

Item: 18

Policy and Resources Committee: 25 November 2025.

Council Climate Change Study – Phase 1 Report.

Report by Director of Infrastructure and Organisational Development.

1. Overview

- 1.1. In September 2023, officers reported to the Policy and Resources Committee on progress towards the Council's climate change commitments and proposals for its Climate Change Strategy. A key action was to commission an independent study, funded by the Council's Crown Estate funds. This report provides an update on the study and initial outcomes, some of which are also relevant to the Council's annual Public Bodies Climate Change Duties report, which is the subject of a separate report). This work is a critical baseline initial step for the Council to prepare a Climate Change Strategy and Action Plan.
- 1.2. Following the Council's procurement process, Aether Ltd was appointed in August 2024, to undertake this study, working alongside Council officers. The consultant's report, attached at Annex 1, presents the findings from phase 1 of the work, including a review of the Council's baseline emissions data and the scope of the Council's Greenhouse gas (GHG) inventory.
- 1.3. Net-zero and decarbonisation are Council priorities with several climate change-related milestones featuring within the Delivery Plan. In October 2024, the Council supported the Community Planning Partnership in their draft 'Orkney Climate Resilient Net Zero Vision' as well as agreeing the following specific climate change statement for the Council:
 - Orkney Islands Council shall be a Net Zero Local Authority, collaborating and innovating for a just transition where Orkney's economy, communities and natural environment all prosper. We will focus on:
 - o Action and Ownership – to understand and reduce our emissions at the earliest opportunities;
 - o Collaboration and Co-ordination – across Council services and with partners and the community.
 - o Transparency – in the setting and addressing of our carbon targets; and
 - o Sustainability – building our resilience and adapting to the changing climate.

2. Recommendations

2.1. It is recommended that members of the Committee:

- i. Note the findings of the consultant's phase 1 report, attached as Annex 1 to this report.
- ii. Endorse the approach suggested by the Corporate Leadership Team, namely that the Council should progressively work through and address the consultant's recommendations and forthcoming statutory guidance, as summarised in section 4 of this report.
- iii. Agree that the Council's new baseline year for emissions reporting will be financial year 2023/24.
- iv. Note that the Council's Greenhouse gas emissions inventory for future Public Bodies Climate Reporting will this year increase in scope to include additional emission sources of commuting, Fluorinated gases (F-gases), water consumption, and treatment, and from tenanted properties and Social Housing.

3. Background

3.1. The study commenced in August 2024. Progress has been slower than originally planned, primarily due to the unexpected level of detailed information identified through the early phases of work. This extra detail will result in a stronger and more reliable basis from which the Council can move forward.

3.2. The study by Aether Ltd has progressed in two phases, including an initial review of the Council's carbon baseline, scope and data (1+2 below) followed by a study to inform and identify indicative transition pathways to achieving net zero. There are 5 specific tasks being investigated, with the final report due in January 2026. The phase 1 report is focused upon task 1 and 2 outcomes:

1. Review proposed Inventory 'Scope' – professional / independent view.
2. Review and confirmation of baseline emissions.
3. Develop the Business-as-usual emissions projection for OIC.
4. Develop OIC Transition Pathways (projections / scenarios) to net zero.
5. Neutralise / compensate for OIC residual emissions.

3.3. The Aether report on tasks 1 and 2 is attached at Annex 1. Work was undertaken with contributions from officers including a visit to Kirkwall by the consultants in December 2024, meeting officers across service areas and gathering feedback. Further on-line sessions have been held in June and October 2025.

- 3.4. In February 2025, the Scottish Government launched a consultation – ‘Climate change duties - draft statutory guidance for public bodies. The Council submitted a response to the consultation, following consideration by the Policy and Resources Committee on 22 April 2025. Certain points in the draft guidance are as expected, and the consultant’s report has considered these. An example is the Government’s publication of an improvement plan in response to recommendations by Environmental Standards Scotland, to phase in and make reporting of certain indirect (Scope 3) emissions mandatory.

4. Key Points from Consultant’s Report

- 4.1. The Corporate Leadership Team (CLT) has considered the outcomes from the consultants’ initial report and officers are now working through and addressing recommendations which will form part of the final phase report (through delivery of existing operational and delegated functions across Directorates). This involves joint working between Directorates (supported via the Climate Change officer group), and the Director of Infrastructure and Organisational Development is leading on overseeing delivery of the documentation and data management findings. The current approach to data management will continue (central coordination) and will be supported by a sub-group of the Climate Change officer group.
- 4.2. In addressing the report’s outcomes, the Council’s Greenhouse Gas (GHG) inventory, as reported into the official platform in Scotland for public bodies climate change reporting, has now increased in scope, reflecting good practice and developments in national guidance. Some indirect Scope 3 emissions are now included such as from commuting (at this stage an estimate). Other additions include Fluorinated gases (F-gases), emissions from water consumption and treatment, and the emissions from tenanted properties and Social Housing. The GHG Protocol Corporate Standard classifies a company’s GHG emissions into three ‘scopes.’ Scope 1 emissions are direct emissions from owned or controlled sources. Scope 2 are indirect emissions from the generation of purchased energy. Scope 3 are all indirect emissions (not included in scope 2) that occur in the value chain of the reporting company, including both upstream and downstream emissions.
- 4.3. In relation to the Council’s GHG inventory for reporting into the official platform, it will in future be necessary to consider other Scope 3 emissions for inclusion (for example as associated with procurement and pensions). In response to an Environmental Standards Scotland Investigation, a Scottish Government Improvement Plan proposes a proportionate and phased approach to introducing the reporting of Scope 3 emissions by Local Authorities, stating that the proposed actions will add value to the current reporting framework, enhance the information

gathered by Local Authorities and help Local Authorities identify actions that can be taken to reduce their GHG emission impact.

- 4.4. The consultants have advised that it is best practice to use a recent or latest full year of data when setting a baseline for emissions projections, as this ensures the accuracy and relevance of the proposed GHG reduction pathways. The current emissions baseline year for the Council is 2004/05 which is not now consistent with national guidance (which indicates a baseline year should be from 2015/16 onwards). In the case of Orkney Islands Council, the most recently reviewed and submitted inventory year was 2023/24. The annual emissions for that year, along with additional emission sources (4.2 above) have therefore been used as a new baseline year for the Council's emissions and for informing subsequent decarbonisation pathways (i.e. the following tasks 3-5 in this study). This advice regarding updating the Council's emissions baseline year, is further explained in section 4.3 of Aether's report at Annex 1.
- 4.5. Although UHI Orkney will now be included in the Council's net zero baseline (for purposes of net zero projections), the bodies will continue to report their annual emissions separately into the official platform in Scotland for public bodies climate change reporting. This provides continuity and transparency in those annual submissions. Accompanying narrative reporting in these annual disclosures will explain these arrangements.

