

# ISOMETRIC

## Assessment Framework

4 March 2024

Version 1.0

# Summary

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# SUMMARY

The following document outlines an assessment of whether Isometric meets ICROA’s Carbon Crediting Programme Endorsement Review Criteria (version 3.0). The assessment was carried out between 22 January 2024 and 29 February 2024, and is based on the documents submitted to ICROA by Isometric on 21 December 2023, and Isometric’s responses to clarification questions received on 15 February 2024.

While Isometric should include some additional considerations to their Standard documents, we recommend ICROA to *conditionally endorse* the Isometric Standard. The programme has not registered 10+ projects, nor issued 100,000+ tCO<sub>2</sub>e, making it ineligible for full endorsement despite meeting ICROA’s endorsement criteria.

Requirement	Outcome	Explanation
1) Independence	●	<p>Isometric has a clear policy in place to identify and mitigate Conflicts of Interest (COIs). The Programme keeps track of COIs signed by its staff, contractors and board members.</p> <p>Isometric does not act in the capacity of a project developer and is not an active participant in the transaction of carbon credits.</p>
2) Governance	●	<p>The programme is transparent with regard to its governance structure, processes and quality controls. Some discrepancies exist between the organizational chart in their Appointments Policy and their website that need to be harmonized.</p> <p>The Standard documents and methodologies are publicly available and regularly updated, with a transparent versioning system. A grievance mechanism is accessible to all stakeholders.</p> <p>The Standard documents could be strengthened by more explicitly outlining on what timeframe updates to the standard are incorporated, how third-parties can raise comments and questions, and how public comments are received and reviewed.</p>
3) Registry	●	<p>The registry is public and accessible and includes all required documentation. Credits on the registry have unique serial numbers and credit status. A “know your customer” Policy is in place for checking all registry accountholders.</p>
4) Validation and verification	●	<p>All projects need to go through third-party validation and verification. VVBs must meet the requirements set in place in</p>

Requirement	Outcome	Explanation
		the VVB policy. However, the policy states that VVBs may be accepted when they are compliant “with all required verification needs and competencies required for the relevant protocol and with the guidelines of ISO 19011 or other relevant standards”.
5) Carbon Crediting Principles	●	The Programme has adequate measures in place to ensure the credits issued by its project are unique, real, permanent, additional and measurable.
6) Environmental and social impacts	●	The standard clearly outlines that projects need to demonstrate that they create no net environmental and social harm. This is done by conducting an environmental and social assessment using requirements that align with the ICVCM Core Carbon Principle. This assessment needs to be included in the documents that undergo validation and verification.
7) Stakeholder considerations	●	A stakeholder consultation must be held for all Isometric standard and methodology changes, and all projects that are registered under Isometric. However, it is not adequately outlined how stakeholder consultation should be conducted and how the stakeholder comments are included in the PDD.
8) Scale	●	Isometric currently does not meet ICROA’s requirements for scale in terms of both number of projects registered, as well as the volume of credits issued.
9) Additional considerations	●	There is no suggestion of negative media coverage on the standard found online.

## CARBON CREDITING PROGRAMME ENDORSEMENT APPLICATION FORM

### Contact Information

Please complete the following table with up-to-date contact information.

<b>Name of Programme</b>	Legal name: Isometric HQ Ltd Publicly known as: Isometric
<b>Contact Person</b>	Lukas May (Head of Expansion and Policy) Alexandros Metzler (Business Development and Policy) Eamon Jubbawy (Founder and CEO)
<b>Contact Email</b>	lukas.may@isometric.com alex.metzler@isometric.com eamon.jubbawy@isometric.com
<b>Date of Submission</b>	December 20 <sup>th</sup> , 2023
<b>Version of Submission</b>	1
<b>Brief Overview of Programme</b> (max 150 words)	<p>Isometric is a standard and registry for long-duration carbon removal credits. Our mission is to ensure the transition to carbon removal happens responsibly and fast.</p> <p>The Isometric Standard sets out the world’s most stringent set of rules for removing carbon. Our credits represent truly independent, scientifically rigorous confirmation that carbon removal has actually occurred. Buyers can transparently view all the calculations and evidence that underpins each credit on the Isometric Registry.</p> <p>Isometric also hosts a publicly available Science Platform which allows suppliers to share and visualise their early processes and data for feedback from the academic community.</p>

Note: For non-public documents we refer to in this application, we have set up a [shared Google Drive folder](#) for the assessor. We require the individual email addresses to grant access, so for any access requests please send to the contact persons listed above.

## APPLICATION QUESTIONS

### 1. Independence

#### 1.1 Conflicts of Interest

##### **1.1.1 Provide evidence of the procedure in place to identify and mitigate conflicts of interest (COI) between staff, board members, contractors, and the projects developed under the Programme.**

Isometric has an internal Conflicts of Interest Policy, available [here](#). This requires staff, Board members, and contractors to identify and mitigate conflicts of interest, including with any Projects developed under the programme. For example, if one of our in-house scientists has a family member at a Project Proponent with whom we work, then they will need to declare this and put in place a mitigation plan (e.g. that individual could not be involved in the Verification and crediting process in relation to the Project Proponent).

##### **1.1.2 Provide evidence of the COI declaration for all staff, board members and contractors to sign, and provide evidence that the COI declaration has been signed by the relevant parties.**

Isometric has a COI declaration, which must be completed by all staff, Board members, and contractors. The most recent version of the COI declaration and the tracker logging declarations can be found [here](#).

N.B. For Data Protection purposes, the folder containing all completed declarations is considered sensitive as declarations contain personal and financial information so has not been shared here (in line with the data protection law principle of proportionality). Specific examples of completed forms can be shared on request.

##### **1.1.3 Provide evidence that the Programme does not have conflict of interest with validation and verification bodies (VVBs) and project developers. Describe how, and at what frequency, the Programme checks to ensure no COIs are present.**

VVBs:

The Isometric Standard includes measures in [Section 4.4 \(“Conflicts of Interest”\)](#) to ensure independence and prevent conflicts of interest in the Validation and Verification of carbon removal providers. Relevant extracts are listed below:

- Any organisation which has been involved in the development of a particular Project may not act as a VVB for Validation and/or Verification purposes for that Project. Any organisation which has been paid by a particular Project to assist in developing any part of a Protocol for their process may not act as a VVB for Validation and/or Verification purposes for that Project
- To minimise the risk of conflicts of interest occurring between the Project Proponent and the VVB, Isometric will select and engage VVBs for Project Validation and Verification, and VVBs must complete a

conflict of interest disclosure. Any entity that has been involved in Project development or has received compensation from a specific Project to engage in the Protocol development and certification process is prohibited from serving as a VVB for Validation and Verification tasks. Furthermore, VVBs must be rotated every five years

Isometric also has a publicly available [VVB Policy](#), building on the rules outlined in the Isometric Standard and setting out the specific requirements VVBs must abide by. Beyond the requirements listed above, the conflict of interest requirements of this Policy require that:

- VVBs fill in an application form before they are approved by Isometric. In that form, VVBs must confirm the absence of any potential or actual conflicts of interest, and that they will immediately notify Isometric and agree an appropriate mitigation of such conflicts (if possible) should a conflict of interest arise. The application template can be viewed [here](#).
- For Project-specific engagements, the VVB must confirm a declaration upon signature of the request for proposal (RFP) for an individual Project. This includes a statement declaring that:
  - the applicant has no financial interest in and no unmitigated conflict of interest with Isometric or the relevant Project
  - none of the family members of involved auditors must be dealing in, promoting, or otherwise have a fiduciary relationship with anyone promoting or dealing in the offset credits being evaluated
- In cases where a conflict of interest has been identified, Isometric will determine the appropriate mitigation, and if mitigation is not possible Isometric may require specific individuals to be removed from the work programme, or require a new VVB to be appointed

Project developers:

Isometric does not hold equity in any Project developers, nor does Isometric act in the capacity of a Project developer. Isometric also takes additional steps to remove any potential conflict with Project developers: unlike traditional registries, Isometric does not take payment for its services from Project developers. Instead Isometric is paid by buyers. This payment is a fixed sum that is independent of the actual number of credits that Isometric issues following Verification (further details of Isometric's revenue model are outlined in response to Q1.1.4). This removes a potential conflict inherent in the business model of traditional registries, where they are paid by the developers whose work they are supposed to be scrutinising.

**1.1.4 Describe how carbon credits from the Programme go to market and the stakeholders involved.**

**Describe the Programme's revenue structure and confirm the Programme is not exposed to the sale price of a carbon credit.**

The process by which credits get to the market is set out below, alongside information on the beneficiaries and parties involved, as well as the role of the Isometric Standard. More detailed information is set out in [Section 5 \(“Crediting”\)](#) of the Isometric Standard.

**Step 1: Order:** A buyer expresses interest in buying carbon credits from a certain Project Proponent. They sign a contract with that Project Proponent for a certain amount of tonnage of carbon dioxide removed. The buyer then signs a contract directly with Isometric for registry services related to that order, including a fee schedule. Isometric also puts in place a contractual relationship with the Project Proponent, if there is not one already. The Project Proponent contract does not involve any fees (it relates instead to areas such as information sharing and confidentiality, for example).

**Step 2: Protocol Development:** Isometric works with the Project Proponent to identify if an existing Protocol may be suitable for its removal approach. If no existing Protocol is available, Isometric would need to develop a new Protocol, which would then undergo a public consultation and review from the Science Network. Following any changes made through that process, the finalised Protocol is then available for use.

**Step 3: Project Validation:** The Project Proponent must supply a completed Project Design Document (“PDD”) to Isometric detailing the location, requested crediting period, technology used and selected Protocol applicable for the carbon removal Project, as well as additional information including an environmental impact assessment, Project risk analysis, roles and responsibilities of Project participants and details of other stakeholders. See [Section 3 \(“Project Requirements”\)](#) of the Isometric Standard for more information. Isometric will appoint an accredited, independent Validation and Verification body (“VVB”) to validate the Project against the selected Protocol. The Validation process includes desk review of Project documentation and conducting an on-site visit, in accordance with the guidance of ISO 14064-3 and the requirements outlined in [Section 4 \(“Validation and Verification Requirements”\)](#) of the Isometric Standard. Upon completing this process, the VVB will submit a Validation report and Validation opinion to Isometric for final review, following which the Project may, depending on the opinion, be deemed validated against the selected Protocol.

**Step 4: Verification:** Following Project Validation, Project Proponents may submit claimed removals to Isometric, including associated removal calculations and monitoring data via the Science Platform. Isometric will appoint a VVB to conduct Verification, following the process described in [Section 4 \(“Validation and Verification Requirements”\)](#) of the Isometric Standard. Isometric appoints and pays the VVB, rather than the Project Proponent, to minimise the conflict of interest of a Project Proponent choosing its own auditor. The VVB must follow these requirements and the requirements of the selected Protocol, and will issue a Verification report and Verification opinion to Isometric for final review upon completion of the process. The first Verification for a Project may take place at the same time as



Project Validation, or subsequently. Verification may then take place at least annually, but generally more frequently, according to the requirements of the relevant Protocol. Once Isometric has accepted a Verification report, the corresponding removals will be deemed verified, and eligible for the issuance of credits.

