up to 30 MW, which is supplied directly to the Sharjah electricity grid, enough to power 28,000 homes.



**300,000**

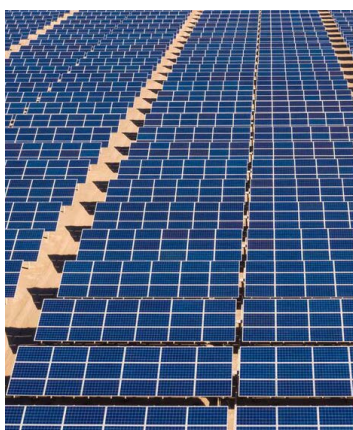
Tonnes of solid waste diverted from landfill each year



**30 MW**

Total energy production capacity

## UNDER DEVELOPMENT



### Al Dhafra Solar PV (2 GW)

TAQA and Masdar – alongside partners EDF and JinkoPower – are developing this record-breaking project, located approximately 35 km from Abu Dhabi city. Once operational, the Al Dhafra Solar PV IPP will be the world's largest single-site solar power plant, using approximately 3.5 million solar panels to generate enough electricity for approximately 160,000 homes across the UAE. It will mitigate 2.4 million tonnes of carbon dioxide annually.



**3.5 million**

Solar panels

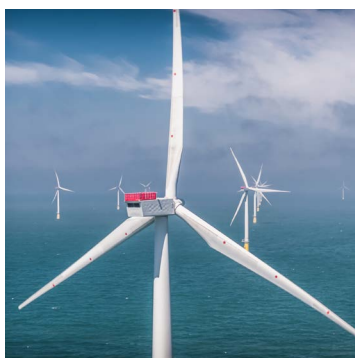


**2.4 million**

Tonnes of carbon dioxide displaced annually

# KEY INTERNATIONAL PROJECTS

## OPERATIONAL



### London Array, UK (630 MW)

A joint venture between RWE (30%), Orsted Energy (25%), Caisse de dépôt et placement du Québec (CDPQ) (25%) and Masdar (20%), London Array is the world's second-largest offshore wind farm currently in operation. Inaugurated in July 2013, the plant powers over half a million homes and displaces about 925,000 tonnes of CO<sub>2</sub> emissions per year.



**630 MW**

Total energy production capacity



**925,000**

Tonnes of CO<sub>2</sub> emissions displaced per year.



### Tafila Wind Farm, Jordan (117 MW)

The first commercial utility-scale wind power project in the Middle East, the Tafila Wind Farm has increased the country's total power capacity by 3% and generates enough electricity to power 83,000 homes.



**3 %**

Country's total power capacity



**83,000**

Homes powered



### Dudgeon, UK (402 MW)

The Dudgeon Offshore Wind Farm is located 32 km off the coast of North Norfolk in East Anglia, UK. Masdar, with a 35 percent share, partnered with Equinor and China Resource Holdings for the project, which provides electricity for around 410,000 homes and displaces 893,000 tonnes of CO<sub>2</sub> emissions annually.



**35 %**

Masdar stake in the project



**893,000**

Tonnes of CO<sub>2</sub> emissions displaced annually



### Hywind Scotland, UK (30 MW)

Hywind is one of Masdar's iconic investments in the UK renewable energy sector and the world's first commercial scale floating offshore wind farm, located 30 km off the coast of Peterhead, Scotland. Hywind was jointly developed by Equinor (75%) and Masdar (25%) and provides electricity for approximately 22,000 homes.



**30 km**

Located off the coast of Peterhead



**22,000**

Homes powered



### Krnovo, Montenegro (72 MW)

The Krnovo Wind Farm is Masdar's first investment in Montenegro's renewable energy sector. The 72 MW onshore wind farm is Montenegro's first wind farm and one of the largest in the region. Masdar acquired 49% of Krnovo Green Energy, the owner and developer of the Krnovo wind farm. The farm supplies around 45,000 households with electricity and displaces an estimated 80,000 tonnes of carbon emissions annually.



**45,000**  
Homes powered



**80,000**  
Tonnes of CO<sub>2</sub> emissions  
displaced annually



### Rocksprings and Sterling Wind Farms, US (178.9 MW)

In 2019, Masdar acquired John Laing Group plc's interest in two wind farms in the United States, marking the company's first investment in North America. The 149 MW Rocksprings project in Val Verde County, Texas, and the 29.9 MW Sterling project in Lea County, New Mexico, were both commissioned in 2017.



