



**Assurance Statement related to
Greenhouse Gas Emissions Inventory for Calendar Year 2018
prepared for Republic Services, Inc.**

Terms of Engagement

This Assurance Statement has been prepared for Republic Services, Inc. (Republic).

Lloyd's Register Quality Assurance Inc. (LR) was commissioned by Republic to assure its GHG Emissions Inventory for the calendar year 2018 (hereafter referred to as "the Inventory").

The Inventory relates to direct (Scope 1) GHG emissions, energy indirect (Scope 2) GHG emissions, and other indirect (Scope 3) GHG emissions. The Scope 3 GHG emissions include Business Travel and Upstream Transportation and Distribution (T&D).

All emission scopes include only Carbon Dioxide (CO₂), Methane (CH₄), and Nitrous Oxide (N₂O).

Management Responsibility

Republic's management was responsible for preparing the Inventory and for maintaining effective internal controls over the data and information disclosed. LR's responsibility was to carry out an assurance engagement on the Inventory in accordance with our contract with Republic.

Ultimately, the Inventory has been approved by, and remains the responsibility of Republic.

LR's Approach

Our verification has been conducted in accordance with ISO 14064-3:2006 *Specification with guidance for validation and verification of greenhouse gas assertions* to provide limited assurance that GHG data as presented in the Inventory have been prepared in conformance with the World Resources Institute/World Business Council for Sustainable Development (WRI/WBCSD) GHG Protocol: *A Corporate Accounting and Reporting Standard* and Republic Services' Greenhouse Gas Inventory Management Plan.

To form our conclusions the assurance engagement was undertaken as a sampling exercise and covered the following activities:

- Reviewed processes related to the control of GHG emissions data and records;
- Interviewed relevant staff of the organization responsible for managing GHG emissions data and records; and
- Verified historical GHG emissions data and records at an aggregated level for the calendar year 2018.

Level of Assurance & Materiality

The opinion expressed in this Assurance Statement has been formed on the basis of a limited level of assurance and at a materiality of the professional judgment of the Verifier.

LR's Opinion

Based on LR's approach nothing has come to our attention that would cause us to believe that the total Scope 1, Scope 2, and Scope 3 GHG emissions disclosed in the Inventory, as summarized in Table 1 below, are not materially correct and the Inventory has not been prepared in accordance with the WRI/WBCSD GHG Protocol and Republic Services' Greenhouse Gas Inventory Management Plan, except for the following qualifications:

- LR is unable to provide assurance of Republic's total Scope 1 and Scope 2 GHG emissions for CY2018 because we were only contracted to verify emissions of CO₂, CH₄, and N₂O;
- The CY17 emissions total applied in the calculation of the Scope 1 and Scope 2 year-on-year change metric in the table below were different from the values verified for calendar year 2017 due to discoveries that took place after the verification. The differences are not material;



- Scope 3 Business Travel does not include travel by train. This difference is not material; and
- The emission factors used to calculate CH₄ and N₂O emissions from Upstream T&D are not consistent with stated source. The difference is not material.

Signed

Dated: June 25, 2019

LR Lead Verifier
 On behalf of Lloyd's Quality Assurance, Inc.,
 1330 Enclave Parkway, Suite 200,
 Houston, TX 77077

LR reference number: UQA00000499

Table 1. Summary of Republic, GHG Emissions Inventory 2018

Scope	Value	Units
Total Scope 1 Emissions	13,199,147	Tonnes CO _{2e}
Scope 1 Biogenic Emissions	7,575,173	Tonnes CO _{2e}
Scope 2 Emissions (Electricity, Location based)	301,468	Tonnes CO _{2e}
Scope 2 Emissions (Electricity, Market based)	297,864	Tonnes CO _{2e}
Scope 3 Emissions – Business Travel	8,341	Tonnes CO _{2e}
Scope 3 Emissions – Upstream Transportation & Distribution (T&D)	373,516	Tonnes CO _{2e}
Scope 1 and Scope 2 Year-on-Year change	-1.98%	Percent

This Assurance Statement is subject to the provisions of this legal section:

This Assurance Statement is only valid when published with the Report to which it refers. It may only be reproduced in its entirety.

Lloyd's Register Group Limited, its affiliates and subsidiaries, including LRQA Inc., and their respective officers, employees or agents are, individually and collectively, referred to in this Legal Section as 'Lloyd's Register'. Lloyd's Register assumes no responsibility and shall not be liable to any person for any loss, damage or expense caused by reliance on the information or advice in this document or howsoever provided, unless that person has signed a contract with the relevant Lloyd's Register entity for the provision of this information or advice and in that case any responsibility or liability is exclusively on the terms and conditions set out in that contract.

Due to inherent limitations in any internal control, it is possible that fraud, error, or non-compliance with laws and regulations may occur and not be detected. Further, the verification was not designed to detect all weakness or errors in internal controls so far as they relate to the requirements set out above as the verification has not been performed continuously throughout the period and the verification carried out on the relevant internal controls were on a test basis. Any projection of the evaluation of control to future periods is subject to the risk that the processes may become inadequate because of changes in conditions, or that the degree of compliance with them may deteriorate.

The English version of this Assurance Statement is the only valid version. Lloyd's Register assumes no responsibility for versions translated into other languages.