Step 5: Account and Issuance: For a buyer to be eligible for credits, both the buyer and Project Proponent will need to have a registered credit account within the [Isometric Registry](#). These accounts are set up by Isometric if the organisation has passed the appropriate know-your-customer (“KYC”) checks. Following Verification of carbon removal activity (as per step 4), the corresponding amount of credits is issued to a Project Proponent’s account. Isometric is the sole credit issuing body on the Isometric Registry.

Step 6: Delivery: Once credits have been issued to a Project Proponent’s credit account, it can transfer these credits to the buyer at the appropriate time, to fulfil its contractual relationship with the buyer. This transfer from a Project Proponent to a buyer is considered a “delivery” (and [defined](#) as such in the Isometric Standard).

Step 7: (Optional) Retirement: A credit account holder can retire the credits it owns at any time of its choosing. A credit may be retired for an account holder’s own purposes, or on behalf of a third party beneficiary, who must be publicly identified. This is not a reversible step and, once retired, the credits related to those tonnes of carbon dioxide removal activity can never be used again by the owner, the beneficiary of the retirement, or any other actor.

Step 8: (Optional) Secondary Transfer: A buyer can also transfer the credits it owns to another organisation with a credit account on the [Isometric Registry](#).

Revenue Structure: Isometric charges buyers a flat fee for each contract, independent of the amount of credits issued and their sale price. The fee is paid partly up-front, and then prorated over the lifecycle of the deliveries of the removal tonnes. Project Proponents are not charged. The fee structure can be summarised as follows:

Isometric’s fee is a function of both:

- the complexity of the MRV, represented by Verification price  $P_v$  (per-tonne);
- and the amount of MRV required, represented by number of tonnes ordered  $N$

and amounts to  $P_v * N$  for each order.

Based on CarbonPlan’s Verification Confidence Levels (VCL) framework, the Verification price increases with the complexity of MRV.

From the perspective of a buyer, there are two relevant cash flows:

- The Isometric fee ( $P_v * N$ , as explained above), paid to Isometric.

- The removal fee ( $P_r * N$ , which is the price-per-tonne multiplied by the volume of tonnes ordered). This is the price for the carbon removal services, paid to the Project Proponent, and is determined directly between the buyer and the proponent. Isometric is never exposed to the sales price of any credit.

The Volume, N, represents ordered tonnes, not delivered credits. This is to ensure the Verification result has no impact on what Isometric is paid (i.e. to avoid an incentive for Isometric to provide more credits to the Project Proponent than can be justified).

The payment schedule for Isometric's fee is decoupled from the delivery schedule of the contracted carbon removal. This eliminates any incentives for early claims of full Verification and delivery to expedite payment collection. For orders below a certain threshold (currently \$25,000), the fee is required to be paid in full up-front. For larger orders, 50% of the total fee is paid upfront, with the remaining 50% payable in equal annual instalments spread over the lifetime of the contract.

## 1.2 Project Development

### 1.2.1 Describe the Programme's role in the development of carbon credit projects, if any. Confirm the Programme owner / operating entity does not act in the capacity of a project developer.

Isometric is not involved in any way in the development of any carbon credit Projects. We confirm that Isometric does not act in the capacity of a Project developer.

## 1.3 Marketplaces

### 1.3.1 Describe the Programme's role in the sale of carbon credits, if any. Confirm the Programme does not pursue buyers, act in a brokering capacity, or actively market carbon credits.

Isometric is not a marketplace and does not act in a brokering capacity, and therefore there is no method by which buyers can contract with Project Proponents directly through Isometric, nor is there any kind of transaction fee charged by Isometric when a buyer contracts with a Project Proponent. Isometric has deliberately avoided such a business model to avoid the inherent conflicts of interest it would create.

### 1.3.2 If the Programme has a marketplace, describe how the marketplace functions. Provide evidence that the Programme does not set the price of carbon credits that are sold on its marketplace.

Not applicable; Isometric does not have a marketplace.

## 2. Governance

### 2.1 Effective Governance

#### 2.1.1 Share the Programme's publicly available organisation chart that shows the governance structure, including the makeup of the Board. Describe the responsibilities of the Board.

Isometric's governance structure is available on the website as part of our publicly available [Appointments Policy](#)<sup>1</sup>. It shows the makeup of the Board as well as the Leadership, and how these interact with individual Divisions as well as the independent Science Network.

The Board is responsible for:

- Setting overall strategy for the organisation
- Where the Board agrees to place on the agenda: discussion of topics that the Leadership deems useful to receive a Board-level steer
- Appointment of Board Directors and the Chief Executive Officer
- Review of proposed appointments to the organisation's Leadership
- Approval of annual accounts
- Matters requiring Board sign-off as set out in the Articles of Association, for example in relation to the approval and management of employee share options

### **2.1.2 Provide evidence of the publicly available description of how appointments are made to leadership, committees, and groups.**

Isometric has a publicly available [Appointments Policy](#), which describes how appointments are made to Leadership, committees, and other groups (e.g. our Science Network).

### **2.1.3 Confirm the Programme complies with all laws and regulations related to the business in the jurisdiction in which it is registered as a business. Provide evidence, as available.**

As a UK-based private limited company, relevant laws and regulations with which Isometric ensures ongoing compliance are:

#### Companies Act 2006:

- Isometric maintains financial records and prepares accounts in line with the guidance provided for UK private limited companies under the Companies Act 2006
- Isometric provides regular and timely filings to Companies House as required by the Companies Act 2006, including for example in relation to the appointment or resignation of company Directors
- Isometric's filing history is up-to-date on Companies House and there have been no late filing or other kinds of penalties incurred during its operating history

#### Data Protection Act 2018:

- Isometric recognises that handling personal data brings it within scope of the Data Protection Act 2018 as a data controller. Protections are therefore in place within the organisation to ensure compliance with the Act, always bearing in mind the seven key principles underpinning effective data protection

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<sup>1</sup> Direct links to publicly available documents provided in this application can also be accessed through the website at <https://isometric.com/company>

- For example, documents containing sensitive personal data (e.g. employee pay information) are visible only on a need-to-know basis (e.g. HR, payroll providers).
- We have a published [Privacy Policy](#) on our website for external visitors to understand how Isometric handles data

#### Bribery Act 2010:

- Isometric assesses the current risk of employees being exposed to bribery as relatively low, given the nature of the work being undertaken and the jurisdictions in which Isometric currently operates (UK and USA). Nonetheless, Isometric is aware that should that risk profile change, implementation of additional measures (e.g. additional staff training) may be necessary to ensure compliance with the Act. The Leadership Committee intends to keep this under review, noting for example that beginning work with Project Proponents in higher risk jurisdictions may require a change in approach.

#### Money Laundering Regulations 2022:

- Isometric has considered the possibility of the Money Laundering Regulations applying to its business, but has determined that it falls outside the scope required to register with HMRC as a reporting institution. Isometric also falls outside the FCA's remit, since it is not carrying out regulated activities as defined under the Financial Services and Markets Act 2000 (as amended)
- Nonetheless, as a matter of good practice and to ensure integrity of the [Isometric Registry](#), Isometric has determined that it is appropriate to implement principles drawn from the Money Laundering Regulations and associated guidance (e.g. Joint Money Laundering Steering Group guidance) in the process of onboarding Project Proponents and buyers onto the Isometric Registry. For example, KYC checks are to be carried out on all clients (both Project Proponents and buyers) seeking to use the Isometric Registry, in accordance with the [Isometric KYC Policy](#)

#### Health and Safety Act 1974:

- Isometric is committed to meeting and exceeding the requirements of health and safety legislation in order to maintain the health, safety, and wellbeing of its staff, which are its most important asset
- In this regard, Isometric goes above and beyond the basic requirements of the legislation. For example, in providing employees with a selection of high quality working-from-home hardware to choose from upon joining the organisation, to ensure their home environment is as comfortable and ergonomic as the office

### **2.1.4 Describe how the Programme transparently makes decisions. Provide evidence of decision-making provisions in the bylaws or Terms of Reference of specific decision-making forums.**

Isometric has a transparent framework underpinning all the decision-making in relation to its carbon crediting programme. The core elements of this framework are set out below:

#### Isometric Standard:

The [Isometric Standard](#) sets out the criteria required for credits to be issued by Isometric, as well as a range of other relevant topics, such as decisions on which VVBs are appointed, how consultations should be run, and what process is followed for amendments to the Isometric Standard itself.

#### Protocols:

[Protocols](#) must conform with the requirements set out in the Isometric Standard. Protocols are a more detailed description of the processes that must be followed for an individual Project to receive credits. This includes how decisions are made in respect of the life-cycle assessment that is itself fundamental to the decision to issue credits. For example, Protocols set out the process by which the level of reversal risk is calculated for a given Project and accordingly what proportion of credits need to be set aside in a buffer pool.

#### VVBs:

The [Isometric VVB Policy](#) is published on the Isometric [website](#) and sets out the criteria applicable to the appointment of VVBs, as well as the process that is followed by Isometric in determining whether to appoint a VVB. For example, there is a standardised application form that a VVB needs to submit to Isometric as part of the decision-making process for appointing VVBs. This form can be viewed [here](#).

#### Credits

The credits themselves contain a high degree of transparency, highlighting the decisions made in relation to the specific emissions calculated at every step of the Greenhouse Gas (GG) Assessment. Any user can click through on a credit on the [Isometric Registry](#), enabling them to see all the individual components - such as the emissions associated with transportation of materials to the facility.

#### Board: decision making bylaws

The bylaws governing the Board's decision making procedures are as set out in the Articles of Association and in accordance with UK Company Law and corporate best practice. Relevant extracts below:

*Where Shares confer a right to vote, on a show of hands each holder of such shares who (being an individual) is present in person or by proxy or (being a corporation) is present by such duly authorised representative or by proxy shall have one vote for each Share held by them.*

[...]

*If the Directors are required by the Shareholders under section 303 of the Act to call a general meeting, the Directors shall convene the meeting for a date*

*not later than 28 days after the date on which the Directors become subject to the requirement under section 303 of the Act.*

*[...]*

*Polls must be taken in such a manner as the chairman directs. A poll demanded on the election of a chairman or on a question of adjournment must be held immediately. A poll demanded on any other question must be held immediately or at such time and place as the chairman directs not being more than 14 days after the poll was demanded.*

#### Leadership Committee: Terms of Reference

The Leadership Committee is the meeting of the members of the Leadership team, and takes place weekly. The Terms of Reference of this Committee are as follows:

- The Leadership Committee is constituted of the CEO as well as the Heads of Divisions, currently the Heads of Engineering, Science, Growth, and People
- The meetings will be organised by the Secretariat, who will be responsible for confirming the agenda and noting the Decisions and Agreed Actions
- Each meeting of the Leadership Committee shall begin with a review of the Agreed Actions, with any further required actions noted accordingly
- Agenda items for the Leadership Committee shall be nominated by any member of the Committee to the Secretariat. The final Agenda shall be determined in consultation between the Secretariat and the CEO and certain items may be postponed if insufficient time allows for discussion
- The CEO shall Chair the Leadership Committee, but may appoint any other member to Chair in their absence
- The Committee shall make decisions wherever possible by consensus, but if required a vote may be taken to establish the views of the majority. The CEO will be responsible for determining the final decision if consensus cannot be reached
- The Committee shall discuss such items, and make such decisions, as relate to the business critical matters affecting more than one Division within the organisation, for instance:
  - Deciding on the Quarterly and Annual Goals for the organisation
  - Reviewing the overall headcount projections and hiring plans
  - Discussing major industry, regulatory, or scientific developments and any actions required to be taken in response
  - Calibrating performance reviews and ensuring consistency in approach to performance management across Divisions

#### **2.1.5 Provide evidence of publicly available procedures and quality control mechanisms to enforce procedures. Describe how these procedures were developed and which standards they are based upon (i.e., ISO 9001, 31000).**

The publicly available Isometric Standard sets out the duties and obligations of stakeholders, including Isometric itself, in relation to the [Isometric Registry](#) and Isometric's business operations as a carbon crediting programme. Further rules and requirements and how these are enforced are set out in the policies as well as individual Protocols or Modules hosted by Isometric.

