Certified Energy

New Zealand Energy Certificate System

The Role of Energy Attribute Certificates in Greenhouse Gas Emissions Reporting

White Paper

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Contents

1. Introduction

The New Zealand Energy Certificate System (NZECS) was established in 2018 to increase transparency, choice and engagement with renewable energy. Managed by Certified Energy, the system enables the trade of energy production attributes, via the issuance, transfer and redemption of Energy Attribute Certificates (EACs).

In New Zealand, an EAC issued and transacted within the NZECS is classed a New Zealand Energy Certificate, or NZ-EC. Each EAC or NZ-EC corresponds to the production of one megawatt hour (MWh) of electricity.

Measuring and reporting GHG emissions is becoming increasingly common, used by various entities as a first step in supporting emission reduction goals, reducing exposure to climate-related risks and providing transparency of organisational impacts. To subsequently reduce their emissions, businesses can purchase EACs to match their energy consumption, reducing energy emissions (for which certificates have been redeemed) to zero. In addition to supporting organisational goals, this mechanism provides a significant opportunity to mobilise finance from private institutions for renewable energy technology investment.

Since 2018, use of the NZECS system in New Zealand has grown rapidly, with the 2020/21 Production Year resulting in 500% annual growth in registered volumes compared to the previous year. Participants in the system include a number of large gentailers, as well as a number of independent generators, consumers, and intermediaries such as renewable commodity brokers and consultants.

1.1 Purpose

The purpose of this paper is to demonstrate the wide recognition of EACs globally, and thus provide the basis for establishment of NZ-ECs within the New Zealand market. This recognition and alignment with international best practice is shown by a review of international best practice outlining the interaction between EACs, standards, accreditation bodies, verification bodies and other relevant entities.

1.2 Key points

Organisations should feel confident that the use of EACs (including NZ-ECs) is:

- a legitimate means of describing attributes of consumed electricity according to global standards such as the Greenhouse Gas Protocol Scope 2 Guidance, ISO 14064-1:2018, ISO 14067:2018 and CEN-EN 16325;
- recognised within global and national verification bodies such as Toitū Envirocare (NZ), Climate Active (Australia), Carbon Trust (UK), Bilan Carbone (France), CarbonNeutral Protocol (Natural Capital Partners, UK) and The Climate Registry (US);
- recognised within global and national commitment programmes such as RE100, Climate Leaders Coalition (CLC), Science Based Targets initiative (SBTi) and B Corp;

- often used as the underlying instrument in government-led support programmes and policy such as the Renewable Energy Target (RET) scheme (Australia), United States Environmental Protection Agency (US) Clean Energy Programs, Renewable Energy Directive (EU) and the Ministry of Economy, Trade and Industry (Japan);
- recognised by global disclosure systems[1] such as the Carbon Disclosure Project (CDP), policy organisations such as the Centre for Resource Solutions (CRS), and sustainability consultants such as thinkstep ANZ;

In addition, based on international best practice:

- standards and procedures governing GHG accreditation bodies should include guidance on the treatment of EACs ensuring a consistent approach,
- EACs (including NZ-ECs) are recognised and documented energy certificate mechanisms, and as such should be recognised by all structures that recognise market-based mechanisms,
- All reporting entities should use both the location-based[2] and market-based[3] reporting methods within voluntary reporting, whereby market-based reporting in New Zealand comprises the use of NZ-ECs and the Residual Supply Mix (RSM)[4]. The RSM is an alternative to the use of the location-based grid mix emission factor (as supplied by MfE in NZ[5]).

1.3 Position

In introducing energy certificates to New Zealand, Certified Energy is of the opinion that the use of the market-based method, underpinned by EACs (including NZ-ECs), is the most impactful and legitimate method for attribute transfer and for description of the characteristics of consumed energy.

This position is based on acceptance and recognition of certificates by global standards, accreditation bodies, verification bodies, commitment programmes, government-led support programmes, global disclosure systems, policy organisations and sustainability consultants. Details of recognition of certificates by these parties is detailed in section 2.3.

