

McGuinness Institute Submission

External Reporting Board (XRB) Consultation on GHG Protocol Scope 2

28 November 2025

1.0 Introduction

The McGuinness Institute (the Institute) welcomes the opportunity to submit on the Greenhouse Gas (GHG) Protocol Scope 2 proposals. We would like to thank the External Reporting Board (XRB) for inviting feedback on this important topic.

Climate change measurement, reporting, mitigation and adaptation is a rapidly evolving field that encompasses multiple dimensions, making it inherently complex and fast-moving. The old adage that ‘we manage what we measure’ remains as relevant as ever. Emissions are a prime driver of rising temperatures, and thus it is critical we focus on developing policy to measure and limit New Zealand’s emissions.¹ Better data will lead to better decision-making to help us reach our climate goals.

The Institute supports the GHG Protocol’s aim for ‘improved accuracy, greater transparency, and provid[ing] more comparability inventory values for use by external disclosure frameworks and initiatives’.² We acknowledge that in 2023, 97% of disclosing S&P 500 companies reported to CDP using the GHG Protocol.³

It is timely for the GHG Protocol to update the Scope 2 Guidance (2015) to reflect modern standards, including improved technology, evolving electricity grids and improved scrutiny of claims.⁴ However, it is important to ensure these Scope 2 amendments are useful, accurate and reflect how organisations prepare and report emissions data, and how users seek, reflect and make decisions on how organisations emit carbon emissions.

The GHG Protocol standards are the most widely used framework for voluntary reporting of greenhouse gas emissions and these proposals are very important.⁵ To look after the planet for future generations, we must begin by assessing our impact through quality reporting and then commit to improving outcomes for both present and future generations. Accurate and transparent climate reporting, including a clear protocol for Scope 2 reporting, is an essential step for New Zealand to understand our climate impacts, meet our domestic emission targets and comply with our international climate commitments.

As explained later in section 2.0, the levels of carbon dioxide and impacts of climate change on our environment are unprecedented. In this context, more than ever, it is critical that New Zealand works to improve our climate reporting.

In summary, the Institute supports the proposed changes to Scope 2 reporting as they reflect today’s changing energy landscape and its evolving user needs.

Please do not hesitate to contact us if you have any questions on the following ideas.

Note that the Institute is also planning on submitting directly to the GHG Protocol on 19 December 2025.

1.1 About the McGuinness Institute

The Institute was founded in 2004 as a non-partisan think tank working towards a sustainable future for Aotearoa New Zealand. Project 2058 is the Institute's flagship project focusing on Aotearoa New Zealand's long-term future. Our observation that foresight drives strategy, strategy requires reporting, and reporting shapes foresight, led the Institute to develop three interlinking policy projects: *ForesightNZ*, *StrategyNZ* and *ReportingNZ*. All three of these must align if we want Aotearoa New Zealand to develop durable, robust and forward-looking public policies.

