



## Statement

on the verification of the adequacy of carbon emission reduction calculations  
and data reporting for the regular generation of carbon credits

## Background

Green Cross Hungary (short name: GCH, full name: Hungarian Green Cross Association, headquarters: H-1023 Budapest, Frankel Leó út 42-22., registration number: 01-02-0006012), tax number: 18062465-1-41, website: <https://www.magyarzoldkereszt.hu>) was founded in 1994 as an affiliate of [www.gcint.org](http://www.gcint.org). GCI was founded by Mikhail Gorbachev in 1992.

The mission of Green Cross is to promote the prevention of conflicts arising from environmental degradation and the increasing demand for scarce natural resources, and to address global water, energy and environmental sustainability challenges.

Their innovative programme proposals, mainly to mitigate the climate crisis, would be difficult to classify in only one category. Green Cross aims to fully implement ecological sustainability and circular economy models and technologies. Green Cross organisations work on a self-fund basis, with a focus on overall societal benefits.

## international Carbon Cycle (iCC)- Green Cross' carbon mitigation brand

The international Carbon Cycle (short name: iCC, website: <https://www.youandicc.com>) is a carbon market think-tank established by GCH experts, which has developed and is continuously improving the internationally operating, voluntary carbon market-compatible, quality carbon credit generation "QxyS" family of standards. The generated, "issued" carbon credits (VCUs) are being registered in an international carbon credit registry, typically in OurOffset Nonprofit Ltd. (website: <https://ouroffset.com>), as an internationally recognised Hungarian-based carbon market registry.



## The aggregator is EMPROVIA Zrt.

The carbon credit generation process, the carbon calculations and the necessary documentation requirements are based on the methodology of EMPROVIA Informatikai Fejlesztő, Üzemeltető és Szolgáltató Zrt. (abbreviated as EMPROVIA Zrt, registered office: H-2800 Tatabánya, Fő tér 10., company registration number: 11-10-001772; tax number: 27964671-2-11, website: <https://www.mitigia.com>), which have been registered as intellectual property with the National Intellectual Property Office in the Voluntary Register of Intellectual Property and which EMPROVIA Zrt. is exclusively entitled to use without any restrictions in time, space and manner of use. EMPROVIA Zrt. is therefore entitled to generate regular carbon credits. Details of the relevant documentation relating to this certification can be found in the following table:

Name of carbon market process	Date of voluntary registration	Reg. No. of voluntary registration	Reg. No. of carbon market verification
Ex-post financing of green energy investments through the issuance of carbon credits	2024.07.09	012417	GCH-EMP-80712

## Mitigia: Emprovia Zrt's carbon credit issuance service

The carbon credits generated by the carbon market processes owned by Emprovia Zrt. and used as proprietary knowledge are registered in a specialised emission pooling scheme, based on the legal concept of the service commission, within the framework of the carbon credit issuance service launched by Emprovia Zrt. under the mitigia brand. Based on the fact of the service commission, EMPROVIA Zrt. acts on its own behalf in the carbon market, i.e. it issues and sells carbon credits as an aggregator. However, it does so for the benefit of its clients (green investors), under the mitigia brand.

The carbon credits generated under each carbon market procedure are completely homogeneous, based on the same methodology, calculation methodology, legal framework and validation. The Mitigia carbon crediting scheme thus provides significant efficiency gains for all stakeholders compared to separate project-by-project issuances. It provides a significant reduction of registration and transaction costs associated with emissions for its clients, while at the same time providing a simplified, one-certificate offsetting transaction for carbon credit purchasers.



## Carbon calculation and data verification of MOTIM Zrt.

On behalf of **Magyaróvári Timföld és Múkorund Zrt** (hereinafter: MOTIM Zrt.; registered office: H-9200 Mosonmagyaróvár, Timföldgyári u. 9-13.; company registration number: 08-10-001675; tax number: 11406761-2-08), EMPROVIA Zrt. prepared the carbon credit calculations in relation to the photovoltaic solar power plants operated by MOTIM Zrt, based on the "Carbon Credit Issuance Agreement" dated on the 7th January, 2025, signed by the parties, and attached the calculation supporting the data, as well as the contracts and documentation.

EMPROVIA Zrt. has approached iCC with the request to verify the legal basis of the issuance of the carbon credits, validate the mathematical calculations and provided data, as well as the enclosed documentation for the carbon credit issuance project related to the operation of the photovoltaic solar park built on the lot 4783/19 and operated by MOTIM Zrt., during the time period between 19<sup>th</sup> December, 2023 and 31<sup>st</sup> December, 2024.

The Verified Carbon Units (VCUs) duly created based on this verification will be registered at OurOffset Nonprofit Kft., under the **MITIGIA 14MW+ 'off grid' Solar Program in Hungary 2024** issuance program that was designed for green investors of off-grid, backwatt protected, solar power plants., based on the "Post-financing of investments in green energy production by issuing carbon credits" carbon market methodology.