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[1] A global disclosure system provides a way for investors, companies, cities, states and regions to manage their environmental impacts

[2] *"A location-based method reflects the average emissions intensity of grids on which energy consumption occurs (using mostly grid-average emission factor data)".* https://ghgprotocol.org/scope_2_guidance

[3] *"A market-based method derives emission factors from contractual instruments. These include any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation, or for unbundled attribute claims."* https://ghgprotocol.org/scope_2_guidance

[4] *"The emissions from all untracked and unclaimed energy comprise a residual mix emission factor."* https://ghgprotocol.org/scope_2_guidance

[5] Ministry for the Environment (2020). *Measuring Emissions; A Guide for Organisations*. Retrieved from https://www.mfe.govt.nz/sites/default/files/media/Climate%20Change/Measuring%20Emissions%20Detailed%20Guide%202020.pdf

While the use of EACs is recognised by many schemes for reporting GHG emissions, there are some cases where additional criteria were required to increase impact[6,7 & 8], including substantive contribution and revenue ring-fencing criteria.

Certified Energy recognises the need to continually develop the system to increase the impact and substantive contribution of NZ-ECs in New Zealand over time, and supports ambitious applications of energy certification. To this end, the NZECS is currently developing methodologies to clearly communicate impact within energy certificates in New Zealand, to ensure that the certification process provides sufficient and appropriate information to enable assessment against acceptance criteria.

EACs are fundamentally useful instruments. Energy certificates are used in a number of international markets to help organisations achieve their renewable energy purchasing and emissions reduction goals. Where energy efficiency and reduction measures have been considered, credible EACs are a flexible tool for the support of projects, policies and programmes in order to contribute to decarbonisation efforts.

2. Acceptance & recognition of market-based reporting

2.1 Global context

Energy certificate markets have been operating globally since the late 1990s, creating the opportunity to leverage private funding from businesses and individuals who are motivated to support renewable or low-carbon electricity production.

While the EAC concept is the same globally, EACs are sold under various names within numerous schemes. These include Renewable Energy Certificates (RECs) in North America, Guarantees of Origin (GOs) in Europe, Green Energy Certificates (GECs) in Japan, Small-Scale Technology Certificates (STCs) / Large-Scale Generation Certificates (LGCs) in Australia, and International RECs (I-RECs) or Tradable Instruments for Global Renewables (TIGRs) in many other parts of the world. In New Zealand, EACs are referred to as New Zealand Energy Certificates (NZ-ECs).

Globally, there are both voluntary and compliance (mandatory) EAC markets. Voluntary purchasing is not legally mandated and is often done by organisations that report their electricity usage to third-party sustainability standards in response to increasing consumer pressure. Compliance markets require the purchase of EACs to measure progress towards national renewable targets, including Renewable Portfolio Standards (RPS).

[6] https://www.toitu.co.nz/home

[7] https://www.carbonneutral.com/the-carbonneutral-protocol

[8] https://www.theclimateregistry.org/guidance/Accounting-for-Renewable-Energy.pdf

Some EAC markets include both voluntary and compliance schemes. In Australia LGCs support the Renewable Energy Target (RET), while GreenPower supports the voluntary market, with the government providing guidance on both. Additionally, most compliance markets allow consumers to voluntarily purchase more EACs than are required.

The NZECS exists within a voluntary market and is driven by market demand. However, the NZECS is a fully functioning and credible registry capable of supporting governmental programs if required.

2.2 Recognition framework

Internationally, systems for energy certification exist within a framework of reporting standards, accreditations, and programmes of use. The framework in this report outlines the interaction between EACs, standards, accreditation bodies, verification bodies and other relevant entities.

The relevance of the framework for the NZECS and NZ-ECs includes interaction between the GHG Protocol/ISO 14064-1:2018, JAS-ANZ and Toitu Envirocare, as well as recognition by a number of additional entities, as per figure 1 below, with further detail in section 2.3 below.