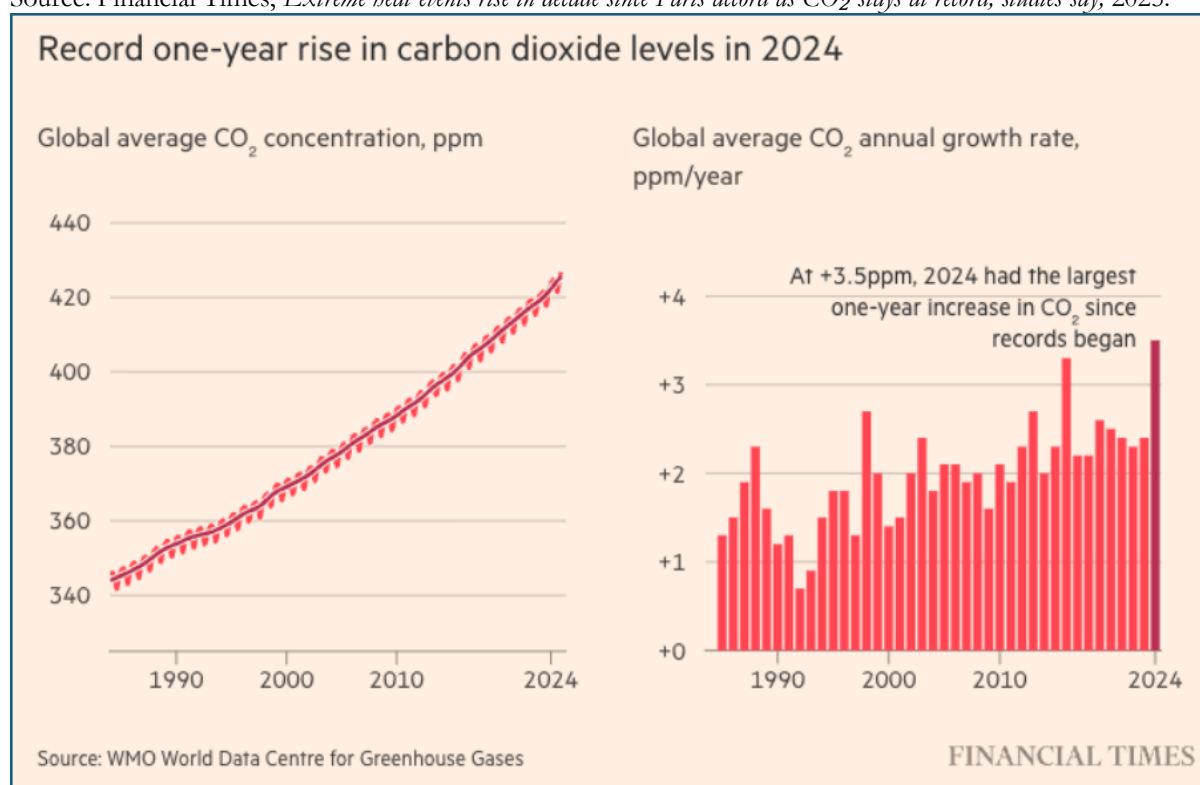
The policy projects frame and feed into our research projects, which address a range of significant issues facing Aotearoa New Zealand. The 13 research projects are: *BiodiversityNZ*, *CivicsNZ*, *ClimateChangeNZ*, *ForesightNZ*, *OneOceanNZ*, *PandemicNZ*, *PublicScienceNZ*, *ReportingNZ*, *SecurityNZ*, *StrategyNZ*, *TacklingPovertyNZ*, *TalentNZ* and *WaterFuturesNZ*.

2.0 Level of change is unprecedented

The intensifying global transition to low-emission technologies and increases in defence spending are driving a substantial increase in demand for critical minerals such as lithium, cobalt, and other rare earth elements. This surge results in both supply-chain vulnerabilities and pricing volatility, with implications for industries reliant on clean energy infrastructure. Simultaneously, the growing frequency and severity of climate-related events are contributing to population displacement and heightened immigration pressures.

Recent research shows that atmospheric carbon dioxide concentration last year saw the largest one-year increase since records began in 1957 (see graphs below using data from *WMO World Data Centre for Greenhouse Gases*).⁶

Source: Financial Times, *Extreme heat events rise in decade since Paris accord as CO₂ stays at record, studies say*, 2025.⁷



Recent examples of the costs of the changing climate include:

- ‘In July [2025], Pakistan saw record-breaking heat, with temperatures in Chilas, in the mountains, 48.5C, which may have contributed to the flooding that followed.’⁸
- ‘Extreme wildfire activity has more than doubled worldwide [in the last 21 years].’⁹ These wildfires have had severe consequences for air quality, biodiversity and human health, and they continue to shape global discussions on climate resilience and emergency preparedness.
- ‘More than 32,000 people have died trying to reach Europe in the past 10 years – including 1,300 dead or missing this year.’¹⁰
- ‘Cyclone Gabrielle in 2023 and the Auckland Anniversary floods caused an estimated \$14.5 billion in damage, of which insurers paid \$3.8 billion in claims ... global insured losses from natural catastrophes in 2025 are likely to surpass \$100 billion for the seventh straight

year ... The largest single loss to date is the Los Angeles wildfire, with insured losses of more than \$40 billion.¹¹

These shifts are straining local systems and amplifying demand for essential resources, including food and water, especially in regions already facing environmental stress.

It is not surprising, therefore, that the September 2025 *Mood of the Boardroom* survey included geopolitical vulnerabilities as part of their risk matrix.¹² This reflects a growing recognition that global instability, from trade tensions and resource competition to climate-induced migration, is creating significant challenges for businesses. We cannot afford to ignore risks on the basis that new systems are too hard to implement.

Climate change is one of the most serious risks facing New Zealand, and any proposed amendments to the second emissions plan should include detail on how it will respond to and help slow the impacts of climate change.

