ASSESSMENT

16 April 2025

Send Your Feedback

Contacts

Simon Boemer
Sustainable Finance Analyst
simon.boemer@moodys.com

Alice Presotto
Sustainable Finance Associate
alice.presotto@moodys.com

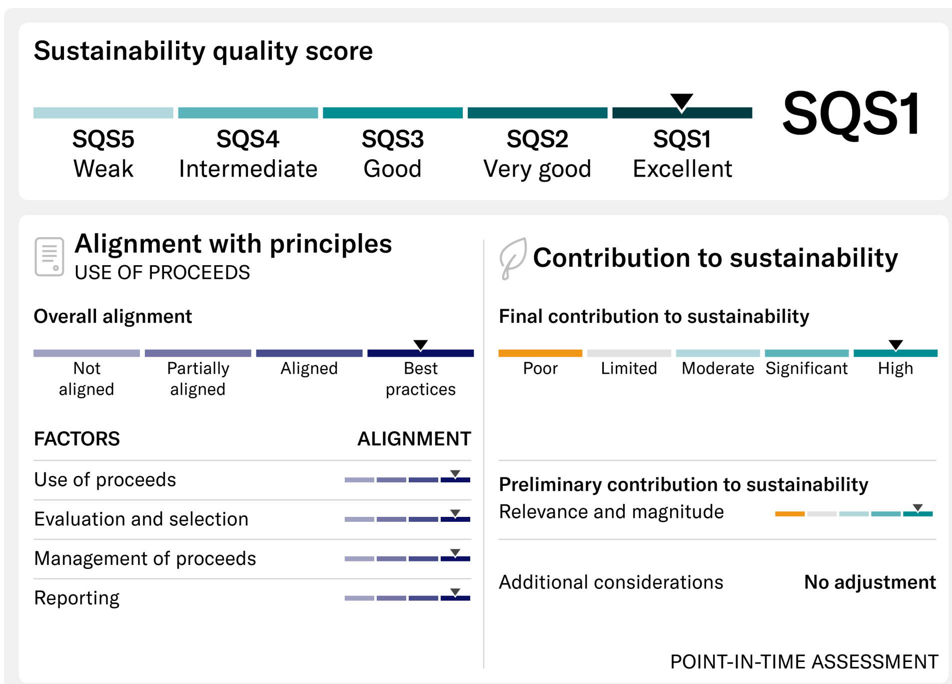
Adriana Cruz Felix
SVP-Sustainable Finance
adriana.cruzfelix@moodys.com

Abu Dhabi Future Energy Company PJSC (Masdar)

Second Party Opinion – Green Finance Framework Assigned SQS1 Sustainability Quality Score

Summary

We have assigned an SQS1 sustainability quality score (excellent) to Abu Dhabi Future Energy Company PJSC's (Masdar) green finance framework, dated March 2025. Masdar has established a use-of-proceeds framework with the aim of financing projects across two eligible green categories: renewable energy and energy efficiency. The framework is aligned with the four core components of the International Capital Market Association's (ICMA) Green Bond Principles (GBP) 2021 (including the June 2022 Appendix 1), and the Green Loan Principles (GLP) 2023 of the Asia Pacific Loan Market Association, the Loan Market Association, and the Loan Syndications and Trading Association (LMA/APLMA/LSTA). The company has also incorporated all Moody's Ratings identified best practices for all four components. The framework demonstrates a high contribution to sustainability.



Scope

We have provided a Second Party Opinion (SPO) on the sustainability credentials of Masdar's green finance framework, including the framework's alignment with the ICMA's GBP 2021 (including the June 2022 Appendix 1) and the LMA/APLMA/LSTA's GLP 2023. Under its framework, Masdar plans to issue use-of-proceeds instruments with the aim of financing projects in two categories: renewable energy and energy efficiency, as outlined in Appendix 3 of this report.

Our assessment is based on the last updated version of the framework received on 5 March 2025, and our opinion reflects our point-in-time assessment[1] of the details contained in this version of the framework, as well as other public and non-public information provided by the company.

