



Gold Standard[®]

Climate Security & Sustainable Development

CONDITIONS FOR CONSENTING TO TOKENISATION OF GOLD-STANDARD ISSUED CREDITS

SUMMARY OF CONSULTATION FEEDBACK AND NEXT STEPS

March 2023

1 | INTRODUCTION

Gold Standard ran a public consultation related to the tokenisation of carbon credits - the creation of digital tokens representing Gold Standard-issued credits on a blockchain - between 14 September and 28 October 2022. The purpose of the consultation was to inform the approach that Gold Standard should take with respect to tokenisation. It was of particular interest to Gold Standard to receive views and input on a series of areas in which conditions may be applied as part of a potential framework for the creation of digital tokens representing Gold Standard-issued credits.

This consultation followed an update by Gold Standard to its [Registry Terms of Use](#) in May 2022, 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. The consultation ran alongside discussions within a Working Group on Digital Assets for Climate Impact, coordinated by Gold Standard and partners, as part of an [Open Collaboration on Digital Climate Markets](#) supported by Google Charitable Giving.

This document includes a summary of the responses to the public consultation and an overview of the planned next steps, which includes a readiness phase involving structured engagement on potential guidelines and functionality for the creation of digital assets related to Gold Standard-issued carbon credits.

2 | SUMMARY OF RESPONSES

Gold Standard received formal feedback to its consultation from 37 organisations, with the full list of respondents at Annex A. This included feedback from developers of carbon market projects, web3-based organisations, academics and university institutes, and carbon credit exchanges and retailers.

The responses in general provided broad endorsement of the proposals put forward, while a number of respondents provided information and resources to inform the development of a more detailed framework. A significant majority of respondents were of the view that Gold Standard should permit the creation of digital tokens on a blockchain platform to represent carbon credits. It should though be noted that a significant majority of respondents to the consultation represented organisations associated with blockchain, including those who would have been subject to the proposed conditions. The views within other stakeholder groups - including project developers - were more varied, with a recognition of both the risks and opportunities associated with the creation of digital tokens on a blockchain platform.

A more detailed summary of responses is provided in Section 4, and – except where explicitly requested to be kept confidential – full responses are available on the [consultation page](#).

3 | NEXT STEPS

Gold Standard has considered carefully the feedback received in the public consultation, alongside legal advice and other information, and is taking forward the following next steps:

1. Development of guidelines that could be adopted to guide activity by entities seeking to create digital assets representing Gold Standard-issued carbon credits, alongside our [Terms and Conditions](#) and [Registry App Terms of Use](#), which may also be amended as required to ensure the integrity of the Gold Standard Impact Registry and its use.
2. A short readiness phase involving structured engagement to assess the suitability and completeness of these guidelines and any changes to our Registry App Terms of Use, and to inform the development of associated infrastructure. This will include:
 1. Focused engagement with selected organisations intending to create digital assets representing Gold Standard-issued credits, addressing both the guidelines and the development of a software interface to enable two-way communication between the Gold Standard Impact Registry and third-party platforms. These organisations, listed in the accompanying news story, have been identified and invited to participate on the basis of the following eligibility criteria:
 - a. Membership of the Open Collaboration [Working Group on Digital Assets for Climate Impact](#), led by Gold Standard and core partners
 - b. Active participation in Working Group meetings or through the provision of feedback on materials developed for these meetings
 - c. Interest in and existence of a business model involving the direct creation of VER Reference Tokens, bridged from the Gold Standard Impact Registry
 - d. Registration in the EU, UK, Switzerland, or the USA
 2. Broader consultation with interested parties, including through the Open Collaboration Working Group on Digital Assets for Climate Impact, and including organisations with different business models and applications of blockchain. While Gold Standard will be undertaking the above-mentioned structured engagement with a small group of organisations, we remain open to consultations with other parties where requested.

This phase of structured engagement will run for a period of several months and will inform a future decision by Gold Standard on whether to introduce such guidelines to guide activity by entities seeking to create digital assets representing Gold Standard-issued carbon credits, and/or whether to take additional or alternative steps with respect to digital assets. Under a

guideline-based approach, Gold Standard would not endorse the model of any third-party entity engaged in the creation of digital assets but would instead seek to guide best practice and provide a reference for holders of Gold Standard credits contemplating their transfer to a platform creating digital assets.

4 | SUMMARY OF FEEDBACK BY AREA

This section provides a summary of feedback received during the public consultation, categorised by area of questions. The summary does not include all feedback shared by respondents, but is instead intended to reflect common views, trends and notable comments or recommendations provided by respondents.

