

Impact Report for Bonds and Loans
CBD Sustainable Finance Framework

Impact Summary

Evaluation Date May 7, 2024

Issuer Location Dubai, United Arab Emirates

Sustainalytics has calculated the estimated impact achieved by Commercial Bank of Dubai's Eligible Green Loan portfolio ("EGL"). As at 29 February 2024, the bank's EGL was AED 2,511 million in the categories of Renewable Energy, Clean Transportation and Green Buildings. The projects are located across the United Arab Emirates. Due to data limitations for a subset of the bank's retail banking Green Buildings portfolio, the scope of this report covers AED 2,272 million. For a representative year during the lifetime of the projects, Sustainalytics has calculated 101,778 tonnes of avoided GHG emissions in CO₂e.



2.3B
Reviewed allocation, AED

102K
Annual emissions avoided (tCO₂e)

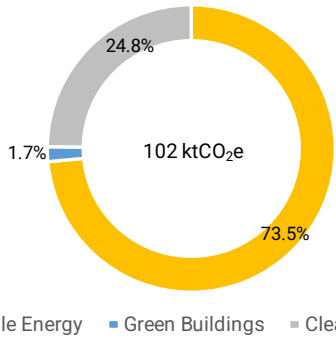
348
Projects

22K
Cars driven for one year

1
Country

7M
Trees, yearly sequestration

Avoided GHG emissions by Use of Proceeds and Location of Projects by Country



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Introduction

Commercial Bank of Dubai (“CBD” or the “Issuer”) is a banking and financial services corporation that is headquartered in Dubai, United Arab Emirates. Established in 1969 as a joint venture between Commerzbank, Chase Manhattan Bank, and Commercial Bank of Kuwait, the bank became a National Shareholding Company in 1982 and is listed on the Dubai Financial Market. Today CBD offers its customers retail and commercial banking products and services through its digital channels and a network of 14 branches.¹ In 2023, CBD issued its inaugural USD 500 million green bond and allocated the proceeds according to the CBD Sustainable Financing Framework.² CBD used the proceeds from the bond to finance 73% of the EGL.

CBD engaged Sustainalytics to quantify the environmental benefits of the projects in CBD’s EGL. As at 29 February 2024, the bank’s Eligible Green Loan Portfolio was AED 2,511 million. Due to data limitations for a subset of the bank’s retail banking Green Buildings portfolio, the scope of this report covers AED 2,272 million. Using established methodologies, Sustainalytics has estimated avoided emissions from CBD’s projects. This report presents the details of our findings, including a description of the methodology used to calculate the impacts.

Scope of Work and Limitations

CBD has engaged Sustainalytics to calculate the environmental impacts of the portfolio of projects in CBD’s EGL according to the CBD 2023 Sustainable Financing Framework. For this work, Sustainalytics relied on the data provided by CBD on the EGL balance and the technical data on the projects financed.

Sustainalytics’ impact reporting is aligned with ICMA’s June 2023 Harmonised Framework for Impact Reporting.³ The methodology and assumptions made for the impact calculation are outlined in the methodology chapter.

As part of this engagement, Sustainalytics exchanged information with CBD’s representatives to understand the sustainability impact of its projects. Through these exchanges, CBD’s representatives have confirmed that:

- (1) They understand it is the sole responsibility of CBD to ensure that the information provided is complete, accurate and up to date;
- (2) They have provided Sustainalytics with all relevant information;
- (3) Any provided material information has been duly disclosed in a timely manner.

Sustainalytics also reviewed relevant public documents and non-public information.

¹ Commercial Bank of Dubai, “Backing the Nation’s Ambition – Annual Report 2023”, (2023) available at: https://www.cbd.ae/docs/librariesprovider2/annualreports/annual-report-2023---final.pdf?sfvrsn=e1b2516b_2

² Commercial Bank of Dubai, “Sustainable Financing Framework”, (2023), <https://www.cbd.ae/docs/librariesprovider2/default-document-library/cbd-sustainable-finance-framework-5-4-23.pdf>

³ ICMA, “Handbook - Harmonised Framework for Impact Reporting”, (2023), at: <https://www.icmagroup.org/assets/documents/Sustainable-finance/2023-updates/Handbook-Harmonised-framework-for-impact-reporting-June-2023-220623.pdf>

Impact Findings

For reporting, Sustainalytics follows the ICMA Harmonised Framework for Impact Reporting,⁴ which synthesizes market expectations and outlines recommendations for impact reporting to create a standardized reporting structure and to enhance the understanding of the impact to all stakeholders, including investors.

