Carbon Neutral Britain™

Carbon Neutral Britain Certification™

IS PRESENTED TO

Hughes Network Systems Limited

Certified Carbon Neutral

APRIL 2025 - MARCH 2026

This certificate is to verify that Hughes Network Systems Europe has met all Carbon Neutral Britain Certification™ standards in measuring, calculating and carbon offsetting organisational carbon emissions selected within the Scope 1, 2 and 3 GHG emissions boundary during the period of 1st January 2024 to 31st December 2024.

Certificate No: BCNB - 05308

Calculations made following the ISO 14064-1:2018 and GHG Protocol Emissions Standards.
Credits Issued from one or more of the International Carbon Offsetting standards:

Christina Willoughby

CHRISTINA WILLOUGHBY
Credit Officer

James Poynter

JAMES POYNTER
Director

United Nations Framework Convention on Climate Change
Verified CER

Verified Carbon Standard
A VERRA STANDARD

Gold Standard for the Global Goals

Hughes Network Systems Limited

Carbon (GHG) Emissions Report

2024

Completed by Carbon Neutral Britain Ltd

January 2025

Project No: 4452

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1 - Message from Carbon Neutral Britain™

It has never been more important for businesses to step up and take account of the environmental impact associated with their operations.

"We are delighted to partner with Hughes Network Systems Limited to help identify and offset their environmental impact for 2024 and beyond."

James Poynter
Director - Carbon Neutral Britain

In the UK, businesses account for over 85% of total GHG emissions - making corporate action the number one priority in helping stop climate change.

Looking to do their part for the environment, Hughes Network Systems Limited engaged with Carbon Neutral Britain in September 2024, with the ambition to measure and offset the total organisation emissions - to become Carbon Neutral.

As a company that specialises in delivering highly available managed network services, it was identified that the main emissions were to occur from energy usage on site within the reporting period.

2 - Carbon Emissions Summary

Organisation	Hughes Network Systems Limited
Reporting Period	1st January 2024 - 31st December 2024
Consolidation Approach	Operational Control
Base Year	2023/24 (first year of calculation)
Total Emissions	1233.29 Tonnes of Carbon Dioxide Equivalent

2.1 Emissions Table

Scope 1:

Stationary or Mobile Combustion Source	104.22	kg CO2e
Mains Gas	45,911.56	kg CO2e
Company Owned/Leased Vehicles	63,648.90	kg CO2e
Refrigerant Gas Loss Recharge	54,353.00	kg CO2e
Total	164,017.68	kg CO2e
Total (Tonnes)	164.02	t CO2e

Scope 2:

Total Organisation Energy Usage on Site	769,971.43	kg CO2e
Total Electric Vehicle Energy Usage	-	kg CO2e
Total	769,971.43	kg CO2e
Total (Tonnes)	769.97	t CO2e

Scope 3:

Total Organisation Energy Usage WFH	42,296.75	kg CO2e
Organisation Waste	10,934.97	kg CO2e
Business Travel (not using owned/leased Vehicles)	10,147.43	kg CO2e
Staff Commuting (not using owned/leased Vehicles)	43,787.28	kg CO2e
Business Hotel or Event Activities	2,357.30	kg CO2e
Organisation Water Usage	260.42	kg CO2e
Transmission & Distribution Losses	43,877.72	kg CO2e
Well to Tank	145,640.60	kg CO2e
Total	299,302.47	kg CO2e
Total (tonnes)	299.30	t CO2e

Total

Total Organisation Emissions	1,233.29	t CO2e

3 - Context

3.1 The purpose of this report

This Carbon Emission Report will measure and calculate the total Greenhouse Gas (GHG) Emissions produced directly and indirectly from the organisations activities. Compulsory for Large Organisations as part of their Streamlined Energy and Carbon Reporting (SECR), HM Government encourages all organisations to take action and measure their emissions on a voluntary basis - as the most effective tool in monitoring and reducing an organisations climate impact.