Like the rest of the world, New Zealand is experiencing a changing climate and is facing the impacts of rising temperatures, changing weather patterns, and increased occurrences of natural extreme weather events. These changes are serious and their frequency and severity will continue to increase in the future, impacting the next generation and beyond. New Zealand needs to both reduce our greenhouse gases and prepare for future climate-related risks. The Ministry for the Environment (MfE) has noted the impacts are increasing in frequency and severity across the country:

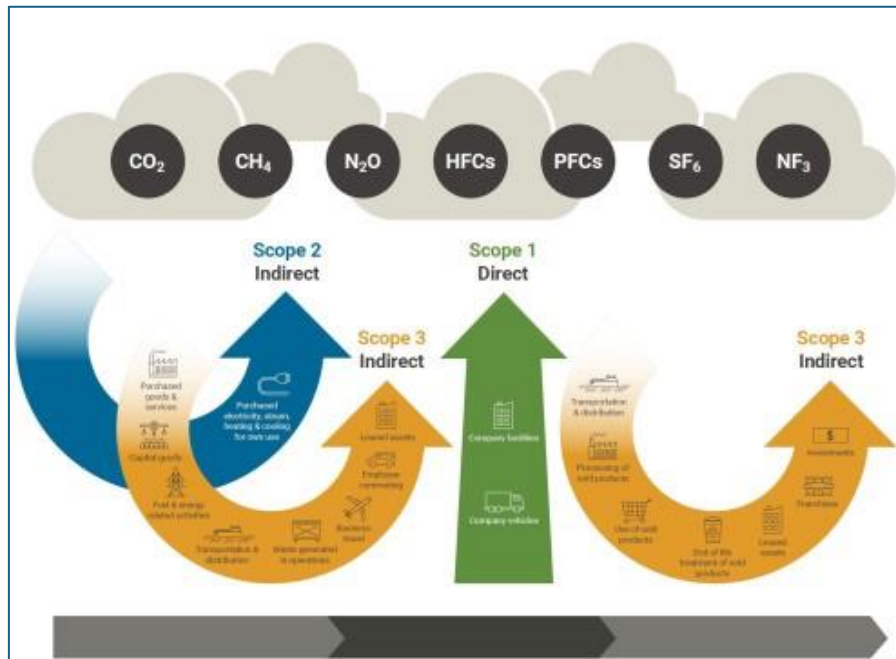
Aotearoa New Zealand experienced its second warmest year on record in 2023, just shy of the record set in 2022, with an average temperature of 13.6 °C. Climate change projections for Aotearoa show further warming is projected by 2090, with more hot days and fewer cold days across the country over the next decades.¹³

As well as the direct impacts of climate change impacting our environment, New Zealand's international reputation and trade are at serious risk if we continue to go backwards in our climate change policy. The Climate Change Performance Index (CCPI) notes that New Zealand's climate action is backsliding in 2025. CCPI makes the following key points:

- New Zealand ranked 44th in this year's CCPI, and its climate policy performance was rated 'very low'.
- New Zealand's second Nationally Determined Contribution (NDC2) does not meet the requirements of the Paris Agreement. It is not aligned with 1.5 degrees Celsius of warming and does not reflect New Zealand's highest possible ambition, with the Climate Change Commission finding that domestic action alone could feasibly contribute to emissions reductions of up to 69% below 2005 gross levels by 2035 without harming economic growth.
- Agriculture has accounted for two-thirds of New Zealand's warming to date and represents about half of total emissions. Excluding these emissions from the Emissions Trading Scheme (ETS) greatly weakens its effectiveness in driving meaningful gross emission reductions.¹⁴

New Zealand needs to develop robust policy to measure and manage emissions. Emissions are Scope 1 (direct emissions), Scope 2 (indirect emissions from the generation of purchased energy in the form of electricity, heat or steam) or 3 (other indirect emissions occurring because of the activities of the CRE but generated from sources it does not own or control).¹⁵ It is increasingly important for entities to understand and report upon their indirect, as well as their direct, emissions.

The relationship between these different types of emissions can be seen in the diagram below.
 Source: External Reporting Board, *Getting started on managing your emissions*, 2023.¹⁶



The proposed GHG Protocol updates to Scope 2 reporting is now needed to reflect today’s changing energy landscape and its evolving user needs. Alexander Bassen, Chair of Greenhouse Gas Protocol’s Independent Standards Board, said:

A decade after publishing the Scope 2 standard, an update is both timely and necessary. This revision is an opportunity to make improvements based on how the standard has been applied in practice and how power systems have become cleaner, more complex, and more interconnected than ever before.¹⁷

3.0 Specific questions

Below we answer some of the specific XRB Zoom consultation questions in detail.

