

Johnson Controls

TYCO HOLDINGS (U.K.) LIMITED

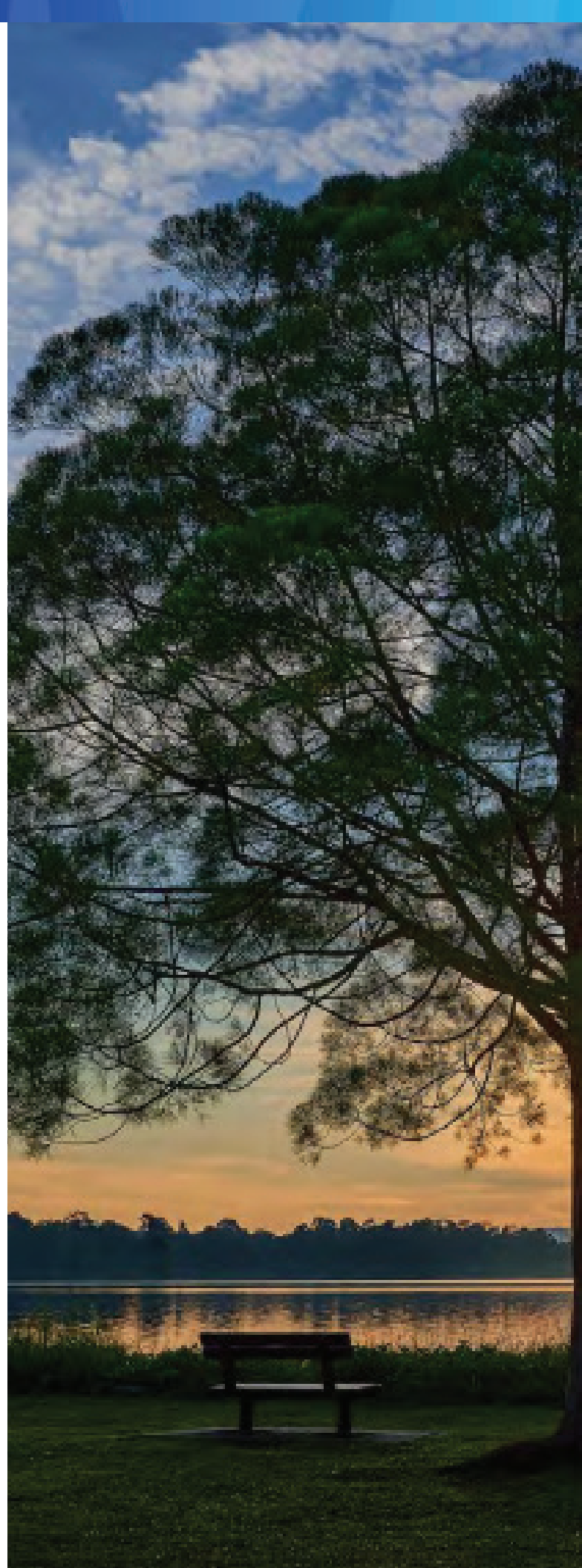
UK Carbon Reduction Plan

This Carbon Reduction Plan captures the operations of Tyco Holdings (U.K.) Limited and all its wholly owned subsidiaries in the UK. Tyco Holdings (U.K.) Limited is a wholly owned subsidiary of Johnson Controls International plc.



Publication date: October 20, 2023

This Carbon Reduction Plan conforms to the requirements of Procurement Policy Note PPN06/21 "Taking Account of Carbon Reduction Plans in the procurement of major government contracts" published in June 2021 and the supporting "Technical standard for the Completion of Carbon Reduction Plans." This report focuses on Tyco Holdings (U.K.) Limited and its wholly owned subsidiaries within Johnson Controls control for the fiscal year 2022, October 1, 2021 – September 30, 2022.





ABOUT JOHNSON CONTROLS

Sustainability is at the heart of Johnson Controls and fundamental to everything that we do. At Johnson Controls, we transform the environments where people live, work, learn and play. Building on a proud history of nearly 140 years of innovation, our mission is to reimagine the performance of buildings and deliver the blueprint of the future for industries such as healthcare, schools, data centers, airports, stadiums, manufacturing and beyond through our comprehensive product and solutions offering. With a global team of nearly 100,000 experts in more than 150 countries, Johnson Controls offers the world's largest portfolio of building technology and software as well as service solutions from the most trusted names in the industry.