GHG Emission (also referred to as Carbon Footprint) Calculation, Offsetting and Reducing are now the most popular method for businesses to make an environmental impact as part of their Corporate Social Responsibility policies due to the accurate and measured methodologies, providing complete transparency about their climate impact and resulting actions. Annual emissions reports are regularly used by organisations to track their progress in achieving emissions reductions across the business over time, and in many cases helps identify areas within the business that produce the most emissions - as an area to focus and improve.

Most importantly of all, carbon emission reports also help identify an organisations total carbon footprint - measured in tonnes of carbon dioxide equivalent (tCO2e), a set unit to ensure carbon offsetting is accurate, and will reverse the organisations environmental impact to achieve carbon neutral status - increasingly important for customers, shareholders, employees and other stakeholders.

3.2 The Kyoto Protocol Greenhouse Gases (GHGs)

Seven Greenhouse Gases are calculated as part this emissions report, known as the seven Kyoto Protocol GHGs. These gasses occur the most often as a result of business activities, with the highest Global Warming Potential. For the purposes of emissions reporting, these gases are simplified and measured in the unit of tonnes of carbon dioxide equivalent (tCO_2e). The Global Warming Potential (GWP) of these gases are not the same however, which creates the unit equivalence compared to carbon dioxide over a period of 100 years (shown below). The latest AR5 values have been used.

GHG	Formula	GWP (CO_2e)
Carbon Dioxide	CO_2	1
Methane	CH_4	28
Nitrous Oxide	N_2O	265
Hydro fluorocarbons	HFCs	Depends on specific gas
Sulphur hexafluoride	SF6	23,500
Perfluorinated compounds	PFCs	Depends on specific gas
Nitrogen trifluoride	NF_3	16,100

3.3 Calculating Emissions & Emissions Factors

The emissions calculations have been made using client-supplied activity data, with assumed full disclosure of all relevant and necessary information. The data received (such as energy usage in Kwh, or vehicle mileage) are then multiplied by the relevant emissions factors from published and reputable sources. Depending on the needs of the organisation the emissions factors used in some cases are scientific research journals or independent studies, but in most cases are from HM Government publications. Most commonly used - UK Government Conversion Factors for Company Reporting (Year: 2023, Expiry: 10/06/2024, Version 1.1) - DBEIS / DEFRA). Any assumptions or estimations of relevant data are published within this report.

3.4 Reporting Standards

GHG emissions reports are most widely carried out in accordance with the ISO 14064:1-2018 and GHG Emissions Protocol Accounting and Reporting Standards, whose methodologies have been used in the creation of this report.

The International Organisation of Standardisation (ISO) created the ISO 14064 standard in 2006, updating in 2018 to specify the principles and requirements at the organisational level for the quantification and reporting of greenhouse gas (GHG) emissions and removals. It includes requirements for the design, development, management, reporting and verification of an organization's GHG inventory.

The "Greenhouse Gas Protocol - Corporate Accounting and Reporting Standard" (GHG Protocol, 2011) developed in a partnership of the World Business Council for Sustainable Development (WBCSD) and the World Resource Institute (WRI) follow a similar methodology mirroring those of the ISO standard.

Using the two most widely recognised and used emission standards in the world, ensure all measurements, calculations and subsequent offsetting are completed to the most regulated and accurate standards possible.

3.4 Scopes of Emissions

Using the ISO 14064 and GHG Emissions Protocol Standards, business emissions are identified using three scopes of emissions:

Scope 1 (Direct emissions)

Activities owned or controlled by the organisation that release emissions straight into the atmosphere.

For manufacturing business these would be emissions from equipment and machinery used in production. Businesses that own or lease vehicles are also included within scope 1. For many office-based businesses, scope 1 emissions are usually very small.

Scope 2 (Energy indirect)

Emissions being released into the atmosphere associated with the consumption of purchased electricity, heat, steam and cooling. These are indirect emissions that are a consequence of the organisation's activities - but occur at sources that the business does not own or control.

These emissions would be the energy usage by the organisation and staff working at sites under the operational control of the business.

Scope 3 (Other indirect)

Emissions that are a consequence of business activity, which occur at sources which are not owned or controlled, which are not classed as scope 2 emissions.