Location-Based Methods (LBM)

1. Do you support the proposed hierarchy for location-based emission factors?

The Institute supports the proposed updates to the location-based method requirements, which improve clarity, as they provide better guidance for reporters on spatial and temporal granularity. This will both make reporting clearer for reporters and improve comparability of data for users.

The proposals will improve clarity and accuracy of data as reporting organisations are required to prioritise emission factors using the most precise location information first, followed by the most precise time matching.

The Institute also supports the updated emission factor hierarchy which distinguishes between ‘production-based’ and ‘consumption-based’ factors, and prioritises the latter.¹⁸ As ‘consumption-based’ factors include imports and exports, reporting will more accurately include the actual mix of resources used to deliver power to consumers. This prioritisation of ‘consumption-based’ factors will therefore make reporting information more accurate and reliable for users.

2. Assuming hourly emission factors were available, would it be feasible for your entity to use them?

The proposed revision requires that all contractual instruments used in the market-based method be matched on an hourly basis, except in certain cases of exemption for smaller organisations. The Institute as an organisation does not report on hourly emission factors, however we understand the value added in hourly reporting to improve the accuracy of Scope 2 emissions information.

The change to hourly factors will improve Scope 2 information for users, which will also support the goals of the amendment to ‘strengthen the accuracy, scientific integrity, and enhance comparability when used by disclosure and target setting programs based on GHG Protocol inventories’.¹⁹ More accurate information will allow for better decision-making to support climate action.

3. How significant do you expect the administrative and cost burden would be to implement hourly reporting?

N/A

Market-based method (MBM)

1. Does your entity currently purchase/use RECs or PPAs for scope 2?

N/A

2. Would your entity continue to purchase PPAs or RECs under the new rules?

N/A

3. Other comments

The Institute supports the reasoning for changing MBMs to improve accuracy and alignment between MBM reporting and actual emissions. This alignment is critical for information usefulness and public trust in Scope 2 reporting.

As stated by the GHG Protocol, the ‘increased scrutiny of reported scope 2 values has focused on the accuracy and decision-usefulness of some MBM claims, especially in cases where EACs are perceived to be of lower relevance, such as when they are separated from the underlying power, come from existing resources, or are not deliverable to the grid serving the load’.²⁰ Note EACs refers to Energy Attribute Certificates, which are the universal mechanism for tracking, trading, and proving renewable energy consumption.²¹

Residual emission factors (MBM)

1. Do you report scope 2 emissions using the market-based method?

N/A

2. Do you have a residual emission factor in your scope 2 reporting?

N/A

3. Do you consider that NZ has a residual emission factor available?

N/A

Standard supply service (MBM)

1. Do you consider this would apply in the New Zealand situation?

N/A

2. If so, what?

N/A

For general recommendations on how to improve this approach, refer to Section 4.0 below.

4.0 General recommendations

Below are general recommendations in response to the Discussion Document.

1. Implement change now to reflect the urgently changing climate

As discussed in Section 2, the changing climate is already having extreme impacts across the world, and these are only increasing.

More accurate and credible Scope 2 emissions information will not only help with emissions reduction, it will also help guide capital allocation, risk management and strategic decision-making in a way that helps New Zealand meet our climate goals. By using more precise local and time-matched data, the reported Scope 2 emissions will more closely reflect what is actually happening, improving accuracy and credibility.

2. Consider implementing a low level of confidence in reporting for the first years of implementation

In light of climate urgency, the Institute supports the changes being mandatory. Climate change is happening now and the longer it remains unaddressed, the harder the impacts will be to reverse. To help entities adapt to the new requirements, however, we also recommend education and support is provided and that implementation is phased.

We note the GHG Protocol states that ‘rules are being discussed to facilitate a smooth transition to new requirements. Following [Independent Standards Board] (ISB) and [Steering Committee] (SC) approval and publication of the revised Scope 2 Standard (anticipated late 2027), implementation is expected to phase in over multiple years. Staged effective dates will give organizations, data providers, utilities, and service platforms time to adapt and develop tools, with early adoption encouraged.’²² The Institute supports this approach as it will support a smooth transition and ensure reporters understand the new requirements and users can take into account this new information as it becomes available knowing the data is based on a true and tested framework, and can therefore be relied upon, and can be compared over time (to access progress) and between organisations (to make investment, banking, supply and insurance decisions).

