

# MASDAR GREEN FINANCE REPORT

Allocation and Impact 2024



# CONTENTS

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<b>1.0</b>	Introduction	<b>03</b>
<b>2.0</b>	Masdar's Contribution to the SDGs Through Sustainable Finance	<b>05</b>
<b>3.0</b>	2024 Highlights	<b>07</b>
<b>4.0</b>	Green Finance Instruments	<b>08</b>
<b>5.0</b>	Green Bond Allocation Summary	<b>09</b>
<b>6.0</b>	Sustainability Impact of Projects	<b>11</b>
<b>7.0</b>	Overview of Projects With Green Finance Allocations	<b>14</b>
<b>8.0</b>	Assurance Report	<b>22</b>

## **Assurance Approach**

Abu Dhabi Future Energy Company PJSC – Masdar appointed Ernst & Young LLP (EY) to provide independent assurance over certain sustainability metrics, indicated with an (\*) in this report. The assurance engagement was planned and performed in accordance with the International Standard on Assurance Engagements (UK) 3000 (July 2020), Assurance Engagements Other than Audits or Reviews of Historical Financial Information. An assurance report was issued and is included within this consolidated report which includes further details on the scope, respective responsibilities, work performed, limitations and conclusion.

# 1.0

## INTRODUCTION



### **Masdar: Advancing the global clean energy sector**

Abu Dhabi Future Energy Company PJSC – Masdar is a global clean energy leader, placing the United Arab Emirates (UAE) at the forefront of global energy transformation.

With 51GW of clean energy capacity and a 2030 target of 100GW, Masdar has a clear mandate to advance renewable energy projects across priority markets and technologies.

Masdar's expanding portfolio, pioneering projects, and recent major capacity additions in high-growth markets position it as a key player in scaling global renewable energy solutions. Masdar unites the UAE's three energy champions, Mubadala, ADNOC and TAQA, and utilizes their combined expertise to fulfill its purpose as a global clean energy leader across renewables and green hydrogen.



Masdar’s ambitions are built upon a commitment to sustainability and upholding the highest environment, social and governance (ESG) standards, which are woven into everything the company does as it targets clean energy objectives on a global scale. Ultimately, central to Masdar’s mission is to ensure it has a positive impact on the environment and support all communities in reducing their carbon footprint.

Masdar is delighted to present its 2024 Green Finance Allocation and Impact Report, which aims to provide transparency regarding the deployment of green finance instruments and the projects they have supported.



### Allocation Highlights from Green Bond Issuances in 2023 and 2024

For every US\$1 million invested in Masdar green bonds, approximately 3,726 tonnes of CO<sub>2</sub> equivalent are avoided annually.

Technology	Green Category	Contracted Project Capacity (MW)	Total Green Bond Proceeds Allocated as of 31 December 2024 U.S \$
Energy Storage	Energy Efficiency	484	106,622,957
Offshore Wind	Renewable Energy	476	184,848,325
Solar <sup>1</sup>		8,238	1,133,397,522
Onshore Wind		650	260,877,165
Grand Total		9,848	*1,685,745,969

(\*) Within scope of EY Assurance. Refer to the front page and to section 8 of this report for more information.  
 1. Solar category includes solar PV projects with co-located Battery Energy Storage Systems

# 2.0

## Masdar's Contribution to the SDGs through Sustainable Finance

As a prominent player in renewable energy and clean technology, Masdar is committed to leveraging its resources and innovative capabilities to contribute to the achievement of the United Nations Sustainable Development Goals ("UN SDGs"), and makes a significant contribution across multiple SDGs through its core operations and strategic platforms. This is especially important in how Masdar chooses its investments. Since 2006, Masdar has built a balanced and resilient portfolio that has delivered long-term value and strong operational results, while prioritizing positive environmental and social impact. Masdar's Green Finance Framework aims to contribute to the UN SDG 7 (Affordable and Clean Energy) and 13 (Climate Action) in particular.

### Affordable and Clean Energy



Masdar is targeting a global renewable energy portfolio capacity of 100GW by 2030, and in a two-year period, Masdar significantly increased its overall capacity by 150%, reaching 51GW at the end of 2024, from 20GW in 2022. In addition, Masdar aims to be a leading producer of green hydrogen by 2030.

### Climate Action



Masdar's projects have a direct and tangible impact in global climate action, with its operational projects avoiding approximately 15.5 million tonnes of carbon dioxide emissions in 2024.

### Masdar's approach to managing environmental and social issues

Masdar acts on its sustainability vision and mission by implementing key policies that prioritize positive environmental impact and embed sustainable practices at the core of the business. All employees are trained in the right policies and procedures to ensure that every step is taken in the right direction. These policies include:

<b>Environmental and Social Impact Assessment</b>	<p>All projects are subject to an environmental and social impact assessment. This includes biodiversity studies and mitigation plans to demonstrate no net loss of natural habitat and species, and livelihood restoration studies to ensure that local communities benefit from projects. To promote transparency and participation, the Environmental and Social Impact Assessments of projects are consulted with local communities and disclosed online.</p>
<b>Health, Safety, Environment and Quality</b>	<p>Corporate Quality, Health, Safety and Environment ("QHSE") and Occupational Safety and Health ("OSH") management systems, which reference achieving no damage to the environment and no risk for stakeholders. Masdar is also certified for the ISO 45001:2018 Management system. The company's policies and procedures are in line with this.</p>
<b>Supply Chain &amp; Procurement</b>	<p>Masdar has a sustainable procurement policy, which is followed by the procurement committees, tender committee and bid opening committee. The company requires all suppliers to disclose information on their sustainability performance. When sourcing photovoltaic modules for its projects, Masdar undertakes to ensure there is no forced labor in the supply chain and ensures compliance with Internationally recognized environmental and social standards (including the International Labor Organization conventions).<sup>1</sup></p>
<b>Non-discrimination</b>	<p>Masdar has zero tolerance towards discrimination, violence, abuse and sexual harassment. Its equal pay policy advocates that the salary of each employee is directly driven by the job evaluation and grading scale.</p>