Scope 3 emissions can be quite broad, including areas such as waste management, business travel, staff commuting, events, the emissions produced from delivery to and from the organisation (including third party delivery services), transmission and distribution losses associated with electricity usage, and well to tank emissions from combustion fuels.

3.5 Radiative Forcing

Radiative forcing (RF) is a measure of the additional environmental impact of aviation. These include emissions of nitrous oxides and water vapour when emitted at high altitude.

HM Government guidance recommends organisations should include the influence of radiative forcing RF in air travel emissions to capture the maximum climate impact of their travel habits. As such, radiative forcing has been included within the emission factor calculations of air travel within this report and future reports, where applicable.

3.6 Quality and Accuracy

The accuracy of a GHG assessment is directly related to the quality of the activity data provided, and for this assessment and report, 'primary data' (such as electrical usage in Kwh for the reporting period), have been used wherever possible. 'Secondary data' in the form of estimates, extrapolations and/or industry averages has been used when primary data is not available - to provide as accurate estimates of emissions as possible.

In addition, this report has been completing following the WRI GHG Protocol principles of relevance, completeness, consistency, transparency and accuracy.

4 - Methodology

4.1 Business Introduction

Carbon Neutral Britain was engaged by Hughes Network Systems Limited in order to measure and calculate the organisation's total carbon footprint for 2023/24, with the purpose of offsetting their total organisation emissions - to become Carbon Neutral.

As a company that specialises in delivering highly available managed network services, it was identified that the main emissions were to occur from energy usage on site within the reporting period. Due to hybrid working, staff worked from home, of which the energy usage from home was also calculated.

4.2 Operational Boundary and Data

Using the operational control consolidation approach was determined as the best method for Hughes Network Systems Limited, due to the standard business structure and business practices. As a result, the following scope of data was collected.

Scope 1 - Stationary and Mobile Source Emissions (equipment and quantity combusted), Company Owned and Leased Vehicles (vehicle type and distance travelled), Refrigerant Gas Losses (refrigerant type and new/disposed units) for the organisation only.

Scope 2 - Energy (electricity, imported heat, steam in kwh) from the office and vehicles, using the location based method.

Scope 3 - Homeworking Energy (Days), Water (consumption and waste volume), Waste (landfill, recycled and composted weight), Business Travel (type and distance), Staff Commuting (average distance and type), Hotel Stays (UK, Europe or Worldwide days), Transmission and Distribution losses associated with electricity usage (kwh) and Well To Tank emissions from combustion fuels (volume combusted).

4.3 Assumptions and Estimations

Where primary emissions data could not be collected, the following assumptions and estimations were used:

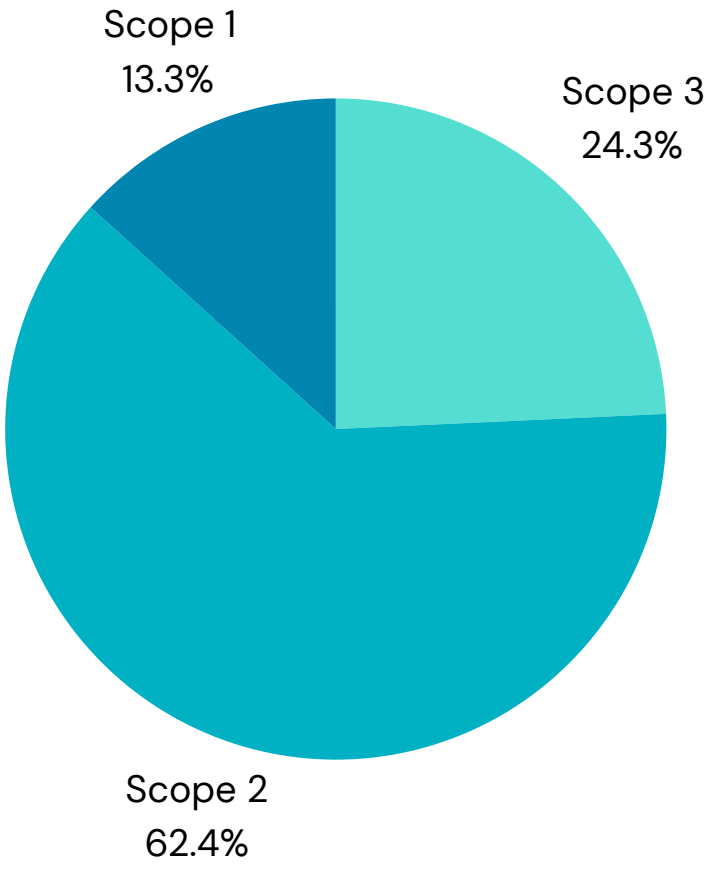
- Vehicle emissions were calculated using Defra vehicle categories and HM Government Emission Factors (2024).
- Throughout the reporting period, some staff worked remotely from home. Due to the unknown primary energy data from staff at home, the energy usage was calculated based on the number of days staff worked, assuming 8 hours per day.
- Waste figures were estimated based on staff days within the organisation.
- Transmission and distribution losses associated with electricity usage, as well as 'well to tank' emissions from combustion fuels were included in the assessment.
- Any incidental emissions less than 1% from the sources measured were not included within this report.