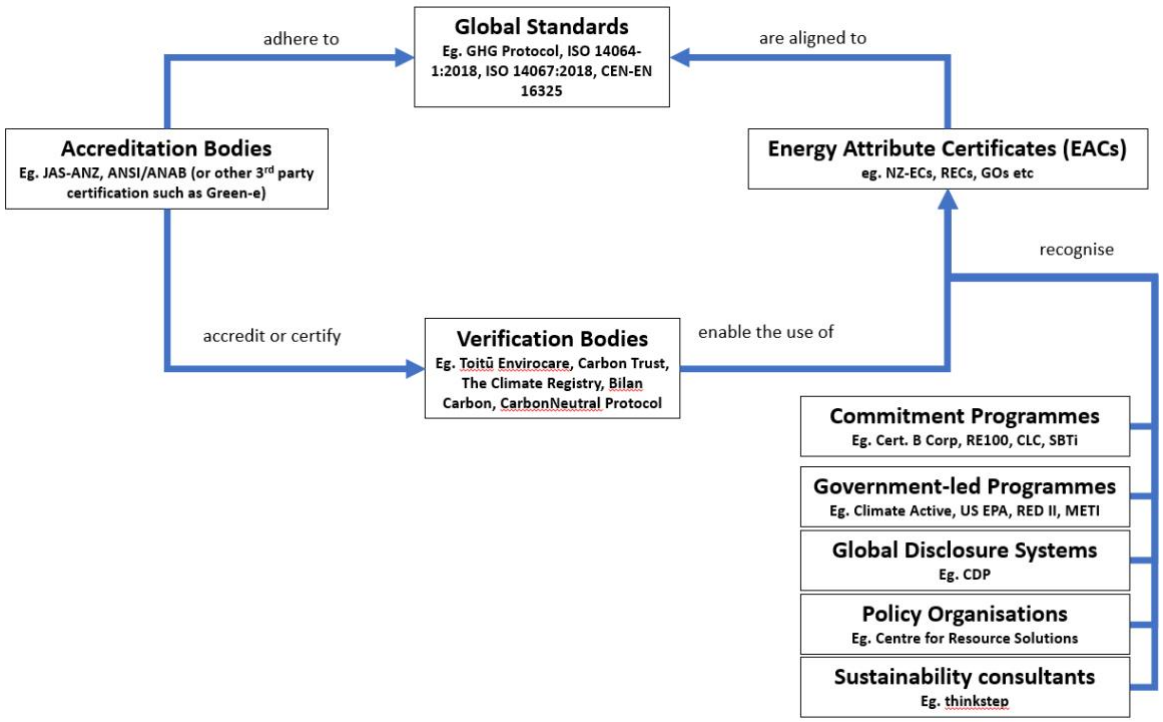

Figure 1. Framework of relevant GHG reporting entities and their recognitions of EACs.

2.3 International precedence

2.3.1 Global greenhouse gas reporting standards

Global GHG reporting standards seek to develop internationally accepted approaches to accounting for emissions from operational activity and products. Universally consistent reporting standards and tools ensure efficient and accurate approaches, ultimately maximising GHG reductions. The vast majority of global entities currently reporting on their greenhouse gas emissions comply with, are aligned with, or adhere to:

- The Greenhouse Gas Protocol Scope 2 Guidance (indirect scope 2 electricity emissions for organisational reporting),
- ISO 14064-1:2018 (indirect electricity emissions for organisational reporting),
- ISO 14067:2018 (carbon footprint emissions for product reporting), or
- CEN-EN 16325 (rules for member country compliance with GOs)

Compliance of reporting to these standards requires adherence to relevant criteria, clearly outlined within these documents.

a) GHG Protocol Scope 2 Guidance[9] (indirect scope 2 electricity emissions)

Globally recognised, this is one of the two most important standards governing the reporting of an organisations' Scope 2 GHG emissions. As corporate interest in renewable energy has increased, the requirement for proper governance of reporting practices has also increased, leading to the development of market-based reporting. Contractual instruments such as EACs have developed to enable consumers to purchase their electricity from a specific source in line with market-based reporting. The GHG Protocol standard provides an Internationally recognised framework for the use of both location-based and market-based reporting.

