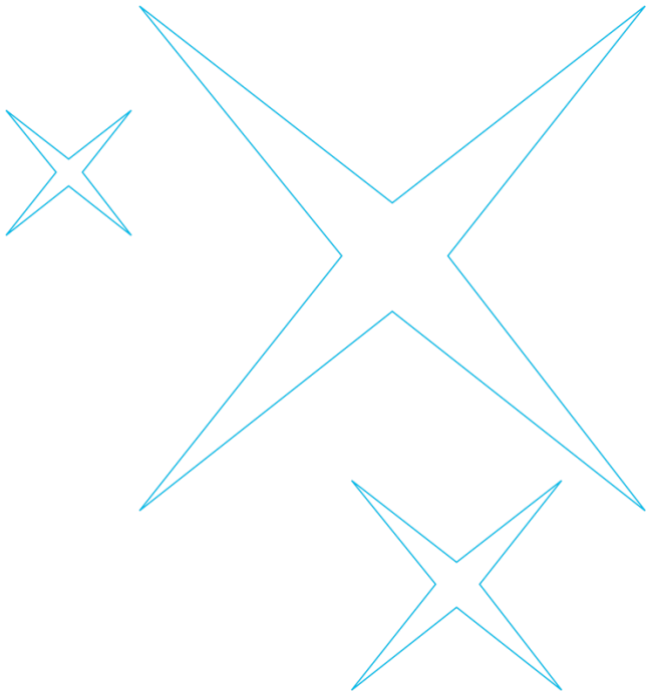
June 2026

Aotearoa New Zealand Sustainable Finance Taxonomy

Energy sector

Climate change mitigation Substantial Contribution (SC) criteria

Draft for public consultation



Energy sector Substantial Contribution criteria for climate change mitigation – draft for public consult

This section presents the draft Substantial Contribution (SC) criteria for climate change mitigation, as they apply to the Energy sector for the NZ Taxonomy.

The SC criteria define the thresholds and requirements that an economic activity or measure must meet to be considered as making a substantial contribution to an environmental objective — in this case, climate change mitigation.

These criteria are grounded in robust technical and scientific evidence and are designed to ensure that activities go beyond business-as-usual and meaningfully advance emissions reduction towards alignment with the Paris Agreement.

The SC criteria are the core component of the framework specifically designed to drive positive outcomes for one of the Taxonomy's environmental objectives.

The Energy sector climate change mitigation SC criteria are available for feedback in this consult.

Sector context

Globally, energy-related greenhouse gas (GHG) emissions need to fall around 50% by 2035 compared to 2024 levels to support the objectives of the Paris Agreement goal of limiting global warming as close as possible to 1.5°C. Emissions from the power sector, which currently account for 40% of global energy-related emissions, will also need to decline particularly fast and drop to around 25% of today's levels by 2035. Under the International Energy Agency (IEA) Net Zero Emissions by 2050 (NZE) Scenario, low-emissions sources provide nearly all electricity generation by 2040, while electricity increases its share in total final consumption to around 40% by 2040 and 55% by 2050.[1]

Meanwhile, New Zealand's energy story is shaped by renewables, with the country's energy system ranked 9th globally and 1st in Asia by the World Energy Council (WEC) for its combined affordability, security and sustainability. Renewable generation, primarily from hydropower, geothermal, and wind, has increased to nearly 90% of the total electricity supply, well above the Organisation for Economic Co-operation and Development (OECD) average of 30%. Further growth in renewable generation is also expected to increase the share of renewable electricity supply to 95% by 2027 and 98% by 2030. Given the highly renewable electricity mix, the New Zealand Government has also identified the electrification of other sectors of the economy as the country's greatest decarbonisation lever moving forward. Overall, energy-related emissions are targeted to continue falling by 26% by 2040 compared to 2022 levels.[2][3][4]

Methodology

In general, the Energy sector of the NZ Taxonomy is scoped around five main sub-sectoral categories: Electricity generation; production of heating and cooling; transmission and distribution networks; storage systems; and research and development. A specific focus on electricity has been identified, as the electricity system plays a critical role in supporting other sectors to reduce emissions and economy-wide decarbonisation. Correspondingly, as the share of renewable electricity grows, grid upgrades and modernisation, along with energy storage systems, are necessary to minimise intermittent supply disruptions. Lastly, heating and cooling is also of significance, notably for buildings and in industry, and in line with government efforts to increase the use of renewables.[5] On the other hand, upstream energy production activities such as the production of hydrogen, biofuels, and other low-carbon fuels would be considered under a manufacturing-related sector of the economy.

