



CONSULTATION

CONDITIONS FOR CONSENTING TO TOKENISATION OF GOLD STANDARD-ISSUED CREDITS

Date 14 September 2022

Consultation deadline 28 October 2022

1. INTRODUCTION

1.1 CONTEXT

The tokenisation of carbon credits refers to the act of creating a digital representation of a carbon credit using blockchain technology. This can be applied in multiple different ways in the carbon market, some – but not all - of which are linked to crypto-currencies.

In May 2022, Gold Standard updated its [Registry Terms of Use](#) to clarify that the creation of tokens, crypto-currencies or other digital instruments or assets is not permitted without Gold Standard’s express written consent. This step was taken to ensure that Gold Standard can understand and manage any tokenisation of its credits in a responsible and cooperative way.

Since updating its Registry Terms of Use, Gold Standard has been considering the conditions and criteria that could be applied to determine whether to provide consent to organisations for the creation of digital tokens related to Gold Standard credits. In doing so, Gold Standard has considered the initial findings of IETA’s [Task Group on Digital Climate Markets](#) and taken into account feedback from members of its [Working Group on Digital Assets for Climate Impact](#), announced earlier this month, as well as information from other stakeholders through bilateral meetings.

Gold Standard has always embraced the potential for technology to drive greater ambition, efficiency and transparency within the carbon market. We recognise the benefits that blockchain technology can bring within the carbon market, for instance to provide a secure record of data and ownership of carbon credits, and as a basis for platforms seeking to innovate and mobilise finance to support the carbon market’s development.

At the same time, we are mindful of the potential risks if tokenisation is permitted to occur in an uncontrolled way, and without formal coordination and terms of reference between Gold Standard and third parties creating digital tokens representing Gold

Standard credits on a blockchain. This includes risks related to environmental integrity, IT security, regulatory uncertainty and reputational harm.

It is for this reason that we are seeking to establish a formal framework and conditions to permit and manage the creation of digital tokens representing Gold Standard credits, which is the subject of this consultation.

1.2 CONSULTATION PROCESS

Gold Standard is now inviting views from stakeholders on the framework that we plan to establish to provide consent to organisations seeking to create digital tokens representing Gold Standard credits, using blockchain technology. On the pages that follow, we have outlined the eight categories in which we intend to apply conditions, as part of our overall framework.

We invite comments from stakeholders across these categories, as well as general comments on the approach Gold Standard should take with respect to tokenisation. In some areas, we are seeking views on whether stakeholders agree with our proposed approach; in others, we are seeking information and evidence to inform the approach that we ultimately take.

Finally, we are aware that stakeholders may be submitting feedback and comments on this topic to other standard-setting bodies. In the interest of efficiency, we will accept and consider feedback that may have been prepared for any separate consultations.

To respond to this consultation please complete the form, available at <https://gold-standard-foundation.formstack.com/forms/tokenisation>. Should you prefer, you can also submit responses via email to hugh.salway@goldstandard.org.

If you have any questions or would like to speak directly to the Gold Standard Secretariat, please contact hugh.salway@goldstandard.org.

2. CATEGORIES

Gold Standard is considering applying conditions in the following areas:

MODEL	The model used to create and manage digital tokens representing Gold Standard credits
HOLDING AND RETIREMENT	Requirements related to the information associated with digital tokens representing Gold Standard credits, the retirement of credits on the registry and reporting by the organisation responsible for creation of digital tokens
POOLING	Limitations on the credits that Gold Standard credits can be pooled with
DUE DILIGENCE	Informational requirements as part of Know Your Customer and Anti-Money Laundering checks
SUSTAINABILITY	Requirements to ensure digital tokens representing Gold Standard credits are only created using blockchain technologies with a low carbon intensity
DATA SECURITY	Requirements to ensure organisations take appropriate steps to protect against IT breaches that put digital tokens representing Gold Standard credits at risk
PERMITTED UNITS	Initial, limited restrictions on the type of credits that may be tokenized
REPUTATIONAL HARM	Provisions to protect Gold Standard and its projects from reputational harm

Further information on each of these is provided below, with questions for stakeholders.

In practice, Gold Standard envisages applying these conditions at two points. Some would be part of upfront checks prior to an organisation being granted consent to create digital tokens representing Gold Standard credits. Others would be integrated into Gold Standard's Registry App Terms of Use, which organisations seeking consent would be required to sign. Gold Standard expects that it would need to charge a reasonable fee to organisations seeking consent, to cover costs associated with the assessment process.

Gold Standard then envisages keeping under review whether organisations continue to abide by its requirements, with the right to withdraw or amend consent in instances where its requirements were deemed to be breached.

