

GHG Accounting 1.0 Module

Public Consultation Summary

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Context

Isometric held a public consultation on its GHG Accounting Module v1.0.

The public consultation was announced on the 9th of May, 2025. The period of consultation lasted 30 days, with the final day as the 9th of June, 2025.

After the initial public consultation, the feedback received was considered for incorporation into the Module. All stakeholders have received responses to the submitted feedback.

This document summarizes the feedback received during the public consultation and the revisions included as a result of the comments. Content in italics and brackets are excerpts from the public consultation version of the protocol to give the reader necessary context behind the comment.

We thank all participants for their time.

Summary of feedback received

Section	Comment	Resolution
<i>Consequential Analysis</i>	<i>[project-level consequential analysis to]</i> This will be confusing for some LCA practitioners who might read this as requiring that the conducted LCAs be entirely consequential. While some aspects are consequential—such as those relating to induced energy use and leakage—most parts of the LCA will use attributional emissions factors (e.g., we used X kg of NaOH that has Y kg CO ₂ -eq/kg emissions according to ecoinvent). It is not feasible or recommended to use consequential or marginal emissions factors for every last input. The data is too noisy and difficult to find (e.g., there are many more unknowns about the environmental impacts of the production of one marginal unit of most inputs). I recommend clarifying that this is a principle but that attributional LCA will still be used for most parts of the assessment. I now see additional content related to this is reflected in the relevant appendix. Regardless, it may be useful to clarify a few of these aspects upfront, which will be helpful for new LCA practitioners digging in here who might read too much into the "consequential" label.	We have acknowledged that the wording in this section of the GHG Accounting module could be somewhat confusing. We have included further clarifications. Further details on this choice can also be found in Appendix C.
	<i>[Use of attributional emission factors as a proxy: Marginal emission factors are used in consequential analysis as they</i>	We recommend the use of the cut-off model to align with other recognised databases for consistency. We have included the following

Consequential Analysis	<p><i>represent the change in GHG emissions resulting from a small (marginal) increase or decrease in activity, reflecting the most responsive sources rather than the average. However, databases providing marginal emission factors are still limited and often based on modelling approaches that are challenging to validate. While Ecoinvent offers marginal emission factors for various products and processes, they are unsuitable for project-level accounting which considers leakage as they already incorporate market substitution effects. Isometric is proactively researching appropriate sources for marginal emission factors and will update its guidance accordingly. In the meantime, attributional emission factors are accepted as a proxy for marginal emission factors.]</i></p> <p>Thank you for clarifying, but how should project developers approach this? This doesn't provide enough detail to guide project developers on acceptable GHG accounting. For example, is it acceptable to use emission factors using the cut-off system in Ecoinvent? For the required databases, it would be helpful if Isometric clarified the system model that project developers can use now, to prevent changes having to be made during the validation process.</p>	<p>clarifying text in the Module:</p> <p><i>While Ecoinvent offers marginal emission factors for various products and processes, they are unsuitable for project-level accounting which considers leakage as they already incorporate market substitution effects. Project Proponents are therefore encouraged to use emission factors under the cut-off system model, as it is aligned with the methodology used by other recognised Reputable Sources.</i></p>
GHG Statement boundary	<p>[Controlled, Related and Affected]</p> <p>I don't believe these are currently reflected in the "B.4 Project Boundary" section of the PDD template. I recommend ensuring direct consistency across the modules and any templates for more streamlined reporting and compliance.</p> <p>[Affected SSRs include increases in GHG emissions as a result of The Project displacing emissions or causing a secondary effect that increases emissions elsewhere. These SSRs are referred to as leakage in this Module.]</p> <p>It seems like "affected SSRs" could include both emissions increases and</p>	<p>We have amended this section to refer simply to Project Emissions for Controlled and Related SSRs, as outlined in the relevant Protocol (at the project site, upstream, and downstream), to avoid creating unnecessary confusion. A reference to Controlled, Related, and Affected Sources, Sinks, and Reservoirs (SSRs) remains at the beginning of the section to maintain alignment with the ISO 14064-2 standard.</p> <p>We have added additional clarity to this section. Only increases in emissions are accounted for due to conservatism, with the exception of the substitution method (procedure 3 of co-product allocation), which accounts for the displacement effect of co-product production in a highly conservative manner.</p>

GHG Statement boundary	decreases outside of the project but that only increases are accounted for here due to conservatism. This is reasonable but should perhaps be clarified, and it would probably be ideal to have projects report induced emissions reductions but just note that the benefits from them accrue elsewhere.	
	<p>[Related emissions]</p> <p>Does this include emissions from transport and storage of CO2 for a DACCS project?</p>	<p>Yes, it does. Controlled and Related Sources, Sinks, and Reservoirs (SSRs) include all emission sources within the system boundary defined by each Protocol.</p> <p>We've amended this section to refer simply to Project Emissions for Controlled and Related SSRs, as outlined in the relevant Protocol (covering the project site, upstream, and downstream), to avoid creating unnecessary confusion. A reference to Controlled, Related, and Affected SSRs remains at the beginning of the section to maintain alignment with the ISO 14064-2 standard</p>
	<p>[Controlled SSRs]</p> <p>For clarity, it might be worth mentioning that controlled SSRs are akin to scope 1 emissions whereas related SSRs are essentially scope 2 and 3 emissions.</p>	<p>We have amended this section to refer more simply to Project Emissions for Controlled and Related SSRs, as outlined in the relevant Protocol (covering emissions at the project site, upstream, and downstream), in order to minimize confusion.</p> <p>A reference to Controlled, Related, and Affected Sources, Sinks, and Reservoirs (SSRs) remains at the beginning of the section to maintain alignment with the ISO 14064-2 standard.</p> <p>We are considering mapping emission sources to Scope 1, 2, and 3 categories for inclusion in the model. However, we have decided not to include this mapping in the current version to avoid introducing further complexity.</p>
Ancillary Activities	<p>[Ancillary Activities]</p> <p>These would fall into a corporate emissions statement. Is it Isometrics' position that Project proponents would report these with each report, annually, or on what basis?</p>	Following consideration of public consultation feedback, the requirement for ancillary activities to be included within the system boundary has been removed. However, we encourage CDR suppliers to keep tracking and disclosing these emissions for transparency and to align with GHG disclosing frameworks.
	<p>[Ancillary activities]</p> <p>This category requires a lot of administrative and logistical burden on</p>	Following consideration of public consultation feedback, the requirement for ancillary activities to be included within the system boundary has been removed. However, we