[1] International Energy Agency (2025), World energy outlook 2025. Available at: https://www.iea.org/reports/world-energy-outlook-2025

[2] Boston Consulting Group (2025), Energy to grow: Securing New Zealand's future. Available at: https://www.bcg.com/publications/2025/energy-to-grow-securing-new-zealands-future

[3] New Zealand Government (2025), Submission under the Paris Agreement: New Zealand's second Nationally Determined Contribution. Available at : https://unfccc.int/sites/default/files/2025-01/New%20Zealand%27s%20second%20Nationally%20Determined%20Contribution.pdf

[4] Climate Change Commission (2024), Advice on Aotearoa New Zealand's fourth emissions budget. Available at: https://www.climatecommission.govt.nz/assets/Advice-to-govt-docs/Target-and-budgets-final-reports/Climate-Change-Commission-EB4-Final-Advice-1.1.pdf

[5] International Energy Agency (2023), New Zealand 2023 energy policy review. Available at: https://www.oecd.org/content/dam/oecd/en/publications/reports/2023/04/new-zealand-2023-energy-policy-review_5c598db8/d99c3085-en.pdf

The specific scope of economic activities selected in the energy sector has been guided by the NZ Taxonomy's core principles of credibility, usability, interoperability and prioritisation for impact. Activities have been selected based on their substantial contribution to the climate change mitigation objective, in line with the NZ Taxonomy's Transition methodology. Zero and low-emissions technologies included as Green activities in the Energy sector are readily deployable and identified as the key decarbonisation levers to prioritise for impact. The NZ Taxonomy also includes a research and development activity to support the commercialisation of innovative Energy-related solutions, processes, technologies, business models and other products that support emissions reductions.

The table below provides an overview of activity selection and classification in the NZ Taxonomy.

The NZ Taxonomy considers renewable energy activities as necessary to achieve a Paris-aligned future. During intermittent renewable supply, increased seasonal demand, and dry years however, there may be a need for thermal (fossil fuel-powered) firming capacity in the short to medium term, alongside energy storage and demand flexibility solutions, to ensure security of electricity supply. Therefore, in addition to criteria for eligible activities, the NZ Taxonomy offers a voluntary framework to define how back-up flexible gas firming capacity may be recognised and assessed within a credibly transitioning portfolio of generation and storage assets (see here).

Emissions intensity thresholds

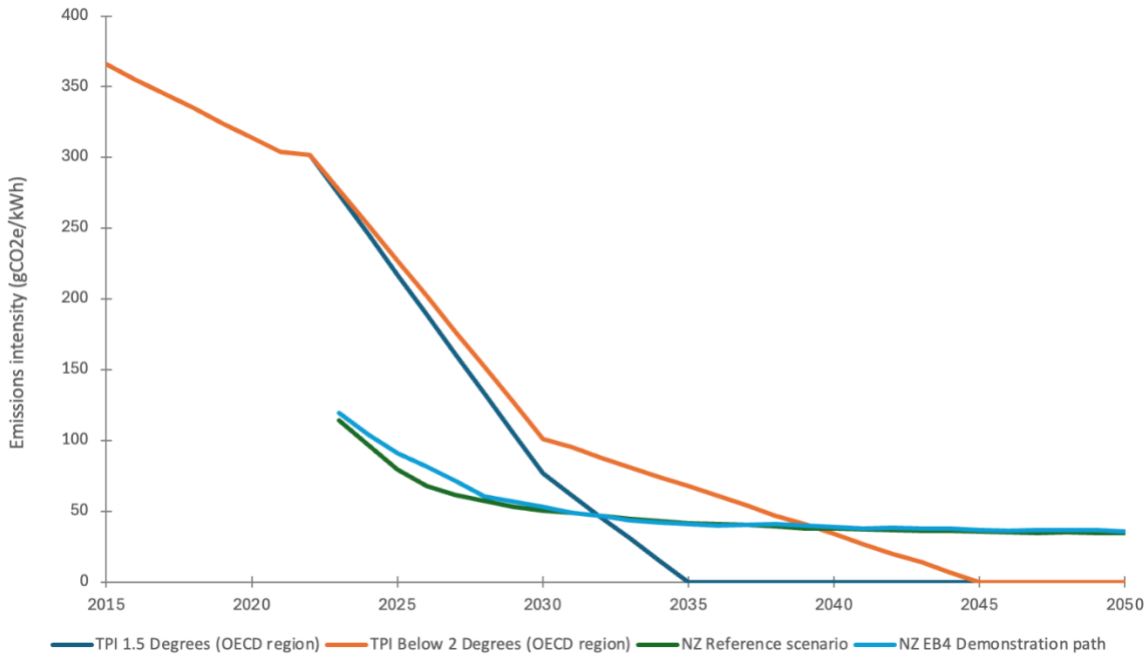
The emissions intensity thresholds form the basis of the Energy sector criteria and have been developed through alignment with global and domestic decarbonisation scenarios for the electricity system. Specifically, they refer to Transition Pathway Initiative 1.5 and below 2 degrees scenarios for the OECD region, as well as New Zealand's electricity market modelling for the draft advice on the fourth emissions budget (EB4).[6][7] The primary, standardised metric for measuring emissions of the Energy sector is gCO_2/kWh.