5 - Results

5.1 Summary

Hughes Network Systems Limited
Carbon (GHG) Emissions

Reporting Period - 01/01/24 - 31/12/24



164.02
Scope 1
Direct Emissions

769.97
Scope 2
Energy Indirect

299.30
Scope 3
Indirect Other

Total
Carbon
Footprint

1233.29 tCO2e

GHG Emissions 2024 - 1233.29 tCO_2e
GHG Emissions per FTE - 11.21 tCO_2e

Completed January 2025

5.2 Emissions by Scope

164.02

Scope 1
Direct Emissions

The main Scope 1 emission occurred from refrigerant gas. Other emissions occurred from stationary or mobile combustion sources, mains gas usage, and company owned/leased vehicles & the mileage completed within the reporting period and combustion sources.

769.97

Scope 2
Energy Indirect

All Scope 2 emissions occurred from electricity consumption within the reporting period. No other Scope 2 emissions occurred.

299.30

Scope 3
Indirect Other

The main Scope 3 emissions occurred from well to tank emissions. Other emissions occurred from the energy consumption from staff working at home (these emissions were attributed 'additional' energy consumption that would not have otherwise occurred at home), waste, business travel, business hotel stays, staff commuting, water usage, and transmission and distribution losses.

6 - Carbon Neutral Certification

6.1 Carbon Neutral Status

In January 2025, Hughes Network Systems Limited offset their carbon footprint to become certified as a Carbon Neutral Business by Carbon Neutral Britain.

As certification awarded by an external organisation, it provides assurance that the carbon neutral claim is robust and credible, following calculation using the ISO 14064 and GHG Protocol Emissions Standard principles of relevance, completeness, consistency, transparency and accuracy.

Carbon Neutral Status has been awarded to the organisation for a period of 12 months.

It is recommended the organisation completes an annual calculation of its environmental impact and emissions in 2024, to further monitor and evaluate emissions changes after implementing reduction strategies, in addition to offsetting and maintaining carbon neutral status.

6.2 Carbon Offsetting Projects

Through the Carbon Neutral Britain Climate Fund™, Hughes Network Systems Limited has offset its total carbon emissions through internationally certified carbon offsetting projects.

Certified via the Verra - Verified Carbon Standard (VCS), the Gold Standard - Voluntary Emission Reductions (VER) or the United Nations - Certified Emission Reductions (CER) programmes, the projects have also been selected based on their direct and indirect impact around the world - not just in offsetting, but also in supporting education, employment and clean water, as well as having net positive impact on the local wildlife and ecology.

As the three largest, and most regulated voluntary offsetting standards used by organisations and even countries in their emissions reductions - all measurements and tonnes of CO_2e offset are accurate, and verified.