With nearly 40 percent of global greenhouse gas emissions coming from buildings, Johnson Controls is committed to leading and addressing climate change, helping our customers and industries around the world pursue goals for best-in-class environmental targets. Since 2020, we have transformed our business to focus on building decarbonization through the trifecta of low-carbon, energy efficient products, electrification, and digitalization.

We are committed to spending no less than 75% of R&D on developing and delivering new sustainable products and services, and in 2021 and 2022 we exceeded that goal by investing more than 90% on new product R&D toward sustainable products and solutions. These investments are already delivering. The expansion of our comprehensive heat pump portfolio is driving huge carbon cuts for our customers and our investment in digital technology through the OpenBlue Enterprise Manager enables our customers to increase operational efficiencies and further reduce carbon and costs. In 2022, more than half of our revenues were from our sustainable portfolio in both our global products and field service offerings, in alignment with the Corporate Knights Sustainable Revenue taxonomy.

Commitment to achieving Net Zero

Johnson Controls has a global, enterprise-wide commitment to achieve Net Zero scope 1 and 2 emissions by 2040, 10 years ahead of goals set out in the Paris Agreement and the 2050 target set out in the Carbon Reduction Plan requirements. These commitments apply to Tyco Holdings (U.K.) Limited and its wholly owned subsidiaries in the U.K.

Climate action is urgent, and we are not waiting. Johnson Controls has targets approved by the Science Based Targets initiative (SBTi) to achieve 55 percent reduction in scope 1 and 2 emissions and 16 percent reduction of scope 3 emissions by 2030 across the global enterprise. It has already reached a reduction of 42 percent of Scope 1 and 2 emissions, saving over 455,934 metric tons of absolute greenhouse gas emissions across its global operations. Johnson Controls has reduced Scope 3 emissions by 18 million metric tons of CO₂e from the use of its products sold (category 11 from Greenhouse Gas Protocol).

More information on Johnson Controls global Net Zero commitments and climate action is available at:

<https://www.johnsoncontrols.com/corporate-sustainability/environment>

2023 Sustainability Report: www.johnsoncontrols.com/2023Sustainability

Baseline Emissions Footprint and Current Emissions Reporting

Tyco Holdings (U.K.) Limited and its wholly owned subsidiaries in the U.K.

Tyco Holdings (U.K.) Limited Emissions Footprint	2017 Baseline emissions:	2022 Current emissions:
Unit of measure	(Metric tons CO ₂ e)	(Metric tons CO ₂ e)
Scope 1	50,963	30,611
Scope 2 (Market-based)	3,443	1,852
Scope 3 (Total)	4,644,468	4,135,862
Purchased Goods & Services	130,084	200,226
Capital Goods	64,294	126,310
Fuel & Energy	1,020	1,462
Upstream T&D	17,034	8,738
Waste	170	184
Business Travel	1,088	544
Employee Commuting	7,378	7,786
Use of Sold Products	4,375,800	3,757,510
Product End of Life	47,600	33,116
Total Emissions	4,698,874	4,157,059

Details pertaining to the emissions calculations:

Emissions are reported and recorded in accordance with the published reporting standard for Carbon Reduction Plans and the GHG Reporting Protocol corporate standard¹ and use the appropriate Government emission conversion factors for greenhouse gas company reporting². This report includes data from business operations that were at least 51 percent under Tyco Holdings (U.K.) Limited's operating control and financially consolidated during the reporting year in line with the Greenhouse Gas Protocol Corporate Accounting Standard, Chapter 3, Setting Organizational Boundaries, Control Approach. European Residual Mix emissions factors are used to calculate Scope 2 market-based emissions. European Residual Mix. Actual fiscal 2022 UK Scope 1 and 2 emissions from Tyco Holdings (U.K.) Limited and its wholly-owned subsidiaries in the U.K. is reported. Fiscal 2017 scope 1 and 2 emissions are estimated based on share of actual emissions from fiscal 2022. Metrics are tracked according to our fiscal year, October 1 – September 30. Scope 3 emissions are calculated using a revenue approach, applying the percent of our total revenue applicable from Tyco Holdings (U.K.) Limited and its wholly owned subsidiaries in the U.K. in fiscal 2017 and 2022 to total emissions.