**149 MW**  
Rocksprings project in  
Val Verde County



**29.9 MW**  
Sterling project in  
Lea County



### Čibuk 1, Serbia (158 MW)

The Čibuk 1 Wind Farm in Serbia is the largest utility-scale commercial wind project in Serbia and the Western Balkans. The wind farm has a capacity of 158 MW and was inaugurated in October 2019. The project provides clean, reliable and economically viable electricity to approximately 113,000 Serbian homes, mitigating approximately 370,000 tonnes of CO<sub>2</sub> emissions each year.



**158 MW**  
Total energy production  
capacity



**370,000**  
Tonnes of CO<sub>2</sub> emissions  
displaces each year



### Dhofar, Oman (50 MW)

Masdar has delivered the first large-scale wind farm in the Gulf region. The 50 MW project is located in Dhofar Governorate, in the Sultanate of Oman. Funding for the wind farm is provided by the Abu Dhabi Fund for Development (ADFD). The project includes 13 GE 3.8 MW wind turbines and powers approximately 16,000 homes and displaces approximately 110,000 tonnes of CO<sub>2</sub> annually.



**110,000**  
Tonnes of CO<sub>2</sub> emissions  
displaced annually



**16,000**  
Homes powered





### Baynouna, Jordan (200 MW)

Located east of Amman, Baynouna is the largest single solar energy project in Jordan. The project constitutes 4 percent of the installed capacity in Jordan, supplying the annual energy needs of 160,000 homes and displacing 360,000 tonnes of CO<sub>2</sub> emissions each year.



**160,000**  
Homes powered



**360,000**  
Tonnes of CO<sub>2</sub> emissions  
displaced each year

### UNDER DEVELOPMENT



### Cirata, Indonesia (145 MW)

The 145-MW Cirata Floating Photovoltaic Power Plant will be Masdar's first floating solar PV project and its first renewable energy project in the Southeast Asian market. Masdar is developing the plant with PT Pembangkitan Jawa-Bali Investasi (PT PJBI), a subsidiary of PLN. The plant, set to be the largest of its kind in Southeast Asia and one of the largest in the world, will provide enough electricity to power 50,000 homes will offset 214,000 tonnes of carbon dioxide emissions, and create up to 800 jobs.



**50,000**  
Homes to be powered



**800**  
Jobs to be created



### Garadagh, Azerbaijan (230 MW)

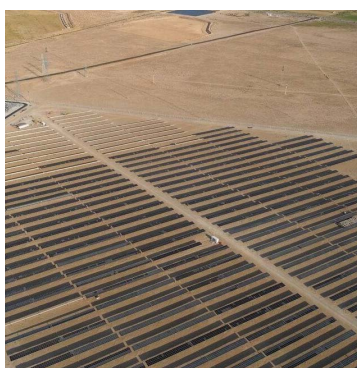
The Garadagh Solar Photovoltaic Power Plant is the country's first foreign investment-based independent utility scale solar project structured as a public-private partnership. Located nine kilometers northwest of the Alat settlement in the Republic of Azerbaijan, the plant will generate half a billion kilowatt-hours of electricity annually, enough to meet the needs of more than 110,000 homes and reduce emissions by 200,000 tonnes a year.



**110,000**  
Homes to be powered



**200,000**  
Tonnes of CO<sub>2</sub> emissions to  
be displaced annually



### Nur Navoi, Uzbekistan (100 MW)

The Nur Navoi Solar Plant is the first Masdar project in Uzbekistan, with the company having committed to a number of other solar and wind projects in the Central Asian country. Once fully operational, the plant, which is Uzbekistan's first utility-scale solar project, will produce enough power for 31,000 households and displace around 150,000 tonnes of CO<sub>2</sub> each year.



**31,000**  
Homes to be powered



**150,000**  
Tonnes of CO<sub>2</sub> emissions  
to be displaced annually





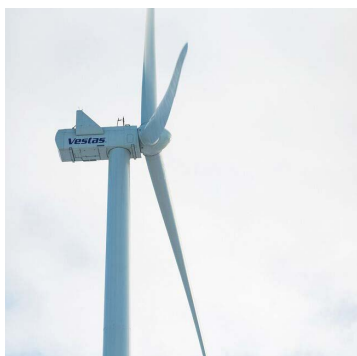
### South Jeddah Noor, Saudi Arabia (300 MW)

A consortium led by Masdar with EDF Renewables and Nesma Company as partners is developing the 300 MW South Jeddah Noor Photovoltaic Plant. The plant will utilize the latest technology, combining bifacial PV modules with mounting structures that use single-axis tracking technology to maximize energy generation by following the sun's position throughout the day.