As well as this, entities could be allowed short-term flexibility as they adapt to the new reporting guidelines. In the Institute’s recent publication *Working Paper 2025/06 – Analysing Climate Statements Contained in 2023 and 2024 Annual Reports of NZSX-listed Companies*²³ we recommend giving reporters short-term flexibility for the accuracy and reliability of Scope 3 GHG emissions and the disclosure of anticipated financial impacts. A similar concept could be applied to GHG Protocol’s proposed changes to Scope 2. By allowing a low level of confidence for a short period of time (e.g. three years), users of the Protocol are encouraged to adapt to the changes without fear of consequence. This will result in better quality data which will maintain the credibility and comparability of reporting.

3. Adopt regular reviews to ensure the Scope 2 reporting framework remains fit-for-purpose and compliant with international best practice.

New Zealand needs to implement regular reviews of our reporting systems to ensure they remain fit-for-purpose and compliant with best practice internationally.

5.0 Conclusion

Climate impacts when combined with geopolitics and technologies like climate engineering and AI, will quickly alter the outputs of climate reporting, and hopefully the outcomes of climate change.

The proposed revisions, and their phased implementation timeline, will help to improve alignment of claims with actual conditions (time, location/deliverability, fair allocation and accurate residual mixes). This will make information more accurate and credible to build public trust in Scope 2 reporting. With more accurate and trusted information, we can make decisions to work towards our climate targets, and make the most of the opportunities that being an informed consumer, supplier, banker, insurer and investor bring..

In conclusion, the McGuinness Institute supports the Scope 2 proposals, as improved reporting will allow us to make better climate choices for the long-term. We recommend that regular reviewing is undertaken to adapt to changing technology and reporting requirements, and to ensure the standards remain fit-for-purpose for both preparers and users of Scope 2 climate data.

We have a clear understanding of our climate future: the overall direction is clear, the lags are understood, and the primary and secondary impacts are well known (e.g climate refugees). What remains uncertain is the pace of change—the speed of this trajectory continues to carry significant unpredictability.

Controlling emissions is the only way to control the pace of that trajectory.

Endnotes

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- ¹ External Reporting Board (XRB) (2023). *Getting started on measuring your emissions*. [online] www.xrb.govt.nz. Available at: <https://www.xrb.govt.nz/standards/climate-related-disclosures/resources/getting-started-on-measuring-your-emissions-2/> [Accessed 27 Nov. 2025].
- ² Greenhouse Gas Protocol (2025). *Upcoming Scope 2 Public Consultation: Overview of Revisions*. [online] Available at: <https://ghgprotocol.org/blog/upcoming-scope-2-public-consultation-overview-revisions> [Accessed 26 Nov. 2025].
- ³ Greenhouse Gas Protocol (2025). *Home*. [online] Available at: <https://ghgprotocol.org> [Accessed 26 Nov. 2025].
- ⁴ Greenhouse Gas Protocol (2025). *Upcoming Scope 2 Public Consultation: Overview of Revisions*. [online] Available at: <https://ghgprotocol.org/blog/upcoming-scope-2-public-consultation-overview-revisions> [Accessed 26 Nov. 2025].
- ⁵ PwC (2025). *GHG Protocol announces Scope 2 Public Consultation*. [online] Available at: https://viewpoint.pwc.com/us/en/pwc/in-briefs/ib_int202521.html#appendix [Accessed 25 Nov. 2025].
- ⁶ Tauschinski, J. and Mooney, A. (2025). Extreme heat events rise in decade since Paris accord as CO₂ stays at record, studies say. *Financial Times*. [online] 16 Oct. Available at: <https://www.ft.com/content/4186663e-e96a-4852-ae6c-1fdaf31afa44> [Accessed 23 Oct. 2025].
- ⁷ Tauschinski, J. and Mooney, A. (2025). Extreme heat events rise in decade since Paris accord as CO₂ stays at record, studies say. *Financial Times*. [online] 16 Oct. Available at: <https://www.ft.com/content/4186663e-e96a-4852-ae6c-1fdaf31afa44> [Accessed 23 Oct. 2025].
- ⁸ Kumar Mahla, P. (2025). Monsoon flooding has killed hundreds in Pakistan – climate change is pushing the rainy season from blessing to looming catastrophe. *ABC Asia*. [online] 28 Aug. Available at: <https://www.abc.net.au/asia/monsoon-flooding-deaths-pakistan-climate-change/105706870> [Accessed 24 Sep. 2025].
- ⁹ NASA (2025). *Wildfires and Climate Change*. [online] Available at: <https://science.nasa.gov/earth/explore/wildfires-and-climate-change> [Accessed 24 Sep. 2025].
- ¹⁰ Keane, F. (2025). Migrant crisis: How Europe went from Merkel’s ‘We can do it’ ten years ago to pulling up the drawbridge. *BBC*. [online] 4 Sep. Available at: <https://www.bbc.com/news/articles/cn5e5q7w41eo> [Accessed 24 Sep. 2025].
- ¹¹ Libatique, R. (2025). Modelling reveals where storms and floods may hit hardest in New Zealand. *Insurance Business*. [online] 12 Aug. Available at: <https://www.insurancebusinessmag.com/nz/news/catastrophe/modelling-reveals-where-storms-and-floods-may-hit-hardest-in-new-zealand-545883.aspx> [Accessed 24 Sep. 2025].
- ¹² McCready, T. (2025). Mood of the Boardroom: Leaders warn global instability hitting business. *NZ Herald*. [online] 23 Sep. Available at: <https://www.nzherald.co.nz/business/business-reports/mood-of-the-boardroom/mood-of-the-boardroom-leaders-warn-global-instability-hitting-business/V3TIERH5NBHFFBWEMWBSXG76GI> [Accessed 24 Sep. 2025].
- ¹³ Ministry for the Environment (2024). *Climate projections insights*. [online] Available at: <https://environment.govt.nz/facts-and-science/climate-change/climate-change-projections/climate-projections-insights-and-publications/> [Accessed 21 Nov. 2025].
- ¹⁴ Climate Change Performance Index (CCPI) (2021). *CCPI Countries and Rankings: New Zealand*. [online] Available at: <https://ccpi.org/country/nz/> [Accessed 21 Nov. 2025].
- ¹⁵ External Reporting Board (XRB) (2023). *Getting started on measuring your emissions*. [online] www.xrb.govt.nz. Available at: <https://www.xrb.govt.nz/standards/climate-related-disclosures/resources/getting-started-on-measuring-your-emissions-2/> [Accessed 27 Nov. 2025].