- Section 1.5: "*This guidance codifies two distinct methods for scope 2 accounting, each with a list of appropriate emission factors. Both methods are useful for different purposes; together, they provide a fuller documentation and assessment of risks, opportunities, and changes to emissions from electricity supply over time.*
- *A location-based method reflects the average emissions intensity of grids on which energy consumption occurs (using mostly grid-average emission factor data).*
- *A market-based method reflects emissions from electricity that companies have purposefully chosen (or their lack of choice). It derives emission factors from contractual instruments, which include any type of contract between two parties for the sale and purchase of energy bundled with attributes about the energy generation, or for unbundled attribute claims.*

[9] https://ghgprotocol.org/scope_2_guidance

- *Markets differ as to what contractual instruments are commonly available or used by companies to purchase energy or claim specific attributes about it, but they can include energy attribute certificates (RECs, GOs, etc.), direct contracts (for both low-carbon, renewable, or fossil fuel generation), supplier specific emission rates, and other default emission factors representing the untracked or unclaimed energy and emissions (termed the "residual mix") if a company does not have other contractual information that meets the Scope 2 Quality Criteria*."

b) ISO 14064-1:2018[10] (indirect electricity emissions)

This standard is the second of the two most important standards for reporting GHG emissions, with many similarities to the GHG Protocol. This standard mandates the use of location-based reporting first, and allows market-based reporting to be used provided the inventory is reported using both emissions factors. Additionally, there is no distinction made in this standard between compliance or voluntary markets.

- Clause 9: (9.3.3) "*The organization may report the results of contractual instruments for GHG attributes (market-based approach), expressed in GHG emissions (tCO_2e) as well as in the unit of transfer (eg. kWh). The organization may report the amount purchased compared to the amount consumed*."
- Annex E: (E.1) Treatment of Electricity – "*provides requirements and guidance for the treatment of imported electricity consumed by the organization*."
- Annex E: (E.2.2) Additional Information – "*When using contractual instruments in the procurement of its electricity, an organization may use the market-based approach*."
- Annex E: (E.2.2) Note 1 – "*When the organization uses those contractual instruments for GHG emission attributes, including renewable energy certificates, these transactions shall be documented and reported separately (see Clause 9)*."

c) ISO 14067:2018[11] (Carbon footprint of products)

This standard requires market-based reporting to be used in the first instance, then location-based reporting.

Clause 6 (6.4.9.4.4) "Electricity from the grid life cycle data from a supplier specific electricity product shall be used when the supplier is able to guarantee through a contractual arrangement that the electricity product":

- *"conveys the information associated with the unit of electricity delivered together with the characteristics of the generator;*
- *is assured with a unique claim (see 5.12);*

[10] https://www.iso.org/standard/66453.html

[11] https://www.iso.org/standard/71206.html

- *is as close as possible to the period to which the contractual instrument is applied and comprises a corresponding timespan; and*
- *produced within the country.*"

"*When information on supplier specific electricity is not available, GHG emissions associated with the relevant electricity grid from which the electricity is obtained shall be used. The relevant grid shall reflect the electricity consumption of the region, excluding any previously claimed attributed electricity. In case no electricity tracking system is in place, the selected grid shall reflect the electricity consumption of the region.*"

"*NOTE 1 - Contractual arrangements include green certificates, financial products, RECs (Renewable Energy Certificates) etc.*"

"*NOTE 2 - Example of the characteristics of a generator: registered name of the facility, owners and nature of the energy generated, generation capacity and renewable energy supplied.*"

"*NOTE 3 - If specific life cycle data on a process within the electricity supply system are difficult to access, data from recognized databases (eg. through the GLAD, The Global LCA Data Access Network, or UNFCCC) may be used. Some electricity attributes such as green certificates are sold without direct coupling to the electricity itself. In some countries parts of the electricity from renewable energy sources might be sold/exported as renewable electricity without being excluded from the supplied mix. For this reason a sensitivity analysis applying the relevant national consumption grid mix shall be conducted and reported in the CFP study report to demonstrate the difference in results of the electricity tracking instruments.*"

d) CEN-EN 16325[12]

This European Standard is the prevailing standard outlining the requirements for GOs for electricity generated from all energy sources. It aims to establish the relevant terminology and definitions as well as the requirements for registration, issuing, transferring and cancellation in line with the Renewable Energy Directives. The standard is currently being updated and requires all European countries to comply by the end of June 2021.

In Article 19 of the Renewable Energy Directive, there is an obligation that from 1 July 2021 the Guarantee of Origin systems of all European Internal Market countries should comply with the EN 16325 Standard of Guarantees of Origin. The existing EN 16325 Standard was set up in 2013 (and slightly revised in 2015) based on the EECS standard, and is for electrical energy only. GOs have since been opened up to include renewable energy from all energy carriers necessitating the current revision of the EN 16325 Standard.