1. More details about actions and Supply Chain policies can be found in Masdar's Sustainability Report 2023

# 3.0

## Highlights of 2024

### Significant Milestones Achieved in Global Expansion

In 2024, Masdar made significant progress towards meeting its ambitious target of 100GW of renewable energy capacity by 2030. Masdar deployed close to US\$8 billion in equity investments and secured US\$6 billion in non-recourse financing in 2024 to develop 11GW of clean energy across 12 projects in 9 countries. These accomplishments reflect Masdar's commitment to expanding its renewable energy portfolio through a balanced growth strategy that combines strategic acquisitions and project development. Masdar's growth was advanced by landmark acquisitions in Greece, Spain and the United States, strengthening the company's presence in Europe and North America, as well as breaking ground on seven major projects worldwide. These included two BESS projects in the UK, two solar projects in Azerbaijan with a combined capacity of 760MW, and the 1.5GW Al Ajban Solar Project in the UAE.

### Fitch Credit Rating Upgrade and Sustainable Fitch ESG Entity Rating

Fitch Ratings upgraded Masdar's credit rating by one notch to 'AA-', with a stable outlook, recognizing the company's financial strength and the support from its shareholders, which made significant contributions to fund Masdar's growth ambitions. Leading ESG rating provider Sustainable Fitch assigned Masdar with an entity rating of 2 and entity score of 71/100, recognizing the company's strong ESG performance and the pure-player nature of its business model.

ESG ratings indicate an entity's performance, commitment, and integration of environmental and social considerations into its business, strategy and management, and the effectiveness of governance. The ratings are provided on a scale of 1 to 5, with 1 being the highest.

### US\$1 billion Green Bond Issuance; 2023 Debut Green Bond Recognition

In July 2024, Masdar successfully raised US\$1 billion in a dual-tranche 5-year and 10-year green bond issuance under the Green Finance Framework, following the company's inaugural green bond issuance of US\$750 million in 2023. The issuance attracted strong appetite from regional and international investors, with the orderbook peaking at US\$4.6 billion, an oversubscription of 4.6x. Allocation was finalized with an average split of 70% to international investors and 30% to MENA investors. In line with Masdar's corporate credit ratings, this second issuance was rated AA- by Fitch and A2 by Moody's. Masdar's inaugural green bonds issued in 2023 and 2024 have won the Global Banking & Markets "ESG Bond Deal of the Year" award for two consecutive years, reflecting the confidence and trust that global fixed-income investors have placed in Masdar as a driver of global energy transformation.

### Continued Investments in Biodiversity Protection

Masdar is committed to protecting the rich biodiversity of the environments it operates in, focusing on minimizing the impact of projects and mitigating potential harm. In 2024, Masdar updated its biodiversity policy and strategy, allowing the company to identify areas of improvement and set further key performance indicators (KPIs) to track its progress.

All projects undergo biodiversity risk assessments, and if negative impacts are identified, Masdar works with experts and stakeholders to develop effective and achievable mitigations to achieve No Net Loss (NNL) or Net Gain (NG) outcomes for the affected species or habitats.

Masdar enhanced its site-screening system to avoid areas with high biodiversity risk, and implemented Automated Shutdown on Demand

(ASD) technology to reduce collision risk for birds of prey at its Zarafshan Wind Power Project in Azerbaijan. The IdentiFlight system uses artificial intelligence and optical technology to detect flying birds, identify species, predict flight paths and automatically shut down wind turbines when there is a collision risk. This is the first deployment of this state-of-the-art technology in Asia.

## 4.0 Green Finance Instruments

### Overview of Masdar's outstanding Green Bonds (as of 31 December 2024)

All Masdar issuances in the loan and debt capital markets are guided by its Green Finance Framework<sup>1</sup>, in line with best practices in the sustainable finance industry, and every dollar raised through green bond issuances is used to finance the development of new greenfield projects.

Issuance Date	ISIN	Bond type	Face Value (U.S.\$)	Coupon	Maturity Date	Proceeds Allocated as of 31 December 2024 (U.S.\$)	Proceeds not yet allocated as of 31 December 2024 (U.S.\$)	% Green Bond Proceeds Allocated
25 July 2023	XS2651619285	Senior	750,000,000	4.875 %	25 July 2023	750,000,000	-	100%
18 July 2024	XS2865538776	Senior	500,000,000	4.875 %	25 July 2029	467,872,984	32,127,016	94%
18 July 2024	XS2856902189	Senior	500,000,000	5.25 %	25 July 2034	467,872,984	32,127,016	94%
	<b>Total Outstanding Green Bonds</b>		<b>1,750,000,000</b>		<b>Total</b>	<b>*1,685,745,969</b>	<b>64,254,031</b>	<b>-</b>

[\*] Within scope of EY Assurance. Refer to the front page and to section 8 of this report for more information.

1. [https://masdar.ae/-/media/corporate-revamp/downloads/investors/2025/masdar\\_green-finance\\_2025\\_march21.pdf](https://masdar.ae/-/media/corporate-revamp/downloads/investors/2025/masdar_green-finance_2025_march21.pdf)



# 5.0

## Green Bond Allocation Summary

The tables below display eligible projects in Masdar's Green Finance Register, as of December 31, 2024, arranged by technology. Case studies for selected projects can be found in Section 7. Net proceeds from Masdar's green finance instruments have been used exclusively to finance the development of new green projects.