5. Legislative position

- 5.1. Local authorities in Scotland have legal duties under the Climate Change (Scotland) Act 2009 to contribute to achieving Scotland's national climate change targets. The duties are set out in section 44(1) of the 2009 Act and require that a public body must, in exercising its functions, act –
- (a) in the way best calculated to contribute to the delivery of emissions reduction targets (i.e. mitigation).
- (b) in the way best calculated to help deliver any statutory climate change adaptation programme.
- and do this in a way that it considers most sustainable.
- 5.2. The Climate Change (Duties of Public Bodies: Reporting Requirements) (Scotland) Order 2015 mandates annual reporting in respect of the section 44 Climate Change Duties introduced by the Climate Change (Scotland) Act 2009.

- 5.3. The Climate Change (Emissions Reduction Targets) (Scotland) Act 2019, and the Climate Change (Scotland) Act 2009, established a legal framework for Scotland's climate change policies and targets. The 2019 Act significantly increased the ambition of Scotland's emissions reduction targets, aiming for net-zero emissions by 2045. Legislation was further updated by the Climate Change (Emissions Reduction Targets) Act 2024.

6. Next Steps

- 6.1. The Council is addressing the consultant report outcomes, with oversight from the Director of Infrastructure and Organisational Development. Data management remains centrally coordinated and will be supported by the Climate Change Officer Subgroup. The Council's greenhouse gas inventory has expanded to include additional emission sources. Orkney College UHI is now part of the Council's net zero study but will continue with separate annual reporting in relation to public bodies Climate Change duties. The final report from the consultants (addressing final tasks 3-5) is now expected in January.

For Further Information please contact:

Nick Blyth, Climate Change Strategy Officer, extension 3314, Email nick.blyth@orkney.gov.uk

Implications of Report

1. **Financial:** No financial implications arising directly from the recommendations of the report. Any proposed new actions in the future will need to be assessed and either met from approved budgets, or from specific budget approvals and/or successful external funding applications.
2. **Legal:** None directly related to the report recommendations. The Council's Climate Change duties are outlined in section 5 of this report.
3. **Corporate Governance:** Improving the Council's understanding and management of its emission sources is important in helping the Council to address its climate change targets and also in contributing towards the Community Planning Partnership's shared vision of what net zero will mean for Orkney.
4. **Human Resources:** None directly.
5. **Equalities.** None.
6. **Island Communities Impact:** None.
7. **Links to Council Plan:** The report addresses a milestone in the Council's Delivery Plan related to updating the Council's emissions baseline and in relation to the following Council Plan strategic priorities:
 - ☒ Growing our economy.

- ☐ Strengthening our Communities.
 - ☐ Developing our Infrastructure.
 - ☒ Transforming our Council.
- 8. Links to Local Outcomes Improvement Plan:** Updating the Council's emissions baseline and inventory helps to ensure the Council has effective and relevant information and can therefore contribute to outcomes for communities as outlined in the following Local Outcomes Improvement Plan priorities:
- ☐ Cost of Living.
 - ☒ Sustainable Development.
 - ☐ Local Equality.
 - ☐ Improving Population Health.
- 9. Environmental and Climate Risk:** Report updates on the Council's emissions
- 10. Risk:** None directly.
- 11. Procurement:** None directly. Phasing in mandatory scope 3 reporting will likely influence future procurement.
- 12. Health and Safety:** None directly.
- 13. Property and Assets:** Property and assets are included in the emissions baseline.
- 14. Information Technology:** None directly.
- 15. Cost of Living:** None directly

List of Background Papers

[The Greenhouse Gas Protocol Corporate Accounting and Reporting Standard](#)

[Consultation on draft Statutory Guidance for public bodies: putting the climate change duties into practice – Scottish Government, February 2025.](#)

[Public bodies climate change duties - draft statutory guidance: consultation analysis - final report – Scottish Government, September 2025.](#)

Annex

Annex 1 - Aether Ltd Task 1 and 2 report: Review of proposed scope and confirmation of baseline emissions for Orkney Islands Council.

Task 1 and 2 Report: Review of proposed scope and confirmation of baseline emissions for Orkney Islands Council

February 2025



Title	Task 1 and 2: Interim Report: Review of proposed inventory scope and confirmation of baseline emissions for Orkney Islands Council
Customer	Orkney Islands Council
Recipient	Nick Blyth
Report Reference	3417 Orkney Net Zero Transition\Work\Tasks 1 and 2\OIC Net Zero Transition - Task 1 2 report FINAL.docx
Report Status	Final
Revisions	V6

Author(s)	Jill Mitchell, Susie Wright, Harper Robertson
Reviewed by	Katie King
Signature	
Date	17/02/2025

Company Details:	Aether Ltd Oxford Centre for Innovation New Road Oxford OX1 1BY UK Registered in England 6630896
Contact:	enquiries@aether-uk.com +44(0)1865 261466 www.aether-uk.com

Contents

Summary and recommendations	1
1 Introduction	2
1.1 Background to the study	2
1.2 Purpose and structure of this report.....	2
2 GHG accounting: Terminology and core principles	3
2.1 Terminology used in GHG accounting	3
2.2 What sources of emissions do Scottish Local Authorities need to report?	4
2.3 Core principles of GHG accounting	4
3 Methodology for Tasks 1 and 2.....	5
4 Task 1: Review of the proposed scope of the inventory.....	6
4.1 Defining an organisational boundary	6
4.2 Sources of emissions included in the inventory.....	7
4.3 Baseline year	13
4.4 Implications for OIC	13
5 Task 2: Review of available data and confirmation of OIC baseline emissions.....	14
5.1 Data quality.....	14
5.2 Calculation methods	14
5.3 Emission factors.....	15
5.4 Documentation and transparency	15
5.5 Data management	15
6 Conclusion	16
Appendix A: Data quality analysis	17
Appendix B: Accounting for renewable energy.....	18

Summary and recommendations

Aether has been commissioned by Orkney Islands Council (OIC) to provide:

- *“An independent review of the Authority’s carbon baseline (both scope and data); and*
- *A study to inform and identify indicative transition pathways to achieving net zero,”*

This report summarises the results of Tasks 1 and 2 of the study, which address the first bullet point. It will feed into future work to assess GHG reduction measures and model transition pathways (Tasks 3, 4 and 5), which will inform the Council’s climate change action planning towards net zero.