Ancillary Activities	the team to track a lot of activities. Especially around rapid R&D, prototyping, and testing schedules. I would advocate that if we expect this to be a small share of the GHG emissions, then it does not seem to be justified in terms of effort required. Since our organization works on multiple projects at times that are informed by the same activity (i.e. a particular research experiment or an IT data management infrastructure), how do you allocate company-level efforts to each GHG project statement?	encourage CDR suppliers to keep tracking and disclosing these emissions for transparency and to align with GHG disclosing frameworks.
Data Quality	<p><i>[Primary data: Activity data that is specific to project activities and it is directly measured, but is not a direct measurement of CO2e. Examples are electricity and natural gas data from automatic meter readings; fuel quantity data from invoices; number of units or quantity in tonnes of materials and resources from a bill of quantity (BoQ). This type of data is provided by the Project owners, operators or supply chain members]</i></p> <p>Primary data can have varying levels of reliability. Eg, Fuel invoices are remarkably accurate for determining co2 emissions tonnage, whereas electricity may be more nebulous.</p>	<p>Yes, we agree that the reliability of primary data can vary depending on the type. For example, when calculating transport emissions, fuel consumption data are generally considered more reliable than mileage data, even though both are classified as primary data. More details can be found in the data quality hierarchy section (Section 3.4) and in Appendix A, where reliability is also scored based on the type of emission source.</p> <p>The reliability of calculated emissions also depends on the emission factor used and how well it corresponds to the activity data.</p> <p>In this section, our intention is to define what constitutes primary versus secondary data, emphasizing that primary data should always be prioritized. When choosing between different types of primary data, the hierarchy outlined in the referenced sections should be followed.</p>
	<p><i>[when collecting activity data]</i></p> <p>Given that it is available</p>	<p>Activity data refers to the quantifiable measure of an activity, which is multiplied by an emission factor, representing the emission intensity of that activity, to estimate absolute emissions. Activity data can be derived from either primary or secondary sources.</p> <p>Section 4 outlines a hierarchy for selecting between primary and secondary data. In cases where high-quality data are unavailable, lower-quality proxies such as expenditure data or benchmarks may be used for emissions calculations.</p>
	<p><i>[Primary data:]</i></p> <p>Would an Environmental Product</p>	<p>Environmental Product Declarations (EPDs) are considered secondary data. While EPDs are regarded as high-quality emission factors</p>

Data Quality	Declaration (EPD) for a specific raw material procured be classified as primary data?	(especially when provided by the supplier of the specific product sold) they may still rely on generic emission factors in their calculations. These can include average grid factors or generic material data from national databases (e.g., "generic steel"), which is why EPDs are classified as secondary data.
	<p><i>[Improving the quality of activity data used by moving up the activity data quality hierarchy will reduce the number of conservative assumptions required in GHG accounting, therefore likely leading to an increase in net CO₂e removals]</i></p> <p>This is not always the case. There are instances where less geographically or technologically specific emission factors can be more advantageous to use.</p>	We recognize that emission factors with lower technological or geographical specificity may sometimes appear less carbon-intensive than more appropriate alternatives. We have updated the text in this section to reflect this. Through the data quality hierarchy, our intention is to provide both Project Proponents and Validation and Verification Bodies (VVBs) with a tool to ensure that the emission factor most accurately aligned with the activity data is being used.
	<p><i>[by the verifier]</i></p> <p>1) What is the verifier or the project proponents obligation to search for the highest possible quality data? If a project has low or medium quality EFs, but it's theoretically possible that a high quality EF exists, even if it isn't easily available, how does the project proponent justify that it isn't available?</p> <p>2) As a somewhat analogous system, for organic farming certification, farmers have to demonstrate that they have looked for an organic version of an input (like seeds) from three major suppliers to justify using a non-organic version. So maybe the project proponents must show it's the best available from GREET or LCI commons?</p> <p>3) And how do we consider the fact that some EFs are paywalled (@ecoinvent)? Is having to pay sufficient justification for not using the highest quality EFs possible?</p> <p>Of course, we don't expect the module to consider every possible situation, but the more specificity that is written out here, the smoother the verification process will be, and suppliers will be less likely to have to redo calculations because they thought something was</p>	<p>1) & 2) The materiality assessment is intended to guide Project Proponents in identifying which SSRs require every effort to source high-quality data. The role of Validation and Verification Bodies (VVBs) will be to question the use of medium or low-quality data for Sources, Sinks, and Reservoirs (SSRs) that contribute $\geq 1\%$ on net removal, determine whether better data can be obtained for the ongoing verification, or suggest ways to improve data quality for future verifications if better data cannot be retrieved (e.g., stakeholder engagement to enhance data quality from expenditure-based to quantity-based data).</p> <p>We have included the following in the GHG Accounting module which should provide clarity on the above: <i>Materiality may be used as a justification for applying lower-quality data when an emission source accounts for less than 1% of net removals. Emission sources using this justification must collectively represent less than 1% of net removals. If the cumulative total of these SSRs exceeds 1%, Project Proponents should seek higher-quality data, starting with the SSRs that contribute the most.</i></p> <p>3) The issue of emission factors being behind a paywall (e.g., Ecoinvent) should be relevant only for SSRs with a contribution of $\geq 1\%$ to net removal. When VVBs determine that an</p>

<i>Data Quality</i>	high quality and the VVB disagrees	<p>emission factor from Ecoinvent is of higher quality than the one used by Project Proponents, the Proponents have three options:</p> <p>a. Defend the current factor: Provide justification for why their chosen factor is appropriate (e.g., better geographical representation).</p> <p>b. Purchase an Ecoinvent licence: Buy access to improved emission factors. The cost of an Ecoinvent licence is £1,500, which may be negligible compared to potential credit losses from using poor-quality factors.</p> <p>c. Accept an uncertainty discount: Take a penalty rather than improve the data</p>
	<p>[<i>activity data</i>]</p> <p>Are all criteria weighted equally? I'm wondering if this could take the form of a rubric (3 points for high quality reliability + 1 point for low quality completeness, etc.) to make it a little less subjective.</p>	<p>Currently, the data quality hierarchy serves as a guide for both suppliers and Validation and Verification Bodies (VVBs) to distinguish between high- and low-quality data. Its aim is to increase awareness on data quality standards, promote greater transparency around the data used, to streamline verification and to encourage VVBs to fairly interrogate the quality of available data. Weightings are not applied at this point in time.</p>
	<p>[<i>GHG Statement Report.</i>]</p> <p>The data sources would need to be validated, which may occur before verification, so there wouldn't be a GHG Statement Report yet. Should this justification go in the PDD, instead? It would still need to be reviewed every reporting period</p>	<p>Where high quality data is not available to a Project Proponent, justification for using medium or low quality data for the relevant Source, Sink, or Reservoir (SSR) must be provided either within the GHG Statement, or as part of the GHG Statement Report (at the verification stage) or the Project Design Document PDD (at the validation stage). This has been clarified within the data quality section of the Module.</p>
	<p>[<i>fully representative</i>]</p> <p>Additional clarity would be helpful here. For example, is the state-level in the US sufficient?</p>	<p>Please note that Appendix A provides more details on each scoring criteria for both activity data and emission factors. Whether the state level is considered high or low it depends on the emission source. For example, an emission factor for diesel will be of high quality for geography at the state level, but electricity will be considered of a lower quality.</p>
	<p>[<i>Completeness</i>]</p> <p>Thinking through how this correlates with the 15min allowance of data gaps for continuous data within the DAC protocol -Since the protocol defines how to obtain specific emissions, I would expect that if all data for a given emission is within this 15min threshold</p>	<p>The requirements specified in protocols and relevant modules (such as storage modules) supersede the requirements in the GHG Accounting Module. The Module serves as a source of truth across all protocols. However, where additional considerations or complexities are in place for a specific process, these will be detailed at the Protocol (or relevant module) level.</p>