### Solar PV

Project Name	Project Location	2023 10Y Bond Issuance Allocated Amount	2024 5Y Bond Issuance Allocated Amount	2024 10Y Bond Issuance Allocated Amount	*Total Allocated Amount
Jizzakh PV	Uzbekistan	77,635,163	-	-	77,635,163
Samarkand PV	Uzbekistan	75,513,521	-	-	75,513,521
Sherabad PV	Uzbekistan	182,077,417	-	-	182,077,417
Garadagh / Area 60 PV	Azerbaijan	153,653,349	-	-	153,653,349
DEWA 6 PV	UAE	97,464, 519	52,391,141	52,391,141	202,246,801
Bukhara PV + BESS	Uzbekistan	9,036,000	30,905,576	30,905,576	70,847,151
Amaala Utilities PV + BESS	KSA	-	59,842,902	59,842,902	119,685,804
Al Henikayah PV	KSA	-	59,598,273	59,598,273	119,196,546
Al Dhafra PV	UAE	-	18,965,041	18,965,041	37,930,081
Al Ajban PV	UAE	-	47,305,844	47,305,844	94,611,688
<b>Total</b>		<b>595,379,969</b>	<b>269,008,776</b>	<b>269,008,776</b>	<b>1,133,397,522</b>

### Onshore & Offshore Wind

Project Name	Project Location	2023 10Y Bond Issuance Allocated Amount	2024 5Y Bond Issuance Allocated Amount	2024 10Y Bond Issuance Allocated Amount	*Total Allocated Amount
Zarafshan Wind	Uzbekistan	154,620,031	36,424,338	36,424,338	227,468,706
Baltic Eagle Offshore Wind Farm	Germany	-	92,424,162	92,424,162	184,848,325
Čibuk 2	Serbia	-	16,704,229	16,704,229	33,408,459
<b>Total</b>	<b>-</b>	<b>154,620,031</b>	<b>145,552,729</b>	<b>145,552,729</b>	<b>445,725,490</b>

(\*) Within scope of EY Assurance. Refer to the front page and to section 8 of this report for more information.

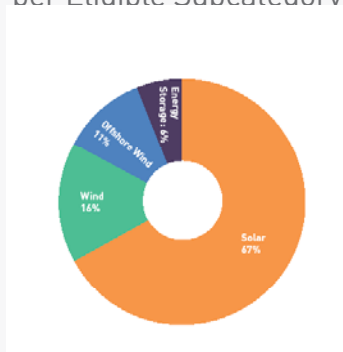
## Battery Energy Storage Systems

Energy Storage Systems serve as storage and distribution systems for energy generated by sources such as renewables. As the penetration of renewable energy in the grid increases, grid-level energy storage will become more and more important. Storage solutions provide the flexibility that transmission systems need to accommodate the variability of the wind and the sun. Masdar is playing a leading role in developing storage solutions as part of its commitment to commercialize advanced clean technologies.

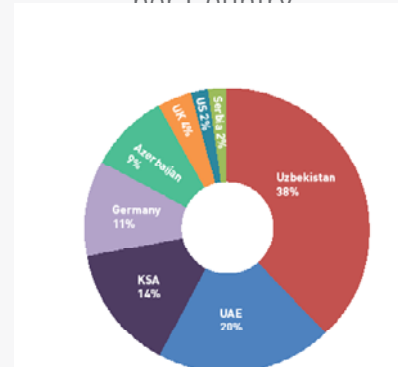
Project Name	Project Location	2023 10Y Bond Issuance Allocated Amount	2024 5Y Bond Issuance Allocated Amount	2024 10Y Bond Issuance Allocated Amount	*Total Allocated Amount
Terra Gen - Beaumont	US	-	11,011,183	11,011,183	22,022,366
Terra Gen - Sagebrush B	US	-	6,492,600	6,492,600	12,985,200
Terra Gen - Canyon County	US	-	1,116,241	1,116,241	2,232,481
Arlington - Welkin Road	UK	-	8,706,498	8,706,498	17,412,995
Arlington - Royle Barn	UK	-	11,147,274	11,147,274	22,294,547
Arlington - Ipswich Road	UK	-	10,394,313	10,394,313	20,788,626
Arlington - Calow Green	UK	-	4,443,371	4,443,371	8,886,741
<b>Total</b>	<b>-</b>	<b>-</b>	<b>53,311,479</b>	<b>53,311,479</b>	<b>106,622,957</b>

## Green Bond Allocation Pie Charts

Share of Green Bonds Proceeds Allocated per Eligible Subcategory



Share of Green Bonds Proceeds Allocated per Country



[\*] Within scope of EY Assurance. Refer to the front page and to section 8 of this report for more information.

# 6.0

## Sustainability Impact of Projects

For every US\$1 million invested in Masdar green bonds, approximately 3,726 tonnes of CO<sub>2</sub> equivalent are avoided annually.

Issuance Date	ISIN	Face Value (U.S.\$)	Maturity Date	Avoided emissions attributed to Masdar green bonds (tCO <sub>2</sub> /year) <sup>(6)</sup>
25 July 2023	XS2651619285	750,000,000	25 July 2023	2,509,634
18 July 2024	XS2865538776	500,000,000	25 July 2029	1,885,325
18 July 2024	XS2856902189	500,000,000	25 July 2034	1,885,325
<b>Total Outstanding Green Bonds</b>		<b>1,750,000,000</b>	<b>Total</b>	<b>*6,280,283</b>