We have a publicly available [Procedures Management Policy](#) setting out our system for quality management - notably how we ensure quality and consistency in our work and compliance with our procedures. Our approach has been informed by industry best practice, the experience of senior management from other organisations, and from relevant standards, in particular ISO 9001:2015.

## 2.2 Transparency and Publicly Available Information

### 2.2.1 Provide evidence that the following information is publicly available on the Programme's website and/or in standalone, version-controlled documents:

- **Operating procedures that include, at minimum, how Programme rules are drafted and revised and how committees are formed, as well as how these are approved by the board.**
- **Methodology development procedures that include, at minimum, requirements for expert involvement and public consultation, and a description of the frequency at which methodologies are updated.**
- **A grievance and redress mechanism that is accessible to project developers, project stakeholders, and the public, and includes, at minimum, a description of how grievances will be addressed by the Programme.**

#### Operating procedures:

Programme rules are set out in the publicly available [Isometric Standard](#). The requirements for revisions to the rules and the processes that need to be followed (e.g. public consultation) are set out in the Isometric Standard itself in [Section 1.3 \("Versioning"\)](#). In summary these require any revisions to the Isometric Standard to be scrutinised by the Science Network and subject to a public consultation, before the changes can be finalised and confirmed in a new version uploaded to the Isometric website.

For the formation and approval of Committees, this is set out in our publicly available [Appointments Policy](#).

#### Methodology development procedures:

[Section 2 \("Protocol Requirements"\)](#) of the Isometric Standard sets out the procedure for methodology ("Protocol") development. As part of this, experts are involved through the review of all Protocols by the Science Network, composed of over 200 experts. In addition, all Protocols are subject to public consultation before they can be finalised. Finally, the Isometric Standard specifies that all Protocols should be reviewed in full at least every 2 years

since publication, and the Modules within any given Protocol are reviewed at least annually. Any material changes in the science or regulatory framework relevant to a given Protocol will trigger an ad hoc review within 6 months of such a change having been identified. More information on Protocol development is available under [Section 2 \(“Protocol Requirements”\)](#) of the Isometric Standard.

#### Grievance mechanism:

Beyond the Project-related requirement for a grievance mechanism as per [Section 3.5 \(“Stakeholder Input Process”\)](#) of the Isometric Standard, Isometric has a publicly available [Grievance Policy](#) outlining rules and procedures around grievances relating to Isometric’s operations as a standard and registry. The aim of this Policy is to provide a transparent and fair process for any stakeholder seeking to challenge Isometric’s decision-making. In summary, the Policy sets out:

- Eligibility and scope of grievances
- How grievances will be assessed
- Procedures for escalation, including a route for appeal
- How decisions will be communicated and expected timelines

### **2.2.2 If the Programme references other Standards (i.e., CDM additionality tool, methodologies), describe the process in place to ensure that changes to the referenced Standards are reflected in the Programme’s processes.**

Isometric does not refer to or rely on other standards, so no process is required for incorporating changes to such externally referenced standards.

## 3. Registry

### **3.1 Describe the registry provider and relationship to the Programme. Provide evidence the registry is publicly available and available internationally.**

Isometric is the registry provider for the Programme (the Isometric Standard). Potential conflicts of interest have been carefully considered. These are managed through a business model designed explicitly to remove conflicts of interest from the traditional registry model (explained further in response to Q1 and Q3.5), as well as a [Conflicts of Interest Policy](#) that is applicable to all Isometric employees and Board members. Access to Isometric’s publicly and internationally available registry can be gained via this link: <https://isometric.com/registry>

### **3.2 Provide evidence that the registry provides public access to underlying project information including, at minimum, project descriptions, monitoring reports, and validation and verification reports.**

All Project information, including but not limited to PDD’s, monitoring reports, Validation statements and reports, and Verification statements and reports are publicly available on the [Isometric Registry](#). Furthermore, information on individual removals is publicly available on the [Isometric Science Platform](#), including a process overview as well as monitoring and Verification data,



supporting a granular view of the carbon removal which has taken place, and the associated calculations and evidence.

### **3.3 Provide evidence that the registry individually identifies units through unique serial numbers.**

All credits on the [Isometric Registry](#) are issued with a permanent, unique serial number, with a full, public, immutable data provenance that guards against double-counting. This provenance is publicly visible on the Isometric Registry, allowing any credit user to trace the origin and history of the credit including its retirement status, any previous transfers or transactions, its issuing Project, issuing Project Proponent and the specific removal from which the credit was issued. In turn, information on individual removals is publicly available on the Isometric Science Platform, including a process overview as well as monitoring and Verification data, ensuring a completely transparent chain of custody from removal to credit issuance to credit retirement.

### **3.4 Provide evidence that the registry can identify credit status including, at minimum, “issued”, “retired”, and “cancelled”.**

[Section 5.1 \(“Credit Attributes”\)](#) of the Isometric Standard defines a set of metadata which must be associated with each unit on the [Isometric Registry](#), and visible to users who want to click through to view it. This includes:

- Unique serial number
- Issuance date
- Issuing Project
- Issuing Project Proponent
- Country of removal
- Ownership history, including the current owner and all previous owners and transfer dates
- Retirement date
- Retirement beneficiary
- Credit status: whether “active” (issued but has not yet been retired or cancelled), “retired”, or “cancelled”

### **3.5 Provide evidence that the registry has publicly available rules and procedures that include, at minimum, all account holders undertake and pass “know your customer” checks, and a description of how the registry operators guard against conflicts of interest.**

Buyers and Project Proponents seeking to use the [Isometric Registry](#) must first undergo a series of standard KYC checks as defined in Isometric’s [KYC Policy](#), which is publicly available on its [website](#). To summarise, the Policy requires the following measures to guard against the risk of money-laundering and the financing of terrorism:

- Collection of information on clients
  - Isometric can thereby build an understanding of the legitimacy of Account Holder’s businesses and monitor unusual or suspicious transaction activities

- If Account Holders are based in FATF high-risk jurisdictions, named on government sponsored watchlists or international sanctions lists, an Account cannot be opened
  - KYC records are maintained for a minimum of five years
- Ongoing monitoring and intervention in the case of unusual or suspicious trading
  - Interventions may include prohibition of trading with the counterparty or a site visit to the high-risk counterparty
- Role-specific training for Isometric employees
- Reporting of unusual or suspicious activities within Isometric
- Mitigations
  - Asking for further information from clients to explain unusual activity
  - Off-boarding clients who do not meet Isometric's risk appetite
  - If necessary, filing of reports with relevant authorities

Isometric draws from well-established industry guidance such as the guidance produced by the [Joint Money Laundering Steering Group](#) in implementing and keeping up-to-date its [KYC Policy](#).

Isometric's business model guards against registry conflicts of interest as follows:

- Isometric is only paid by buyers, not Project Proponents, and thus avoids a financial incentive for over-crediting on the [Isometric Registry](#)
- Isometric is fully independent of Project Proponents as well as marketplaces or any platforms on which carbon credits are sold as tradable units
- Isometric appoints independent, accredited Validation and Verification bodies for conducting audit reports on proponents whose Projects are being credited on the Isometric Registry

The Registry also guards against conflicts-of-interest in the structure of its operations:

- First, credits may only be issued against approved Protocols, which undergo a thorough development review process which incorporates multiple perspectives (including Isometric's Science Team, expert members of the Isometric Science Network of 200+ scientists, and a public consultation via the Isometric Science Platform) – this process is further outlined in [Section 2 \("Protocol Requirements"\)](#) of the Isometric Standard
- Second, all Projects on the [Isometric Registry](#) are validated by independent, accredited VVBs – as detailed in our response to Q4 and further outlined in [Section 4 \("Validation and Verification Requirements"\)](#) of the Isometric Standard, including specific requirements to minimise conflicts of interest for VVBs in [Section 4.4 \("Conflicts of Interest"\)](#)
- Finally, Isometric ensures its role in maintaining a registry is independent by not carrying out other roles that could cause conflicts of interest, such as acting as a marketplace or broker for credits. See also the answer to Q1.3.1

Isometric also maintains a Conflicts of Interest Policy for all staff involved in the Registry:

- Individuals must declare and log any real, potential, or perceived conflicts of interest
- Where such conflicts (real or perceived) may arise, then individuals will need to recuse themselves from decision-making. Their line managers will be responsible for monitoring this Policy in practice. Failure to adhere to the Policy will be grounds for dismissal
- An example of this would be if an individual held a material financial stake in a given Project. In that case such an individual would not be permitted to work on any Project related to that proponent. In addition, so-called “ethical walls” would need to be put in place, for example restricting file access within Isometric’s IT systems so that the individual could not (inadvertently or otherwise) access private information related to Isometric’s decision-making in relation to that Project Proponent

#### Security provisions for the Registry

Isometric conducts an annual security audit, resulting in Cyber Essentials certification, most recently completed by AvISO Consultancy Ltd. As part of this audit process we review and implement recommendations necessary to improve our security. For example, we have rigorous audit logging in place that provides an audit trail of all access that has taken place on data held by the organisation. We also ensure data availability and integrity through multiple automated back-ups. Furthermore, we use a provider, Kandji, for mobile device management on computers used by staff to ensure that settings and security software are kept fully up to date. Isometric is also careful to manage the security of our software ‘supply chain’, through automatic vulnerability scanning and automatic recommended updates of open source software dependencies, ensuring any common vulnerabilities and exposures (CVEs) are rapidly identified, brought to the attention of the security team and resolved. Security of credit management on the Registry is assured through individually identifiable user accounts, created and managed following industry standard best practices. User authentication occurs via Google Cloud Identity Platform. User accounts are authorised to operate under a single organisation. Authentication is implemented through use of JSON Web Tokens (JWTs), which is an open standard ([RFC 7519](#)) that defines a compact and self-contained way for securely transmitting information between parties. All credit management activities are permission-checked using a centralised authorisation framework and logged for audit purposes.

### **3.6 Provide evidence that registry functions, programme documents, and methodologies are available in English.**

Isometric’s operating language is English, and this is reflected in all programme documents and Protocols (methodologies).