Data Quality	or only a small subset is missing (i.e. 30 min of missing data, estimated using extrapolations) then it would still be considered high quality. Is this the right way to think about the interplay between tech specific modules and this GHG accounting module?	
	<p>[Table 2. Data quality hierarchy for activity data. Refer to Appendix A for further detail]</p> <p>Can Isometric provide further information on the implications of using high, medium, and low quality data on the final GHG statement.</p>	Currently, the data quality hierarchy serves as a guide for both suppliers and Validation and Verification Bodies (VVBs) to distinguish between high- and low-quality data. Its aim is to increase awareness on data quality standards, promote greater transparency around the data used, to streamline verification and to encourage VVBs to fairly interrogate the quality of available data. Weightings are not applied at this point in time.
	<p>[proficient]</p> <p>Is 'proficient' the right word here? It normally means 'competent or skilled in doing or using something'</p>	We agree with your comment, and have therefore changed the module from 'proficient' to 'authorative'.
	<p>[as US EPA and EXIOBASE]</p> <p>While this EPA resource is reasonably easy to access, it could be difficult to decipher for some. EXIOBASE requires much more technical expertise to access. For either resource, the sheer volume of possible factors could lend itself to cherrypicking more favorable factors. I recommend that Isometric consider extracting EIO factors from such resources and providing them as a separate resource for consistent use. Alternatively, a very conservative factor (e.g., "10 kg CO₂-eq/USD") should be provided for use here if the user cannot find their own.</p>	We agree that some of these libraries can be difficult to navigate. In the short term, we will provide additional guidance to suppliers who need to use them for the materiality assessment. We are also exploring the integration of a materiality assessment tool in Certify that utilizes these libraries.
	<p>[Activity is the activity that took place, presented in no. units]</p> <p>Please define "activity" here in more detail than "Activity is the activity that took place." This does not provide adequate information to properly interpret your meaning and then how this relates to Certify.</p>	Thank you for your comment. We are continuously collaborating with our colleagues developing Certify to fully align terminology between the platform and the module.
Data Collection	<p>[Data Collection]</p> <p>It is advisable for the Project Proponents to create a data collection</p>	The LCA inventory is typically a tool where activity data used for emissions calculations are input after being transformed (e.g.,

	<p><i>tracker that can be shared internally and with third parties to record data requests.] --- What's the difference between this and a standard LCA inventory?</i></p>	<p>converting expenditure data into consumption figures using benchmarks) and aggregated.</p> <p>A data collection template should be used to gather all relevant data points (raw data) for activities included in the system boundary. The project proponent should specify the headers required for emissions calculations and verification purposes (e.g., for feedstock transport: date of delivery, departure location, destination, vehicle type, mass transported, and whether the return journey was the same).</p>
Materiality	<p>[Materiality]</p> <p>not sure i understand how this definition provides works in this context.</p> <p>Materiality has to do with which processes have a meaningful impact on the subject under study in an LCA.</p>	<p>The definition linked wasn't the correct one, thank you for flagging this. As you say, in this context Materiality is related to the impact of each Source, Sink and Reservoir (SSR) on net removal.</p>
	<p>[The Materiality assessment]</p> <p>In reality, even this calculation will be quite difficult to perform for generally negligible aspects often excluded from project-level LCAs, such as cleaning and office supplies at the facility. It might be valuable to list a few categories such as these that it's ok to exclude by default (but note that these must be disclosed and it's at the VVB's discretion whether to request more information or inclusion in the boundary if deemed material).</p>	<p>Following internal discussion based on feedback received as part of public consultation, Isometric has decided to not enforce inclusion of ancillary activities in the GHG Statement boundary. However, we encourage CDR suppliers to keep tracking and disclosing these emissions for transparency and align with GHG disclosing frameworks.</p>
	<p>[GHG Statement]</p> <p>Is the materiality of project establishment and end-of-life SSRs assessed each reporting period? If emissions associated with a mixing tank are allocated based on the expected lifetime of 5 years, not based on project output, it may be material during some reporting periods and not in others. For example, it might take a project 1 year to remove the first 100 tonnes while it ramps up, but only 1 month for the next 100 tonnes. The establishment emissions allocated to the first reporting period are higher than for the second, even if the removals is the same. Thus, the materiality may be different</p>	<p>The materiality assessment, as per the current rules of the module, is required to be repeated when any of the following conditions are met:</p> <ul style="list-style-type: none"> - The previous assessment was conducted one year or more prior to the current verification; - There has been a significant change in the Net Removal estimate; - There has been a change in activities associated with any of the relevant Sources, Sinks, and Reservoirs (SSRs). <p>Project establishment and end of life emissions should be included every time the materiality assessment is repeated.</p> <p>It is not required to perform the materiality assessment each reporting period.</p>

<p>Materiality</p>	<p>[complete categories of SSRs]</p> <p>What does this mean? Is a category general like "project establishment" or specific like "feedstock transportation"</p>	<p>A complete category of Sources, Sinks, and Reservoirs (SSRs) refers to a grouping of all related activities. For the purpose of the Materiality Assessment, examples of such categories include:</p> <ul style="list-style-type: none"> - Equipment and materials manufacture: all activities related to the production of project components, such as concrete, steel, and other key materials. - Construction and installation: all on-site activities, including the fuel consumed and waste generated during the build phase. - Feedstock transport: the end-to-end transportation of feedstock, covering all modes of transport used (e.g., road, rail, sea).
	<p>[If the sum of SSRs that individually are < 1% becomes > 1%, then the SSRs with the highest Materiality must be included in the GHG Statement boundary until the sum of SSRs becomes < 1%.]</p> <p>Projects/verifiers should be able to choose or discuss the SSRs to include or exclude from the boundary until the sum is <1%. For example, if one factor with higher Materiality also has higher uncertainty than two smaller factors with equal Materiality but smaller overall uncertainty, the SSRs with lower uncertainty should be included in the project boundary and the more uncertain SSR kept in the pool of negligible SSRs, as lowering overall uncertainty underpins the point of the Materiality rule.</p>	<p>After careful consideration, we do not think that projects should be able to exclude a more material Source, Sink, and Reservoir (SSR) in favor of a less material one, even if the former has higher uncertainty.</p> <p>Our reasoning:</p> <ul style="list-style-type: none"> - Incentivizing Data Quality: The current rule creates a powerful incentive for Project Proponents to reduce uncertainty where it matters most. If an SSR is potentially material but the data is poor, requiring its inclusion compels the project to gather more accurate data. Allowing it to be excluded would create a loophole, discouraging rigor and potentially leading to the systemic omission of SSRs that are, in fact, significant. - The Principle of Conservativeness: high uncertainty does not justify exclusion; it heightens the need for scrutiny. A high degree of uncertainty means there is a greater risk that the emissions could be substantially higher than the initial estimate. Excluding such an SSR would be antithetical to a conservative approach, as it would ignore the sources that pose the greatest risk of underestimating a project's total emissions.
	<p>[If the sum of SSRs that individually are < 1% becomes > 1%, then the SSRs with the highest Materiality must be included in the GHG Statement boundary until the sum of SSRs becomes < 1%.]</p> <p>Why not just allow summing up to 1% and then adding all others into the GHG Statement? Seems like more work to count it all up and then count backwards than to just count up to 1% and add the</p>	<p>Thank you for raising this. The materiality clause is intended to simplify supplier reporting by allowing immaterial sources (<1%) to be excluded, avoiding unnecessary effort in assessing negligible emissions. The reason we require inclusion of the highest-materiality Sources, Sinks, and Reservoirs (SSRs) once the sum of excluded items exceeds 1% is to ensure that the boundary reflects the most relevant emission sources, rather than excluding a large number of small sources in a way that could</p>