### Solar PV

Project Name	Masdar Ownership Percentage	Share of green bond proceeds as a percentage of Masdar's total equity commitment	Contracted Project Capacity (MW) <sup>(1)</sup>	*Nominal Project Capacity (MW) <sup>(2)</sup>	Start of Operation	*Annual project energy generation (GWh) <sup>(3)</sup>	Intermittent Energy Emission factor (gCO <sub>2</sub> /kWh) <sup>(4)</sup>	Total project avoided emissions (tCO <sub>2</sub> /year)	*Avoided emissions attributed to Masdar green bonds (tCO <sub>2</sub> /year) <sup>(6)</sup>
Jizzakh PV	100%	100%	220	221	2025	577	558	321,966	321,966
Samarkand PV	100%	100%	220	221	2025	562	558	313,596	313,596
Sherabad PV	100%	100%	457	497	2026	1,078	558	601,524	601,524
Garadagh / Area 60 PV	100%	96%	230	230	2023	568	478	271,504	271,504
DEWA 6 PV	40%	40%	1,800	1,800	Phase A: 2025 Phase B: 2025 Phase C: 2027	1,877 1,221 2,390	464	2,546,432	980,967
Bukhara PV + BESS	100%	100%	250 [+63]	250	2025	623	558	347,634 <sup>(5)</sup>	347,634
Amaala Utilities PV + BESS	43%	100%	250 [+147.5]	248	2025	503	510	256,306 <sup>(5)</sup>	110,211
Al Henikayah	40%	100%	1,100	1,100	2026	3,249	510	1,657,046	662,818
Al Dhafra PV	20%	100%	2,000	2,101	2023	4,861	464	2,255,597	451,119
Al Ajban PV	60%	85%	1,500	1,500	2026	4,707	464	2,183,825	1,108,353
<b>Total</b>	<b>-</b>	<b>-</b>	<b>8,027</b>	<b>8,169</b>	<b>-</b>	<b>22,215</b>	<b>-</b>	<b>10,755,430</b>	<b>5,169,693</b>

\* Within scope of EY Assurance. Refer to the front page and to section 8 of this report for more information.

(1) Contracted capacity (or grid limitation capacity if inferior to contracted capacity). Contracted capacity for co-located Battery Energy Storage Systems (BESS) is shown in brackets

(2) Nominal capacity (or grid limitation capacity if inferior to nominal capacity) is provided by third party technical reports

(3) P50 annual generation per ILF yield assessment

(4) Country-specific combined margins for intermittent electricity generation were used as the baseline. Source: Emission factors based on the International Financial Institution ("IFI") Dataset of Default Grid Factors v.3.2 from April 2022 here, created by the IFI Technical Working Group on GHG Accounting. The methodological approach can be found on the UNFCCC's website here.

(5) Avoided emissions for Bukhara and Amaala projects are calculated for the PV plant only to avoid double counting of the BESS project.

(6) For a given project, avoided emissions attributed to Masdar's green bonds is pro-rated according to its share of green bond proceeds as a proportion of the total equity commitment in the project in percentage terms

## Onshore & Offshore Wind

Project Name	Masdar Ownership Percentage	Share of green bond proceeds as a percentage of Masdar's total equity commitment	Contracted Project Capacity (MW) <sup>(1)</sup>	*Nominal Project Capacity (MW) <sup>(2)</sup>	Start of Operation	*Annual project energy generation (GWh) <sup>(3)</sup>	Intermittent Energy Emission factor (gCO <sub>2</sub> /kWh) <sup>(4)</sup>	Total project avoided emissions (tCO <sub>2</sub> /year)	*Avoided emissions attributed to Masdar green bonds (tCO <sub>2</sub> /year) <sup>(5)</sup>
Zarafshan Wind	100%	75%	500	522	2025	1,702	558	949,716	711,989
Baltic Eagle Offshore Wind Farm	49%	46%	476	476	2025	1,867	523	976,441	221,105
Čibuk 2	50%	81%	150	150	Q1 2026	334	933	311,249	126,501
<b>Total</b>	<b>-</b>	<b>-</b>	<b>1,126</b>	<b>1,148</b>	<b>-</b>	<b>3,903</b>	<b>-</b>	<b>2,237,406</b>	<b>1,059,594</b>

\* Within scope of EY Assurance. Refer to the front page and to section 8 of this report for more information.

(1) Contracted capacity (or grid limitation capacity if inferior to contracted capacity)

(2) Nominal capacity (or grid limitation capacity if inferior to nominal capacity) is provided by third party technical reports

(3) P50 annual generation per ILF yield assessment

(4) Country-specific combined margins for intermittent electricity generation were used as the baseline. Source: Emission factors based on the International Financial Institution ("IFI") Dataset of Default Grid Factors v.3.2 from April 2022 here, created by the IFI Technical Working Group on GHG Accounting. The methodological approach can be found on the UNFCCC's website here.

(5) For a given project, avoided emissions attributed to Masdar's green bonds is pro-rated according to its share of green bond proceeds as a proportion of the total equity commitment in the project in percentage terms



## Battery Energy Storage Systems

Project Name	Masdar Ownership Percentage	Share of green bond proceeds as a percentage of Masdar's total equity commitment	Contracted Project Capacity (MW) <sup>(1)</sup>	*Nominal Project Capacity (MW) <sup>(2)</sup>	Start of Operation	*Annual project energy storage (GWh)	Intermittent Energy Emission factor (gCO <sub>2</sub> /kWh) <sup>(3)</sup>	Total project avoided emissions (tCO <sub>2</sub> /year) <sup>(4)</sup>	*Avoided emissions attributed to Masdar green bonds (tCO <sub>2</sub> /year) <sup>(5)</sup>
Terra Gen – Beaumont	50%	29%	100	100	2024	146	352	51,392	7,507
Terra Gen - Sagebrush B	50%	46%	99	99	2024	145	352	50,878	11,645
Terra Gen - Canyon County	50%	6%	80	80	2025	117	352	41,114	1,258
Arlington - Welkin Road	90%	81%	20	20	2025	29	320	9,344	6,827
Arlington - Royle Barn	90%	70%	35	35	2025	51	320	16,352	10,335
Arlington - Ipswich Road	90%	45%	50	50	2027	73	320	23,360	9,403
Arlington - Calow Green	90%	10%	100	100	2027	146	320	46,720	4,020
<b>Total</b>	<b>-</b>	<b>-</b>	<b>484</b>	<b>484</b>	<b>-</b>	<b>707</b>	<b>-</b>	<b>239,160</b>	<b>50,996</b>

\* Within scope of EY Assurance. Refer to the front page and to section 8 of this report for more information.