In summary, our recommendations are:

- **Setting the organisational boundary** – It is recommended that an operational control approach is taken to developing the inventory to best capture emissions that the Council has most control over (see section 4.1 for further detail).
- **Changes to the scope of the inventory** – Possible scope extensions have been suggested in section 4.2, prioritisation and the details of these are subject to further consultation with OIC officers. One scope extension, in line with the operational control boundary decision, is to include all tenanted assets in Scope 3. There is currently inconsistent coverage of these assets by the inventory. Therefore a key recommendation is to take a more consistent approach to the inclusion of activity data for tenanted properties and assets, or explain the rationale for their exclusion.
- **Baseline year** – 2023/24 as baseline year is the most recent and likely most representative of the current estate. It is recommended that this is used for the purpose of modelling future GHG reduction pathways in Tasks 3 and 4 of this project. Further detail can be found in section 0.
- **Inventory data review** – Overall, the existing inventory was found to be robust, and the calculation methodologies were easily auditable. Most of the data is high quality primary and secondary data. There are a few instances of estimated data, which is acceptable in this context provided that any assumptions are documented in a transparent way. It was noted that fuel types within a category are often aggregated before an emission factor has been applied, leading to the emission factor for one fuel being applied for all. This would need to be rectified in future reporting. Going forward, any differences across the time series or between the net zero baseline and other OIC carbon reporting, should be made transparent (an example from past years is that Orkney College was initially included but later excluded from OIC figures after 2018/2019 due to separate national reporting requirements for Public Bodies). Some additional work will be required to increase documentation and outline assumptions and considerations as appropriate to be transparent. Our data review is summarised in Section 5.

The above changes have some implications for OIC in terms of target setting and progress monitoring.

- **Target setting:** As new sources of emissions are scoped into OIC’s inventory, the Council will need to make a determination as to whether or not they are subject to a net zero target.
- **Progress monitoring:** OIC has previously reported GHG emissions savings as a percent (%) reduction compared to emissions in 2004-05. Stakeholders will need to be made aware that a different baseline year has been used for the purpose of this study.

1 Introduction

1.1 Background to the study

The Climate Change (Scotland) Act 2009 was amended in 2019 to require Scottish emissions of greenhouse gases (GHGs) to reach net zero by 2045. In line with this, all Scottish Local Authorities have a duty to take action on climate change. Orkney Islands Council (OIC) declared a Climate Emergency in 2019 and, through the adopted Council Plan 2023-28, has confirmed a high level of ambition for achieving net zero in advance of the national target date. Although OIC is embracing this challenge, the Council has acknowledged that they are currently “*below the pace required within recognised net zero aligned approaches.*”¹ There is a need for further, accelerated action.

The services that the Orkney Islands Council provides, and the potential solutions that it could adopt to mitigate greenhouse gas (GHG) emissions, are almost unique among UK Local Authorities due to the island’s remote nature which often demands additional infrastructure, resilience and forward-planning, alongside the need to optimise the use of existing assets. Hence, this project aims to provide a tailored evidence base, trajectory and transition scenarios and action options to inform future decision-making.

Our review is informed by best practice principles of GHG accounting and national reporting requirements in Scotland. Where applicable, it has sought to take account of relevant developments in climate change reporting in order to prepare the Council; for more information, see **Section** Error! Reference source not found.. The recommendations and information provided within this study will feed into the Council Climate Change Strategy and Action Plan, building on existing GHG emissions reporting and the projects already underway in the OIC Carbon Management Plan (CMP).

1.2 Purpose and structure of this report

This report is the first deliverable for the project, outlining the findings from Tasks 1 and 2.

- **Task 1** involved conducting an independent **review of the proposed scope of OIC’s GHG inventory** in line with guidance set out in the internationally-recognised GHG Protocol Corporate Accounting and Reporting Standard,² which also largely underpins the guidance for the Scottish Public Bodies Climate Change Duties Annual Reporting co-ordinated by the Sustainable Scotland Network (SSN).³ The findings are presented in **Section 4**, along with references to other international standards relevant to GHG accounting and target setting.
- **Task 2** was to review the data sources used to inform OICs CMP and Public Bodies Climate Change Duties Report (PBCCDR) to check for gaps and issues, and validate the assumptions made. This provides an **independent review of OIC’s inventory**. The findings are presented in **Section 5**.

These tasks have identified a number of recommendations for improving the OIC GHG inventory. Some of those improvements will be incorporated into the modelling carried out in Tasks 3 and 4 of this

¹ <https://www.orkney.gov.uk/Files/Committees-and-Agendas/Policy-and-Resources/PR2023/PR19-09-2023/Item%2024%20Climate%20Change%20Strategy.pdf>

² <https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>

³ <https://sustainablescotlandnetwork.org/uploads/store/mediaupload/1879/file/PBDR%20Guidance%202022%20Final%20pdf.pdf>

project, while others are for OIC to consider for subsequent years. These are included in **Section** [Error! Reference source not found.](#).

2 GHG accounting: Terminology and core principles

2.1 Terminology used in GHG accounting

2.1.1 Units of measurement

Greenhouse gases (GHGs) are gases in the Earth's atmosphere that trap heat, thus contributing to climate change. Carbon dioxide (CO₂), methane (CH₄) and nitrous oxide (N₂O) are the primary GHGs, but there are others, such as hydrofluorocarbons (HFCs), perfluorocarbons (PFCs), sulphur hexafluoride (SF₆) and nitrogen trifluoride (NF₃).⁴

These gases have different effects on the atmosphere over set time periods. For example, one tonne of methane has a different impact on temperature rise, or global warming potential (GWP), than one tonne of carbon dioxide. 'Carbon dioxide equivalent' or CO₂e is a measure used to compare the emissions from various GHGs based on their GWP. It represents the amount of CO₂ that would have to be emitted to have the equivalent global warming effect over a specified time period, allowing easier comparison of emissions from different GHGs.

2.1.2 Scope 1, 2 and 3 emissions

In GHG accounting, it is standard practice to group emissions into different categories or 'scopes'. This is done in order to clarify which sources of emissions arise directly or indirectly from an organisation's activities, and which ones they have the most control over. It also helps to avoid double-counting between different organisations. The table below provides definitions of these scopes, with relevant examples for OIC.

Table 1: Definitions of GHG accounting scopes

Scope	Definition	Examples
Scope 1	Direct GHG emissions from sources owned or controlled by OIC	Burning fossil fuels within Council buildings e.g. gas fired boilers or petrol and diesel in fleet vehicles
Scope 2	Indirect GHG emissions from the consumption of purchased electricity, steam or other sources of grid-distributed energy	Electricity used across the Council estate – council offices, EV charging points and street lighting/CCTV
Scope 3	Other GHG emissions that occur indirectly from OIC's activities	Emissions from staff working from home and commuting, or from operations which are run by a third party (e.g. Pickaquoyleisure Centre or from waste disposal).

⁴ <https://naei.beis.gov.uk/overview/ghg-overview>

2.2 What sources of emissions do Scottish Local Authorities need to report?

Guidance from the Sustainable Scotland Network (SSN) states that all relevant Scope 1 and 2 emissions must be reported in the Public Bodies Climate Change Duties annual reporting.⁵

There is currently no mandatory list of Scope 3 emissions to be included, but SSN recommends that as a minimum, emissions from waste, water supply, water treatment and business travel should be reported.