In New Zealand, the current average Scope 1 (direct) emissions from the electricity system are well below global values, as reflected in Figure 1. Under the EB4 demonstration path, direct emissions intensity in 2025 starts at $91gCO_2e/kWh$, before further falling to $53gCO_2e/kWh$ in 2030, $39gCO_2e/kWh$ in 2040, and $36gCO_2e/kWh$ in 2050.

[6] Transition Pathway Initiative electricity utilities online tool. Available at: https://www.transitionpathwayinitiative.org/sectors/electricity-utilities

[7] Climate Change Commission (2024), Modelling and data: Consultation on emissions reduction target and emissions budgets. Available at: https://www.climatecommission.govt.nz/our-work/advice-to-government-topic/preparing-advice-on-emissions-budgets/advice-on-the-fourth-emissions-budget/modelling-and-data-consultation-on-emissions-reduction-target-and-emissions-budgets. Refer to the 'Electricity market modelling' section for the decarbonisation trajectories, and the 'Energy and emissions in New Zealand (ENZ) model' section for an assumptions log.

Figure 1. Average Scope 1 (direct) emissions intensity of electrical utilities – global and New Zealand decarbonisation pathway



As consistent with global taxonomies, the calculated emissions intensity thresholds are proposed on a lifecycle assessment (LCA) basis to consider emissions throughout the value chain of the energy production process.[8] This includes Scope 1 (direct) emissions as well as upstream emissions related to production considerations. LCA measurements and calculations follow the ISO 14067:2018 or 14064-1:2018 standards.

The Green lifecycle emissions intensity threshold is set at 100gCO_2e/kWh[9] until 2030. This reflects New Zealand's relatively decarbonised electricity sector, while also taking care to not inadvertently exclude renewable energy technologies as newer frontiers are explored – for example, carbon capture and reinjection associated with geothermal plants. After 2030, this threshold will be reviewed, which will be further defined in the next version of the NZ Taxonomy. Projects that reach a final investment decision before 2030 will remain eligible, and the updated thresholds will apply to projects that reach final investment decision after 2030.

To aid usability and minimise compliance burdens, direct eligibility is available for certain types of renewable energy technologies which are well recognised to have lifecycle emissions intensity below the 100gCO_2e/kWh threshold. Such activities are considered indisputably Green across taxonomies and need not conduct an LCA to demonstrate alignment with the criteria and receive taxonomy-aligned financing.

[8] Lifecycle emissions calculations should not factor in the use of offsets.

[9] For avoidance of doubt, this metric refers to emissions per kilowatt-hour of electrical energy whenever referring to electricity generation, and emissions per kilowatt-hour of thermal energy whenever referring to the production of heating or cooling.

List of eligible activities, and their categorisation, at a glance

Activities	Classification
1. Electricity generation, including cogeneration of heating/cooling and power, from solar PV, CSP, and PVT systems	Green Activity
2. Electricity generation from onshore and offshore wind	Green Activity
3. Electricity generation from ocean energy	Green Activity
4. Electricity generation from hydropower	Green Activity
5. Electricity generation, including cogeneration of heating/cooling and power, from geothermal energy	Green Activity
6. Electricity generation, including cogeneration of heating/cooling and power, from bioenergy	Green Activity
7. District heating and cooling systems	Green Activity
8. Installation and operation of heat pumps	Green Activity
9. Production of heating or cooling from waste heat	Green Activity
10. Production of heating or cooling from solar thermal heating	Green Activity
11. Production of heating or cooling from geothermal energy	Green Activity
12. Production of heating or cooling from bioenergy	Green Activity
13. Transmission and distribution of electricity	Green Activity
14. Transmission and distribution of renewable and low-carbon gases	Green Activity
15. Remote and micro-grid systems	Green Activity
16. Storage of energy	Green Activity
17. Research, development and innovation of energy technologies	Green Activity