(1) Contracted capacity (or grid limitation capacity if inferior to contracted capacity)

(2) Nominal capacity (or grid limitation capacity if inferior to nominal capacity) is provided by third party technical reports

(3) Country-specific combined margins for intermittent electricity generation were used as the baseline. Source: Emission factors based on the International Financial Institution ("IFI") Dataset of Default Grid Factors v.3.2 from April 2022 here, created by the IFI Technical Working Group on GHG Accounting. The methodological approach can be found on the UNFCCC's website here.

(4) The calculation for avoided emissions is based on the assumptions that Terra Gen BESS assets have 4 hour capacity and operate 1 cycle per day. Arlington assets operate 2 cycles per day and have a 2 hour capacity.

(5) For a given project, avoided emissions attributed to Masdar's green bonds is pro-rated according to its share of green bond proceeds as a proportion of the total equity commitment in the project in percentage terms

# 7.0

## Overview of Projects with Green Finance Allocations

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### **AMAALA SOLAR PV & BATTERY ENERGY STORAGE SYSTEM**

Location: Al Wajh, Tabuk, Saudi Arabia

Masdar and EDF Group consortium is developing a fully optimized and decarbonized off-grid renewable energy system at AMAALA, a new destination with wellness at its core, nestled along the Red Sea coast of the Kingdom of Saudi Arabia. The system will generate electricity from a 250 MW solar photovoltaic park, 700MWh battery energy storage, transmission and distribution lines, and desalination plant, with a capacity of 37 million litres of drinking water per day and wastewater treatment plants securing the needed baseload around the clock.

The innovative project will avoid the equivalent of nearly 256,306 tons of CO<sub>2</sub> emissions every year compared to average infrastructures of this kind, and it will be a cutting-edge infrastructure project, paving the way for a new era of eco-friendly luxury tourism. The first phase of AMAALA is set to welcome its first guests in 2025. Upon completion, the destination will feature over 4,000 hotel rooms across 30 hotels, and 1,200 high-end residential villas, apartments, and estate homes.

The project will set a global benchmark for integrated renewable energy solutions.



## QUICK FACTS



**250 MW** utility-scale solar PV plant and **147.5 MWh** battery energy storage system



Will mitigate **256,306 tonnes** of carbon dioxide annually



Commercial operation is **expected in 2025**

### Applicable Environmental and Social Mitigation Programmes<sup>^</sup>

- Pre-construction survey to identify sensitive areas and species
- Comply with the Prince Mohammed bin Salman Royal Reserve (PMBSRR) authority requirements for biodiversity and natural ecosystem protection
- The construction timetable is designed to avoid the most sensitive times for local species
- Micro-siting, protective fencing and translocation of local species where appropriate
- Implement pollution control measures including spill kits, dust suppression and enforcement of speed limits
- Store all fuel, oil and chemicals in a designated secure area
- Recycle structures and other materials sent to a suitable disposal site
- Reduce waste to the extent possible and maximise re-use and recycling of materials
- Attenuate noise levels at source to ensure construction noise limits are met
- Apply a comprehensive environmental monitoring and measurement program to ensure compliance with national and international standards
- Apply a robust grievance mechanism to ensure social standards are maintained and workers' rights are protected

<sup>^</sup> The project satisfies both national (Saudi Arabia) and international environmental and social standards