2.3.2 Accreditation bodies

For GHG reporting, accreditation bodies generally refer to ISO 14065:2020 in the conduct of an accreditation audit confirming that the verification body is using ISO 14064-3:2019

[12] https://standards.globalspec.com/std/9969735/EN%2016325

correctly when they certify that an organisation has used 14064-1:2018, 14064-2:2019 or 14067:2018 correctly.

The following are two examples of relevant accreditation bodies responsible for auditing verification bodies who certify GHG inventories:

1) The Joint Accreditation System of Australia and New Zealand[13] (JAS-ANZ)
2) American National Standards Institute/National Accreditation Board [14](ANSI/ANAB) (North America)

These quotes were obtained from members of the ISO SC7 WG15 who are involved in drafting the Carbon Neutral standard. They are opinions of how accreditation bodies should approach accreditation of EAC use.

- *"RECs must be separately documented and reported. The verifier is not responsible for verifying anything more than that and ensuring that the mathematics is accurately completed. The accreditation body would make an assessment of the verifier in any observed verification undertaken for the purposes of accreditation. I cannot think that there are any circumstances where accreditation could/would be withdrawn for verifying the inclusion of appropriately documented and recorded RECs."*[15]
- *"it is highly unlikely that ANSI/ANAB would exclude voluntary RECs from an accreditation. An accreditation body should only be interested in the verification body's procedures for undertaking 14064-3 and whether the verification body being accredited had checked that the RECs were accounted for in the inventory in accordance with 14064-1."*[16]

2.3.3 Global verification bodies

The following programmes enable the use of market-based reporting mechanisms.

a) Toitū Envirocare[17] (New Zealand and the UK)

Toitū Envirocare provides tailored software and technical guidance for compliance within carbon and environmental programmes and certifications. Since market-based reporting has been accepted and recognised within the standards underpinning these programmes, Toitū has confirmed the following:

- *Toitū will require dual reporting of both location-based and market-based electricity in accordance with the GHG Protocol Scope 2 Guidance and ISO 14064-1:2018.*

[13] https://www.jas-anz.org/about-us

[14] https://anab.ansi.org/?gclid=CjwKCAjw-e2EBhAhEiwAJI5jg4LP_Gr5601_W8MN866l6WKXv1Mn4uO8pZxCfimtd1PUeZxPVvnyexoCPCgQAvD_BwE

[15] Pers. Comm - Ann Smith https://www.linkedin.com/in/dr-ann-smith-cenv-fiema-ehf-1213762/?originalSubdomain=nz - Quote obtained from members of the ISO SC7 WG15 involved in drafting the Carbon Neutral standard.

[16] Pers. Comm - Ann Smith https://www.linkedin.com/in/dr-ann-smith-cenv-fiema-ehf-1213762/?originalSubdomain=nz - Quote obtained from members of the ISO SC7 WG15 involved in drafting the Carbon Neutral standard.

[17] https://www.toitu.co.nz/home

For market-based reporting, programme clients may or may not redeem NZ-ECs for their electricity consumption. If they choose to redeem NZ-ECs, their market-based emission factor is reported as zero. If they choose not to redeem NZ-ECs, the factor applied is equal to the RSM.

Customers may offset their market-based emissions position within the specified programme with NZ-ECs if they meet certain criteria, set by Toitū including:

a. Funds from the purchase can be shown to be ring-fenced for construction of new renewable generation,

b. The generation facility linked to the certificate has been constructed since the NZ NDC baseline year of 2005 (or other date decided by the Toitū Programme from time to time),

c. The funds from the purchase can be shown to be used in another purpose that reduces the load on fossil fuel generation facilities, such as funding projects that reduce electricity load at peak times (demand side management); or

d. Funds from the purchase can be shown to be used for projects that result in reductions in GHG emissions, such as boiler conversion projects, provided that it can be shown that no double claiming of emissions reductions is occurring.

b) Carbon Trust[18] (UK)

The Carbon Trust advise and certify large organisations to internationally-recognised standards for GHG reporting, including their own Carbon Trust Standard.