#### **3.6.1 Confirm understanding that where the Assessor seeks evidence that is not available in English (i.e., when doing spot checks of project documents) ICROA may have to charge the Programme a fee to have the relevant document translated.**

Isometric confirms this understanding (since all documents are in English, this will not be applicable in Isometric’s case).

## 4. Validation and Verification

### 4.1 Third-party validation and verification

#### 4.1.1 Provide evidence that all projects are verified to a reasonable level of assurance as defined in ISO 14064-3

Isometric requires all Projects to be independently verified by a Validation and Verification body (“VVB”), which is a fully independent entity from both Isometric and the Project Proponent. The detailed requirements surrounding independent Validation and Verification of each Project are outlined in [Section 4 \(“Validation and Verification Requirements”\)](#) of the Isometric Standard, in the [Isometric VVB Policy](#), and also explained below. The Isometric Standard requires that all Projects must be verified to a reasonable level of assurance.

The individual steps of the Verification process are listed and explained in chronological order below:

1. Protocol development: Firstly, Isometric develops a Protocol relevant to the Project Proponent. Only then can a Project Proponent’s carbon removal activities can be verified against this Protocol. The process of Protocol development has been outlined in Isometric’s response to Q1.1.4 and is available under [Section 2 \(“Protocol Requirements”\)](#) of the Isometric Standard.
2. Preparation:  
To register a Project on the [Isometric Registry](#), Project Proponents must create a Project Design Document (“PDD”). This PDD assesses the Project against requirements in the Isometric Standard. The PDD forms the basis for Project Validation and evaluation in accordance with the relevant Protocol.
3. Initial project Validation: All Project Proponents must undergo an initial Project Validation carried out by an accredited, independent VVB. The VVB uses the PDD and further existing information gathered, as well as additional information which may be collected under an evidence gathering plan, in order to assess conformity with the Isometric Standard and the relevant Protocol. Upon completing this process, the VVB will submit a Validation report and Validation opinion to Isometric for final review, following which the proponent’s Project may be deemed validated against the selected Protocol. Unless otherwise specified in the relevant Protocol, a site visit is required for Validation and the first Verification of a Project.
4. Verification: After gathering all documentation necessary and conducting Verification of a claimed amount of removals, the VVB conducting Verification submits a Verification report and Verification opinion, which includes the auditor’s opinion and the amount of net carbon removal to be credited for the covered period. Isometric then reviews the findings. If this review is successful, the corresponding amount of carbon removal is deemed verified and eligible for the issuance of credits.

5. **Re-Verification and -Validation:** Independent VVB Verification must be conducted again for any subsequent removals. Ongoing Verification takes place depending on the carbon removal activity of the Project Proponent, at least annually but generally more frequently, depending on the requirements of the relevant Protocol. It is at the discretion of the VVB to determine whether further site visits are needed, based on an independent risk assessment. Should a Project Proponent seek to extend the crediting period of a Project, they must provide an updated PDD and undergo Project Revalidation. According to [Section 3.4 \(“Project Crediting”\)](#) of the Isometric Standard, the maximum crediting period is five years.

## 4.2 VVB Qualifications

### 4.2.1 Provide the list of approved VVBs and a link to where this is published on the Programme’s website.

Isometric has conducted due diligence on and internally approved the following VVBs, which are also listed on [Isometric’s website](#):

- 350 Solutions ([accredited](#) by ANAB under ISO 14034 and 17020)
- Earthood ([accredited](#) under ISO 14064 by Qatar-based IAF member Global Accreditation Bureau)

Isometric has also conditionally approved Future Past and EcoEngineers based on satisfactory preliminary due diligence on these VVBs. However, full approval by Isometric is currently pending successful completion of due diligence (e.g. receiving proof of appropriate certifications).

### 4.2.2 Confirm the organisation has at least two organisations approved as VVBs, or an explanation of why not, if fewer than two are approved.

Confirmed that at least two organisations are approved as VVBs.

### 4.2.3 Provide evidence of the publicly available list of qualifications for VVBs that includes, at a minimum,

- requirements that VVBs must be accredited under a relevant accreditation programme, such as ISO 14065, CDM/A6.4 Accreditation programme, etc.
- that VVBs may only perform validation and/or verification activities for the sectoral scope for which they have been accredited.

As per the [Isometric VVB Policy](#) and [Section 4 \(“Validation and Verification Requirements”\)](#) of the Isometric Standard, VVBs conducting third-party services must be approved by Isometric. The minimum expectation for the accreditation and qualification of VVBs is set out in the Isometric Standard, relevant extract below:

- Accreditation from an International Accreditation Forum member against ISO 14065 or other relevant ISO standard, including, but not limited to ISO 14034, ISO 17020, ISO 17029; or
- Accreditation from a relevant governmental or intergovernmental regulatory body.

The accreditation must remain valid throughout the Validation and Verification process, as well as during the submission of the final audit report. Isometric will conduct regular checks on the status of accreditation of approved VVBs.

As an exception, if a VVB is pending full accreditation but has demonstrated that they satisfy all Verification needs and competencies for the relevant Protocol, and that they adhere to the guidelines of ISO 19011 or other relevant standards, they may be approved.

According to Section 3 (“Auditor competencies and requirements”) of the [Isometric VVB Policy](#), personnel records of all involved auditors detailing sectoral work experience must be submitted, and the VVB shall demonstrate overall competence in the sectoral areas relevant to the carbon removal activity of the relevant Project. Before any VVB is approved by Isometric, they must submit a [VVB application form](#), which among other things requires them to describe their experience in greenhouse gas accounting and indicate their sectoral experience in a list based on [IAF Mandatory Document 14](#). As part of the approval process, VVBs must also submit their certificate of accreditation.

**4.2.4 Describe how, and at what frequency, the Programme checks the qualifications of the Programme’s approved VVBs against the list of requirements.**

As described in the [Isometric VVB Policy](#), Isometric may oversee the Validation and Verification activities of VVBs and will conduct regular checks of the qualifications of approved VVBs against the requirements outlined in the Policy and the Isometric Standard. In practice, employees responsible for matters such as the onboarding process of suppliers will regularly check notifications received and materials delivered by the VVB to assess them against Isometric’s rules and requirements. If a VVB was found to be noncompliant or if repeated performance issues were observed, Isometric may revoke its approval.

**4.2.5 If applicable, describe the rules that outline the scenarios when it is acceptable to have validation or verification completed by a qualified individual (sole proprietor). Describe what qualifications are required of the individual.**

As per the [Isometric VVB Policy](#), an audit team shall, at a minimum, include a team leader and a separate validator or verifier. To ensure the principle of dual control, Validation and Verification may not be conducted by a sole proprietor. Therefore, this question is not applicable to the case of Isometric.

**4.3 Programme Oversight of VVBs**

**4.3.1 Provide evidence of the publicly available procedure for providing oversight to VVBs that includes, at minimum:**

- **Requirements for the VVB to prove independence from the Programme, market, and project.**

- **At least two individuals involved in validation and/or verification of each project (peer review)**
- **Minimum requirements for site visits are specified**
- **A rule on what number of sequential verifications are allowed before the project must be verified by a new VVB.**
- **Procedure for spot checks on quality of validation/verification reports, and mitigation plan**

Oversight of independent VVBs is provided in the following ways:

- **Isometric:** Isometric monitors the activity of approved VVBs in accordance with the [Isometric VVB Policy](#) and [Section 4.6 \(“Validation and Verification Body Oversight”\)](#) of the Isometric Standard. In particular, oversight includes review of VVB documentation such as Verification and sampling plans, reports, opinions and conflict of interest disclosures. Isometric may suspend approval of a previously approved VVB. e.g. if reporting requirements are not met or in case a conflict of interest has been identified
- **Accreditation Body:** As set out per [Section 4.1 \(“Validation and Verification Body Qualification Requirements”\)](#) of the Isometric Standard and in the [Isometric VVB Policy](#), VVBs must be accredited by appropriate bodies. These Accreditation Bodies complete regular and thorough independent witness audits of VVBs. Isometric will always report material concerns on VVB performance to the relevant Accreditation Body responsible for the VVB

**Independence:** To ensure independence from the programme, market, and Project, Isometric has explicit measures in [Section 4.4 \(“Conflicts of Interest”\)](#) of the Isometric Standard. Relevant extracts are listed below:

- Any organisation which has been involved in the development of a particular Project may not act as a VVB for Validation and/or Verification purposes for that Project. Any organisation which has been paid by a particular Project to assist in developing any part of a Protocol for their process may not act as a VVB for Validation and/or Verification purposes for that Project
- To minimise the risk of conflicts of interest occurring between the Project Proponent and the VVB, Isometric will select and engage VVBs for Project Validation and Verification, and VVBs must complete a conflict of interest disclosure
- Furthermore, according to [Section 4.5 \(“Rotation of Validation and Verification Bodies”\)](#) of the Isometric Standard, VVBs must be rotated every five years

The [Isometric VVB Policy](#) adds more specific detail on the controls to ensure independence of the VVB:

- As part of the application form, VVBs need to complete, they must declare any conflicts of interest. This mechanism allows Isometric to identify any conflicts of interest, and mitigate them if possible, or select another VVB if not
- Upon signature of the statement of work for an individual Project, the VVB must confirm a declaration ensuring impartiality, quality, and the absence of any conflicts of interest. This includes:
  - confirmation that the VVB has no financial interest in and no unmitigated conflict of interest with Isometric or the relevant Project
  - that none of family members of involved auditors are dealing in, promoting, or otherwise have a fiduciary relationship with anyone promoting or dealing in the offset credits being evaluated
- In cases where a conflict of interest was identified after signing of relevant contracts or the beginning of the audit, Isometric will take remedial action to mitigate the conflict of interest. This could include, for example, suspending the relevant experts from the audit process and seeking unconflicted replacement personnel from the VVB. If mitigation is not possible, Isometric reserves the right to suspend the VVB immediately and appoint a different VVB for the Project.

At least two individuals:

As outlined in response to Q4.2.5, the [Isometric VVB Policy](#) defines as a minimum requirement that an audit team shall at least include a team leader and a separate validator or verifier. To ensure the principle of dual control, Validation and Verification may not be conducted by a sole proprietor.

Minimum requirements for site visits:

As per [Section 4.2 \(“Validation and Verification Process”\) of the Isometric Standard](#), a site visit is required for Validation and the first Verification of a Project, unless otherwise specified in the relevant Protocol. For subsequent Verifications, the VVB must identify whether a site visit is needed, based on an independent risk assessment. A schedule for site visits must also be provided as part of the Validation/Verification plan VVBs must submit prior to the beginning of an audit.

Number of sequential verifications:

As per the [Isometric VVB Policy](#) and [Section 4.5 \(“Rotation of VVBs”\) of the Isometric Standard](#), Isometric requires that Projects must work with a single VVB for no longer than five consecutive years. A given VVB may conduct



Verification for a Project during no more than five out of seven consecutive years.