As mentioned above, full responses from organisations are available on the [consultation page](#), except where explicitly requested to be kept confidential.

1. General questions

Description In recognition that many of the questions asked in this consultation were specific and in some cases technical, Gold Standard invited views on a set of more open questions related to the principle of consenting to the creation of digital tokens representing Gold Standard VERs. Gold Standard sought general views on:

- A. Whether respondents agreed that Gold Standard should explore and enable organisations to create digital tokens representing Gold Standard VERs, using blockchain technology.
- B. Whether there are potential advantages or disadvantages for the organisation of the respondent.
- C. Whether there are uses of blockchain technology that should be distinguished and treated differently from others.

Feedback

All respondents representing organisations associated with blockchain were of the view that Gold Standard should explore its use, with most outlining reasons for doing so, including liquidity, security of information and improved access to the carbon market.

Respondents representing organisations associated with project development had a more diverse set of views. Several were supportive of Gold Standard exploring tokenisation. One was still to be fully convinced, noting potential price volatility and reputational risks, but on balance was of the view that tokenisation should be explored given the potential

opportunities. Finally, two recognised the potential advantages but were overall more sceptical, noting for instance the potential risks given the limited maturity of crypto-currency markets and the risk that greater commoditisation and standardisation reduces quality of projects and the focus on their benefits for sustainable development.

Respondents also provided a variety of additional, general comments, including:

1. That Gold Standard should consider rules that would discourage speculative trading
2. A concern that Gold Standard may prevent decentralisation by acting as a gatekeeper
3. The need for transparency with respect to the organisations permitted to create digital tokens representing Gold Standard VERs, as well as their processes
4. That Gold Standard should commence with a pilot period of tokenisation before introducing a more open approach
5. That Gold Standard should be wary of any system that includes a native coin, as there may be a perverse incentive to increase its value
6. That Gold Standard should treat certain applications of blockchain differently, including public and private, permissioned and un-permissioned, and those wrapping credits for trading as opposed to using blockchain to aid transparency of use and retirement.

2. Model

Description

The model used to create and manage digital tokens representing Gold Standard credits

Gold Standard consulted on an initial model under which any organisation intending to create digital representations of Gold Standard credits on a blockchain would be required to establish a 'custodial' registry account within the Gold Standard Impact Registry. Under this model, the organisation intending to create digital tokens 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.

Gold Standard also noted that it may explore the development of an Application Programming Interface (API) to allow for automated two-way communication between the Registry and third-party platform, as well as the direct creation of on-chain representations of Gold Standard credits by Gold Standard, which is sometimes referred to as 'native tokenisation'.

Summary of feedback

A significant majority of respondents agreed with the model proposed by Gold Standard as an initial approach. It was stated, for example, that the custodian account model can make it easier to audit and identify any errors in the representation of credits on-chain, as all credits are housed within one account in the Gold Standard Impact Registry. Several respondents also noted the benefits of an API to bring greater efficiency by replacing more manual processes.

A minority of respondents did not agree with proposed initial model or did not consider it preferred. For two of these, there was a preference to move directly to an alternative model in which credits are ‘immobilised’ within the Gold Standard Impact Registry without the need for custodial accounts, while one considered the model to add complexity.

A significant majority of respondents agreed that Gold Standard should explore ‘native tokenisation’ in the future, with one respondent noting that this could instil trust. Some provided caveats, including (a) whether Gold Standard would have the technical capability to pursue this; (b) that this should be a longer-term consideration while relying on third parties for the time being; (c) that the emissions impact of doing so should be considered, and; (d) that native tokenisation should be pursued in alignment with other carbon crediting programmes. A small number of respondents disagreed with the idea, stating in one case that blockchain technology is intended for decentralisation, and in another that native tokenisation could put third parties intending to create digital tokens at a disadvantage.

3. Holding and retirement

Description

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

Gold Standard consulted on a number of responsibilities on the part of third parties creating digital representation of Gold Standard VERs, considered necessary 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. These were to:

1. Ensure that any VERs retired or cancelled in full on a third-party platform 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

3. Ensure that digital tokens 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
4. Report at least quarterly to Gold Standard with information on VERs that the organisation has represented as a digital token, and VERs that have been retired or cancelled on the organisation's platform

Gold Standard also consulted openly on the concept of fractionalisation, by which a carbon credit representing the reduction or removal of one tonne of carbon dioxide equivalent is divided into smaller fractions (e.g., 50 or 500 kilograms of carbon dioxide equivalent) and transacted in these smaller unit sizes. This may be attractive, for instance, for business models enabling individuals to compensate for the emissions footprint of small purchases or trips.