Materiality	others into GHG Statement?	<p>undermine completeness.</p> <p>In practice, this does not add significant additional burden. Spend-based factors can be used to capture the <1% SSRs, ensuring coverage without requiring detailed primary data collection. This approach preserves the efficiency benefits of the materiality clause while maintaining fairness and consistency across projects.</p>
	<p><i>[There has been a significant change in the Net Removal estimate;]</i></p> <p>This can fluctuate significantly, especially around production start and while reaching steady state. Or may intentionally fluctuate in the case of intentional interruptible loads to load follow with renewable availability. Perhaps upon project start, a lower bound to trigger this can be set. A conservative estimate for total net removals (low end) can be established and when the net removal estimate for a reporting period is at or below this, then a new materiality assessment is required. In the absence of something like this, I believe that this will be required the majority of reporting periods.</p>	<p>We agree with your proposed solution of using a predefined threshold. Building on that idea, we believe the most robust approach is to have the project proponent set this threshold themselves based on their specific operational data.</p> <p>Specifically, a project proponent can perform a sensitivity analysis to determine the level of net removal at which their largest non-material Sources, Sinks, and Reservoirs (SSRs) would cross the materiality threshold. For instance, if an SSR is currently 0.8% of the net removal, they can calculate the net removal value below which that SSR would become >1%. This calculated value can then be established as the project's specific lower-bound threshold for that reporting period. A new materiality assessment would only be required if the project's net removals fall below this justifiable, predetermined level.</p> <p>We believe this approach directly addresses your concern, provides a clear and defensible trigger for reassessment, and avoids unnecessary work during periods of normal fluctuation. We will work on incorporating this guidance to make the requirement clearer</p>
	<p><i>[The calculation of CO₂e Removal Estimated should follow the procedure set out for the calculation of CO₂e Removal in the relevant Protocol.]</i></p> <p>It would be helpful to clarify how these two terms are different in this section</p>	<p>The calculation of CO₂e Removal Estimated should follow the procedure set out for the calculation of CO₂e Removal in the relevant Protocol for Sources, Sinks, and Reservoirs (SSRs) that are deemed to be material. For SSRs that are expected to be negligible, emissions for the SSR should be estimated, as with the term CO₂e SSR Estimated. The wording describing this equation term has now been updated to improve clarity.</p>
	<p><i>[The latter is a common approach for estimating emissions at a high level. This method uses financial expenditure data in combination with Environmentally-Extended Input-Output (EEIO) emission factor models. EEIO emission factors are provided by</i></p>	<p>Our methodology is designed to use this tool strategically. It is intended for an initial screening of emission sources that are presumed to be negligible, allowing project proponents to focus their data collection efforts on the sources that have a material impact.</p>

Materiality	<p>organizations such as US EPA7 and EXIOBASE]</p> <p>Would this not then be entirely made up of low quality secondary data?</p>	<p>The key safeguard is the materiality threshold. If a source calculated with this spend-based method proves to be material (i.e., it exceeds 1% of the net removal), it is no longer acceptable as a final calculation. This result triggers a requirement for the Project Proponent to seek out higher-quality, more specific data (such as activity-based data). If better data is not available, a clear justification must be provided.</p> <p>In short, this method is used to efficiently prove that minor emission sources are indeed minor. It is not used for the final calculation of any significant emission source</p>
	<p>[the total estimated net CO2e removals]</p> <p>Over what timespan?</p> <p>Should be equivalent to the expected reporting period</p>	<p>The materiality assessment is conducted over data related to a single reporting period.</p>
Uncertainty Analysis	<p>[Step 3 - Sensitivity Analysis]</p> <p>In what format should this be uploaded for the PDD process? Do only the results need to be shown in B.14? More clarity here would be valuable for those filling out this documentation.</p>	<p>The sensitivity analysis should be provided separately from the Project Design Document (PDD). It is typically included with the LCA submitted by CDR suppliers.</p> <p>The Isometric team is currently working on implementing an automated sensitivity analysis feature within our Certify platform, for suppliers who choose to use it to upload their LCA.</p>
	<p>[Input parameters]</p> <p>What counts as an input parameter; is it just emissions factors and direct activity levels or also lower-level parameters that might contribute to higher-level inputs? E.g., a project might have one input parameter of 100 km of trucking but use 5,000 t*km as the activity factor for a particular reporting period where 50 tons were transported. At what level does the sensitivity need to be applied?</p> <p>This is exceptionally important to clarify given what's being requested based on the results of the sensitivity analysis.</p>	<p>Sensitivity is applied to each specific input parameter. In the case of mass-distance data, there may be multiple weight values and multiple distance values. To calculate the total quantity used for emission calculations, each weight is multiplied by its corresponding distance traveled, and the resulting tonne-kilometres (t.km) are then summed.</p> <p>There should be an uncertainty value associated with both the weight (e.g., due to scale precision) and the distance traveled. If the same uncertainty applies uniformly across all weights or distances, then applying it to each individual measurement or to the total t.km calculation yields the same final result.</p>
	<p>[Monte Carlo Simulation]</p> <p>Has anyone actually ever proposed using this for a real project? While a cool tool, I'm not sure MC is actually that valuable in the real world. The garbage in—garbage out risk for utilized</p>	<p>Thanks for your observation. Monte Carlo simulation and variance propagation are particularly relevant for combining uncertainties across parameters.</p> <p>To derive uncertainty factors, for input parameters based on primary data from direct</p>

