

# GHG Inventory Reporting

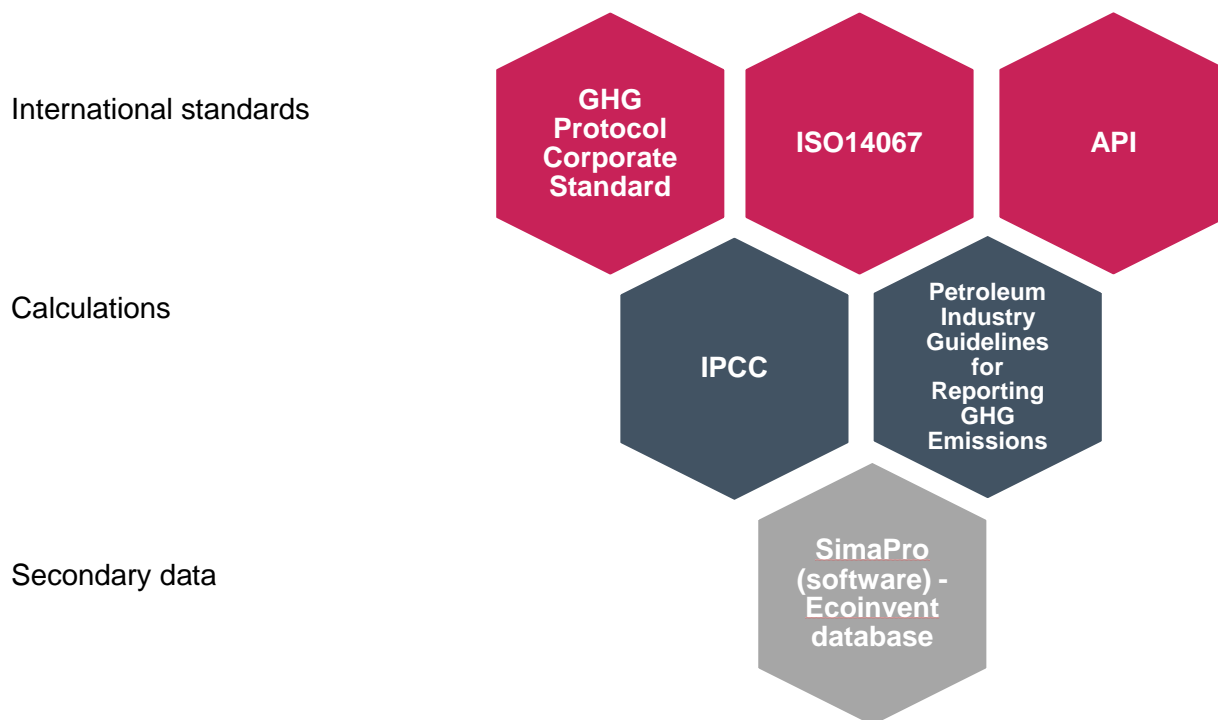
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Heritage Petroleum Company Limited as the state-owned exploration and production company of Trinidad and Tobago is committed to supporting the aims of the national commitments aligned to the Paris Agreement and to contribute to the UN Sustainable Development Goals on climate change as part of our Environment, Social and Governance (ESG) strategic agenda. Protecting the environment is an integral part of Heritage’s Strategic Plans as identified on Heritage Health, Safety, Security and Environmental (HSSE) Policy.

As part of this commitment to support the most ambitious goal to tackle climate change laid out in the Paris Agreement, Heritage has taken the first step within its ESG agenda to develop a Greenhouse Gas (GHG) Emission Inventory Report (“Report”) and its GHG Calculator tool for monthly reporting. We continually strive to minimise our environmental impact, setting goals to improve our performance and aim to transparently communicate our goals and progress.