In addition to the questions included on the following pages, which are specific to each of these categories, Gold Standard invites general feedback from stakeholders in response to the following questions:

QUESTIONS

- *Do you agree that Gold Standard should explore and enable organisations to create digital tokens representing Gold Standard credits, using blockchain technology? Why?*
- *Do you consider there to be potential advantages or disadvantages for your organisation if this were enabled?*
- *Would you like to share any additional comments not covered by questions included in this consultation?*
- *Do you consider there to be uses of blockchain technology that should be distinguished and treated differently from others?*

Stakeholders with more limited direct interaction or experience with blockchain and tokenisation may wish to answer only these questions, and not the more detailed questions that follow.

2.1 MODEL

The model is the approach adopted to create digital representations of Gold Standard credits, and to manage their connection to the original credits on the Gold Standard Impact Registry. Several early efforts to tokenise carbon credits involved the retirement of credits within the registry of a crediting programme, prior to the creation of a digital representation. This model will not be permitted by Gold Standard as it is inconsistent with the understanding that retirement represents a permanent removal of credits from circulation. Gold Standard invites views on the approach it proposes to take instead.

Initially, Gold Standard proposes to require any organisation intending to create digital representations of Gold Standard credits on a blockchain to establish a 'custodial' registry account within the Gold Standard Impact Registry. The custodial account is a model currently used by organisations listing credits on a third-party exchange, in which an account holder manages – or takes 'custody' of - credits that are owned by other organisations or individuals, for the period that they are listed on the third-party platform.

In the case of tokenisation, the organisation intending to create digital tokens representing Gold Standard credits on a third-party platform would be required to establish a custodial account, in which the original credits would be housed for the duration that they are represented as a digital token. Any VERs that the organisation or the organisation's participants wished to 'tokenise' would need to be transferred into the custodial registry account prior to their tokenisation and held (unretired) in that account for the full period that the VERs are represented as digital tokens on the organisation's separate platform. By establishing this registry account, the organisation would also be required to sign and thereby take responsibility for compliance with [Gold Standard's General Terms and Conditions](#) and Registry [Terms of](#)

Use. Gold Standard considers the model described above to be a short-term solution, while other models are developed. Over the longer-term, Gold Standard may explore two further models:

The creation of an Application Programming Interface (API) or similar software interface connected to the Gold Standard Impact Registry, which enables a more direct tokenisation of VERs on a third-party platform and allows for automated two-way communication between the Registry and third-party platform.

The direct creation of on-chain representations of Gold Standard credits by Gold Standard, which is sometimes referred to as 'native tokenisation'.

QUESTIONS

- *Do you consider the custodial account model to be workable in the short-term while other solutions are explored?*
- *Do you consider it appropriate for Gold Standard to explore 'native tokenisation' in the future?*
- *Would you like to share any additional comments on this topic?*

2.2 HOLDING, RETIREMENT AND REPORTING

To support transparency and the avoidance of double counting, and to enable Gold Standard to continue to effectively manage information related to credits it has issued, there are certain responsibilities that organisations creating digital tokens representing Gold Standard credits will need to take.

Gold Standard proposes to require that organisations must:

1. Ensure that any VERs retired or cancelled in full on a third-party platform (referred to as 'burning' on some web3 platforms) must be irreversibly retired on the Gold Standard Impact Registry with no undue delay.

2. Provide an option for entities to 'de-tokenise' GS VERs, ensuring that the digital representation of the GS VER is irreversibly cancelled, and that the original GS VER can be transferred and retired by account holders within the Gold Standard Impact Registry without a risk of double use.
3. Ensure that digital tokens representing Gold Standard carbon credits created on a blockchain-based platform contain sufficient publicly available information for third parties to clearly associate the digital representation with the original carbon credit in the Gold Standard Impact Registry. We propose to require that organisations include a link to all relevant information listed on the Gold Standard Impact Registry via the unique URL for the credit block, and/or include at least the serial number, vintage and associated project ID for all carbon credits represented as digital tokens on their platform.
4. Report at least quarterly to Gold Standard with information on:
 - I. VERs that the organisation has represented as a digital token, including as a minimum information on the serial number, vintage and associated project ID
 - II. VERs that have been retired or cancelled on the organisation's platform, including as a minimum the same information.

QUESTIONS

- *Do you consider these proposals to be workable and proportionate?*
- *What do you consider to be an appropriate timeframe in which retirements must be made on the Gold Standard Registry, following their retirement on a third-party platform?*
- *We are aware that some organisations may wish to create and market tokens that represent fractional portions of one carbon credit. Do you have experience or ideas for how requirements may need to vary in such cases, for instance related to retirement in the Gold Standard Impact Registry?*
- *Would you like to share any additional comments on this topic?*

2.3 POOLING

Several organisations creating digital tokens representing carbon credits apply the practice of ‘pooling’, under which carbon credits that meet certain eligibility criteria are pooled together and represented by a generic token rather than a token that is specific to an individual carbon credit. An example is the [Base Carbon Tonne \(BCT\)](#) created by Toucan. This is broadly similar to the use of contracts on traditional exchanges, such as the Global Emissions Offset (GEO) created by CBL.

