

BeZero Carbon ratings governance and processes



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Independent carbon ratings

Independent carbon ratings and ratings agencies matter because they allow anyone to objectively assess the quality of any type of carbon project, at any stage, in any carbon market. They are essential to scaling climate action.

Independence is what differentiates ratings as a risk metric from other types of quality scores, broker advisory, or in-house analysis. Independence is what separates ratings agencies from other market actors such as consultants, traders, or investors, who typically play a direct role in transactions and have vested interests.

Financial market regulations in the EU, Singapore, UAE, UK, and US are being applied to the carbon market, making the roles of different market actors more defined and easier to understand.

BeZero welcomes and encourages transparency in the market and has published all of its [ratings methodologies](#) and [headline ratings](#). BeZero also welcomes regulations and has voluntarily signed up to the International Capital Market Association's Code of Conduct. Rather than waiting for regulations, BeZero already imposes on itself seven key pillars to guarantee its independence.

Together, these pillars give BeZero's customers and the broader market confidence that there are no activities or incentive structures in place that could prejudice any ratings outcome irrespective of who commissions it, or who its clients are.

Pillars of independence

1. No internal conflicts

BeZero enforces a separation of commercial and analytical functions, flow of information, and compensation structures.

Once a rating has been contracted and paid for, it is delivered and managed by ratings analysts without any further engagement or involvement of the commercial team. Ratings are only assigned via unanimous consent at a committee of subject matter experts after a rigorous internal peer-review process. Individual analysts are not able to unilaterally assign ratings. The analytical team's compensation structure is also never linked to the specific outcomes or volume of ratings. Finally, for all ex post ratings, commercial team members learn about ratings BeZero has assigned at the same time as everyone else in the market, when they are published on BeZero's public website and platform.

2. No trading or developing carbon projects

BeZero is not involved in any type of carbon credit or carbon project transaction or any activities specifically related to the development of a carbon project. All employees are equally prohibited from these activities and must sign a declaration attesting to this.

The only exception to this rule for BeZero is the annual retirement of high quality credits equivalent to BeZero's annual carbon footprint by Molten Ventures, its Series A lead investor. This is a requirement

under Molten's ESG policy. Their in-house team is a subscriber to the BeZero Carbon Markets platform and relies on BeZero's ratings to inform their purchasing decisions for all portfolio companies. BeZero is not involved in the selection, purchase, or retirement of the credits.

3. No MRV consulting

BeZero does not advise clients on any part of the auditing, accreditation or monitoring, reporting or verification (MRV) process, or provide analysis that can be used directly as an input to these processes. BeZero avoids this conflict because if it did provide analysis that was used to directly evidence a project's issuance, and then rated the project once it issued credits, the rating would in effect be akin to 'marking one's own homework'.

A carbon ratings agency is not a standards body, validation and verification body, or project design consultant. It offers third-party opinions expressed as ratings on the evidence provided by these entities to support a project's climate claims.

4. No privileged rating access

Issued credits from accredited carbon projects with publicly available project development documents are commonly transacted in the spot carbon market.

BeZero makes every headline letter rating of these credits publicly available for free. BeZero releases ratings simultaneously to all audiences and displays the ratings the same way everywhere. BeZero has done this since it launched - <https://bezerocarbon.com/ratings/listings>.

BeZero's view is that the headline ratings for existing carbon projects are a public good. BeZero's core business is the value-add of providing customers access to the deep due diligence and risk analysis that underlies these headline ratings.

The only exception to this approach is for project developers who are consulted pre-rating to ensure there is no pertinent project information missing, and are always given the rating in full upon publication at no charge. They also reserve the right to respond, and any new material evidence, from them or elsewhere, will be reflected in an updated rating.

BeZero also rates pre-issuance projects - those that have not yet issued credits or completed their accreditation process. Documentation for such projects is often incomplete, non-public, restricted, and/or subject to fundamental change. As such, all BeZero pre-issuance ratings are private unless otherwise agreed.

If the project starts issuing credits and BeZero has rated them, the headline letter rating will be made public as per the above.

5. No buyer-seller referrals

BeZero never actively facilitates introductions between any type of buyer or seller via BeZero's platform, API, or over the counter. This is regardless of whether the 'match' is anonymous or known, or has a commission or not. This process is analogous to a transaction and carries the same risk of conflicts.

6. No advisory

BeZero will never advise on how to design or change a project, or make recommendations on which projects to buy or sell. Doing so would be in clear conflict with the independence of BeZero's ratings.

We provide clear, evidence-based analysis on the risks a project faces, or doesn't, and are fully transparent in disclosing the methodology and parameters used to perform the rating -

<https://bezerocarbon.com/ratings/approach>.

7. No results-based payments

All BeZero Carbon Rating commissions are 100% flat fees, paid upfront. There are no differences in fees based on ratings outcomes. Unlike registries, which typically charge based on the size of credit issuance, BeZero does not vary its fees on the size of the project. And there's no special treatment for any client type.

This approach reflects the reality that all carbon market participants have a vested interest in the quality of a carbon project, and by association the outcome of a carbon rating:

- Developers want to create better projects with better ratings to get higher prices, lower cost of capital, and ultimately raise more finance for climate interventions.
- Investors want to get better returns on their investments.
- Exchanges and marketplaces want access to reliable liquidity.
- Traders want to buy low and sell high.
- End buyers want to retire high quality credits at the lowest possible price.
- Everyone wants to minimise performance risks that can cause reputational damage.

Any of these actors can be on either side of a transaction with one another, and ratings provide value to the market at all of these stages.

BeZero's approach to ratings governance

A rating is an assessment of risk or the likelihood of an event happening. A carbon rating is an assessment of the likelihood of a carbon credit delivering on its promise of avoiding or removing 1 tCO₂e.

It is an analytical opinion based on a combination of qualitative and quantitative factors, overlaid with analytical judgement. It is not an absolute measure.

Robust carbon credit ratings cannot be assigned solely through a quantitative model, a questionnaire, or even a combination of the two. It is an involved process that requires access to comprehensive, curated datasets, a deep understanding of carbon risk factors, and multidisciplinary expertise. The process needs to be objective, independent, transparent, and backed by analytically robust criteria and clear rating definitions.

The governance around assigning a rating is an essential component of a ratings agency.

Ratings governance at BeZero Carbon is built on six key pillars:

- Expertise in risk assessment
- Cross-sectoral knowledge
- Skills in 'relative assessments'
- Consistency in applying criteria and methodologies
- Time and commitment
- Internal rating committee

Expertise in risk assessment

Carbon efficacy ratings are an assessment of the likelihood of the carbon credit delivering on its promised 1 tCO₂e avoided or removed.

The essential thesis of risk assessment is to dig deep into 'what can go wrong', extensively interrogate evidence to onboard expectations/assumptions and bring it all together to arrive at an overall risk assessment.

It is an evolved area of expertise prevalent primarily at ratings agencies, fixed-income research organisations (e.g. sell-side banks), and insurance companies. BeZero Carbon ratings incorporate hands-on involvement from people who have this experience to ensure a robust assessment.

Cross-sectoral knowledge

Carbon credits can be issued by projects across a wide range of sectors, including Renewables, Afforestation, Reforestation & Restoration, REDD, Oil Recovery, and Blue Carbon. Each sector has a unique way of seeking to avoid/remove emissions from the atmosphere. Understanding these factors is essential to assessing the efficacy of the project activities and its likelihood of delivering on its carbon commitments.

Sector knowledge exists at various levels. For sectors that have been in existence for a number of years (renewables, forestry, etc) there would be a number of people who have worked in the sector and possess a large body of knowledge. For emergent and evolving sectors (direct air capture, biochar, etc), this deep sector expertise may be less readily available.

A ratings agency requires sector knowledge to understand the sectoral nuances and the relative effectiveness of activities being undertaken, i.e. the means by which emissions avoidance/removal are achieved. This provides context to the opinion-based rating.

BeZero acknowledges that a robust rating process requires a large number of analysts with deep knowledge of individual sectors and sub-sectors, and ensures this is reflected in its employment and training of carbon credit analysts.

Relative assessment

Ratings are not absolute, and do not operate on a pass-fail threshold. They are relative assessments - comparable in relation to all other ratings across sectors, countries, and other ratings. This helps in a granular assessment and pricing of risk embedded in the credits issued by projects.

It is therefore essential for a sound ratings process to have a common set of people who understand, deliberate, and opine on individual ratings across sectors and countries over time.

A robust rating process must have a formal rating committee composed of a common set of individuals who have extensive experience in participating and deliberating at a large number of rating committees over time.

At BeZero, this is achieved by the rating committee. Members of the rating committee comprise senior members of the analytical team who question and challenge the presenting analyst(s). They also interrogate how a proposed rating compares to other ratings within the sector and across all sectors.

Consistency in applying criteria and methodologies

Ratings are assigned based on published criteria and methodologies. Consistent application of these criteria and methodologies is expected from the rating process.

Ratings involve complex analysis of projects of all types. They are analytical opinions based on a range of qualitative and quantitative inputs leveraging various data sources, models, and analytical judgement.

Robust ratings methodologies are comprehensive in nature, and require supporting sector-specific frameworks to help take project context into account. They are not a questionnaire that can be answered to arrive at a rating, and they are not simply the product of running data into a predefined algorithm.

Since ratings seek to provide a common language of risk across sectors, countries, and carbon credit types, the consistent application of criteria and methodologies becomes an essential prerequisite to

the process. This requires a deep understanding of the criteria and methodologies, and experience in applying them across a large number of projects.

At BeZero, consistent application of criteria and methodologies is achieved through the rating committee, whose members have overseen and ensured ratings consistency over hundreds of projects.

This further underscores the importance of a formal rating committee to ensure the robustness of the rating process.

Time commitment

Robust ratings processes require dedicated time and effort to consistently apply predefined criteria and methodologies, factor in sectoral nuances, and refine assessments to arrive at a relative grading of risk.

