

# Raiffeisenbank Impact and Allocation Report



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# Introduction

In 2021, Raiffeisenbank, a.s. Czech Republic (RBCZ) launched its green bond issuance program to promote sustainable lending in the Czech Republic. With a total program volume of € 350 million, RBCZ was the first financial institution in the Czech Republic to launch a green bond issuance program. Our Green Bond Framework was established as part of our

broader group sustainability strategy aimed at increasing the funding of projects with a positive environmental impact. Assets are aligned with the ICMA (International Capital Market Association) Green Bond Principles<sup>1</sup>. Eligible green categories include green buildings, renewable energies, energy efficiency, clean transportation, and sustainable agriculture & forestry.

## Important Facts at a glance:

### As at 31 December 2021

€ 350 million Green Bonds outstanding<sup>2</sup>

€ 125.06 million Green Loan Portfolio

€ 90.16 million Green Buildings

€ 13.23 million Clean Transportation

€ 11.96 million Renewable Energy

€ 9.71 million Sustainable Forestry and Agriculture

74 504 metric tons of CO<sub>2</sub> saved per year

equals 596 metric tons of CO<sub>2</sub> saved per year

per € 1 million investment

<sup>1</sup>Green-Bond-Principles-June-2021-140621.pdf (icmagroup.org)

<sup>2</sup>Gross amount



## Foreword by Board member



Sustainability is often defined in the context of human civilization as the current ability to satisfy today's basic needs without compromising the ability of future generations to satisfy their basic needs and to maintain their living standard. It is our duty to keep this in mind in our business and private lives. Learning is one of the core values of our organization. We have learned to establish a green bond framework and issue the bond and we are doing our best to back it with eligible assets. We are committed to make further steps on our journey towards a sustainable company for the benefit of our key stakeholders and the society in general.

František Ježek / Member of the Board / 3 May 2022

## Raiffeisenbank's green journey so far:

### 2020

- Joined the RBI ESG Ambassadors platform
- First education
- RBCZ ESG working group

### 2021

- Memorandum & Commission for Sustainable Finance
- Green Bond Framework
- Issuance of the Green Bond
- Green Finance Day

### 2022

- New team: ESG & Support Products
- CBA working groups
- Design of a sustainable bond framework
- Climate and sustainable leaders membership
- ESG Roadshow for clients

In 2021, RBCZ decided to set up a dedicated team to focus on our customers' sustainability. Our ESG & Support Products team is given a crucial role in identifying relevant customers and supporting their sustainable transition. The Czech market shows strong signs of the need for sustainable finance solutions and we as RBCZ want to be the key partner to our customers who are willing to run their businesses in an environmentally and socially sound manner. The team is also responsible for fostering recognition and awareness of the issue among our key internal

and external stakeholders, as sustainable future requires sustainable investments and finance as well as education.

Support from RBI's Sustainable Finance department plays a significant role in achieving success. The department provides our network bank with the relevant knowledge and guidelines to be strictly followed and applied when assessing sustainable transactions, developing green products, advising customers and keeping up with the most recent trends in the ESG field.