Following an investigation by Environmental Standard Scotland (ESS) into how well Local Authorities are supported with their Public Bodies Climate Change Duties Reporting (PBCCDR), Scope 3 reporting requirements will change in the coming years.⁶ In addressing this incoming requirement, Scope 3 emissions categories have been collated by ESS into three groups:

- Those that are more practical and feasible to report (Group 1: fuel and energy related activities not in scopes 1 or 2; waste generated in operations; business travel; employee commuting including homeworking);
- Those where more collaboration and resource will be required (Group 2: purchased goods and services; capital goods; upstream leased assets; downstream leased assets; investments); and
- Those that require further research (Group 3: downstream distribution and transportation; processing of sold products; use of sold products; end-of-life treatment of sold products; franchises).

It is anticipated that, in 2025, mandatory reporting of Group 1 will be taken forward as part of wider legislative amendments of an Amendment Order. A focus group will be established in spring 2025 to share best practices and create a standardised methodology for reporting Group 2 categories. In spring 2026, work will begin with local government partners to develop a training program for emissions reporting. Finally, in autumn 2025, independent researchers will be commissioned to evaluate the value for money of reporting Group 3 categories and develop data-gathering methods if needed.

Given these developments nationally, the above group 1+2 (indirect) emissions will need to be reported by OIC in future. At this stage, there is no requirement for these to be automatically included into LA targets. It would, however, be appropriate for OIC to prepare for these additions and to consider if these should also be included in the net zero targets.

2.3 Core principles of GHG accounting

In simple terms, a GHG inventory is produced by collecting data on OIC's activities ('activity data') and applying a relevant emission factor to convert this to GHG emissions.

For example, calculating emissions from the use of electricity involves multiplying data on kilowatt-hours (kWh) of electricity used by the emission factor (kgCO₂e/kWh) for electricity, which will depend on the technology or type of fuel used to generate the electricity. The formula in that case would be:

⁵ <https://sustainablesotlandnetwork.org/uploads/store/mediaupload/1879/file/PBDR%20Guidance%202022%20Final%20pdf.pdf>

⁶ <https://www.gov.scot/publications/scottish-government-improvement-plan-response-environmental-standards-scotland-investigation-climate-change-delivery-improvement-report/pages/1/>

Electricity use (kWh)	×	Emission factor (kgCO ₂ e/kWh)	=	Emissions (kgCO ₂ e)
-----------------------	---	---	---	---------------------------------

Where primary data are unavailable, it is acceptable to use alternative estimation methods, provided that the assumptions are clearly documented. In those instances, stakeholders should be made aware of the limitations of the chosen methodology, and where possible plans should be made for data collection improvements.

Estimating GHG emissions from an organisation’s activities is inherently complex due to the different ownership and operational structures involved, and the need to collect data from a range of stakeholders both within OIC and along the supply chain. Inevitably there will be uncertainties and gaps in the data, and judgment will need to be applied to determine how to address those challenges. The GHG Protocol Corporate Standard sets out best practice principles for carbon accounting that act as a framework for doing this.



Relevance

Ensure the GHG inventory appropriately reflects the GHG emissions of the company and serves the decision-making needs of users – both internal and external to the company.



Completeness

Account for and report on all GHG emission sources and activities within the chosen inventory boundary. Disclose and justify any specific exclusions.



Consistency

Use consistent methodologies to allow for meaningful comparisons of emissions over time. Transparently document any changes to the data, inventory boundary, methods, or any other relevant factors in the time series.



Transparency

Address all relevant issues in a factual and coherent manner, based on a clear audit trail. Disclose any relevant assumptions and make appropriate references to the accounting and calculation methodologies and data sources used.



Accuracy

Ensure that the quantification of GHG emissions is systematically neither over nor under actual emissions, as far as can be judged, and that uncertainties are reduced as far as practicable. Achieve sufficient accuracy to enable users to make decisions with reasonable assurance as to the integrity of the reported information.

Note: All definitions are taken from the GHG Protocol Corporate Standard.

3 Methodology for Tasks 1 and 2

Aether has undertaken an independent review of OIC’s emissions inventory and of OIC’s internal scoping review. Our approach to GHG emissions accounting is in line with the internationally-recognised GHG Protocol Corporate Reporting Standard and the related Scope 2 Standard and Scope 3 Emissions

Reporting Standard.^{7,8,9} This also underpins the guidance for the Scottish Public Bodies Climate Change Duties Annual Reporting co-ordinated by the SSN although there are some minor differences, e.g. in the way that renewable energy is accounted for which will be clearly explained in our final report.

Task 1: To determine which activities should be included in the inventory, beyond the mandatory reporting requirements for Scope 1 and Scope 2 emissions, a materiality assessment can be undertaken to determine which sources of emissions are relevant and could feasibly be included in the inventory. This takes into account the likely scale of emissions, OIC's level of influence over the activity, and data availability. OIC commenced an assessment internally and provided Aether with a draft scoping document which Aether has reviewed and supplemented. The recommendations in **Section 4** of this report build on the contents of that scoping document and complete this assessment.

Task 2: OIC also provided Aether with spreadsheets containing the activity data and calculations that have been used to produce the GHG inventory as part of OIC's Public Bodies Duties Reporting. Aether has in-house QA procedures and checks which it uses when undertaking reviews of GHG inventories which the team applied to the documents OIC provided. Observations and queries were recorded in a summary sheet which Aether and OIC staff reviewed together via Teams to resolve issues.

4 Task 1: Review of the proposed scope of the inventory

The following section outlines recommendations for defining the scope of the OIC GHG inventory.

4.1 Defining an organisational boundary

The organisational boundary determines which entities and assets are included in an organisation's GHG inventory. Within the GHG protocol guidance, there are three possible approaches that can be taken to defining organisational boundaries:

1. **Equity share approach** – Under this approach an organisation accounts for GHG emissions from operations according to its share of equity in the operation. For example, emissions from any asset the organisation owns partially or wholly would be included in scope 1 as direct emissions, whereas emissions from an asset owned by another organisation and leased by OIC would fall into scope 3.
2. **Financial control approach** – An organisation accounts for 100 percent of the GHG emissions over which it has financial control within its scope 1 and 2 emissions. The organisation has financial control over an operation if it can direct the operation with a view to gaining economic benefit. It does not account for GHG emissions from operations in which it owns an interest but cannot gain economic benefit although those can be reported within scope 3.
3. **Operational control approach** – An organisation accounts for 100 percent of the GHG emissions over which it has operational control within its scope 1 and 2 emissions. It does not account for GHG emissions from operations in which it owns an interest but does not have operational control although those can be reported within scope 3. For example, in this case, investments would fall into scope 3 as they are not controlled by the organisation but if the

⁷ <https://ghgprotocol.org/sites/default/files/standards/ghg-protocol-revised.pdf>

⁸ <https://ghgprotocol.org/scope-2-guidance>

⁹ <https://ghgprotocol.org/corporate-value-chain-scope-3-standard>

organisation is operating a facility it would generally be able to implement policies there and hence has operational control.