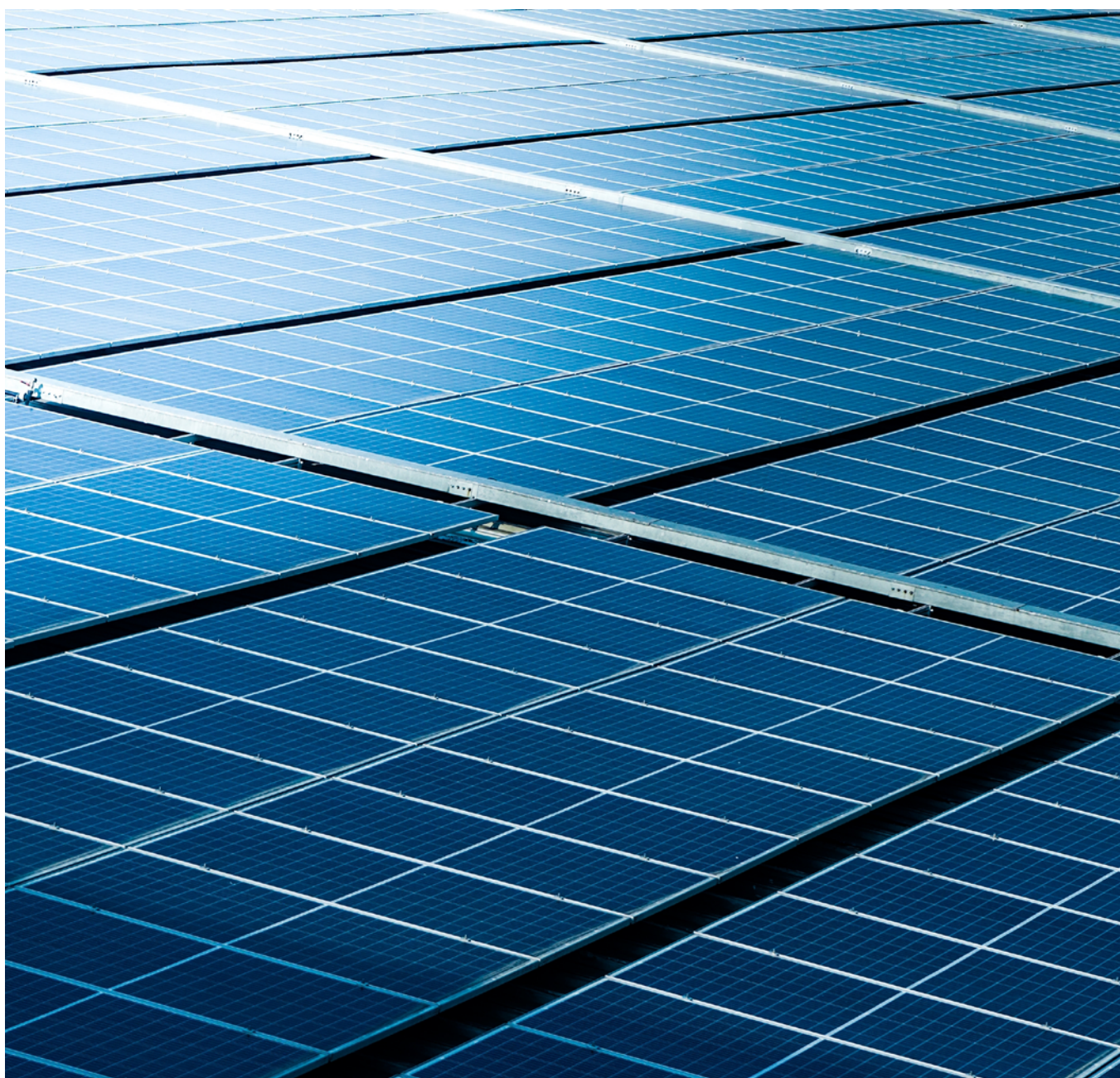


## AL HENIKAYAH SOLAR PHOTOVOLTAIC PLANT

Location: Saudi Arabia

A consortium led by Masdar was awarded the 1,100MW Al Henakiyah project, after a successful tender process by Saudi Power Procurement Company. The project entails developing, financing, constructing, and operating of the 1,100MWac PV plant, to be located in the Al Henakiyah region of the Kingdom of Saudi Arabia. The plant is expected to start commercial operation in 2026.

The Al Henakiyah Solar Power Plant is part of the National Renewable Energy Program implemented under the supervision of the Ministry of Energy, and will contribute to achieving the Kingdom's target of increasing the share of renewables in the country's energy mix to around 50 percent by 2030.





## QUICK FACTS



**1.1 GW** utility-scale  
solar PV plant



Will provide electricity to  
**190,000 homes**



Commercial operation  
is **expected in 2026**



Will mitigate  
**1.657 million tonnes**  
of carbon dioxide annually

### Applicable Environmental and Social Mitigation Programmes^

- Biodiversity baseline assessment pre-construction has confirmed the site is not located within areas of critical environmental concern
- No sensitive habitats recorded on project site
- Assessment has identified flora and fauna species within project site which are considered of Least Concern
- ESIA includes Environmental and Social Management Plan (ESMP) to mitigate identified impacts, using the mitigation hierarchy
- The ESIA has identified adequate mitigation measures to control such impacts and with the implementation of such measures, the impacts are considered of minor significance.
- Ongoing monitoring for compliance with the ESMP throughout the construction and operational phases
- Project creates 6,000 job opportunities (at peak) during the construction phase, for roughly 16 months
- Climate change risk assessment undertaken to investigate key development risks

<sup>^</sup> The project satisfies both national (Saudi Arabia) and international environmental and social standards

## ČIBUK 2

Location: Serbia

In September 2024, Masdar announced the financial close for the 154MW Cibuk 2 wind farm in Serbia. Čibuk 2 has been developed by Masdar and Taaleri Energia, via their joint venture development vehicle Masdar Taaleri Generation (MTG), in partnership with New Energy Solutions, one of the leading developers in Serbia. Nordex is supplying the turbines and will also provide operations and maintenance services for the project under a 35-year contract.

Construction on the project has already begun and it is expected to be operational by the first quarter of 2026. Čibuk 2 will produce enough renewable energy to power around 62,000 households and displace 311,200 tonnes of carbon dioxide during each year of operation. Consisting of 22 Nordex 7MW turbines, it will share the same grid connection point as the 158MW Čibuk 1 wind farm, which was the largest utility-scale wind project in Serbia and the Western Balkans when it became operational in October 2019. When completed, Čibuk 2 will bring Masdar's total renewable energy capacity in Serbia to 312MW and make the combined Čibuk project the largest operational wind farm in Serbia.



## QUICK FACTS



Installed capacity  
**150 MW** Wind farm



Will provide electricity to  
**62,000 homes**



Commercial operation  
is **expected in 2026**



Will mitigate  
**311,249 tonnes**  
of carbon dioxide annually

### Applicable Environmental and Social Mitigation Programmes<sup>^</sup>

- Pre-construction bird and bat monitoring survey to identify species
- A construction Environmental and social management plan “CESMP” has been developed aligned with National Law, Lender Standards and is being implemented
- A community grievance mechanism is developed and managed by MTG
- Employees grievance mechanism plan is developed and implemented on the project
- Social investment programme with a dedicated budget to support small local initiatives throughout the project; 23 projects supported (related to education, sport and infrastructure)
- Project creates more than 200 job opportunities (at peak) during the construction phase, for approximately 20 months
- The construction site covers about 4,750 hectares of agricultural land, however 99% of the land will continue to be cultivated once the project is operational

<sup>^</sup> The project satisfies both national (Serbia) and international environmental and social standards

## BALTIC EAGLE

Location: [Germany](#)

Masdar's entry into the German offshore wind market in Q4, 2023 with the Baltic Eagle acquisition signaled the company's first joint venture with Iberdrola and their largest stake in an offshore wind project (49%) to date. At the time of acquisition, the project was mid-construction.