We produced this SPO based on our Assessment Framework: Second Party Opinions on Sustainable Debt, published in March 2025.

Issuer profile

Abu Dhabi Future Energy Company PJSC's (Masdar) was established in 2006 as the Government of Abu Dhabi's primary vehicle for investing in renewable energy and sustainable development. The company mainly invests in clean energy, and develops, owns and operates renewable energy projects in Abu Dhabi and more than 30 other countries, usually through joint ventures. Following the completion of a reorganisation in December 2022, Masdar consolidated renewable energy investments from TAQA, Mubadala and ADNOC, supporting the UAE's transition to a sustainable economy. As part of its sustainability strategy, Masdar aims to increase its renewable energy capacity to at least 100 GW by 2030 (year-end 2024: 51 GW), which is in line with its ambition to substantially contribute to the UAE's pursuit to become net zero in carbon emissions by 2050.

Strengths

» Financing of mostly best-in-class renewable energy and energy efficiency projects, which are likely to have a high contribution to sustainability.

» Clearly defined eligible categories, environmental benefits and objectives.

» Comprehensive and transparent project evaluation and selection process, including a robust environmental and social risk mitigation process.

» Commitment to engage an external reviewer to conduct an annual post-issuance verification to ensure the quality of allocation and impact reporting.

Challenges

» The country's targeted electricity mix for 2050 still remains significantly dependent on fossil fuel assets despite the development of new renewable energy capacities, although this is outside Masdar's control.

Alignment with principles

Masdar's green finance framework is aligned with the four core components of the ICMA's GBP 2021 (including the June 2022 Appendix 1) and the LMA/APLMA/LSTA's GLP 2023, and is in line with best practices identified by us. For a summary of alignment with principles scorecard, please see Appendix 1.

- ☑ Green Bond Principles (GBP)
- ☑ Green Loan Principles (GLP)
- ○ Social Bond Principles (SBP)
- ○ Social Loan Principles (SLP)
- ○ Sustainability-Linked Bond Principles (SLBP)
- ○ Sustainability Linked Loan Principles (SLLP)

Use of proceeds

Not aligned	Partially aligned	Aligned	Best practices ▼

Clarity of the eligible categories – BEST PRACTICES

Masdar has clearly communicated the nature of expenditures, and the eligibility and exclusion criteria for all the projects, and refers to the EU Taxonomy to enhance clarity and transparency. The issuer has disclosed the locations of the projects to be financed, which are Azerbaijan, Germany, Kingdom of Saudi Arabia, Serbia, Uzbekistan, the UAE, the US and the UK. The use of proceeds is likely to include equity investments in partnerships or joint ventures. However, Masdar confirms that only primary equity investments will be eligible, and the values in the asset register will be based on the investment costs. In addition, the company will ensure that only its share of the investment is considered in its eligible green projects, and that double counting of green assets is prevented.

Clarity of the environmental or social objectives – BEST PRACTICES

The environmental objectives associated with both eligible categories, aimed at climate change mitigation, are clear and relevant. In addition, the objectives are coherent with international standards, including the UN's Sustainable Development Goals (SDGs), such as Goal 7 “Affordable and Green Energy” and Goal 13 “Climate Change”, and the EU Taxonomy, which are referred to within the framework.

Clarity of expected benefits – BEST PRACTICES

The expected benefits identified are clear and relevant for both categories. These benefits are measurable, and the company plans to include them in its ongoing reporting. The company has committed to disclose the expected share of refinancing should the proceeds be used for refinancing. The look-back period of up to 24 months is disclosed in the framework.