1. <https://ghgprotocol.org/corporate-standard>

2. <https://www.gov.uk/government/collections/government-conversion-factors-for-company-reporting>

Please refer to our 2023 Sustainability Report for total global emissions and further detail on our emissions reporting.

Emissions reduction targets and progress to date

Net Zero operations (scope 1 and 2 emissions)

Our global enterprise has set ambitious enterprise-wide commitments and pledged to reach net zero carbon emissions by 2040 for scope 1 and 2 emissions, with interim targets for absolute emission reduction, including approved science-based targets for 2030. Our net zero transition plan includes four key strategies to achieve net zero scope 1 and 2 emissions by 2040:

- 1 Facility decarbonization globally
- 2 Refrigerant loss reduction in manufacturing
- 3 Fleet emission reduction through efficiency and electrification
- 4 Transition to renewable electricity globally

Enterprise-wide targets (2017 baseline) and progress by the end of fiscal 2022:

Achieve our enterprise-wide approved Science-based Target of 55 percent absolute reduction of global scope 1 and 2 emissions by 2030 and achieve global Net Zero emissions by 2040.

As of 2022, Johnson Controls has achieved a 42 percent absolute global reduction of scope 1 and 2 emissions since 2017.

Achieve 100 percent renewable electricity usage globally by 2040.

In fiscal year 2022, 41.5 percent of electricity purchased globally was met or matched by renewable sources of energy, including sites where renewable electricity directly supports the sites and those whose load is matched by certified renewable energy credits. In fiscal year 2022, we matched 100 percent of the greenhouse gas emissions from our manufacturing plants in the US and our US corporate headquarters through voluntarily purchases of Green-e® certified Renewable Energy Certificates (RECs).

Sustainable products and solutions (scope 3 emissions)

Delivering sustainable products and solutions is core to our business and growth as a global leader in smart, healthy, sustainable buildings. As we work to help our customers manage the carbon transition and enable deep decarbonization of their buildings' footprints, we have a four-part strategy:

1. Develop low-carbon and energy-efficient products
2. Enhance our services and digital solutions to help our customers decarbonize buildings
3. Reduce the carbon footprint of our products to enable customers to build net zero embodied carbon facilities
4. Actively engage with our suppliers to build sustainable roadmaps for decarbonization

Reduce scope 3 global emissions by 16 percent by 2030 from use of our products

At the end of fiscal 2022, Johnson Controls has already reduced global scope 3 emissions by 14 percent compared to fiscal year 2017. The use of sold products represents more than 90 percent of Johnson Controls global scope 3 emissions.

UK Carbon Reduction Projects

The reduction of our carbon footprint in the UK is tracking our progress globally. The three primary contributors of scope 1 and 2 emissions are our facilities, refrigerants and fleet. We measure emissions monthly, applying continuous improvement across all categories throughout the year. We have six workstreams organized within our enterprise-wide ESG Leadership Committee governance structure; the Climate Workstream is focused on developing and executing against our net zero transition plan, including the improvement measures, investments and timing by area:

Scope 1 and 2:

1. Decarbonize our facilities

In 2021, we launched the Johnson Controls Facility Decarbonization Program, forming a cross-functional team of global facilities, operations, environmental, health and safety, information technology and finance professionals along with our in-market subject matter experts in building decarbonization – our Net Zero Buildings-as-a-Service team. The goal is to build the roadmap to net zero buildings through best-in-class energy-efficiency programs, low carbon products, and implementing digital technologies to optimize our building operations.

In the UK, we reduced our building footprint by over 400,000 ft² since 2017, recognizing that reducing is an important step on the path to net zero. And for new and existing buildings, we seek to decarbonize our building footprint and those of our customers.

Our largest contributors to our operational emissions are our



manufacturing locations. At all manufacturing locations, Johnson Controls Manufacturing System (JCMS) defines progressive levels of maturity in environmental and sustainability management, goals and practices. It also provides a framework for continuous improvement in operational management. We have implemented an Energy Hunt Program across our manufacturing facilities globally.