Climate change mitigation Substantial Contribution criteria for Aotearoa New Zealand's Energy sector

1. Electricity generation, including cogeneration of heating/cooling and power, from solar photovoltaic (PV), concentrated solar power (CSP), and photovoltaic-thermal (PVT) systems

Activity description	Construction or operation of facilities that produce electricity using solar PV technology or solar thermal power.
Associated ANZSIC codes	• 2619 Other electricity generation • 3109 Other heavy and civil engineering construction • 3231 Plumbing services • 3232 Electrical services • 3233 Air conditioning and heating services
Green	Until 2030, all electricity generation activities from solar PV and solar CSP are directly eligible.
Specific ineligible cases	A. Power plants dedicated to supporting fossil fuel infrastructure (e.g., operations of fossil fuel activities). B. Projects that result in degradation of land with high carbon stock.[10]

2. Electricity generation from onshore and offshore wind

Activity description	Construction or operation of facilities that produce electricity from wind power, including offshore wind power.
Associated ANZSIC codes	• 2619 Other electricity generation • 3109 Other heavy and civil engineering construction
Green	Until 2030, all electricity generation activities from onshore and offshore wind power plants are directly eligible.
Specific ineligible cases	A. Power plants dedicated to supporting fossil fuel infrastructure (e.g., operations of fossil fuel activities). B. Projects that result in degradation of land with high carbon stock.

[10] Land that currently has any one the following statuses, or had such a status in the base year of 2008:

1. Wetland, i.e., land that includes permanently or intermittently wet areas, as well as shallow-water and land-water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.
2. Land of continuously natural forest areas spanning more than one hectare with trees higher than 5 metres and a canopy cover of more than 10 percent, or trees able to reach these thresholds in situ, to ensure resilience and biodiversity outcomes.
3. Drained peatland, unless measures are undertaken to re-wet this land alongside the energy project.

3. Electricity generation from ocean energy

Activity description	Construction or operation of facilities that produce electricity from ocean energy.
Associated ANZSIC codes	• 2619 Other electricity generation • 3109 Other heavy and civil engineering construction
Green	Until 2030, all electricity generation activities from ocean energy are directly eligible.
Specific ineligible cases	A. Power plants dedicated to supporting fossil fuel infrastructure (e.g., operations of fossil fuel activities). B. Projects that result in degradation of land with high carbon stock.

4. Electricity generation from hydropower

Activity description	Construction or operation of facilities that produce electricity from hydropower.
Associated ANZSIC codes	• 2612 Hydro-electricity generation • 3109 Other heavy and civil engineering construction
Green	The activity complies with one of the following criteria: A. The electricity generation facility is a run-of-river plant and does not have an artificial reservoir. B. Until 2030, the power density of the electricity generation facility is above 5W/m^2.[11] C. Until 2030, the lifecycle emissions intensity of the generation of electricity from hydropower is lower than 100gCO_2e/kWh.
Specific ineligible cases	Power plants dedicated to supporting fossil fuel infrastructure (e.g., operations of fossil fuel activities).

[11] For avoidance of doubt, power density refers to the installed capacity of the power plant divided by the total surface area of the reservoir.

5. Electricity generation, including cogeneration of heating/cooling and power, from geothermal energy

Activity description	Construction or operation of facilities that produce electricity, including cogeneration of heating/cooling and power, from geothermal energy.
Associated ANZSIC codes	• 2619 Other electricity generation • 3109 Other heavy and civil engineering construction • 3233 Air conditioning and heating services
Green	Until 2030, the lifecycle emission intensity of the generation of electricity, including cogeneration of heating/cooling and power, from geothermal energy is less than 100gCO_2e/kWh. If the activity utilises carbon reinjection technology, it must comply with requirements set out in Appendix 1. Energy emissions related to CCU/CCS must be included in the GHG accounting.
Specific ineligible cases	A. Power plants dedicated to supporting fossil fuel infrastructure (e.g., operations of fossil fuel activities). B. The use of hydraulic fracturing to create Enhanced Geothermal Systems.

