



# **Raiffeisen Bank Romania Green Bond Report**

April 2022

## Introduction

...3

## Summary

...5

## Green Bond Framework

...8

---

## RBRO Allocation Report

...10

### Green Buildings

...11

### Clean Transportation

...15

### Sustainable Agriculture

...16

---

## RBRO Impact Report

...17

### Green Buildings

...18

### Clean Transportation

...22

---

## Methodology

...25

Methodology for selecting and allocating green eligible loans

...26

Methodology for calculating the environmental impact (CO<sub>2</sub> and energy savings)

...29

## Independent Limited Assurance Report

...32

## Disclaimer

...35

# Introduction

**In its assessment from October 2021\*, Moody's rating agency evaluates Romania's ESG (Environment, Social and Governance) credit impact score as moderately negative, balancing low exposure to environmental, moderate social risks and deteriorating institutions.**

Romanian economy has currently (2019) among the lowest greenhouse gases emissions (tCO<sub>2</sub> per capita) within EU, however the emission intensity (kCO<sub>2</sub>/EUR2010 GDP) is among highest (see *charts on the next page*). Among the main reasons for this outcome have been the deindustrialization process that the Romanian economy underwent in the post communism transition period, as a result of chronic underinvestment and increasing share of (retail and wholesale) trade in overall economic activity. Following EU accession, these trends have started to reverse with higher productive investments in industry and services leading to incremental improvements in emissions intensity and energy efficiency. The share of renewable energy sources has increased over the past decade, standing at around 24% in total energy consumption (2019), above EU average of approx 20%.

Still, a lot more needs to be done in order to ensure Romania's transition to a sustainable and low-carbon emissions economy, in line with EU's Fit for 55 and Paris Agreement objectives. According to CNSM analysis\*\*, the stakes for addressing the climate change effects on the Romanian economy are high, both from an opportunity but also from a cost perspective (in case of delayed transition). CNSM estimates the overall volume of investments from public and private sources into green projects at around 60 bn euros over the next decade until 2030. An important part of these investments could be financed from EU funds (MFF and NextGen), while private sector co-financing, will play a key role as enabler for the absorption of such funds. Successful implementation of green projects funded from EU funds could have a positive impact on economic growth of up to 5.7 p.p. and lead to a decrease in unemployment rate of 1 p.p. over the period 2021-2026, based on CNSM analysis.

In this context, our bank's mission is to support and substantially contribute to Romania's journey to a green economy by implementing our three-pillar sustainability strategy:

-  **responsible banker**
-  **fair partner**
-  **active corporate citizen**

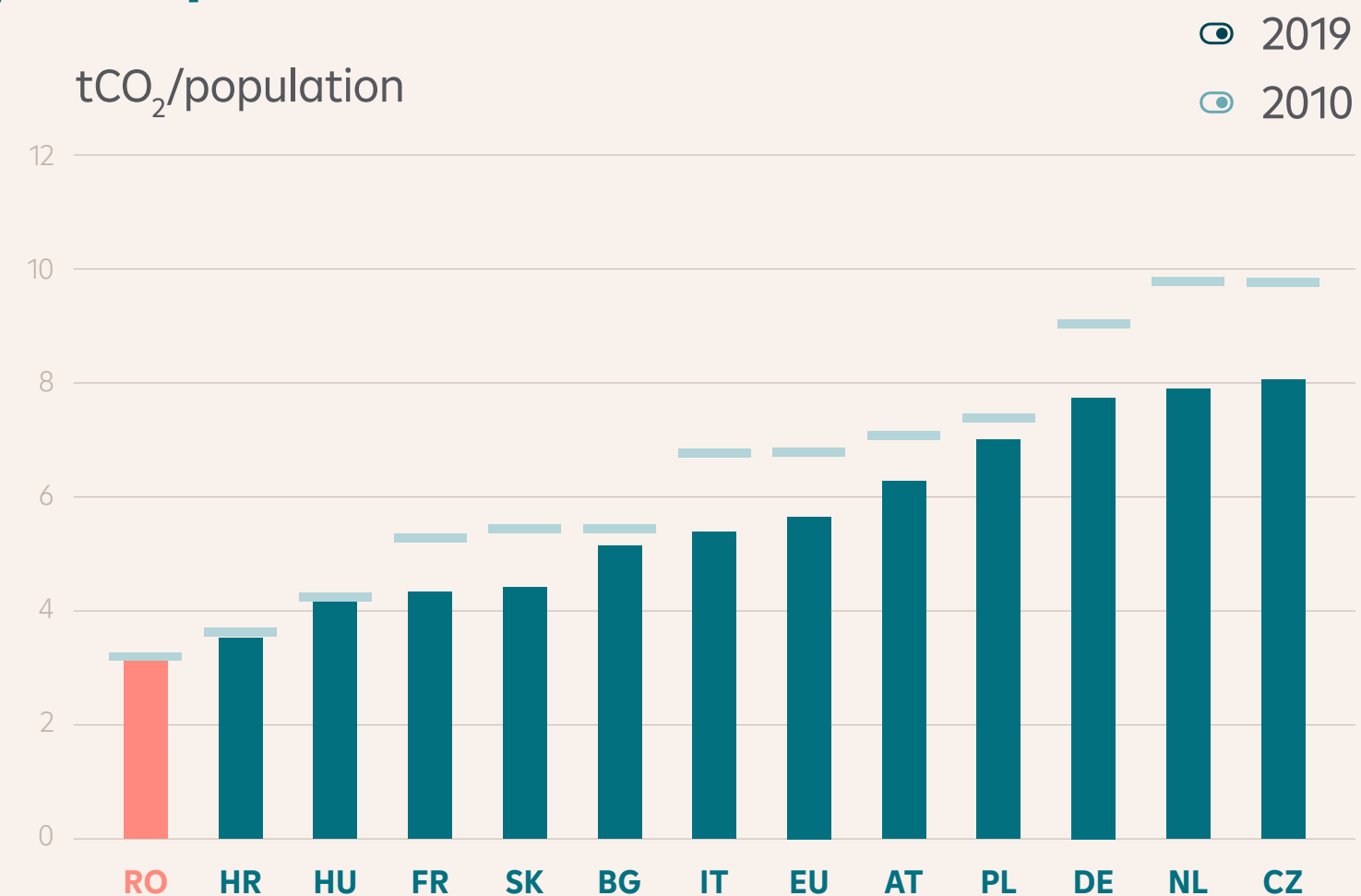
\* Research: Rating Action: Moody's changes Romania's outlook to stable; affirms Baa3 rating - Moody's ([moodys.com](https://www.moodys.com))

\*\* Comitetul Național pentru Supraveghere Macroprudențială, 2021 – Analiza Grupului de lucru CNSM pentru sprijinirea finanțării verzi ([link here](#))

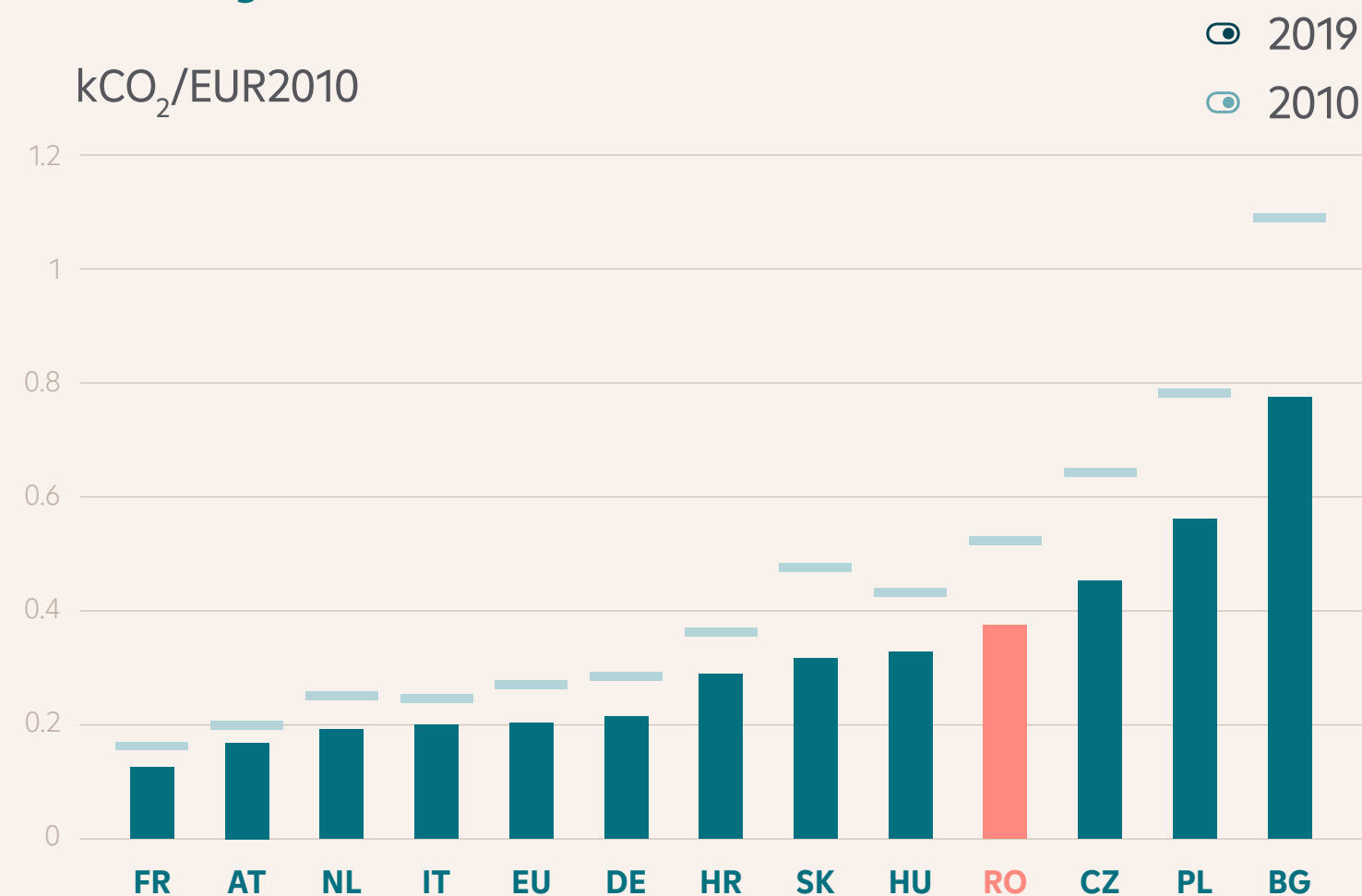
We have committed to financing responsibly, therefore RBRO performs a thorough analysis on every credit application it receives. Our bank has implemented a policy regarding social and environmental risk management since 2014. The policy applies to all sectors and is used to evaluate potential legal person clients. In addition, we use all reasonable efforts to maintain our Coal Related Activities Exposure\* near at zero at all times.