Under either the financial or operational control boundary it will be possible to report the same range of emissions overall, but there may be differences in whether emissions are classified as Scope 1, 2 or 3.

- *As an example, consider energy use associated with buildings that are owned by OIC and leased out, where OIC pays the bills but the tenant operates the building. Under a financial control approach, those emissions would be classed as Scope 1 or 2 because the Council exerts control via its spending power. Under an operational control approach, those emissions would be classed as Scope 3, reflecting that the Council only has indirect influence over operations.*

In choosing the boundary, consideration should be given to how the inventory data will be used to set and measure progress against targets, how it will be used to inform and evaluate policy, and whether sufficient data is available for the relevant sectors.

Following discussions with OIC officers and review of datasets in light of future emission reduction policy and action generation, **it is recommended that OIC takes an operational control approach to their GHG inventory.** This should allow the Scope 1 and 2 inventory classes to best represent the widest range of assets and operations that OIC has control over and hence is able to most directly reduce emissions from.

Under this approach, emissions from tenanted assets would be included in the inventory under Scope 3, thus allowing data to be used and collected to inform policy around the aspects of these assets where OIC does have some control – for example building retrofit – but also allowing more flexibility where data are not available.

4.2 Sources of emissions included in the inventory

Having proposed the organisational accounting approach, the next step in producing the inventory requires identifying direct and indirect emissions associated with OIC's operations. Here we have built on OIC's draft GHGI scoping document to produce recommendations. In addition to following the principles of the GHG protocol (See **Section 2.3**), this activity has sought to:

- Include, as a minimum, all GHG sources that are within the existing Carbon Management Programme along with all sources that are within the annually reported disclosures by OIC for Public Bodies Climate Change Duties Reporting (the latter being more extensive).
- Address known gaps relative to the public bodies' requirement (for example water).
- Consider for inclusion other / indirect sources where OIC has strong control or influence, in line with the GHG Protocol Corporate Standard and other requirements in Scope 3 reporting.
- Also (as far as possible) to reflect developments underway by the Scottish Government in terms of forthcoming Scope 3 requirements and also the developing statutory Climate Change guidance for public bodies.

Suggested changes are listed in **Table 2: Recommended changes to Scope 1, 2 and 3 reporting for OIC.** Note that these assume that an operational control approach is taken. For brevity, we have not listed areas where the scope is expected to remain the same such as vehicle fleet emissions.

Table 2: Recommended changes to Scope 1, 2 and 3 reporting for OIC

Source of emissions	Recommendation	Rationale
Scope 1 & 2 emissions:		
Emissions associated with electricity used at council provided EV charge points	This is currently included in OIC's Scope 2 as emissions from energy consumption in council owned property. If the data can be sufficiently disaggregated, it is recommended that OIC seek to differentiate between electricity used in buildings vs. vehicles. Electricity use in non-OIC vehicles should then be deducted from the OIC inventory calculation. A further example of information to be subtracted from total electricity consumption, is OIC's provision of electricity (cold ironing) to the MV Hamnavoe Northlink ferry, at its mooring in Stromness.	OIC is effectively serving the function of an energy retailer, selling EV charge to the public; it does not operate all of the vehicles that use the electricity.
Fugitive emissions of f-gases (refrigerants)	Currently f-gases are not recorded as a full inventory by OIC. Emissions from equipment leakage are collected via maintenance contracts. These are to be reported in the baseline year. This should be included in OIC's Scope 1. OIC should establish an inventory of equipment / installations where f-gases are used. It should establish / formalise monitoring and collecting of data. Note that the contribution from f-gases would be expected to increase in future due to a) increasingly formalised monitoring and b) further uptake of heat pumps and possibly air conditioning in coming decades. Note, these are generally only reported for equipment that require re-gassing (such as air conditioning) and not items such as domestic refrigerators.	These are direct emissions from OIC facilities and arguably should be included for the sake of completeness. It is acknowledged that this may be a small source of emissions and data may not be available, and therefore it may not be a high priority in terms of future improvements.
Scope 3 emissions:		
Energy consumption in selected Council owned tenanted buildings – excluding council housing	As far as data allows, all tenanted buildings including the farms should be included in the GHG inventory, for the sake of completeness.	A consistent approach is needed for including tenanted buildings in the inventory, whilst acknowledging data limitations. This approach

Source of emissions	Recommendation	Rationale
		would allow for the impacts of any OIC action to reduce emissions (e.g. via building upgrades) to be captured in Scope 3.
Renewables	For the purpose of PBCCD reporting, OIC should continue to follow SSN guidance on how to account for renewable energy generation. For other purposes, it is recommended that OIC follow GHG Protocol Scope 2 guidance on this topic. See Appendix B for further information.	This approach ensures that OIC's GHG inventory within the PBCCDR is consistent with the Scottish Government's requirements, while also ensuring that the current study is aligned with international standards.
Water consumption across Council Buildings (non-domestic properties)	Include in Scope 3 for all properties operated by OIC. Where data is available, OIC can optionally report on water consumption by tenants. Note, this refers to emissions from water supply and wastewater treatment. Emissions from water heating will be included with emissions from other heat supply (fossil fuels or electricity).	Data has been made available and SSN guidance recommends that emissions associated with water consumption and water treatment should be included in annual statutory reports as Scope 3 emissions.
Council housing	Include council housing emissions from electricity and heating supply in Scope 3. Consider also including emissions associated with water use (water supply and wastewater treatment) if possible.	If based on metered data, this would be useful as a way to track the impacts of policies implemented to improve housing, e.g. building retrofits and heating system replacements. If it is based on an estimate (as is currently the case) then the impacts of mitigation measures may or may not be captured. However, its inclusion is still recommended as a way of reminding decision-makers that they should take action on these emissions.
Marine services	Included as per existing OIC emission reporting but consider the situation regarding Scope 3 emissions / any developments. Where there are sources of emissions reported in the Orkney Island Harbours GHG Emissions Inventory that are not included in	Since marine services are a major source of emissions, it is important to try to understand in more detail.