6. Electricity generation, including cogeneration of heating/cooling and power, from bioenergy

Activity description	Construction or operation of facilities that produce electricity from bioenergy.
Associated ANZSIC codes	• 2619 Other electricity generation • 3109 Other heavy and civil engineering construction • 3233 Air conditioning and heating services
Green	Bioenergy power generation must comply with all of the following criteria: A. Until 2030, the lifecycle emissions intensity of the generation of electricity from bioenergy is less than 100gCO_2e/kWh. B. Feedstock fulfills either of the following sets of criteria B1 or B2. B1. Bioenergy produced from waste and residues. Examples include: ○ Byproducts or waste from agricultural crops and residues (e.g., maize, wheat, straw, animal manure), forestry (e.g., logs, stumps, leaves and branches). ○ Wood-processing industries (bark, off-cuts, wood chips, sawdust). ○ Organic waste (e.g., municipal solid waste and sewage sludge).

	B2. Feedstock used for the generation of bioenergy which complies with one of the following standards: ○ Forest Stewardship Council (FSC) ○ Biomass Biofuels voluntary scheme (2BSvs) ○ Bonsucro (Better Sugarcane Initiative) ○ Roundtable of Sustainable Biomaterials (RSB) ○ Round Table on Responsible Soy (RTRS) ○ International Sustainability and Carbon Certification (ISCC and/or ISCC plus) ○ Agricultural biomass used in the activity complies with the criteria in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001 (the so called RED II Directive) ○ Forest biomass used in the activity complies with the criteria in Article 29, paragraphs 6 and 7, of Directive (EU) 2018/2001 (the so called RED II Directive) C. Leak detection and repair mechanisms and a plan to avoid and minimise gas leakages must be presented. D. If the activity utilises carbon capture and storage (CCS) or carbon capture and utilisation (CCU) technology, it must comply with requirements set out in Appendix 1. Energy emissions related to CCU/CCS must be included in the GHG accounting.
Specific ineligible cases	A. Power plants dedicated to supporting fossil fuel infrastructure (e.g., operations of fossil fuel activities). B. Power plants using native forest biomass as a feedstock.
Notes	This activity covers biogenic waste. Note the activity "waste to energy" related to treatment and disposal of non-hazardous waste is not in scope of this taxonomy as it is classified within the Waste sector.

7. District heating and cooling systems

Activity description	Construction, refurbishment, or operation of pipelines and associated infrastructure for distribution of heating and cooling, ending at the sub-station or heat exchanger.
Associated ANZSIC codes	• 3233 Air conditioning and heating services • 3109 Other heavy and civil engineering construction • 3231 Plumbing services • 3232 Electrical services • 5021 Pipeline transport

Green	All activities related to renewables-based district heating and cooling[12] are eligible.
Specific ineligible cases	The following are ineligible: A. Activities with GWP_{100} >10 refrigerants. B. Activities that introduce or extend the life of existing hydrofluorocarbons (HFC) refrigerants or blends or hydrochlorofluorocarbons (HCFC)-charged equipment.

8. Installation and operation of heat pumps

Activity description	Installation and operation of electric heat pumps, as well as thermal heat pumps using non-fossil sources of heat.
Associated ANZSIC codes	• 3109 Other heavy and civil engineering construction • 3233 Air conditioning and heating services
Green	Heat pumps use refrigerants that comply with all of the following requirements: A. Refrigerants are not chlorofluorocarbons (CFCs), HCFCs, HFCs, or blends. B. Refrigerants do not have a GWP_{100} >10.

9. Production of heating or cooling from waste heat

Activity description	Construction or operation of facilities that produce heat/cool using waste heat.
Associated ANZSIC codes	• 3109 Other heavy and civil engineering construction • 3233 Air conditioning and heating services
Green	All activities related to the production of heating or cooling from waste heat from non-fossil fuel operations are eligible.

10. Production of heating or cooling from solar thermal heating

Activity description	Construction or operation of facilities that produce heat/cool from solar thermal heating technology.

[12] Refer to Activities #9-#12 of the Energy component of the NZ Taxonomy as relevant.

Associated ANZSIC codes	• 3109 Other heavy and civil engineering construction • 3233 Air conditioning and heating services
Green	Until 2030, all production of heating/cooling activities from solar thermal heating are directly eligible.
Specific ineligible cases	A. Production of heating/cooling plants dedicated to support fossil fuel infrastructure (e.g., operations of fossil fuel activities). B. Projects that result in degradation of land with high carbon stock.