Uncertainty Analysis	<p>probability distributions is apparent too; most auditors probably couldn't accurately assess this. I recommend considering just removing this outright and focusing on a single, clear, unified uncertainty estimation approach relying on worst, average, and best cases or +/-20% if those are not available.</p>	<p>measurements, the uncertainty factor must be derived using appropriate statistical methods to directly calculate the standard deviation of the parameter</p> <p>For GHG emissions, uncertainty is typically addressed using alternative methods, such as:</p> <ul style="list-style-type: none"> - Values provided by third-party sources (e.g., Ecoinvent) - Contextual information (e.g., alternative longer transport routes) - Standard assumptions (e.g., $\pm 20\%$) <p>Please note, the section on Uncertainty Analysis has been removed from the GHG Accounting Module and will instead be added to the Isometric Standard.</p>
	<p>[Variance propagation]</p> <p>I'm not sure what this actually means. I've interpreted it before as seeing how low-level uncertainties manifest in the overall removal level. But variability/variance and uncertainty are actually distinct concepts. More clarity is needed here.</p>	<p>See above.</p> <p>Please note, the section on Uncertainty Analysis has been removed from the GHG Accounting Module and will instead be added to the Isometric Standard.</p>
	<p>[Contribution Analysis should be]</p> <p>Shouldn't this be the fraction of overall emissions instead of net removal? E.g., I feel like it's more useful to understand that electricity could drive 20% (40 kg CO₂-eq out of 200 kg CO₂-eq) of emissions impacts rather than $40 / (1000 - 200) = 5\%$ of net removal. This proposed approach has all the contributions add to 100% whereas dividing by net removal only adds up to the fraction of emissions from the gross ton removed.</p>	<p>Our current approach is focussed on ensuring the integrity of carbon credits. We calculate the sensitivity relative to the net removal because our primary goal is to identify the emission sources that most significantly impact the final credited amount and to minimize the risk of over-crediting. Our testing has shown that sources that are a small fraction of the net removal ($< 1\%$) do not have a material impact on the number of credits generated.</p> <p>We agree that both perspectives are valuable. While suppliers can and should perform their own internal hotspot analysis, our focus for verification must remain on the integrity of the final net removal figure. As our Certify platform evolves, we will certainly consider providing both types of analysis to serve both purposes.</p> <p>Please note, the section on Uncertainty Analysis has been removed from the GHG Accounting Module and will instead be added to the Isometric Standard.</p>
	<p>[Where the impact of the parameter's uncertainty is $< 1\%$ of the net CO₂e]</p>	<p>When conducting sensitivity analysis, each input parameter should be increased using its</p>

Uncertainty Analysis	<p><i>removal, no further action is required. Where the impact is > 1% of the net CO2e removal, the adjusted value used in the sensitivity analysis must replace the original parameter and be reported in the GHG Statement, unless the following information is true and can be justified and evidenced:]</i></p> <p>Please define which adjusted value is being referred to. The sensitivity analysis will determine the impact of the variable on the GHG statement, rather than returning an adjusted parameter.</p>	<p>associated uncertainty factor to evaluate the impact on net removal. If the resulting change is equal to or greater than 1%, Project Proponents must either adopt the adjusted value in the GHG statement or provide a valid justification for not doing so. For instance, if the most conservative value was already selected from among multiple possible inputs, this may serve as a sufficient justification.</p> <p>Please note, the section on Uncertainty Analysis has been removed from the GHG Accounting Module and will instead be added to the Isometric Standard.</p>
Procedure 1: Allocate all emissions to CDR	<p><i>[This is the most conservative approach to take. Crediting claims must be transparently reported and must not form part of marketing for a separate product. The concrete product must not be marketed as carbon negative if the product is used as a storage mechanism for the generation of Credits.]</i></p> <p>Penalties or enforcement methods?</p>	<p>The Isometric Standard contains a 'no double counting' clause in Section 5.7. Furthermore, the PDD GHG Statement Report Appendix will undergo an update to align with the GHG Accounting Module, including a statement relating to double counting in relation to co-products and carbon stored in a product.</p>
Procedure 2: Divide the process into sub-processes	<p><i>[retrofit]</i></p> <p>Is this declaring outright that if the combined facility is a greenfield that subdivision is not suitable? In such a case, it seems to matter if the CDR sales would be the deciding factor in that facility getting built, as in that sense they'd be inducing the combined emissions. This gets into odd territory with the financial additionality for the underlying facility and is worth considering further. One could argue that if a new combined facility (e.g., an ethanol plant considering bio-CCS) is going to be built anyway with or without carbon finance, then the assessment should focus on marginal equipment and operations needed to generate the CDR. But if the CDR credits are allowing that facility to be built, then in some sense all the emissions are induced by the process as leakage, thus likely making the project untenable. A way around this could just be not crediting CDR at such greenfield facilities, as this seems to imply.</p>	<p>If a facility is greenfield, then subdivision (procedure 2) is not allowable. Instead, the project may implement procedure 3 (the substitution method). Under procedure 3, the project may subtract the avoided burdens associated with the co-product from eligible project emissions. Prior to using the substitution method, the project must demonstrate net negativity.</p>

<p><i>Procedure 2: Divide the process into sub-processes</i></p>	<p>Or is the idea that such a greenfield facility would just have to use the substitution approach for the primary co-product (e.g., ethanol)?</p>	
	<p><i>[Procedure 2: Divide the process into sub-processes]</i></p> <p>Given that it's implied in the flowchart ("if shared processes still exist"), it would be helpful to clarify that processes can be partially sub-divided to the point where there truly are shared processes that need to be allocated.</p>	<p>We have revisited the text and the graph in the subdivision section, and made it clearer that Project Proponents are able to use subdivision only if all processes are physically separated. If some shared processes exist, they should instead apply one of the alternative procedures.</p>
	<p><i>[Where processes, or aspects of processes, are physically separable and only required for either the CDR product or co-product production, the process may be divided into sub-processes]</i></p> <p>It will be common to see a CDR process that has two "trains". Which are two systems that are physically separate from one another as shown on engineering diagrams. However, both systems are used to produce CDR. I don't believe your intent here is to allow each train to become a sub-system, but it may be worth clarifying</p>	<p>We have revisited the text and the graph in the subdivision section, and made it clearer that Project Proponents are able to use subdivision only for processes that are physically separated, or retrofits. Particularly, subdivision and substitution can not be used in the same assessment. However, if there are more than one CDR co-products, Project Proponents may be able to use procedure 4 (allocation using carbon mass balance) after using subdivision or substitution.</p>
<p><i>Procedure 3: "Substitution method"</i></p>	<p><i>[Procedure 3: Substitution method]</i></p> <p>If there is a greenfield project that produces both CDR and a co-product (e.g., bio-CCS with ethanol) but there is some fraction of residual emissions for the underlying process (e.g., N₂O emissions from corn growth), the residuals should have to be compensated for with generated CDR before allocation can be performed and credits can be carved out and sold to other parties. Otherwise, you could have a case where incentivized systems are not compatible with net zero, as such net-emitting greenfield projects without a credible path to net zero can earn CDR revenues as well as co-product sale revenues. See https://carbonplan.org/research/defining-good-cdr for more on this. This would, of course, require extra determinations for what emissions qualify as residual.</p>	<p>Thank you for highlighting this concern. We understand the issue of inadvertently allowing net-emitting processes through use of the substitution method. To address this, we have introduced an additional requirement: projects must demonstrate net negativity before they can apply the substitution method. This ensures that net-emitting processes cannot be credited as part of CDR. Furthermore, we have included specific requirements on implementation of the substitution method and which emissions sources substituted emissions can be subtracted from. This works to ensure that projects are not disincentivised to decarbonise their systems first and foremost.</p> <p>Additionally, we recognize that secondary impacts could occur as a result of CDR, such as incentivizing industries to continue operations longer than they would without CDR finance. This would be classified under leakage and all projects are required to assess and account such emissions.</p>
	<p><i>[The substitution effect must not result</i></p>	<p>The equation for application of the substitution</p>