A typical ratings exercise takes up to 6 weeks to complete. The proposed ratings involve detailed deliberations at rating committees.

Ratings analysts need to be engaged in it full time, as do the rating committee members. At BeZero, it is a full time occupation, not a part time advisor-/consultant-driven process.

The full time commitment of the entire ratings team and the rating committee is an essential component underpinning the rigour of BeZero's rating governance.

Internal Rating Committee

The importance of rating committees as the key driver of governance in the ratings process is critical.

A rating committee consisting of a broad membership with various skills and backgrounds ensures that no one analyst can determine and/or influence the rating process. It also ensures that the rating represents the views of the organisation and not a single analyst.

BeZero's rating committee provides oversight over the analytical process, ensures consistency in the application of rating criteria and methodologies, and comparability of ratings across sectors and countries.

In financial markets, internal rating committees are the norm; reputable ratings agencies operate through internal rating committees that are responsible for assigning and reviewing all ratings.

A rating committee composed of internal staff is a well-proven mechanism to ensure robust rating governance.

BeZero Rating committees are composed only of full-time staff. This ensures an extensive time commitment required to ensure consistency in the application of rating criteria and methodologies, and comparability of ratings across sectors and countries.

Ratings governance at BeZero Carbon

BeZero's rating committees have a formal governance structure. Each committee has a pre-agreed agenda, a designated chair, and has minimum quorum requirement. All meetings are formally minuted.

Rating committees are 'open meetings' for members of the ratings analytical team. Any rating analyst can attend and contribute to rating committee meetings. They can ask questions and share their views on the rating under discussion.

Rating decisions are taken only via unanimous vote - this is a higher bar than at financial sector ratings agencies, where a simple majority carries the decision.

Credit rating process

BeZero Carbon Rating analytical framework and process

A carbon credit is a contract certifying a commitment that 1 tonne of CO₂e (i.e. a tonne of carbon dioxide or an equivalent amount of other greenhouse gases) has been removed or avoided for a given period of time as a direct result of carbon project activities.

This commitment typically relies on third-party verification and validation, and ongoing monitoring, of a project's adherence to a given methodology for a given activity. Methodologies are designed and maintained by standards bodies and, in some instances, undergo additional validation through industry initiatives such as the ongoing Integrity Council for the Voluntary Carbon Market. Some standards bodies also act as registries for the issued credits. This process, known as accreditation, is binary by design. It results in a standardised unit of account, i.e. 1 tonne of CO₂e avoided or removed, and credits are transacted and eventual climate claims made upon that basis.

However, in our view, solely relying on a binary assessment to understand carbon efficacy or carbon credit quality is insufficient. Whether or not 1 whole tonne of CO₂e has been achieved cannot be verified with absolute accuracy. Assessing the quality of carbon projects involves counterfactual analysis, a mix of subjective and objective parameters that change over time. The heterogeneous nature of engineered and nature-based avoidance and removal projects also prohibits perfect fungibility.

To assess the achieved CO₂e avoidance or reduction with confidence, we believe that all carbon market participants (e.g. developers, investors, intermediaries, and end buyers) of carbon credits need information and tools to understand the risks and uncertainties. This is equally important across the various phases of project development, from when a project has yet to issue any carbon credits to those parties interacting with credits that have been issued.

We have designed an approach to assess the carbon efficacy risk associated with issued carbon credits. This framework is applicable to any project type in any sector accredited by any standards body, and leverages a blend of qualitative and quantitative factors; financial, environmental, policy assessment techniques; and primary and secondary data sources.

BeZero Carbon Rating definition

A BeZero Carbon Rating (BCR) represents our opinion on the likelihood of a carbon credit achieving 1 tonne of CO₂e avoided or removed. It is an opinion on the greenhouse gas efficacy of a carbon credit.

The BCR is conveyed using an eight-point alphabetical scale ranging from 'highest' to 'lowest' likelihood.

Table 1. BeZero Carbon Rating scale and definitions.

Rating symbol	Definition
BeZero Carbon Rating AAA	The credit issued by the project has the highest likelihood of achieving 1 tonne of CO ₂ e avoidance or removal.
BeZero Carbon Rating AA	The credit issued by the project has a very high likelihood of achieving 1 tonne of CO ₂ e avoidance or removal.
BeZero Carbon Rating A	The credit issued by the project has a high likelihood of achieving 1 tonne of CO ₂ e avoidance or removal.
BeZero Carbon Rating BBB	The credit issued by the project has a moderate likelihood of achieving 1 tonne of CO ₂ e avoidance or removal.
BeZero Carbon Rating BB	The credit issued by the project has a moderately low likelihood of achieving 1 tonne of CO ₂ e avoidance or removal.
BeZero Carbon Rating B	The credit issued by the project has a low likelihood of achieving 1 tonne of CO ₂ e avoidance or removal.
BeZero Carbon Rating C	The credit issued by the project has a very low likelihood of achieving 1 tonne of CO ₂ e avoidance or removal.
BeZero Carbon Rating D	The credit issued by the project has the lowest likelihood of achieving 1 tonne of CO ₂ e avoidance or removal.

The rating is not an assessment of:

- The broader risks faced by a carbon project, e.g. fraud, negligence, default risk, political interference, or business interruption, other than the extent to which such risks may inform our assessment of carbon efficacy.
- Other specific elements of the credit's quality other than how they relate to carbon efficacy, such as potential co-benefits from broader ecological and social impacts. These could include biodiversity effects; social, health, or economic impacts on local communities; or actual or

potential sustainable development goals (SDG) claims. To the extent that such effects may compromise carbon efficacy, they would be taken into consideration, e.g. when considering stakeholder relations and the effect on non-permanence or leakage risk.

Steps in the rating process

The BeZero Carbon Rating analytical framework encompasses three broad elements:

- **Project governance assessment:** This pre-rating project analytics and governance screening includes: a review and standardisation of project data; governance screening of carbon accounts and issuance; verification against double counting; assessment of project claims; and application of our qualifying criteria to test eligibility for a BCR.
- **Carbon efficacy assessment:** A holistic review of all evidence across all risk factors in the BCR methodology.
- **Aggregated risk assessment:** this includes rating assignment and ongoing monitoring.

The following diagram shows our analytical framework.

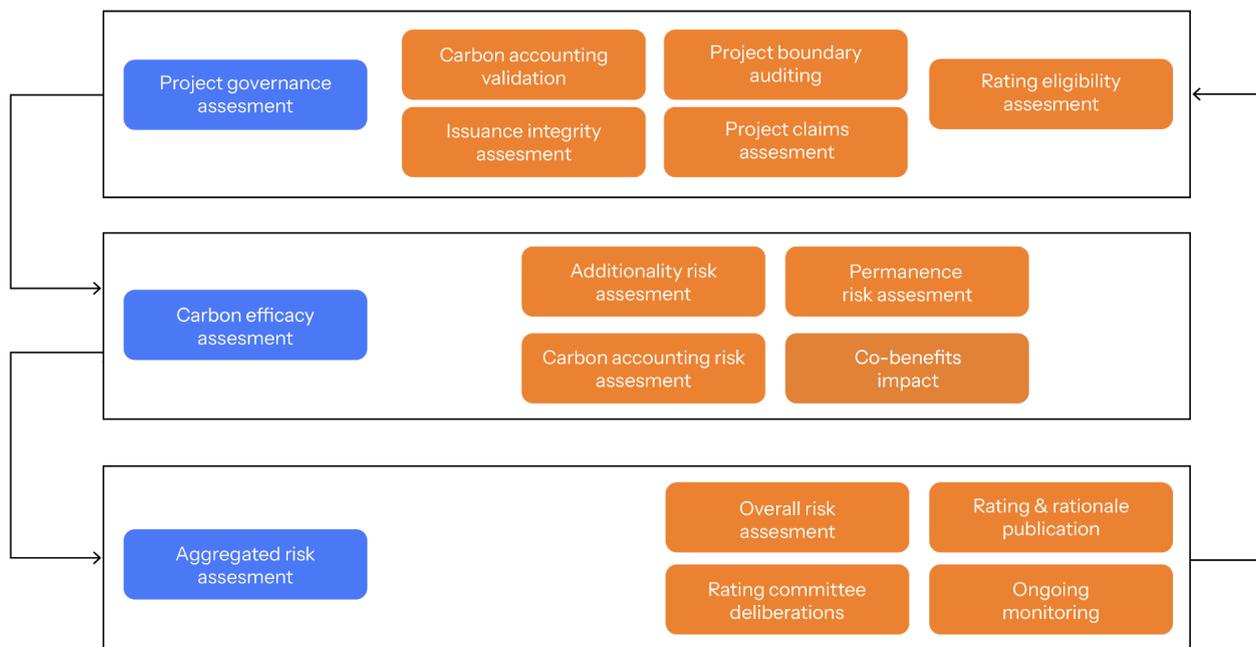


Figure 1. The various stages of the analytical framework that lead to a BeZero Carbon Rating.

Introduction to risk factor framework

The BCR follows a robust analytical framework involving a detailed assessment of three critical risk factors affecting the quality and carbon efficacy of credits issued by the project:

Additionality: The likelihood that a credit purchased and retired leads to a tonne of CO₂e being avoided or sequestered that would not have otherwise happened.

Carbon accounting: The likelihood of having carbon accounting consistent with achieving a tonne of CO₂e avoided or removed.

Permanence: The likelihood that the carbon avoided or removed by the project will remain so for the time committed.

Across a carbon credit’s lifecycle, BeZero Carbon’s assessment of carbon efficacy risk looks at the same risk factors for [ex post ratings](#), [ex ante ratings](#), and the BeZero Scorecard. The following table summarises how and where risk factors overlap across the three products.

Table 2. The overlap of risk factor assessments across a carbon credit’s lifecycle.