## Selected highlights of RBCZ's commitment to sustainable finance

- Raiffeisenbank Czech Republic is member of RBI's ESG ambassador platform that facilitates sharing of the best practices and member collaboration in diverse working streams to develop new sustainable solutions for our customers.
- We became signatories to the Sustainable Finance Memorandum, which should be perceived as a signal that the banking industry is a vital element of sustainable future. Along with other major banks, we are committed to help in creating a sustainable society and enable the sustainable transformation. The Memorandum is one of the pillars of the Commission for Sustainable Finance of the Czech Banking Association, of which we are also proud members.
- We established a new policy for thermal coal: no business in the future with companies generating more than 25 per cent of their revenues from thermal coal mining (by analogy, this also applies to energy and trading companies) and no new financial services for new or existing thermal coal power plants or mines.
- Education within our company is an ongoing process and we continuously develop new ways to educate our staff in the Sustainability agenda. With our colleagues from RBI we held an all-staff event called the Green Finance Day to raise awareness and explain the importance of the issue. Online courses are available to our employees, ranging from a beginner level to advanced. Also, workshops focused on specific areas of sustainability were held on several occasions.
- Other activities were conducted before or after the Green Bond issuance, including formation of the Green Bond Committee, development of the Green Bond Framework, or adjustments to our internal processes, to name few. All these efforts gave rise to an internal incentive program for green loans.
- We saw increased interest in the topic of green financing, and decided to dedicate a whole team to focus on sustainable financing of our corporate clients. The team is to search for solutions and advise the customers who are serious about their commitment to sustainability.
- Raiffeisen sustainable development funds are pro-actively offered to our clients. They stand for a great tool to add value to an investment in a sustainability-conscious manner, suitable for both corporate and retail clients.
- We became members of the Climate & Sustainable Leaders association joining companies from various industries, ranging from finance to telecommunications, who are dedicated to assist Czech businesses in reducing their CO<sub>2</sub> footprint. First initiatives of the association include the carbon tracker, a tool to track the CO<sub>2</sub> footprint of the 150 biggest companies in the Czech Republic.
- We are also members of various working groups within the Commission for Sustainable Finance. The groups focus on how the relevant EU legislation translates into the Czech regulatory framework, creation of standards for the assessment of EU Taxonomy eligible transactions and methods for systematical data collection to allow for making informed decisions.



## Green Bond portfolio case study



Brno Industrial Park consists of a developed area of 109,457 m<sup>2</sup> in total. It is a unique multi-purpose zone with buildings designed to have the lowest possible impact on the environment. Part of the area was built on a brownfield and up to 90% of the materials obtained from demolition of the original buildings were used in the construction. The multimodal complex neighbouring with Brno Airport was constructed by Brno Airport a.s., a company of Accolade Group.

Three halls of the park reached for the „Excellent“ BREEAM New Construction rating, one is rated „Very Good“, while another is still in the process of certification. BREEAM international certification guarantees environmental friendliness, a high level of self-sufficiency in terms of energy and superior working conditions for the staff. The park benefits from its strategic location near Brno Airport and D1 motorway. It also offers excellent technological equipment for modern and sustainable businesses.

One of the halls is situated next to the airport runway system. The location eliminates the need to reload cargo from airplanes to road vehicles heading off-site, which in turn reduces the requirements for traffic on neighbouring roads and pollution. In addition to air and road transport, the park has a direct connection to the railway infrastructure.

The level of BREEAM Certification obtained makes it one of the greenest parks in the Czech Republic and the greenest logistic park near Brno. Also, over 100 trees and shrubs will be planted on the green areas over time, forming a mix of deciduous trees and indigenous Czech conifers. The afforestation of selected areas has already started.



## Independent limited assurance report (ISAE 3000 (Revised))

To the Board of Directors of  
Raiffeisenbank a.s.  
Hvězdova 1716/2b  
140 78 Prague 4

We have been requested to conduct a limited assurance engagement on the Allocation report and the Impact report included in the Raiffeisen Impact and Allocation report of the Green Bond ISIN XS2348241048 issued by Raiffeisenbank a.s. (the “Green Bond Reports”) for the period from 09.06.2021 to 31.12. 2021 in accordance with provisions of Green Bond Framework issued by the Client in May 2021 (the “Framework”).

Limited assurance is a lower level of assurance and it is not a guarantee that an assurance engagement conducted in accordance with International Standard on Assurance Engagements (ISAEs) will always detect a material misstatement when it exists.

### Responsibilities of the client

The Client is responsible for the preparation of the Green Bond Reports in accordance with the Framework.

In preparing the Green Bond Reports, the board of directors of the Client used Client’s self-developed Framework, building upon the Green Bond Principles as of June 2018 of the International Capital Markets Association (ICMA), and has indicated these within the Framework.