Source: Odyssee database

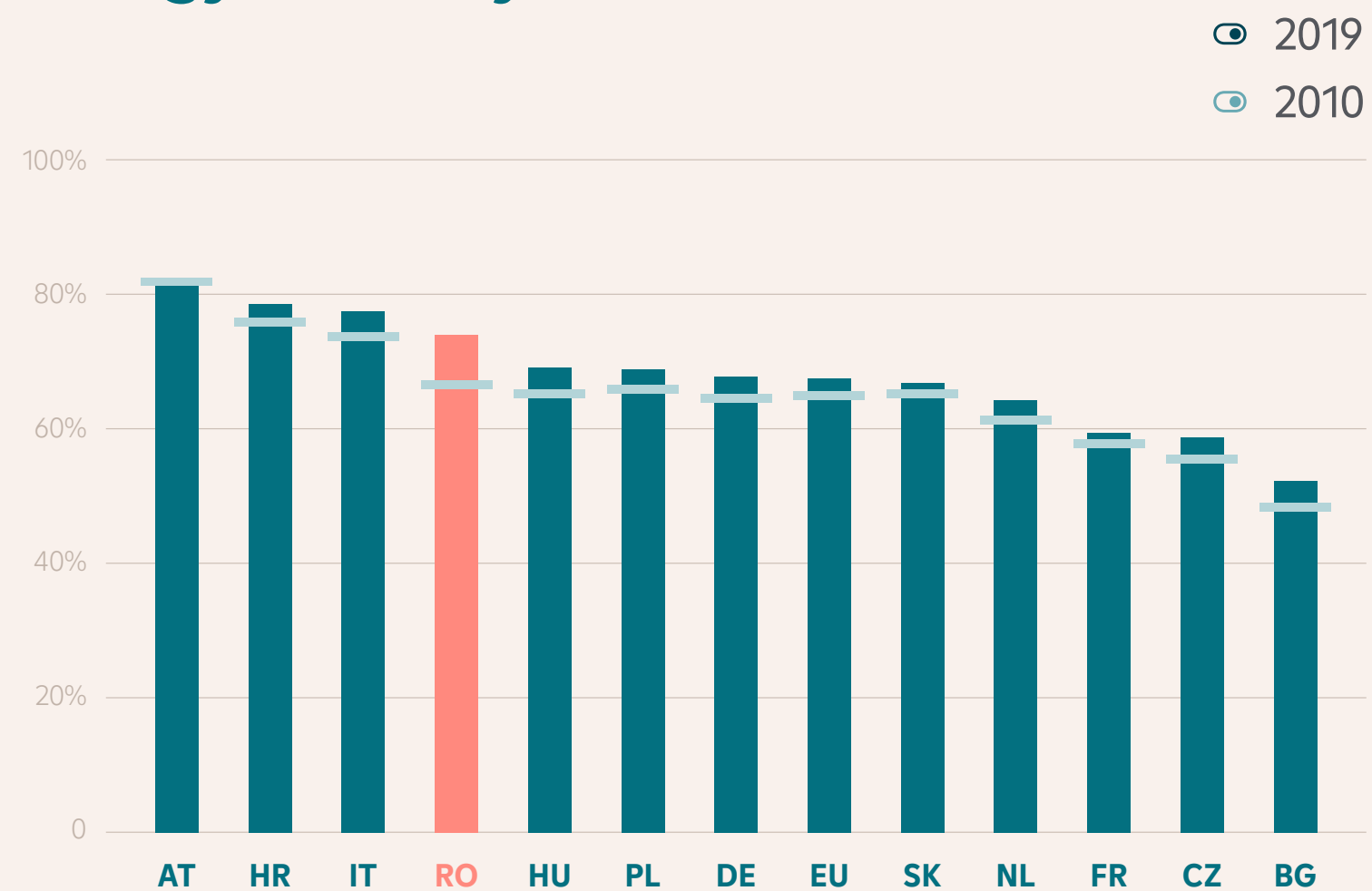
### GHG emissions per capita



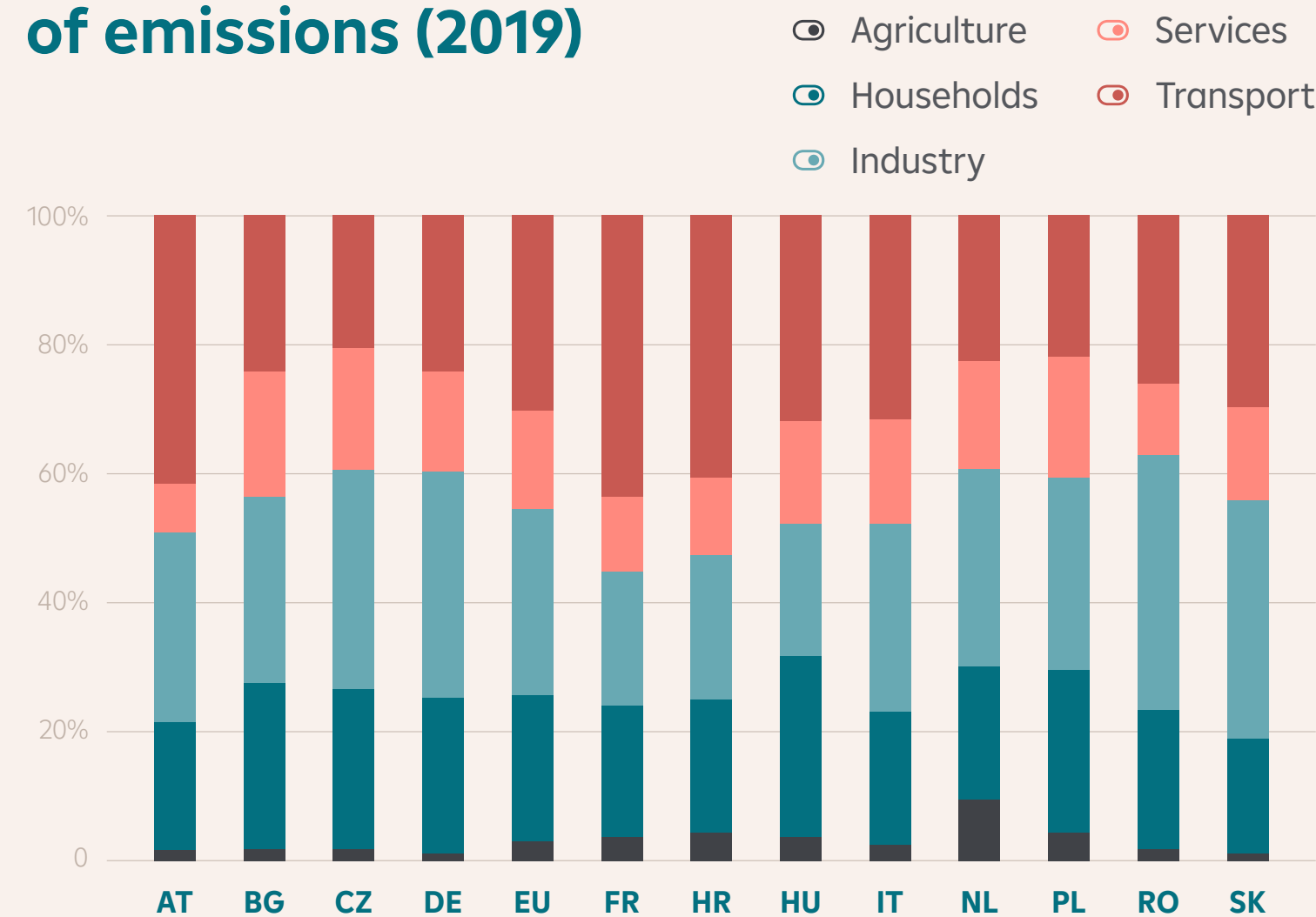
### Emissions intensity



### Final/Primary energy intensity






### Sectorial structure of emissions (2019)



\* Coal Related Activities means activities which relate to long-term (more than 36 months) project finance and/or corporate finance for the development of new coal-related projects including coal-mining, coal transportation, as well as infrastructure services exclusively dedicated to support any of these activities, and coal-fired power plants. It excludes captive coal-fired power plants used for industrial applications such as mining, smelters, cement or chemical industries, etc.

# Summary

## Green Bonds issued

ISIN	Rank	Currency	Issue amount <i>RON mn</i>	Issue amount <i>EUR mn equiv.</i>	Issue date	Maturity	Link stock exchange
XS2339508587	Senior Preferred	RON	400.575 	80.98	14-May-21	14-May-26	BVB <a href="https://tinyurl.com/BVB-RBRO26">tinyurl.com/BVB-RBRO26</a> LUXSE <a href="https://tinyurl.com/LUXSE-RBRO26">tinyurl.com/LUXSE-RBRO26</a>
XS2349343256	Senior Non-Preferred	RON	1,207.500 	244.10	11-Jun-21	11-Jun-28	BVB <a href="https://tinyurl.com/BVB-RBRO28">tinyurl.com/BVB-RBRO28</a> LUXSE <a href="https://tinyurl.com/LUXSE-RBRO28">tinyurl.com/LUXSE-RBRO28</a>
<b>Total</b>			<b>1,608.075</b> 	<b>325.07</b>			

## Allocation summary as of Jan 2022

Total amount of allocated green loans:

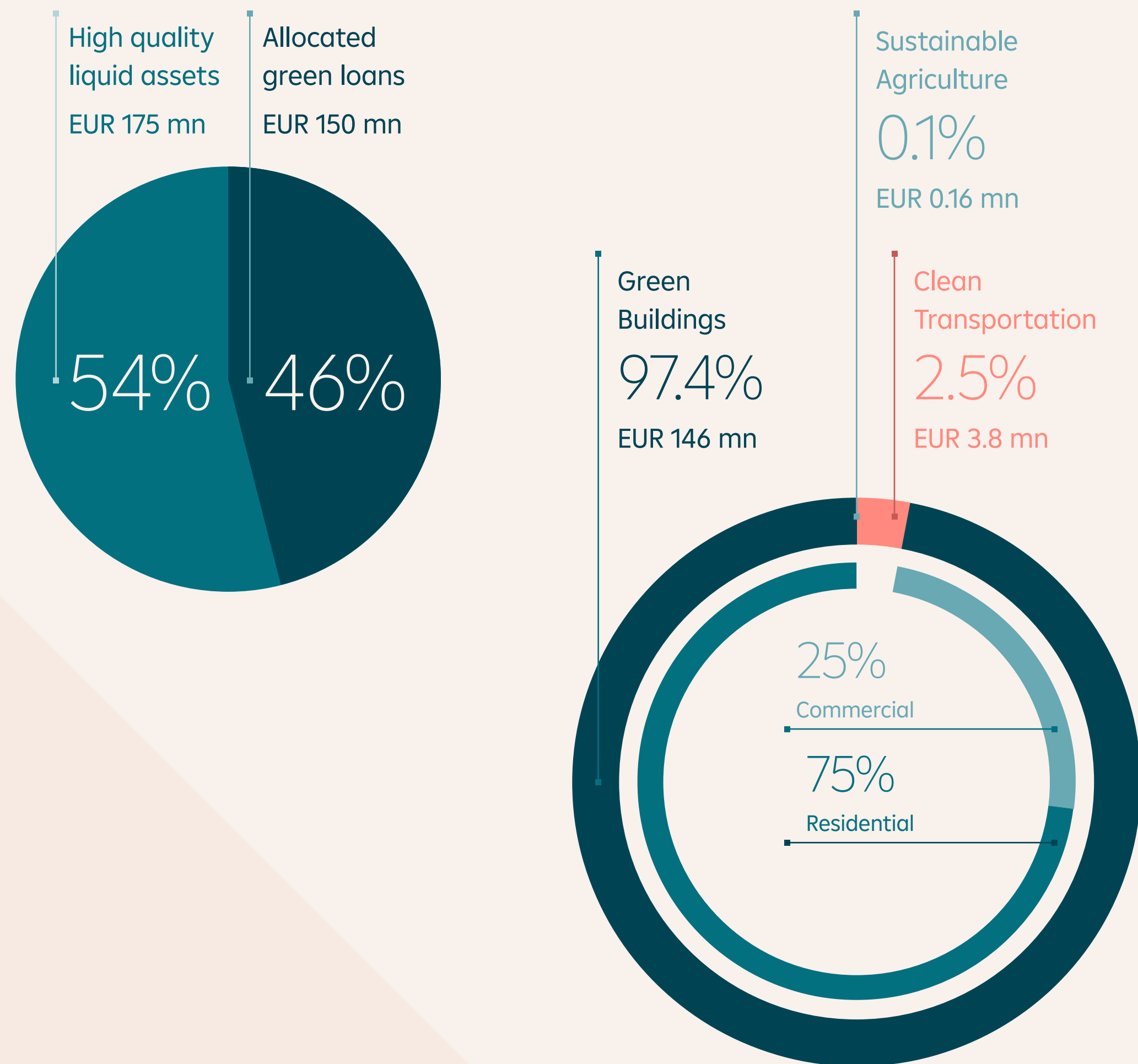
**EUR 150 mn**

Number of allocated loans:

**2,062**

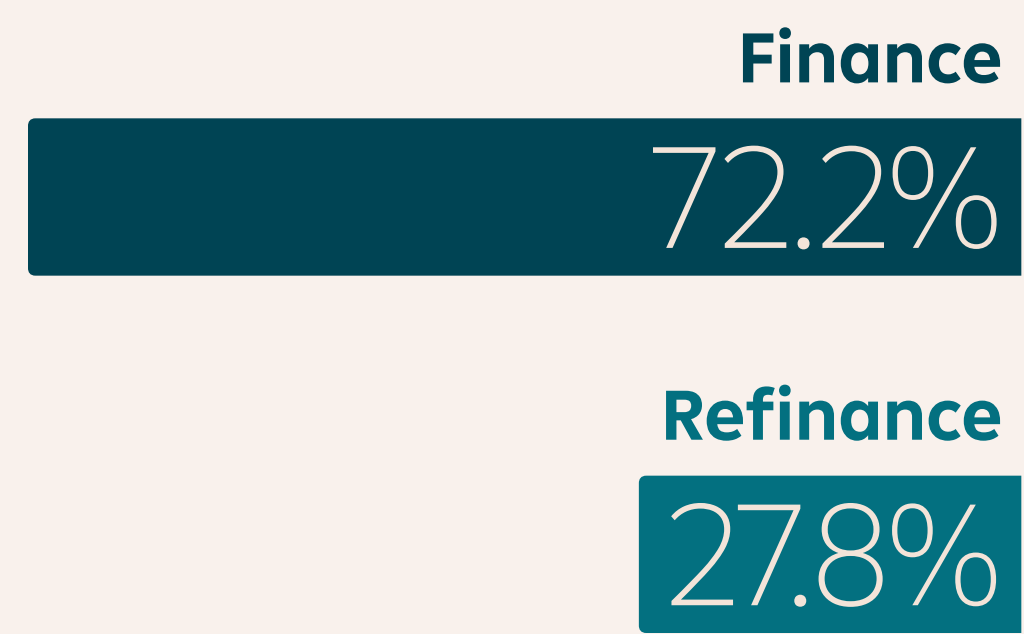
## Structure of green bonds use of proceeds

Summary



Asset category	Category type	Allocated green loans at 31 Dec. 2021 <i>EUR mn</i>	Allocated green loans at 31 Jan. 2022 <i>EUR mn</i>	Number of loans as of 31 Jan. 2022	Allocated amount at 31 Jan. 2022 %
Green Buildings	Apartment	84.86	88.83	1,681	59.2
	House	19.91	20.98	271	14.0
	Warehouse	32.35	32.01	2	21.3
	Office	3.06	3.03	1	2.0
	Production facility	1.23	1.19	1	0.8
Clean Transportation	Electric car	1.94	1.89	84	1.3
	Hybrid car	0.58	0.57	19	0.4
	Electric Locomotive	1.36	1.34	1	0.9
Sustainable Agriculture	Organic farming	0.15	0.16	2	0.1
<b>Total</b>		<b>Ⓐ 145.44</b>	<b>Ⓐ 150.00</b>	<b>2,062</b>	<b>100</b>

### Share of finance and refinance loans



## Impact summary for the allocated green loan portfolio as of Jan 2022



1,985 tCO<sub>2</sub> annually saved through EUR 150 mn green loan portfolio



Annual CO<sub>2</sub> reduction per EUR 1 mn invested: 13.25 t



Equivalent to green-house gas emissions from:  
1,026 passenger cars driven for 1 year or 11,611,734 km driven in 1 year

### CO<sub>2</sub> emissions and energy savings by asset category

Asset category	Category type	tCO <sub>2</sub> savings per year	CO <sub>2</sub> savings <i>in %</i>	Final energy savings per year <i>in megawatt hour</i>	Final energy savings <i>in %</i>	Primary energy savings per year <i>in megawatt hour</i>	Primary energy savings <i>in %</i>	Area <i>ha</i>
Green Buildings	Residential	1,273	64	14,906	46	20,194	46	...
	Non-residential	561	28	17,154	54	23,239	54	...
Clean Transportation	Passenger cars	86	4	...	...	...	...	...
	Electric Locomotive	64	3	...	...	...	...	...
Sustainable agriculture	Organic farming	...	...	...	...	...	...	550
<b>Total</b>		<b>1,985</b>	<b>100%</b>	<b>32,060</b>	<b>100%</b>	<b>43,433</b>	<b>100%</b>	<b>550</b>

### Compliance of allocated green mortgages portfolio with EU Taxonomy's criteria for substantial contribution and with national NZEB standards for CO<sub>2</sub> emission

Criteria	Outstanding amount <i>EUR mn</i>	% of total allocated green mortgages
EU Taxonomy Substantial contribution compliance	81	74%
NZEB CO <sub>2</sub> compliance	85	78%

# Green Bond Framework

What are green bonds?

Any type of bonds with specific use of proceeds, by which the issuer makes a commitment to the investors that the proceeds from the bonds will be invested in eligible projects with positive environmental benefits, issued in compliance with internationally recognized standards.