Source of emissions	Recommendation	Rationale
	the OIC PBCCDR, then confirm with Marine Services team whether this will be included in public reporting by Marine Services in future years. It will be important for any reporting to be transparent and cross referenced with OIC reporting.	
Transport services	Include school bus data into Scope 3 if further data becomes available.	Further refinement of transport emission source.
Waste	One recent addition by OIC within the PBCCDR has added a separate calculation of emissions from shipping waste to Shetland. Aether has checked the OIC approach used in 2022/23. The methodology for calculating emissions from waste transportation is acceptable but there are two points that merit attention: (a) The OIC PBCCDR inventory only includes an estimate for waste produced by OIC's own operations, which assumes that it is a set percentage of total area-wide waste. That estimate is now out of date. OIC should look to test the accuracy of this assumption and update it where possible. However, given that OIC has overall responsibility for waste collection in the islands, it could report the emissions from all waste collection and management for which it has responsibility within its own Scope 3. The key point is that any future action plan should to consider opportunities to reduce OIC's own operational waste, and reduce emissions from waste management processes that OIC is responsible for. (b) The Shetland Islands Council (SIC) PBCCDR for 2022/23 says that the reported waste emissions include "Total waste into ERP incl. Orkney, Mainland Scotland (RDF), all waste from Shetland" which means that these emissions may be double-counted when SSN aggregates the GHG emissions estimates for public bodies. OIC does not need to change its own calculation approach but this should be noted within the PBCCDR in the interest of transparency and, optionally, OIC officers could make SIC officers aware of the issue.	Waste is a minimum requirement for Scope 3 reporting under SSN guidance. Orkney wide domestic and commercial waste are currently included in the Carbon Management Plan but not in the OIC inventory for PBCCDR.

Source of emissions	Recommendation	Rationale
Procurement	In future, OIC should seek to include procurement emissions within its inventory, subject to available data. Aether has spoken with the procurement team and has been sent their sustainability criteria and documents for assessing priority contracts. Procurement have confirmed spend data will be provided to Aether to identify the largest areas of spend – due January 2025. This will be used to estimate the scale of emissions from different contracts using spend-based emission factors in the first instance. Those, in turn, will be used to establish which sources of emissions are likely to be the largest and therefore aid in prioritising which ones should be the focus of more detailed analysis by OIC in future years.	Target areas where emissions are likely to be highest in the first instance and identify data availability. As set out in Section 2.2, in future the Scottish Government will expand Scope 3 emissions reporting for public bodies so undertaking this analysis now puts OIC in a good position to respond to those requirements once they are introduced.
Pensions	OIC already reports on its pension fund annually. As part of this work, Aether will provide an order of magnitude estimate of the potential scale of emissions associated with this source, drawing on published evidence from Make My Money Matter.¹⁰ It is acknowledged that this will only provide a rough estimate; there is relatively little published data on carbon emissions from pension providers. However, the information can be used by OIC to engage with decision-makers and pension provider to seek better data and explore sustainable options.	This often represents one of the largest areas of Scope 3 emissions, and OIC may have an ability to influence it through choice of pension provider.
Joint ventures	Under the operational control approach, if OIC has operational control over any joint ventures, the GHG emissions should be reported under Scope 1 or 2 as appropriate. Otherwise, they should be reported under Scope 3 and prorated according to OIC's share of the joint venture, subject to data availability.	These should be included in the inventory in the interest of completeness. It is acknowledged that OIC's level of influence may be minimal.

¹⁰ https://makemymoneymatter.co.uk/wp-content/uploads/2022/09/FTSE100-hidden-emissions-report-MMMM_SW_R2_.pdf

Source of emissions	Recommendation	Rationale
Other scope 3	Working from Home (WFH): National average benchmarks per FTE working hour are available and these are pre-populated within the PBCCDR spreadsheet so OIC should continue to use those for that purpose. Recognising that they may not be relevant to the Orkney context, OIC could voluntarily choose to derive an uplifted factor for the purpose of its own internal information. This could be done by comparing typical annual emissions from residential properties in the UK as a whole against those in Orkney, drawing on sub-national fuel consumption statistics and/or Home Analytics data. Commuting: It is recommended to include commuting where data allows. This would require a staff travel survey to be carried out (possibly a survey in combination with home working). It is recommended that OIC keep abreast of future developments following ESS recommendations from the Scottish Government on Scope 3 reporting (see Section 2.2).	For WFH and commuting, the Scottish Government's view is that reporting these could increase their visibility and help contribute to organisational and national GHG reduction targets. Furthermore, estimating these emissions is considered by the Scottish government to be 'practical and feasible' and is proposed (planned) to become a mandatory requirement in future. ¹¹

Although the Scottish Government has developed guidance on land-based carbon¹², public bodies are not required to report emissions from land management, land use change and carbon removals (e.g. from woodland creation or peatland restoration) within their PBCCDRs. The GHG Protocol has developed a pilot version of guidance on this topic which is expected to be finalised in 2025.¹³ For that reason, it is not necessary for OIC to assess and report those emissions or removals. However, an estimate of potential future sequestration (in Orkney) will be produced for this study under Task 5.

¹¹ <https://www.gov.scot/scottish-government-improvement-plan-response-environmental-standards-scotland-investigation-climate-change-delivery-improvement-report.pdf>

¹² <https://sustainablescotlandnetwork.org/news/offsetting-guidance-published-for-public-bodies>

¹³ <https://ghgprotocol.org/land-sector-and-removals-guidance>

4.3 Baseline year

It is best practice to use the most recent year when setting up a baseline for emissions projections as this ensures the accuracy and relevance of the proposed GHG reduction pathways.

In the case of Orkney Islands Council, the most recent reviewed and submitted inventory year is 2023/24. It is therefore recommended to use 2023/24 as the basis for calculations in Tasks 3 and 4.

However, it is important to recognise that OIC has previously reported GHG emissions reductions against a different baseline year. Because the 2023/24 inventory would have a different scope, it would not provide a like-for-like comparison against earlier documents. For organisations that have a GHG reduction target of *less than* 100%, the baseline year makes a significant difference in the ability to track progress. However, if the target is net zero (i.e. a 100% reduction) then this is not as relevant because it is easy to determine whether or not the target has been met. For the purpose of reporting against earlier GHG reduction targets, OIC can therefore:

- Accept that the change in scope makes a like-for-like comparison difficult and explain why this is the case, noting that it will not inhibit the ability to track progress against a net zero target;
- Retrospectively calculate GHG emissions in previous years in line with the scope of the 2023/24 inventory (noting this will only be possible with estimates being added on the additions to the inventory); or
- Produce an alternative (shadow) version of the 2023/24 inventory that matches the scope of the previous baseline. Council Officers would be able to continue to report progress based on the former inventory and method. Note that this would be out of scope of the current study.

Given that OIC's target (and that of the Scottish Government) is to achieve net zero emissions, it is suggested that recalculation is not necessary, but as above can be informative for broader progress monitoring by OIC.

4.4 Implications for OIC

The above changes have some implications in terms of target setting and progress monitoring which OIC stakeholders should be aware of.