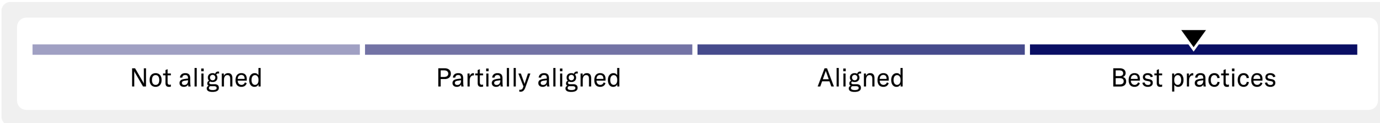
Process for project evaluation and selection

Not aligned	Partially aligned	Aligned	Best practices ▼

Transparency and clarity of the process for defining and monitoring eligible projects – BEST PRACTICES

Masdar has established a clear process for determining the eligibility of projects, with granular decision-making criteria formalised in its public framework and internal documentation. The company's Sustainability, Strategy and Investment Committee is responsible for updating the register of eligible green projects (the green finance register), which will also ensure the traceability of the decision-making process, based on recommendations by its ESG and structured finance teams. In addition, the teams are responsible for monitoring the green finance register to ensure that the projects continue to meet the eligibility criteria, and there is a clear procedure in place for addressing instances where a project is no longer compliant with the eligibility criteria. This procedure includes reallocation of proceeds to other eligible green projects on a best effort basis within 24 months. In addition, the process ensures compliance with relevant internal requirements for the prevention of significant environmental and social risks, and it is disclosed in the publicly available framework.

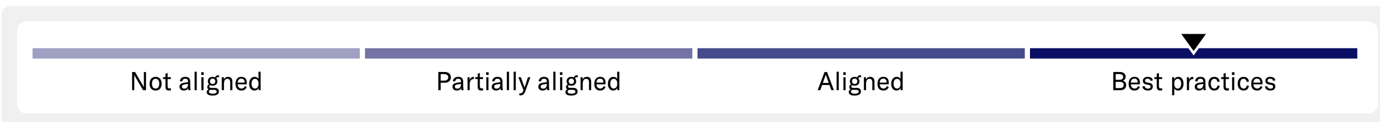
Management of proceeds



Allocation and tracking of proceeds – BEST PRACTICES

Masdar has defined a clear process for the management and allocation of instrument proceeds in the framework. Net proceeds from instruments will be deposited in a segregated account. The company will ensure that the value of the projects in the green finance register exceeds or is at least equal to the net proceeds on a best effort basis, and it periodically adjusts the balance of proceeds to match allocations to eligible projects. The company also commits to reach full allocation within 24 months. Unallocated proceeds will be invested in cash, cash equivalents or similar instruments, and will be managed in accordance with Masdar's corporate liquidity policy and the exclusion criteria. The exclusion criteria will ensure that unallocated proceeds are not directed to greenhouse gas (GHG)-intensive or controversial activities.

Reporting

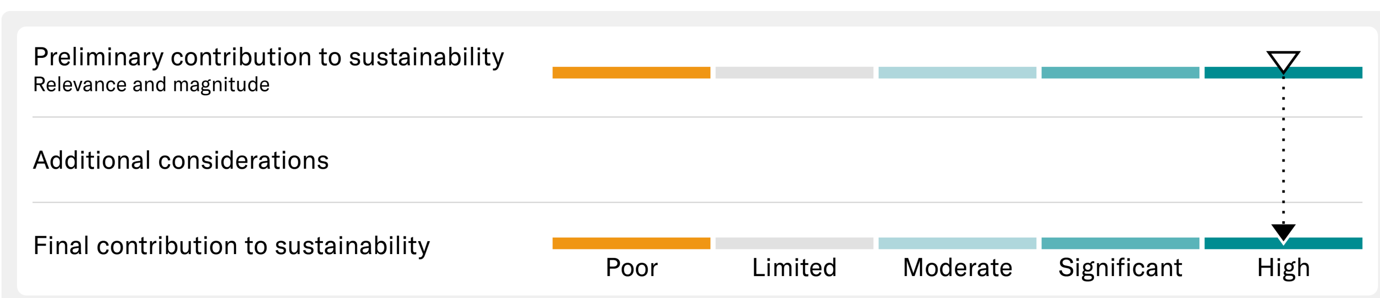


Reporting transparency – BEST PRACTICES

The company will report annually on the use of proceeds for the eligible project categories. Reporting will take place until there is no green finance instrument outstanding, and in case of any material event. The reporting will be exhaustive, and will include relevant indicators for both allocation and expected benefits. To report on the environmental impact, the company will use actual measurements. In case such an approach is not feasible, it will provide estimates and disclose the relevant calculation methodologies and key assumptions. All reporting will be disclosed publicly. In addition, the company commits to engage an independent auditor to verify the allocation and impact reports.