An example of projects supported include:

Project 2151: Household Solar Lighting in Zambia

Project 2112: Wind Power in Karnataka

Project 2256: Elazig Solar Farm in Turkey

Project 1165: Salkhit Wind Farm in Mongolia

7 - Carbon Reduction Plan (CRP)

7.1 Reduction Overview

IPCC studies (and COP discussions) have highlighted the importance of businesses making a difference in the next 5 years before changes to the climate are irreversible, and by Carbon Offsetting and becoming Carbon Neutral, Hughes Network Systems Limited is proactively doing its part for the planet now - when it is the most important.

In addition to Carbon Offsetting and Carbon Neutral status - it is recommended that Hughes Network Systems Limited takes further action to reduce its future emissions - as much as practically possible. By reducing all avoidable emissions to zero - the organisation will achieve Net Zero status.

7.2 Science Based Targets

As part of the 2015 Paris Agreement, world governments committed to curbing global temperature rise to well-below 2°C above pre-industrial levels, and pursuing efforts to limit warming to 1.5°C. In 2018, the IPCC warned that global warming must not exceed 1.5°C to avoid the catastrophic impacts of climate change.

It was agreed that to achieve this, GHG emissions must halve by 2030 – and drop to Net Zero by 2050. In order to align with these Science Based Targets - Hughes Network Systems Limited must commit to reducing half of its GHG emissions by 2030, and to achieve Net Zero by 2050.

