

# Challenge 2: M+ Issuance Process

## ### Prize Title

Programming the M+C Test Token Issuance Process

## ### Prize Bounty

1000 DAI

## ### Challenge Description

### Why (are we doing this challenge)?

Climate change is the mother of all market failures: it is the direct result of individual actions aggregating to a catastrophic outcome, because individual choices are trapped in an incentive system that rewards exploitation and environmental harm and penalizes responsible consumption. There is no path leading a bright, low-carbon future that doesn't go through hacking the market. This is what we're about.

M+C is an initiative to pilot and scale a community-based currency linked to climate-positive consumption choices. This currency - M+C - is backed by retired carbon credits<sup>1</sup> [incl footnote], and aims to reward climate-positive consumption choices. The aim of this initiative is to prototype a platform that can support alternative currencies in cities around the world, ensuring the seamless interoperability of these different currency schemes.

Retired carbon credits (see M+ White Paper) represent a social good (= a net GHG emission reduction) that is benefitting society (and the planet). Entities (usually companies) retire a carbon credit to substantiate their own net zero climate claim<sup>2</sup>. The retirement of the carbon credit occurs when an entity moves a carbon credit from an active / trading account to a "retirement" account which means they give up the access to use/trade of that carbon credit forever.

M+ is a new token that rewards net GHG emission reductions (= a social good) through the issuance and transfer of an M+ token to a) the entity that retires a carbon credit (referred to as Net Reducers (or NR in short)), and b) the Global M+ Community Development Fund (M+ GCDF). NR and M+GCDF then use their M+ token to incentivize climate positive action.

- NR can transfer M+ tokens to employees, clients, suppliers, other stakeholders, relevant communities or use them to donate to / vote for M+ related projects in global or local M+ communities.

---

<sup>1</sup> The M+Climate token (M+C) is a reward/ alternative currency system that is created through the voluntary retirement of a carbon credit, thus creating a net GHG emission reduction. These M+C token are issued to the entity that retires the carbon credit, usually within the context of fulfilling a voluntary net zero carbon footprint pledge.

<sup>2</sup> Entities surrender a carbon credit to meet a regulatory compliance obligation. Surrendered carbon credits are NOT eligible for the issuance of an M+ token.

- The M+GCDF uses their M+ to a) develop the M+ “toolbox” and governance system, and b) co-fund the launch of Local M+ Community Funds (M+LCDF).

M+ thus creates an alternative, climate positive economy and currency system that:

- a) rewards entities that make net zero pledges/commitments,
- b) allows them to engage their entire up- and downstream value chain & their communities using a circular, natural-capital asset backed alternative/loyalty currency, and
- c) provides for the funding of climate-positive, community driven actions to protect the global and local commons using a radically democratic governance process.

### **What is this challenge about?**

The purpose of this challenge is to create the process by which an eligible entity (that has retired a carbon credit in an eligible carbon registry) can claim the issuance of M+ tokens into a designated digital wallet using an ERC 20 coin token.

A carbon credit is represented by a serial number within a carbon credit registry account that is operated by or licensed by a carbon credit authority such as Verra, The Gold Standard or the Climate Action Registry.

It resides inside the account of an entity that has registered this account, key customer information, including the ID of the authorized representatives with the registry operator.

Every M+ token represents 10 kg of avoided CO<sub>2</sub>, which means that the retirement of one carbon credit (denomination = 1 metric ton of avoided CO<sub>2</sub>), results in the issuance of 100 M+ tokens. When issued, 90 M+ tokens are issued to the entity that retired the carbon credit and 10 M+ token are issued to the M+ Global Community Fund.

An M+ token is not redeemable from the issuer (not for cash, or any other claim). An M+ token is only redeemable for products and services from vendors or any other willing counterparty as a means of payment in local currency at the above mentioned rate.

A vendor who is signaling his willingness to accept payment in M+ can do so by quoting prices in local currency plus the “+” sign, i.e. EUR+ or stating “we accept payment in M+”.

### **Required Functions (to be implemented in the hackathon)**

Create a simulated carbon registry with 50 entities and their retirement accounts

Create 10.000 carbon credit serial numbers, including a marker to identify them as “retired”

Create 50 smart wallets that can hold M+ tokens for entities that retired carbon credits.

Create 1 smart wallet to hold the M+ token for the M+ Community Fund.

Create a protocol by which an eligible entity account holder can request the issuance of an M+ token for every retired carbon credit inside of their retirement account into a digital wallet

specified by the user. Create that protocol as a) manual approval process by an authorized member of the M+ governance team, and b) as an automatically executing smart contract.

Ensure that an M+ token can not be issued twice for the same retired carbon credit (serial number). Create fraud protection mechanisms to ensure that M+ token generation can not be hacked.

Create 1 million “test M+ tokens” issued to the 50 test wallets (representing the 10.000 retired carbon credits).

### **### Submission Requirements**

Deposit the code and documentation in our Github depository (code and presentation).

Demonstrate the use of the created functionality step by step (starting with how an eligible entity would submit its M+ issuance request) and ending with the transfer of the M+C tokens into the designated user wallet.

Transfer of the 51 private wallet keys to the M+ Team (github deposit).

### **### Submission Deadline**

All submissions must be received no later than 11:59 PM (ET) on November 1st, 2020 to be considered.

### **### Judging Criteria**

The M+ Team has formed a jury to judge submission based on

- a) ease of use/UX design,
- b) quality of documentation (which should allow non-techs to set up and manage their own private wallets and requests the issuance of M+C tokens against proof of retirement of eligible carbon credits), and
- c) integrated security (mainly to prevent unauthorized users to request the issuance of M+C tokens)

### **### Winner Announcement Date**

We will assess submissions from Nov 1st to Nov 5th 2020. Winners will be announced by 11:59 PM (ET) on Nov 5th 2020.