The project is designed with an expected lifetime of 25 years, and it completed turbine installation in Q4 2024 with operational take over due to be achieved in 2025. Located 30 kilometres to the northeast of Rügen island, the 476MW project supplies enough renewable energy to power 475,000 households.





## QUICK FACTS



Installed capacity  
**476 MW** Wind farm



Annual CO<sub>2</sub> emissions avoided:  
**976,441 tonnes**



Start of construction  
work: **2022**



Turbines:  
**50 x Vestas V164-9.5MW**

### Applicable Environmental and Social Mitigation Programmes<sup>^</sup>

- Full pre-construction surveys including unexploded ordnance surveys and clearance
- Assessment of key risks to the project from climate change was undertaken during the development and design phase, and is continually monitored throughout life of the asset
- Local German supply chain utilized for sourcing monopile foundations
- Cable routing and foundation positions are planned to avoid protected benthic communities
- Noise reduction techniques implemented during substation piling
- Bird monitoring radar has been installed on Offshore Substation in collaboration with local authorities
- Decommissioning planned in accordance with BSH Standard German Regulations

<sup>^</sup> The project satisfies both national (Germany) and international environmental and social standards

# 8.0

## Assurance Report



Ernst & Young LLP  
25 Churchill Place,  
London,  
E14 5EY

Tel: + 44 20 7951 2000  
Fax: + 44 20 7951 1345  
ey.com

### INDEPENDENT ASSURANCE REPORT TO THE DIRECTORS OF ABU DHABI FUTURE ENERGY COMPANY PJSC MASDAR ON SELECTED METRICS WITHIN THE ALLOCATION AND IMPACT REPORT 2024

EY was engaged by Abu Dhabi Future Energy Company PJSC Masdar (the 'Company') to perform an assurance engagement in accordance with International Standard on Assurance Engagements (UK) 3000 July 2020, in respect of certain sustainability metrics attached as Appendix A (the 'Subject Matter') presented in the Allocation and Impact Report as at 31 December 2024 (the 'Report').

The subject matter is marked up with an asterisk (\*) within the Report. Other than as described in the preceding paragraph, which sets out the scope of our engagement, we did not perform assurance procedures on the remaining information included in the Report(s), and accordingly, we do not express an opinion or conclusion on this information.

This report is produced in accordance with the terms of our engagement letter dated 17 April 2025 for the purpose of reporting to the Directors of the Company in connection with the assurance of selected metrics for the period ended 31 December 2024.

This report is made solely to the company's Directors, in accordance with our engagement letter dated 17 April 2025. Those terms permit disclosure on Abu Dhabi Future Energy Company PJSC Masdar's website, solely for the purpose of the Company showing that it has obtained an independent assurance report in connection with the Subject Matter. To the fullest extent permitted by law, we do not accept or assume responsibility to anyone other than the company and the company's Directors as a body, for our examination, for this report, or for the opinions we have formed.

Our work has been undertaken so that we might report to the Directors those matters that we have agreed to state to them in this report and for no other purpose. Our report must not be recited or referred to in whole or in part in any other document nor made available, copied or recited to any other party, in any circumstances, without our express prior written permission. This engagement is separate to, and distinct from, our appointment as the auditors to the company.

#### Responsibilities of the company

As Directors of the company, you are responsible for the Subject Matter which is attached as Appendix A to this report. The Directors of the company remain solely responsible for presenting the Subject Matter in accordance with Masdar's Green Finance Framework and the applicable criteria as defined in Appendix B (the 'Criteria').

#### Responsibilities of Ernst & Young LLP

It is our responsibility to provide a conclusion on the Subject Matter based on our examination. The Criteria has been used as the basis on which to evaluate the measurement and presentation of the Subject Matter as defined in Appendix A.

#### Our approach

We conducted our engagement in accordance with International Standard on Assurance Engagements (UK) 3000 (July 2020) *Assurance engagements other than audits or reviews of historical financial information* ("ISAE (UK) 3000 (July 2020)") as promulgated by the Financial Reporting Council (FRC). For the purpose of the engagement, we have been provided by the Directors with the Subject Matter and applicable Criteria, for which the Directors of the company remain solely responsible.

In performing this engagement, we have applied International Standard on Quality Management (ISQM) 1 and the independence and other ethical requirements of the Institute of Chartered Accountants of England and Wales (ICAEW) Code of Ethics (which includes the requirements of the

Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants (IESBA)).

We have performed the procedures agreed with you and set out in our engagement letter dated 17 April 2025. Our work included, but was not limited to:

- Gaining an understanding of the reporting process through interview with management responsible for ESG and Sustainability management and reporting;
- Reviewing systems and procedures management have in place to capture, collate, aggregate, validate and process source data for the in-scope KPI and metrics that will be included within the Allocation and Impact Report over which we will provide limited assurance;
- Analytical and substantive procedures, as deemed necessary to obtain limited assurance; and
- Reviewing the Information Provided by the Entity ("IPE") (i.e. any information provided to us utilising your IT applications, End User Computing tools or other means) to the extent that the procedures support our ability to form a limited assurance conclusion.

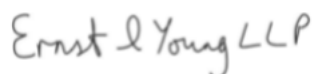
The objective of a limited assurance engagement is to perform such procedures as to obtain information and explanations in order to provide us with sufficient appropriate evidence to express a negative conclusion on the Subject Matter. The procedures performed in a limited assurance engagement vary in nature and timing from, and are less in extent than for, a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had a reasonable assurance engagement been performed.

#### **Inherent limitations**

Our conclusion is based on historical information and the projection of any information or conclusions in the attached report to any future periods would be inappropriate. Our examination excludes audit procedures such as verification of all assets, liabilities and transactions and is substantially less in scope than an audit performed in accordance with International Standards on Auditing (UK) and therefore provides a lower level of assurance than an audit. Accordingly we do not express an audit opinion on the information.