Ex ante ratings	Ex post ratings
Additionality	Additionality
Carbon accounting	Carbon accounting
Permanence	Permanence
Project execution	<i>Not applicable</i>

Table 3. Example summary table for BeZero Carbon rating assessments.

Risk factor	Ex ante Assessment	Ex post Assessment
Additionality	a	a
Carbon accounting	bbb	bbb
Permanence	aa	aa
BeZero Carbon Rating	BBB.pre (Moderate likelihood)	BBB (Moderate likelihood)
Project execution risk	bb	n/a

Holistic assessment

The assessment of a carbon credit’s efficacy includes detailed project-specific, bottom-up, and top-down analysis to provide a comprehensive assessment of risk.

To make their assessment, BeZero Carbon analysts use a broad range of qualitative and quantitative inputs, including, but not limited to, financial, environmental, and policy assessment techniques based on primary and secondary data sources.

BCR opinions, therefore, incorporate a comprehensive review of the fundamental drivers of risks associated with carbon efficacy at a project and vintage level, including, natural, technological, economic, social, legal, and regulatory factors.

Sector and country analysis

Top-down analysis focuses on the market sector of a proposed project, the country and/or region where it is based, and the methodology and standards applied. The bottom-up analysis focuses on interrogating the project's claims and the extent to which top-down risks are mitigated. Risks to carbon efficacy take account of all available top-down and bottom-up evidence and how they interact.

Our assessments are based on all available project documentation, combined with our in-house models, frameworks, and databases. These include geospatial and Earth observation evidence and techniques, where relevant, and a curated database of peer-reviewed literature, industry research, and third-party datasets, totalling more than 10,000 sources as of July 2024.

Standards and methodology screening

The BeZero Carbon Rating is not an assessment of compliance with standards body rules or the accreditation process. As an assessment of carbon efficacy, the methodology and standards followed form only one part of the overall review. Nevertheless, the strength, effectiveness, and scientific integrity of those methodologies and the rigour with which they have been implemented by each project form an integral part of our rating analysis. This reflects that it is not necessarily the methodology in isolation that drives credit quality, but how a project applies it (which can vary considerably).

Our analytical approach evaluates the rules of each standards body and each methodology on an individual basis. This screening includes an assessment of methodology development and consultation (for an overview of why this is important, see our [insight on VCM methodologies](#)). Further to this, we consider all deviations from methodologies exhibited by projects. Moreover, we consider the risks associated with projects that apply older or invalid methodologies, for example, due to outdated emission factors and global warming potentials.

Monitoring of registry operations and credit tracking also form part of our analytical process. We screen registry and standards body rules and processes, and take into account any strengths or weaknesses, in our assessment of relevant risk factors. This includes reconciliation of data and risk buffer rules ([see our report on buffer pools](#)) and their potential implications for over-crediting and non-permanence risk, respectively. Further details can be found in the section on [project governance assessment](#).

Project and vintage-specific analysis

Our bottom-up assessment considers all publicly available project documentation and data, including that provided by the standards body, registry, or project developer, information from third-party sources, and data sourced using our internal models, notably including proprietary geospatial and Earth observation evidence and techniques where relevant.

Vintage-level assessments are made on two fronts:

- **Project reporting and crediting:** Our analysis ensures that, across each ratable vintage for a project, we identify whether projects correctly issued credits towards the market and buffer pool and that where credits are transferred, vintage labelling correctly maps onto cancellation

certificates.

- **Risk factor assessments:** For each of our carbon efficacy risk factors, our analysis spans each ratable vintage of a project. This allows us to incorporate changes in project boundaries, baselines, issuance, and buffer contributions over time. It also enables a dynamic process for assessing the role of policy, changes in forestry investment landscapes, and other exogenous factors in reducing forest loss and productivity relative to the project.

Geospatial and Earth observation

For all Nature-Based Solutions (NBS) projects, data and analysis from our Geospatial and Earth Observation team forms a core part of the analytical process. The team draws on a diverse set of data inputs, including but not limited to airborne and spaceborne LiDAR, synthetic-aperture radar, and multispectral measurements, with spatial resolutions ranging from centimetres to kilometres, and temporal frequency and coverage from days to decades.

Other geospatial inputs include data on road and river networks, human demographics, land ownership and governance, soil and climate data, and biodiversity. We also draw on our extensive database of ground-measured carbon, spanning thousands of forest inventory sites globally. These geospatial data are combined in statistical and machine learning frameworks, to inform project and vintage-level risk associated with common practice, over-crediting, leakage, and permanence.

The BeZero Carbon Rating reflects the balance of evidence across all types of information, geospatial or otherwise. Subject to project-specific characteristics and evidence, our geospatial analysis may not be paramount in the final rating if, for example, financial, policy, or other analyses are more decisive. In all cases, non-spatial data (e.g. buffer pool contributions) provide essential context.

Project governance assessment

Data collection, assessment, and governance

A historical lack of top-down market standardisation on the reporting structure of carbon accounting has led to each project's public data and methods being reported in a unique way. Further, we find multiple examples where the calculations behind vintage-level credit issuance cannot be recreated from the information available in the public documentation.

To enable better governance of crediting data, which is also fungible across the market, we have built a standardised model that can be applied to any project type and any standards body. The [BeZero Carbon Accounting Template](#) is a simple but powerful tool. It consists of the four key components required to calculate issuance:

- Baseline assumption
- Project net emissions
- Leakage
- Risk buffer allocation

In certain cases, a fifth component accounts for uncertainty discounts applied by a project, which is often the case for NBS projects. These building blocks are designed to be the highest level of categorisation that capture all elements that feed into the calculation of potential issuance while being applicable to all project types in the market.

Underlying each component are calculations ranging in complexity and depth depending on the project. For example, a zero baseline is assumed for many removal projects, whereas baseline assumptions for NBS projects may require multiple stages of cleaning and structuring by our data collection team. We collect each component at a vintage level, since variations can occur over a project's lifetime.

Aggregating these data is the first step to enable downstream assessments of project claims, auditing of project boundaries across the various vintages, verification of registry-reported data, and assessments of double-counting.

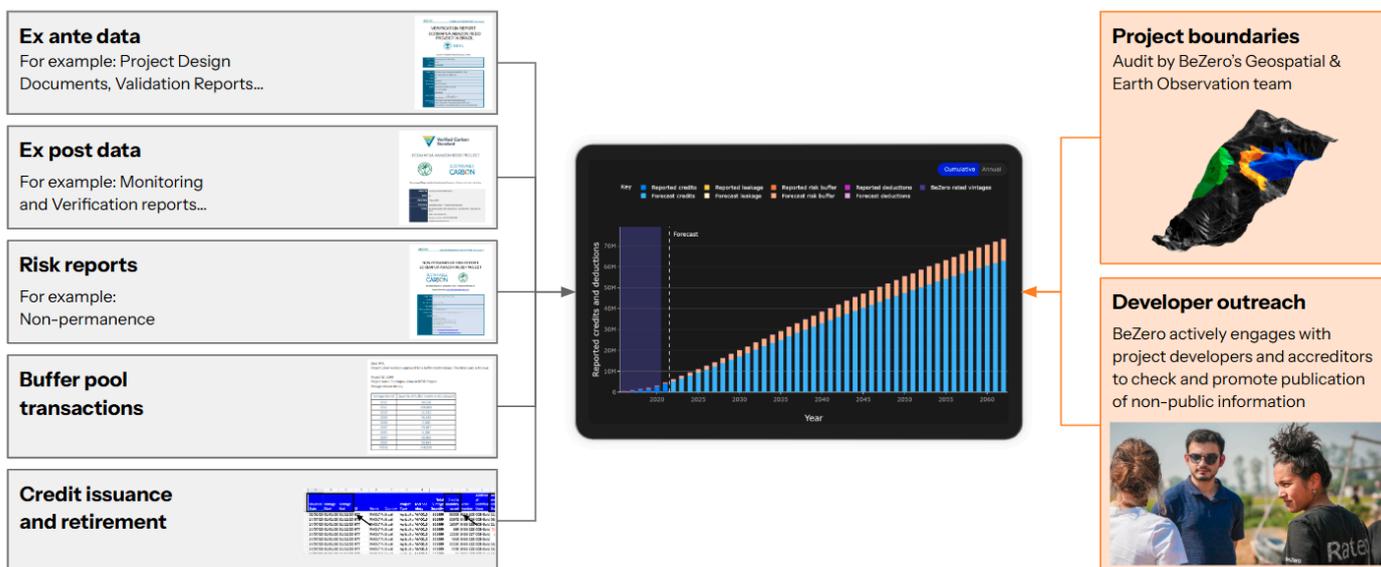


Figure 2. Aggregation of data to BeZero's standardised data template.

For each sub-sector, BeZero Carbon has built additional modules that supplement the basic Carbon Accounting Template.

For every project, we impose a strict governance structure that ensures data integrity. First, all project documentation is labelled according to its version and vintage. The project data are then cleaned and structured to fit the key components underlying potential issuance and the sub-sector Carbon Accounting Template modules. Data validation checks are made against the registry-reported issuance (see [registry issuance](#)) and a developer outreach process is initiated in cases where reported data do not reconcile or are poorly disclosed. Each project's individual Carbon Accounting Template and associated modules are stored in a central data store. Each project's Carbon Accounting Template is subject to continual updates to reflect changes in project documentation, new issuance, and cancellation of credits, for example, and at each instance, subject to peer review.

BeZero has developed an automated system that monitors existing, new, and deleted documents within four major standards bodies: American Carbon Registry, Climate Action Reserve, Gold Standard, Isometric, and Verra. Changes are detected within 24 hours, and a notification to review the project and its documents is triggered. For rated projects outside of these standards bodies, a monthly manual check is performed.

Assessment of project claims

Once the project Carbon Accounting Template is created and approved at review, the data are used to assess project claims of emissions removals or avoidance. This step of our assessment is entirely project specific, and we assess claims at the vintage level. For example, we assess whether credits reported for each vintage within monitoring and verification documents correctly detail the baseline, leakage, and permanence assumptions laid out by the project, and accurately reflect [registry issuance](#).