In October 2019, Carbon Trust issued guidance including the following information:[19]

- *"The GHG Protocol launched additional Scope 2 Guidance in 2015. These guidelines outline two different approaches to allocating scope 2 emissions to end-users, the 'location-based' method and the 'market-based' method. Where possible companies should report against both methodologies but can choose which method to use for their goal setting."*

c) Bilan Carbone[20] (France)

This is a process for organisations to calculate and manage their GHG emissions, providing a methodology for quantifying GHG emissions. They require compliance with ISO 14064-1:2018, which recognises the market-based method.

[18] https://www.carbontrust.com/

[19] https://www.carbontrust.com/resources/energy-procurement-and-green-tariffs Oct 21 2020)

[20] https://www.bilans-ges.ademe.fr/en/accueil/contenu/index/page/calculation_methods/siGras/0

d) CarbonNeutral Certification[21] (North America)

This is an international certification administered by Natural Capital Partners. They recognise the use of the market-based approach to reduce scope 2 emission by placing certain 'substantive contribution' constraints on the type of EAC accepted.

- Section 2.4.2 (Table 9)[22] – EACs are recognised under certain criteria: "*Did contractual instruments substantively contribute to implementation of new low carbon projects.*"
- Section 4.1.1 (Table 16)[23] – EACs that are recognised are all underpinned by leading standards.

e) The Climate Registry[24] (TCR) (North America)

The TCR is a not-for-profit voluntary GHG registry that helps organisations prepare and report their GHG inventories. TCR also drives climate action and ambition on the road to net zero by recognizing and showcasing sub-national leadership, and by building strategic partnerships with and between national and international entities. The market-based method is recognised; EACs are required to meet TCR eligibility criteria which is based on Green-e certification[25].

2.3.4 Global commitment programmes

The following programmes recognise the use of market-based reporting mechanisms.

a) Certified B Corporation[26] (Global)

A global initiative that represents businesses who meet high standards of verified social and environmental performance, public transparency, and legal accountability to balance profit and purpose. They recognise the use of the market-based approach to reduce scope 2 emissions.

b) RE100[27] (Global)

This is a global initiative led by the Climate Group and in partnership with CDP committing businesses to purchasing and using 100% renewable electricity. The RE100 Technical

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21 https://www.carbonneutral.com/the-carbonneutral-protocol

22 https://www.carbonneutral.com/the-carbonneutral-protocol/technical-specifications-and-guidance/step-2-measure-1/additional-requirements-2-1-1-1

23 https://www.carbonneutral.com/the-carbonneutral-protocol/technical-specifications-and-guidance/step-4-reduce-1/4-1-approved-environmental-instrument-standards

24 https://www.theclimateregistry.org/guidance/Accounting-for-Renewable-Energy.pdf

25 Green-e – leading 3rd party certification for voluntary renewable energy in the US and Canada. They limit eligibility and set rules in terms of technology, date of facility construction, vintage etc. https://www.green-e.org/

26 https://bcorporation.net/

27 https://www.there100.org/

Advisory Group Briefing[28] specifies the requirements for a credible renewable electricity usage claim, including the criteria for contractual allocation of attributes (including EACs).

c) Climate Leaders Coalition[29] (CLC) (New Zealand)

A NZ based initiative committing CEOs from the business community to measure and publicly report their GHG emissions, set a public emissions reduction target and work with suppliers to reduce their emissions. They recognise the use of the market-based approach to reporting scope 2 greenhouse emissions.

d) Science Based Targets Initiative[30] (SBTi) (Global)

A global initiative within the private sector to encourage companies to set emission reduction targets in line with the Paris Agreement goals. They recognise the use of the market-based approach to reduce scope 2 emissions.

2.3.5 *Government-led support programmes*

The following section lists examples of programmes where a government provides guidance and support for the use of the market-based method, and therefore EAC use.

a) Climate Active[31] (Australia)

This is a voluntary standard to manage greenhouse gas emissions and achieve carbon neutrality. It is a partnership between the Australian Government and Australian businesses to encourage voluntary climate action. They require auditors of companies applying for certification to be National Greenhouse and Energy Reporting Scheme (NGERS[32]) registered or accredited to ISO 14065:2020. The electricity accounting rules reference the use of both the location-based method and the market-based method[33]. They have been adapted from best-practice principles in the Greenhouse Gas Protocol Scope 2 Guidance (GHG Protocol) and informed by stakeholder consultation.