In a premiere for the Romanian capital market, Raiffeisen Bank Romania (RBRO) has successfully placed in 2021 the first two green bond issuances in local currency ever listed on the Bucharest Stock Exchange (BSE), the second issuance being also the largest corporate bond placed and listed on BSE. We have thus reaffirmed our

commitment to support Romania's climate agenda towards a sustainable and low carbon economy. At the same time, the bonds contribute to strengthening the own funds and eligible liabilities position of our bank, in line with regulatory requirements, thus enabling a sustainable development of our customer lending.

\*

Notes: BVB – Bucharest Stock Exchange, LUXSE – Luxembourg Stock Exchange; EUR equivalent issue amount is based on NBR official EUR/RON exchange rate from 31<sup>st</sup> January 2022

## Green Bonds issued

ISIN	Rank	Currency	Issue amount <i>RON mn</i>	Issue amount <i>EUR mn equiv.</i>	Issue date	Maturity	Link stock exchange
XS2339508587	Senior Preferred	RON	400.575	80.98	14-May-21	14-May-26	BVB <a href="https://tinyurl.com/BVB-RBRO26">tinyurl.com/BVB-RBRO26</a> LUXSE <a href="https://tinyurl.com/LUXSE-RBRO26">tinyurl.com/LUXSE-RBRO26</a>
XS2349343256	Senior Non-Preferred	RON	1,207.500	244.10	11-Jun-21	11-Jun-28	BVB <a href="https://tinyurl.com/BVB-RBRO28">tinyurl.com/BVB-RBRO28</a> LUXSE <a href="https://tinyurl.com/LUXSE-RBRO28">tinyurl.com/LUXSE-RBRO28</a>
<b>Total</b>			<b>1,608.075</b>	<b>325.07</b>			



The use of proceeds shall be fully allocated to eligible loans within 36 months of the bond issuances, in line with criteria set in RBRO's Green Bond Framework (2021) (GBF)\* Unallocated proceeds are invested in high liquid assets, such as money market instruments, cash or cash equivalent instruments. The eligible categories for the use of proceeds – Green Buildings, Renewable Energy, Energy Efficiency, Clean Transportation, Agriculture and Forestry – are aligned with those recognized by the Green Bond Principles 2018.

According to Sustainalytics, which provided a Second Party Opinion (SPO)\*\* on GBF, financing of the eligible categories defined in the GBF will lead to positive environmental impacts and advance the UN Sustainable Development Goals ("SDGs"), specifically SDGs 2, 7, 11 and 15.



## Zero Hunger



## Sustainable Cities and Communities



## Affordable and Clean Energy



## Life on Land

In line with market best practice, RBRO intends to limit the share of internally refinanced eligible loans allocated as use of proceeds for the green bonds to a maximum of 30%. Internally refinanced loans are defined as loans originated in the years prior to the issuance of the green bonds. A lookback period of maximum 3 years is to be considered in this regard. The age of the asset financed by a potential eligible loan (e.g. construction year of the building) is also taken into account when deciding to allocate a loan as use of proceeds. Additionally, only eligible performing loans (as of the reporting date) are allocated into the green bond loan portfolio.

\* [20210301-RBRO-Green-Bond-Framework \(raiffeisen.ro\)](#)

\*\* [20210302 RBRO Green Bond Framework Second-Party Opinion \(raiffeisen.ro\)](#)

# RBRO Allocation Report

Green Buildings

Clean Transportation

Sustainable Agriculture

# Green Buildings

RBRO supports the increase in energy efficiency and reduction of the carbon footprint of the Romanian buildings via two types of dedicated lending products:

1

## Retail

green mortgages aimed at acquisition of energy efficient homes, having either level A energy performance certificate (EPC) or ROGBC (Romanian Green Building Council) standard\*

2

## Corporate/ Project Finance

loans for development, acquisition and/or ownership of new or existing buildings in commercial and retail real estate sector meeting at least one eligibility criteria from the Green Bond Framework (internationally recognized green building certification or EPC level A)

## Summary statistics of the allocated green building loan portfolio as of 31<sup>st</sup> January 2022

Outstanding volume  
**EUR 146 mn**

Number of loans  
**1,956**

Floor area  
**385,556 m<sup>2</sup>**

\* [Romania Green Building Council - What is the RoGBC](#)

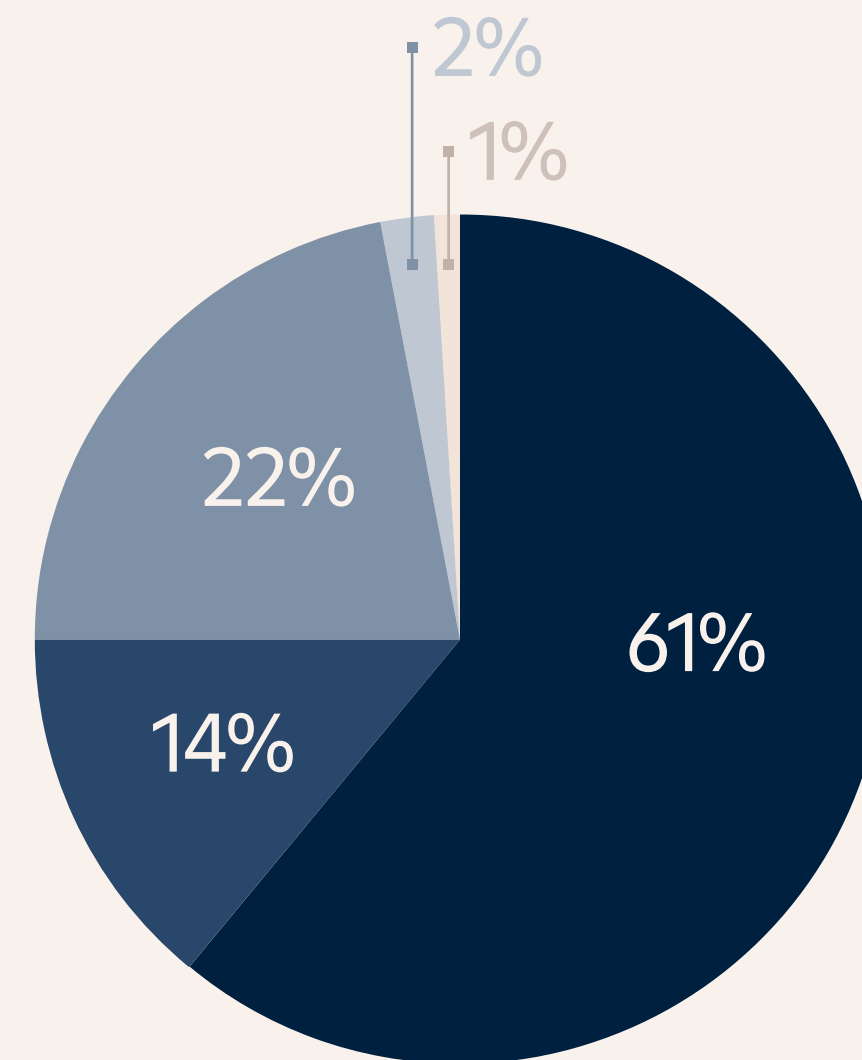
The outstanding amount of allocated green building loans as of 31<sup>st</sup> Jan 2022 stood at EUR 146 mio, representing approximately 97% of the total volume of allocated loans.

Green mortgages represent 75% of the total portfolio of green buildings, while 25% of the loan portfolio went towards financing of warehousing, office buildings and production facilities.

Most of the financed buildings have EPC level A certificate (78% of the allocated amount) and the rest BREEAM in use Excellent (22%) – out of which one building is undergoing the certification process.

## Outstanding amount by category type

- Apartment
- House
- Warehouse
- Office
- Production facility



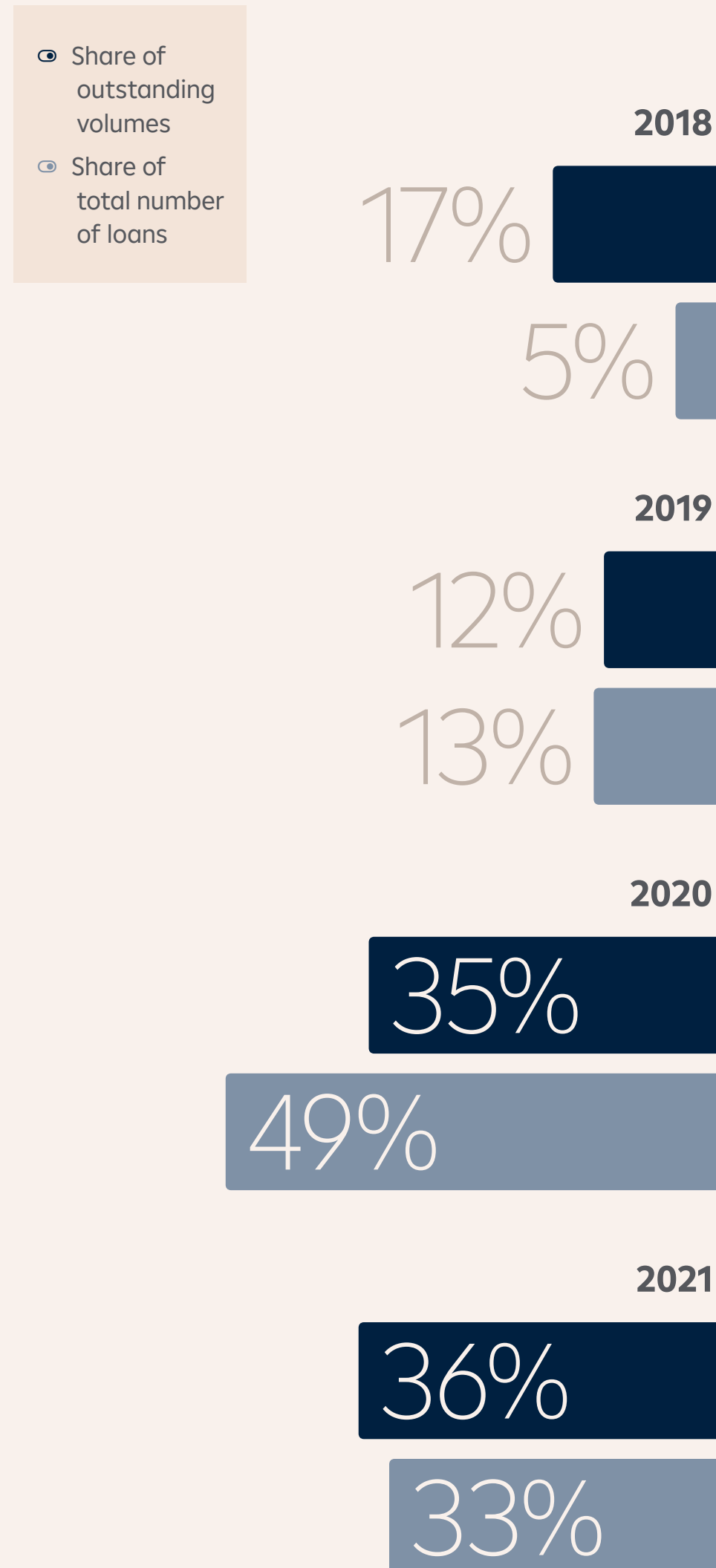
Asset category	Lending product	Category type	Allocated amount Jan. 2022 EUR mn	Number of loans	Floor area m <sup>2</sup>
Green Buildings	Mortgage	Apartment	88.83	1,681	92,296
		House	20.98	271	32,592
	Corporate/ Project Finance	Warehouse	32.01	2	247,633
		Office	3.03	1	7,360
		Production facility	1.19	1	5,675

Certification	Allocated amount EUR mn	No. of certified buildings	No. of buildings undergoing certification
BREEAM in use Excellent	32.01	1	1
EPC level A	114.04	1,954	-
<b>Total</b>	<b>146.05</b>	<b>1,955</b>	<b>1</b>

In terms of age of the buildings, we have allocated only eligible loans with construction year 2018 or later. For eligible loans originated in 2020, construction year has been estimated based on the assumptions described in the *Methodology section*. Most of the buildings (82%) financed by the allocated loans have been built in 2020 or 2021. (*chart on next page*).

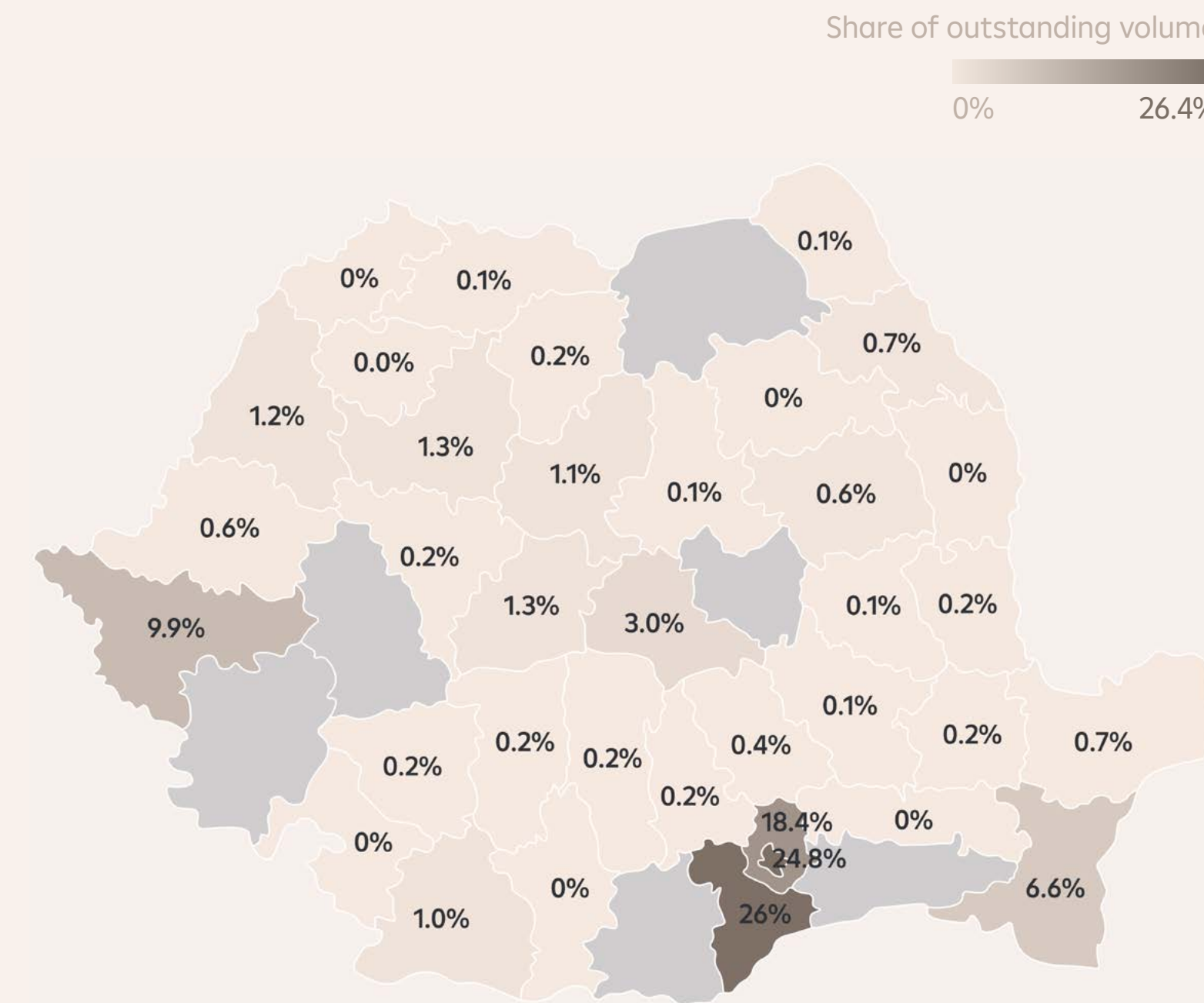
The total outstanding volume of eligible green mortgages (EPC level A) originated in year 2021 and 2022 (by end of January) stood at approximately EUR 139 mn, out of which we have allocated only EUR 90 mn to the green bond register, as the rest of the financed buildings had been built before 2018. The remaining allocated amount of 19 mn EUR was granted in 2020 leading to a total allocated amount of green mortgages of 109 mn EUR.