11. Production of heating or cooling from geothermal energy

Activity description	Construction or operation of facilities that produce heat/cool from geothermal energy.
Associated ANZSIC codes	• 3109 Other heavy and civil engineering construction • 3233 Air conditioning and heating services
Green	Until 2030, the lifecycle emission intensity of the production of heating/cooling from geothermal energy is less than 100gCO_2e/kWh. If the activity utilises carbon reinjection technology, it must comply with requirements set out in Appendix 1. Energy emissions related to CCU/CCS must be included in the GHG accounting.
Specific ineligible cases	A. Production of heating/cooling plants dedicated to support fossil fuel infrastructure (e.g., operations of fossil fuel activities). B. The use of hydraulic fracturing to create Enhanced Geothermal Systems.

12. Production of heating or cooling from bioenergy

Activity description	Construction or operation of facilities that produce heat/cool from bioenergy.
Associated ANZSIC codes	• 3109 Other heavy and civil engineering construction • 3233 Air conditioning and heating services
Green	Bioenergy power generation must comply with all of the following criteria:

	A. Until 2030, the lifecycle emissions intensity of the generation of electricity from bioenergy is less than 100gCO_2e/kWh. B. Feedstock fulfills either of the following sets of criteria B1 or B2. B1. Bioenergy produced from waste and residues. Examples include: ○ Byproducts or waste from agricultural crops and residues (e.g., maize, wheat, straw, animal manure), forestry (e.g., logs, stumps, leaves and branches). ○ Wood-processing industries (bark, off-cuts, wood chips, sawdust). ○ Organic waste (e.g., municipal solid waste and sewage sludge). B2. Feedstock used for the generation of bioenergy, which complies with one of the following standards: ○ Forest Stewardship Council (FSC) ○ Biomass Biofuels voluntary scheme (2BSvs) ○ Bonsucro (Better Sugarcane Initiative) ○ Roundtable of Sustainable Biomaterials (RSB) ○ Round Table on Responsible Soy (RTRS) ○ International Sustainability and Carbon Certification (ISCC and/or ISCC plus) ○ Agricultural biomass used in the activity complies with the criteria in Article 29, paragraphs 2 to 5, of Directive (EU) 2018/2001 (the so called RED II Directive) ○ Forest biomass used in the activity complies with the criteria in Article 29, paragraphs 6 and 7, of Directive (EU) 2018/2001 (the so called RED II Directive) C. Leak detection and repair mechanisms and a plan to avoid and minimise gas leakages must be presented. D. If the activity utilises carbon capture and storage (CCS) or carbon capture and utilisation (CCU) technology, it must comply with requirements set out in Appendix 1. Energy emissions related to CCU/CCS must be included in the GHG accounting.
Specific ineligible cases	A. Production of heating/cooling plants dedicated to supporting fossil fuel infrastructure (e.g., operations of fossil fuel activities). B. Production of heating/cooling plants using native forest biomass as a feedstock.
Notes	This activity covers biogenic waste. Note the activity "waste to energy" related to treatment and disposal of non-hazardous waste is not in scope of this taxonomy as it is classified within the Waste sector.

13. Transmission and distribution of electricity

Activity description	Construction, retrofitting, or operation of transmission and distribution networks for electricity. Demand-side flexibility solutions involving energy management systems and virtual power plants are within scope.
Associated ANZSIC codes	• 2620 Electricity transmission • 2630 Electricity distribution
Green	The activity must comply with one of the following criteria: A. Transmission and distribution infrastructure dedicated to a direct connection or an expansion of connection between power plants that all meet the electricity generation criteria defined in the NZ Taxonomy. B. Transmission and distribution infrastructure dedicated to an inter-country/region direct or grid connection to access existing or new power plants that meet the criteria for electricity generation defined in the NZ Taxonomy. C. Transmission and distribution infrastructure where until 2030, the average system grid emissions factor on a lifecycle basis is less than 100gCO_2e/kWh over a five-year rolling period.[13] D. All enabling ICT systems and smart management systems and those required to procure electricity that meet the Green criteria[14] as well as support demand-side flexibility are eligible.
Specific ineligible cases	Transmission and distribution infrastructure dedicated to connecting fossil fuel plants to the grid.