b) United States Environmental Protection Agency[34] (US EPA)

The EPA provides guidance on indirect emissions from purchased electricity[35]:

- *"EPA encourages organizations to use renewable energy as a way to reduce the environmental impacts associated with the electricity they purchase. Organizations can reduce their market-based scope 2 emissions by purchasing renewable energy, or "green*

[28] https://www.there100.org/sites/re100/files/2020-09/RE100%20Making%20Credible%20Claims.pdf

[29] https://www.climateleaderscoalition.org.nz/

[30] https://sciencebasedtargets.org/

[31] https://www.climateactive.org.au/

[32] http://www.cleanenergyregulator.gov.au/NGER

[33] https://www.industry.gov.au/sites/default/files/2020-09/climate-active-technical-guidance-manual.pdf

[34] https://www.epa.gov/

[35] https://www.epa.gov/sites/production/files/2016-03/documents/electricityemissions_3_2016.pdf

power." They can do this by choosing a differentiated electricity product from their utility or electricity supplier, by contracting directly with a renewable energy generator (if the regulatory rules allow), or by purchasing unbundled renewable energy certificates (RECs)."

c) Renewable Energy Directive[36] (RED II), (European Union)

There is no direct accreditation at the EU level with respect to EACs; however, the CEN-EN 16325 standard is given legal force by article 19.6 of the 2018 Renewable Energy Directive of the European Union which states that:

- *"Member States or the designated competent bodies shall put in place appropriate mechanisms to ensure that guarantees of origin shall be issued, transferred and cancelled electronically and are accurate, reliable and fraud-resistant. Member States and designated competent bodies shall ensure that the requirements they impose are compliant with the standard CEN - EN 16325."*

d) Ministry of Economy, Trade and Industry[37] (METI), (Japan)

The Japanese Ministry of Economy, Trade and Industry has published guidance for companies to report their greenhouse gas emissions. Non-fossil fuel certificates (NFCs) were introduced to monitor electricity retailers' achievements of their non-fossil electricity ratio which is set to be 44% or more by 2030. Electricity retailers are obliged to purchase or acquire NFCs, and as of April 2020 the government began integrating EACs into NFCs for grid injected renewables.

2.3.6 Global disclosure systems, policy organisations and sustainability consultants

The following entities recognise and support the use of market-based reporting.

a) Carbon Disclosure Project[38] (CDP)

The CDP is a not-for-profit charity that runs the global disclosure system for investors, companies, cities, states and regions to manage their environmental impacts. It is the globally dominant force in driving environmental disclosures for larger organisations and government bodies. To enable third-party verification activities to be comparable, they require compliance with recognised standards and provide a list of the standards they recognise.

[36] https://www.europex.org/eulegislation/renewable-energy-energy-directive/

[37] https://www.meti.go.jp/english/

[38] https://www.cdp.net/en/guidance/verification

The CDP provides guidance on reporting using the GHG Protocol Scope 2 Guidance and a technical note to explain how to report scope 2 emissions to CDP in line with the 2015 updated version.[39]

- Table 2.2 – Clarification on market-based approach (Pg. 13)

"Clarification on market-based approach: It has come to our attention that the interpretation by some market actors of the new ISO 14064-1:2018 standard for organizational GHG quantification and reporting, is that it does not recommend the market-based approach to report Scope 2 GHG emissions as good practice. CDP can clarify that this is not our interpretation of neither the discussions held within the ISO 14064-1 revision working group (that CDP was part of), nor the final text version of the standard.

ISO 14064-1 explicitly acknowledges the use of the Scope 2, market-based approach in its section "9.3.3 Optional information and associated requirements", stating that "The organization may report the results of contractual instruments for GHG attributes (market-based approach), expressed in GHG emissions (tCO2e) as well as in the unit of transfer (eg., kWh). The organization may report the amount purchased compared to the amount consumed". Further information is then provided in Annex E on the "Treatment of electricity", both for a location-based and market-based approach. In dealing with the two approaches in this way, ISO 14064-1 acknowledged the existence and acceptance of the market-based approach, even if the approach is not consensual within the GHG accounting community. ISO 14064-1 diverges from the GHG Protocol by not requiring all companies to report Scope 2 market-based figures. In our view, this does not disallow market-based as a GHG accounting approach and it is not our interpretation that deviations between ISO 14064-1 and the GHG Protocol can be claimed on "bad practices" in one or the other standard.