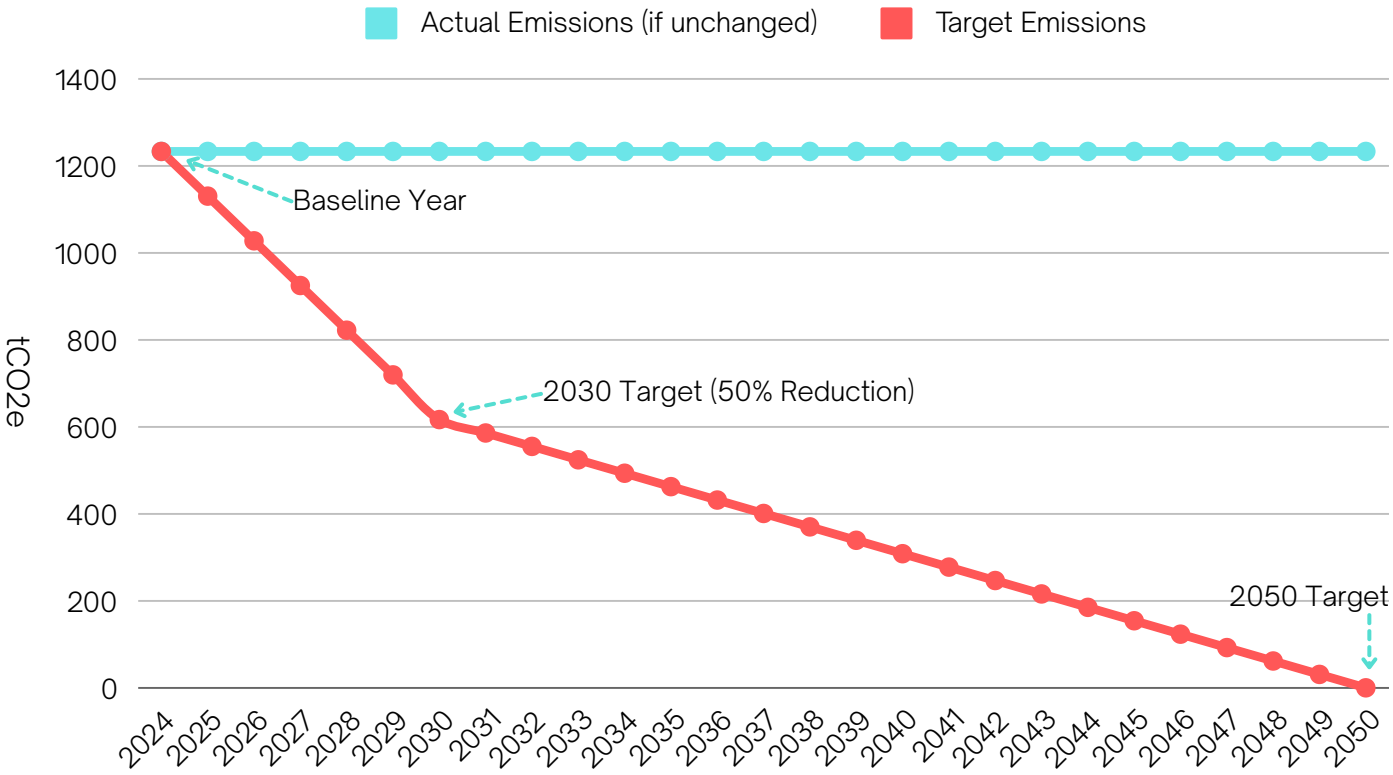
7.3 Procurement Policy Note 06/21

The UK Government amended the Climate Change Act 2008 in 2019 by introducing a target of at least a 100% reduction in the net UK carbon account (i.e. reduction of greenhouse gas emissions, compared to 1990 levels) by 2050. This is otherwise known as the 'Net Zero' target.

To aid in this target, UK suppliers to government contracts are required to meet the requirements of Procurement Policy Note (PPN) 06/21, by providing a Net Zero Carbon Reduction Plan.

In addition to calculating Scope 1, 2 and a subset of Scope 3 emissions in tCO2e for the six greenhouse gases covered by the Kyoto Protocol (as outlined in this report), Hughes Network Systems Limited is required to make a commitment to achieving net zero by 2050, outline its reduction plans, and publish its Carbon Reduction Plan (CRP) on its website.

7.4 Reduction Target Plan



In order to achieve a 50% reduction in emissions by 2030, Hughes Network Systems Limited is required to reduce its emissions by **616.65 tCO2e** from the 'Baseline' (first year) assessment by 2030.

This will require a reduction of **8.33%** (102.73 tCO2e) per year from the 'Baseline' (first year) assessment of the organisation. A further reduction of **2.5%** (30.83 tCO2e) each year is then required in order to achieve Net Zero.

Should significant changes to the business size and structure occur in the future - Carbon Neutral Britain will amend the 'baseline' assessment year, as well as look at intensity values (tCO2e per million turnover, FTE or other metric), to further track and implement reduction strategies.

"By accurately measuring, offsetting and committing to annually reduce emissions 8.33% by 2030, Hughes Network Systems Limited is not only Carbon Neutral, but in alignment with both Science Based and UK Government targets for Carbon Emissions Reductions"

James Poynter
Director - Carbon Neutral Britain

7.5 Reduction Strategies

Although some emission reductions will require technological and third party improvements, it is recommended that Hughes Network Systems Limited targets the three largest emissions sources of the organisation, in order to make the most impactful, and quickest reduction in emissions possible. The three largest emission sources are:

Energy Usage on Site - 769.97 tCO2e (62% of total emissions)
company Owned/Leased Vehicles - 63.65 tCO2e (5% of total emissions)
Refridgerant Gas Loss Recharge - 54.35 tCO2e (4% of total emissions)

Recommendations for the organisation are as follows:

Electricity Consumption

Electricity consumption is a large contributor to Hughes Network Systems Limited's overall carbon footprint. During the reporting period, electricity emissions reached 769.97 tCO_2e, representing a large amount of the company's total emissions, emphasising the potential for targeted strategies to reduce electricity usage over the coming years.

Potential opportunities for the company are:

Energy Efficiency Upgrades: Implementing energy-efficient lighting, equipment, and appliances across Hughes Network Systems Limited's operations could lead to large reductions in electricity consumption. Upgrading to LED lighting, high-efficiency HVAC systems, and ENERGY STAR-rated appliances could collectively lower energy use and emissions.

Expand Flexible Working Arrangements: Offering flexible work hours and remote working options could reduce electricity consumption related emissions, leading to lower emissions. Adopting hybrid working arrangements could decrease the frequency of office attendance and, therefore, the emissions associated with electricity consumption.