Procedure for spot checks:

As per [Section 4.6 \(“Validation and Verification Body Oversight”\)](#) of the Isometric Standard as well as the [Isometric VVB Policy](#), Isometric may at all times oversee VVB activity during the Validation and/or Verification process, and may suspend approval of a previously approved VVB. Oversight will typically include review of VVB documentation, including Verification and sampling plans, reports, opinions and conflict of interest disclosures, as well as review of Project Proponent documentation. Particularly Validation and Verification audit reports will receive a quality review by Isometric prior to the issuance of credits. If any shortcomings are identified, the auditor will need to address and clarify them before the report is accepted. Credits will only be issued once the report meets a satisfactory level of quality.

**4.3.2 Provide evidence that the procedure described in Section 4.3.1 is being followed.**

Example: 350Solutions as the VVB for the Validation and Verification of Vaulted Deep’s Great Plains Facility Organic Waste Sequestration Project (“Great Plains Project”):

- 350Solutions was formally approved as a VVB by Isometric after internal assessment of its completed application form against the requirements in the [Isometric VVB Policy](#). The completed 350Solutions application form can be viewed [here](#).
- 350 Solutions is accredited by ANAB to complete ISO 14034:2016 Environmental Technology Verifications, and has gained relevant sectoral experience from previous Verification activities, such as conducting Verification of carbon removal Projects certified under ICROA-endorsed carbon crediting programme Puro.earth, and supporting and managing the Greenhouse Gas Technology Center for the US EPA’s Environmental Technology Verification programme. The [accreditation certificate](#) can be found publicly on the ANAB website.
- Independence from Isometric was confirmed through 350 Solutions being a 2019-founded, privately held and independent company with no cross shareholdings with Isometric and no conflicts of interest with individuals in either organisation.
- Independence from the market and Project was confirmed as 350Solutions does not own any equity interest in Vaulted Deep nor hold any personal links with Vaulted Deep staff.
- At least two validators/verifiers were involved, namely Tim Hansen, PE (Lead Verifier) and Kevin McCabe (Peer Reviewer).

- A site visit was carried out by 350Solutions at the Great Plains facility in Hutchinson, Kansas.
- Multiple spot checks were conducted by Isometric team members during the Validation and Verification process. For example, LCA Specialist [Emma Marsland](#) reviewed the Project LCA and spot checked calculations and evidence for specific removals, whilst geochemist [Dr Rebecca Tyne](#) reviewed the site monitoring plan.
- The final Verification report provided by 350Solutions was subject to a quality review by Isometric, alongside Project documentation and data provided by Vaulted Deep, before being accepted for the purpose of issuing credits.

#### **4.3.3 Describe the capacity building support the Programme provides to the VVBs, including onboarding, training, and explanations of what the VVB must look at when completing validations and verifications.**

First, Isometric will determine the existing capacity of the VVBs. Before a VVB is approved by Isometric, it needs to submit an application form which, among other things, describes the sectoral experience of the VVB. Having formed an assessment of the particular gaps in knowledge or experience that are a priority for the Project at hand, Isometric will deliver several bespoke training sessions to the auditors selected to work on the Project. This training will be delivered by Isometric staff, typically including at least one scientist who is an expert in the carbon removal pathway, and usually delivered in an online format. The template of this form can be viewed [here](#).

#### **4.3.4 Provide evidence of the procedure that ensures VVBs operate to the spirit of the Standard and projects are working towards the goals of the Programme.**

Isometric will assess VVBs on the basis of the information provided in the application form. This includes confirming the competence, expertise, and lack of conflicts of interest. The Declarations section of the form ensures that VVBs understand and explicitly agree to confirm with the spirit of the approach that Isometric takes as a crediting program, and its goals, as reflected in the rules of the Standard. The template of this form can be viewed [here](#) and an example completed application form (for 350Solutions) can be viewed [here](#), including confirmation that they agreed to all the Declarations.

Additionally, Isometric will take a holistic view and judge whether VVBs are willing and able to deliver against the spirit of the Standard. This qualitative judgement will be formed through the direct interactions with the VVB staff, as well as any information available publicly on the VVB's track record. The Isometric Standard has a clear emphasis on scientific rigour, transparency, and the elimination of conflicts of interest. These qualities need to be reflected in the words and actions of the VVBs with whom we work.

This type of holistic assessment is also relevant for the selection of Project Proponents to work with. It is not sufficient that a Project Proponent states a willingness to deliver against the relevant Protocol. Isometric staff will have numerous interactions, including between Isometric scientists and the Project Proponent scientists. Through this a qualitative judgement will be formed about whether the Project Proponent is seriously committed to the high level of scientific rigour that Isometric expects, and the stringent data collection requirements that are associated with that. Isometric will reserve the right not to work with Project Proponents who it deems to be misaligned with the goals and values of the Isometric Standard.

## 5. Carbon Crediting Principles

### 5.1 Unique

#### 5.1.1 Provide evidence of the procedure in place that ensures carbon credits are not double counted.

As explained in [Section 5.7 \(“No Double Counting”\)](#) of the Isometric Standard, different rules and procedures were established by Isometric in order to avoid different forms of double counting:

- **Double issuance:** Any Project listed on the [Isometric Registry](#) must be listed there exclusively, and not on any other programme. This is to ensure that credits are issued and counted to only one Registry. The same rule holds for the claims associated with a particular Project
- **Double use:** Double use is mitigated through the publicity and transparency of the [Isometric Registry](#), enabling public record of the full life-cycle of credits and allowing unique identification of the Project that credits were issued against. Credits can only have one owner at a given time, and can only be retired to one beneficiary. Once a credit is retired, it cannot be used further. On retirement, a unique and publicly available Retirement Certificate is produced
- **Double claiming:** To avoid double claiming, the Isometric Standard requires that no separate CO<sub>2</sub> removal claims may be made for the underlying removal from which a given credit was issued. Isometric monitors for instances of double claiming, which would result in suspension of accounts engaging in double claiming

### 5.2 Real

#### 5.2.1 Provide evidence that carbon credits are measured, monitored, and verified ex-post. Identify any methodologies under the Programme that issue carbon credits ex-ante.

Isometric does not credit emission reductions, but only net removals. Isometric ensures that only real removals are credited through the implementation of the following measures, which are outlined in more detail in the Isometric Standard:

- **Documentation:** When a new Project Proponent applies for certification by Isometric, a variety of Project documentation is collected in a Project Design Document (“PDD”), which is designed to ensure

consistency with ISO 14064-2:2019. This includes geographic and physical location information, lab tests, injection certificates in the case of geological storage, information on conditions prior to Project initiation to support identification of the counterfactual scenario, and demonstration of legal ownership over the production facility that is responsible for the removals. Further information surrounding specific documentation requirements is outlined by [Section 3.2 \(“Documentation”\)](#) of the Isometric Standard.

- **Internal review:** All Projects must be verified against the relevant Protocol, which is explained in more detail in response to Q5.5. When onboarding Project Proponents, Isometric carries out deep scientific due diligence of the Project’s CDR and MRV process
- **External review:** All Projects must undergo audits conducted by an independent Validation and Verification body. As outlined in response to Q4, the purpose of those audits is to verify that Projects meet the requirements in the relevant Protocol and the Isometric Standard. This also includes site visits, unless otherwise specified in the relevant Protocol
- **Conservativeness:** In Sections [2.5.5 \(“Default Emission Factors, Proxies and Models”\)](#), and [2.5.7 \(“Uncertainty in Removals”\)](#), the Isometric Standard sets out a strict approach to the usage of default emissions factors, and a conservative approach to uncertainty regarding the amount of CO<sub>2</sub> removed. This ensures that the gap between actual and credited removals is minimised

Isometric does not issue credits ex-ante. Credits are exclusively issued ex-post, for removals which have been independently verified against an approved Protocol. In all cases, Isometric measures, models, or makes conservative assumptions as outlined in the relevant Protocol, and verifies all life cycle emissions.

## 5.3 Permanent

### 5.3.1 Identify the project types under the Programme that have a risk of reversal. Describe the Programme’s requirements for a multi-decadal term/commitment by the project developer.

Isometric exclusively issues durable carbon removal credits. We do not credit against purely nature-based methodologies such as afforestation, reforestation, or revegetation, because these are subject to significant reversal risks through climate change impacts and other natural and anthropogenic impacts. As per the IPCC’s [2022 AR6 WG3 report](#), “CO<sub>2</sub> stored in geological and ocean reservoirs (via BECCS, DACCS, ocean alkalisation) and as carbon in biochar is less prone to reversal.” These are the types of carbon removal that Isometric focuses on, and are therefore inherently less risky from a reversal perspective. Where risks of reversal do remain inherent in the pathway, these risks are explicitly described and managed through the provisions of the relevant Protocol. Please see our answers below for more details on how this works in practice.

To ensure removals associated with carbon credits are durable, Isometric has set a minimum threshold of 1,000 years of durability. The Isometric Standard sets out that to demonstrate this threshold is met, evidence has to be provided by each Project Proponent either through scientific and/or engineering containment mechanisms with a conservative containment estimate of over 1,000 years, or through scientifically falsifiable hypotheses that can be used to show there is no alternative destination for carbon storage other than the reservoir in question. More detailed requirements are outlined by individual Protocols.

One example of ensuring emissions reductions are permanent is outlined in [Section 8 \(“Bio-oil Storage”\)](#) of the Bio-oil Geological Storage Protocol, which is linked to two storage Modules, depending on the chosen storage approach. The “[Biomass or Bio-oil Storage in Salt Caverns Storage Module](#)”, relevant for the Vaulted Deep Great Plains Project, details durability and monitoring requirements for biomass storage in salt caverns, including how measurements at injection wells are to be undertaken to determine when the bio-oil has polymerised, and thus is not at risk of reversal on any time scale shorter than geological time.

**5.3.2 For projects with a risk of reversal, describe the requirements for the project to complete a risk mitigation plan that includes, at minimum, a description of how risks of reversal will be minimised.**

Overall risk mitigation requirements for Project Proponents are set out in Sections [2.5.8 \(“Durability and Monitoring”\)](#) and [2.5.9 \(“Risk of Reversal”\)](#) of the Isometric Standard, and evidence of durability is required. Additionally, Project Proponents must follow a monitoring plan for their individual removal method as specified in [Section 5.6.1 \(“Reversals”\)](#) of the Isometric Standard and the respective Protocol. The required contents of monitoring plans include a set frequency of measurements and re-evaluations with respect to the uncertainty of a given method, provisions for reporting reversals to VVBs and regulatory bodies, and further requirements which are Protocol-specific.

An example of how this is implemented at the Protocol-level can be illustrated based on the Modules associated with [Section 8 \(“Bio-oil Storage”\)](#) of the Bio-oil Geological Storage Protocol.