Therefore, CDP hereby clarifies that it will encourage companies to report market-based approach figures, in line with the two standards i.e. ISO 14064-1 and GHG Protocol Scope 2 guidance, and will consider it as best practice.

Furthermore, CDP will continue to work to make sure companies are aware of risks associated with any of the two accounting approaches and associated claims when reporting Scope 2 figures, as well as following up the debate on accounting GHG emissions of imported electricity and other energy carriers. CDP will also continue to use the tools available to drive its ultimate mission – the full decarbonization of the economy in line with the goals of the Paris Agreement – by encouraging companies to purchase renewable energy, and to finance and build new renewable energy capacity."

b) Centre for Resource Solutions[40] (CRS)

The CRS creates policy and market solutions to advance sustainable energy in the United States. They perform evaluations of EAC tracking systems for the purpose of supporting

[39] https://b8f65cb373b1b7b15feb--70d8ead6ced550b4d987d7c03fcdd1d.ssl.cf3.rackcdn.com/cms/guidance_docs/pdfs/000/000/415/original/CDP-Accounting-of-Scope-2-Emissions.pdf?1479752807

[40] https://resource-solutions.org/

public declarations that the systems meet international best practices, along with the Green-e certification programme.

- Section 4.3[41]: *"RECs are the only way to deliver or consume renewable energy in the U.S. They represent property rights to the fully-aggregated non-power generation attributes of renewable electricity generation. They are the essential accounting and tracking tool used to allocate renewable generation to specific customers and to purchase green power, either to demonstrate RPS compliance or meet voluntary demand. These attributes include the renewable fuel type, location, and in almost all cases both GHG attributes described previously—the direct GHG emissions and the avoided grid emissions associated with generation—as well as all other environmental and social impacts and benefits of the generation. This treatment and use of RECs is accepted and consistent across the U.S. Thirty-five (35) states and territories, along with voluntary buyers and sellers of renewable energy—including U.S. federal agencies, utilities and other electric service providers, thousands of companies and municipalities and millions of individuals—use RECs to verify and legally enforce delivery and consumption of renewable energy on the grid. The exclusive use of RECs for this purpose is not contradicted by the remaining states and territories."*

c) thinkstep ANZ[42] (Australia and New Zealand)

thinkstep provides sustainability consulting services to businesses in New Zealand and Australia. thinkstep ANZ have provided second-party review of the methodology, documentation and registry of the NZECS and confirmed the system has been designed with consideration of the criteria, principles and requirements outlined in international GHG reporting standards and requirements.

- *"Organisations can use EACs to demonstrate the procurement of renewable lower-carbon energy to support emission reduction plans and targets, reduce the offsets required for carbon neutral certification, and reduce their exposure to climate-related risks. In addition to the direct benefits to the organisation, procurement of renewable energy provides a clear signal to generators and regulators of market demand for renewable electricity, helping to shift the system towards a more renewable generation mix." (Page 3)*
- *"At their simplest, EACs demonstrate commitment to renewable energy and reduced reliance on fossil fuels, providing useful messaging for public communications." (Page 3)*

thinkstep further confirmed that the NZECS complies with, or enables compliance with quality criteria within the following two standards, including:

- GHG Protocol Scope 2 Guidance
- ISO 14064-1:2018

[41] https://www.oneplanetnetwork.org/sites/default/files/corporate-and-voluntary-re-in-state-ghg-policy.pdf

[42] https://www.thinkstep-anz.com/

3. Conclusion

As is demonstrated above, there is robust existing international precedent for the recognition of EACs as eligible instruments for the purposes of performing market-based GHG reporting. Further, there is broad support for the use of market-based reporting as international best practice.

In New Zealand, users of the NZECS should feel confident in their use of NZ-ECs as part of their GHG reporting.

Users of the system are able to select certificate providers based on production attributes that match their ambition and priority.

It should also be noted that within the application of certification globally, there is recognition of differing contribution, and therefore, the option to apply stringent acceptance criteria where necessary.

Certified Energy will continue to develop and support certificate users to make discerning certificate purchasing decisions.