This responsibility of the board of directors of the Client includes the selection and application of appropriate methods for preparing the Green Bond Reports as well as making assumptions and estimates related to individual disclosures, which are reasonable in the circumstances. In addition, the board of directors is responsible for such internal control they have determined necessary to enable the preparation of the Green Bond Reports that is free from material misstatements, whether intentional or unintentional.

### Responsibilities of the practitioner

Our engagement has been conducted in accordance with the International Standard on Assurance Engagements 3000 (Revised) applicable to Assurance Engagements Other Than Audits or Reviews of Historical Financial Information (ISAE 3000 (Revised)) established by the International Auditing and Assurance Standards Board (“IAASB”). In accordance with this standard we have planned and performed our engagement to obtain a limited assurance regarding the subject matter of the engagement.

We applied International Standard on Quality Control 1, Quality control for firms that perform audits and review of historical financial information, and other assurance and related services engagements (“ISQC1”), and accordingly maintain 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 complied with the applicable independence and other ethical requirements of the Code of Ethics for Professional Accountants issued by the International Ethics Standards Board for Accountants (the “Code”). The Code is founded on fundamental principles of integrity, objectivity, professional competence and due care, confidentiality and professional behaviour.

## Summary of work performed

As part of our assurance procedures, we performed the following work:

- We have inspected the respective sections of the Framework and respective Green Bond Prospectus, particularly the sections related to total Green Bond proceeds and its use.
- We have interviewed relevant Client's employees that participated in the preparation of the Green Bond Reports about the process of preparation, the measures on hand and precautionary measures (system) for the preparation of the Green Bond Reports.
- We have obtained understanding of the process for evaluation and selection of the eligible projects, which might be financed by the Green Bond proceeds, and verify whether this process includes the eligibility criteria set out in the Framework. The eligible project, which might be financed by the Green Bond proceeds, must be in line with the Framework.
- We have reviewed the design and the implementation of the internal procedures and policies to understand the tracking process of the investments, expenditure and other costs linked to the usage of the Green Bond proceeds for the eligible projects.
- We have assessed that the rules for management of Green Bond proceeds are clearly defined and documented in line with requirements set out in the Green Bond Prospectus.
- We have inspected the description of the projects financed and check project-related materials to determine eligibility in comparison with the of Framework to assess whether the Green Bond proceeds have been allocated in accordance with the Framework on sample basis.
- We have inspected on sample basis that the Green Bond proceeds have been used in line with the rules to (re)finance relevant project expenditures and are monitored in line with the rules specified in the Framework.
- We have reconciled the that the initial balance of Green Bond proceeds corresponds to the proceeds as per the Green Bond Prospectus net of costs for issuance of the Green Bond.
- We have reconciled the disbursements from the Green Bond proceeds to the reported allocated proceeds, in particular reported amounts of
  - Total amount of Green Bonds issued
  - Total amount and number of Eligible Green Loans
  - Breakdown by Eligible Category (Green Buildings, Renewable Energy, Energy Efficiency, Clean Transportation, Agriculture and Forestry)
  - Breakdown of Green Building loans (including type of building and building certificates)
  - The geographic distribution of Eligible Green Loans
  - Share of Green Bond proceeds allocated and yet unallocated, if any
  - Share of assets financed vs. re-financed
- We have inspected the presentation of the disclosed impact indicators in the Green Bond Reports defined in the section 2.4 of the Framework.
- We have assessed that the methodology for calculating impact indicators corresponds to usual market practice
- We have assessed that emission factors used in calculating impact indicators are sourced from reputable sources on sample basis
- We have assessed numerical accuracy of the calculations on sample basis

In a limited assurance engagement, the procedures performed vary in nature and timing from, and are less in extent than for a reasonable assurance engagement. Consequently, the level of assurance obtained in a limited assurance engagement is substantially lower than the assurance that would have been obtained had we performed a reasonable assurance engagement.