- **Target setting:** As new sources of emissions are scoped into OIC's inventory (for example as national reporting requirements change), the Council will need to make a determination as to whether or not they are subject to a net zero target. Most targets set in advance of 2045 will be voluntary targets, in which case it will be up to OIC to decide what to include, although it is recommended to include Scopes 1 and 2 at minimum. When setting targets, OIC is advised to refer to relevant guidance for Scottish public bodies in the first instance, and may also refer to the principles set out in the Science-Based Target Initiative (SBTi), or the GHG Protocol which underpins it. Note that if OIC decides to sign up to a scheme such as SBTi, then those schemes may have additional, specific requirements about what the target should cover. The next stages of this project will evaluate decarbonisation pathways, which can be used to inform that decision.

- **Progress monitoring:** OIC has previously reported GHG emissions savings as a percent (%) reduction compared to emissions in 2004-05. As discussed in the previous section, there are a few ways OIC can address this. Stakeholders will need to be made aware that a different baseline year has been used for the purpose of this study. This will be clearly explained in Aether’s reporting as part of Tasks 3, 4 and 5.
- **Accounting for renewable energy:** Different standards take different approaches on how to account for renewable electricity within GHG inventories (for more information, see Appendix B). In simple terms, some standards would allow OIC to subtract the renewable electricity it generates and exports (e.g. from solar PV or wind turbines) from the total amount of electricity that it consumes, and some do not. There is a discrepancy between current SSN guidance, which takes the former approach, and the GHG Protocol Scope 2 standard, which takes the latter approach. The key implication for OIC is that the choice of accounting method could affect estimates of OIC’s GHG emissions and therefore affect the apparent feasibility of achieving different GHG reduction targets. If carbon savings from renewables *are* included, a net zero target might appear to be easier to achieve, even if there is no difference from a practical or cost standpoint. On one hand, this would allow OIC to claim credit for the renewable energy it funds, which some might see as an advantage. On the other hand, OIC could be criticised if it uses renewable energy projects to claim that it has achieved net zero, if there are still avoidable emissions occurring within its own assets and services. This issue will be clearly explained in the Task 3&4 report so that readers can correctly interpret the recommendations and any accompanying figures.

5 Task 2: Review of available data and confirmation of OIC baseline emissions

The activity data and emission factors used in the Orkney Islands Council Historic Emissions inventory were reviewed. Full details of the review, calculation appraisal, and outstanding questions are outlined in the accompanying spreadsheet [OIC Historic activity data and emission factor analysis.xlsx]. This section provides a brief summary of the main outcomes from the activity data and emission factor appraisal.

5.1 Data quality

An assessment of the data quality, methodology and calculations was undertaken. The majority of data used in the Orkney Islands Council Historic Emissions inventory is of good quality, either primary or secondary data, as shown in **Appendix A**.

5.2 Calculation methods

Overall, the calculation methods were found to be robust, with clear audit trails within the spreadsheet provided. There were some issues found in the data aggregation and calculation methodologies which should be addressed:

- Firstly, it was common for different fuel or activity types to be aggregated before applying emission factors, resulting in a loss of accuracy of emissions estimates. For example, the category “Construction and Waste processing” includes detailed information on gas oil, kerosene, DERV and unspecified fuel usage. However, in the final emissions estimate, a diesel

emission factor is used for all the activity data. This has relatively little impact on the emissions estimate for these activities because these fuels have similar emission factors; however, if the same categories are aggregated in future, it is anticipated that the error will increase as some activities are electrified and/or switch to renewable energy sources. It also represents a loss of information from high-quality activity data.

- Another issue identified in several categories was the inclusion and exclusion of Orkney College at different points in the timeseries. For example, for Electricity Metered Orkney College is excluded from 2018/19 and for Fuel Use Heating Oil Orkney College is excluded from 2016/17. This exclusion is related to the introduction of Public Bodies Climate Change Duties reporting, with UHI and OIC making separate disclosures. Moving forward, OIC and the College will need to clarify which organisation reports emissions from the College. The College should report its own emissions as this is required by the Scottish Government, but optionally both organisations could include it in their PBCCDR if this is clearly explained, with OIC reporting it as Scope 3 and the College under Scopes 1, 2 and 3 as relevant. An alternative option would be for OIC to exclude the college in PBCCDR returns but to include the college in net zero progress reporting. Whichever option OIC chooses to take, to minimise confusion, this would require a transparent narrative explanation in the respective reports.

5.3 Emission factors

All the emission factors used for the Public Bodies Climate Change Reporting were reviewed. Although they were compared to the UK GHG Conversion factors, there was not a consistent match across years (see accompanying spreadsheet).

5.4 Documentation and transparency

There are some key areas where documentation should be added to improve transparency, consistency, comparability and completeness, notably:

- Recording units for all the activity data throughout the document.
- In the interest of longevity, documenting the main source of data and contact details ensures that activity data can be collected in the future.
- Documenting assumptions for any estimated or modelled data, as well as data aggregation techniques and the rationale behind these.

Good documentation and transparency are important as a way of ensuring that OIC's current GHG reporting processes can be maintained in the event of staff absence or turnover.

5.5 Data management

At present, responsibility for compiling the GHG emissions inventory largely sits with one individual. Going forward, OIC should review this arrangement and consider whether the responsibility for managing and compiling data can or should sit with a wider group and/or have a more formal structure for data reporting processes. There would be a few benefits of doing this, notably:

- Having a broader structure and more individuals responsible for data management can often raise the profile of climate change reporting. Being more involved in the data compilation and reporting can increase stakeholders' sense of urgency and ownership of the sources of emissions that they are responsible for.
- It also helps to ensure that systems and processes are maintained in the event of staff turnover or unavailability.

6 Conclusion

This combined task report provides suggestions and recommendations regarding the organisational boundary of the inventory, proposed and possible changes to inventory scope and to the baseline year. A review of baseline data for 2023/24 has also been carried out.

Through this process, it was evident that OIC has relatively advanced in-house procedures for GHG accounting, and that a considerable amount of detailed consideration had been given to the GHG inventory re-scoping exercise. That puts the Council in a very good position to undertake more detailed climate action planning going forward.

This review has identified some areas for improvement, primarily in relation to the need for further documentation, which would improve transparency and ensure that the inventory can be maintained in the event of staff changes etc.

Appendix A: Data quality analysis

Error! Reference source not found. summarises the categories in the Orkney Islands Council Historic Emissions inventory. All the activity data collected were analysed at a sub-category level using the following definitions (listed from highest to lowest quality):

- Primary data – measured activity data that can be used to estimate emissions with minimal assumptions (e.g. metered data).
- Secondary data – measured activity data that can be used to estimate emissions with assumptions (e.g. mileage).
- Modelled data – other data is used to create an estimate of activity data through assumptions, conversions and mathematical modelling (e.g. linear extrapolation, pro rating).
- Estimated data – total activity data is estimated using individual judgment.