<p>Procedure 3: "Substitution method"</p>	<p><i>in a negative value of CO₂eEmissions.]</i></p> <p>This bullet should explicitly clarify whether it would be ok to result in a value of 0 for the CO₂eEmissions, meaning that gross and net carbon removal for a system could be the same (in the event it has emissions but they are less than those of a rival, conventional production system that only produces the main co-product).</p>	<p>method has been updated to highlight that CO₂eEmissions may be zero if total substituted emissions equal total residual emissions for which the substitution method can be applied on. However, substituted emissions may only be subtracted from residual project emissions and may not be subtracted from leakage emissions. If leakage emissions or non-residual emissions exist, then CO₂eEmissions can not be zero.</p>
	<p><i>[The "substitution method" has faced criticism for its reliance on assumptions and potential uncertainties¹¹ and the risk of underestimating emissions associated with the main product¹². To ensure its appropriate application, strict safeguards are in place for the use of the substitution approach in Isometric Projects]</i></p> <p>This also requires a dynamic analysis. CDR from a bio-CCS plant producing both ethanol and CDR should get a bigger and bigger emissions burden if the substituted ethanol's emissions on the general market decrease over time. If this approach is allowed, there needs to be dynamic updating, perhaps every year, to account for this.</p>	<p>Thank you for this important flag. The substitution approach must be dynamic and the assumptions underpinning the Substituted Emissions value, the Decarbonisation Statement, and all supporting evidence must be updated and validated annually to account for changes in market conditions. This has now been clarified within the Module text.</p>
	<p><i>[Only Isometric approved substitution factors may be used]</i></p> <p>Please provide more details and examples of approved substitution factors.</p>	<p>Please note that following feedback from the consultation period, the requirements for application of the substitution method have been updated. The new requirements on eligibility and implementation criteria introduce additional guardrails to ensure its conservative application and to ensure that the use of the substitution method does not disincentivise project-level decarbonisation.</p> <p>Due to the technical and geographic variety in scope of projects that produce co-products it is not feasible to provide default substitution factors. However, further requirements have been included for 'EF Substituted', for example details on the scope of lifecycle modules to be considered. Furthermore, all EF Substituted values must be from a Reputable Source and approved by Isometric.</p>
	<p><i>[The emission intensity of the substituted product must be conservative]</i></p>	<p>The EF for the substituted product must be conservative. EF values of a lower carbon intensity are more conservative as they result in smaller estimates and therefore smaller</p>

<i>Procedure 3: "Substitution method"</i>	In the context of substitution, does this mean that the substituted product EF should be conservative ie. higher? This could lead to less conservative estimates and allocation for the CDR process itself. Clarification of the conservative estimate applied to the CDR or the substituted co-product would be appreciated.	substitution values. Clarification has been included in the module text. Please note that following feedback from the consultation period, the guidance on the substitution method has been updated. The new guidance introduces additional guardrails to ensure its conservative application and to ensure that the use of the substitution method does not disincentivise project-level decarbonisation.
<i>Procedure 4: Carbon mass balance if the co-product leads to Crediting</i>	<i>[co-product leads to Crediting for CDR with Isometric, for example if the process produces both biochar and bio-oil.]</i> To be clear, this kind of physical allocation only applies in cases with multiple CDR co-products? Everything else would have to use substitution?	Yes, that's correct. This method is intended for processes that produce two CDR co-products with differing durability. An example has been added to the text to highlight this (see section 6.1 Co-product Emissions allocation, Procedure 4). For all other types of co-products, one of the three alternative procedures outlined in the module may be adopted, provided the appropriate conditions are met.
<i>Co-product Emissions Allocation: General</i>	<i>[(Option 1 in the table)]</i> Can you provide an example (or examples applicable under different CDR Protocols) for each procedure?	We have included examples for each procedure in Appendix D of the GHG Accounting module.
	<i>[significant market value]</i> I would suggest using the same terminology of "market value" for both by-products and co-products. I believe the significant part may complicate distinguishing between the two -and the market value of a particular product can change over time	Thank you for this useful catch. We have subsequently updated the definitions used in the Module for co-products and by-products. Co-products are products that are produced intentionally and in a controlled manner alongside the main product in a production process, and have a significant market value. By-products are products that are produced as a secondary or unintended result of the production process, and typically have lower market value than the main product. Co-products and by-products that are outputs of the Project's processes are treated the same under the allocation rules outlined in the procedures in the Module.
<i>Emissions Accounting for inputs that are by-products</i>	<i>[Emissions Accounting for inputs that are by-products]</i> This is largely an 'attributional' approach. A consequential approach would treat by-product inputs as a 'constrained resource'. The question would be 'Is the by-product is used as an input for the project what will existing users of that constrained resource use instead (and what are the emissions	We acknowledge that the direct supplier may not be the marginal supplier, that consequential analysis should use marginal emission factors and that procedures such as by-product accounting are attributional approaches. Isometric's GHG accounting approach is not a fully consequential analysis, but rather a hybrid that incorporates elements of attributional LCA. Isometric requires project-level consequential