The procedures performed do not constitute an audit according to the International Standards on Auditing, nor an examination of the effectiveness of the Company's internal control systems, or an examination of compliance with laws, regulations, or other matters. Accordingly, our performance of the procedures does not result in the expression of an opinion, or any other form of assurance on the Company's internal control systems or its compliance with laws, regulations, or other matters.

The assurance provided by our procedures should therefore be considered at the light of these limitations on the nature and extent of evidence-gathering procedures performed.

We believe that our evidence obtained is sufficient and appropriate to provide a basis for our limited assurance conclusion.

## Conclusion

Based on the procedures performed and the evidence obtained, nothing came to our attention that causes us to believe that the Allocation report and the Impact report included in the Raiffeisen Impact and Allocation report of the Green Bond ISIN XS2348241048 issued by Raiffeisenbank a.s. on 9 June 2021 under the Raiffeisenbank a.s. Green Bond Framework from May 2021 for the period from 9 June 2021 to 31 December 2021 has not been prepared and presented, in all material respects, according to section(s) 2.1-2.4 of the Green Bond Framework issued by the Client in May 2021.

## Purpose of the report and liability

We issue this report on the basis of the engagement agreed with Raiffeisenbank a.s. The limited assurance engagement has been performed for purposes of Raiffeisenbank a.s. and the report is solely intended to inform Raiffeisenbank a.s. on the results of this limited assurance engagement.

This report is therefore not intended to provide third parties with support in making any investment or financial decisions. Our responsibility with respect to our Client, i.e. Raiffeisenbank a.s. is governed by the Engagement Letter dated 22 March 2022. We do not assume any responsibility to any third party.

In Prague on 03 May 2022

Audit firm:

Deloitte Audit s.r.o.

The Deloitte logo, consisting of the word "Deloitte" in a white, cursive script font.

Responsible practitioner:

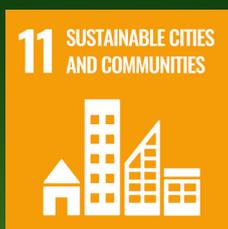
Petr Pruner  
on the basis of a power of attorney

A handwritten signature in black ink, appearing to be "Petr Pruner".

# Key data

## Raiffeisenbank Green Bond program

RBCZ's green bond framework supports achievement of the UN Sustainable Development Goals (SDGs), with a particular focus on the following SDGs:



In 2021, RBCZ established its Green Bond Framework followed by the launch of our first euro-denominated Senior Non-Preferred MREL eligible green bond transaction on 2 June 2021. It was the first green SNP bond issued in the Czech Republic and at the same

time this transaction was the largest green bond to date in CEE FI Space.

These facts demonstrate our pioneering role in the market and our commitment to sustainability.



A handwritten signature in black ink.

Maroš Hrnčiar / Head of Asset & Liability Management / 3 May 2022

The transaction enjoyed significant oversubscription which just underscores the importance of the topic on financial markets. We are proud to be one of the first movers and we strive to continue with our work to help build the sustainable future we all aim for.

Furthermore, RBCZ sustainability strategy is very closely linked to the one of RBI. Our common goal is to support our clients in their ESG activities, and this issuance gave us the perfect means to do so.

In 2021, RBCZ issued its first Green Bond sold to both institutional and private investors. This report relates to all Green Bonds outstanding as at the end of December 2021:

ISIN	Currency	Issuance date	Maturity Date	Nominal as at 31. 12. 2021
XS2348241048	EUR	09. 06. 2021	09. 06. 2028	350 mn
<b>Total RBCZ Issuances (mn)</b>				350 mn



## Our current Green Loan Portfolio contributes to the following SDGs:

Eligible Category <sup>3</sup>				
Green Buildings	90.16 mn €		90.16 mn €	
Renewable Energy	11.96 mn €			11.96 mn €
Sustainable Forestry and Agriculture		9.71 mn €		
Clean Transportation			13.23 mn €	
<b>Total</b>	<b>102.12 mn €</b>	<b>9.71 mn €</b>	<b>103.39 mn €</b>	<b>11.96 mn €</b>

<sup>3</sup>Partial eligibility not accepted



# Allocation Report

## as of 31. 12. 2021

The evaluation and selection process for Eligible Green Loans is a key process in ensuring that the amount equivalent to the net proceeds from Green Bonds is allocated to assets and activities which meet the criteria in the Framework. Lookback period of 3 years is considered in the green buildings category. With respect to other categories no assessment of lookback period is in place.