The permanence risks of storing bio-oil include:

- Until bio-oil solidifies, risk of migration out of the intended storage reservoir is a possibility
- Bio-oil could be converted to bio-gases in the subsurface reservoir such as CH<sub>4</sub>, CO<sub>2</sub>, and short chain hydrocarbons
- Bio-oil could react with the storage reservoir in a neutralisation reaction outgassing CO<sub>2</sub>

To mitigate these risks the Modules outline requirements, for post-placement monitoring plans which, among other measures, set requirements to:

- Prove the injection well is constructed in compliance with the EPA UIC permit (if US based).
- Undergo geologic reservoir and site characterisation: the proposed storage site must have been properly characterised to demonstrate site suitability for storage and containment of bio-oil or other biomass or organic materials. This includes analysis of the porosity and permeability of sequestration zone strata and confirmation of low permeability and structural integrity of confining layer/cap rock.
- Test concentration and  $\delta^{13}\text{C}$  signature of DIC, DOC and carbon speciation in formation fluid as well as the  $\delta^{13}\text{C}$  of the compounds of the bio-oil. This is to determine the source of determining the source of any produced biogas and extent of reactions (e.g. methanogenesis). Intermittent gas sampling every 6 months of  $\text{CO}_2$ ,  $\text{CH}_4$  and VOCs is also required after initial injection with a trigger condition for further measurements of  $\text{CO}_2$ ,  $\text{CH}_4$  and VOCs if the quantities of these in bio-gasses increase from baseline values.
- Test temperature, pH and salinity of geologic reservoir formation fluid/brine to determine the risk of reactivity of the bio-oil with surrounding rocks.

**5.3.3 For projects with a risk of reversal, describe the risk mitigation mechanism(s) in place to ensure any carbon credits lost to intentional or unintentional reversals are replaced.**

As outlined in [Section 5.6.2 \(“Buffer Pools”\)](#) of the Isometric Standard, Isometric maintains a buffer pool of credits, specific to each Project, from which credits equivalent to the quantified amount of reversal are retired in the case of a reversal event. Buffer pool size relative to the amount of credits issued depends on each Project’s reversal risk categorisation and can vary from 2% (very low risk), 5% (low), 10% (medium), to 20% (high). More detailed information on Isometric’s reversals requirements and buffer pool mechanism and procedures for handling reversals can be found in [Section 5.6 \(“Reversals and Buffer Pools”\)](#) of the Isometric Standard. For guidance on Protocol requirements for how the risk of reversal is assessed, see [Section 8.1 \(“Worked Examples”\)](#), as well as the associated risk questionnaire in [Section 8 \(“Appendix B: Risk Reversal Questionnaire”\)](#) of the Isometric Standard.

The rationale for this graduated buffer pool approach is that for some pathways, such as those that lead to  $\text{CO}_2$  mineralisation, there are provable methods to demonstrate  $\text{CO}_2$  is not able to be re-released on geological timescales. It therefore was determined to be inappropriate for these pathways to maintain a buffer pool of the same size as methods where the risk of reversal may be higher.

**5.3.4 Provide evidence that the requirements and mechanisms described in Sections 5.3.1-5.3.3 are in place and followed.**

Taking the Vaulted Deep: Great Plains Project as an example:

Multi-decadal terms (in the case of Isometric, a minimum of 1,000 years):

Vaulted Deep is the sole operator of the Great Plains facility and has ownership over, and liability for, all injected materials. Salt caverns have been identified in the academic literature as a viable location for permanent storage of CO<sub>2</sub> (e.g., [Davidson & Dusseault, 1997](#); [Duyvestyn et al., 1998](#); [Dusseault et al., 2004](#)). Salt is impermeable and the salt caverns used by Vaulted Deep are located at a depth of over 500ft. Vaulted Deep's geologically sequestered carbon is expected to stay sequestered for much longer than 10,000 years, based on a combination of direct measurement, and modelling. A monitoring programme, both during and post- operation and described below, is in place.

#### Risk mitigation and minimisation:

In the case of the Great Plains Project, risk mitigation requirements are embedded in the "[Biomass or Bio-oil Storage in Salt Caverns](#)" Module. The Module requires the Project Proponent to monitor the composition of the injectate and ensure their facility complies with the well operating plan as required by the injection well permit issued by the authorising agency, in this case, the U.S. EPA. Further, alongside monitoring during emplacement, a dedicated post-emplacement monitoring plan must be in place to address and mitigate any potential risks to durability. In this case, the main risks are cavern wall dissolution, cavern pressure increases through conversion of the injectate to bio-gases (CO<sub>2</sub>, CH<sub>4</sub>, N, O<sub>2</sub>, H<sub>2</sub>S and Volatile Organic Compounds ("VOCs")) within the cavern, or loss of cavern integrity from fluid expansion/reduction and fracturing. The monitoring plan requires the use of a combination of direct (e.g. pressure, temperature) and indirect measurement methods (e.g. sonar surveys) to confirm containment of the injectate and any biogas produced to ensure durability. According to [Section 3.2 \("Post-emplacement Monitoring Plan"\)](#) of the Module, there must be daily monitoring of the cavern pressure, 6-monthly temperature monitoring, and periodical monitoring for cavern volume. Intermittent gas monitoring for emissions of CO<sub>2</sub>, CH<sub>4</sub>, N, O<sub>2</sub> and VOCs at the wellhead (6-monthly) is required, where applicable and when gas volumes allow, until closure of the well. To monitor for indications of salt movement or cavern roof collapse, there must be periodic surface subsidence monitoring, for example using reference points, which will be compared to baseline data and trends or reference points. There must also be system integrity monitoring, which, as all post-emplacement monitoring requirements, must follow any post-emplacement requirements of the U.S. EPA Underground Injection Control (UIC) permit, to ensure there are no leakage pathways. In their entirety, the requirements of the Module ensure that the risk of reversal of biomass slurry injectate is minimised, that the carbon removal is durable over geological time spans and any reversals are accounted for.

#### Mechanism to replace units in a reversal event:

The Great Plains Project was categorised with a very low risk of reversal, resulting in a buffer pool of 2% of credits issued after each verified removal. No reversals are expected and as outlined above, Vaulted Deep is required to maintain a stringent and continuous monitoring mechanism.

## 5.4 Additional

#### 5.4.1 Describe the methods the Programme uses to assess additionality.

The high-level additionality requirements outlined in [Section 2.5.3 \(“Additionality”\)](#) of the Isometric Standard can be subdivided into three overarching areas, and more detailed information can be found in that chapter. The three areas are:

- **Financial additionality:** Proponents of CO<sub>2</sub> removal activities must demonstrate that removals are the Project’s main source of revenue and without the revenues from carbon finance, Project implementation would be prevented by economic barriers. The Isometric Standard requires Projects to provide evidence in the form of Project financials and a comparison of those financials to a Project-specific baseline analysis. Based on a 10-year period and non-depreciated residual values for any assets, Project Proponents must determine the IRR for the Project without carbon finance revenues, the IRR with carbon finance revenues, and the impact on IRR resulting from the inclusion of carbon finance revenues. Eventually, it must be demonstrated that the IRR without carbon finance revenues is zero or negative, or less than the cost of capital or return on equity for the Project. In addition to using IRR as a metric for additionality determination, the IRR analysis should also include a scenario analysis that demonstrates the ability to meet the above criteria for cases where important values in the IRR analysis change by +/- 20% or by a more appropriate value based on historical data or literature. Project Proponents may use the UNFCCC’s Methodological Tool for Investment Analysis for guidance.
- **Emissions additionality:** The life cycle emissions of the Project must be net negative compared to a counterfactual scenario. The underlying analysis should be conducted in accordance with the GHG Statement framework defined by the relevant Protocol. More information on counterfactual baseline scenarios is accessible in the Isometric Standard under Sections [2.5.3 \(“Additionality”\)](#) and [2.5.2 \(“Baselines”\)](#).
- **Regulatory & policy considerations:** It must be shown that the Project is not already required by any regulatory (national, state, municipality, local), policy, or other legal requirement. If the Project is required by law as outlined above, but it delivers removals surpassing the legal mandate, the surplus removals beyond legal obligation may be deemed additional, provided that the other criteria for additional status are met

These high-level requirements are then implemented alongside any more specific measures in the Protocols, as determined by the removal pathways or specific circumstances of the Project. An example of this is [Section 6.4 \(“Additionality”\)](#) of the Bio-oil Geological Storage Protocol, which sets out that the determination of additionality may be affected by increased waste feedstock tipping fees, sale of co-products, e.g. pyrolysis by-products, or reduced rates for capital access.



**5.4.2 If the Programme pre-defines certain projects as automatically additional (e.g., through a “positive list” of eligible project types), describe how the activity was determined to be additional. Provide evidence that the criteria for such positive lists are publicly disclosed, and conservative.** Isometric does not make use of positive lists or similar approaches.

## 5.5 Measurable

**5.5.1 Provide evidence that carbon credits are issued from project-based standards and methodologies. Describe any methodologies where carbon credits are issued from a product-based methodology or via lifecycle assessment.**

While the Isometric Standard is the overarching set of rules and principles surrounding the crediting of carbon removal activities, Protocols (methodologies) are all composed of Project-based requirements.

All Projects must provide a Cradle-to-Grave GHG Assessment of all emissions associated with a Project’s removal process. The GHG Assessment must follow life cycle assessment guidelines set out by the relevant Protocol. Each Protocol has project-based standards outlining which system boundary and emission factors are acceptable and how they relate to the overall quantification of carbon credits. These include guidelines for conducting transport emission accounting, energy use accounting and embodied emission accounting, as well as specific Protocol requirements such as default emission factors. For example, when calculating embodied carbon emissions associated with a Project, independently verified life cycle assessments or environmental product declarations can be used specific to the product or material.

The GHG emissions that result from the Project’s activities within the defined boundary combined with any Leakages together encompass the entire impact of a Project on GHG emissions.

**5.5.2 Provide evidence of procedures in place to ensure projects are measurable and backed by data. These procedures must include, at minimum, requirements for:**

- **All projects to clearly define the business-as-usual baseline scenario.**
- **All projects to identify and mitigate leakage of emissions.**
- **Projects to use conservative estimates if real project data is not available.**
- **All projects to re-calculate baselines, at minimum, upon each crediting period renewal.**

### **Business-as-usual baseline:**

Isometric only credits removals of CO<sub>2</sub> from the atmosphere, and not avoidance or reduction of such emissions. Thus, Project Proponents are only credited for CO<sub>2</sub> removals above the baseline defined by a counterfactual scenario for what would likely have happened if the Project Proponent did not

conduct its removal activities due to a lack of carbon finance. For this to happen, the life cycle emissions of a Project based on a Cradle-to-Grave GHG Assessment must be net negative when compared to that baseline. As outlined in [Section 2.5.2 \(“Baselines”\)](#) of the Isometric Standard, all Projects must be assessed against such a baseline.

The method for baseline assessment depends on the type of Project and is set out in each individual Protocol. [Section 3.2 \(“Documentation”\)](#) of the Isometric Standard requires that Project Proponents provide documentation of the conditions prevailing before Project initiation so that the counterfactual scenario can be understood. Sections [2.5.2 \(“Baselines”\)](#), [2.5.5 \(“Default Emission Factors, Proxies and Models”\)](#), and [2.5.7 \(“Uncertainty in Removals”\)](#) of the Isometric Standard set out the requirement to employ a conservative approach in quantifying baselines within each Protocol. In particular, additional information on how over-crediting is avoided through conservative counterfactual scenarios can be found under the above-mentioned Section 2.5.2 of the Isometric Standard.

#### **Identify and mitigate leakage:**

Project Proponents must provide a robust assessment of potential increases in greenhouse gases outside the Project boundary that occur due to the respective Project's carbon removal activities. If potential for such market leakage was identified, it must be quantified and deducted from the amount of CO<sub>2</sub> removals. This requirement is set out in [Section 2.5.4 \(“Leakage”\)](#) of the Isometric Standard.