Contribution to sustainability

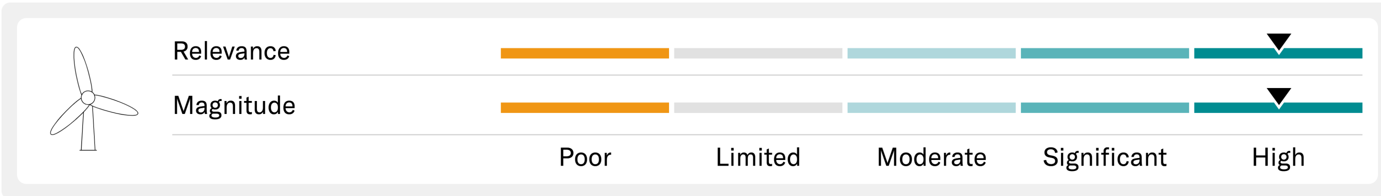
The framework demonstrates a high overall contribution to sustainability. This reflects a preliminary contribution to sustainability score of high, based on the relevance and magnitude of the eligible project categories, and we have not made an adjustment to the preliminary score based on additional contribution to sustainability considerations.



Preliminary contribution to sustainability

The preliminary contribution to sustainability is high, based on the relevance and magnitude of the eligible project categories. The issuer communicated that most of the proceeds will be allocated to the renewable energy category. Thus, we have weighted the eligible categories accordingly. A detailed assessment by eligible category is provided below.

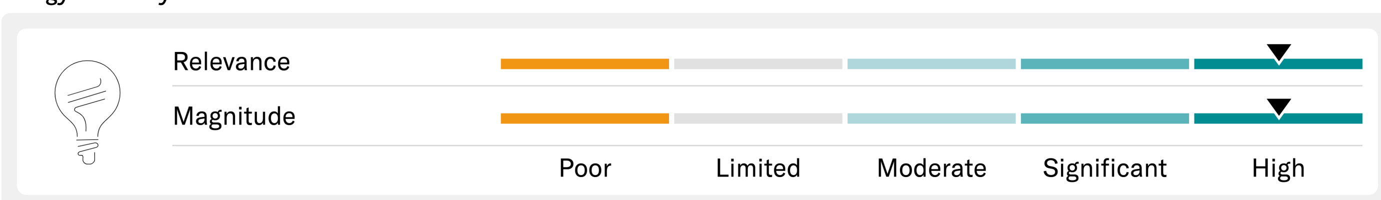
Renewable energy



Under its framework, Masdar is planning to finance renewable energy projects, including solar power, wind power, and the transmission and distribution of electricity. The expansion of renewable energy capacity is essential and highly relevant at the global level to reduce GHG emissions from electricity generation, buildings, industry and transportation. This is particularly important in the UAE, where Masdar is headquartered, as the country aims to diversify its energy mix, and reduce its reliance on natural gas and oil. These projects are also highly relevant to Masdar because it is a pure-play operator in renewable energy production.