**300 MW**

Total energy  
production capacity



### Dumat Al Jandal, Saudi Arabia (400 MW)

A consortium consisting of Masdar and EDF Renewables announced in 2019 that it had won the tender for the Dumat Al Jandal Wind Farm in Saudi Arabia. With an installed capacity of 400 MW, it will be Saudi Arabia's first wind farm and the largest in the Middle East. The project is expected to displace approximately one 1 million tonnes of carbon dioxide annually.



**400 MW**

Total energy  
production capacity



**1 million**

Tonnes of CO<sub>2</sub> emissions  
to be displaced annually



### East Rockingham Waste to Energy Project, Australia (29 MW)

In January 2020, Masdar made its first investment in Australia after acquiring a stake in the East Rockingham Waste to Energy. When completed, the facility will process 300,000 tonnes waste and up to 30,000 tonnes of biosolids per annum, producing around 29 MW of renewable energy, enough to power 36,000 homes.



**330,000**

Tonnes waste to be  
processed annually



**36,000**

Homes to be powered

## ENERGY SERVICES

The Energy Services department within the Clean Energy Business Unit offers full turn-key supply and demand side energy management solutions to clients through energy performance contracting (ESCO) and O&M services. The team has a proven track record in small- to medium-scale client funded renewable energy projects delivery in remote, complex and challenging geographical locations. Numerous building energy audits have also been completed, which identified up to 40,000 MWh per year worth of energy savings.

## OPERATIONAL



### Afghanistan

Masdar has installed 600 solar home systems in 27 villages in Helmand Province in southern Afghanistan. Completed in September 2013, the project is improving the lives of more than 3,000 people without access to electricity.



**600**

Solar home systems  
installed



**3,000**

Lives improved



### Sheikh Zayed Solar Power Plant, Mauritania (15 MW)

Masdar's 15 MW PV power plant in Nouakchott was the largest solar power installation in Africa at the time of its completion. The project was the first utility-scale solar power installation in the Islamic Republic of Mauritania, accounting for 10% of Mauritania's grid capacity.



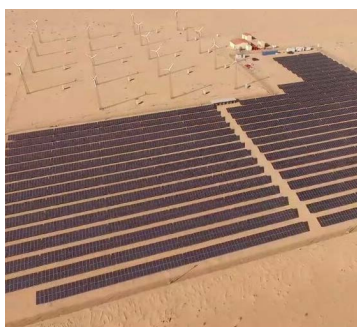
**15 MW**

Total energy  
production capacity



**10%**

Grid capacity of  
Mauritania met



### Distributed Solar PV projects in Mauritania (16.6 MW)

Eight rural solar energy projects, with a capacity of 16.6 MW, were completed in November 2016, nearly doubling the UAE's total contribution to Mauritania's clean energy capacity. The projects supply clean power to remote communities, meeting 30% of their demand on average.



**16.6 MW**

Total energy  
production capacity



**30%**

Of remote community  
demand met



### Port Victoria Wind Power Project, the Republic of Seychelles (6 MW)

The Port Victoria Wind Power Project, a 6 MW onshore wind farm in the Republic of Seychelles, is the country's first large-scale renewable energy project. It accounts for more than 8% of the grid capacity on the archipelago's main island of Mahé, where 90% of the country's residents live.



**8%**

Of island grid  
capacity met



**6 MW**

Total energy  
production capacity



### Bab Al Shams (1.2 MW)

Located in the Bab Al Shams area of Dubai, the project is a 1.2 MW PV plant connected to the DEWA grid. It provides electricity to a large farm that is growing animal fodder. The plant is located in the desert and equipped with automatic cleaning robots to clear the dust from the PV modules and assure continual high energy production.



**1.2 MW**

Total energy  
production capacity



### Solar Home Systems in Morocco

Masdar installed 19,438 solar home systems across 1,000 villages through a partnership agreement with Morocco's Office National de l'Electricité et de l'Eau Potable (ONEE). Each system contains two solar panels with a total capacity of 290 watts and two batteries with storage capacity of up to three days.