Where project claims cannot be verified or are incorrect, this informs our risk factor assessments and drives lower ratings. Where project claims deviate from ex ante forecasts, we identify the drivers of change.

Project boundary auditing

For all NBS projects, digital information on the spatial extent of carbon accounting is important for our independent assessment of carbon efficacy, both historically and in our assessment of future risk. Digital boundaries (e.g. KML, Shapefile, GeoPackage, GeoJSON) are required for the project area, and may also be required for the leakage belt and/or reference region(s), depending on the methodology.

To obtain these boundaries, we first check if they are published on the registry or elsewhere in the public domain (e.g. on a project proponent's website). We continuously monitor registry websites for updates (see [data collection, assessment, and governance section](#)). Where available, we audit the boundaries by comparison to images embedded in project documentation for the relevant vintage, and by reference to area units and locations stated in project documents.

We find that some nature-based projects do not make their project area boundaries available in digital formats, either on the registry or through the project proponent. Of those that do, around some require correction by BeZero, for example, because the project area has been reduced or extended since publication of the boundaries. Moreover, we find that many REDD projects do not make leakage belts and/or reference regions available in digital formats.

Our method for the correction or reconstruction of project boundaries, where necessary, starts with georeferencing control points (e.g. map features such as graticules, natural features such as coastlines or rivers, or man-made features such as road junctions) in images embedded in project documents. Our team then applies graphical techniques to filter and sharpen the available imagery, followed by algorithms to extract the project boundaries in a digital, vector format. Where these semi-automated procedures are insufficient, we may trace the boundary by hand. In some cases, sections of the boundaries may follow roads, rivers, political borders, concessions, or easements, or other spatial data, in which cases we draw on our geospatial database of such features to assist in accurate delineation. Similarly, we use high-resolution satellite or aerial imagery where boundary demarcations are clearly visible from above. In all cases, we check our results for consistency with the area units and depictions in project documents.

BeZero has built the most complete spatial database of nature-based projects in the voluntary carbon market - over 3,000 projects across 20+ registries. The database resolves long-standing issues of scattered, inconsistent boundary data that have led to duplication of effort, flawed baselines, and double counting. By mapping every NBS project, BeZero enables accurate overlap detection, stronger baseline methodologies, and market-wide benchmarking of carbon project risks. Regularly updated, the database supports developers, standards bodies, investors, and researchers in advancing transparency and quality across the market.

Double counting

We audit project boundaries (for NBS) not only for the specific project being rated, but also for any project operating or under development within a radius of 50 km. This is important for the landscape context of common practice and baselines assessments, and also provides a spatial check on whether the same land is or has previously been included by more than one project, or by the same project across more than one standards body.

As part of BeZero's data collection, assessment, and governance process, we assess risks of double counting, which typically emanate from three key sources:

- **Transfer of projects between standards bodies:** Where projects transfer between accreditation entities, our data analysis evaluates whether credits have been accurately cancelled to facilitate the transfer. This assessment checks for credit transfer and cancellation certifications by vintage and credit quantity.
- **Allocation of credits towards national registry or buffer structure:** In certain instances, for projects to participate in the voluntary carbon market, a set allocation of their credits must be issued towards a national registry or buffer system to support national greenhouse gas targets or permanence safeguards, respectively.
- **Transformation of ex ante or provisional credits to ex post credits:** Under certain standards bodies, projects may be able to issue ex ante (also called provisional) credits and retire these. To ascertain that these credits are not double counted once project activities have materialised, we ensure that the credits associated with each vintage batch are retired in only a single instance.

Our double counting risk assessments interrogate whether projects have accurately reported, issued, and cancelled credits as part of the above three processes. Where there are data discrepancies or uncertainties, projects are deemed to have eligibility, over-crediting, and/or information risks. As part of

our double counting assessments, we scrutinise the unique serial codes of each credit (and credit batch) on the registry of each standards body.

Registry issuance

Another important aspect of our pre-rating analytics and data governance assessment is a review of the integrity of reported issuance. This includes validation checks of project-reported data against registry issuance. Here, we evaluate four key variables:

- Project monitoring, reporting, and verification (MRV) crediting volumes and vintages align with registry issuance towards the market
- Project-reported buffer credits have been accurately deposited towards the buffer pool
- Credit status within the buffer pool for cancellations or 'hold'
- Credit cancellations for the purpose of reversals or transfers

This step enables us to determine whether over-crediting risk exists due to elevated and undocumented issuance, whether permanence risk exists due to under-resourcing of the buffer pool or credit cancellations, or whether [double-counting](#) risks exist.

Rating eligibility

For projects to qualify for a BeZero Carbon Rating, they must meet our primary qualifying criteria. These criteria are centred around quality and transparency. These basic criteria alongside the BeZero Carbon Accounting Template allow us to build a standardised starting point for any project, registered to any standards body.

The primary criterion is that the project has applied an [additionality test](#), or has otherwise provided sufficient information on how it is deemed additional. The other criteria centre on third-party auditing and public disclosure of sufficient information to assess the project's claims. All three act as limiting factors for whether BeZero accepts a project to be rated.

Additionality - i.e. whether, in the absence of carbon revenues, the avoidance or removal activity would be viable - is the founding principle of a carbon credit project. Consistent with this, additionality is a limiting factor for the BeZero Carbon Rating from the outset of the analytical process, and projects that have poor additionality disclosure and/or reporting can be and have been deemed not rateable by BeZero Carbon.

For all projects, sufficient public disclosure of project claims includes crediting calculations, registry issuance (inclusive of buffer pool allocations), project boundaries, and applied methodologies (and their versioning).

Through these primary eligibility criteria, we ensure that all project validation and verification documentation as well as registry operations related to the project are traceable and are governed by standards body processes for oversight. Where a project fails to be sufficiently transparent or conduct a third-party audit, these projects are considered ineligible for a rating.

Continuous monitoring of eligibility criteria

To ensure that our ratings remain up to date, we monitor whether a project meets our eligibility criteria on an ongoing basis. This ensures that the minimum criteria around project transparency and disclosure are continuously met.

Should the availability of documentation change once a project has been rated, BeZero Carbon has a robust due diligence process to understand the reason and if such changes are permanent. This includes the following steps:

- BeZero Carbon will contact the registry, certification bodies, and the project developer to identify underlying reasons for the change in document disclosure, if data will be shared publicly again, and within what timeframe.
- BeZero provides these organisations two weeks to restore the availability and disclosure to levels consistent with our eligibility criteria.
- If documents remain unavailable after this two-week period, the rating will be placed on 'rating watch'.
- BeZero will continue to make reasonable efforts to follow up with the project developer, registry, and certification bodies to determine if and when the documents will be made available in public domain. We will allow another four weeks for this process.
- If during this period, the relevant data and documents are shared again in the public domain, we will verify that these documents contain required information to meet our eligibility criteria. Where projects meet our criteria again, the rating will be removed from 'rating watch'.
- If the relevant documents and information are not restored in public domain within the aforementioned timeframe, the project will no longer be eligible for a BeZero Carbon Rating. Accordingly, BeZero Carbon will 'withdraw' the rating.

Aggregated risk assessment

Overall rating view and limiting factors

Rating Assignment

We make a preliminary view of carbon efficacy risks based on three core pillars (or risk factors). To assess the likely overall rating we combine the three risk factors multiplicatively and the Ratings Committee assigns a final rating with reference to the combined output score and rating boundary guidelines.

Steps in the rating assignment process:

1. For each risk factor, Ratings Analysts propose risk levels from 'aaa' to 'd'.
2. BeZero's rating model equates a numerical score to each proposed risk level and combines these scores multiplicatively to calculate an overall carbon efficacy score.

3. The BeZero Carbon rating committee assigns the final risk levels and overall carbon efficacy score, considering all available evidence presented by the analyst and discussed in committee.

It should be noted that assigning the rating is a deeply analytical process, wherein the sole objective is to assign ratings reflective of the carbon credit's efficacy or quality. Any risk factor can fundamentally limit the rating we assign to credits issued by that project if that is deemed appropriate.

Internal peer review

The lead analyst completes their analysis and prepares a draft report. The draft analysis incorporates detailed input from the Geospatial and Data Analytics teams. This draft report is also peer-reviewed by at least one other analyst who has not worked on the assignment.

Peer review is an interactive process aimed at ensuring uncertainties are investigated further and conclusions are stress tested. Following completion of the peer review process, and when consensus is reached among the lead analyst, geospatial analysts, and peer reviewers, a final draft rating report is prepared.

The report thus finalised is submitted to the Rating Committee for consideration, which is the sole body that can assign BeZero Carbon Ratings (ex ante or ex post).

Rating Committee

The BeZero Carbon Rating Committee contains hundreds of years of scientific, carbon, and markets experience. We believe that full-time specialists scrutinising every rating decision gives the most rigorous assessment.

The Rating Committee is made up of members of the Ratings team and senior members of the Research team. The committee is subject to quorum requirements and is chaired by one of the senior members of the Ratings and Research organisation (e.g. the Director of Carbon Ratings or Chief Research Officer). Members of the Geospatial and Earth Observation team must attend in the case of NBS projects. Peer reviewers are also expected to attend committee meetings relevant to the projects that they have been assigned to.

All rating analysts are invited to attend and participate in the deliberations. At the committee, the lead analyst presents their analysis and rating recommendation. The Rating Committee's role is to interrogate their recommendation by asking questions and/or seeking clarifications. If the Rating Committee requires additional information or clarification which cannot be addressed at the meeting, the rating cannot be assigned until all outstanding issues are deemed resolved by the committee. Unanimous approval by the Rating Committee is required for a final rating to be assigned.