Summary of feedback

A significant majority of respondents agreed with Gold Standard's proposed responsibilities for third parties. Some respondents provided further comments, including that the ability to 'de-tokenise' will be an important feature for market actors to be able to access preferable prices for credits, and that Gold Standard could consider increasing its obligations on third parties over time so as not to stifle initial innovation. Another respondent notes the potential for error if the bridging of credits from the Gold Standard Impact Registry to a third-party platform based on blockchain is done manually rather than through use of an API. Finally, one respondent proposed that Gold Standard introduce a feature in its Impact Registry that functions in a similar way to retirement, allowing credits to be moved on-chain without the risk of double counting.

Gold Standard consulted specifically on the frequency of retirement of VERs in the Gold Standard Impact Registry following their cancellation or retirement on a third-party blockchain-based platform. While responses varied, and some felt that it was sufficient for this to take place within one week, the majority of respondents felt that this retirement should occur immediately, and that this could be made possible through technology. No respondent explicitly opposed the concept of fractionalisation of tokenised VERs, with a number of respondents highlighting the potential benefits. No participant mentioned a need for additional functionality or requirements on the part of Gold Standard to manage the fractionalisation of VERs. Instead, a number of respondents stated that it should be the responsibility of any third party creating digital tokens to manage fractionalisation and ensure retirements occur accurately.

4. Pooling

Description

Limitations on the credits that Gold Standard credits can be pooled with

Gold Standard invited 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. Pooling was understood as a situation whereby 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. The consultation acknowledged that, on the one hand, the ability to sell credits into pools may be attractive to some project developers and support liquidity while, on the other hand, the pricing implications of pooling could be disadvantageous to many projects registered with Gold Standard, if they are currently able to sell credits at higher prices.

Feedback

Respondents were divided on the topic of pooling, with respondents from the same stakeholder group broadly conveying the same messages. Respondents from project development were generally cautious about pooling, highlighting a risk to the reputation, differentiation and value of Gold Standard VERs if these were pooled with credits issued by different crediting programmes. One project developer noted that, at a very minimum, Gold Standard should not permit pooling with credits issued by crediting programmes not recognised under either ICROA (the International Carbon Reduction and Offsetting Alliance) or CORSIA (ICAO's Carbon Offsetting and Reduction Scheme for International Aviation). One project developer was however more open to the concept of pooling, recognising that this could support price differentiation.

On the other hand, respondents from web3-based organisations were generally in favour of pooling, noting that restrictions would stymie one of the primary benefits of tokenisation. Some respondents noted that project developers and other holders of carbon credits would retain a choice as to whether to sell carbon credits into pools, but that these pools would provide improved price transparency. Amongst web3-based organisations, a small number proposed that if restrictions are applied, this should be to permit the pooling of Gold Standard VERs only with credits issued by other ICROA-endorsed crediting programmes, while one proposed that restrictions should be limited to the avoidance of any future activities intended to 'sweep the floor' of the carbon market.

5. Due diligence

Description

Informational requirements as part of Know Your Customer and Anti-Money Laundering checks

Gold Standard sought views from stakeholders on the extent of the due diligence requirements in cases where organisations intend to create on-chain representations of Gold Standard credits. Specifically, we sought views on whether Gold Standard’s existing KYC (Know Your Customer) checks are sufficient for organisations intending to create digital tokens representing Gold Standard VERs or if further due diligence requirements should be introduced, and whether Gold Standard should apply requirements related to the due diligence checks imposed by organisations intending to create digital tokens on their own users.

Feedback

A majority of respondents were of the view that organisations intending to create digital tokens representing Gold Standard VERs should undergo the same level of KYC checks as are applied for other account holders within the Gold Standard Impact Registry. One respondent believed that further due diligence requirements should be applied but did not specify these. Several other observations were made in responses, including one respondent highlighting a significant reputational risk related to money-laundering through crypto-currencies, another respondent proposing that KYC processes should be tailored for each jurisdiction, and a third respondent expressing concern about whether web3-based organisations will have sufficient capabilities to manage risks related to money laundering and other criminal behaviour.