**19,438**

Solar home systems  
installed



**1,000**

Villages benefited  
through program



### Ile de Romainville Solar Park, the Republic of Seychelles (5 MW)

The Ile de Romainville Solar Park is a 5 MW solar photovoltaic (PV) power plant with battery storage in the Republic of Seychelles. The project includes an energy storage system with a capacity of 5 MW and 3.3 megawatt-hours (MWh), allowing for the safe and stable supply of electricity from the PV power plant to the main island of Mahé and further increasing the resilience of the national grid of the Seychelles. The project was financed by Abu Dhabi Fund for Development (ADFD), and was developed by Masdar and the Seychelles' Public Utilities Corporation (PUC).



**5 MW**

Solar photovoltaic (PV) power  
plant with battery storage



**3.3 MWh**

Capacity allowing for the  
safe and stable supply of  
electricity

## Masdar Solar Program in Egypt

Masdar has delivered 30 MW of utility-scale clean energy projects and 7,000 solar home systems in remote and strategically important areas across Egypt. The projects are part of a UAE-funded grant program for rural electrification in Egypt, carried out in partnership with Egypt's New and Renewable Energy Authority.



### Siwa Solar PV Plant (10 MW)

Masdar's 10 MW solar PV power plant in Siwa was the largest solar power installation in Egypt at the time of its completion in March 2015. The project is the first utility-scale solar power installation in the country and accounts for 30% of the grid capacity of Siwa City and its neighbouring areas.



**10 MW**

Total energy  
production capacity



**30%**

Grid capacity of  
area met



### Red Sea Solar Power Plants (14 MW)

Built in the Red Sea cities of Marsa Alam (6 MW), Shalateen (5 MW), Abu Ramad (2 MW), and Halayeb (1 MW), the four PV plants in Egypt's Red Sea Governorate have a total capacity of 14 MW and provide reliable energy supply to support the area's vital tourism sector.



**14 MW**

Total energy  
production capacity



### Al Wadi Al Jadeed Solar PV Plants (6 MW)

Masdar built three solar power plants in the Governorate of Al Wadi Al Jadeed, the largest and most sparsely inhabited region in Egypt. The plants have been developed in the cities of Al Farafra (5 MW), Abu Minqar (0.5 MW) and Darb Al Arbaeen (0.5 MW). They provide electricity for over 4,800 homes, displacing over 8,700 tonnes of CO<sub>2</sub> emissions and reducing the diesel consumption of existing power plants by over 40%.



**4,800**

Homes powered



**8,700**

Tonnes of CO<sub>2</sub> emissions  
displaced



### 7,000 Solar Home Systems

Masdar has provided 7,000 standalone solar home systems (SHS) to homes and public/community buildings in remote areas in six Egyptian governorates without access to the national electricity grid. Each SHS consists of two solar panels, two batteries, charge controllers, energy saving light bulbs, cables, switches, and a mounting structure.



**7,000**

Solar home systems  
installed



## UAE-Pacific Partnership Fund projects

The UAE-Pacific Partnership Fund (UAE-PPF) is a US\$50 million initiative led by the Masdar Energy Services unit. The fund delivers grant-funded renewable energy projects across 11 Pacific Island nations. All projects are delivered by Masdar in cooperation with each nation's government, with grant funding provided by the Abu Dhabi Fund for Development (ADFD).



### Cycle 1

#### Kiribati: 500 kW Solar PV & Water Protection

The UAE-PPF project is helping to meet the needs of 17% of Kiribati's population who live off-grid. The 500 kW solar PV plant is also protecting an endangered freshwater aquifer by restricting access and limiting contamination. The project also features a state-of-the-art control system.



**17%**

Of Kiribati energy needs met



**500 kW**

Total energy production capacity



#### Fiji: LaKaRo 525 kW Solar PV

The 525 kW solar photovoltaic system installed on three of Fiji's outer islands (Kadevu, Kalekba, and Rotuma) provide residents with round-the-clock energy access, where they previously only had power 12-18 hours a day.



**525 kW**

Total energy production capacity



#### Samoa: 550 kW Cyclone-Proof Wind Farm

Samoa depends on imported diesel to meet 70% of its energy demand. This UAE-PPF project is the first wind farm in the country and is designed as a cyclone-proof facility with two 55 meter tall turbines that pivot at the base, enabling them to be lowered and locked in place in less than one hour.