Table 1 below provides a summary of the impact at the portfolio level, which Sustainalytics calculated for the portfolio of projects in CBD's EGL according to the CBD 2023 Sustainable Financing Framework. Tables 2-5 provide use of proceeds level details for the assessed projects. Appendices 1-3 provide impact data at the project level. These metrics correspond to a representative year during the lifetime of the projects and are based on the share of project financing.

Table 1: Summary of Impact – Portfolio Level⁵

Allocated Amount	Bond Tenor	Financed Emissions Avoided	Financed Emissions Avoided/M AED
M AED	Years	tCO ₂ e/year	tCO ₂ e/year/M AED
2,272.33	5	101,778	44.79

Table 2: Summary of Impact – Use of Proceeds

Use of Proceeds	Allocated Amount	Financed Emissions Avoided	Financed Emissions Avoided/M AED
	M AED	tCO ₂ e/year	tCO ₂ e/year/M AED
Renewable energy	541.37	74,844	138.25
Clean transportation	605.96	25,237	41.65
Green buildings	1,125.00	1,694	1.51

Table 3: Impact of Renewable Energy Projects by Technology Type

Technology Type	Allocated Amount	Financed Generation	Financed Capacity	Financed Emissions Avoided	Financed Emissions Avoided/ M AED
	M AED	MWh/year	MW	tCO ₂ e/year	tCO ₂ e/year/M AED
Solar CSP + PV ⁶	497.01	101,989	28	54,348	109.35
Solar PV	44.36	36,454	19	20,496	462.07

Table 4: Impact of Clean Transportation by Project Type

Project Type	Allocated Amount	Tonne-kilometres Travelled	Financed Emissions Avoided	Financed Emissions Avoided/ M AED
	M AED	tkm/year	tCO ₂ e/year	tCO ₂ e/year/M AED
Freight rail project	605.96	42,420,000,000	25,237	41.65

⁴ ICMA, "Handbook - Harmonised Framework for Impact Reporting", (2023), at: <https://www.icmagroup.org/assets/documents/Sustainable-finance/2023-updates/Handbook-Harmonised-framework-for-impact-reporting-June-2023-220623.pdf>

⁵ Due to rounding, the summary might not sum up to the exact amount in other tables.

⁶ CSP: concentrated solar power, PV: photovoltaic.

Table 5: Impact of Green Building by Building Type

Building Type	Allocated Amount	Gross Building Area	Energy Reduction	Financed Emissions Avoided	Financed Emissions Avoided/M AED
	M AED	m ²	MWh/year	tCO ₂ e/year	tCO ₂ e/year/M AED
Office	529.04	106,838	6,244	390	0.74
Residential mortgage portfolio	595.96	107,487	5,063	1,303	2.19

Methodology

Sustainalytics developed its own methodologies for quantifying GHG avoidance and other metrics, including leveraging publicly available best-in-class methodologies, protocols and frameworks that are currently industry best practice. Our estimation practices and general principles rely on the GHG Protocol.⁷ Our methodologies are based on guidance provided by the International Financial Institutions⁸ on calculation methodology and global emissions. In addition, we rely on the Partnership for Carbon Accounting Financials' Global Accounting Standard⁹ for guidance on estimation where data is not readily available and assumptions must be made. Finally, the UN's Clean Development Mechanism¹⁰ provides guidance and information, serving as the foundation for these and other methodologies, including those implemented in this report.

Renewable Energy

It is assumed that energy generated by the projects crowd out a mix of current and upcoming planned generation capacity and, therefore, associated emissions. The approach taken to derive the greenhouse gas emissions avoidance uses:

- a) The emissions of the renewable energy projects, which is often (but not always) zero; and
- b) The baseline emissions or emissions occurring in the absence of the project. For electricity generation, these emissions are based on the energy mix used to supply electricity to the local grid.
- c) Financed project avoided emissions are calculated by using the share of project financing of the total project emissions avoided from the above calculations.