This first annual Report was completed in April 2020 for the reporting period January to December 2019. Heritage has also completed its 2<sup>nd</sup> annual Report in March 2021 for the reporting period January to December 2020 and is currently undergoing the final validation of this report. The Report aimed to analyse in detail, Heritage’s total emissions and was aligned to international standards and guidelines. The methodological approach is outlined in Figure 1 below. The Report was developed by an independent third-party expert, Factor CO<sub>2</sub>, supported by a cross-functional team of Heritage employees.

## METHODOLOGICAL APPROACH: Organisational Carbon Footprint



**Figure 1: Heritage's Methodological Approach for its GHG Emissions Inventory**

Heritage’s GHG Emissions Inventory is calculated utilising three (3) scopes:

- **Scope 1:** direct emissions that are owned or controlled by the company.
- **Scope 2:** indirect emissions derived from the electricity purchased/generated by the company.
- **Scope 3:** all indirect emissions (not included in Scope 2) that occur in the value chain of the company – purchase of goods and services, employee commute, wastewater treatment, and distance travelled for oil deliveries to international destinations.

The direct GHG emissions from facilities that we operate (Scope 1) were 9,171,798.57 tonnes on a CO<sub>2</sub>-equivalent (CO<sub>2</sub>e). The indirect GHG emissions from the energy we purchased or generated (electricity) (Scope 2) were 24,634.04 tonnes CO<sub>2</sub>e. Heritage's total GHG emissions from Scope 1, Scope 2 and Scope 3 amounted to 9,248,293.29 tonnes of CO<sub>2</sub>e, where Scope 1 represents the largest contribution with 99.17% of total GHG emissions.

Scope 1 emissions are the highest mainly because gas is directly vented to the atmosphere (instead of flared), and 89.5% of its composition is methane. Vented emissions represent 97.4% of Scope 1 emissions, other sources are combustion (stationary and mobile), fugitive and fluorinated gases.

Since 2019, Heritage has also been working with the Ministry of Planning and Development (MPD) and the Environmental Management Authority (EMA) to support the Government of the Republic of Trinidad and Tobago's commitment to following through on its Nationally Determined Contributions (NDC).

One of these initiatives is the National Climate Mitigation Monitoring, Reporting and Verification (MRV) System. The National MRV System is intended to facilitate the collection, analysis and transparent reporting of accurate and reliable information and data on GHG emissions, efforts to mitigate them and resources devoted to enabling these efforts.

The Trinidad and Tobago Knowledge Management System (KMS) is the central repository for this information and data and includes methodologies, procedures and institutional frameworks. Heritage has participated in Trinidad and Tobago's MRV system in 2020 and submitted its GHG emissions data for the year 2019.

Heritage is also in action to reduce GHG emissions, to both identify immediate actions that can be delivered by the organisation and to explore medium to long term emissions projects with clearly defined emission reduction targets. The first Heritage Emissions Reduction Assessment Report was published in 2020. The Emissions Reduction Assessment has outlined eighty (80) near, mid and long-term GHG reduction opportunities.

## Heritage response to meeting the challenge of Global Climate Change

Recognising the role of energy transition finance in supporting the transition to a low-carbon and more resource-efficient economy, Heritage has developed its first Energy Transition Framework ("Framework") and is committed to the implementation of this Framework to link our funding with our energy transition objectives, leveraging defined timelines to achieve energy transition performance goals that are relevant, core and material to our business. Heritage's support of energy transition finance allows us to continue to partner with all our stakeholders along with our long term environmental and social commitments. Heritage is committed to accurate disclosure of GHG emissions data and will focus on, measurement, reported disclosures, goals and objectives that inform our road map to achieving material GHG reductions.