## Project: Solar park investment leased and operated by MOTIM Zrt.

The green investment concerned by the carbon credit is the solar park leased by MOTIM Zrt. as the lessee from Iris Energy Kft. (registered office: H-2040 Budaörs, Rubik Ernő str. 6., company registration number: 13-09-21041, tax number: 25194487-2-13) as the lessor. The site of the solar park investment, which is entitled to generate carbon credits, is the 53941,52m<sup>2</sup> power plant site owned by MOTIM Zrt. (built on the lot 4783/19 in Mosonmagyaróvár). As regards the solar power plant, the lessee has the right to dispose of the assets necessary for the production of electricity and therefore the grid connection contract of the power plant is in the name of the lessee, for which reason MOTIM Zrt. is the contractual party vis-à-vis Emprovia Zrt.

The lessor keeps a record of the solar park as one of his assets and is therefore a green investor, which he has ceded to the tenant for the electricity generation concerned. The agreements between the green investor and the lessee of the solar park are set out in the following contracts, which are both part of the issuance documentation establishing MOTIM Zrt's entitlement to generate carbon credits:

- **Lease and Cooperation Agreement:** Based on the Lease and Cooperation Agreement concluded between Iris Energy Kft. (the lessor) and Magyaróvári Timföld és Múkorund Zrt. (lessee) lessor has leased the solar park to lessee. The purpose of the lease is to use the plant for its intended purpose, to utilise it and to optimise the use of electricity. The electricity generated is used entirely by the lessee and the lessee is the one who takes the electricity off the grid. The current Amendment No. 3 in force is dated 1 February, 2024 and is valid until 31 January, 2044.
- **Agreement on cooperation in the provision of carbon credit services:** The parties agreed that the lessor as a green investor, will voluntarily join the carbon credit generation and utilisation

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project initiated by the lessee as an aggregator for the power plant concerned. Here the green investor engages the aggregator Emprovia Zrt. in connection with the green investment, to use its carbon market process for the provision of the service. The agreement, dated 3rd January, 2025, is valid for the production realised until 31st December, 2024 and thus covers the total production of 5 925 304 kWh included in the accounts.

## Project boundary condition data, findings

- The project period covered by this issuance is: 19.12.2023 - 31.12.2024.
- To generate the carbon credits, EMPROVIA Zrt uses its own proprietary knowledge, post-financing of investments in green energy production by issuing carbon credits
- The iCC/GCH followed the principles of the Quality Technology Change Standard® (QTCS) v3 during the validation/verification process.
- According to the authentic legal documentation provided, MOTIM Zrt. has the right to use the avoidance of carbon dioxide emissions.
- Based on the technology documentation provided, the investments were completed, and CO<sub>2</sub> emission avoidance/removal was achieved during the operational period.
- The volume of carbon savings can be unequivocally quantified by calculations, thus the quantity of VCUs (Voluntary Carbon Units) enabled to be issued on the voluntary carbon market, based on these carbon savings, can be determined too.

## Technology description

The solar power plant uses solar panels to generate green electricity, which consist of solar panels that convert sunlight into electricity through photovoltaic effect. The direct current electricity is converted into alternating current (AC) by means of inverters, since the energy produced by the solar panels is essentially available in the form of direct current (DC). The energy produced by each power plant is continuously generated during the sunny season and, according to plan, the production units of the company use this produced energy in full, thus replacing the purchase of the so-called "dirty electricity", which carbon intensity corresponds to the general grid's carbon intensity.

MOTIM's solar power plant is a so-called "reverse watts protected" plant. The fact of generation does not change the carbon impact of the generation. Thus, credits can be generated with the total green electricity production volume.

## Basic data and configuration of the solar power plant

<b>Company Name</b>	Magyaróvári Timföld és Műkorund Zrt.
<b>Headquarters</b>	9200 Mosonmagyaróvár, Timföldgyári u. 9-13.
<b>Company Registration Number</b>	08-10-001675
<b>Tax Number</b>	11406761-2-08

### Project Boundary Condition Data

<b>Activity:</b>	Off-grid solar power plant operation
<b>Solar Power Plant Address:</b>	9200 Mosonmagyaróvár 4783/19 hrsz
<b>GPS coordinates:</b>	GPS: 47.863887; 17.247773
<b>Nominal capacity:</b>	3,8 MW AC / 4,6 MW DC
<b>Original Grid Connection Agreement Issuer:</b>	E.On North-Danube Electricity Network Ltd.
<b>Original Grid Connection Agreement Number:</b>	HC_NAP1004/2023
<b>Original Grid Connection Agreement Date:</b>	02.15. 2023
<b>Transferred Grid Connection Agreement Issuer:</b>	E.On North-Danube Electricity Network Ltd.
<b>Transferred Grid Connection Agreement Number:</b>	HC_NAP1004M/2024
<b>Transferred Grid Connection Agreement Date:</b>	02.20. 2024
<b>Building Permit Issuer:</b>	Győr-Moson-Sopron County Government Office
<b>Building Permit Number:</b>	GY/48/00199-18/2023
<b>Building Permit Date:</b>	02.16. 2023
<b>Issuer of permit of user:</b>	Győr-Moson-Sopron County Government Office
<b>Number of Permit of Use:</b>	GY/48/00504-19/2024
<b>Date of Permit of Use:</b>	06.12. 2024
<b>Inverters:</b>	12 pcs Huawei SUN2000-330KTL-H0 Nominal capacity: 300kW 1 pc Huawei SUN2000-215KTL-H0 Nominal capacity: 200 kW
<b>Solar Panels:</b>	8316 pcs Jetion Solar JT550SGh ( B ) type (monocrystalline bifacial)
<b>Transformer:</b>	1 pc Schneider Electric RM6 IDD (10 kV, 630 A, 16 kA/ 1s)
<b>Total capacity:</b>	4573,800 kWp