All potential Eligible Green Loans are subject to Raiffeisenbank's standard credit process in line with the normal course of business and only loans that

have been approved through this process can be considered for Green Bond eligibility.

Raiffeisenbank's Green Bond Committee ("GBC") is responsible for ensuring that allocations are made to Eligible Green Loans as specified in the use of proceeds section above and for overseeing the entire issuance process.

As of the end of 2021, the total green loan portfolio amounted to € 125.06 million. All projects were approved by GBC and included in the Green Bond Portfolio in 2021.



### **Green Buildings € 90.16 million (72.1%)**

- Of which 100% built
- All projects located in the Czech Republic



### **Sustainable Agriculture and Forestry € 9.71 million (7.7%)**

- Sustainable forestry focused on production of tree seedlings
- Project located in the Czech Republic



### **Clean Transportation € 13.23 million (10.6%)**

- Financing of public electric railway transport
- Project located in the Czech Republic



### **Renewable Energy € 11.96 million (9.6%)**

- Production of energy from photovoltaics
- All projects located in the Czech Republic



# Green Bond portfolio allocation

Raiffeisenbank Czech Republic has committed to allocate the full amount of proceeds from the Green Bond issuance by 1 June 2024.

Asset Category		Allocated amount in € million	Number of loans	% of Allocated amount	% of total Net proceeds	New financing/ refinancing
Green Buildings	Commercial Buildings*	65.22	2	52.2%	18.8%	Refinancing
	Retail Buildings	24.94	1	19.9%	7.2%	Refinancing
Sustainable Agriculture and Forestry	Sustainable Forestry	9.71	2	7.7%	2.8%	Refinancing
Clean Transportation	Public rail transport	13.23	1	10.6%	3.8%	Refinancing
Renewable Energy	Photovoltaics	11.96	11	9.6%	3.4%	Refinancing
<b>Total allocated</b>		<b>125.06</b>	<b>17</b>	<b>100%</b>	<b>36%</b>	<b>Refinancing</b>
<b>Unallocated</b>		<b>222.04</b>			<b>64%</b>	
<b>Green bonds net proceeds</b>		<b>347.1</b>			<b>100%</b>	

\* ) Mainly logistic halls

Use of proceeds is calculated based on the outstanding principal when it comes to the loans and net present value for the leasing. The share of unallocated net proceeds represented 64% as of 31.12.2021. These proceeds have been stored within the Czech National Bank on the Reverse Repo instrument. They are not fully segregated on particular accounts.

## Maturity profile of the portfolio

The volumes represent the outstanding balance as of 31.12.2021 with a maturity profile representing the final maturity of the proceeds:

2022 – 2024	2025 – 2027	After 2027
€ 11.69 mn	€ 88.94 mn	€ 24.43 mn



# Impact Report as of 31. 12. 2021

Presentation of an impact report in conformity with the Green Bond Framework requires the bank's management to make judgments, estimates and assumptions that affect the reported amounts of CO<sub>2</sub> emissions and CO<sub>2</sub> emission savings during the reporting period. These estimates are based on the best available information the management has at the reporting date. These estimates are subject to inherent uncertainty due to various factors such as limited data available, time lag in data (e.g. Czech electricity network emission factor published by the Ministry of Industry and Trade), various external conditions which are highly specific, such as the amount of CO<sub>2</sub> offset by a tree which depends on tree species, location, growing conditions, water availability, sunlight, local climate, soil nutrients and other site-specific factors. The management analyses and evaluates various available data sets and compares various estimates to select the estimate used in calculations of the reported amounts of CO<sub>2</sub> emissions. Where a range of estimates is available the management selects the lower end of the range of the estimate. Please refer to section Carbon impact methodology for details.