Rating watch, withdrawal, and suspension process

Ongoing monitoring

Continuous monitoring

All BeZero Carbon Ratings are valid at all times and are monitored on an ongoing basis. The assigned lead analyst is responsible for reviewing all new information pertaining to the project, sector, and methodology. Such information includes new satellite imagery, new research, new project documents including new monitoring reports, new or changed regulations, changes in the methodology, and other information deemed relevant to the project or the rating. The analyst also monitors the continuing availability of information in the public domain, an essential criterion for a project to be eligible for the BeZero Carbon Rating. The analyst takes note of these developments and assesses their implications (if any) on the rating.

Rating watch

If, as part of the monitoring process, the lead analyst is of the opinion that the new information could have a material impact on the rating, or that the publicly available information has been withdrawn/compromised, the lead analyst prepares a report with a recommendation to place the rating on 'rating watch'. This note goes through independent peer review and is then presented and discussed at the Rating Committee Meeting (similar to the process involved in assigning a new rating or a rating review). If the Rating Committee unanimously believes that the new information (or the withdrawal of publicly available information) could affect the rating, the rating will be placed on 'rating watch'. All ratings placed on 'rating watch' are published on the BeZero website and the BeZero Carbon Markets (BCM) platform.

The committee could also disagree with the analyst's recommendation and conclude that no action needs to be taken.

All 'rating watch' decisions include a direction that provides additional information as to the likely orientation of the implications of the rating watch trigger. The three 'directions' are:

- A rating placed on '**rating watch with positive implications**' indicates that the rating is under review and BeZero believes the rating is likely to be upgraded or reaffirmed.
- A rating placed on '**rating watch with negative implications**' indicates that the rating is under review and BeZero believes the rating is likely to be downgraded or reaffirmed.
- A rating placed on '**rating watch with developing implications**' indicates that BeZero does not have enough information to indicate the likely direction and may be either upgraded, downgraded or reaffirmed.

Once a decision has been made to place a rating on 'rating watch', the analyst will collect and analyse all new information, conduct additional research as required, and prepare a detailed report for Rating Committee consideration. This note will be independently peer reviewed before it is presented and discussed at the Rating Committee. The Rating Committee could unanimously decide to:

- Upgrade the rating to a higher level
- Downgrade the rating to a lower level
- Reaffirm the rating

Once a unanimous decision has been reached, the rating will be removed from 'rating watch'. The revised rating/reaffirmation along with removal from 'rating watch' is published on the BeZero website and the BCM platform.

'Rating watch' actions are primarily applied for reviews triggered by external events or changes to a project and its operation. In cases where internal reviews drive ratings changes, projects may or may not be placed on 'rating watch' prior to the change. Internally-driven rating changes with 'rating watch' cases may be supported by external advisory notes for consumers of the rating. These notes will describe the internal change, the scope of impact, and the likely direction of ratings change if relevant.

BeZero's ongoing monitoring and 'rating watch' process is summarised in the diagram below.

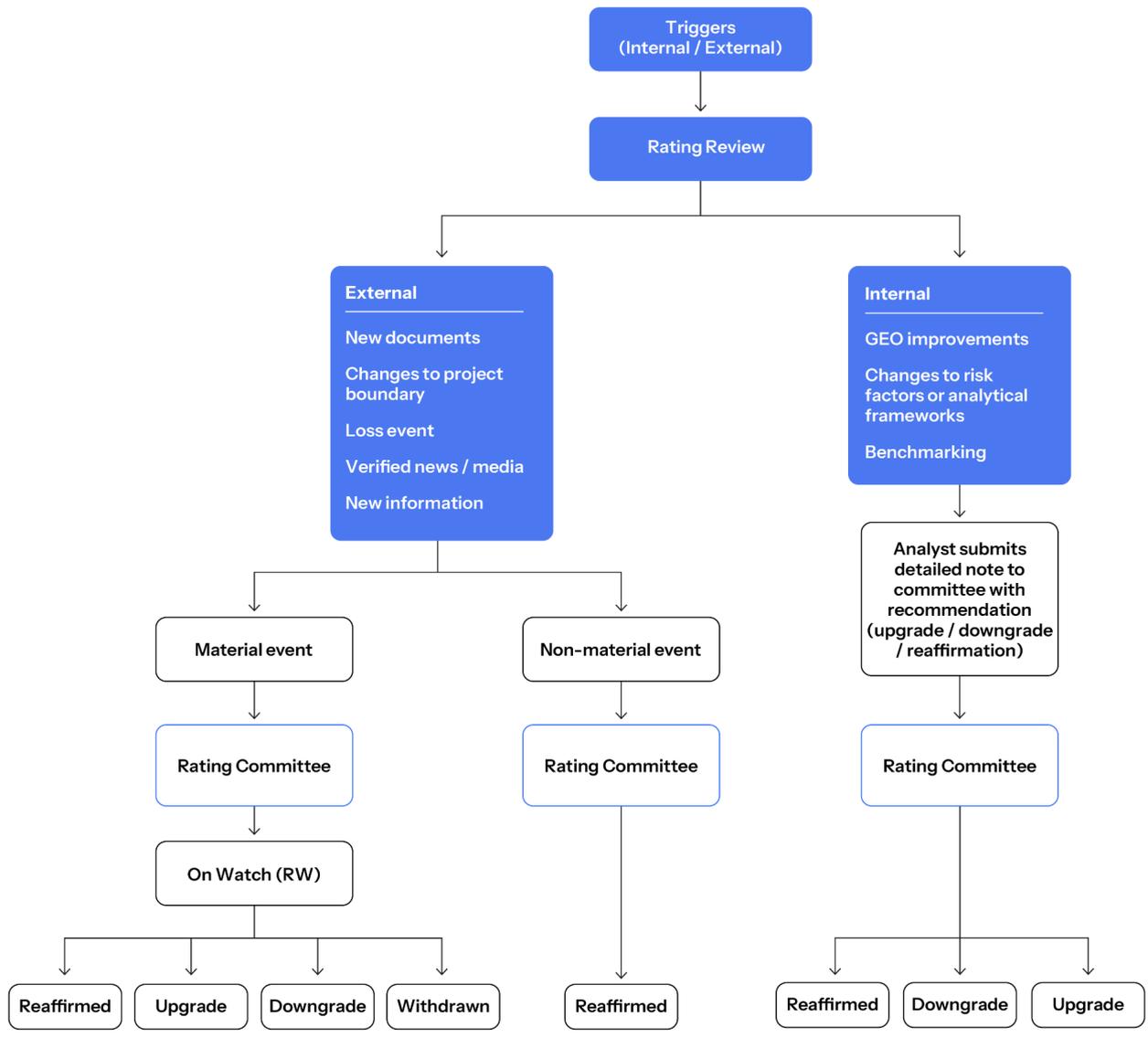


Figure 1. BeZero’s ongoing monitoring and ‘rating watch’ process.

Ratings Reaffirmation

If the new information or changes to information is not considered to have a material impact on the rating, following unanimous approval of the Committee, the rating is reaffirmed. All reaffirmations, along with their rationale, are published on the BeZero Website and the BCM platform.

Rating withdrawal

BeZero Carbon Ratings are assigned only to projects that meet predefined eligibility criteria. These criteria include documented tests on additionality, formal audit processes, and continued public availability of all relevant information. BeZero Carbon Ratings may be withdrawn in the case of a material impairment in the project’s ability to meet any of the eligibility criteria, including partial or complete withdrawal or unavailability of relevant information in the public domain. BeZero may also withdraw its ratings if BeZero Carbon becomes aware of any risks with respect to the ownership of the project and/or usage rights, etc. All rating withdrawals are published on the BeZero website and the BCM platform.

Ratings eligibility and information required for BeZero Carbon Ratings

Rating eligibility

To qualify for a BeZero Carbon Rating, projects must meet our primary criteria. These criteria are centred around quality and transparency. These basic criteria, alongside the BeZero Carbon Accounting Template, allow us to build a standardised starting point for any project, registered with any standards body.

The primary criterion is that the project has applied an [additionality test](#), or has otherwise provided sufficient information on how it is additional. The other criteria centre on third-party auditing and public disclosure of sufficient information to assess the project's claims. All three act as limiting factors on whether BeZero accepts a project for rating at all.

Additionality – i.e. whether, in the absence of carbon revenues, the avoidance or removal activity would be viable – is the founding principle of a carbon credit project. Consistent with this, additionality is a limiting factor for the BeZero Carbon Rating from the outset of the analytical process.

For all projects, sufficient public disclosure of project claims includes crediting calculations, registry issuance (inclusive of buffer pool allocations), project boundaries, and applied methodologies (and their versioning).

Through these primary eligibility criteria, we ensure that all project validation and verification documentation, as well as registry operations related to the project, are traceable and are governed by standards body processes for oversight. Where a project fails to be transparent or to conduct a third-party audit, it is considered ineligible for a rating.

Continuous monitoring of eligibility criteria

To ensure that our ratings remain up to date, we monitor whether a project meets our eligibility criteria on an ongoing basis. This ensures that the minimum criteria around project transparency and disclosure are continuously met.

Should the availability of documentation change once a project has been rated, BeZero Carbon has a robust due diligence process to understand the reason and whether such changes are permanent. This includes the following steps:

- BeZero Carbon will contact the registry, certification bodies, and the project developer to identify underlying reasons for changes in document disclosure, if data will be shared publicly again, and within what timeframe.
- BeZero allows these organisations two weeks to restore the information availability and disclosure to levels consistent with our eligibility criteria.
- If documents remain unavailable after this two-week period, the rating will be placed on ‘rating watch’.
- BeZero will continue to make reasonable efforts to follow up with the project developer, registry, and certification bodies to determine if and when the documents will be made available in the public domain. We will allow another four weeks for this process.
- If during this period, the relevant data and documents are shared again in the public domain, we will verify that these documents contain the required information to meet our eligibility criteria. Where projects meet our criteria again, the rating will be removed from ‘rating watch’.
- If the relevant documents and information are not restored in the public domain within the aforementioned timeframe, the project will no longer be eligible for a BeZero Carbon Rating. Accordingly, BeZero will ‘withdraw’ the rating.