**550 kW**

Total energy production capacity



**55 meter**

Tall turbines



#### Tonga: Vava'u 512 kW Solar PV

Masdar has helped reduce fuel consumption on the Tongan island of Vava'u by installing a 512 kW solar PV plant along with advanced control systems. These systems ensure a maximum of 70% of the solar energy is efficiently fed into the grid at peak hours, while any surplus is stored in a battery bank for later use.



**512 kW**

Total energy production capacity



#### Tuvalu: 500 kW Rooftop Solar PV

Built on a 4 meter high structure, the UAE-PPF project in Tuvalu creates shaded public space while feeding clean energy into the grid. 500 kW of energy capacity is distributed across three roofs and three structures.



**500 kW**

Total energy  
production capacity



#### Vanuatu: Port Vila 767 kW Solar PV

Only 27% of people in Port Vila, Vanuatu, have access to electricity. Masdar installed three solar PV plants to help increase the country's share of renewable energy in the energy mix in addition to providing shading for 112 parking spaces at the country's key civic areas.



**767 kW**

Total energy  
production capacity



### Cycle 2

#### Solomon Islands: 1 MW Solar PV Plant in Honiara

The Republic of the Solomon Islands consists of over 1,000 islands inhabited by a total population of 609,883. Approximately 90% of the electricity produced is diesel generated. The 1 MW plant, which was expanded from 600 kW following a grant from the New Zealand Ministry of Foreign Affairs and Trade, bolsters energy resilience and reduces costs associated with diesel imports.



**1 MW**

Total energy  
production capacity



#### Marshall Islands: 600 kW Solar Water Collection in Majuro

The Republic of the Marshall Islands is made up of 29 low-lying atolls and five elevated islands inhabited by 71,000 citizens. The nation is dependent on diesel for more than 90% of its electricity. Masdar built a 600 kW PV plant in Majuro on an existing water reservoir to power the grid and increase water yield of the reservoir through increased run-off.



**600 kW**

Total energy  
production capacity



### The Republic of Nauru: 500 kW Nauru Solar

The Republic of Nauru is an island of just 21 square kilometers with more than 9,500 citizens who are highly dependent on imported fossil fuels for transport and power generation. The 500 kW solar PV plant bolsters energy resilience by contributing electricity to the national grid.



**500 kW**

Total energy  
production capacity



### Palau: 420 kW Solar Penetration and Water Access

The three projects in Palau consist of a 100 kW PV / 150 kW low-load diesel hybrid generation plant on Peleliu, a 100 kW PV / 100 kW diesel hybrid plant on Angaur, which powers a water treatment facility capable of supplying 50 cubic meters of clean water per day, and 100 1.7 kW solar home systems on the island of Koror provided through a subsidy loan program by the National Development Bank of Palau.



**100**

Solar home  
systems



**420 kW**

Total energy  
production capacity



### Pohnpei, Federated States of Micronesia (FSM): 600 kW Solar PV

The Pohnpei Island State is one of the four main groups of islands in FSM. The 600 kW solar plant, the largest PV project in FSM, supplies up to 10% of the peak demand of Pohnpei's 34,000 residents.



**600 kW**

Solar plant, the largest PV  
project in FSM



**10%**

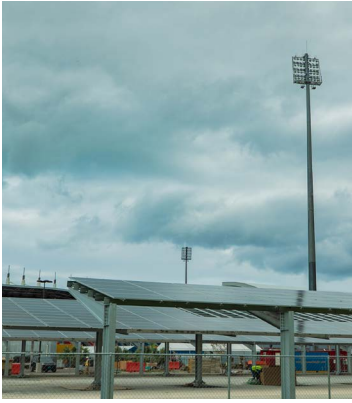
Peak demand of Pohnpei  
residents met

## UAE-Caribbean Renewable Energy Fund

The UAE-Caribbean Renewable Energy Fund (UAE-CREF) is a US\$50 million initiative that aims to deliver renewable energy projects across 16 Caribbean Island nations to help reduce reliance on fossil-fuel imports, increase energy access, and enhance climate change resilience. The fund is a partnership between the UAE Ministry of Foreign Affairs and Cooperation, Abu Dhabi Fund for Development, and Masdar. Project details for all are below:



## Cycle 1



### **Bahamas: Thomas A. Robinson National Stadium 925 kW Solar PV Carport Power Plant**

The 925-kilowatt (kW) solar photovoltaic (PV) plant at the national stadium, which also serves as a carport with 342 parking spaces including 4 spots for families and 2 spots with fast charging electric vehicle (EV) charging stations, is the country's first large-scale solar energy project. Developed in partnership with the Bahamas Ministry of Environment and Housing, it sets a regulatory precedent for new renewable energy plants to feed into the grid.



