



## VERIFICATION OPINION DECLARATION GREENHOUSE GAS EMISSIONS, ENERGY, WATER, PRODUCTION, WASTE AND PACKAGING

To: The Stakeholders of PepsiCo

Apex Companies, LLC (Apex) was engaged to conduct an independent verification of the greenhouse gas (GHG) emissions and environmental sustainability data 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 and environmental sustainability data is the sole responsibility of PepsiCo. PepsiCo is responsible for the preparation and fair presentation of the GHG emissions statement and environmental sustainability data in accordance with the criteria. Apex's sole responsibility was to provide independent verification on the accuracy of the GHG emissions reported, select energy, water, production, waste and packaging metrics 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 and environmental sustainability data 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 Operations

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

### **GHG Emissions Statement:**

- Direct GHG emissions (Scope 1) associated with manufacturing and warehouse operations, fleet operations, offices and distribution centers:
  - 3,377 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 and warehouse operations, offices and distribution centers:
  - 1,752 thousand metric tons of CO<sub>2</sub>e
- Indirect GHG emissions: (Scope 2 Market – Based, reflecting Energy Attribute Certificates) associated with manufacturing and warehouse operations, offices and distribution centers:
  - 304 thousand metric tons of CO<sub>2</sub>e
- Scope 1 and 2: Reduce Scope 1 and 2 emissions by 75% (measured versus a 2015 baseline): 33%
- Scope 3:
  - Category 1 – Purchased Goods & Services: 39,745,044 metric tons of CO<sub>2</sub>e
  - Category 2 – Capital Goods: 982,204 metric tons of CO<sub>2</sub>e
  - Category 3 – Fuel and Energy Related Activities (Well-to-tank only): 999,454 metric tons of CO<sub>2</sub>e
  - Category 4 – Upstream Transportation and Distribution: 1,726,362 metric tons of CO<sub>2</sub>e
  - Category 9 – Downstream Transportation and Distribution: 7,018,552 metric tons of CO<sub>2</sub>e
  - Category 12 – End of Life Treatment of Sold Products: 1,478,121 metric tons of CO<sub>2</sub>e

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**Energy:**

- Global energy usage associated with manufacturing and warehouse operations, fleet operations, offices and distribution centers:
  - Total fuel usage: 16,905,996 MWh
  - Total site electricity usage: 4,323,754 MWh
  - Total renewable electricity usage: 3,486,617 MWh
  - Total renewable electricity purchased: 3,406,063 MWh
  - Total United States electricity usage: 1,854,717 MWh
  - Total United States electricity purchased: 1,785,341 MWh
  
- Total renewable electricity as a percentage of total electricity associated with manufacturing and warehouse operations, fleet operations, offices and distribution centers:
  - Total renewable electricity usage: 81%
  - Total renewable electricity purchased: 82%
  
- Total Renewable Energy Certificates (RECs) allocated to PepsiCo associated with electric power generation from sourced renewable electricity in the United States of America:
  - 1,785,341 MWh
  - USA sourced electricity usage covered by RECs: 100%

**Water:**

- Water withdrawal associated with manufacturing operations:
  - 74,409,610 kiloliters
  
- Global water use efficiency (WUE) rate improvement in high water-risk areas vs base year 2015: 25%
  
- WUE associated with manufacturing operations:
  - Average liters of water used per kilogram of convenient foods produced in high water-risk areas: 2.3
  - Average liters of water used per kilogram of convenient foods produced in non-high water-risk areas: 5.2
  - Average liters of water used per liter of beverage produced in high water-risk areas: 1.7
  - Average liters of water used per liter of beverage produced in non-high water-risk areas: 1.8
  
- Alliance for Water Stewardship (AWS) sites in process of adopting standard: 59
  
- AWS sites completed adoption of standard: 27
  
- Global water replenishment progress toward 2025 Goal: 82%
  
- Global water replenishment progress toward 2030 Goal: 69%
  
- Global water replenished in liters (2023): 12,231,931,585

**Production:**

- Primary production associated with manufacturing operations:
  - Total net production (Convenient Foods): 9,471,435 kilograms
  - Total net production (Beverages): 21,023,354 kiloliters

**Waste:**

- Waste generation associated with manufacturing and warehouse operations, fleet operations, offices and distribution centers:
  - 2,586 thousand metric tons

**Packaging:**

- Packaging associated with manufacturing operations:
  - Cut virgin plastic from non-renewable sources per serving across global beverages and convenient foods portfolio versus a 2020 baseline: 1%
  - Reduction of absolute tonnage of virgin plastic derived from non-renewable sources versus a 2020 baseline: (6%) (represents an increase in absolute tonnage of virgin plastic)
  - Achieve goal of using 50% recycled content in plastic packaging: 10%
  - Design 100% of packaging to be recyclable, compostable, biodegradable or reusable: 89%
  - Scaling new business models that avoid or minimize single-use packaging materials (e.g., models that reuse, refill, prepare at home, utilize concentrates like powders, drops, etc.), with the aim of delivering 20% of all beverage servings sold through reusable models: 10%

**Period covered by GHG emissions verification:**

- Calendar Year 2023

**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)
- 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 and Environmental sustainability data 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 thirteen (13) PepsiCo global locations including 6<sup>th</sup> October, Egypt; Channo, India; Dammam, Saudi Arabia; Frankfort, Indiana; Indianapolis, Indiana; Itu, Brazil; Manisa, Turkey; Modesto, California; Mucia, Spain; Mesquite, Texas; Rojana, Thailand; Saltillo, Mexico; and Tingalpa, Australia; 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 and environmental sustainability data shown above:

- is not materially correct and is not a fair representation of the GHG emissions data, environmental sustainability 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).

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 and environmental sustainability data 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 30 years combined experience in this field and an excellent understanding of Apex's standard methodology for the verification of greenhouse gas emissions and environmental sustainability data.

**Attestation:**



Scott Johnston, Lead Verifier  
ESG Principal Consultant  
Apex Companies, LLC  
Doral, Florida



John Rohde, Technical Reviewer  
ESG Principal Consultant  
Apex Companies, LLC  
Lakewood, Colorado

September 24, 2024

*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 the public or other organizations but without accepting or assuming any responsibility or liability on our part to any other party who may have access to this declaration.*