Gold Standard is mindful that by the nature of pools or contracts, carbon credits entered into the pool or contract would all be expected – in the absence of new innovation – to attract the same price. If Gold Standard credits were pooled with credits from other standards, this may therefore be disadvantageous to many projects registered with Gold Standard, if they are currently able to sell credits at higher prices. At the same time, Gold Standard understands that the ability to sell credits into pools may also be attractive to some project developers.

Gold Standard is inviting views from stakeholders on whether it should apply restrictions on the ability of organisations to pool Gold Standard credits with credits from other standards and, if so, the nature of these restrictions.

QUESTIONS

- *Do you think that Gold Standard should consider restrictions on the ability of organisations to pool its issued credits with credits from other standards. Why?*
- *If the answer to the above question is yes, do you have views on how any restrictions could operate?*
- *Would you like to share any additional comments on this topic?*

2.4 DUE DILIGENCE

Gold Standard already requires all organisations intending to open and manage an account in the Gold Standard Impact Registry to undergo Know Your Customer (KYC) checks, involving the provision of documents related to the organisation's incorporation, management, the nature of its business and how it intends to use its registry account. As a minimum, Gold Standard will require all organisations intending to create digital tokens representing Gold Standard credits to fulfil these existing requirements.

Gold Standard is though mindful that the organisation creating an on-chain representation of a Gold Standard credit will only represent the first layer of interaction. In some cases, other organisations may then create derivative tokens or other crypto-assets based on the original representations, which would not be subject to these KYC checks conducted by Gold Standard. Considering the ability for entities to act anonymously when using blockchain-based platforms and cryptocurrencies, this may introduce either real or reputational risks for Gold Standard and its stakeholders. At the same time, Gold Standard is mindful that secondary due diligence checks are not required in other cases, where credits are transacted without the use of blockchain.

Gold Standard is therefore seeking views from stakeholders on the extent of the due diligence requirements that should be introduced in cases where organisations intend to create on-chain representations of Gold Standard credits.

QUESTIONS

- *Is it sufficient for organisations intending to create original on-chain representations of Gold Standard credits to undergo our existing KYC checks, or should further due diligence requirements be introduced? If so, for whom?*
- *Do you think that Gold Standard should introduce requirements related to the due diligence checks that organisations creating digital tokens representing Gold Standard credits apply for their own users?*

- *Are there examples from other sectors that you believe could be learned from?*
- *Would you like to share any additional comments on this topic?*

2.5 SUSTAINABILITY

The greenhouse gas emissions associated with the operation of blockchain technologies varies significantly from platform to platform. Blockchains using a 'proof-of-work' mechanism, which includes Bitcoin, can require significantly more energy and therefore may contribute significantly higher greenhouse gas emissions than blockchains using a 'proof-of-stake' mechanism.

Gold Standard is of the view that the sustainability of the blockchain matters, in the context of its decision to approve requests by organisations to create on-chain representations of Gold Standard credits. There is the potential for higher emissions, as well as reputational harm, by permitting the creation of on-chain representations using higher-emitting blockchain technologies, in particular considering that more sustainable alternatives exist.

Gold Standard therefore proposes introducing a requirement that organisations creating digital tokens representing Gold Standard credits must either:

1. Ensure digital tokens exist only on a blockchain that uses a proof-of-stake mechanism, or
2. In cases where the blockchain does not use a proof-of-stake mechanism, provide at least one independent, peer-reviewed analysis demonstrating that the blockchain technology has a direct emissions footprint (i.e., prior to any offsetting) that is significantly lower than those using a proof-of-work mechanism (see question below on the benchmark for this).

In the future, Gold Standard expects that it would establish an approved list of blockchain technologies to streamline this process for applicant organisations.

Gold Standard invites views from stakeholders in particular on the workability of these proposals, the appropriate benchmark to set for the emissions footprint of blockchain technologies, and any existing third-party source of evidence on the emissions footprint that could be used to inform its approach and decisions.