**925 kW**

Total energy production capacity



**342**

Parking spaces provided, including spots for families



### **Barbados: Bridgetown 350 kW Solar PV Carport Power Plant & Bowmanston 500 kW Solar PV Power Plant**

This project has two elements: a 350 kW solar PV carport with 124 parking spaces, which include six level 2 EV charging stations, and a 500 kW ground-mounted PV plant. Both projects were developed in partnership with the Barbados Water Authority and are built on sites operated by the authority. The project supports BWA operations at their water treatment plant and the water pumping station.



**350 kW**

Solar PV carport with 124 parking spaces



**500 kW**

Ground-mounted PV plant



### **Saint Vincent & the Grenadines: Union Island 600 kW Solar PV Battery Hybrid Power Plant**

Developed in partnership with St Vincent Electricity Services Limited (VINLEC), the project sets a strong precedent for using renewable energy to drive down energy costs on outer islands. Located on Union Island, the 600 kW solar PV plant and 637 kilowatt-hour (kWh) lithium-ion battery project supplies all of the island's daytime power needs, and represents Masdar's first fully implemented grid-connected battery energy storage system.



**600 kW**

Solar PV plant



**637 kWh**

Lithium-ion battery project



## Cycle 2



### Antigua and Barbuda: 720 kW Solar PV Battery Hybrid Green Barbuda Project

With support from the Government of Antigua and Barbuda, the CARICOM Development Fund, and the New Zealand Ministry of Foreign Affairs and Trade, Green Barbuda was designed to be a climate-resistant hybrid diesel and solar plant. The project includes an 800-kilowatt diesel power station, 720 kilowatt-peak of solar PV panels, and a 863-kilowatt-hour (kWh) battery, to reliably produce and store electricity. The energy produced from this plant will save Barbuda 406,000 liters of diesel and offset 1,055,600 kg of carbon emissions.



**800 kW**

Diesel power station



**800 kW**

Solar PV panels



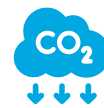
### Belize: 400 kW Solar PV Battery Hybrid Belize Rural Electrification Project

With 400 kW of solar photovoltaic panels, 600 kWh of battery storage, and 184 kW backup diesel generation, the system will mainly be powered by solar energy, with a standby diesel generator to provide power during the wet season. Powering homes, schools, clinics, water pumping facilities and tourist operations, the climate-resistant project will transform lives in Belize's native Mayan villages of Indian Creek, Golden Stream and Medina Bank, through improved energy independence and resilience. The plant will save Belize almost 200,000 liters of diesel fuel and avoid around 500 tonnes of CO<sub>2</sub> emissions yearly.



**200,000**

Liters of diesel fuel  
to be saved



**500**

Tonnes of CO<sub>2</sub> emissions  
displaced annually



## RENEWABLE ENERGY WATER DESALINATION PROGRAM

In 2013, Masdar launched a renewable energy desalination pilot program to research and develop energy-efficient, cost-competitive desalination technologies that are suitable to be powered by renewable energy. The project was officially inaugurated during UAE Innovation Week in November, 2015.

The commercial partners – Abengoa, Suez, Veolia and Trevi Systems – each developed and operated a next-generation pilot seawater desalination plant. The four plants tested a range of innovative approaches to boost operational efficiency of reverse osmosis, a technique where salt water is purified through membranes. A fifth pilot was installed in October 2016 by Mascara Renewable Water, a unique off-grid solar powered solution without batteries, ideally suited for remote locations.

A Masdar report published at Abu Dhabi Sustainability Week 2018 on the results of the program found that the solutions are up to 75% more energy efficient than the thermal desalination technologies currently used in the UAE, delivering annual energy savings of as much as US\$550 million.

The desalination project was sponsored by the Abu Dhabi Government, with co-funding provided by the industry partners. Masdar was leading the project management and coordinated the program with key Abu Dhabi stakeholders.

- Developing a gross capacity of more than 20 GW of renewable energy projects worldwide, either in operation or under development
- Investing in renewable energy projects valued at more than US\$30 billion globally



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- United Arab Emirates - Middle East

ABU DHABI

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