Projects can be added to the impact report once the project has been approved and determined as eligible, or once green bond proceeds have been allocated to eligible disbursements.

In 2021, we contributed to avoiding around 74 504 t of CO<sub>2</sub> emissions with our Green Loan portfolio funded by the Green Bonds. The most significant contribution of CO<sub>2</sub> avoided is thanks to the financing of Sustainable Forestry project.

Asset category	CO <sub>2</sub> savings per year in metric tons	CO <sub>2</sub> savings in %	Allocated amount in %
Green Buildings	6 856	9.2%	72.1%
Clean Transportation	1 591	2.1%	10.6%
Sustainable Forestry and Agriculture	66 035	88.6%	7.7%
Renewable Energy	22	0.03%	9.6%
<b>Total RBCZ Green Portfolio</b>	<b>74 504</b>		

\*) Mainly logistic halls

74,504 metric tons of CO<sub>2</sub> annually saved with the green portfolio of € 125.06 million



## CO<sub>2</sub> Savings – RBCZ Green Portfolio

Annual CO<sub>2</sub> reduction per **EUR 1 million**  
invested: **596 metric tons**, equivalent  
to greenhouse gas annual emissions from



OR



OR



**16 053**

passenger vehicles driven  
for one year

**9 385**

private homes

**172 493**

barrels of oil  
consumed

Source: <https://www.epa.gov/energy/greenhouse-gas-equivalencies-calculator>



## Green Buildings

The real estate properties included in the eligible green portfolio have considerably lower energy consumption than the average level for real estates in the Czech Republic. This leads to an annual reduction in greenhouse gas emissions of 6 856 metric tons per year.

<b>Weighted average CO<sub>2</sub> production of baseline portfolio</b>	125.44 kg/m <sup>2</sup> *year
<b>Weighted average CO<sub>2</sub> production of RBCZ green portfolio</b>	69.72 kg/m <sup>2</sup> *year
<b>Weighted average CO<sub>2</sub> savings per m<sup>2</sup> per year</b>	44.42 %
<b>Total CO<sub>2</sub> savings</b>	6 856 tons

## Renewable Energy

RBCZ's portfolio of renewable energy consists of photovoltaic projects. The electricity mix in the Czech Republic relies heavily on fossil fuels and substantial investments are required in order to support renewable energy projects. Our portfolio contributes to the goal of making renewable energy a more relevant energy source in the Czech Republic.

<b>Installed capacity</b>	51 MW
<b>Czech Republic electricity emission factor<sup>4</sup></b>	0,428 t CO <sub>2</sub> /MWh
<b>CO<sub>2</sub> savings per year</b>	22 tons

<sup>4</sup>Hodnota emisního faktoru CO<sub>2</sub> z výroby elektřiny za léta 2010–2019 | MPO



## Clean Transportation

RBCZ's clean transportation portfolio helps reducing CO<sub>2</sub> emissions in public railway transport by shifting the transport of public to zero tailpipe emission vehicles.

<b>Passengers transported</b>	780 000
<b>Average distance traveled per passenger in Czechia (km)</b>	51.5
<b>CO<sub>2</sub> savings per year</b>	1 591 tons

## Sustainable Forestry and Agriculture

Our portfolio within this category supports CO<sub>2</sub> offsetting through the production of tree seedlings with PEFC certification. The sustainable forestry portfolio is the main driver of our green bond portfolio impact and CO<sub>2</sub> reductions.