BeZero’s approach to non-public information

BeZero Carbon strongly advocates for disclosure and transparency in the voluntary carbon market. Our eligibility criteria for a project to be rated acts as an important driver of transparency; if there is

insufficient public information on a project's additionality test or third-party audits, BeZero Carbon will not rate the project.

In some instances, there are legitimate reasons for including private information where it improves the accuracy of the rating.

These types of information include:

- That which is non-public for legal, data protection, competitive, practical, or other reasons
- Nature-Based Solutions (NBS) landowner boundaries
- Technical IP (including carbon models)
- Financial data and disclosures
- Early access to information due to be published

BeZero uses non-public information with the following principles in mind:

- Justify conclusions with analytical insights or analysis
- Do not disclose the specifics or details of the private information
- Use to mitigate uncertainty
- Seek to test, evidence, and corroborate independently
- Explain our opinion and conclusion at all times

This flexible approach allows for more accurate ratings. BeZero does not operate in a black box, however; we continue to combine many data sources, and all opinions need to be evidenced and explained.

Rating Committee process

Rating Committee

The BeZero Carbon Rating Committee has hundreds of years of scientific, carbon, and markets experience. We believe that full-time specialists scrutinising every rating decision gives the most rigorous assessment.

The Rating Committee is made up of members of the Ratings team and senior members of the Research team. The committee is subject to quorum requirements and is chaired by one of the senior members of the Ratings and Research organisation (e.g. the Director of Carbon Ratings or Chief Research Officer). Members of the Geospatial and Earth Observation team must attend in the case of Nature-Based Solutions (NBS) projects. Peer reviewers are also expected to attend committee meetings relevant to the projects that they have been assigned to.

All rating analysts are invited to attend and participate in the deliberations. At the committee, the lead analyst presents their analysis and rating recommendation. The Rating Committee's role is to interrogate their recommendation by asking questions and/or seeking clarifications. If the Rating Committee requires further information or clarification which cannot be addressed at the meeting, the rating will not be assigned until all outstanding issues are deemed resolved by the committee. Unanimous approval by the Rating Committee is required for a final rating to be assigned.

Ratings publication process

BeZero Carbon's ratings publication process is centred around ensuring that no one has privileged access to rating actions, including BeZero's commercial teams.

Once a rating action is determined via unanimous approval by the Rating Committee, and formal minutes are finalised, its publication involves the following steps.

1. The Ratings Operations team independently confirms that the material to be published is in line with the minuted outcome of the Rating Committee.
2. Publication occurs simultaneously on BeZero's public website, the BeZero Carbon Markets platform, and via email to customers, press, and BeZero staff.

Ratings monitoring and review process

Ongoing monitoring

Continuous monitoring

All BeZero Carbon Ratings are valid at all times and are monitored on an ongoing basis. The assigned lead analyst is responsible for reviewing all new information pertaining to the project, sector and methodology. Such information includes new satellite imagery, new research, new project documents including new monitoring reports, new or changed regulations, changes in the methodology, and other information deemed relevant to the project or the rating. The analyst also monitors the continuing availability of information in the public domain, an essential criterion for a project to be eligible for a BeZero Carbon Rating. The analyst takes note of these developments and assesses their implications (if any) on the rating.

Rating reaffirmation

The publication of a monitoring report is typically a trigger for a detailed review of the rating. At this point, the lead analyst will collate all the new information pertaining to the relevant project that has been published since the last Rating Committee Meeting in which that project was discussed, including information they have reviewed during their ongoing monitoring. They will reconfirm that the project continues to meet the eligibility criteria and that all information regarding the project remains available in the public domain.

A detailed review report is prepared and follows the same process of independent peer review before being presented at a forthcoming Rating Committee, along with the analyst's recommendation on the

rating. The Rating Committee discussions and deliberations are similar to the process followed for assigning a new rating.

If the new information or changes to information are not considered to have a material impact on the rating, the rating is reaffirmed following unanimous approval of the Committee. All reaffirmations, along with their rationale, are published on the BeZero website and the BCM platform.

Sector and portfolio reviews

Portfolio reviews are an integral part of the continuous monitoring process carried out by BeZero. This process involves the simultaneous review of ratings assigned to a homogeneous group of projects/credits, either at the sector/subsector or country level (as opposed to reviewing one or two projects at a time).

Portfolio reviews can be triggered by macroeconomic events such as changes in sector dynamics, changes in regulation (global or country-specific), or the incorporation of new elements of analyses applicable across a sector/sub-sector. Alternatively, it could be part of a periodic review process to reassess the appropriateness of the ratings in the context of an updated methodology, sectoral developments, and comparisons of ratings across similar projects.

These reviews can last anywhere from a few weeks to several months, depending on triggers, project-specific factors, and Rating Committee unanimity.

If BeZero believes that a portfolio review may have an impact on the published ratings, some or all ratings in the portfolio may be placed on 'rating watch' pending the completion of the full review. Ratings may also change as a result of a portfolio review without being placed on 'rating watch' if the trigger for the change is internal, for example, if it is driven by new analytical tools or an updated methodology. Projects included in a portfolio review may have different rating outcomes as a result of the review.

All 'rating watch' decisions include a direction that provides additional information as to the likely orientation of the implications of the rating watch trigger. The three 'directions' are:

- A rating placed on '**rating watch with positive implications**' indicates that the rating is under review and BeZero believes the rating is likely to be upgraded or reaffirmed.
- A rating placed on '**rating watch with negative implications**' indicates that the rating is under review and BeZero believes the rating is likely to be downgraded or reaffirmed.
- A rating placed on '**rating watch with developing implications**' indicates that BeZero does not have enough information to indicate the likely direction and may be either upgraded, downgraded or reaffirmed.

This is particularly important as a portfolio review may involve a recalibration of ratings across the portfolio. The review process will follow the usual process of peer reviews, Rating Committee discussions, and decisions. BeZero will publish the resolution of the 'rating watch' and updated ratings at the conclusion of the review process.

Ratings methodologies and consistency of ratings

Ratings methodologies

The BeZero Carbon Rating methodologies

Our overarching ratings methodologies provide users with a risk based assessment for understanding and interrogating carbon credit efficacy across sectors and locations.

- The [BeZero Carbon ex post Methodology](#) assesses the relative quality of credits already issued.
- The [BeZero Carbon ex ante Methodology](#) assesses the relative quality of credits yet to be issued.

BeZero Carbon sector methodologies

The overarching methodologies are complemented by detailed sector methodologies. These sector and sub-sector methodologies present BeZero's detailed analytical framework for each sector. Using select case studies, they showcase the various parameters through which we assess risk to the carbon quality of those credits, and how the sector relates back to our overarching ratings methodology. These sector-specific methodologies are available on BeZero Carbon's [public website](#),

All BeZero methodologies are live and current, with versioning logs at the end of each document.

Consistency of ratings

Consistent application of rating methodologies is a key element of ensuring that ratings are comparable across sectors and projects.

The BeZero Ratings Lead Analytical Officer along with the BeZero Carbon Rating Committee is vested with the responsibility of ensuring the consistency of application of rating methodologies. The Rating Committee has members with extensive experience within and across all sectors.

The Lead Analytical Officer lays down the framework for ensuring rating consistency. These include, inter-alia, benchmarking on key parameters within sectors, rating comparisons within and across sectors, etc. The Lead Analytical Officer is also responsible for ensuring that all methodologies are updated with the latest analytical thought leadership and benchmarking to foster continuous improvement. These changes/refinements are approved by an Analytical Committee composed of senior members of the ratings team.

The Rating Committee deliberates on specific projects and assigns the final rating/rating action ensuring the consistency in the application of ratings criteria, methodologies, and comparability of ratings across sectors and countries.

Analyst profile and training policy

BeZero Ratings are assigned by a multidisciplinary team of climate and environmental scientists, geospatial experts, data scientists, and financial market analysts.

Our carbon scientists hold doctorate or postgraduate degrees in a range of areas, including environmental science, Earth sciences, and ecology. They have up to 12 years of post-qualification experience.

Our Geospatial & Earth Observation team hold PhD or postgraduate-level qualifications in a range of areas, including remote sensing, environmental or Earth sciences, and statistics, with an average of 10 years post-qualification experience.

Our data science and engineering team are all postgraduate qualified. They have backgrounds in subjects such as mathematical engineering, computer and information sciences, or astrophysics, with an average of 7 years post-graduate work experience.

These teams are supervised by a team of senior experts with doctorate or postgraduate degrees and 15-30 years experience in environmental markets, carbon science, geospatial science, financial research, and data science.

Analyst training programme

BeZero has developed a robust, bespoke, in-house programme to train its analytical team on all aspects of assigning and monitoring carbon credit ratings. This programme comprises distinct modules involving a rich mix of classroom and practical (assignment-based) training. All members of the ratings department's analytical team are required to undergo this training programme before they are permitted to work on any formal ratings or review engagements.

The training modules comprise, inter-alia, introduction to the carbon markets and carbon credits; finding, collecting and standardising project-level data including the nuances of carbon accounting; understanding BeZero's rating eligibility criteria and methodologies; working on a few 'mock' rating assignments; learning to prepare and present both to rating committees and clients. The training programme also involves gaining full familiarity with all internal data sources and tools, as well as broader knowledge of the carbon markets.

All analysts have to successfully pass a formal assessment at the end of each module before they can move on to the next module.

Project developer engagement process

Developer engagement process

BeZero's Developer Engagement team actively engages with hundreds of carbon project developers as part of our ratings process. This engagement enhances the accuracy of our ratings through direct communication with developers and allows them to receive their full rating report once published, increasing transparency in the Voluntary Carbon Market (VCM). Additionally, it provides developers with the opportunity to give feedback and voice concerns about their assigned rating, serving as a grievance redress mechanism.