Energy Champions are trained and understand their role in identifying continuous improvements in reducing energy and emissions and implementing simple daily energy reduction strategies like turning off lights and closing doors. This program drives culture change and helps our teams identify energy, emissions and cost savings opportunities by evaluating measures that include heating, ventilation and air conditioning (HVAC) temperature scheduling, lighting, supply and demand of compressed air, building envelope, and employee energy awareness and engagement.

For example, in the UK, our manufacturing facility in Frome has eliminated the use of natural gas for pre-heating tooling used in the diecasting process. The use of natural gas is now limited to the central heating and hot water supply and will result in an estimated 80% reduction in natural gas consumption at the site.

2. Eliminate refrigerant loss reduction in manufacturing

Our refrigerant decarbonization roadmap includes both the reduction of refrigerant loss within facilities as well as the transition to products with low and ultra-low Global Warming Potential (GWP) refrigerants.

Our team of environmental health and safety, operations and research and development professionals work collaboratively to map refrigerant loss reductions by manufacturing location to create our refrigerant decarbonization roadmap. Since 2017, Johnson Controls has significantly reduced total refrigerant emissions from its global operations and plans to achieve an additional 50 percent reduction by 2030.

In the UK, we have one manufacturing site that charges our products with refrigerant. At this facility, we have a closed loop system and have installed flow meters and needle valves to monitor and control usage and ensure there are no leaks. In addition, all data is digitally recorded and monitored daily to identify and eliminate unexplained losses. Leak checks are performed weekly on the system and an annual pressure test of lines is conducted. All delivery receipts/invoices are cross referenced with weighbridge tickets to ensure gas quantities align with actual totals.

3. Reduce fleet emissions through efficiency and electrification

Johnson Controls global fleet is comprised of both field service operations and management fleet. Vehicle emissions accounted for more than 30 percent of Johnson Controls total scope 1 and 2 emissions in 2022. One of our climate

working groups is dedicated to fleet emission reductions, working on optimizing our current vehicle use and transitioning to electric vehicles. Quarterly, we analyse our fleet performance, including implementing telematics to understand trends and driving patterns. We systematically bring in higher fuel efficiency vehicle options and right-size the equipment needed in our field service operations to decrease weight and increase load factors.

In 2020, we added full electric company cars (EV) to our fleet options for eligible employees in the UK and across Europe. The initiative has been particularly successful with UK drivers where concurrent changes to tax policy provided additional incentives to employees to use EVs.

Our electric vehicle fleet in the UK increased from 48 to 185 electric vehicles in just the past two years. Over 52% of Johnson Controls cars delivered in fiscal 2023 in the UK were electric vehicles (EV). And that is just the beginning – in 2023, 31% of our UK Car Fleet is an EV. The majority of these EVs will replace diesel vehicles.

Where possible we are accelerating the change cycle for employees, allowing them to move to an EV earlier than their normal replacement date.

To encourage use of EVs by our employees, we have installed EV charging points which we provide as a free benefit to employees in many of our UK locations and have plans to install them at more locations.

Scope 3, (Category 11, Use of Sold Products)

Deliver increasingly sustainable products and solutions, including:

- Develop low-carbon and energy-efficient products.
- Enhance our services and digital solutions to help our customers decarbonize buildings.

The use of sold products represents more than 90 percent of Johnson Controls scope 3 emissions. Johnson Controls offers the world's largest portfolio of building technology, software and services. We offer some of the most sustainable and efficient heating and cooling systems in the world. Retrofitting with efficient modern systems can save at least 30 percent to 40 percent in energy, emissions and costs.

Low Carbon and Energy Efficient Products

Heat pumps are energy multipliers that provide zero-carbon heating when powered by clean electricity. Where conventional heating systems 'convert' electricity or fuel into heat, heat pumps 'move' heat from a source – air, water, earth or waste streams – in a process that uses one-third of the energy. Heat pumps are a priority for the European Union, US, China and other governments around the world. That is because their use in place of boilers and other traditional heating systems could replace 80 percent of the gas used to heat buildings and will play a significant role in helping building owners and occupiers reach net zero and drive energy security.