<b>Seedlings produced</b>	23 300 000
<b>CO<sub>2</sub> offset per tree</b>	21.77 kg
<b>CO<sub>2</sub> savings per year</b>	66 035 tons



# Carbon impact methodology

## Buildings (Scope 1 and 2 emissions based on the Greenhouse Gas Protocol)

RBCZ estimates the carbon impact of its Green Loan portfolio on a line-by-line basis:

$$\text{Carbon Impact (Building b, Country c)} = (\text{Final Energy Demand (b)} - \text{Baseline (c)}) \times \text{Emission Factor (c)}$$

- Green building certifications (including the related energy score) are used to calculate direct reduction in CO<sub>2</sub> against the baseline. The level of certification leads to a specific CO<sub>2</sub> reduction when compared against the country baseline. This is based on the certificate issuer's methodology<sup>5</sup>.
- Where certification is not available, RBCZ uses the Final Energy Demand values documented in the Energy Performance Certificates (or equivalent) of the green buildings in portfolio.
- Energy savings are calculated against baselines of the national average energy demand (source: EU Entranze project, <https://www.entranze.eu/>)
  - Residential buildings – 238.7 kWh/m<sup>2</sup>\*year
  - Non-residential buildings – 423.4 kWh/m<sup>2</sup>\*year
- Energy savings are then converted into carbon savings based on the emission factors for gas, oil, coal and biomass (source: Decree No. 309/2016 Coll. on Energy Audit and Assessment). For electricity, the network emission factor is published by Ministry of Industry and Trade and for district heating it is provided by TZB-info (source: CO<sub>2</sub> a jejich dopad na hodnocení zdrojů v budovách – TZB-info).
- Where a specific energy mix is not available, the building emission factors for the particular energy sources are combined according to the energy mix consumed by an average building locally (source: EU Entranze project, <https://www.entranze.eu/>).

## Sustainable Forestry and Agriculture (Carbon offsets based on the Greenhouse Gas Protocol)

RBCZ estimates the carbon impact based on the following:

$$\text{Carbon Impact} = \text{Seedlings Produced} \times \text{Tree CO}_2 \text{ Offsetting} \times \text{Survival Rate of Seedling}$$

- Number of seedlings produced is disclosed by the client.
- Tree CO<sub>2</sub> offsetting represents how many kg of CO<sub>2</sub> can one tree offset<sup>6</sup>. For the purposes of calculations the lower estimate is used.
- Survival rate of seedling can vary a lot depending on many factors, for our calculations the worst-case scenario is assumed<sup>7</sup>.



## Clean Transportation (Scope 1 emissions based on the Greenhouse Gas Protocol)

RBCZ estimates the carbon impact based on the following equation:

$$\text{Carbon Impact (Electric train e; Diesel train d)} = \text{Passengers transported (e)} \times \text{AVG CO}_2 \text{ Footprint per Passenger km (d)} \times \text{AVG Distance Passenger Travels}$$

- Number of passengers transported is disclosed by the client.
- Electric train: zero direct emissions mean of transport.
- Average CO<sub>2</sub> footprint per kilometer a passenger travels in a diesel train<sup>8</sup>.
- Average distance a passenger travels in one year<sup>9</sup>.

## Renewable Energy (Scope 1 emissions based on the Greenhouse Gas Protocol)

Carbon impact is based on the data regarding installed capacity provided by the customer and on the production coefficient. This represents the average amount of energy that 1 MWp of installed capacity will produce on average in the Czech Republic in one year (1.016 MWh/MWp)<sup>10</sup>.

The carbon impact is calculated based on the fact that energy from renewable resources has zero direct emissions as opposed to the energy coming directly from the electricity grid. Thus, the carbon impact is essentially the CO<sub>2</sub> avoided when electricity from renewable resources is used instead of electricity from the central grid.

<sup>5</sup>Assessing-Carbon-Emissions-in-BREEAM--Dec-2015-.pdf

<sup>6</sup>Calculation of CO<sub>2</sub> offsetting by trees | Encon

<sup>7</sup>swd\_3bn\_trees.pdf (europa.eu)

<sup>8</sup>mu\_prezentace\_pohl.pdf (itregep.cz)

<sup>9</sup>Čtvrtletní přehledy základních ukazatelů (sydos.cz)

<sup>10</sup>Kolik elektřiny vyrobí vaše FVE? Roli hraje nejen lokalita, sklon či orientace panelů | Silekro Energy