Duration of project affected by this issuance: **19<sup>th</sup> December, 2023 – 31<sup>st</sup> December, 2024**

The solar power plant is connected to the site's electricity grid via a main distribution board and the transformer station. All generated electricity is being used up.



Figure 1: Block diagram of the systems  
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## Considerations in the context of the generation of green electricity credits at MOTIM Zrt.

1. The solar power plant implemented by MOTIM Zrt. as the lessee and Iris Energy Kft. as the lessor, is an off-grid power plant with backwatts protection, that does not generate electricity for the national grid but only serves the energy needs of the site. Reverse watts protection means that the instantaneous energy generated by the solar system cannot be fed back into the grid. In practical terms, this means that the energy produced by a solar power system can never at any moment be greater than the amount of energy used at the point of purchase.
2. According to MOTIM Zrt., its business and legal structure is established in such a way that all its business activities are conducted through one company, one legal entity. The solar power plant was implemented on MOTIM Zrt.'s own site by Iris Energy Kft as a green investor and has been leased by MOTIM Zrt. on a long-term contract with full operating control and the right to issue all the solar power plant's carbon credits.
3. MOTIM Zrt. has a definite strategy and roadmap for the elimination and offsetting of future carbon emissions. The company's documented strategy provides sufficient information on this, and the continuity of the processes that aimed at neutralising their carbon emissions is ensured.

Taking all this into account, the solar power plant can be considered as a stand-alone project for the purpose of generating carbon credits, as if it were administered as a separate project company. Therefore, we do not monitor and qualify the overall change in the carbon footprint of MOTIM Zrt. as a legal entity, which is also influenced by several other factors (e.g. new production sites and plant halls generated by expanding business activities). The solar park, with all its production considered in the calculations, improves the carbon footprint per unit of value added, so that *ceteris paribus*, **considering all above conditions, the entirety of the green electricity generated can be accounted for carbon credit issuance.**

## The result of the carbon calculation

Based on the documents provided by MOTIM Zrt., during the period between 19<sup>th</sup> December 2023 and 31<sup>st</sup> December 2024 the project has resulted in the following avoided carbon emissions, as summarised in the table below:

Solarpark	Project start date	Project end date	Electricity production (kWh)	Verified carbon emission reductions (g CO <sub>2</sub> e)	Number of carbon units (pieces)
MOTIM	2023.12.19	2024.12.31	5 925 304	1 133 833 946	1 133,83

Based on the supporting documents and daily energy production data provided, it can be concluded that between **19<sup>th</sup> December, 2023 and 31<sup>st</sup> December, 2024 the total green energy production was 5,925,304 kWh**. During this period, the average daily carbon dioxide intensity in the Hungarian electricity grid, cumulated from hourly disaggregated elementary data, was 222 g CO<sub>2</sub>e/kWh.

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- Over the assessed period, residential carbon consumption was an average of 31 g CO<sub>2</sub>e / kWh for solar plants, which was estimated by a life-cycle carbon intensity.
- The calculations were carried out by Emprovia Zrt. as aggregator and the company acting in the utilization of the produced green energy, using the proprietary knowledge carbon market methodology "Post-financing of investments in green energy production by issuing carbon credits".

## Carbon emission reduction certification

Using the data of the above carbon calculations, **the total carbon dioxide emission reduction for the project under assessment for the relevant period is certified by iCC/GCH 1,133 tonnes CO<sub>2</sub>e.**

Therefore, the iCC/GCH **considers a total of 1,133 (one thousand one hundred and thirty-three) carbon credits (VCUs) to be issued and registered in the carbon market.** With this certificate, EMPROVIA Zrt. as the issuer (or its authorised agent) is **eligible to initiate the registration of the carbon credits** based on the CO<sub>2</sub> emissions savings at any carbon credit registry recognised by the voluntary carbon market (VCM registry).

## Comment

The iCC/GCI will not store the provided input documentation but will store the corner numbers supporting this opinion for 10 (ten) years from the date of registration of the carbon credits and will forward them to the competent authority upon official request. At the same time, the contractor is requested to keep the complete documentation and data field containing the input data of the solar power plants of MOTIM Zrt. for the assessment period for at least 10 (ten) years.

Budapest, 13<sup>th</sup> March, 2025.

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