## Construction year of green buildings

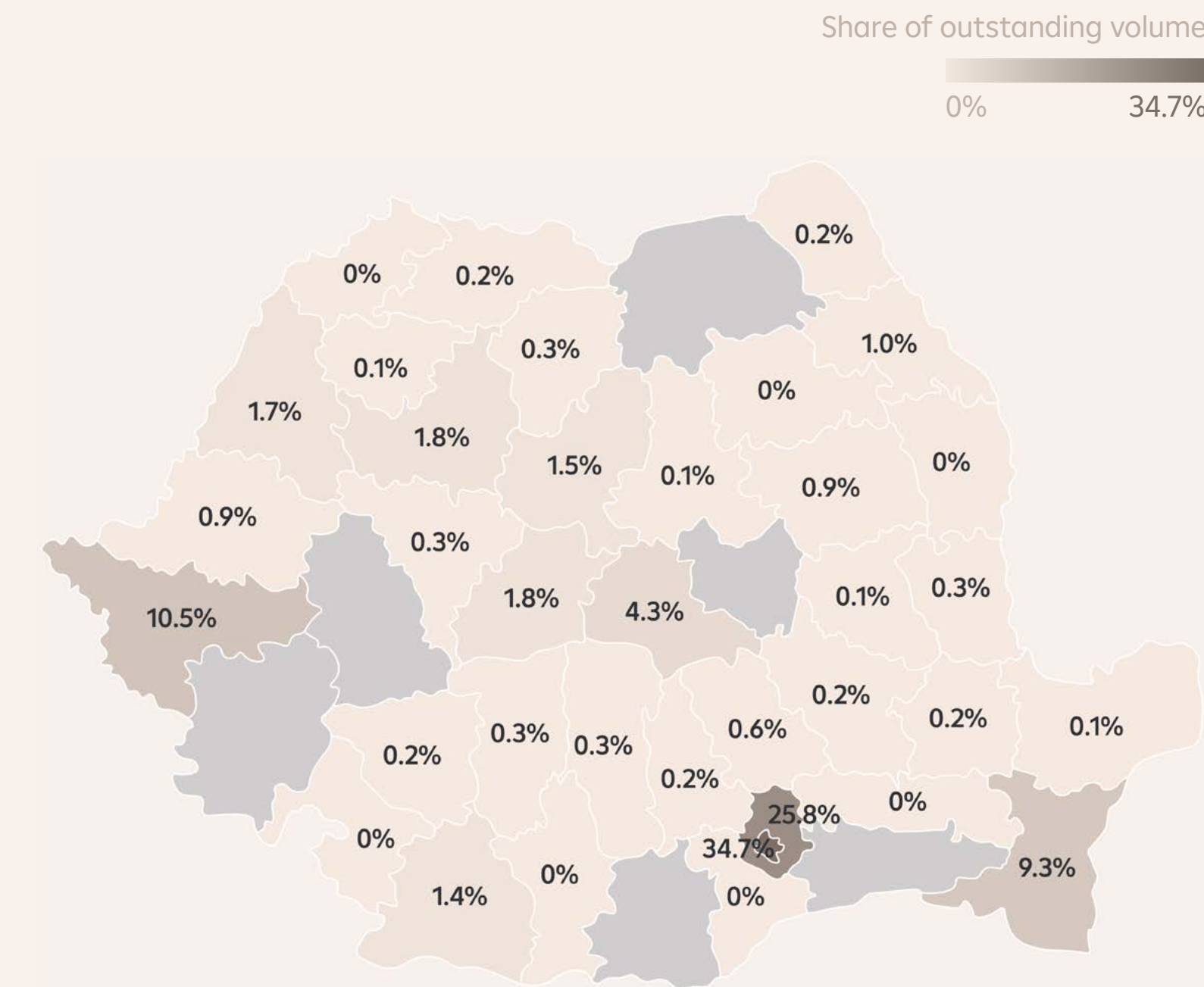


With regards to geographical distribution, 89% of the allocated loans finance buildings in 6 counties: Bucharest, Ilfov, Timis, Constanta, Brasov, Giurgiu. The allocated corporate/ project finance loans are financing warehousing and office buildings in Giurgiu and Timis counties.

### Geographical distribution of total allocated amount of green buildings



### Geographical distribution of allocated amount of green mortgages



## SHOWCASE

# Warehousing Project financed by RBRO



EUR 15.5 mio outstanding loan volume as of  
31<sup>st</sup> January 2022, signing date July 2021

**eMag Logistical Hub represents a state-of-the-art logistic capacity with a Gross Leasable Area of 127,388 sq m and Total Built Area of 129,691, considered a benchmark in CEE region.**

The project obtained an Interim BREEAM Excellent qualification for design stage, with an overall score of 71.5%, the immovable being designed to fulfill the requirements to optimize energy consumption and limit greenhouse gas emissions. The interim BREEAM EXCELENT certification points out the outperformance of the building, with a special mention regarding the categories water, where maximum score is achieved, while health and wellbeing, materials and pollution are also marking high scores.

The warehouse will be supplied with green energy through 40,000 sqm of solar panels. In addition, trees will be planted on an area of 100,000 square meters.

The Logistical Hub is located in the proximity of Bucharest, approximately 16 km west of the city center, a preferred location for warehouses due the well-developed logistical connectivity (close to A1 highway).

The finance transaction is an eloquent statement confirming the core strategy of Raiffeisen Bank for investing in sustainable assets and sustainable transactions, with the aim to support the transition to a greener economy. The investment has a social component, considering that eMag will integrate local SMEs, helping them to deliver their products in new markets, aspect that will lead to commercial expansion of the small and medium business segment and, also, generating jobs for the local community.

# Clean Transportation

## Summary statistics of the allocated loans financing clean transportation as of 31<sup>st</sup> January 2022

Outstanding volume  
**EUR 3.8 mn**

Number of vehicles  
**104**

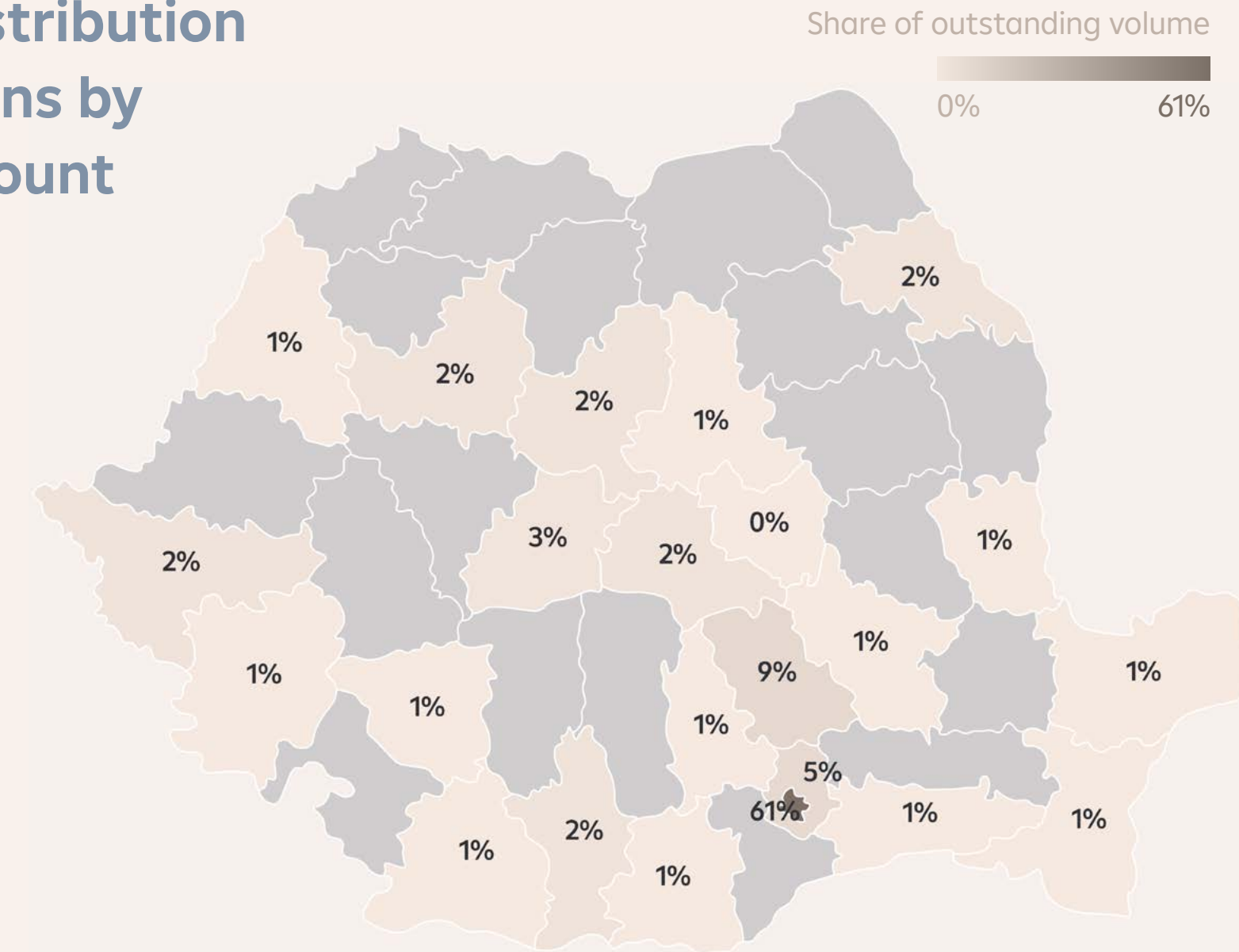
Type of vehicles  
**103** passenger cars  
**1** electric locomotive

In line with GBF, eligible loans can be originated also by Raiffeisen Leasing IFN (RLRO), a wholly owned subsidiary (99.99%) of RBRO. In 2021, RBRO granted a credit facility to RLRO, with outstanding amount of EUR 36.7 mio as of 31<sup>st</sup> January 2021, out of which RLRO financed through financial leasing the acquisition of EV, hybrid cars and an electric locomotive with total outstanding amount of EUR 3.8 mn.

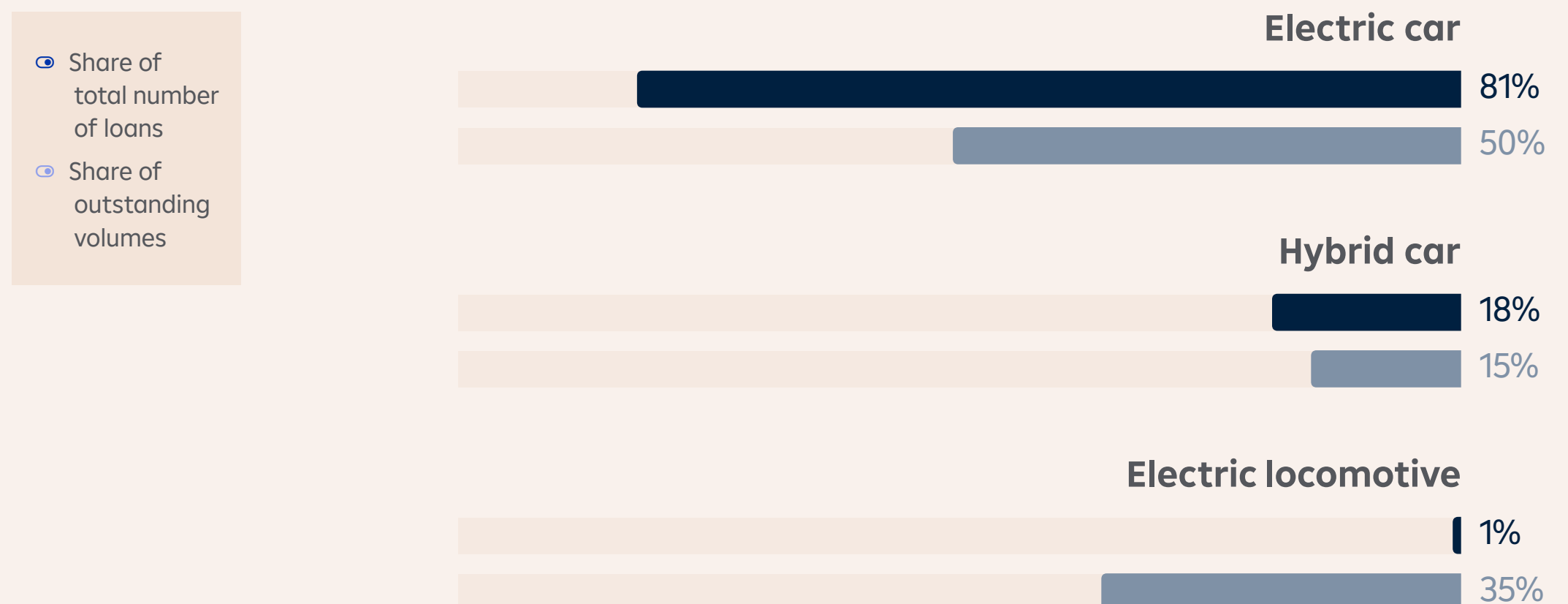
Electric cars accounted for the largest share (50%) of vehicles financed by the allocated loans, with Tesla EVs making up the biggest share of electric car sales (higher than 50%). The electric locomotive financed under this category will be used for freight transport with an estimated utilization between 8,000 and 10,000 km per month.