Smart Energy Management: Adopting smart energy management systems could help monitor and control electricity usage more effectively. These systems provide real-time data on consumption patterns, allowing for better management of energy resources and identification of opportunities to optimize efficiency.

Office Space Optimization: For leased sites where making infrastructure changes may be challenging, consider relocating to more energy-efficient premises if feasible. Additionally, promoting hybrid working arrangements to reduce office occupancy could lower overall electricity use, as working from home generally consumes less energy than traditional office settings. Downsizing office space or adopting flexible workspaces could also contribute to further energy savings.

Relevant Schemes and Support:

- Energy Efficiency Grants: Explore available grants or incentives for upgrading to energy-efficient systems and technologies.
- Smart Energy Management Tools: Investing in energy management software could provide valuable insights and help optimize electricity use across facilities.

By focusing on these strategies, Hughes Network Systems Limited could effectively manage its electricity consumption, reduce related emissions, and support a more sustainable operational footprint.

Company Vehicle Emissions

Emissions from Hughes Network Systems Limited's owned and leased vehicles are a large contributor to the company's overall carbon footprint and could be minimized wherever possible. Transitioning to low-emission vehicles, including electric and hybrid models, could reduce the impact of the fleet. Regularly reviewing fleet performance, routes, and fuel efficiency could further optimize usage and cut down emissions.

Hughes Network Systems Limited could continue to adopt measures such as tracking fuel usage, conducting regular vehicle maintenance, and providing driver training to improve efficiency. Additionally, exploring incentives for low-emission vehicles and installing on-site EV charging points could further support emissions reduction.

By actively monitoring and managing vehicle emissions, Hughes Network Systems Limited could identify areas for targeted improvement, ultimately driving down its transportation-related carbon footprint.

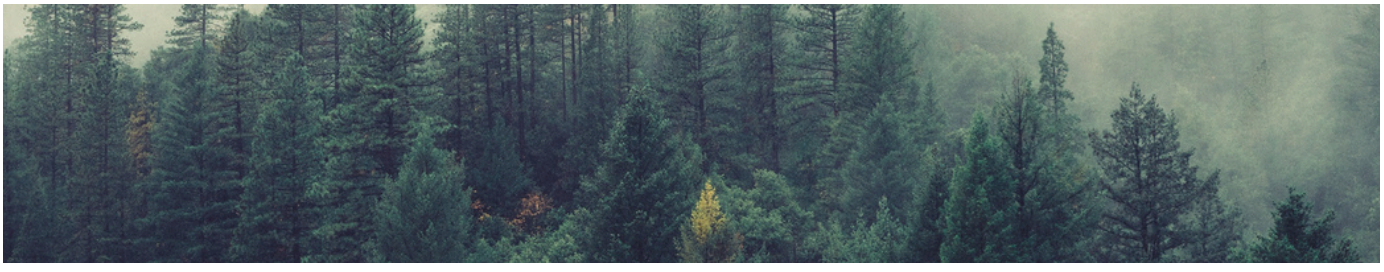
Refrigerant Gas Emissions

Refrigerant gases are among the most potent contributors to greenhouse gas emissions, with over 1 tCO_2e emissions per kilogram due to their high global warming potential (GWP). Proper management of refrigerant equipment is important for minimizing these emissions.

Hughes Network Systems Limited could ensure regular servicing of refrigerant-containing equipment to prevent leaks, which can lead to large emissions. Proper maintenance reduces the need for recharging systems with new gas, helping to limit the release of harmful substances.

When acquiring new refrigerant units, it is advisable to select options that use low-GWP refrigerants such as hydrofluoroolefins (HFOs), including R1234yf, R1234ze(E), and R1233zd. These alternatives offer lower carbon emissions compared to traditional refrigerants.

By focusing on these strategies, Hughes Network Systems Limited could reduce the environmental impact of refrigerant gases and contribute to a more sustainable operation.



8 - Contact

2025
The Year to Make a Difference

Help Support Climate Action

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