#### Example:

Carbon removal Project Proponents utilising biomass need to submit information on the feedstocks they are using. This includes criteria such as source, price paid, quantity purchased, type of feedstock, or past uses (if any).

In this case, market leakage presents a risk in two ways:

- Project Proponents pay feedstock suppliers enough money that it might lead to the intensification/extensification of growing/harvesting/treatment practices leading to higher emissions
- Project Proponents remove feedstock from a prior use that now requires some amount of emissions to create a replacement product

To demonstrate these leakage risks are minimal, Project Proponents must provide information on the prices paid for their feedstocks as well as information that outlines any past use for the source of their biomass.

To mitigate the risk of these types of leakage, the [Biomass Feedstock Accounting Module](#) embedded in [Section 7.2.1 \(“Biomass Feedstock Accounting”\)](#) of Isometric's Bio-oil Geological Storage Protocol requires Project Proponents to demonstrate, based on the price they paid for their feedstock, that there is minimal chance of upstream market mediated leakage:

- One way this can be achieved by Project Proponents is to demonstrate that they acquired their feedstocks for \$0 or a negative price
- To mitigate against replacement emissions, Project Proponents can demonstrate that the source of their feedstock came from an unused waste pile
- A Project Proponent that acquired forest thinning residues for \$0 but had to pay for the collection of these residues would calculate this part of their life cycle emissions by totalling the emissions of the collection and transport of residues but would not have to take responsibility for the emissions caused during the forest treatment itself

**Conservativeness:**

As defined in [Section 2.5.5 \(“Default Emission Factors, Proxies and Models”\)](#) of the Isometric Standard, if direct measurement of variables is not possible, Protocols can make use of default emission factors, standards, proxies, and models to quantify removals, establish baselines, and demonstrate additionality. When such measures are made use of, it is required by Isometric that Protocols must apply conservative uncertainty factors and make conservative assumptions. The Isometric Standard as a whole follows the principle of choosing conservative parameter values to increase the likelihood of a given removal calculation being an underestimation rather than an overestimation. Further information on this can be found under Sections [2.5.5 \(“Default Emission Factors, Proxies and Models”\)](#), [2.5.6 \(“Common Calculation Factors”\)](#), and [2.5.7 \(“Uncertainty in Removals”\)](#) of the Isometric Standard.

An example of how conservativeness is used at the Protocol level is contained in the [Biomass Feedstock Accounting Module](#) of the Biomass Geological Storage Protocol. Here, one of the main risks to the net carbon removal value is potential upstream or downstream leakage caused by using a certain biomass feedstock for carbon removal activities. Not taking these risks adequately into account has in the past led to previous biomass climate solutions, such as ethanol-based biofuels or methane avoidance credits, to have substantially lower efficacy than anticipated. To be conservative, Isometric requires Project Proponents to outline a number of factors about the biomass they use including original source, price paid, and previous use.

Projects that are able to obtain biomass either for free or are paid a small fee to remove it will not have to account for upstream production and harvesting emissions of that biomass. However, if Project Proponents pay for a feedstock, then in order to be conservative in the calculations, they are subject to a more extensive set of tests - for example, this can include requirements around the specific contractual terms of the payments to make sure these address leakage risks. This approach results in an appropriate degree of conservativeness in the quantification of emissions that should be attributed to the feedstocks that Projects use. This level of conservatism in relation to feedstock emissions calculations does not exist in Protocols used by other

Registries in the market today. More information can be found in the [Biomass Feedstock Accounting Module](#).

#### **Re-calculate baselines:**

As explained in [Section 2.5.2 \(“Baselines”\)](#) of the Isometric Standard, Project Proponents must review baselines whenever a crediting period extension is sought, unless otherwise stated in the applicable Protocol, and must undergo Validation as part of Project Validation. In general, in line with [Section 3.4 \(“Project Crediting”\)](#), the maximum crediting period is 5 years, unless otherwise specified by the relevant Protocol. Two examples of when baselines would be re-evaluated on a more frequent basis:

- For biomass carbon removal and sequestration Projects, Project Proponents must provide evidence on the specific feedstock they are using and these could potentially lead to different baselines based on the feedstock and market characteristics. In this sense the baseline is updated for each new type of feedstock used.
- Enhanced Weathering Project Proponents are required to use a control plot which has similar characteristics to the land on which the Projects will spread mineral feedstocks. Data from these control plots would be used to compare Project drawdowns and so act as a type of continuous dynamic baseline.

#### **5.5.3 Provide evidence that all methodologies under the Programme have monitoring requirements that are validated and verified for each project.**

Removal type-specific monitoring requirements are outlined in individual Protocols. These must be complied with, which is ensured during Validation and Verification by an independent VVB. If Project Proponents wish to submit new claimed removals to Isometric, they are again subsequently verified by an independent auditor. The length of monitoring will vary depending on the removal activity. In pathways that rely on geologic storage, this can require multi-decadal monitoring, depending on site specific conditions, with specific requirements outlined in the relevant Protocol.

To provide an example, the Bio-oil Geologic Storage Protocol sets out detailed requirements for the quantification of CO<sub>2</sub> removal from bio-oil injection with storage in permeable reservoirs or salt caverns, including monitoring requirements, i.e. sequestration monitoring and reversals monitoring. [Section 6.2 \(“Verification and Validation”\)](#) of the Bio-oil Geologic Storage Protocol states that the VVB must verify that the quantification approach and monitoring plan adheres to the requirements of the Protocol.

#### **5.5.4 Demonstrate that the Programme’s methodologies are based on scientifically robust or peer-reviewed methods and go through a public consultation process.**

All Protocols are based on peer-reviewed literature and the best available scientific knowledge, robust best practices, and aim to adhere to the requirements of standards such as ISO 14064-2: 2019 – Greenhouse Gases –

Part 2. Protocols are developed by Isometric's team of experienced scientists, and in close cooperation with leading experts from the Science Network. As outlined in more detail in response to Q7, all new Protocols undergo a rigorous scientific peer review by members of the Isometric's Science Network as well as subsequent public consultation.

## 6. Environmental and Social Impacts

### 6.1 **Provide evidence of the publicly available rules and requirements that ensure all projects identify and mitigate and potential environmental or social impacts. These rules and requirements must include, at minimum, the “No Net Harm” principle is fulfilled by all projects.**

As set out in Sections [3.6 \(“Regulatory Requirements”\)](#) and [3.7 \(“Environmental and Social Impacts”\)](#) of the Isometric Standard, Project Proponents of CO<sub>2</sub> removal activities must clearly state in their PDD the approaches they use to ensure compliance with regulations (including environmental) in all jurisdictions to which the Project is accountable. Project Proponents are also specifically required to consider the environmental and social impacts which could potentially arise as a result of their activities, both within and beyond their boundary, and at minimum must demonstrate that they will do no net environmental or social harm. This must be evidenced in the following ways:

- **Environmental impacts:** [Section 3.7 \(“Environmental and Social Impacts”\)](#) of the Isometric Standard explains the ways in which Project Proponents must demonstrate the absence of net harm by completing a range of assessments: environmental assessments in line with local regulations, ongoing monitoring, and a closure plan. These assessments must be performed by an independent third-party.
- **Social impacts:** [Section 3.7 \(“Environmental and Social Impacts”\)](#) of the Isometric Standard sets out the social requirements Projects must comply with. The absence of socioeconomic harm should be demonstrated through a social impact assessment or equivalent. The assessments on social impacts must consider a variety of social boundaries, outlined in the same Section.

Project Proponents must always report potential impacts to their VVB and environmental regulator.

### 6.2 **Provide evidence of how projects undertake a risk assessment for potential environmental and social impacts. Confirm this is included in the project documents that undergo validation or verification.**

As outlined in [Section 3.7 \(“Environmental and Social Impacts”\)](#) of the Isometric Standard, Projects must conduct the following assessments. These are included in the Project documents that undergo assessment by an independent VVB during Validation and Verification:

- An EIA should be carried out as required by local regulations prior to the Project start date.

- Ongoing environmental assessments such as environmental monitoring, maintenance, and remediation strategies should be completed both during Project operation and post cessation of Project activities.
- A closure plan that outlines post-cessation actions that are needed by the Project Proponent. A closure plan should be designed at the beginning of a Project and periodically updated throughout the Project life cycle.

### **6.3 Provide evidence that the rules and requirements in Sections 6.1-6.2 are being followed.**

Vaulted Deep conducted all necessary pre-injection studies and analyses before their Great Plains facility was built. This included geologic feasibility studies, local environment and groundwater assessments, and engagement with local community groups and regulators. The absence of net environmental or socioeconomic harm was demonstrated (outlined in more detail in response to Q7.3). Before receiving Class V injection permits, the Project Proponent conducted environmental impact assessments, and no material environmental issues were found. The Great Plains site was fully permitted and operational prior to Validation and Verification. Vaulted Deep submits monthly and quarterly reports to the Kansas Department of Health and Environment. This includes groundwater testing, lab-analyses and volume reports on emplaced material, daily readouts of pressures and stability of the subsurface caverns, as well as bi-annual elevation surveys to ensure ground stabilisation and no cavern sinking is occurring.

## **7. Stakeholder Considerations**

### **7.1 Provide evidence of the publicly available stakeholder engagement procedure that includes, at minimum:**

- a definition of “stakeholder”
- a requirement for 30-day public consultation for new programme documents (or during revisions to programme documents)
- a requirement for 30-day public consultation during methodology development
- project consultation documents available in relevant local language(s), as necessary for effective consultation with local stakeholders
- a process by which results of stakeholder engagement is included in documents that undergo validation and verification
- a defined process on how local consultations must be conducted

#### Definition

The Isometric Standard [defines](#) stakeholders as any person or entity who can potentially affect or be affected by Isometric or an individual Project activity. [Section 3.5 \(“Stakeholder Input Process”\)](#), more specifically explains relevant stakeholders include, but are not limited to, Indigenous Peoples and Local Communities (IPLCs), stakeholders with land-tenure rights, local policymakers, national government officials and local NGOs.

#### Public consultations: Standard

Any material changes to the Isometric Standard are put to the independent Science Network for review and comment. The Science Network can also put forward recommendations that trigger an update and review cycle. Following incorporation as appropriate of feedback from the Science Network, the amendments are put forward for a 30 day period of public consultation. Following incorporation as appropriate of feedback from the public consultation, the updates will then be reflected in the latest version of the Isometric Standard as hosted on the Isometric website.

#### Public consultations: Protocol

Any new draft Protocol is put to the independent Science Network for review and comment. Following incorporation as appropriate of feedback from the Science Network, the revised draft Protocol is put forward for a 30 day period of public consultation. Following incorporation as appropriate of feedback from the public consultation, the completed Protocol will be published on the Isometric website. Results from the public consultation will be summarised and published as well.

#### Local consultation processes

As specified in more detail in [Section 3.5 \(“Stakeholder Input Process”\)](#) of the Isometric Standard, all Project Proponents are required to conduct thorough public consultation. This is to ensure that the interests of local stakeholders are incorporated into the design of any carbon removal activity. The consultation must be designed to be iterative, accessible, transparent, free from external manipulation, systematically documented, and contain a mechanism for grievances. The results of such stakeholder engagement will be included in Project Design Documents, which in turn are subject to Validation and Verification. The key elements of the process are set out below.