14. Transmission and distribution of renewable and low-carbon gases

Activity description	Construction, retrofitting, or operation of transmission and distribution networks for renewable and low-carbon gases. Renewable and low-carbon gases refer to non-fossil gases, including biogas, biomethane, hydrogen, and ammonia.
Associated ANZSIC codes	• 2700 Gas supply • 3109 Other heavy and civil engineering construction • 5021 Pipeline transport
Green	The activity must comply with all of the following:

[13] The system grid emissions factor is calculated as the total annual emissions from power generation connected to the system, divided by the total annual net electricity production in that system.

[14] Refer to Activities #1-#6 of the Energy component of the NZ Taxonomy as relevant.

	A. The activity consists of one of the following: a. Construction or operation of new transmission and distribution networks dedicated to 100% hydrogen and/or other low-carbon gases.[15] b. Conversion/repurposing of existing networks to 100% hydrogen.[16] c. Retrofit of gas transmission and distribution networks to enable the integration of eligible low-carbon gases which cannot technologically be injected into existing pipelines. B. The low-carbon gas is biogas, biomethane, low-carbon hydrogen and/or ammonia, which complies with the criteria for manufacturing of the corresponding gas specified in the NZ Taxonomy (to be developed). C. Leak detection and repair mechanisms and a plan to avoid and minimise gas leakages must be presented.
Specific ineligible cases	Pipelines directly connecting fossil methane gas extraction or processing facilities.

15. Remote and micro-grid systems

Activity description	Construction, retrofitting, or operation of remote, standalone, and islanded micro-grid systems for electricity.
Associated ANZSIC codes	• 2619 Other electricity generation
Green	The activity must comply with all of the following: A. Meet all of the following qualifying criteria: a. The system has no permanent connection to the grid. b. The system is less than 5MW in size. c. The system can be permanently or temporarily operated when it is not physically connected to the grid. B. The system operates on 95% or more renewable energy, comprising any/all of the eligible Energy activities scoped under the New Zealand Taxonomy, with associated activity criteria fulfilled. C. Evidence that fossil fuel back up is designed only to be used for: a. Back up purposes – i.e., operate only when renewable electricity resources are unavailable.

[15] For avoidance of doubt, minor amounts (for example, up to 2%) of trace gases, impurities, and non-fossil gases for reducing pipe embrittlement are allowed.
[16] As above.

	b. Restart purposes. D. The use of fossil fuels without a planned and/or actual replacement with low-emissions fuels in back-up generators, and/or deployment of battery storage is only eligible until 2030.

16. Storage of energy

Activity description	Construction or operation of facilities that store energy and return it at a later time in the form of electricity, thermal energy, and/or hydrogen. Demand-side flexibility solutions involving vehicle-to-grid (V2G) technologies are within scope. They include supporting infrastructure and software for fleet aggregation models, such as bi-directional chargers, telematics and IoT connectivity in vehicles, cloud-based control platforms for optimisation. They also include repurposed second life EV batteries for stationary energy storage. However, note that electric vehicles in their entirety are excluded.
Associated ANZSIC codes	• 2640 On selling electricity and electricity market operation • 3109 Other heavy and civil engineering construction • 3232 Electrical services
Green	The activity is the construction and operation of energy storage, including: A. Mechanical energy storage systems. B. Thermal energy storage systems. C. Pumped hydropower storage. D. Chemical energy storage systems, including: a. Electrochemical storage systems, including batteries and V2G technologies. b. Low-emissions fuels, including hydrogen or ammonia, which complies with the criteria for manufacturing of the corresponding product specified in the NZ Taxonomy *(to be developed)*.

17. Research, development and innovation of energy technologies

Activity description	Research, applied research and experimental development of Energy-related solutions, processes, technologies, business models and other products dedicated to the reduction, avoidance or removal of GHG emissions. The ability to reduce, remove or avoid GHG emissions in the target economic activities has at least been demonstrated in a relevant environment, corresponding to at least Technology Readiness Level (TRL) 5.