In terms of geographical distribution, 3 counties make up 75% of the total loans granted for clean transportation. Bucharest is the leading county – with 61% share - mainly due to the loan granted for the electric locomotive (58%), the rest representing financing of electric cars (30%) and hybrid cars (12%).

## Geographical distribution for allocated loans by outstanding amount



## Allocated loans by type of vehicle





## Sustainable Agriculture

RBRO supports its SME customers with activity in sustainable agriculture through dedicated working capital facilities, launched in the second half of 2021, aimed at developing or operating organic farms, certified or under certification by an authorized body, in line with Reg 834/2007\*.

Outstanding volume

**EUR 0.15 mn**

Cultivated area

**550.31 ha**

Certification:

**Organic farms  
"Ecocert"**

RO-ECO-007

\* [www.madr.ro/agricultura-ecologica/organisme-de-control-aprobate.html](http://www.madr.ro/agricultura-ecologica/organisme-de-control-aprobate.html)



# RBRO Impact Report

Green Buildings

Clean Transportation

# Green Buildings

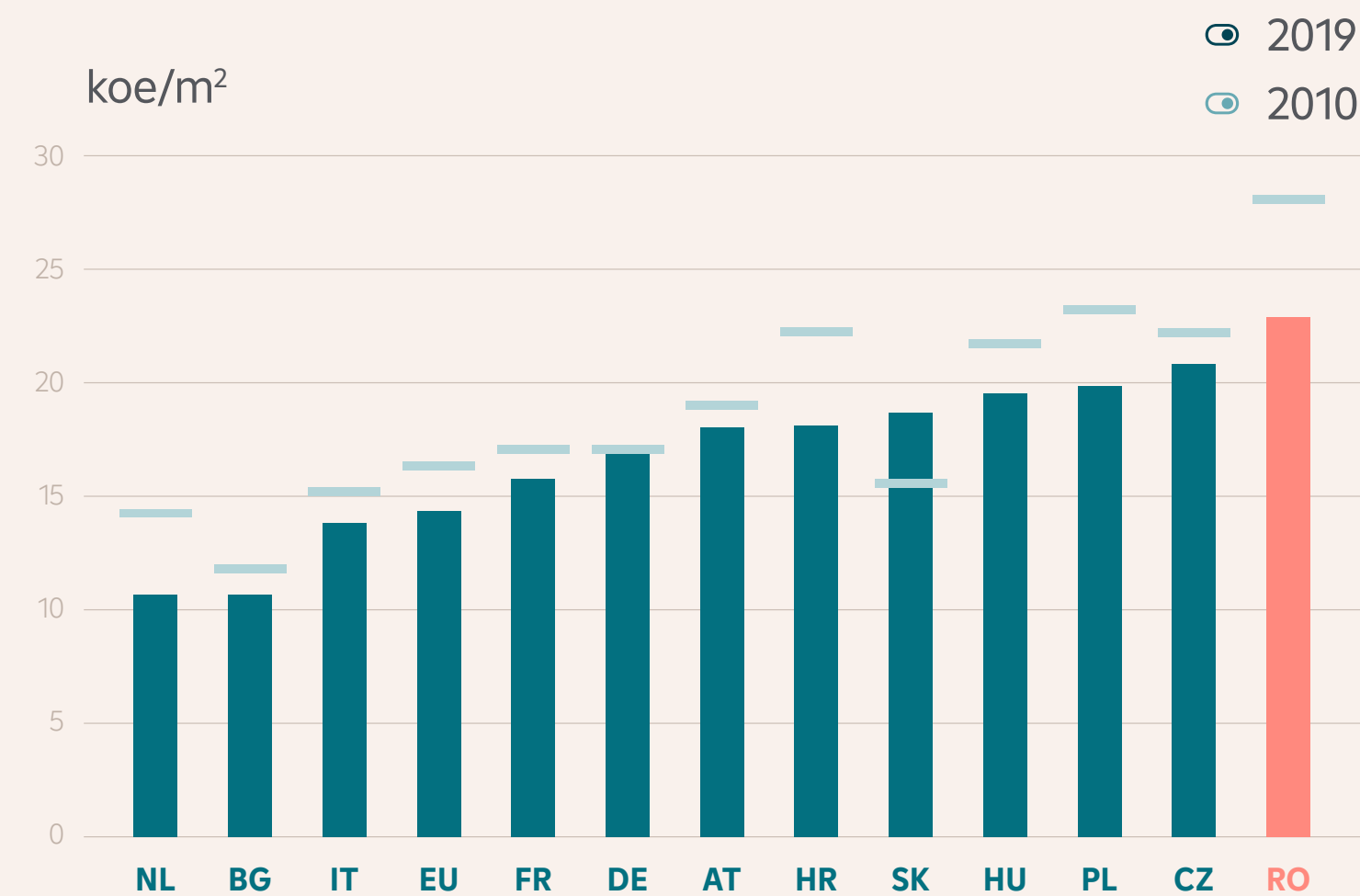
## CONTEXT:

According to European Commissions (EC)\*, buildings account for a large share of greenhouse gas emissions (36%) and consumed energy (40%) at EU level. Approximately 75% of EU building stock is considered inefficient and around 35% of the building stock is over 50 years old.

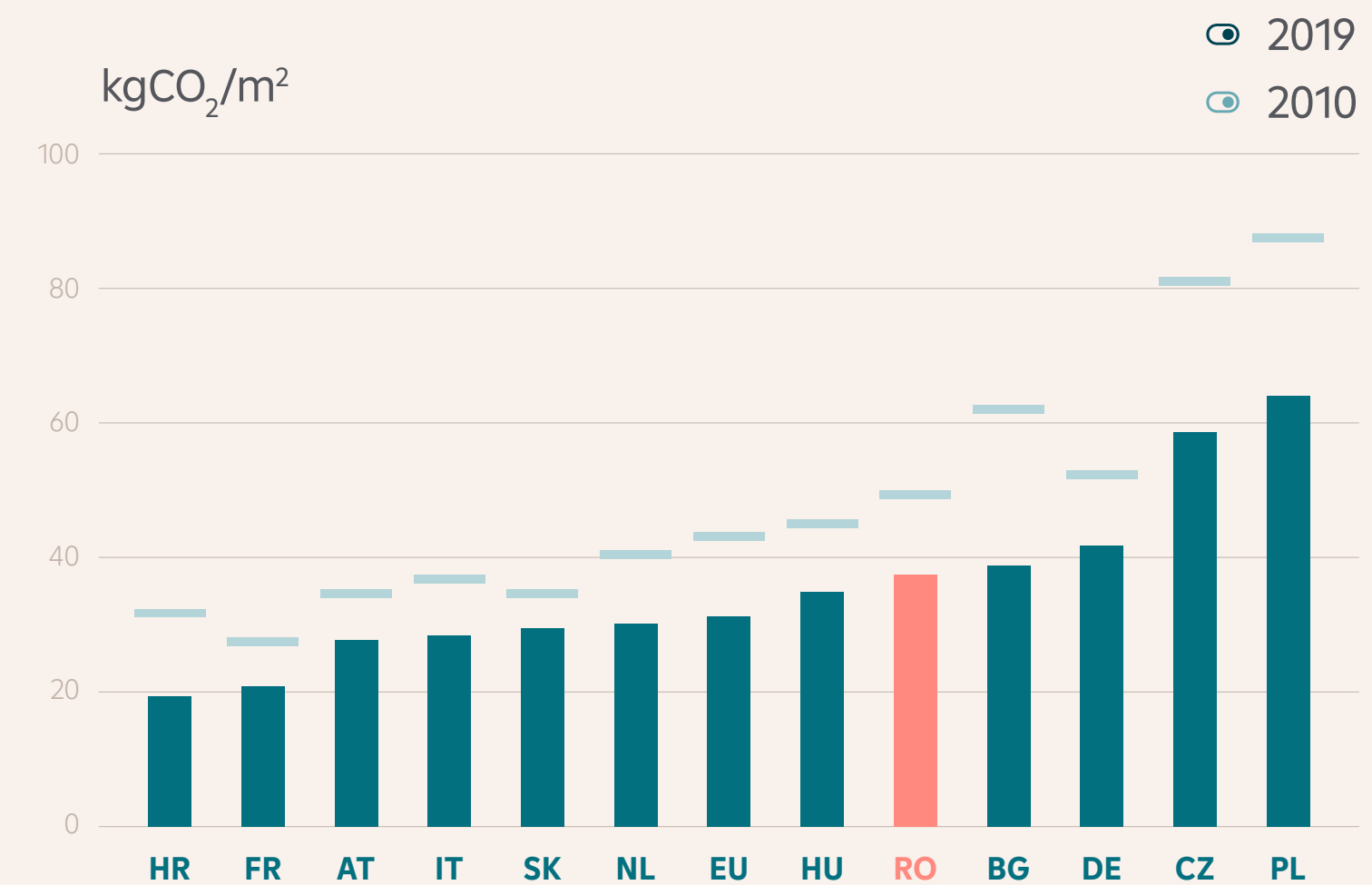
Within EU, Romania ranks among the countries with the lowest energy efficiency and highest CO<sub>2</sub> emissions in the residential sector. In this context, Romania needs to undergo a significant wave of renovation and enforcement of Near Zero Energy Building (nZEB) standards, in order to achieve EU's target of reaching at least 60% emissions reduction by 2030 in comparison to 2015 and climate neutrality by 2050.

\* [Energy performance of buildings directive \(europa.eu\)](https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=CELEX%3A32010L0036)

## Energy efficiency in the residential sector across EU



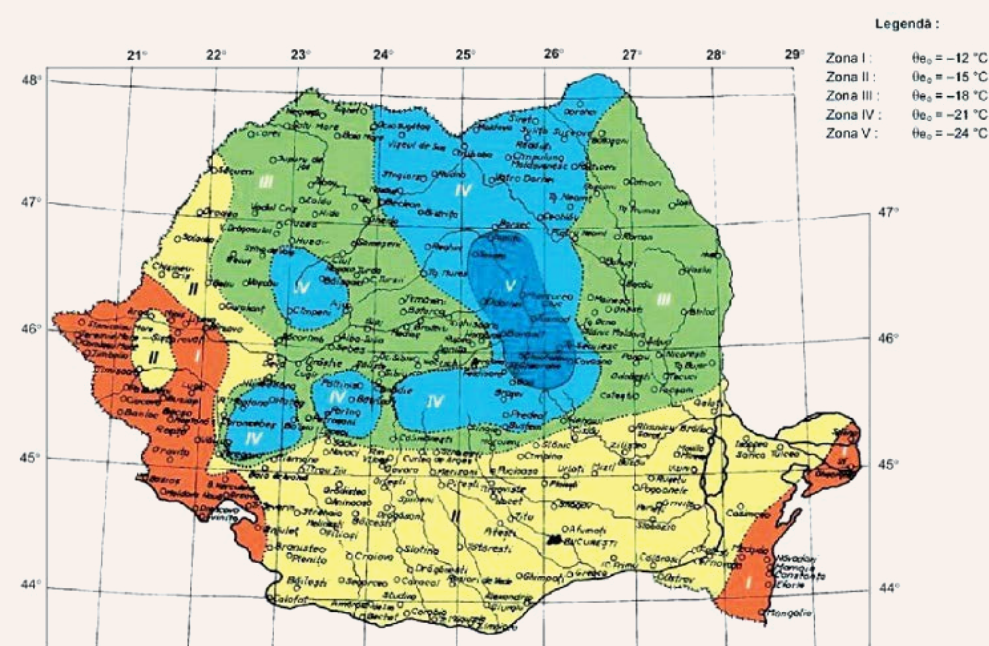
## CO<sub>2</sub> emissions in the residential sector across EU



Source: Odyssee databse

In this context, EU enforced via EU Directive 2010/31/EU (EU Energy Performance of Buildings Directive) the nZEB standard for all newly constructed buildings starting with 2021. In Romania this requirement has been transposed through Law 101/2020 amending Law 372/2005 on energy performance of buildings. The amended law allows however new buildings not to comply with this standard if the construction of a nZEB is not viable from a technical – economical point.

At national level, the nZEB standards (Primary energy consumption and CO<sub>2</sub> emissions) have been defined through Order 386/2016 of Ministry of Regional Development and Public Administration, based on the climatic region and type of building. A phase-in of the standards ensure a gradual transition towards more strict thresholds (see below table and chart).



**Table: nZEB standards for Romania**

Climate area	Horizon	Residential buildings (individual dwellings)		Residential buildings (apartments)		Office buildings		Buildings for education		Buildings for Healthcare	
		Primary energy kwh/m <sup>2</sup> year	CO <sub>2</sub> emissions kgCO <sub>2</sub> /m <sup>2</sup> year	Primary energy kwh/m <sup>2</sup> year	CO <sub>2</sub> emissions kgCO <sub>2</sub> /m <sup>2</sup> year	Primary energy kwh/m <sup>2</sup> year	CO <sub>2</sub> emissions kgCO <sub>2</sub> /m <sup>2</sup> year	Primary energy kwh/m <sup>2</sup> year	CO <sub>2</sub> emissions kgCO <sub>2</sub> /m <sup>2</sup> year	Primary energy kwh/m <sup>2</sup> year	CO <sub>2</sub> emissions kgCO <sub>2</sub> /m <sup>2</sup> year
I (-12°C)	2015	131	36	105	28	75	21	115	28	135	37
	31.12.2018	115	31	100	25	50	13	100	25	79	21
	<b>31.12.2020</b>	<b>98</b>	<b>24</b>	<b>93</b>	<b>25</b>	<b>45</b>	<b>12</b>	<b>92</b>	<b>24</b>	<b>76</b>	<b>21</b>
II (-15°C)	2015	147	42	112	30	93	27	135	37	155	43
	31.12.2018	121	34	105	28	57	15	120	25	97	27
	<b>31.12.2020</b>	<b>111</b>	<b>30</b>	<b>100</b>	<b>27</b>	<b>57</b>	<b>15</b>	<b>115</b>	<b>30</b>	<b>97</b>	<b>26</b>
III (-18°C)	2015	172	48	130	36	110	28	154	39	171	49
	31.12.2018	155	41	122	34	69	19	136	37	115	32
	<b>31.12.2020</b>	<b>145</b>	<b>40</b>	<b>111</b>	<b>30</b>	<b>69</b>	<b>19</b>	<b>136</b>	<b>37</b>	<b>115</b>	<b>32</b>
IV (-21°C)	2015	226	57	152	38	107	28	192	56	190	55
	31.12.2018	201	51	144	40	89	24	172	48	149	42
	<b>31.12.2020</b>	<b>189</b>	<b>42</b>	<b>127</b>	<b>35</b>	<b>83</b>	<b>24</b>	<b>170</b>	<b>49</b>	<b>142</b>	<b>41</b>
V (-24°C)	2015	248	78	178	48	127	29	210	58	214	58
	31.12.2018	229	57	152	38	98	28	192	56	174	49
	<b>31.12.2020</b>	<b>217</b>	<b>54</b>	<b>135</b>	<b>37</b>	<b>89</b>	<b>24</b>	<b>185</b>	<b>53</b>	<b>167</b>	<b>48</b>

# Impact report

The total annual avoided emissions related to RBRO's allocated green buildings loan portfolio (residential and non-residential) totaled 1,835 tCO<sub>2</sub>/year, representing approx. 13 tCO<sub>2</sub> per EUR 1 mio invested. In terms of the distribution of CO<sub>2</sub> emissions across the allocated green mortgage portfolio, almost 60% of the financed residential buildings generate yearly emissions below 24 kgCO<sub>2</sub>/m<sup>2</sup> more than 37% below the national emission benchmark (2019) for residential buildings (38 kgCO<sub>2</sub>/ m<sup>2</sup>) (more details in the Methodology section).