- Where necessary for effective consultation with local stakeholders, documentation and correspondence should be available in the local language
- The Project Proponent must inform all relevant stakeholders about its proposed and current activities
- There must be a first consultation meeting prior to Project development, with stakeholder invitations to be issued with a minimum notice of 14 days before
- Stakeholders and rights-holders should be invited to consultation meetings via methods including but not limited to the post, email, or notices in newspapers and public places
- Consultation meetings should be scheduled to maximise attendance, taking note of cultural or religious holidays and heritage
- The intention of each consultation meeting should be communicated to all stakeholders prior to the meeting
- All stakeholder or Project Proponent conflicts-of-interests should be declared
- A mechanism for stakeholders to voice and address grievances must be implemented and any grievances must be resolved or escalated no later than 60 days after receipt

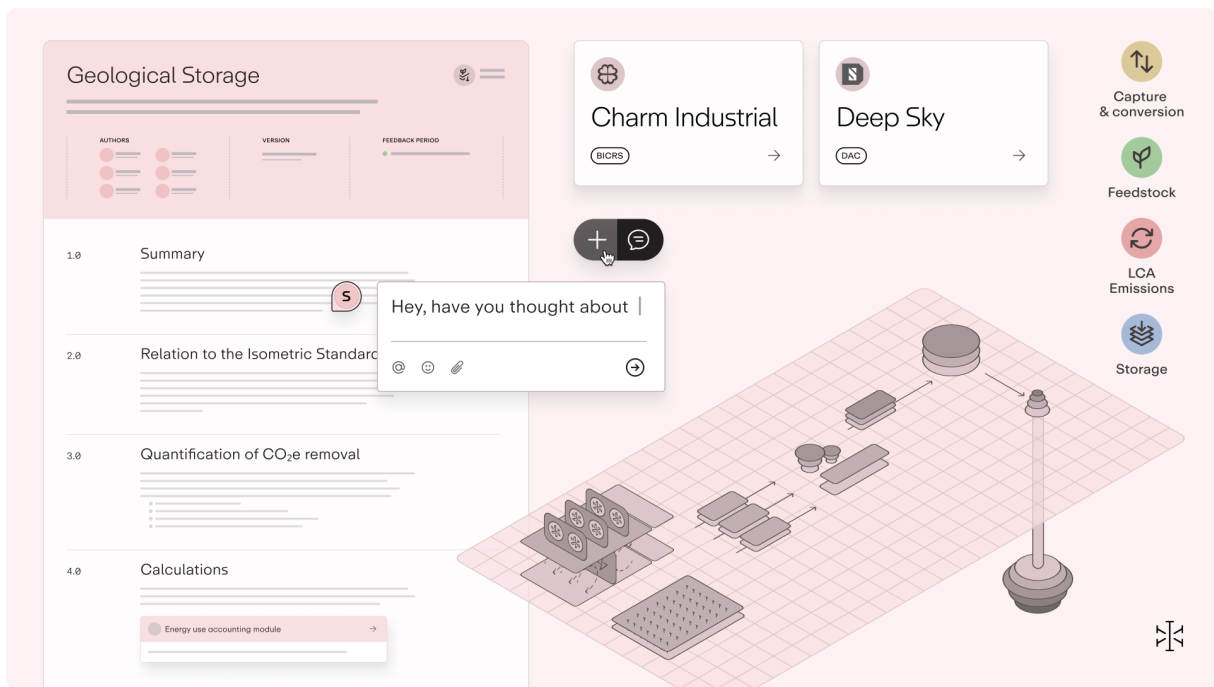


Fig 1.1: Screenshot of the user experience for commenting on a draft Protocol

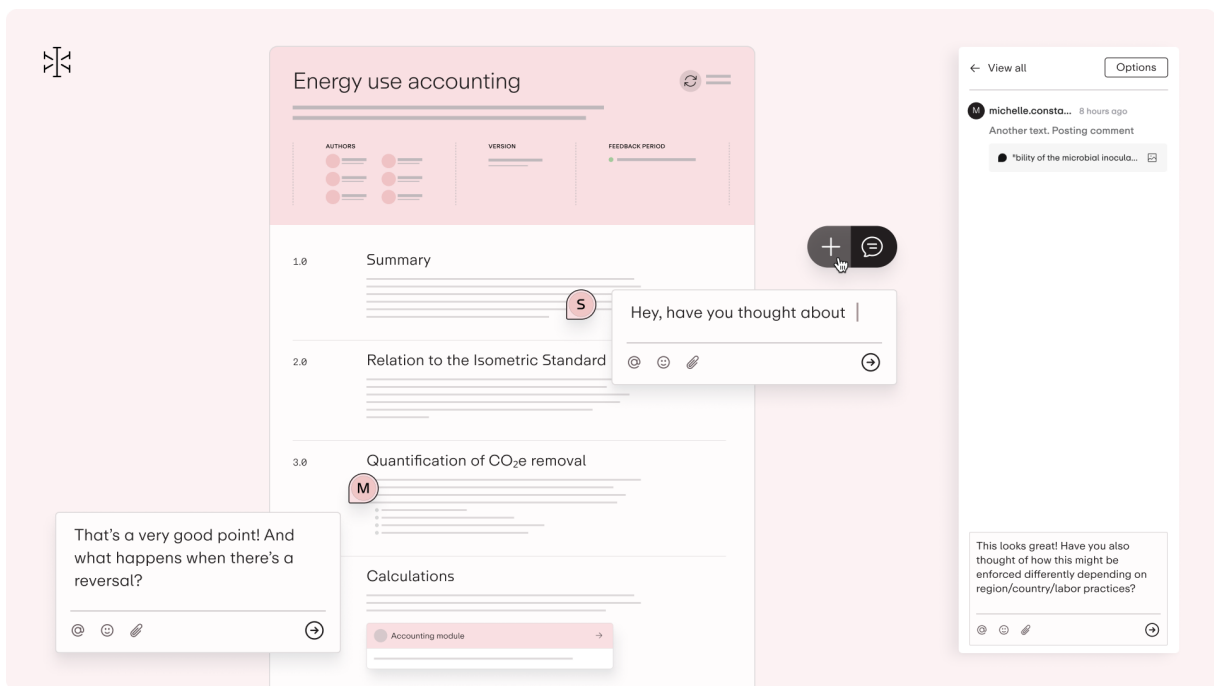


Fig 1.2: Screenshot of the user experience for commenting on a draft Module

## 7.2 Describe how stakeholder comments are transparently addressed.

An overview of all ongoing and closed public consultations on the Standard and Protocols is available publicly under <https://science.isometric.com/consultations>. Feedback is always considered and incorporated as appropriate. As explained in [Section 2.2 \(“Consultation Process”\)](#) of the Isometric Standard, during any public consultation process run by Isometric, all relevant stakeholder comments are considered and responded to by the internal Isometric Science Team via the Science Platform. The results of the consultation are published on the Science Platform. At the Project level, the detailed requirements for Project Proponents as



per [Section 3.5 \(“Stakeholder Input Process”\)](#) of the Isometric Standard ensure that stakeholder comments are transparently addressed by being considered, responded to, and made available to interested parties.

### **7.3 Provide evidence that the procedure in Section 7.1 is being followed**

Examples of how Section 7.1 is being followed are set out below:

#### Isometric Standard:

After being released in October 2023, and following a period of public consultation meeting the minimum 30 day requirement, v1.0 of the Standard was officially finalised and made available on our website in December 2023. The feedback received was all reviewed and where appropriate incorporated into the Isometric Standard. A summary of the feedback received was collated and published on the website. Changes made based on feedback received included:

- Increased comprehensiveness of social and environmental safeguarding requirements
- Adjustments to financial additionality considerations
- Clarifications on guidelines for sensitivity analysis
- Updates to the buffer pool questionnaire

#### Biomass Geological Storage Protocol:

After being released in November 2023, and following a period of public consultation meeting the minimum 30 day requirement, the Protocol was officially finalised and made available on our website in December 2023. The feedback received was all reviewed and where appropriate incorporated into the Isometric Standard. A summary of the feedback received was collated and published. Changes made based on feedback received included:

- Clarification of requirements for biomass preferred use to be energy production rather than carbon removal
- Increased comprehensiveness of embodied emissions allocation in quantification of GHG removal
- Incorporated an expliciting Monitoring Plan, including calibration requirements and QA/QC procedures
- Improved references for durability assessment in the storage module

#### Great Plains Project:

Multiple sessions were held at the facility to educate the local community on the site. A site tour was conducted, as well as two community meetings held to address concerns and questions. The primary topics raised during the consultation were:

- What the economic opportunities would be in the local area arising from the creation of the Project, in particular employment opportunities.
- How safe drinking water would be maintained in the vicinity of the site. This was resolved through explanation provided around the regular monitoring for containment of the formation as well as regular groundwater checks.

Project consultation documents were part of the materials provided to Isometric and the relevant VVB (350 Solutions) for assessment to validate and verify the Great Plains Project.

Stakeholders considered relevant for this project include:

- Local, state, and federal regulators (generally, state and local EPA)
- Members of local government
- Nearby residents and landowners (especially within the anticipated radius of injectate migration/influence)
- Waste partners who provide Vaulted Deep with the waste
- Environmental interest groups/NGOs

Vaulted Deep continues to engage each stakeholder throughout the Project, and their sites require regular re-permitting and reporting to regulatory and local government agencies. These activities generally involve public engagement via notices, hearing, regular quantification and reporting of net environmental impacts, and public access. The cadence of these activities ensures regular input from the public via their elected representatives, responses to public notices, and feedback received at public presentations.

## 8. Scale

### 8.1 Provide evidence that the Programme has issued carbon credits from at least one project.

Our first issued credits relate to the Great Plains Project. The Project Proponent is Vaulted Deep. Isometric has verified and issued 1,401.27tCO<sub>2</sub>e worth of credits as part of this Project. Further details are available on the [Isometric Registry](#).

### 8.2 Confirm whether the Programme has registered 10+ projects and issued 100,000+ t CO<sub>2</sub>e in carbon credits.

Isometric has not yet met these thresholds. At our current projected rate of growth, we expect to reach this threshold during the first half of 2024.

Isometric has scaled quickly since it was founded in January 2022. We now have ~35 full-time members of staff, including world-leading expert scientists across multiple durable carbon removal pathways. We have created a [Science Platform](#), the [Isometric Registry](#), the [Isometric Standard](#), and several durable carbon removal [Protocols](#). We have signed contracts with a range of companies in the carbon removal ecosystem - both major Project Proponents (e.g. Charm Industrial) as well as leading buyers (e.g. Shopify).

We have taken our time over the past year to ensure that all of our Protocols will deliver an unmatched level of scientific rigour. This has meant that we have in many cases turned down the opportunity to get paid to issue credits on our Registry. Maintaining the integrity of our carbon credits is our key priority - we believe every carbon credit we issue should be a scientifically valid representation of a tonne of carbon dioxide permanently removed from the atmosphere.