Associated ANZSIC codes	• 6910 Scientific research services • 6950 Market research and statistical services
Green	The activity fulfils all of the following criteria: A. The activity researches, develops or provides innovation for technologies, products or other solutions that are dedicated to either: a. One or more economic activities for which the technical screening criteria have been set out in the Energy sector of the New Zealand Taxonomy; or b. An Energy sector activity that is not yet included in the NZ Taxonomy, but which substantially contributes to climate change mitigation and until 2030 has a lifecycle emissions intensity lower than 100gCO_2e/kWh. B. The results of the research, development and innovation enable one or more of those economic activities to meet the respective criteria for substantial contribution to climate change mitigation, while respecting Do No Significant Harm (DNSH) criteria.[17] C. The activity aims to bring to market a solution that is either not yet in the market or that improves an existing market solution, fulfilling either one of the following requirements: a. The solution is expected to have a lifecycle GHG emissions performance that is better than the best commercially available technology with the same application and/or comparable technologies, based on public or market information. The implementation of the technologies, products or other solutions being researched results in overall net GHG emissions reductions over their lifecycle. b. The solution is expected to have a lifecycle GHG emissions performance that is at least in line with the best commercially available technology with the same application and/or comparable technologies. It should also provide new significant advantages, such as lower cost. D. Where the researched, developed or innovated technology, product or other solution is at TRL 5 to 7, lifecycle GHG emissions are evaluated in simplified form by the entity carrying out the research. The entity demonstrates one of the following, where applicable:

[17] For avoidance of doubt, research, development and innovation (RD&I) activities that come under criteria A(a) above should refer to their respective activity criteria for substantial contribution and DNSH. Activities that come under criteria A(b) should, until 2030, meet a maximum 100gCO_2e/kWh lifecycle emissions intensity threshold, while fulfilling the generic DNSH criteria. Compliance with DNSH criteria for both types of RD&I activities will be phased in at a later stage and is voluntary for this Taxonomy iteration.

	a. A patent not older than 10 years associated with the technology, product or other solution, where information on its GHG emission reduction potential has been provided; b. A permit obtained from a competent authority for operating the demonstration site associated with the innovative technology, product or other solution for the duration of the demonstration project, where information on its GHG emission reduction potential has been provided; or c. Lifecycle GHG emissions calculated using ISO 14067:2018 or ISO 14064-1:2018 and verified by an independent third party. E. Where the researched, developed or innovated technology, product or other solution is at TRL 8 or higher, lifecycle GHG emissions are calculated using ISO 14067:2018 or ISO 14064-1:2018 and are verified by an independent third party.

Appendices

Appendix 1: Carbon capture and storage (CCS)/carbon capture and utilisation (CCU) cross-cutting requirements

While the carbon capture rates may differ for each manufacturing activity and are specified under the relevant sections and activity cards, this appendix provides standardised criteria for the treatment of the captured CO_2 – including its transportation, storage, and utilisation.

The following transportation criteria (A) have to be adhered to in all cases, in addition to underground permanent geological storage criteria (B) for carbon reinjection or CCS technologies, and utilisation criteria (C) for CCU technologies.

(A) Criteria for the transportation of captured CO_2

To be eligible, all the following criteria have to be fulfilled:

A. The CO_2 transported from the installation where it is captured to the injection point does not lead to CO_2 leakages above 0.5% of the mass of CO_2 transported.
B. Appropriate leakage detection systems are applied and a monitoring plan is in place, with the report verified by an independent third party.

(B) Criteria for the underground permanent geological storage of captured CO_2

To be eligible, all the following criteria have to be fulfilled:

A. Characterisation and assessment of the potential storage complex and surrounding area, or exploration[18] is carried out in order to establish whether the geological formation is suitable for use as a CO_2 storage site.
B. For operation of underground geological CO_2 storage sites, including closure and post-closure obligations:
    a. Appropriate leakage detection systems are implemented to prevent release during operation.
    b. A monitoring plan of the injection facilities, the storage complex, and, where appropriate, the surrounding environment is in place, with the regular reports checked by the competent national authority.
C. For the exploration and operation of storage sites, the activity complies with ISO 27914:201722526 for geological storage of CO_2.

[18] "Exploration" means the assessment of potential storage complexes for the purposes of geologically storing CO_2 by means of activities intruding into the subsurface such as drilling to obtain geological information about strata in the potential storage complex and, as appropriate, carrying out injection tests in order to characterise the storage site.

(C) Criteria for the utilisation of captured CO_2

To be eligible, all the following criteria have to be fulfilled:

A. CO_2 must be used for the manufacture of durable products (e.g., polymers, construction materials stored in buildings).
B. CO_2 is not used for products that release the CO_2 immediately when the products are used (such as in urea, carbonated beverages, chemicals, and fuels).
C. CO_2 is not used for enhanced oil recovery, and the production of other forms of fossil energy sources.

The consultation is open from Monday 8 June – Friday 10 July 2026.

Please contact taxonomy@sustainablefinance.nz for any questions or assistance.