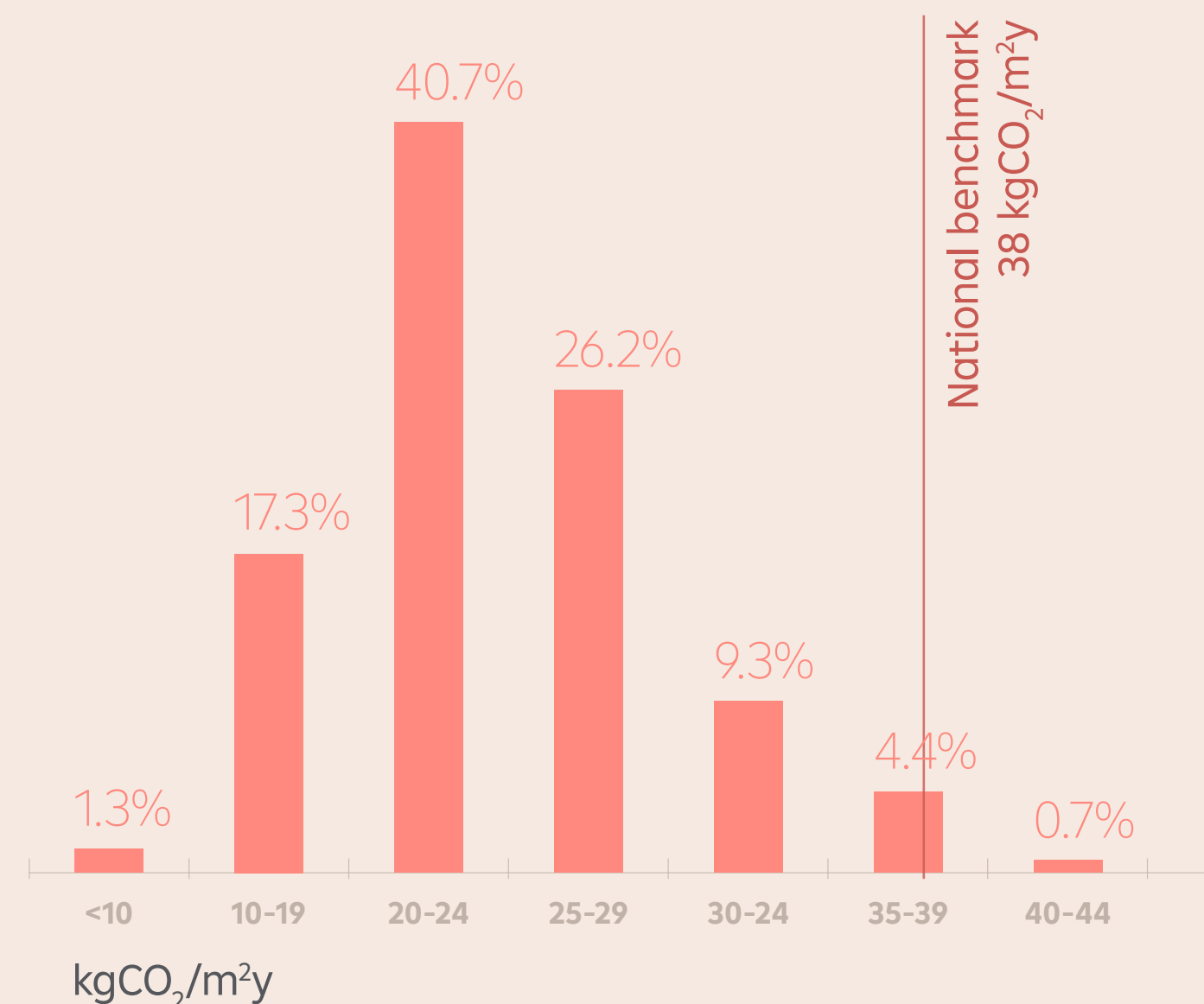
## Greenhouse gas emissions savings for the allocated green building loans as of 31<sup>st</sup> January 2022

**Total Greenhouse gas emissions savings**  
**1,835** tCO<sub>2</sub>/year

**Average GHG savings per residential building**  
**0.68** tCO<sub>2</sub>/year

**Average GHG savings per non-residential building**  
**140** tCO<sub>2</sub>/year

## Distribution of CO<sub>2</sub> emissions for EPC A residential green building



The total final energy savings of the allocated green building portfolio amounted to approximately 32,000 MWh/year, equivalent to an average of 7.96 MWh/year per residential and 4,288 MWh/year per non-residential buildings. In order to derive the primary energy saving a conversion factor of 1.35, derived from ratio final to primary energy intensity of Romanian economy in 2019, was applied to the final energy saving figures.



## Energy savings of green buildings loan portfolio as of 31<sup>st</sup> January 2022

🔑 Total final energy savings  
**32,059.82** MWh/year

🔑 Avg final energy saving per residential building  
**7.96** MWh/year

🔑 Avg final energy saving per non-residential building  
**4,288.50** MWh/year

🔑 Total primary energy savings  
**43,432.78** MWh/year

🔑 Avg primary energy saving per residential building  
**10.8** MWh/year

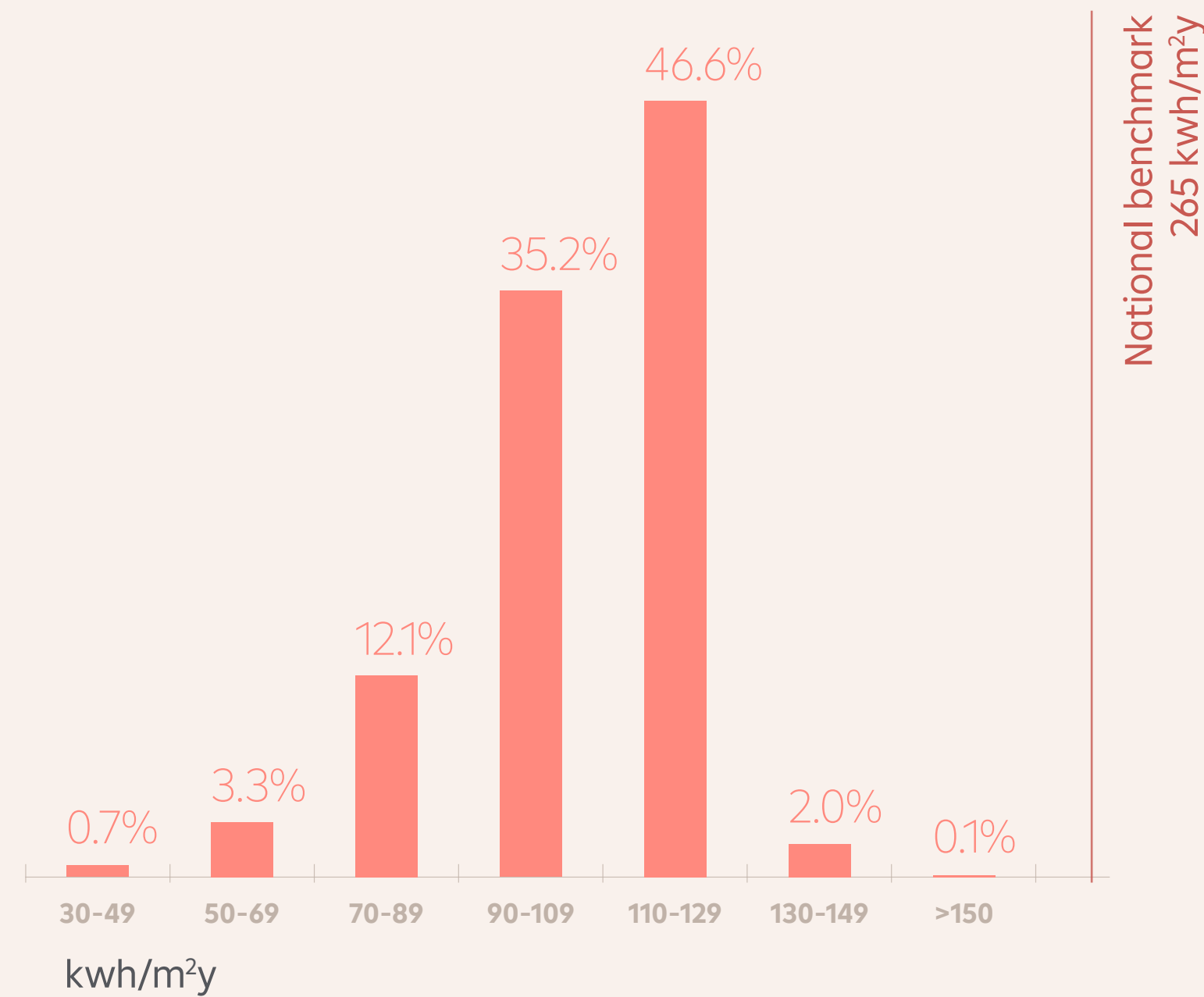
🔑 Avg primary energy saving per non-residential building  
**5,809.81** MWh/year

In terms of distribution of energy consumption for the allocated residential green building portfolio, almost the entire financed buildings (98%) consume by more than 50% less final energy compared to the national benchmark for 2019 (265 kwh/m<sup>2</sup>).

### Compliance of Residential Green Buildings with EU Taxonomy's substantial contribution criteria and national NZEB emission standards

Criteria	Outstanding amount <i>EUR mn</i>	% of total allocated green mortgages
EU Taxonomy Substantial contribution compliance	81	74%
NZEB CO <sub>2</sub> compliance	85	78%

### Distribution of Final Energy Consumption for EPC A residential green buildings



Furthermore, we have assessed the compliance of the allocated residential green building portfolio with the substantial contribution criteria from the EU Taxonomy for acquisition and ownership of buildings (buildings built before 31<sup>st</sup> December 2020 must have EPC level A or be in top 15% at national level in terms of primary energy demand, while for buildings built after this date the primary energy consumption must be 10% lower than the national NZEB threshold) as well as with the national NZEB emission standards. Approximately 74% of the allocated green mortgage portfolio meets the substantial contribution criteria for the acquisition and ownership of buildings from the EU Taxonomy. At the same time 78% of the allocated green mortgage portfolio generates CO<sub>2</sub> emissions below the national NZEB standards (calculation based on climate area of the building's location).

# Clean Transportation

## CONTEXT:

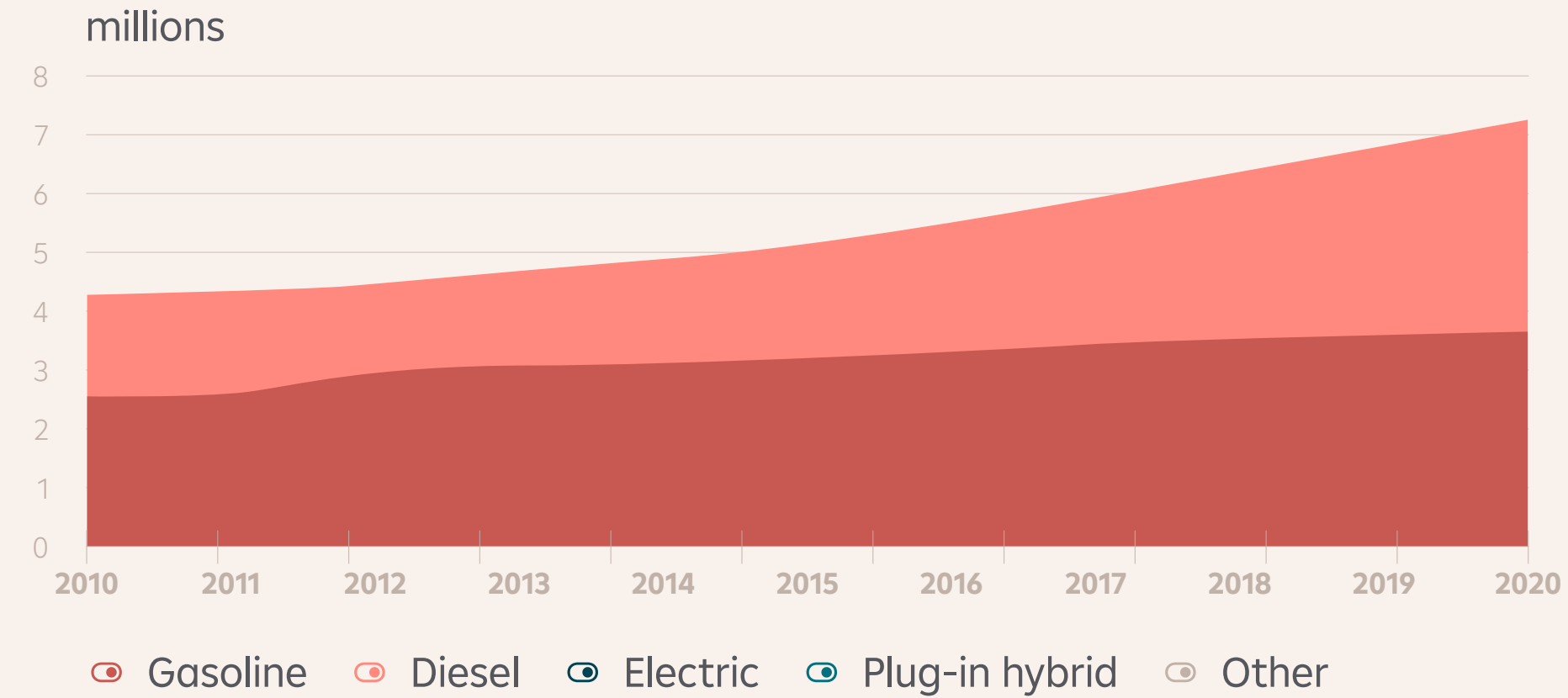
According to European Commission\*, transport represents almost a quarter of Europe’s GHG emissions, being the main cause of air pollution in cities. Whereas other GHG emitting sectors have seen some gradual decline in emissions over the past two decades, transport remains the only sector posting higher emissions than in 1990. Road transport remains the biggest emitter in the transport sector, accounting for more than 70% of GHG emissions from EU transport (2014).