Some of our goals on priority areas for action:

- **GHG Data Improvements and Further Studies:** We will seek opportunities to continuously improve emissions data collection methodologies to improve the accuracy of data and make progress towards verifiable reductions e.g., direct field emissions measurements for venting from identified sources using optical gas imaging cameras and will prioritise higher emitting operations. Identification of the Heritage GHG Emissions Reduction studies will underpin the development of a comprehensive organisation-wide GHG Emissions Reduction plan.
- **GHG Reduction Targets:** We will continue to work towards setting short-, medium- and long-term targets and ambitions to reduce GHG emissions of our operations. In keeping with national commitments to reduce GHG emissions. One of our focus areas is the direct quantification of vented emissions.
- **Carbon Capture and CO<sub>2</sub> Enhanced Oil Recovery Project:** A Large-scale Carbon Capture and CO<sub>2</sub> Enhanced Oil Recovery Project will be of immense importance to the energy sector. Along with other oil and gas companies in Trinidad, Heritage has been included as a key member of the Cabinet Appointed Carbon Capture and CO<sub>2</sub> Enhanced Oil Recovery (EOR) Steering Committee. Heritage will identify suitable reservoirs in the Heritage producing fields to deploy

Carbon Capture, Utilisation and Storage (CCUS) technologies to directly contribute to Heritage's GHG reduction plans.

- **Partnerships (Joint Ventures & Alliance & Contracts):** We will ensure that our partnerships continue the urgent and practical action on climate change.
- **Supply Chain:** We will include supply chain sustainable practices to support GHG Reduction plans and to reflect our environmental commitments.
- **Enterprise Risk Management and Environmental Management System (ISO 31000, ISO 14001):** We will ensure that risk and opportunities are assessed via our Risk Registers and Aspect/Impact Registers. We aim to be ISO 14001 certified by 2023.
- **Increase transparency:** We will transparently report performance in our annual Sustainability Report, intranet and internet.
- **Join National & International Voluntary Initiatives:** We will work constructively with government, national and international institutions, industry and NGOs in the development and implementation of GHG initiatives and regulations. We will participate in global voluntary initiatives to join the industry's response to climate change.

Heritage will communicate on the relevant KPIs and Energy Transition Performance Targets (ETPTs), making up-to-date information and reporting available on its website annually via its Sustainability Reporting.

### Heritage Total Emissions by Scope and Source

Indicators	Unit of Measure	2019
<b>Direct GHG Emissions Scope 1</b>	<b>tCO<sub>2</sub>e</b>	<b>9,171,798.57</b>
Carbon Dioxide (CO <sub>2</sub> )		230,698.55
Methane (CH <sub>4</sub> )		8,937,122.99
Nitrous Oxide (N <sub>2</sub> O)		3,766.80
Hydrofluorocarbons (HFCs)		210.23
<b>Scope 1 Emissions by Source</b>	<b>tCO<sub>2</sub>e</b>	<b>9,171,798.57</b>
Venting		8,934,874.41*
Combustion		212,438.27
Fugitives		24,275.66
Other sources		210.23
<b>GHG Emissions Scope 2</b>	<b>tCO<sub>2</sub>e</b>	<b>24,634.05</b>
Carbon Dioxide (CO <sub>2</sub> )		24,439.36
Methane (CH <sub>4</sub> )		62.65
Nitrous Oxide (N <sub>2</sub> O)		132.04
<b>GHG Emissions Scope 3</b>	<b>tCO<sub>2</sub>e</b>	<b>51,860.68</b>
Carbon Dioxide (CO <sub>2</sub> )		48,415.93
Methane (CH <sub>4</sub> )		2,992.89
Nitrous Oxide (N <sub>2</sub> O)		451.86
<b>Total (Scope 1, 2 and 3)</b>	<b>tCO<sub>2</sub>e</b>	<b>9,248,293.29</b>
GHG Intensity Ratio	tCO <sub>2</sub> e/bbl	0.995

\*Emissions due to venting will be validated with direct measurements in 2021 - 2022. The Gas-to-Oil Ratio used for this calculation represented a small sub-set of the gas-to-oil ratio for Heritage's fields. With direct measurements, a more accurate figure of the emissions related to vented emissions can be obtained.

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