



## VERIFICATION OPINION DECLARATION GREENHOUSE GAS EMISSIONS

Apex Companies LLC, (Apex) was engaged to conduct an independent verification of the greenhouse gas (GHG) emissions reported by PepsiCo, Inc. (PepsiCo) for the period stated 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 PepsiCo. PepsiCo 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. This is the 15<sup>th</sup> year in which we have provided assurance over PepsiCo's Report.

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

- Operational Control
- Worldwide Operations

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

### **GHG Emissions Statement:**

- Direct Greenhouse Gas (GHG) emissions (Scope 1) associated with Manufacturing & Warehouse Operations, Fleet Operations, Offices & Distribution Centers:
  - 3,600 thousand metric tons of CO<sub>2</sub> equivalent (CO<sub>2</sub>e)
- Indirect GHG emissions: (Scope 2 Location – Based, reflecting average grid emissions) associated with Manufacturing & Warehouse Operations, Offices & Distribution Centers:
  - 1,813 thousand metric tons of CO<sub>2</sub>e
- Indirect GHG emissions: (Scope 2 Market – Based, reflecting Energy Attribute Certificates) associated with Manufacturing & Warehouse Operations, Offices & Distribution Centers:
  - 683 thousand metric tons of CO<sub>2</sub>e
- Scope 1 & 2: Reduction of absolute GHG emissions versus a 2015 baseline: 25%
  - Scope 3: 41,770,335 metric tons of CO<sub>2</sub>e
    - Category 1 – Purchased Goods & Services: 39,321,175 metric tons of CO<sub>2</sub>e
    - Category 2- Capital Goods: 1,093,408 metric tons of CO<sub>2</sub>e
    - Category 13 – End of Life Treatment of Sold Products: 1,355,752 metric tons of CO<sub>2</sub>e

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



**Energy:**

- Global Energy Consumption associated with Manufacturing & Warehouse Operations, Fleet Operations, Offices & Distribution Centers:
  - Total Fuel Consumption: 18,204,445 MWh
  - Total Site Electricity Consumption: 4,295,888 MWh
  - Total Renewable Electricity Consumption: 3,073,970 MWh
- Total Renewable Electricity as a percentage of total electricity associated with Manufacturing & Warehouse Operations, Fleet Operations, Offices & Distribution Centers:
  - Total Renewable Electricity: 72%
- Total United States of America Electricity Consumption associated with Manufacturing & Warehouse Operations, Fleet Operations, Offices & Distribution Centers:
  - Total USA Electricity Usage: 1,837,656 MWh
  - Total USA Renewable Electricity Usage: 1,837,656 MWh
- Total Renewable Energy Certificates (RECs) allocated to PepsiCo, Inc. associated with electric power generation from renewable resources in the United States of America:
  - 1,837,656 MWh
  - USA Electricity Usage Covered by RECs: 100%

**Water:**

- Water Consumption associated with Manufacturing Operations:
  - 85,853,199 kiloliters
  - Water Replenishment associated with Manufacturing Operations: 34%
  - Average liters of water used per kilogram of convenient foods produced in high water risk areas: 2.4
  - Average liters of water used per kilogram of convenient foods produced in non-high water risk areas: 5.0
  - Average liters of water used per liter of beverage produced in high water risk areas: 1.8
  - Average liters of water used per liter of beverage produced in non-high water risk areas: 1.8
  - Improve operational water-use efficiency by 25% in high water-risk areas by 2025 versus a 2015 baseline: 18%

**Waste:**

- Waste Generation associated with Manufacturing & Warehouse Operations, Fleet Operations, Offices & Distribution Centers:
  - 2,399 thousand metric tons

**Production:**

- Primary Production associated with Manufacturing Operations:
  - Total Net Production (Convenient Foods): 9,806,912 kg
  - Total Net Production (Beverages): 25,455,987 kiloliters

**Packaging:**



- Packaging associated with Manufacturing Operations:
  - Reduction of virgin plastic from non-renewable sources per serving across our global beverages and convenient foods portfolio versus a 2020 baseline: 5%
  - Reduction of absolute tonnage of virgin plastic derived from non-renewable sources versus a 2020 baseline: (5)%
  - Use of market-leading bio-based materials and increase incorporation of recycled content: 6%
  - Design 100% of packaging to be recyclable, compostable, biodegradable or reusable: 87%

**Period covered by GHG emissions verification:**

- Calendar Year 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 (**Scope 1 and 2**)
- WRI/WBCSD Greenhouse Gas Protocol Corporate Value Chain (Scope 3) Accounting and Reporting Standard (Scope 3)
- Company internal protocols

**Reference Standard:**

- ISO 14064-3 Second edition 2019-04: Greenhouse gases -- Part 3: Specification with guidance for the verification and validation of greenhouse gas statements
- Apex's standard procedures and guidelines for external Assurance of Sustainability Reports and International Standard on Assurance Engagements (ISAE) 3000 Revised, Assurance Engagements Other than Audits or Reviews of Historical Financial Information (effective for assurance reports dated on or after Dec. 15, 2015), issued by the International Auditing and Assurance Standards Board.

**Level of Assurance and Qualifications:**

- Limited
- This verification used a materiality threshold of 5% for aggregate errors in sampled data for each of the above indicators

**GHG Verification Methodology:**

- Interviews with relevant personnel of PepsiCo;
- Review of documentary evidence produced by PepsiCo;
- Reviewing documentary evidence, data and information systems and methodology for collection, aggregation, analysis and review of information used to determine environmental data and information via web-based meetings with representatives at PepsiCo headquarters in Plano, Texas and 13 PepsiCo global locations including Arlington, Texas; Cambridge, Ontario; Carregado, Portugal; CFJ Ceres, South Africa; Kern, California; Lamphun, Thailand; Sorocaba, Brazil; Bishkek, Kyrgyzstan; Sundar, Pakistan; Tainan, Taiwan; Tolleson, Arizona; Vancouver, British Columbia; and Vallejo, Mexico; and
- Audit of sample of data used by PepsiCo to determine GHG emissions.

**Verification Opinion:**

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

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- 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 PepsiCo 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 and has implemented underlying internal assurance practices that provide an appropriate degree of confidence that such information is complete and accurate.

**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 PepsiCo, 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 that reads 'Scott Johnston'.

Scott Johnston, Lead Verifier  
Principal Consultant  
Apex Companies, LLC  
Miami, Florida

A handwritten signature in blue ink that reads 'Trevor Donaghu'.

Trevor Donaghu, Technical Reviewer  
Program Manager  
Apex Companies, LLC  
Pleasant Hill, California

February 21, 2023

*This verification opinion declaration, including the opinion expressed herein, is provided to PepsiCo, Inc. and is solely for the benefit of PepsiCo, Inc. in accordance with the terms of our agreement. We consent to the release of this declaration by you to 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 statement.*