<p><i>Emissions Accounting for inputs that are by-products</i></p>	<p>that result from that)?'.</p>	<p>analysis to determine net CO₂e removals, but a strictly consequential approach is not yet practical given current carbon market standards and data limitations. In particular:</p> <ul style="list-style-type: none"> - Carbon market rules require allocation between CDR products (e.g., bio-oil and biochar) using carbon mass balance, which diverges from strict consequential practice. - Marginal emission factors are often unavailable or rely on models that cannot be easily validated. In these cases, attributional factors are applied as proxies. - Positive leakage (indirect emission reductions) is conservatively excluded under Isometric's framework, except where permitted through the substitution method. <p>Because no recognised standard yet exists for applying full consequential analysis to CDR projects, Isometric's approach seeks to balance methodological rigor with practicality, and will continue to evolve as best practices develop.</p>
<p><i>Waste inputs</i></p>	<p><i>[Payments received for the waste product must not exceed 4% of the total revenue generated from the waste producer's upstream operations]</i></p> <p>Over what timeframe?</p> <p>From the supporting link, this seems to be on an annual basis.</p>	<p>Yes that's correct, the payment received for the waste product must not exceed 5% of total annual revenue generated from the waste producer's upstream operations.</p>
	<p><i>[Documentation required]</i></p> <p>I understand that a GHG statement is expected with each RP, but is this type of supporting documentation also required?</p>	<p>Please note that frequency of reporting is included in the section after the table.</p> <p>In summary:</p> <ul style="list-style-type: none"> - One-time use inputs: Must be validated for eligibility at the time of their initial use. - Ongoing use inputs: Must be revalidated at least every 10 years, and immediately following any material change (e.g., a new provider, contract amendments, or price changes). - Discretionary updates: Projects are also encouraged to revalidate eligibility in response to broader market or regulatory shifts.
	<p><i>[For waste biomass feedstocks, refer to the Biomass Feedstock Accounting Module. Eligibility criteria described in the Biomass Feedstock Accounting Module must be satisfied in order to exclude biomass sourcing emissions from the system boundary. Emissions relating to any processing and transport</i></p>	<p>Please note that these topics are covered in the Biomass Feedstock Accounting module (v1.3 currently in public consultation).</p>

<p><i>Waste inputs</i></p>	<p><i>of biomass feedstock for the CDR process must be included in the system boundary.]</i></p> <p>Can you clarify the difference between sourcing emissions, and processing and transport emissions for biomass feedstock? How does this apply to waste-to-energy plants, or other retrofit projects where the biomass would be transported and processed in the absence of the project (as the project only provides the capture equipment)? In this instance, the processing and transport emissions are part of the counterfactual scenario.</p>	
<p><i>Emissions Amortization</i></p>	<p><i>[project emissions]</i></p> <p>There should maybe be more specificity on the definition of project emissions as well as a materiality threshold here, as there are climate implications to spreading credit burdens for upfront emissions over longer periods (i.e., if the emissions happen in year 1 but are compensated for over 10 years, then there are emissions that cause marginal warming over the first 10 years of the project). Additionally, complexities relating to end-of-life emissions related to factors like project decommissioning should also be discussed here. I would recommend using something like a 5% adder for upfront equipment emissions to account for decommissioning (and not considering salvage values if using EEIO factors).</p>	<p>End-of-Life emissions must be estimated upfront, alongside project establishment emissions. We have now made this clearer within the GHG accounting module itself. For some pathways, such as enhanced weathering, a more front-weighted amortization schedule is required to account for uncertainty in removal projections.</p> <p>Allowing amortization of project emissions is essential for early stage start ups and first of a kind projects. A number of safeguards are in place to ensure that the overall risk of over crediting is negated. Projects must provide evidence to support proposed amortization schedules, acceptance of which will be at the discretion of the Validation and Verification Body (VVB). Amortization schedules must undergo checks at years 1, 3 and 5 and any adjustments must be made where required, for example if the project amortized emissions per gross CO₂ removal and the actual gross CO₂ sequestration is lower then original projections.</p> <p>In addition to the review schedule, if the Project Proponent is not able to comply with the allocation schedule described in the Project Design Document (PDD), for example due to changes in delivered volume or anticipated Project lifetime, the Project Proponent must notify Isometric as soon as the change is identified in order to adjust the allocation schedule for future removals. If that is not possible, the Reversal process will be triggered in accordance with the Isometric Standard (Section 5.6.1), to account for any remaining embodied emissions.</p>

Emissions Amortization	[Risk management for emission amortization]	Thank you for your comment. Following feedback received on these proposed risk management safeguards and after internal considerations, we have decided to remove the use of the buffer pool to derisk amortization schedules.
	<p>This seems mainly targeted at early-stage projects (e.g. pilots, smaller CDR projects) that have significant uncertainty about future operations. It would place a significant burden though on larger-scale projects which have higher confidence in future operations, given the significantly higher investments needed (hundreds of millions of dollars). Adding this burden could significantly impact the returns on these projects, which would make a significant difference for project equity investors/debt lenders. A 2% buffer pool seems sufficient to manage this risk for large-scale projects over a reasonable project lifetime. Facilities larger than demonstration scale (>100K tpy) already have higher requirements when it comes to energy accounting. While that seems fair there, here it seems fair to have a favourable carve out for larger projects.</p>	<p>A number of safeguards are in place to ensure that the overall risk of over crediting is negated. Projects must provide evidence to support proposed amortization schedules, acceptance of which will be at the discretion of the VVB. Amortization schedules must undergo checks at years 1, 3 and 5 and any adjustments must be made where required, for example if the project amortized emissions per gross CO₂ removal and the actual gross CO₂ sequestration is lower than original projections.</p> <p>In addition to the review schedule, if the Project Proponent is not able to comply with the allocation schedule described in the Project Design Document (PDD), for example due to changes in delivered volume or anticipated Project lifetime, the Project Proponent must notify Isometric as soon as the change is identified in order to adjust the allocation schedule for future removals. If that is not possible, the Reversal process will be triggered in accordance with the Isometric Standard (Section 5.6.1), to account for any remaining embodied emissions.</p>
	<p>[year 1, year 3, year 5]</p> <p>At the beginning or the end of the year? I'm guessing the end, but please clarify</p>	Thanks for pointing that out. We have added text in the module clarifying that it is at the end of the mentioned years.
	<p>[the expectation of gross CO₂ sequestration has changed]</p> <p>It would be helpful to have more clear guidelines on how this is done. Is it a rolling average of the annual production, most recent product year, can exclusions be made (i.e. one year a hurricane causes weeks long power outages, subsequently impacting production but not anticipated to be a consistent occurrence)</p>	<p>The anticipated Project lifetime or total gross CO₂ sequestration should be justified as part of The Project Design Document (PDD), to be assessed as part of Project validation. Project Proponents must provide justification to support the chosen Project lifetime or total gross CO₂ sequestered, which should be evidenced appropriately with Project specific documentation.</p> <p>Where initial estimates prove to be unattainable or unlikely, adjustments to the emissions allocation schedule are permitted. Emissions must be adjusted to subtract the amount already covered by Credits from earlier Reporting Periods, and the remaining</p>