#### **Conclusion**

Based on the procedures performed and evidence obtained, nothing has come to our attention that causes us to believe that the accompanying subject matter information as defined in Appendix A is not fairly stated, in all material respects, based on the applicable criteria.



Ernst & Young LLP

**London**

7 August 2025

## Appendix A: Subject Matter Information

The metrics listed below constitute the selected performance metrics in scope of assurance (the 'Subject Matter')

Subject Matter Information subject to Limited Assurance		
<b>Allocation and Impact Report 2024</b>	1a	Nominal project capacity in MW
	1b	Annual project energy generation/savings in GWh
	1c	Avoided emissions attributed to Masdar Green Bonds in tonnes of CO2 equivalent per year
	1d	Total Green Bond Allocated Amount as at 31/12/2024 in US \$

The assured values are as follows:

Project Name	Nominal Project Capacity (MW)
Jizzakh PV	221
Samarkand PV	221
Sherabad PV	497
Zarafshan Wind	522
Garadagh / Area 60 PV	230
Bukhara PV+BESS	250
DEWA 6 PV / Shuaa Energy 4 Solar Photovoltaic Plant	1,800
Amaala Utilities PV	248
Al Henikayah	1,100
Baltic Eagle Offshore Wind Farm	476
Čibuk 2	150
Al Dhafra PV 2	2,101
Terra Gen - Beaumont	100
Terra Gen - Sagebrush B	99
Terra Gen - Canyon County	80
Arlington - Welkin Road	20
Arlington - Royle Barn	35
Arlington - Ipswich Road	50
Arlington - Calow Green	100
Al Ajban PV3	1,500
<b>Total</b>	<b>9,801</b>

Project Name		Annual Project Energy Generation/Storage (GWh)
Jizzakh PV		577
Samarkand PV		562
Sherabad PV		1,078
Zarafshan Wind		1,702
Garadagh / Area 60 PV		568
Bukhara PV+BESS		623
DEWA 6 PV / Shuaa Energy 4 Solar Photovoltaic Plant	Phase A	1,877
	Phase B	1,221
	Phase C	2,390
Amaala Utilities PV		503
Al Henikayah		3,249
Baltic Eagle Offshore Wind Farm		1,867
Čibuk 2		334
Al Dhafra PV 2		4,861
Terra Gen - Beaumont		146
Terra Gen - Sagebrush B		145
Terra Gen - Canyon County		117
Arlington - Welkin Road		29
Arlington - Royle Barn		51
Arlington - Ipswich Road		73
Arlington - Calow Green		146
Al Ajban PV3		4,707
<b>Total</b>		<b>26,825</b>

Project Name	Avoided emissions attributed to Masdar Green Bonds (tCO <sub>2</sub> e/year)
Jizzakh PV	321,966
Samarkand PV	313,596
Sherabad PV	601,524
Zarafshan Wind	711,989
Garadagh / Area 60 PV	271,504

Bukhara PV+BESS	347,634
DEWA 6 PV / Shuaa Energy 4 Solar Photovoltaic Plant	980,967
Amaala Utilities PV	110,211
Al Henikayah	662,818
Baltic Eagle Offshore Wind Farm	221,105
Čibuk 2	126,501
Al Dhafra PV 2	451,119
Terra Gen - Beaumont	7,507
Terra Gen - Sagebrush B	11,645
Terra Gen - Canyon County	1,258
Arlington - Welkin Road	6,827
Arlington - Royle Barn	10,335
Arlington - Ipswich Road	9,403
Arlington - Calow Green	4,020
Al Ajban PV3	1,108,353
<b>Total</b>	<b>6,280,283</b>

<b>Project Name</b>	<b>Total Allocated Amount as at 31/12/2024 (US \$)</b>
Jizzakh PV	77,635,163
Samarkand PV	75,513,521
Sherabad PV	182,077,417
Zarafshan Wind	227,468,706
Garadagh / Area 60 PV	153,653,349



Bukhara PV+BESS	70,847,151
DEWA 6 PV / Shuaa Energy 4 Solar Photovoltaic Plant	202,246,801
Amaala Utilities PV	119,685,804
Al Henikayah	119,196,546
Baltic Eagle Offshore Wind Farm	184,848,325
Čibuk 2	33,408,459
Al Dhafra PV 2	37,930,081
Terra Gen - Beaumont	22,022,366
Terra Gen - Sagebrush B	12,985,200
Terra Gen - Canyon County	2,232,481
Arlington - Welkin Road	17,412,995
Arlington - Royle Barn	22,294,547
Arlington - Ipswich Road	20,788,626
Arlington - Calow Green	8,886,741
Al Ajban PV3	94,611,688
<b>Total</b>	<b>1,685,745,969</b>

## Appendix B: Applicable Criteria

Project Name	Applicable Criteria
Renewable energy capacity in MW	Nominal capacity (or grid limitation capacity if inferior to nominal capacity) is provided by third party technical reports
Annual project energy generation/savings in MWh	P50 annual generation/savings per ILF yield assessment (technical advisors reports).
Masdar Green Bond Impact in tonnes of CO2 equivalent per year	Total project avoided emissions is calculated by multiplying the annual project annual energy generation/savings by IFI Dataset of Default Grid Factors v.3.2. To calculate Green Bond Impact, total project avoided emissions is pro-rated according to Masdar's share of green bond proceeds as a proportion of the total equity commitment in the project in percentage terms.
Total Green Bond Allocation as at 31/12/2024 in US \$	Total bond proceeds allocated per project, across all Masdar bonds.

## **Masdar**

PO Box 54115, Abu Dhabi, UAE

**T** +971 2 653 3333, **E** [info@masdar.ae](mailto:info@masdar.ae)

**[www.masdar.ae](http://www.masdar.ae)**

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