Through our YORK®, Sabroe and Johnson Controls–Hitachi brands, we offer one of the world's most comprehensive range of heat pumps across residential,

commercial and industrial applications. Important examples include our water-to-water YORK® CYK and YVWH heat pump chillers, which can produce water temperatures at 76.6°C (170°F), making them viable boiler replacements. Our ducted heating, ventilation and air conditioning (HVAC) products also deliver significant energy savings for our customers, including the YORK YZV and HMM7 residential heat pumps, which exceed ENERGY STAR cold climate heat pump performance requirements at -15°C (5°F) ambient conditions.

Low-GWP refrigerants

In addition to market-leading efficiency, the YORK YZ chiller also utilizes a next-generation refrigerant with a 99 percent reduction in Global Warming Potential (GWP), and technology that enables up to a 60 percent reduction in refrigerant charge. Across the YORK chiller portfolio, all of our screw and centrifugal chillers offer models with low or ultra-low GWP refrigerants. By 2025, our ducted systems products will transition to a refrigerant with a 78 percent reduction in GWP, the lowest available solution in its equipment class.

Energy retrofits

We also help our customers achieve energy savings using energy performance contracting. Through these projects, we deploy equipment upgrades and management services to deliver guaranteed energy savings and help customers achieve greenhouse gas reductions. Since January 2000, Johnson Controls performance contracting projects have helped avoid more than 37 million metric tons of carbon dioxide equivalent (CO₂ e) and are on track to deliver more than \$7.8 billion in energy and operational savings over the project term.

Digital Solutions with OpenBlue Enterprise Manager

In 2021, Johnson Controls launched OpenBlue Enterprise Manager, a suite of applications producing real-time performance dashboards to analyze energy, greenhouse gas emissions and support customers' increasing need for data and transparency when reporting to internal and external stakeholders. The tools digitally transform buildings so that their hardware is monitored, connected and protected and seamlessly integrates with leading technology partners and existing building technologies.

Our ability to connect and optimize buildings allows us to analyze and act upon vast amounts of data to deliver proactive solutions for our customers. Although each individual building system can save energy and emissions, OpenBlue connects all of them, using sensors, cloud connectivity and AI analytics to optimize the entire building – multiplying the savings in energy, emissions and operational costs. Our customers in the UK and around the world are using OpenBlue to redefine healthy, sustainable building outcomes for their industries and regions.

As just one example, as highlighted in our 2023 Sustainability Report Derwent London plans to become a net zero carbon business by 2030. To achieve its ambitious goal, it must reduce energy use and emissions across all 96 buildings in its portfolio.

Derwent London is focusing on reducing its energy consumption, significantly increasing renewable power usage and thoroughly auditing its activities to shrink its carbon footprint. It is adopting all-electric heating and cooling systems for its new pipeline of developments and retrofitting its older properties. It will also use more sustainable building materials, such as low-carbon concrete. For renewable energy, it will use power from its planned solar farm on its land near Glasgow, Scotland, which could cover up to 40 percent of the power consumption of buildings in its London-based portfolio.

Derwent London is also looking to artificial intelligence (AI) to achieve its ambitious goals. It will use Johnson Controls Open Blue Enterprise Manager (OBEM), OpenBlue Central Utility Plant (CUP) and a suite of apps to pull together data about energy usage, asset performance, occupancy, indoor air quality, maintenance and space utilization from a cluster of its major buildings in the UK capital.

The Johnson Controls cloud-based platform creates a 24/7 feedback loop that continually identifies additional operational efficiencies and energy savings from assets of up to 50 percent. To learn more, see:

<https://www.johnsoncontrols.com/openblue/openblue-pioneers/derwent-london>

<https://www.youtube.com/watch?v=HNYzrmS0xyA&t=30s>



DECLARATION AND SIGN OFF

This Carbon Reduction Plan has been completed in accordance with PPN 06/21 and associated guidance and reporting standard for Carbon Reduction Plans. This report focuses on operations within our control for the fiscal year 2022, October 1, 2021 – September 30, 2022.

Scope 1 and Scope 2 emissions have been reported in accordance with SECR requirements, and the required subset of Scope 3 emissions have been reported in accordance with the published reporting standard for Carbon Reduction Plans and the Corporate Value Chain (Scope 3) Standard .

This Carbon Reduction Plan has been reviewed and signed off by the board of directors (or equivalent management body).

Signed on behalf of the Supplier:

James Earnshaw

Date: October 20, 2023