¹⁶ External Reporting Board (XRB) (2023). *Getting started on measuring your emissions*. [online] www.xrb.govt.nz. Available at: <https://www.xrb.govt.nz/standards/climate-related-disclosures/resources/getting-started-on-measuring-your-emissions-2/> [Accessed 27 Nov. 2025].

¹⁷ Segal, M. (2025). *GHG Protocol Releases Draft Update to Framework for Reporting Scope 2 Emissions*. [online] ESG Today. Available at: <https://www.esgtoday.com/ghg-protocol-releases-update-to-framework-for-reporting-scope-2-emissions/> [Accessed 25 Nov. 2025].

¹⁸ Greenhouse Gas Protocol (2025). *Upcoming Scope 2 Public Consultation: Overview of Revisions*. [online] Available at: <https://ghgprotocol.org/blog/upcoming-scope-2-public-consultation-overview-revisions> [Accessed 26 Nov. 2025].

¹⁹ Greenhouse Gas Protocol (2025). *Upcoming Scope 2 Public Consultation: Overview of Revisions*. [online] Available at: <https://ghgprotocol.org/blog/upcoming-scope-2-public-consultation-overview-revisions> [Accessed 26 Nov. 2025].

²⁰ Greenhouse Gas Protocol (2025). *Upcoming Scope 2 Public Consultation: Overview of Revisions*. [online] Available at: <https://ghgprotocol.org/blog/upcoming-scope-2-public-consultation-overview-revisions> [Accessed 26 Nov. 2025].

²¹ Green Project Technologies (2024). *A Beginner's Guide to Energy Attribute Certificates (EACs) | Green Project Technologies*. [online] Available at: <https://www.greenprojecttech.com/newsroom/a-beginners-guide-to-energy-attribute-certificates-eacs> [Accessed 27 Nov. 2025].

²² Greenhouse Gas Protocol (2025). *Upcoming Scope 2 Public Consultation: Overview of Revisions*. [online] Available at: <https://ghgprotocol.org/blog/upcoming-scope-2-public-consultation-overview-revisions> [Accessed 26 Nov. 2025].

²³ McGuinness Institute (2025). *Working Paper 2025/06 – Analysing Climate Statements Contained in 2023 and 2024 Annual Reports of NZSX-listed Companies* [online] Available at: <https://www.mcguinnessinstitute.org/publications/working-papers/> [Accessed 26 Nov. 2025].