The Developer Engagement team is dedicated to building a deep network of developers aligned with BeZero Carbon's commitment to improving market transparency and raising the bar for quality in the market.

Pre-rating engagement

BeZero Carbon can decide to rate a project in the VCM based on either a client request or on our own initiative, driven by market demand as we look to rate projects that are most liquid and have the most available credits in the VCM.

Once a project has been commissioned or selected for rating, the Developer Engagement team will reach out to the developer to confirm the correct point of contact for that project. Our aim is to have open lines of communication with the developers of every project in our rating pipeline.

For BeZero Carbon to rate a project, it must meet our eligibility criteria. We require specific information such as publicly available monitoring and verification reports, a Project Design Document (PDD), a Carbon Accounting Breakdown and, where appropriate, project boundary files. We will request that these be added to the registry if they are absent. Additionally, where necessary, we will seek clarification on any questions from the Ratings, Data, or Geospatial & Earth Observation teams or request further data.

The assigned Developer Engagement Manager will guide the project developer to our developer-specific resources, such as the Data Disclosure Guidelines (DDGs) and the sub-sector methodology relevant to the project. The DDGs help developers navigate data disclosure requirements beyond those set by standards bodies.

The purpose of sharing these resources is to allow developers to maximise the volume of information available for the rating, based on an understanding of our approach to their project type and what information is useful for our process.

We have also published a frequently asked questions document in multiple languages and a Carbon Accounting template for presenting the core carbon accounting of any type of accredited project. These documents clearly illustrate BeZero Carbon's rating process and provide tools to standardise information reporting.

Post-rating engagement

Published rating

Upon completion of our rating exercise and its publication on our website and platform, the Developer Engagement team will share the full analysis with the confirmed developer at no cost. This analysis is usually only accessible to our clients on our platform; however, sharing it with the developer is an important step to enhance transparency.

Feedback loop and grievance redressal mechanism

At any point during this process (and even outside of it), project developers can provide feedback on their rating by opening a 'feedback loop'. During this process, the developer may provide additional information to be considered in their rating (in line with our disclosure requirements). The feedback could trigger a review and may lead to the rating being placed on 'rating watch' if there is sufficient new information that is material enough to be incorporated into the analysis. We will respond to all feedback provided and will keep the developer up-to-date throughout this process.

All 'rating watch' decisions include a direction that provides additional information as to the likely orientation of the implications of the rating watch trigger. The three 'directions' are:

- A rating placed on '**rating watch with positive implications**' indicates that the rating is under review and BeZero believes the rating is likely to be upgraded or reaffirmed.
- A rating placed on '**rating watch with negative implications**' indicates that the rating is under review and BeZero believes the rating is likely to be downgraded, withdrawn, or reaffirmed.
- A rating placed on '**rating watch with developing implications**' indicates that BeZero does not have enough information to indicate the likely direction and may be either upgraded, downgraded, withdrawn, or reaffirmed.

From time to time, BeZero Carbon will receive queries from developers regarding its ratings and rating decisions. Most of these are analytical queries and are dealt with in collaboration with the analytical teams. Please note that our rating-specific feedback process is exclusive to the developers of the project being rated.

Continuous monitoring

If a rating is placed on 'rating watch', we will notify the project developer. We will continue to update the developer on any change in the rating's status, including if the rating team requires more information from the developer.

The reviewed rating will be independently peer-reviewed before it is presented and discussed at the Rating Committee. The Rating Committee could unanimously decide to:

- upgrade the rating
- downgrade the rating
- reaffirm the rating (no change in letter rating)

Simultaneously, the rating may be ‘removed from watch’. The revised rating or reaffirmation is published on the BeZero Carbon website and our platform. In some scenarios, the rating is maintained on ‘rating watch’ after a review. Either way, the developer will be notified of the outcome of the review and the implications for the watch status.

Acceptance of additional information

BeZero Carbon’s preference is for information to be publicly available where possible to limit information asymmetries in the market and promote transparency. However, we recognise that information may need to be private for legal, data protection, competitive, practical, or other reasons. Non-public information should be accepted where it improves the accuracy of our rating without violating transparency principles in the carbon market.

Our conclusions will always be justified by analytical insights, and our ratings reports will indicate how the information helps our understanding of project fundamentals, but we will not disclose the specifics or details of the private information.

Approach to data sources for ratings

Data sources used in BeZero Carbon Ratings

Dependable data forms the foundation of robust carbon ratings. BeZero Carbon’s analytical teams utilise information provided by the registries and a growing list of more than 10,000 data sources (as of July 2024) for their analysis. These sources include:

- Peer-reviewed academic papers and journals
- Industry research reports
- Global, national and non-governmental public datasets
- Geospatial and Earth observation data

In addition to publicly available datasets and literature, BeZero’s ratings are powered by data obtained from a unique assembly of academic, commercial, and government partners and databases, including NASA, ESA, Planet, Chloris Geospatial, INPE, IPAM, UBC, ISRIC, etc.

Project-level data

BeZero extensively uses project-level information provided by registries, standards bodies, and project proponents. This includes ex ante documentation (e.g. project design documents, validation reports), ex post documentation (e.g. monitoring reports, verification reports), risk reports (e.g. non-permanence risk reports), credit issuances and retirements, buffer pool transactions, and geospatial boundary files. These data are collected and curated on an ongoing basis, ensuring that our ratings and analysis are supported by the most current information available.

A cornerstone of BeZero’s analysis lies in the assumptions behind carbon credit issuance calculations. Reliable, transparent, and standardised data relating to a project’s carbon accounting is essential to assess project claims and assign a rating. The four key components of issuance calculation comprise:

1. Baseline assumptions
2. Project net emissions
3. Leakage
4. Risk buffer allocation

BeZero Carbon has developed sector-specific carbon accounting templates to curate and standardise this information. When data is missing or unclear, BeZero's developer engagement team contacts the project developers to fill in the gaps. We also provide the developers with detailed guidance on what information to share and how to share it ([guidelines on data disclosure](#)) to enable them to provide standardised, comparable data making it easy for the market participants to interrogate project claims.

Geospatial data

BeZero's geospatial analyses and models are supported by over 100 data sources, including space agencies, commercial satellite operators, government databases, academic research networks, crowd-sourced map data, and ecological field surveys. This work can be broadly summarised under the following five pillars:

1. **Project boundaries.** Obtained from the project developer or standards body where possible, or reconstructed from evidence embedded, or alluded to, in public documents, typically using a combination of proprietary image processing techniques, high-resolution satellite imagery, administrative borders, and AI-facilitated digitisation. These boundary data may change over time, for example, when project instances are added to or removed from the carbon accounting area. We further digitise and curate the boundaries of all carbon projects in the landscapes around the project being rated, as well as any other protections, concessions, or easements that could inform our view of the project's carbon efficacy.
2. **Carbon stock density.** Estimating project carbon requires a combination of ground measurements, airborne surveys, and satellite observations. We combine publicly available, licensed, and research data across each of these sources, directly or via commercial or research partnerships. Examples include commercial partnerships with Planet Labs PLC and Chloris Geospatial, and research partnerships with Brazil's National Institute for Space Research (INPE), the Amazon Environmental Research Institute (IPAM), Uganda Wildlife Authority, and numerous others. The BeZero Carbon Plots Database harmonises discrete field inventory data from more than 200,000 sites globally, while satellite-derived biomass estimates provide wall-to-wall, repeat observations across trillions of map pixels.
3. **Change detection.** We use a combination of freely available, peer-reviewed change maps, such as those provided by the University of Maryland, NASA, ESA, and JAXA; monitoring products related to tree heights, canopy cover and biomass through our commercial partnerships, and proprietary in-house models derived using multispectral and LiDAR data from NASA, ESA, Planet and Maxar. These data are combined and applied according to the project's ecology, geography and activity type. For example, in forestry settings, detecting changes in tree height and cover is most important, whereas in the soil sectors, we construct models to detect changes in agricultural practices or rangeland management, while for landfill gas or well-plugging projects, we may monitor changes in flaring or methane emissions.

4. **Causal analysis.** We assess the extent to which carbon outcomes can be attributed to project activities, net of changes expected under business-as-usual. One line of evidence for attributing such causality is through the construction of independent statistical controls. Under this framework, we combine data from the other pillars with ancillary data on environmental and socioeconomic context, including climate and soil data, road and river networks, mill processing capacity, land ownership, indigenous areas and other protections, human population, mining or agricultural concessions, etc. Data are from satellite imagery (NASA, ESA, Planet, Maxar), Open Street Map, various government and academic databases, Forisk, IBAT, and others relevant to the project context.
5. **Natural hazards.** In nature-based sectors, reversal risks can stem from natural events or anthropogenic activities, or some interaction between these factors. We assess risks from fire, drought, hurricanes, sea-level change, and pests and diseases, besides anthropogenic risks from land use, land tenure, community disengagement, and infrastructure development. To analyse natural hazards, we combine data from NASA, ESA, Planet, ECMWF, WMO, NOAA, IPCC, and ISRIC. Our research is supported by partnerships spanning space agencies (e.g. ESA), meteorological organisations (e.g. KNMI), government institutes and funding bodies (e.g. INPE, UKRI), non-profits (e.g. IPAM), and academic institutions (e.g. TU Dresden, UEA).

BeZero's approach to non-public information

BeZero Carbon strongly advocates for disclosure and transparency in the voluntary carbon market. Our eligibility criteria for a project to be rated acts as an important driver of transparency; if there is insufficient public information on a project's additionality test or third-party audits, BeZero Carbon will not rate the project.

In some instances, there are legitimate reasons for including private information where it improves the accuracy of the rating.

These types of information include:

- Non-public for legal, data protection, competitive, practical or other reasons
- Nature-Based Solutions (NBS) landowner boundaries
- Technical IP (including carbon models)
- Financial data and disclosures
- Early access to information due for publication

BeZero uses non-public information with the following principles in mind:

- Justify conclusions with analytical insights or analysis
- Do not disclose the specifics or details of the private information
- Use to mitigate uncertainty
- Seek to test, evidence, and corroborate independently
- Explain our opinion and conclusion at all times

This flexible approach allows for more accurate ratings. BeZero does not operate in a black box, however; we continue to combine many data sources, and all opinions need to be evidenced and explained.

