

# CARBON DISCLOSURE REPORT

Reporting Period:  
Up to July 16th 2023  
(End of Fiscal Year in Nepal)

FY 2022/23



At Laxmi Sunrise, we understand the pressing need to address climate change and its far-reaching consequences. As a signatory of the Partnership for Carbon Accounting Financing (PCAF) since December 2021, we have committed to quantifying and disclosing the greenhouse gas (GHG) emissions associated with our asset classes. This report presents an analysis of the carbon footprint of our Motor Vehicles, Mortgages, and Project Finance (Hydroelectricity) asset classes for the financial year 2022/23.

## PORTFOLIO OVERVIEW

As of July 2023, our Motor Vehicles amounted to \$33.70 Million, Mortgages stood at \$174.55 Million while our Project Finance (Hydroelectricity) amounted to \$145.34 Million. The analysis covered 85.97% (\$28.98 Million) of the Motor Vehicles and 92.92% (\$162.19 Million) of the Mortgages and 100% of Hydroelectricity exposure.

*\*Note: Exchange rate calculated at 1USD = NPR 131.77 as of 16th July 2023*



## EMISSIONS BREAKDOWN

The report reveals that our financed passenger vehicles and vans were responsible for 1,846.94 tCO<sub>2</sub>e (tonnes of carbon dioxide equivalent) emissions, while financed buses accounted 1,797.57 tCO<sub>2</sub>e. Residential buildings financed through our mortgage loans emitted 12,320.60 tCO<sub>2</sub>e. In total, the emissions from vehicles and residential properties financed by Laxmi Sunrise amounted to absolute emissions of 15,965.11 tCO<sub>2</sub>e while the avoided emissions from Project Finance (Hydroelectricity) was 25,134.18 tCO<sub>2</sub>e in the year 2022/23.












## EMISSIONS INTENSITY

The emission intensity, which represents the amount of carbon dioxide equivalent emissions generated per unit of financial activity, stood at 125.72 tCO<sub>2</sub>e/Million for our Motor Vehicles and 74.14 tCO<sub>2</sub>e/Million for our Mortgages. The avoided emission intensity stood at 172.05 tCO<sub>2</sub>e/Million for our Project Finance (Hydroelectricity).



## METHOD OF CALCULATING GHG EMISSIONS

Our GHG emissions calculations follow the PCAF Global GHG Accounting Standards for the Financial Industry, ensuring a standardized and transparent approach.

FINANCED EMISSION	REGION	COUNTRY	YEAR	METHODOLOGY OPTION	
 Motor Vehicles, Mortgages and Project Finance (Hydroelectricity)	 Asia Pacific	 Data for Passenger Car, Van, Mortgages and PF* (Hydroelectricity) loans: <b>Nepal</b> Data for Buses: <b>India</b>	 MV* Loan: 2020 Mortgages & PF* (Hydroelectricity) Loan: 2019	 For Passenger Car, Van: 2b For Bus: 3a	
SCORE	MORTGAGE TYPE	VEHICLE TYPE	FUEL TYPE	PF TYPE	SOURCE
 Score: 3 and 4 Weighted Average Data Score: 3.03	 Residential Building	 Passenger Car, Vans and Buses	 Petrol, Diesel, Electric	 Hydroelectricity	 PCAF MV* Data: 2020, EEA Passenger Vehicles, Mortgages: Guidehouse insights, PF* (Hydroelectricity): UNFCCC

Note I:

\*MV: Motor Vehicles | \*PF: Project Finance

Note II:

Incase of Physical Activity Based emission factor for hydropower projects, the PCAF data base provided factors specific to Nepal is based on Combined Margin Grid Emission Factor.





### SCORE 3 (FOR PASSENGER VEHICLES AND VANS)

$$\sum_{v,f} \frac{\text{Outstanding Amount}_v}{\text{Total Value of Origination}_v} \times \text{Distance Travelled}_x \times \text{Efficiency}_{v,f} \times \text{Emission Factor}_f$$

Where x is the estimated distance travelled of motor vehicle with model v, based on regional statistical data, and where f is the fuel type of motor vehicle model v.

Estimated vehicle-specific emissions, where emissions are calculated based on estimated vehicle distance traveled for a specified vehicle with data collected from official statistics.

**Option 2b:** Distance traveled is estimated based on regional statistical data. Emissions are calculated using estimated fuel consumption and fuel type-specific emission factors.

*\*Note: For Score 3 (Passenger Vehicles and Vans) since emission factors for some of the vehicles weren't provided, we have utilized proxy vehicles of same type.*



### SCORE 4 (FOR BUSES)

$$\sum_{v,f} \frac{\text{Outstanding Amount}_v}{\text{Total Value of Origination}_v} \times \text{Distance Travelled}_x \times \text{Efficiency}_{t,f} \times \text{Emission Factor}_f$$

Where x is the estimated distance travelled of Motor Vehicles with model v of type t, based on regional statistical data, and where f is the fuel type of motor vehicle model v.

Vehicle emissions are calculated based on vehicle efficiency and fuel type (fossil or electricity) from known vehicle type (vehicle make and model are unknown) and estimated vehicle distance traveled derived from local or regional statistical data.

**Option 3 a:** Distance traveled is estimated based on local or regional statistical data. Emissions are calculated using estimated fuel consumption and fuel type-specific emission factors.

*\*Note: For Score 4, bus data was not provided for Nepal, thus we have utilized the average emission data of buses from India.*



## MORTGAGES

This asset class includes on-balance sheet loans for specific consumer purposes—namely the purchase and refinance of residential property, including individual homes and multi-family housing with a small number of units. This definition implies that the property is used only for residential purposes and not for commercial activities.