The fleet of passenger cars in Romania have higher unit GHG emissions than EU average, however the total emission per car is below average as the annual distance travelled by a car in Romania is significantly lower than the EU average (chart on the right-hand side). Still, the total emissions generated by the passenger cars in Romania have accelerated over the past years due to a rapid increase in their overall number, main driver being Diesel cars. EVs and plug-in hybrid vehicle sales are picking-up at a fast pace, but as the starting point is from a low base, they account for an insignificant share of total car stock.

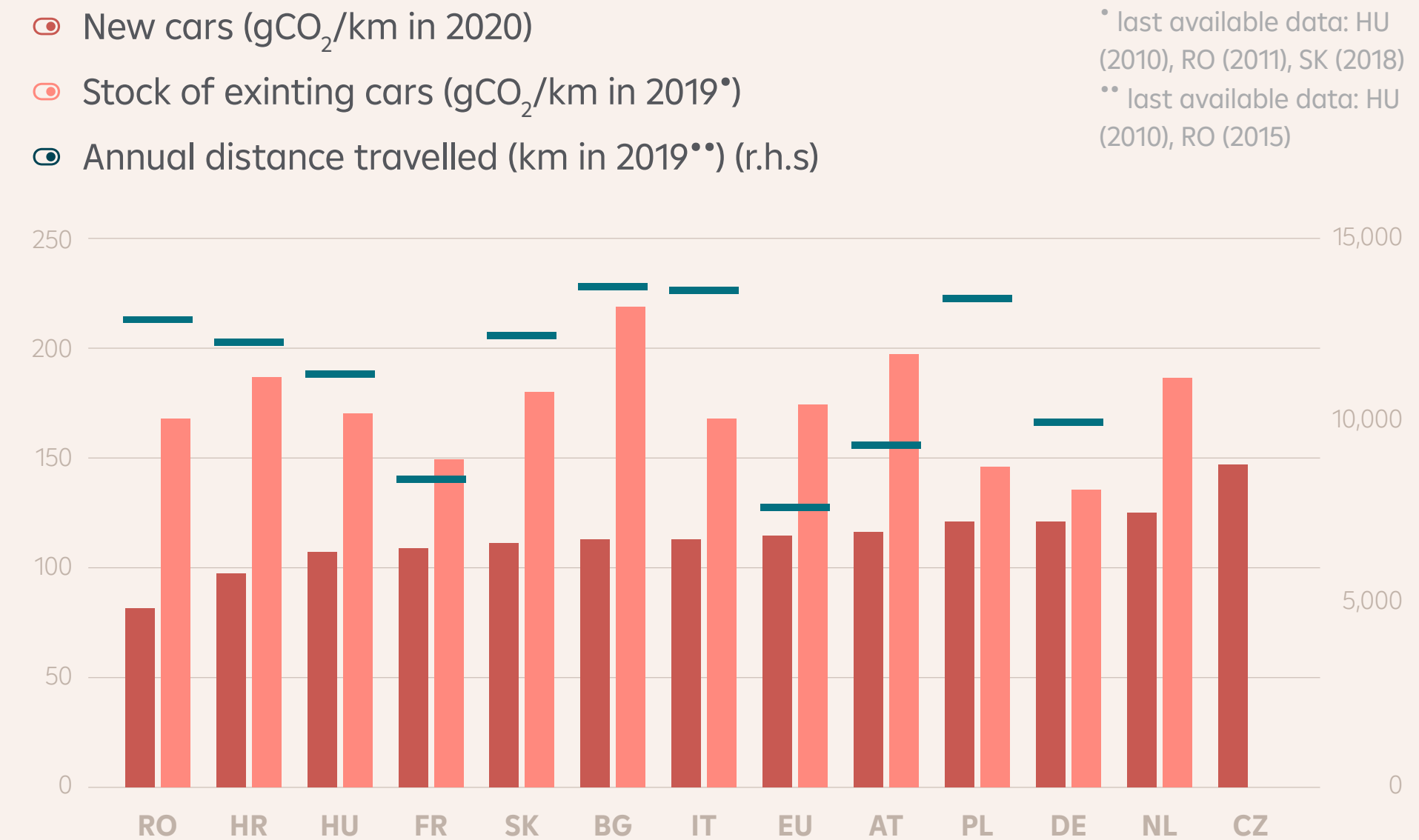
\* [europa.eu](https://europea.eu) Transport emissions

## Development of total number of cars in Romania

as of 2020:  
Electric cars: 45 thousand  
Plug-in hybrid: 10 thousand



## CO<sub>2</sub> emissions of cars across EU






Source: Odyssee database



## Impact report

The total annual avoided emissions related to RBRO's allocated clean transportation loan portfolio stood at 147 tCO<sub>2</sub>, equivalent to approximately 40 tCO<sub>2</sub> per 1 mio invested. The emissions savings are generated by EVs and eligible hybrid vehicles (57% of total savings), while the difference (43%) is coming from the financed electric locomotive.

### Greenhouse gas emissions savings for the allocated clean transportation loans as of 31<sup>st</sup> January 2022

-  Total GHG savings  
**147** tCO<sub>2</sub>/year
-  Total GHG savings cars  
**83** tCO<sub>2</sub>/year
-  Total GHG savings locomotive  
**64** tCO<sub>2</sub>/year



# Methodology

Methodology for selecting and allocating green eligible loans

Methodology for calculating the environmental impact (CO<sub>2</sub> and energy savings)



## Methodology for selecting and allocating green eligible loans

The methodology described below has been developed based on the [Green Bond Framework](#) dated March 2021 and should be read in conjunction with the latter.

### General criteria:

- Eligible loans meeting the criteria laid out in RBRO's Green Bond Framework as approved by the Green Bond Committee
- Outstanding amount is calculated based on gross exposure in accordance with IFRS as adopted by EU, as of 31<sup>st</sup> December 2021 and 31<sup>st</sup> January 2022
- Only performing exposures (as of 31<sup>st</sup> January 2022) were included in the allocated portfolio of green loans

# Specific criteria:

## 1

### Green mortgages - residential

- ☑ EPC level A collateral
- ☑ Construction year 2018 or later, subject to the assumptions detailed below
- ☑ Origination year: 2020 – Jan 2022

Starting with 2020, RBRO is flagging in its core systems, during the underwriting process, mortgages with EPC level A collateral rating. The information is extracted either from the property acquisition contract or from the EPC provided by the customer.

Additionally, starting with 2021, EPCs are collected during the underwriting process and stored in the customer’s credit file.

Relevant information from the EPCs for the allocation and impact analysis (energy performance rating, construction year, CO<sub>2</sub> emissions, energy consumption etc.) are extracted by RBRO’s document processing/archiving supplier, using a double indexing method, to ensure high accuracy rate (>97%).

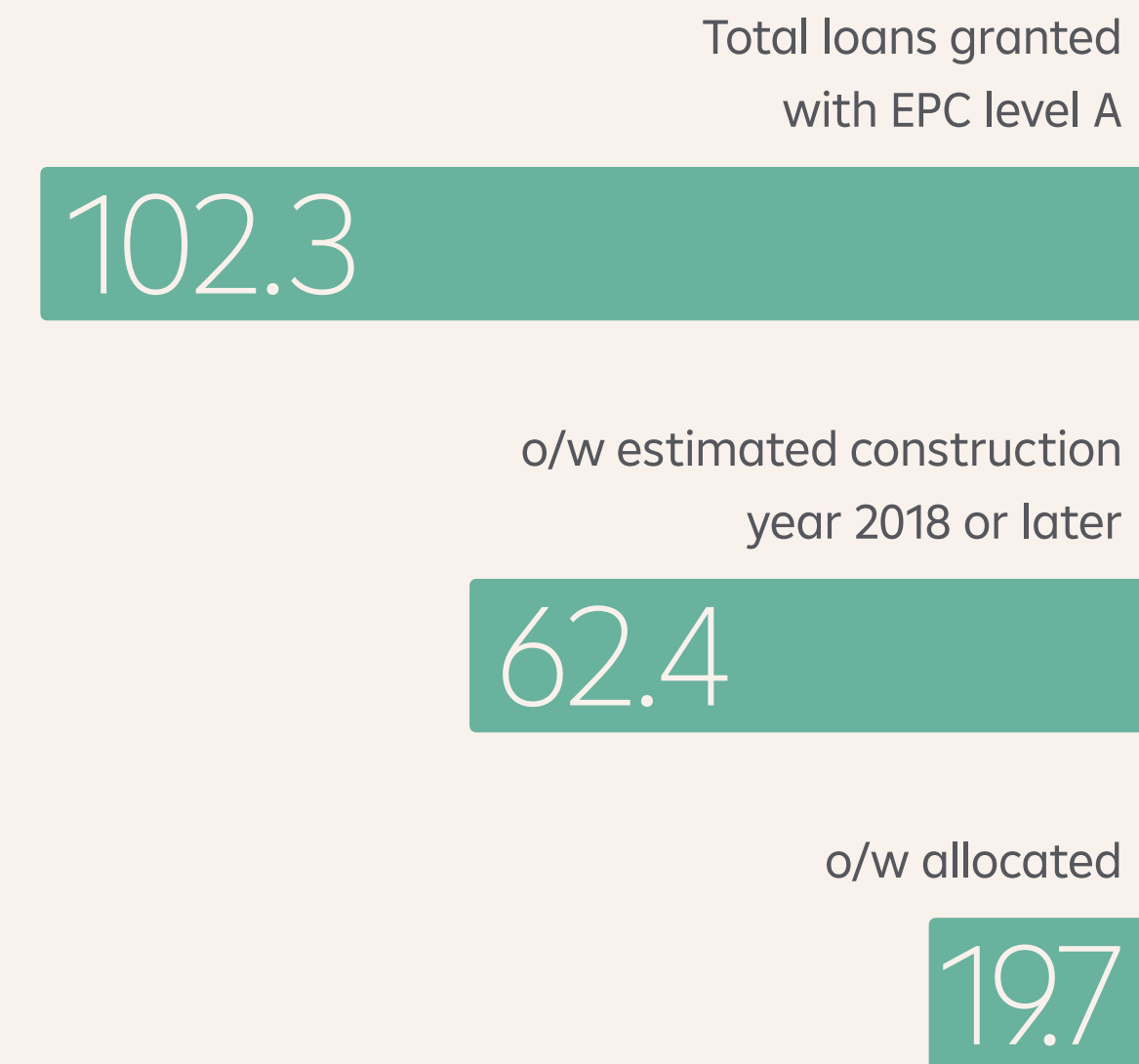
For eligible mortgage loans (EPC level A) originated in 2020, the construction year is not available as the EPCs were collected only starting with year 2021. An assumption was made that the 2020 mortgages follow approximately the same distribution across a number of characteristics (year of construction, geographic distribution, floor area) to the one of the 2021 mortgages. Thus, in order to identify eligible loans originated in 2020 with construction year of the collateral 2018 or later, we have used as a proxy the share of green mortgages originated in 2021 with construction year of the collateral 2019 or later (61%) (based on information extracted from the EPCs).

Thus, green mortgages originated in 2020 with construction year of collateral 2018 or later were identified by selecting the green mortgages in descending order of the origination date up to a total cumulative amount of 61% of the total amount of green loans originated in 2020.

The final allocated amount of green loans originated in 2020 has been determined to ensure that the total amount of refinanced loans (incl from other categories) allocated to the green bonds remains below the 30% refinancing share.

## Allocation of eligible green mortgages originated in 2020

EUR mn



## 2

**Corporate loans - Green buildings**

- EPC level A or international certificates such as BREEAM or LEED; certified or pre-certified
- Construction year 2018 or later
- Origination year 2018-2021

Eligible loans are identified and flagged in the core system during the underwriting process and/ or periodic review based on EPC or other eligible international certifications in line with the GBF criteria. The energy performance certificates are collected and stored in the system.

## 3

**SME loans – Organic Agriculture**

- National certification in line with EU standards (link [↗ here](#))
- Origination year 2021

Eligible loans are identified based on a distinct product code for financing sustainable agriculture. Relevant certifications are collected and stored during the underwriting process.

## 4

**Clean Transportation**

- Part of the loan granted by RBRO to its leasing subsidiary (RLRO) that is used to finance (through financial leasing) eligible clean transportation in line with GBF criteria:
  - Zero tailpipe emission vehicles (incl. hydrogen, fuel cell, electric – e.g. passenger cars, electric locomotive etc.
  - Vehicles with tailpipe emission intensity of max 50 g CO<sub>2</sub>/km (WLTP) up to year 2025
- Origination year of the funding line granted by RBRO to RLRO – 2021
- Origination year of the financial leaseings by RLRO – 2021, except for Electric locomotive granted in 2020

RBRO flags in its core system the share of the loan granted to RLRO for eligible green financing based on the periodic reports received from RLRO on the use of proceeds.

# Methodology for calculating the environmental impact

(CO<sub>2</sub> and energy savings)

Estimations of the CO<sub>2</sub> and energy savings are calculated for each of the allocated loans, based on the methodology described below.