		emissions should be reassigned to future verifications. If significant changes occur in the emissions amortization schedule (for example, if the emission allocation to each reporting period was greatly underestimated) the acceptance of an updated emissions amortization schedule will be down to the Validation and Verification body's discretion. The adjustment mechanism exists to maintain alignment between emissions allocation and actual project performance, ensuring accuracy and integrity in reporting.
	<p>[The Project must demonstrate that total emissions debt at the end of Year 5 is less than the anticipated buffer pool size at the end of Year 5 (see Section 5.6.2 of the Isometric standard for more information on Buffer Pools).] --- I'm not following with the overall purpose of the buffer pool. If I look at the Isometric standard, the buffer pools are intended to protect against reversal risk and the contribution size corresponds to that risk -which makes sense. In this proposal, the buffer pools are serving a different purpose. They are safeguarding against overall project risk. As it stands there will be a significant adjustment to our project schedule at the end of 5 years for a 100 kta project, which significantly impacts financing/project economics. I would suggest looking at other risk-mitigation mechanisms or looking at a project risk assessment based on economics or production track record to adjust this.</p>	Thank you for your comment. Following feedback received on these proposed risk management safeguards and after internal considerations, we have decided to remove the use of the buffer pool to derisk amortization schedules.
	<p>[Year 1]</p> <p>It will take at a minimum 6 months to ramp a DAC facility to full production. It will be difficult and non-representative to evaluate the annual performance at year 1 given this long timeframe. I very much agree with the idea of checking in before reaching year 5. I would suggest making this first check in at year 2 to have a more representative picture of this schedule</p>	Based on the feedback received, we have amended the amortization section and removed the buffer pool as a risk management mechanism. Given that CDR is still in its early stages, we recognize that it is difficult to forecast future events or assess the durability of equipment. We will revisit this decision as knowledge of CDR technologies continues to grow.
Data Quality - Appendix	<p>[The emission factor is global]</p> <p>How does Isometric account for countries / locations where there is limited data, and therefore global</p>	Currently, the data quality hierarchy serves as a guide for both CDR suppliers and Validation and Verification Bodies (VVBs) to distinguish between high- and low-quality data. Its aim is to increase awareness on data quality

Data Quality - Appendix	<p>emission factors may be all that's available? Would projects be inadvertently penalised for operating in these countries? This is a particular problem outside Europe / USA.</p>	<p>standards, promote greater transparency around the data used, to streamline verification and to encourage VVBs to fairly interrogate the quality of available data. Weightings are not applied at this point in time. Project Proponents using data not considered of the best quality because no better alternative exist will not be penalized if no better alternatives are available.</p>
	<p><i>[Emission factors are provided by the best source available for that activity.]</i></p> <p>Access to emission factor databases is costly, and it isn't feasible for project developers to pay for access to multiple database in order to access emission factors deemed to be the highest quality if these can be sourced from one database.</p> <p>For example, the list below includes at least 5 different databases, even though Ecoinvent includes all of these emission factors. Could you clarify why Isometric considers Ecoinvent to be high quality for embodied emissions, but not fuel use or electricity, when the same methodology is used to calculate all of these emission factors?</p>	<p>The list of sources was designed to highlight both free and reputable options, while recognizing that Ecoinvent is a well-established database.</p> <p>Ecoinvent can certainly be used for fuel and electricity factors where the scope and geography are appropriate. However, in some cases national sources (e.g. UK DESNZ, US EPA) may better reflect local conditions. The "best available source" refers to the factor that is most representative and reliable for the activity, rather than implying one database is always superior.</p>
	<p><i>[generic database.]</i></p> <p>What is considered as a 'generic database'? How can project developers distinguish these from high quality?</p> <p>To add to this - does Isometric consider the definition of a generic database differ depending on the type of emission factor being used?</p>	<p>Generic databases are those considered not from official or reliable sources, or have not been verified, or the emission factor is too generic for the type of product assessed. We have updated the wording in the Module to reflect this.</p>
	<p><i>[LCA data is provided by the supplier]</i></p> <p>The direct supplier may not be the 'marginal' supplier in the market.</p>	<p>We acknowledge that the direct supplier may not be the marginal supplier, that consequential analysis should use marginal emission factors and that procedures such as by-product accounting are attributional approaches.</p> <p>The approach when it comes to GHG accounting at Isometric does not align with a full consequential approach, but it contains elements of attributional analysis.</p> <p>While Isometric requires project-level consequential analysis to assess net CO₂e</p>

<p><i>Data Quality - Appendix</i></p>		<p>removals, a fully consequential approach isn't currently practical due to limitations in carbon market standards and data availability. Specifically:</p> <ul style="list-style-type: none"> - Carbon market norms require allocation between CDR products (e.g. bio-oil and biochar) using carbon mass balance, which diverges from strict consequential principles. - Marginal emission factors, central to consequential analysis, are often unavailable or based on models that are difficult to validate. As a result, attributional factors are used as proxies. - Positive leakage (indirect emissions reductions) is excluded under Isometric's conservative framework, except in limited cases via the substitution method. <p>Since no established standard exists for applying full consequential analysis to CDR projects, Isometric's approach balances methodological rigor with practical constraints and will evolve with emerging best practices.</p> <p>Please also refer to Appendix C of the GHG Accounting module for more details</p>
	<p>[<i>DESNZ (for average)</i>]</p> <p>Ideally consequently analysis should never use average emission factors - only factors for sources that change (i.e. 'marginal emission factors').</p>	<p>We acknowledge that the direct supplier may not be the marginal supplier, that consequential analysis should use marginal emission factors and that procedures such as by-product accounting are attributional approaches.</p> <p>The approach when it comes to GHG accounting at Isometric does not align with a full consequential approach, but it contains elements of attributional analysis.</p> <p>While Isometric requires project-level consequential analysis to assess net CO₂e removals, a fully consequential approach isn't currently practical due to limitations in carbon market standards and data availability. Specifically:</p> <ul style="list-style-type: none"> - Carbon market norms require allocation between CDR products (e.g. bio-oil and biochar) using carbon mass balance, which diverges from strict consequential principles. - Marginal emission factors, central to consequential analysis, are often unavailable or based on models that are difficult to validate. As a result, attributional factors are used as proxies. - Positive leakage (indirect emissions

		<p>reductions) is excluded under Isometric's conservative framework, except in limited cases via the substitution method.</p> <p>Since no established standard exists for applying full consequential analysis to CDR projects, Isometric's approach balances methodological rigor with practical constraints and will evolve with emerging best practices.</p> <p>Please also refer to Appendix C of the GHG Accounting module for more details</p>
<i>Appendix - Materiality Example</i>	<p>[staff travel]</p> <p>As noted in some other protocol feedback, Offstream recommends removing staff travel from the system boundaries of Isometric assessments given the disproportionate data collection burden it poses relative to its usually negligible emissions impacts.</p>	<p>We acknowledge that, in most cases, staff travel emissions may be negligible. However, we have encountered situations where this is not the case.</p> <p>If deemed negligible, suppliers can use the materiality assessment included in the module to identify emission sources with minimal impact. This assessment can be performed using expenditure data, which is typically readily available to most organisations.</p>
<i>Reporting Requirements</i>	<p>[This is submitted as an Appendix to the PDD.]</p> <p>Is it? That would mean the PDD is re-submitted every reporting period</p>	<p>Thank you for flagging this. As you correctly pointed out, the Project Design Document (PDD) is not required to be submitted at every reporting period, however the GHG Statement Report is. This can be uploaded to Certify as a standalone document, which may be entirely prepared by a project, or the project may use Isometric's template, which is in the form of a PDD Appendix. Soon, the GHG Statement Report will be integrated within the Certify platform. It will continue to be required at every verification. We have updated the wording in this section, as it was previously misleading.</p>