QUESTIONS

- *Do you agree that Gold Standard should apply restrictions related to the emissions footprint of blockchain technologies?*
- *Do you consider these proposals to be workable and, if not, why?*
- *Do you consider these proposals to be sufficient and, if not, why?*
- *Are you aware of, or would you recommend, a benchmark that Gold Standard could use to determine whether blockchain technologies have a sufficiently low emissions footprint for consent to be granted?*

2.6 DATA SECURITY

Gold Standard has measures in place to protect the security and integrity of data represented on the Gold Standard Impact Registry, and to prevent IT breaches. As is the case for all technology, Gold Standard is mindful of the potential for technologies used by third-party organisations creating digital tokens representing Gold Standard credits to be breached or for data to otherwise be at risk. This could be as a result of steps by malicious actors, or systems could also be disrupted by other factors, such as faulty design.

Gold Standard invites views from stakeholders on any requirements or safeguards that we may choose to put in place with respect to the security of technologies used by organisations creating digital tokens representing Gold Standard credits. Gold Standard will also draw on information and recommendations provided by the Working

Group on [Digital Infrastructure and Open APIs](#), established under its Open Collaboration for digital solutions in carbon markets.

QUESTIONS

- *Do you agree that Gold Standard should either introduce conditions or require information related to the IT security measures that an organisation is taking to protect data against breaches?*
- *If so, do you have views or recommendations on what Gold Standard should require?*
- *What are the primary risks that you believe Gold Standard should consider when writing its requirements on this topic?*
- *Are there benchmarks, good practice codes or similar reference points for IT security requirements that you would recommend Gold Standard following or taking into account?*

2.7 PERMITTED UNITS

Gold Standard has identified several types of credits that may require further consideration before it provides permission for them to be tokenised. These are:

1. **Planned Emission Reductions (PERs):** PERs are issued to certain land use and forestry projects registered with Gold Standard, and represent expected future emission removals rather than verified, achieved emission removals. As such, PERs are not allowed for use towards offsetting claims and are not interchangeable with Verified Emission Reductions (VERs). Initially, Gold Standard is of the view that PERs should not be permitted for tokenisation while a suitable approach and safeguards are developed.

2. **VERs authorised for use under Article 6 of the Paris Agreement:** Gold Standard expects in the future to issue VERs that are associated with a Letter of Authorisation issued by the project’s host country, permitting the VERs to be used by entities towards purposes permitted under Article 6. Under rules adopted by the UNFCCC, governments will need to report detailed information on the use of such VERs, including their use purpose and the using entity. At this early stage in the implementation of Article 6, Gold Standard is of the view that it is premature to permit the tokenisation of VERs associated with an Article 6 Letter of Authorisation.

In both cases, Gold Standard envisages permitting tokenisation with tailored safeguards in the future, as we are aware of organisations interested in creating digital tokens representing both types of unit.

QUESTIONS

- *Do you agree with the proposal not to initially permit the tokenisation of these categories of credit, until tailored safeguards are developed?*
- *Do you believe there are other types of carbon credits that Gold Standard should consider creating tailored safeguards for? If so, why?*
- *Would you like to share any additional comments on this topic?*

2.8 REPUTATIONAL HARM

Gold Standard has existing provisions within its [General Terms and Conditions](#) and [Registry Terms of Use](#) that require organisations using and directly interacting with Gold Standard not to intentionally commit any act or emission that could cause harm to Gold Standard’s reputation and goodwill, and that permit Gold Standard to take certain action in the event that its reputation is put at risk.

Gold Standard considers there to be specific potential reputational risks associated with links to cryptocurrencies that do not exist or are lower for other uses of Gold Standard and its credits. At the same time, our existing provisions related to reputational harm are broadly applicable and therefore could be applied for the act of creating digital tokens representing Gold Standard credits, and any further activity derived from the original creation of these digital tokens, without change.

Gold Standard would be prepared to apply the powers that it holds under our existing terms and conditions in cases where we assess our terms related to reputational harm have been breached.

QUESTIONS

- *Do you consider Gold Standard’s existing conditions related to reputational harm to be suitable for the act of creating digital tokens representing Gold Standard credits?*
- *If not, what amendments or additions do you believe are needed?*
- *Would you like to share any additional comments on this topic?*

3. NEXT STEPS

Gold Standard will carefully consider all responses to this consultation following its close on 28 October 2022. In the absence of any further complications, it then intends to adopt and begin operating a new process to begin providing consent to organisations intending to create digital tokens representing Gold Standard credits as soon as practicaly possible.

We consider the proposals included in this consultation to represent a first phase of a longer process of connecting Gold Standard with blockchain-based applications. It is possible that we will need to tighten restrictions in certain areas if we identify potential risks, which is a fact that organisations intending to create digital tokens representing Gold Standard credits should be aware of. At the same time, we also hope in the future to deepen partnerships and introduce new technology solutions in the future, to draw on the benefits that blockchain technology and its applications may bring to the carbon market.