Data Sources and Assumptions

- For projects included in this report, the estimated emissions avoided is calculated based on the expected annual electricity generation (measured in MWh), as the operational phase of the projects have not yet been reached.
- Where possible, the expected annual generation (measured in MWh) was provided by CBD. In cases for which the annual generation was not available, the project capacity (measured in MW) was provided.
- For projects without data on the expected annual generation, Sustainalytics estimated this value leveraging the project capacity provided by CBD and capacity factors based on technology type and location using data provided by IRENA.¹¹
- The baseline emission factors for the countries where projects are located were sourced from IFI.¹² To account for emissions from upstream activities, Sustainalytics applies an additional, indirect emissions factor.¹³
- For zero-carbon technologies, such as solar and wind energy, the emissions per unit of generation are assumed to be 0 kgCO₂e/kWh.

⁷ Greenhouse Gas Protocol, "About Us", (2023), at: <https://ghgprotocol.org/>

⁸ International Financial Institutions (IFI), "Members of the International Financial Institutions on Greenhouse Gas Accounting", at: https://unfccc.int/sites/default/files/resource/IFIs_membership_for_UNFCCC_%27white_pages%27_0.pdf

⁹ Partnership for Carbon Accounting Financials (PCAF), "About", (2023) at: <https://carbonaccountingfinancials.com/>

¹⁰ UNFCCC, "CDM Methodologies Booklet – Fourteenth edition", (2022), at: <https://cdm.unfccc.int/methodologies/documentation/index.html>

¹¹ International Renewable Energy Agency (IRENA), "Statistics Time Series", (2023) at: <https://www.irena.org/Data/View-data-by-topic/Capacity-and-Generation/Statistics-Time-Series>

¹² UNFCCC, "The IFI Dataset of Default Grid Factors", available at: <https://unfccc.int/climate-action/sectoral-engagement/ifis-harmonization-of-standards-for-ghg-accounting/ifi-twq-list-of-methodologies>

¹³ Government of the UK, "Government conversion factors for company reporting of greenhouse gas emissions", (2023), at: <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

Clean Transportation

Clean transportation is assumed to displace a mix of existing and future transportation along the same travel distance. The carbon avoidance is calculated using:

- a) The emissions of the clean transportation projects based on the best available data from CBD. To the extent available, calculations are based on fuel consumption or tonne-kilometre data. In the absence of such information, estimates are made based on mode of transportation, fuel type and average passengers or tonnes transported per vehicle.
- b) The baseline emissions, which are the emissions associated with a basket of vehicles or modes of transport being replaced currently and in the future lifetime of the project.
- c) Financed project avoided emissions are calculated by using the share of project financing of the total project emissions avoided from the above calculations.

Data Sources and Assumptions

- For the projects included in this report, the estimated emissions avoided is calculated based on the expected network capacity (in tonne-kilometres), as the operational phase of the projects has not yet been reached.
- Data on the transportation type, fuel type, the expected network capacity, as well as project and baseline emissions factors were provided by CBD.¹⁴
- To account for emissions from upstream activities, such as electricity transmission losses and the extraction and refining of primary fuels, Sustainalytics applies an additional, indirect emissions factor to the emissions directly emitted by the project and baseline vehicles.¹⁵ For diesel freight, this is the ratio between direct and indirect emissions, which is approximately 25%.

¹⁴ The estimated annual freight distance travelled were provided as a range between 60 and 80 million tonne-kilometres. To calculate the estimated greenhouse gas emissions avoided, Sustainalytics has assumed the average annual freight distance travelled to be 70 million tonne-kilometres.

¹⁵ Government of the UK, Department for Business, Energy & Industrial Strategy, "Government conversion factors for company reporting of greenhouse gas emissions", at: <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

Green Buildings

It is assumed that green buildings consume less energy than a mix of existing buildings and new construction. The avoidance of greenhouse gas emissions is then calculated using:

- a) The emissions of the green building projects. To the extent available, the reporting is based on metered energy consumption. If such information is not available, estimates for the relevant projects are based on the building certificates, standards or country-level averages.
- b) The baseline emissions, or emissions occurring in the absence of the projects. This figure is based on the estimated energy intensity of comparable buildings, or in the case of refurbishments, the prior emissions.
- c) Financed project avoided emissions are calculated by using the share of project financing of the total project emissions avoided from the above calculations.