Use of non-public information in BeZero Carbon Ratings

Key Principles

- Ensuring availability of information pertaining to the calculation of carbon emission reductions and removals is a fundamental principle of the carbon market. This serves to increase the transfer of knowledge, replicability, and independent verification of results.
- BeZero's preference is for information to be publicly available where possible to limit information asymmetries in the market and promote transparency.
- BeZero's role in the carbon market architecture is to drive towards greater transparency, which will ultimately lead to higher quality projects.
- However, we recognise that information may need to be private sometimes for legal, data protection, competitive, practical, or other reasons.
- Private information should be accepted where it improves the accuracy of our rating without violating transparency principles in the carbon market.
- We need to be able to explain our opinion and conclusion at all times.
- We do not need to cite specific sources for the private or public information that drives our conclusions.

BeZero's approach ensures multiple sources of information are assessed via:

- Verified project information
- Third-party sources
- Extensive developer engagement
- Thousands of peer-reviewed studies
- In-house geospatial tools
- Unique datasets enriched by local expertise and global research partnerships
- Our proprietary sector-specific models and machine learning and automation based tools

BeZero eligibility criteria

Projects must fulfil the following criteria to be eligible for a BeZero Carbon Rating:

1. The project must have applied an additionality test or provide sufficient information on how it is deemed additional.
2. The project must be audited by a recognised third-party auditor in order to ensure the robustness of the data and information published.
3. Sufficient information on the design and ongoing monitoring of the project must be available in the public domain at all times. This data includes the project's start and end dates, the project's carbon credit calculations, which detail baseline and project emissions, and leakage and buffer deductions as appropriate. In addition, to enable accurate sector classification, we require a description of the project's activities to be publicly available.
4. The project must have the breakdown of ex-post credits issuance detailed within verification documents.

All four act as limiting factors for whether BeZero accepts a project to be rated. These represent the limits to what we can accept as non-public information.

Categories of non-public information we can accept

BeZero generally always accepts the following types of private information

- Nature-Based Solutions (NBS) landowner boundaries that are private due to data protection and/or privacy concerns (e.g. a project grouping networks of farms), subject to the condition that we are able to display these on the platform/rating reports.
- Technical information that forms part of the developer IP. This could include sampling and testing methodologies, or statistical models for carbon calculations.
- Information the Project Developer (PD) has requested to be provided on the registry but is delayed.

BeZero is open to using the following types of private information

- Financial data/disclosures that support additionality, but which are private for competitive reasons for PDs.
- Lifecycle assessments that PDs may have conducted.
- Consulting reports PDs have commissioned (market analysis, insurance-based risk assessments, calculations of fNRB value, etc.).
- Technical data that can be verified as accurate/fair e.g. forest inventory.
- Information that is private but that has formed part of the accreditation process and been subject to auditor review is preferred to unaudited information.

Private information that we cannot accept

Boundary data that cannot be published on our platform. We can accept geospatial files or clear images that can be reasonably digitised, even if these have not been made publicly available previously, but we reserve the right to illustrate these boundaries on our ratings platform.

Guidance on how use of non-public information is described

- BeZero will seek agreement with the project developer on 1) the extent to which information is used in platform analytics/graphics, and 2) the wording used to describe the use of the NPI.
- The implications of the data on BeZero's opinion need to be explained.
- If the information provided is material in our analysis, the rating report should reflect the analytical conclusion that was derived from that information (whether in combination with other sources or not).
- Conclusions will always be justified by analytical insights - this principle should continue to be followed regardless of whether the underlying sources used are public or non-public.
- Our ratings reports will indicate how the information helps our understanding of project fundamentals - ideally with some quantification or relative description of the impact. If it drives a differentiation in view we are aiming to explain what the new insight or analysis is.
- We will not disclose the specifics or details of the private information.

Frequently asked questions on non-public information

Has BeZero changed their approach to transparency and disclosure and why?

We continue to strongly advocate for high levels of transparency. BeZero's preference is for information to be publicly available where possible to limit information asymmetries in the market and promote transparency. BeZero's role in the carbon market architecture is to drive towards greater

transparency, which will ultimately lead to higher quality projects. We continue to apply eligibility criteria including minimum levels of public disclosure before assigning a BeZero Carbon Rating.

Our position has evolved to accept non-public information in certain circumstances. This reflects that information may need to be private sometimes for legal, data protection, competitive, practical or other reasons. We also want to ensure that all relevant sources of information are considered to contribute to the accuracy of our rating without violating transparency principles in the carbon market. We do not rely solely on publicly available project information, rather multiple sources of information factor into our assessments including:

- Verified project information
- Third-party sources
- Extensive developer engagement
- Thousands of peer-reviewed studies
- In-house geospatial tools
- Unique datasets enriched by local expertise and global research partnerships
- Our proprietary sector-specific models and machine learning and automation based tools

Does BeZero accept all types of information on a private basis?

The BeZero eligibility criteria act as limiting factors for whether BeZero accepts a project to be rated. These represent the limits to what we can accept as non-public information. The criteria are described above.

For nature-based projects, we cannot accept boundary data that cannot be published on our platform. We can accept geospatial files or clear images that can be reasonably digitised, even if these have not been made publicly available previously, but we reserve the right to illustrate these boundaries on our ratings platform.

How will BeZero use private information without breaching its confidentiality?

BeZero needs to explain the rating and risk factor opinion and conclusion at all times. The implications of any non-public data will therefore be explained in some way. However, the specifics or details of the private information will not be disclosed.

If the information provided is material to our analysis, the rating report will reflect the analytical conclusion that was derived from that information (whether in combination with other sources or not). To ensure confidentiality is maintained, BeZero will (if necessary) agree with a project developer 1) what elements of the non-public data or information we can show and 2) the wording used to describe the use of the private information.

What is the process to disclose information to BeZero?

The BeZero Carbon Project Developer Engagement (PDE) team is the key point of contact for all project developers who wish to provide feedback or make enquiries about their project's rating. Where possible, the PDE team engages with developers both before and after a rating is assigned.

If a developer has feedback, we request they provide it in a form (available from the PDE team). If, as part of that feedback, the developer provides new or undisclosed information the BeZero analytical team will take that information under advisement. The implications of any new information will be assessed.

BeZero will request for any new non-public information to be made available in the public domain unless there are legitimate and reasonable reasons that such information should remain private. Any additional information provided privately to BeZero will be assessed in combination with multiple other sources (public, third-party, academic research, proprietary BeZero datasets etc). In this way, we will always seek to corroborate, substantiate, validate, or otherwise test claims and analytical insights linked to privately provided information.

Could this drive lowering disclosure standards in the market?

No. BeZero will continue to advocate for strong levels of transparency and include minimum levels of disclosure in the eligibility criteria for the BeZero Carbon Rating. BeZero Carbon's ratings will continue to independently assess project claims. Our approach recognises that in some circumstances information is private for legitimate reasons.

Will we be able to understand what analysis is based on private versus public data?

BeZero will explain the rating and risk factor opinion and conclusion at all times. If any non-public data or information provided is material in our analysis, the rating report will reflect the analytical conclusion that was derived from that information (whether in combination with other sources or not). Conclusions are always justified by analytical insights. This principle applies regardless of whether the underlying sources used are public or non-public.

Does this mean you will always engage with a PD prior to rating their project? If not, how will you know your rating uses all relevant information and is therefore accurate?

The BeZero Carbon Project Developer Engagement team operates a policy of outreach to projects and project developers that BeZero assigns ratings to both pre and post rating. The Developer Engagement team (PDE) will reach out when a project is scheduled to be rated (usually the quarter before a rating is assigned) to confirm they are in touch with the correct project developer (PD), let the PD know the process has begun, and to highlight any information gaps that BeZero has identified.

Following the publication of a rating, the PDE team seeks to share the rating brief (i.e. a copy of the rating report) with the PD. If, at this stage, the PD has feedback, they are invited to provide that to BeZero for our consideration.

BeZero considers all relevant sources of information when making a rating assessment including publicly available project information, proprietary datasets and modelling tools, and independent or third-party-sourced information. In line with best practice in other markets, BeZero advocates for all material information to be publicly available where possible to limit information asymmetries in the market and promote transparency. BeZero will accept non-public information where it improves the accuracy of our rating without violating transparency principles in the carbon market.

Do you expect to see meaningful changes in ratings being reviewed with new information?

BeZero Carbon ratings are dynamic and subject to review when new information comes to light (whether project-provided or from independent sources or BeZero models). All ratings reflect a combination of analytics from top-down and bottom-up sources and from qualitative and quantitatively derived insights.

In many cases, new non-public information should enhance analytical rigour but may be unlikely to dramatically alter the conclusions previously ascertained from myriad other information. There may

be cases where new non-public information mitigates uncertainty in our assessment or changes the balance of evidence.

In the event that new non-public information is materially relevant to a rating, we will continue to encourage project developers to publicly disclose such information and/or use in-house models or third-party data sets to evidence it independently.

What happens if private information has implications for other projects?

BeZero will treat private information that informs our view on other projects in the same way. IE the implications of any non-public data will be explained in some way. However, the specifics or details of the private information will not be disclosed.

If the information provided is material to our analysis, the rating report will reflect the analytical conclusion that was derived from that information (whether in combination with other sources or not). To ensure confidentiality is maintained, BeZero will (if necessary) agree with a project developer 1) what elements of the non-public data or information we can show and 2) the wording used to describe the use of the private information.

Version number	Date	Description
1.00	13/03/26	Initial release Consolidating multiple pre-existing documents; updates to application of 'rating watch'; updates to reflect changes to internal processes

Disclaimer

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