The magnitude of Masdar's renewable energy projects is overall high, as they mainly use best available technologies in the production and distribution of renewable energy. All eligible projects follow the substantial contribution criteria of the EU Taxonomy. Solar and wind projects, which make up a significant portion of Masdar's planned financings, undergo rigorous Environmental and Social Impact Assessments to ensure compliance with best practices and mitigate potential negative impacts. The transmission and distribution of electricity also play a crucial role in the promotion of the energy transition, adhering to stringent technical thresholds, such as ensuring that a minimum of 67% of newly enabled generation capacity emits less than 100 gCO_2e/kWh. Although no hydrogen projects are in the pipeline yet, the issuer has confirmed that only green hydrogen produced via electrolysis, using renewable electricity, with life-cycle GHG emissions lower than $3tCO_2e/tH_2$, can be financed in the future. This threshold is considered stringent, although more stringent carbon content thresholds exist in the market for hydrogen projects, meaning that the magnitude of hydrogen projects is significant on a stand-alone basis.

Energy efficiency



This category, which finances energy storage systems (batteries) as defined in the EU Taxonomy under section 4.10 "Storage of electricity," is highly relevant to the issuer and its sector as increasing energy efficiency is crucial for mitigating climate change. By optimising energy use, these projects reduce demand on the grid, enhance the effectiveness of energy storage systems and improve overall energy distribution. In the context of renewable energy development and grid modernisation, energy storage systems can avoid bottlenecks, smooth out production obstacles and optimise the timing of energy distribution.

The magnitude of Masdar's energy efficiency projects is high, as batteries allow for higher penetration of additional renewable energy capacities while contributing to a more stable electric system. This category, which intends to follow the EU Taxonomy's substantial contribution criteria, ensures that the best available technology is adopted. Masdar's rigorous ESG risk management policy minimises negative externalities associated with these projects. The energy storage systems will be both co-located with renewable energy sources and standalone, with the latter being charged from the grid's mixed energy generation, including renewables.

Additional contribution to sustainability considerations

We have not made an adjustment to the preliminary contribution to sustainability score based on additional considerations.

Regarding ESG risks, Masdar has established a robust risk management framework to identify potential hazards and assess risk. Each project is required to comply with Masdar's environmental and social requirements that refer to international standards, such as the Equator Principles, International Finance Corporation (IFC) Performance Standards, and IFC General Environmental Health and Safety Guidelines. These requirements typically oblige Masdar's projects to develop and implement, for example, an Environment and Social Impact Assessment, including an Environmental and Social Management and Monitoring Plan (ESMMP), an Environmental and

Social Management System (ESMS), and an Environmental and Social Management Plan (ESMP) that covers both construction and operations. These plans cover a wide variety of ESG risks, which include, but are not limited to, biodiversity protection; human rights protection, including the prevention of modern slavery, and health and safety of workers; and waste and wastewater management.

The projects to be financed under the framework are considered coherent with the sustainability priorities of Masdar, which focuses on investments in clean energy. While the UAE relies significantly on fossil fuels for its energy production and economy, Masdar helps the country diversify its economy and supports its decarbonisation strategy, which includes achieving net zero emissions by 2050.

Appendix 1 - Alignment with principles scorecard for Masdar's green finance framework