## Residential buildings

$$(1) \text{ CO}_2 \text{ savings } \left( \frac{\text{tCO}_2}{\text{year}} \right) = \frac{1}{1,000} \sum \left[ \text{CO}_2 \text{ emissions per building } \left( \frac{\text{kgCO}_2}{\text{m}^2 \cdot \text{year}} \right) - \text{Emission benchmark } \left( \frac{\text{kgCO}_2}{\text{m}^2 \cdot \text{year}} \right) \right] \cdot \text{Floor area (m}^2) \cdot \text{RBRO Share}$$

$$(2) \text{ Final energy savings } \left( \frac{\text{MWh}}{\text{year}} \right) = \frac{1}{1,000} \sum \left[ \text{Final energy per building } \left( \frac{\text{kWh}}{\text{m}^2 \cdot \text{year}} \right) - \text{Energy benchmark } \left( \frac{\text{kWh}}{\text{m}^2 \cdot \text{year}} \right) \right] \cdot \text{Floor area (m}^2) \cdot \text{RBRO Share}$$

$$(3) \text{ Primary energy savings} = \text{Final energy saving} \cdot \frac{1}{\text{Ratio of final to primary energy intensity}}$$

### CO<sub>2</sub> emissions, final energy consumption and floor area of residential building

(apartment/ house) – extracted from the energy performance certificate (EPC). For green mortgages originated in 2020 the average CO<sub>2</sub> emissions, average final energy consumption and average floor area of the mortgages originated in 2021-2022 were used as input in the above formulas.

**RBRO Share** - represents the share of RBRO loan in total acquisition value of the apartment/ house.

**Emission benchmark** - calculated, based on 2019 data for Romania from Odyssee database\*, by dividing the CO<sub>2</sub> emissions for residential buildings with the average floor area at national level.

**Energy benchmark** - Residential Unit consumption per m<sup>2</sup> with climatic corrections, based on 2019 data for Romania from Odyssee database.

**Ratio of final to primary energy intensity** – data for 2019 Romania, Odyssee database.

\* [Odyssee](#), the European energy efficiency project | Enerdata

Acquisition and ownership of buildings are compliant with **EU Taxonomy's substantial contribution criteria** to the extent that they meet the following conditions:

- i. Buildings built before 31 December 2020, shall have at least an Energy Performance Certificate (EPC) class A. As an alternative, the building is within the top 15% of the national or regional building stock.
- ii. Buildings built after 31 December 2020, shall have primary energy use in kWh/m<sup>2</sup> per year at least 10 % lower than the threshold set for the national nearly zero-energy building (NZEB) standards.

For the allocated green mortgages originated starting 2021 both criteria from above were checked in order to determine the compliance with the substantial contribution criteria. The climatic area of each building was determined based on its geographic positioning in order to identify the applicable NZEB benchmark\*. For the allocated green mortgages originated in 2020, all the loans were considered to meet the substantial contribution criteria as the construction year was 2020 or earlier.

In order to determine the share of allocated green mortgages with CO<sub>2</sub> emissions below the national nZEB standard, we have identified the volume of allocated green loans originated starting with 2021 with CO<sub>2</sub> emission below the relevant nZEB emission benchmarks of the corresponding climatic areas for the city of the collateral. For the allocated green mortgages originated in 2020, we have assumed the same share of loans complying with nZEB emission standard as for the allocated 2021 green mortgage portfolio.

\* Currently the only publicly available information on the climatic areas in Romania is a map (picture format) included in Order 386/2016 of Ministry of Regional Development and Public Administration. In the absence of a public database mapping cities with climatic areas, we have developed an automated image processing tool for mapping all the cities in Romania by climate areas, based on the map provided in the Order 386/2016.

## Non-residential buildings

For the non-residential buildings, the CO<sub>2</sub> and energy savings impact were calculated for each loan using the same formulas as the ones applicable for residential buildings. Relevant data for the financed projects was extracted from the EPCs and/ or international certifications. Specific national benchmarks for non-residential buildings were used, as described below:

Emissions benchmark for buildings in the services sector - estimated based on CO<sub>2</sub> emissions per employee with climatic corrections in the services sector (Romania 2019 data, Odyssee database), rescaled to CO<sub>2</sub> emissions per m<sup>2</sup> based on estimation of floor area (m<sup>2</sup>/employee) in the services sector (Entranze, Odyssee, Eurostat).

Final energy consumption benchmark for buildings in the services sector - Unit consumption per employee in services (with climatic corrections) (Romania 2019 data, Odyssee database), rescaled to unit consumption per m<sup>2</sup> based on the same factor as the one mentioned above.

# Clean Transportation

For **passenger cars** we derive the CO<sub>2</sub> savings based on the following formula:

$$(4) \text{ CO}_2 \text{ savings} \left( \frac{\text{tCO}_2}{\text{year}} \right) = \frac{1}{10^6} \sum \left[ \text{CO}_2 \text{ emissions by car} \left( \frac{\text{gCO}_2}{\text{km}} \right) - \text{Emission benchmark} \left( \frac{\text{gCO}_2}{\text{km}} \right) \right] \cdot \text{Avg distance by car (km)} \cdot \text{No cars} \cdot \text{RBRO Share}$$

**CO<sub>2</sub> emissions by car** – based on data extracted from the technical specifications of each car. Data is provided by RLRO.

**Emissions benchmark** – average CO<sub>2</sub> emissions for the stock of cars (Odyssey database). As the latest available data for Romania is 2010, we have extrapolated the 2010 datapoint based on the EU development of the benchmark between 2010 and 2019.

**Annual average distance travelled by a car** – based on Odyssey database. As the available timeseries for Romania is 2010 – 2015, we have extrapolated the trend until 2019.

For the **electric locomotive** we derive the CO<sub>2</sub> savings based on the following formula:

$$(5) \text{ CO}_2 \text{ savings} \left( \frac{\text{tCO}_2}{\text{year}} \right) = \text{CO}_2 \text{ emissions of the locomotive} \left( \frac{\text{tCO}_2}{\text{year}} \right) - \text{Emission benchmark} \left( \frac{\text{tCO}_2}{\text{year}} \right)$$

CO<sub>2</sub> emissions for the financed locomotive is 0.

**Emissions benchmark** – calculated based on CO<sub>2</sub> emissions of all rail freight transport in Romania (2019 data, Odyssey) divided by the stock of locomotives (National Institute of Statistics, 2019 data). The stock of locomotives represents the number of locomotives registered in the National Register of Vehicles (R.N.V.) administered by the Romanian Railway Authority, at the end of the year.

**Independent  
Limited  
Assurance  
Report**



# Independent Limited Assurance Report to the Supervisory Board of Raiffeisen Bank S.A. on Green bonds use of proceeds

## Introduction

We were engaged by the management of Raiffeisen Bank S.A. (“the Bank”) to report on the *Green bonds use of proceeds information* as at 31 December 2021 and 31 January 2022 included at line “Total” in section “Summary – Structure of green bonds use of proceeds” on page 6 of the Bank’s Green Bond Report dated April 2022, marked with the symbol (A) within the Bank’s Green Bond Report (referred to as “Green bonds use of proceeds information”), in the form of an independent limited assurance conclusion whether based on our work performed and evidence obtained nothing has come to our attention that causes us to believe that the Green bonds use of proceeds information is not prepared, in all material respects, in accordance with the criteria described in the Bank’s internal methodology developed based on Green Bond Framework dated March 2021 and disclosed in the Green Bond Report on pages 26-28.

We have not performed any work, and do not express any conclusion, over any other information than the Green bonds use of proceeds information, including allocation by asset category, that is contained in the Bank’s Green Bond Report and we do not express a conclusion on the Bank’s Green Bond Report as a whole.

## Management's responsibilities

Management is responsible for:

- the preparation of the Green Bond Report in accordance with the criteria described in the Bank’s internal methodology developed based on the Green Bond Framework dated March 2021 and disclosed in the Green Bond Report on pages 26-28, and for the information and assertions contained within it, including the design, implementation and maintenance of such internal control as the management determines is necessary to enable the preparation of the Green bonds use of proceeds that is free from material misstatement, whether due to fraud or error;
- loan eligibility criteria defined in the Bank’s internal methodology developed based on Green Bond Framework dated March 2021 validated in the Second Party Opinion provided by Sustainalytics prior to issuance of the Green Bonds;
- compliance of eligible loans mentioned in the Green Bond Report with the Green Bond eligibility criteria defined in the Bank’s internal methodology developed based on Green Bond Framework dated March 2021, validated by the Second Party Opinion delivered by Sustainalytics;
- the accurate breakdown of amounts allocated to the eligible loans, by asset category;
- management of net Green Bonds proceeds pending allocation of proceeds;
- the use of proceeds by final beneficiaries of eligible loans subsequent to allocation;

- process to ensure that management and personnel involved with the preparation and presentation of the Green bonds use of proceeds is properly trained, systems are properly updated and that any changes in reporting relevant to the Green bonds use of proceeds encompass all significant business units;
- preventing and detecting fraud and for identifying and ensuring that the Bank complies with laws and regulations applicable to its activities.

## Our responsibilities

Our responsibility is to carry out a limited assurance engagement and to express a conclusion based on the work performed. We conducted our engagement in accordance with International Standard on Assurance Engagements (ISAE) 3000, Assurance Engagements other than Audits or Reviews of Historical Financial Information (Revised), issued by the International Auditing and Assurance Standards Board. That Standard requires that we plan and perform the engagement to obtain limited assurance about whether the Green bonds use of proceeds information is free from material misstatement.

The firm applies International Standard on Quality Control 1 and accordingly maintains a comprehensive system of quality control including documented policies and procedures regarding compliance with ethical requirements, professional standards and applicable legal and regulatory requirements.

We have complied with the independence and other ethical requirements of the International Ethics Standards Board for Accountants’ International Code of Ethics for Professional Accountants (*including International Independence Standards*), which is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behavior.

### Procedures performed

The procedures selected depend on our understanding of the Green bonds use of proceeds information and other engagement circumstances, and our consideration of areas where material misstatements are likely to arise.

A limited assurance engagement on the Green bonds use of proceeds information consists of making inquiries, primarily of persons responsible for the preparation of the Green bonds use of proceeds information and applying analytical and other evidence gathering procedures, as appropriate. These procedures included:

- inquiries of the persons responsible for the Green bonds use of proceeds information;
- obtaining an understanding of the process for measuring and reporting the Green bonds use of proceeds information;
- assessing compliance, on a sample basis, of eligible loans included in the calculation of the *Green bonds use of proceeds* information with the Green Bond eligibility criteria defined in the Bank’s internal methodology developed based on Green Bonds Framework dated March 2021, validated by the Second Party Opinion delivered by Sustainalytics, disclosed in the Green Bond Report on pages 26-28;
- reconciliation of the inputs into the determination of Green bonds use of proceeds information to the underlying data sources;
- verifying the arithmetic accuracy of calculations for totaling the amount of eligible loans gross exposure.

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, and 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.

As part of this engagement, we have not performed any procedures by way of audit, review or verification of the sources from which the information contained within the Green bonds use of proceeds information was extracted.

### Conclusion

Our conclusion has been formed on the basis of, and is subject to, the matters outlined in this report.

We believe that the evidence we have obtained is sufficient and appropriate to provide a basis for our conclusion.

Based on the procedures performed and the evidence obtained, as described above, nothing has come to our attention that causes us to believe that the Green bonds use of proceeds information of the Bank as at 31 December 2021 and 31 January 2022 included at line “Total” in section “Summary – Structure of green bonds use of proceeds” on page 6 of the Bank’s Green Bond Report dated April 2022 and marked with the symbol (A) within the Bank’s Green Bond Report is not prepared, in all material respects, in accordance with the criteria described in the Bank’s internal methodology developed based on Green Bond Framework dated March 2021 and disclosed in the Green Bond Report, on pages 26-28.

### Restriction of use of our report

Our report should not be regarded as suitable to be used or relied on by any party wishing to acquire rights against us other than the Bank, for any purpose or in any other context. Any party other than the Bank who obtains access to our report or a copy thereof and chooses to rely on our report (or any part thereof) will do so at its own risk. To the fullest extent permitted by law, we accept or assume no responsibility and deny any liability to any party other than the Bank for our work, for this independent limited assurance report, or for the conclusions we have reached.

### For and on behalf of KPMG Audit SRL:

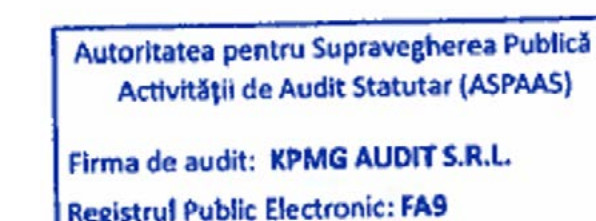
Drăgoi Monica-Iuliana

registered in the electronic public register of financial auditors and audit firms under no AF4375

26 April 2022  
Bucharest



registered in the electronic public register of financial auditors and audit firms under no FA9



# Disclaimer

This document (the "Document") has been prepared by Raiffeisen Bank S.A. ("RBRO") and was drafted for the sole purpose of presenting RBRO's "Green Bond Framework". This Document is being delivered for general information purposes only and no reliance should be placed on the completeness of the information contained herein. This Document may contain or incorporate by reference public information or information based on sources believed to be reliable not separately reviewed, approved or endorsed by RBRO and accordingly, no representation, warranty or undertaking, express or implied, is made and no responsibility or liability is accepted by RBRO as to the fairness, accuracy, reasonableness, or completeness of such information. Except the information covered by the Independent Limited Assurance report, other information in this Document has not been independently verified. This Document may contain statements about future events, procedures, and expectations. None of these forward-looking statements in this Document should be taken as promises or commitments

nor should they be taken as implying any indication, assurance or guarantee that the assumptions on which such future projections, expectations, estimates or prospects have been prepared are correct or exhaustive or, in the case of the assumptions, fully stated in this Document. In particular, no representation or warranty is given by RBRO as to any actual issue of any "Green Bond" by RBRO. RBRO may at any time amend or supplement this Document. However, RBRO undertakes no obligation to update, modify or amend this Document, or the statements contained herein to reflect actual changes in assumptions or changes in factors affecting these statements or to otherwise notify any recipient if any information, opinion, projection, forecast, or estimate set forth herein changes or subsequently becomes inaccurate. This Document is not intended to be and should not be construed as providing legal or financial advice. It does not constitute an offer or invitation to sell or any solicitation of any offer to subscribe for or purchase or a recommendation regarding any securities,

nothing contained herein shall form the basis of any contract or commitment whatsoever and it has not been approved by any security regulatory authority. The information contained herein has no regard to any investment objectives, financial situations or needs of any recipient. In no event shall RBRO or any of its directors, officers or employees have any liability or responsibility to any person or entity for any direct or consequential loss, damage, cost, charge, expense, or other liability whatsoever, arising out of or in connection with the use of, or reliance upon, the information contained in this Document. The publication, distribution or use of this Document and of the information it contains may be subject to legal or regulatory restrictions in some jurisdictions. Entities or persons who might come into possession of it must inquire as to the existence of such restrictions and comply with them. RBRO does not accept any liability to any person in relation to the distribution or availability and possession of this Document to or in any jurisdiction.



**Raiffeisen Bank Romania**  
**Green Bond Report**

April 2022