Table 3: Data quality analysis for each of the Orkney Islands Council historic emission categories.

Category	Sub-category	Scope	Units	Data quality
Electricity	Metered	Scope 2	kWh	Primary data source
Electricity	Unmetered	Scope 2	kWh	Estimated/modelled data until 2021, primary metered data from 2021/22
Fuel Use	Heating oil	Scope 1	Litres	Primary data source
Fuel Use	LPG	Scope 1	Litres	Primary data source
Transport	Construction and Waste processing	Scope 1	Litres	Primary data source
Transport	Ferry Fleet	Scope 1	Litres	Primary data source
Transport	Tugs	Scope 1	Litres	Primary data source
Transport	Harbour Craft	Scope 1	Litres	Primary data source
Transport	Inter-island air transport	Scope 1	Litres	Estimated data
Transport	Public Transport Bus Fleet	Scope 1	Litres	Estimated data
Business Travel	Domestic Flights	Scope 3	Passenger km	Secondary data source
Business Travel	Long-haul Flights	Scope 3	Passenger km	Secondary data source
Business Travel	Ferry	Scope 3	Passenger km	Secondary data source
Business Travel	Business Mileage	Scope 3	km	Secondary data source
Waste		Scope 3	kg	Primary data source
Water (in progress)		Scope 3	m ³	Primary data source

Appendix B: Accounting for renewable energy

This section provides a brief explanation of the difference in approach between the GHG Protocol Scope 2 Guidance, and SSN guidance which supports the PBCCDRs.

GHG Protocol Scope 2 guidance

Under the GHG Protocol Scope 2 guidance, renewable electricity is accounted for differently depending on several factors, as summarised in Table 6.1 of the GHG Protocol Scope 2 guidance.¹⁴ Some of the key considerations are:

- Does the renewable electricity feed into the grid?
- Is it connected to OIC's premises via a private wire?
- Are renewable energy certificates produced, and if so, are they sold or retained/retired by OIC?

There is a key distinction made in the GHG Protocol Scope 2 guidance between the following two methods:

- **location-based method**, which reflects the average emissions intensity of grids on which energy consumption occurs (using mostly grid-average emission factor data); and
- **market-based method**, which reflects emissions from electricity that companies have purposefully chosen (or their lack of choice). This 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.

It is understood that OIC-owned wind farms will feed into the grid, with no private wire connection to OIC premises, and that the REGO certificates¹⁵ will be sold to a third party. If that is the case, then under the GHG Protocol, OIC would not be able to claim the carbon savings from those wind farms, based on the market-based method. However, this would not prevent OIC from reporting and publicising the fact that it has invested in renewable electricity, which is a positive measure that can help to support wider decarbonisation of energy and reduce reliance on energy imports while also raising awareness of climate change issues.

If the energy from OIC-owned wind farms is not grid distributed, but is instead consumed by OIC, with no certificates produced, or with certificates being retired/retained by OIC, then OIC could count that specific electricity consumption as being effectively zero carbon, using the market-based method.

Table 4 below, taken from the *GHG Protocol Scope 2 Guidance: An amendment to the GHG Protocol Corporate Standard*, Table 6.1, presents the details of different options for energy consumed from owned/operated generation, direct line and grid distribution. OIC is advised to refer to this table, and

¹⁴ <https://ghgprotocol.org/sites/default/files/2023-03/Scope%20%20Guidance.pdf>

¹⁵ Renewable Energy Guarantee of Origin (REGO) certificates are an example of a renewable energy certificate, which can be used to demonstrate that electricity has been generated from renewable sources. <https://www.ofgem.gov.uk/environmental-and-social-schemes/renewable-energy-guarantees-origin-rego>

the associated guidance, to determine how renewables should be accounted for within its GHG inventory in future years.

Table 4: GHG Protocol Scope 2 Guidance: an amendment to the GHG Protocol Corporate Standard Table 6.1

Table 6.1 Accounting for scope 2 with and without certificates sales

	Scope 2 with location-based method	Scope 2 with market-based method
Energy consumed from owned/operated generation (e.g. a company owns a solar panel and consumes the energy)		
No certificates generated or sold	No scope 2 reported for consumption from owned generation	
Certificates from generation facility retired/retained by the generation facility's owner who consumes the energy	Should report certificate retention separately, but no scope 2 reported for consumption of on-site generation	
Certificates sold to 3rd party	Use location-based emission factor hierarchy	Use market-based emission factor hierarchy
Direct line (e.g. a company receives power directly from a generator, with no grid transfers)		
No certificates generated or sold	Use source-specific emission factor from direct line	
Certificates from generation facility purchased and retired/retained by the energy consumer	Use source-specific emission factor from direct line (same as certificate emission factor)	Use certificate emission factor (same as source-specific emission factor)
Certificates sold to 3rd party	Use location-based emission factor hierarchy	Use market-based emission factor hierarchy
Grid-distributed		
No certificates generated or sold from any generation facilities on the grid	Use location-based emission factor hierarchy	Use market-based emission factor hierarchy
Certificates purchased from grid generation facilities, or included in a supplier-specific emission factor	Use location-based emission factor hierarchy	Use market-based emission factor hierarchy
Certificates from grid generation facilities sold to 3rd parties	Use location-based emission factor hierarchy	Use market-based emission factor hierarchy

SSN guidance

Although the SSN guidance is generally informed by the GHG Protocol, the current guidance would allow OIC to claim carbon savings from renewables in the following way:

"If the organisation exports electricity (e.g. generation exceeds consumption) this can be 'netted off' (up to the total amount of electricity purchased and consumed) and deducted from the footprint."

It is unclear whether this guidance would apply to renewables that are owned by OIC but feed into the grid with no direct connection to the council's other properties. Aether has sought advice from SSN on this point (expected in January 2025) and will feed it back to OIC to inform future PBCCDRs.

Comments

In relation to the Council as an organisation, if carbon savings from renewables *are* reflected in OIC's inventory, a net zero target will be easier to achieve, assuming OIC windfarm projects proceed. On one hand, depending on how contracts are set up, this could allow OIC to claim credit for the renewable energy it invests in. However, on the other hand, OIC could be criticised for using renewable energy projects to help claim that it has achieved net zero, if there are still avoidable emissions occurring within its own assets and services. One possible option here is for 'dual reporting' whereby carbon values are presented using both methods, and showing two different totals, with a clear explanation for readers.

This GHG accounting issue will be clearly explained in the Task 3&4 report so that readers can interpret the recommendations and any accompanying figures and with further reference to relevant international standards and methods (for example the GHG Protocol, which underpins both the SSN guidance and the Science-Based Targets initiative Corporate Net Zero Standard).