Factor	Sub-factor	Component	Component score	Sub-factor score	Factor score
Use of proceeds	Clarity of the eligible categories	Nature of expenditure	A	Best practices	Best practices
		Definition of content, eligibility and exclusion criteria for nearly all categories	A		
		Location	A		
		BP: Definition of content, eligibility and exclusion criteria for all categories	Yes		
	Clarity of the objectives	Relevance of objectives to project categories for nearly all categories	A	Best practices	
		Coherence of project category objectives with standards for nearly all categories	A		
		BP: Objectives are defined, relevant and coherent for all categories	Yes		
	Clarity of expected benefits	Identification and relevance of expected benefits for nearly all categories	A	Best practices	
		Measurability of expected benefits for nearly all categories	A		
		BP: Relevant benefits are identified for all categories	Yes		
		BP: Benefits are measurable for all categories	Yes		
		BP: Disclosure of refinancing prior to issuance and in post-allocation reporting	Yes		
		BP: Commitment to communicate refinancing look-back period prior to issuance	Yes		
Process for project evaluation and selection	Transparency and clarity of the process for defining and monitoring eligible projects	Clarity of the process	A	Best practices	Best practices
		Disclosure of the process	A		
		Transparency of the environmental and social risk mitigation process	A		
		BP: Monitoring of continued project compliance	Yes		
Management of proceeds	Allocation and tracking of proceeds	Tracking of proceeds	A	Best practices	Best practices
		Periodic adjustment of proceeds to match allocations	A		
		Disclosure of the intended types of temporary placements of unallocated proceeds	A		
		BP: Disclosure of the proceeds management process	Yes		
		BP: Allocation period is 24 months or less	Yes		
Reporting	Reporting transparency	Reporting frequency	A	Best practices	Best practices
		Reporting duration	A		
		Report disclosure	A		
		Reporting exhaustivity	A		
		BP: Allocation reporting at least until full allocation of proceeds, and impact reporting until full bond maturity or loan payback	Yes		
		BP: Clarity and relevance of the indicators on the sustainability benefits	Yes		
		BP: Disclosure of reporting methodology and calculation assumptions	Yes		
		BP: Independent external auditor, or other third party, to verify the tracking and allocation of funds	Yes		
		BP: Independent impact assessment on environmental and social benefits	Yes		
Overall alignment with principles score:					**Best practices**

Appendix 2 - Mapping eligible categories to the United Nations' Sustainable Development Goals

The two eligible categories included in Masdar's framework are likely to contribute to two of the UN SDGs, namely:

UN SDG 17 Goals		SDG Targets
GOAL 7: Affordable and Clean Energy	*Renewable energy* *Energy efficiency*	7.2: Increase substantially the share of renewable energy in the global energy mix
GOAL 13: Climate Action		13.1: Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters in all countries

The UN SDGs mapping in this SPO considers the eligible project categories and associated sustainability objectives/benefits documented in the issuer's green finance framework, as well as resources and guidelines from public institutions, such as the ICMA SDG Mapping Guidance and the UN SDG targets and indicators.

Appendix 3 - Summary of eligible categories in Masdar's framework

Eligible Category	Description	Sustainability Objective	Impact Reporting Metrics
Renewable energy	**Solar Power**: -Investments, development, construction, installation, operation and maintenance of facilities: - Photovoltaic plants - Floating photovoltaic - Concentrated solar power **Wind Power**: Investments, development, construction, installation, operation and maintenance of facilities: - Onshore projects - Offshore projects including floating wind turbines **Hydrogen**: Investments, development construction and installation of facilities, equipment or components dedicated for the manufacture of hydrogen produced with life-cycle GHG emissions lower than 3tCO2e/tH2 **Transmission and Distribution of Electricity**: Investments, development, construction, installation, operation and maintenance of: -Electric power transmission and distribution network infrastructure directly connecting generation plants from renewable sources to the transmission grid -Transmission and distribution infrastructure in an electricity system that complies with at least one of the following criteria: i) the system is the interconnected European system, ii) more than 67% of newly enabled generation capacity in the -system is below the generation threshold value of 100 gCO2e/kWh over a rolling five-year period; iii) the average system grid emissions factor is below the threshold value of 100 gCO2e/kWh over a rolling five-year period; Investments, development, construction and operation of infrastructure and equipment where the main objective is an increase of the generation or use of renewable electricity generation; or to increase the controllability and observability of the electricity system to enable integration of renewable energy sources.	Climate change mitigation	-Renewable energy capacity installed in MW -Annual GHG emissions avoided in tonnes of CO2 equivalent -Annual renewable energy generated (or estimated) in MWh -Capacity of renewable energy plant(s) to be served by transmission systems (MW).
Energy efficiency	Investments, development, construction, installation, operation and maintenance of electricity storage systems.	Climate change mitigation	-Storage capacity installed or developed in MW -Annual GHG emissions avoided in tonnes of CO2 equivalent -Annual energy savings (or estimated) in MWh

Endnotes

1 Point-in-time assessment is applicable only on the date of assignment or update.

REPORT NUMBER 1437425