There was a diversity of views on the question of whether Gold Standard should introduce requirements on the due diligence checks conducted by organisations intending to create digital tokens on their own users. A number of respondents considered this beyond the purview of Gold Standard, with one suggesting that any such requirements may not be effective. Several respondents, including some whose business model includes the creation of digital tokens, proposed that organisations should be required to conduct due diligence checks on all partners supplying credits and those wishing to ‘de-tokenise’ them, but should not be under any further requirement. Several more respondents stated that it would represent a double-standard for organisations to be required to conduct due diligence checks on organisations simply wishing to retire credits, as this is not currently required for non-web3-based platforms or services. Other respondents proposed an element of flexibility, with several proposing that Gold Standard could outline a framework but not prescriptive requirements (possibly requiring partners to certify that they have sought competent legal advice on their obligations under relevant jurisdictional regulations), and another that web3-based organisations could create pools that apply KYC checks and other pools that do not.

6. Sustainability

Description

Requirements to ensure digital tokens representing Gold Standard credits are only created using blockchain technologies with a low carbon intensity

Gold Standard consulted on a proposed 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 that is significantly lower than those using a proof-of-work mechanism.

Gold Standard sought 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.

Feedback

All respondents bar one agreed that Gold Standard should introduce requirements related to the sustainability of the blockchain, with the one respondent that disagreed arguing that this was no longer a relevant issue as use of the proof of work consensus mechanism was diminishing.

While all other respondents agreed with the principle, there were differing views on the application. Some respondents stated that Gold Standard should simply prohibit the use of proof of work consensus mechanisms; others stated that Gold Standard should limit technologies to proof of stake only; while others still argued that Gold Standard should be open to blockchain technologies with a low emissions footprint alongside proof of stake consensus mechanisms.

Several participants noted further considerations, such as dependencies between blockchain layers, the volume of transactions, and use of carbon credits to compensate for emissions. Several participants also recommended third-party organisations whose research and methodologies could be used when assessing the sustainability of different blockchains.

7. Data security

Description

Requirements to ensure organisations take appropriate steps to protect against IT breaches that put digital tokens representing Gold Standard credits at risk

Gold Standard invited views from stakeholders on any requirements or safeguards that it could choose to put in place with respect to the security of technologies used by organisations creating digital tokens representing Gold Standard credits. This was asked due to the potential for technologies used by third-party organisations creating digital tokens to be breached or for data to otherwise be at risk, as a result of steps by malicious actors, or systems could also be disrupted by other factors, such as faulty design.

Feedback

A significant majority of respondents agreed that Gold Standard should introduce specific requirements related to data security. The small minority who disagreed felt that this was beyond the purview of Gold Standard.

Several respondents provided more specific recommendations, including that third-party security audits should be required for all smart contracts, for tokenisation platforms and for how these platforms interact with the Gold Standard Impact Registry. One respondent also proposed that Gold Standard should require a clearly documented, secure process for token issuance, including a requirement for multi-signature authorisation.

Finally, several respondents recommended existing standards or protocols that Gold Standard should consider as it develops its policy. These included CISSP (Certified Information Systems Security Professional), CCSS (the CryptoCurrency Security Standard), PCI DSS (Payment Card Industry Data Security Standard), SOC 2, ISO 27001 and ISO 27701.

8. Permitted units

Description

Initial, limited restrictions on the type of credits that may be tokenised

Gold Standard consulted on proposals to initially prohibit the tokenisation of two types of Gold Standard-issued carbon credits, pending further consideration of the need for certain specific safeguards. These were:

1. **Planned Emission Reduction (PER) Units:** issued to certain land use and forestry projects registered with Gold Standard, and represent expected future emission removals rather than verified, achieved emission removals.
2. **VERs authorised for use under Article 6 of the Paris Agreement:** 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.

Feedback

A significant majority of respondents agreed with the proposal to initially prohibit the creation of digital tokens representing these two types of credits. In many cases, respondents recognised the potential benefits of tokenising PERs, including to provide early finance to project developers, but were still of the view that their tokenisation should be phased in at a later phase.

A small number of respondents disagreed with the proposals, for the reason that they considered there to be significant potential for the tokenisation of both PERs and VERs authorised for use under Article 6.

Generally, respondents focused to a greater extent on PERs than on VERs authorised for use under Article 6 in responses to this question.

9. Reputational harm

Description

Provisions to protect Gold Standard and its projects from reputational harm

Gold Standard sought views from respondents on whether its existing provisions within its General Terms and Conditions and Registry Terms of Use related to harm to Gold Standard's reputation and goodwill, were suitable for cases where an organisation was creating digital tokens representing Gold Standard VERs, or whether any amendments or additions are required.

Feedback

All respondents who answered this question were of the view that Gold Standard's current provisions were sufficient for cases of tokenisation. One respondent proposed that Gold Standard make a general update to its provisions related to general harm, to incorporate a reasonable 'notice and cure' period in cases where organisations are considered in breach.