### SCORE 4

$$\sum_{b,e} \frac{\text{Outstanding Amount}_b}{\text{Property Value at Origination}_b} \times \frac{\text{Estimated Energy Consumption from Statistics}_{b,e}}{\text{Floor Area}_b} \times \text{Average Emission Factor}_e$$

Where b is the building included in the mortgage, and e is the primary energy source used in the buildings.

The emission factors for PCAF data quality score 4 are stated in the Standard to be estimates of building energy consumption per floor area based on building type and location-specific statistical data, and floor area financed. The PCAF Database goes one step further and provides emission factors that combine estimated energy consumption from statistics together with regional average emissions from energy consumption.

**Option 2b:** Estimated building energy consumption per floor area based on building type and location-specific statistical data AND the floor area are available. Emissions are calculated using estimated building energy consumption and average emission factors specific to the respective energy source

We assign a data quality score 3 (option 2b) to Motor Vehicles (Passenger Vehicles and Vans), a score 4 (option 3a) to buses and Score 4 (option 2 b) to Mortgages. This decision aligns with the General Description of data quality provided by PCAF.

## WEIGHTED DATA QUALITY SCORE

Data quality score is likely to vary depending on the type of assets and emissions categories. To precisely represent data quality, financial institutions follow the financed emissions standard, which mandates normalizing data quality scores based on each asset class and sector's outstanding loan. This ensures a fair comparison and disclosure of the best data quality representation.

where  $i = \text{borrower or investee}$

$$\frac{\sum_{i=1}^n \text{Outstanding Amount} \times \text{Data Quality Score}_i}{\sum_{i=1}^n \text{Outstanding Amount}_i}$$



## AVOIDED EMISSIONS IN PROJECT FINANCE (HYDROELECTRICITY)

Emission reductions that the financed project produces versus what would have been emitted in the absence of the project (the baseline emissions). In the context of the Financed Emissions Standard, avoided emissions are only from renewable power projects.

Avoided emissions related to renewable power projects are the reduction in emissions of the financed project compared to what would have been emitted in the absence of the project (the baseline emissions).

### SCORE 3

$$\sum_c \frac{\text{Outstanding Amount}_c}{\text{Total Equity} + \text{Debt}_c} \times \text{Production}_c \times \text{Emission Factor (Avoided Emissions)}$$

## PCAF DISCLOSURE REPORT

Asset Class	Total Asset Class (in \$USD)*	Total Outstanding Loans Covered (in \$USD)*	Coverage (%)
<b>Motor Vehicles</b>	<b>33,708,599.68</b>	<b>28,988,357.50</b>	<b>85.97</b>
Passenger Vehicles and Vans		27,879,402.47	
Buses		1,108,955.03	
<b>Mortgages</b>	<b>174,559,538.47</b>	<b>162,194,474.19</b>	<b>92.92</b>

Asset Class	Absolute Emissions (TCO <sub>2</sub> e)		Scope 1 and Scope 2	Emission Intensity (tCO <sub>2</sub> e/Million \$)*	Data Quality Score	Weighted Data Quality Score
	Scope 1 tCO <sub>2</sub> e	Scope 2 tCO <sub>2</sub> e				
<b>Motor Vehicles</b>	<b>3,642.46</b>		<b>3,644.51</b>	<b>125.72</b>		<b>3.04</b>
Passenger Vehicles and Vans	1,844.88	2.06	1,846.94		3.00	
Buses	1,797.57		1,797.57		4.00	
<b>Mortgages</b>	<b>8,404.23</b>	<b>3,916.37</b>	<b>12,320.60</b>	<b>74.14</b>	<b>4.00</b>	

\*Note: After calculating outstanding loan covered for Option 3 and Option 4, weighted data quality score for Motor Vehicle Scope 1 and 2 is determined to be 3.04.

ASSET CLASS	Loans Covered (\$)*	Avoided Emissions (tCO <sub>2</sub> e)	Avoided Emissions Intensity (tCO <sub>2</sub> e/Million \$)*
<b>Project Finance (Hydroelectricity)</b>	<b>145,341,698.974</b>	<b>25,134.18</b>	<b>172.05</b>

\*Note: Exchange rate calculated at 1USD = NPR 131.77 as of 16th July 2023



## COMMITMENT TO SUSTAINABLE GROWTH

At Laxmi Sunrise, we are committed to driving sustainable growth and contributing to the achievement of the Paris Agreement and the United Nations Sustainable Development Goals (SDGs). We recognize the urgency of the climate crisis and are taking concrete steps to reduce our environmental impact:

### Financing Green Projects

We are actively increasing our investments in eco-friendly initiatives, such as electric vehicles, renewable energy, sustainable agriculture, and green micro, small, and medium enterprises (MSMEs).

### Transparency and Measurement

We are committed to increasing transparency around our financed emissions by measuring and reporting the carbon footprint of other asset classes.

### Client Engagement

We are actively engaging with our clients to support their transition towards decarbonization and encourage sustainable practices.

### Internal Carbon Footprint

We are measuring, reporting, and disclosing our bank's internal carbon footprint to drive continuous improvement.

Furthermore, we are implementing energy-efficient technologies, adopting eco-friendly office supplies, and utilizing digital tools to minimize paper consumption, all in an effort to reduce our direct environmental impact.





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*Laxmi Sunrise pledges to work tirelessly towards a greener and more sustainable future, addressing the pressing challenge of climate change and environmental risk head-on.*

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