Data Sources and Assumptions

- For the projects included in this report, building data including gross building area, location and relevant green building certificates were provided by CBD and used as inputs for the calculations.¹⁶ Where relevant and available, Sustainalytics performed calculations based on the most recently available green building certificates or energy performance certificates for each property.
- Where relevant, Sustainalytics modelled the energy intensity for buildings based on a representative sample of buildings with similar LEED certifications and building type.¹⁷
- Based on location and building characteristics such as type and size, the energy intensity of a baseline building is estimated using a combination of country averages and publicly available statistical models.¹⁸
- For buildings included in CBD's mortgage portfolio, the energy intensity is assumed to be 30% lower than the baseline, in line with regional sustainability standards for new buildings and retrofits.¹⁹
- For buildings included in CBD's mortgage portfolio, a distinction in energy intensity is made between apartments, townhouses and villas. In cases where the building type is not specified, it is assumed that the energy intensity is equivalent to that of villas, yielding the most conservative estimation.
- The emissions factors for the project and baseline properties are based on the average energy mix for buildings in the relevant country.
- The grid emissions factors for the countries in which the projects are located were sourced from IFI.²⁰ To account for emissions from upstream activities, Sustainalytics applies an additional, indirect emissions factor.²¹

¹⁶ A subset of the bank's green mortgages portfolio was excluded from this report due to data limitations related to gross building areas.

¹⁷ LEED, (2023), available at: [LEED v4.1 | U.S. Green Building Council \(usgbc.org\)](https://www.usgbc.org)

¹⁸ IFC's EDGE model is used for statistical modelling of buildings, available at: <http://www.edgebuildings.com>

¹⁹ UAE Government, "Increasing energy efficiency", (2022), at: <https://u.ae/en/information-and-services/environment-and-energy/climate-change/theuaeresponsetoclimatechange/increasing-energy-efficiency>

²⁰ UNFCCC, "IFI TWG – List of methodologies", at: <https://unfccc.int/climate-action/sectoral-engagement/ifis-harmonization-of-standards-for-ghg-accounting/ifi-twg-list-of-methodologies>

²¹ UK Government, Department for Business, Energy & Industrial Strategy, "Government conversion factors for company reporting of greenhouse gas emissions", at: <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

Appendix 1: Impact of Renewable Energy Projects

Project Name	Country	Technology Type	Allocated Amount	Share of Total Project Financing	Financed Generation	Financed Capacity	Direct Emissions Avoided ²²	Indirect Emissions Avoided ²³	Financed Emissions Avoided	Financed Emissions Avoided/M AED
			M AED	%	MWh/year	MW	tCO ₂ e/year	tCO ₂ e/year	tCO ₂ e/year	tCO ₂ e/year/M AED
Project #1	United Arab Emirates	Solar CSP + PV	497.01	2.99	101,989	28	1,500,616	316,929	54,348	109.35
Project #2	United Arab Emirates	Solar PV	44.36	2.10	36,454	19	804,064	169,818	20,496	462.07

Appendix 2: Impact of Clean Transportation Projects

Project Name	Country	Technology	Fuel Type	Allocated Amount	Share of Total Project Financing	Tonne-kilometres Travelled	Financed Direct Emissions ²⁴	Financed Indirect Emissions ²⁵	Financed Emissions Avoided	Financed Emissions Avoided/M AED
				M AED	%	tkm/year	tCO ₂ e/year	tCO ₂ e/year	tCO ₂ e/year	tCO ₂ e/year/M AED
Project #3	United Arab Emirates	Train lines	Diesel	605.96	3.29	42,420,000,000	9,051	2,251	25,237	41.65

Appendix 3: Impact of Green Buildings Projects

Project Name	Country	Building Type	Allocated Amount	Gross Building Area	Average Share of Total Project Financing	Average Energy Intensity	Energy Reduction	Financed Direct Emissions	Financed Indirect Emissions	Financed Emissions Avoided	Financed Emissions Avoided/M AED
			M AED	m ²	%	kWh/m ²	MWh/year	tCO ₂ e/year	tCO ₂ e/year	tCO ₂ e/year	tCO ₂ e/year/M AED
Project #4	United Arab Emirates	Office	529.04	106,838	20.35	107	6,244	607	105	390.4	0.74
Projects #5-348	United Arab Emirates	Villa	553.22	101,195	93.08	110	4,791	2,436	431	1,228.6	2.22
		Townhouse	35.62	4,896	97.89	101	212	115	20	58.2	1.63
		Apartment	7.12	1,396	99.18	99	59	33	6	16.4	2.31

²² Direct emissions refer to the emissions directly avoided by displacing electricity from the grid.

²³ Indirect emissions are the emissions resulting from the extraction, refining and transportation of primary fuels, including transmission and distribution losses, before their use in the generation of electricity.

²⁴ Financed direct emissions refer to the financed part of project emissions.

²⁵ Financed indirect emissions refer to the financed indirect part of project emissions.

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