



**VERIFICATION OPINION DECLARATION  
GREENHOUSE GAS EMISSIONS**

To: The Stakeholders of Johnson Controls

Apex Companies, LLC (Apex) was engaged to conduct an independent verification of the greenhouse gas (GHG) emissions reported by Johnson Controls International PLC (Johnson Controls) for the period described below. This verification opinion declaration applies to the related information included within the scope of work described below.

The determination of the GHG emissions is the sole responsibility of Johnson Controls. Johnson Controls is responsible for the preparation and fair presentation of the GHG emissions statement in accordance with the criteria. Apex’s sole responsibility was to provide independent verification on the accuracy of the GHG emissions reported, and on the underlying systems and processes used to collect, analyze and review the information. Apex is responsible for expressing an opinion on the GHG emissions statement based on the verification. Verification activities applied in a limited level of assurance verification are less extensive in nature, timing and extent than in a reasonable level of assurance verification.

**Boundaries of the reporting company GHG emissions covered by the verification:**

- Operational Control
- Worldwide

**Types of GHGs:** CO<sub>2</sub>, N<sub>2</sub>O, CH<sub>4</sub>, HFCs

**Exclusions:**

**GHG Emissions Statement:**

<b>Johnson Controls Entity Wide GHG Emissions for FY2021</b>	
<b>Scope 1 Emissions</b> 451,000 metric tons (mt) of CO <sub>2</sub> equivalent (CO <sub>2</sub> e)	
<b>Scope 2 Emissions – Location Based</b> 298,000 mtCO <sub>2</sub> e	<b>Scope 2 Emissions – Market Based</b> 213,000 mtCO <sub>2</sub> e
<b>Scope 3 Emissions</b>	
<b>Category 1 – Purchased Goods and Services</b>	4,788,000 mt CO <sub>2</sub> e
<b>Category 2 – Capital Goods</b>	3,016,000 mt CO <sub>2</sub> e
<b>Category 3 – Fuel &amp; Energy Related Activities (Transportation and Distribution losses only)</b>	57,000 mt CO <sub>2</sub> e

<b>Scope 3 Emissions (continued)</b>	
<b>Category 4 – Upstream Transportation &amp; Distribution</b>	440,000 mt CO <sub>2e</sub>
<b>Category 5 – Waste Generated in Operations</b>	4,000 mt CO <sub>2e</sub>
<b>Category 6 – Business Travel (Air, rental car and personal car business travel)</b>	8,000 mt CO <sub>2e</sub>
<b>Category 7 – Employee Commuting</b>	230,000 mt CO <sub>2e</sub>
<b>Category 11 – Use of Sold Products</b>	116,062,000 mt CO <sub>2e</sub>
<b>Category 12 – End of Life Treatment of Sold Products</b>	1,328,000 mt CO <sub>2e</sub>

Data and information supporting the Scope 1 and Scope 2 GHG emissions statement were in most cases historical in nature, but in some cases estimated rather than historical in nature.

Data and information supporting the Scope 3 GHG emissions statement were in many cases estimated rather than historical in nature.

**Period covered by GHG emissions verification:**

- Fiscal Year 2021 - October 1, 2020 to September 30, 2021

**Criteria against which verification was conducted:**

- World Resources Institute (WRI)/World Business Council for Sustainable Development (WBCSD) Greenhouse Gas (GHG) Protocol, Corporate Accounting and Reporting Standard, Revised Edition (Scope 1 and 2) and the GHG Protocol Scope 2 Guidance, an amendment to the GHG Protocol Corporate Standard.
- WRI/WBCSD Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3)

**Reference Standard:**

- ISO 14064-3 (2019-04) Second Edition: Greenhouse gases -- Part 3: Specification with guidance for the verification and validation of greenhouse gas statements

**Level of Assurance and Qualifications:**

- Limited
- Materiality Threshold ±5% (applied to each scope separately)

- Qualifications: Some Scope 1, Scope 2 and Scope 3 emission sources used emission factors that accounted for CO<sub>2</sub> only and not CO<sub>2</sub> equivalent.

**GHG Verification Methodology:**

- Interviews with relevant personnel of Johnson Controls;
- Review of documentary evidence produced by Johnson Controls;
- Review of Johnson Controls data and information systems and methodology for collection, aggregation, analysis and review of information used to determine GHG emissions;
- Audit of samples of data used by Johnson Controls to determine GHG emissions.

**Verification Opinion:**

Based on the process and procedures conducted, there is no evidence that the GHG emissions statement shown above:

- is not materially correct and is not a fair representation of the GHG emissions data and information; and
- has not been prepared in accordance with the WRI/WBCSD GHG Protocol Corporate Accounting and Reporting Standard (Scope 1 and 2), and WRI/WBCSD Greenhouse Gas Protocol Corporate Value Chain Accounting and Reporting Standard (Scope 3).

It is our opinion that Johnson Controls has established appropriate systems for the collection, aggregation and analysis of quantitative data for determination of these GHG emissions for the stated period and boundaries.

**Statement of independence, impartiality and competence**

Apex is an independent professional services company that specializes in Health, Safety, Social and Environmental management services including assurance with over 30 years history in providing these services.

No member of the verification team has a business relationship with Johnson Controls, its Directors or Managers beyond that required of this assignment. We conducted this verification independently and to our knowledge there has been no conflict of interest.

Apex has implemented a Code of Ethics across the business to maintain high ethical standards among staff in their day-to-day business activities.

The verification team has extensive experience in conducting assurance over environmental, social, ethical and health and safety information, systems and processes, has over 20 years combined experience in this field and an excellent understanding of Apex's standard methodology for the verification of greenhouse gas emissions data.

**Attestation:**A handwritten signature in blue ink, appearing to read 'David Reilly'.

David Reilly, Lead Verifier  
Principal Consultant, Sustainability Services  
Apex Companies, LLC

A handwritten signature in blue ink, appearing to read 'Trevor Donaghu'.

Trevor Donaghu, Technical Reviewer  
Program Manager, Sustainability Services  
Apex Companies, LLC

February 7, 2022

*This verification opinion declaration, including the opinion expressed herein, is provided to Johnson Controls and is solely for the benefit of Johnson Controls in accordance with the terms of our agreement. We consent to the release of this opinion declaration by you to the CDP in order to satisfy the terms of CDP disclosure requirements but without accepting or assuming any responsibility or liability on our part to CDP or to any other party who may have access to this opinion declaration.*