SWIRE COCA-COLA

2022 SBT PROGRESS REPORT

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1. INTRODUCTION

Swire Coca-Cola Limited (Swire Coca-Cola) is the fifth largest bottling partner of The Coca-Cola Company (TCCC) by global volume, with a franchise to manufacture, market and distribute TCCC products in Greater China and the western U.S.

In 2020, Swire Coca-Cola set a science-based target (SBT) to reduce greenhouse gas (GHG) emissions in line with the 1.5°C trajectory. It has been approved by the Science Based Targets Initiative (SBTi). By 2030, we target to achieve the following reductions from our 2018 base year:

- 70% reduction in emissions from core operations (Scope 1 & 2); and
- 30% reduction in emissions from across value chain (Scope 1, 2 & 3).

This SBT Progress Report is intended to provide a detailed and honest account of our performance and progress towards our 2030 target, by market and by material emissions source. It covers the period from 1 January to 31 December 2022, and is supplementary to our full Sustainable Development Report 2022. This report, and our other sustainable development reports can be downloaded from our corporate website: https://www.swirecocacola.com/en/Sustainability/Sd-Reports.html.

2. CALCULATING OUR 2018 BASELINE AND PROJECTED EMISSIONS

2.1. Summary of our Emissions Modelling Study

Swire Coca-Cola engaged a specialist consultant, RESET Carbon (RESET), to map GHG emissions across its full value chain (Figure 1) and determine a business-as-usual (BAU) emissions scenario (Figure 3). Following intensive consultation with our internal teams and experts from the Coca-Cola Company (TCCC), RESET helped to identify the most material and impactful opportunities to reduce our GHG emissions. The 2018 baseline was recalculated in 2022 using our latest methodology to enable a more accurate assessment of our performance over time.

Figure 1: Swire Coca-Cola GHG Emissions Profile in 2018

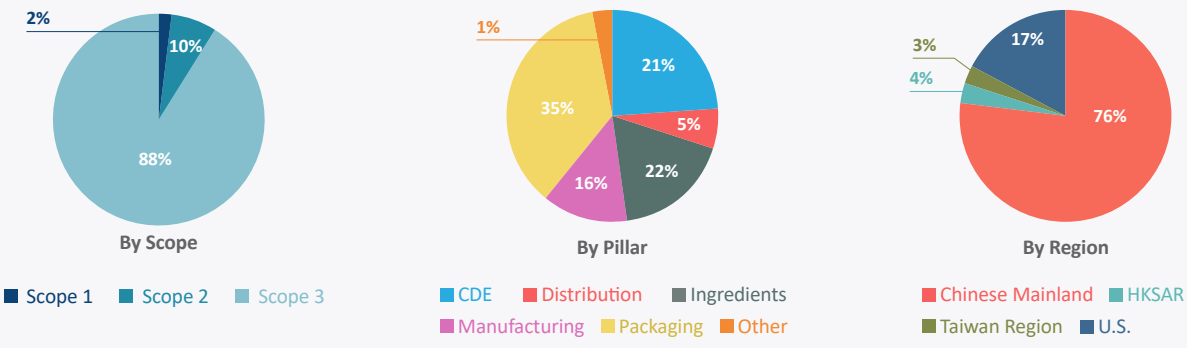


Figure 2: Breakdown of 2018 Emissions by Pillar, Emission Source and Region

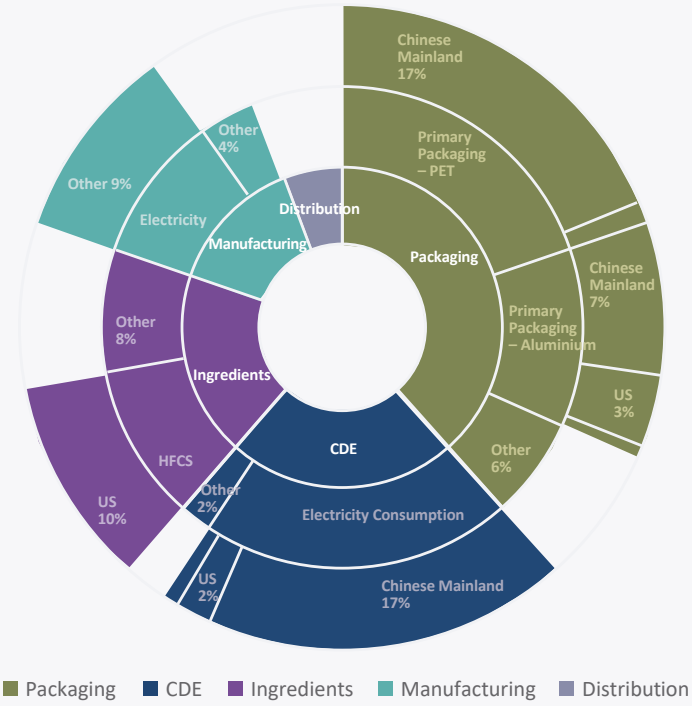
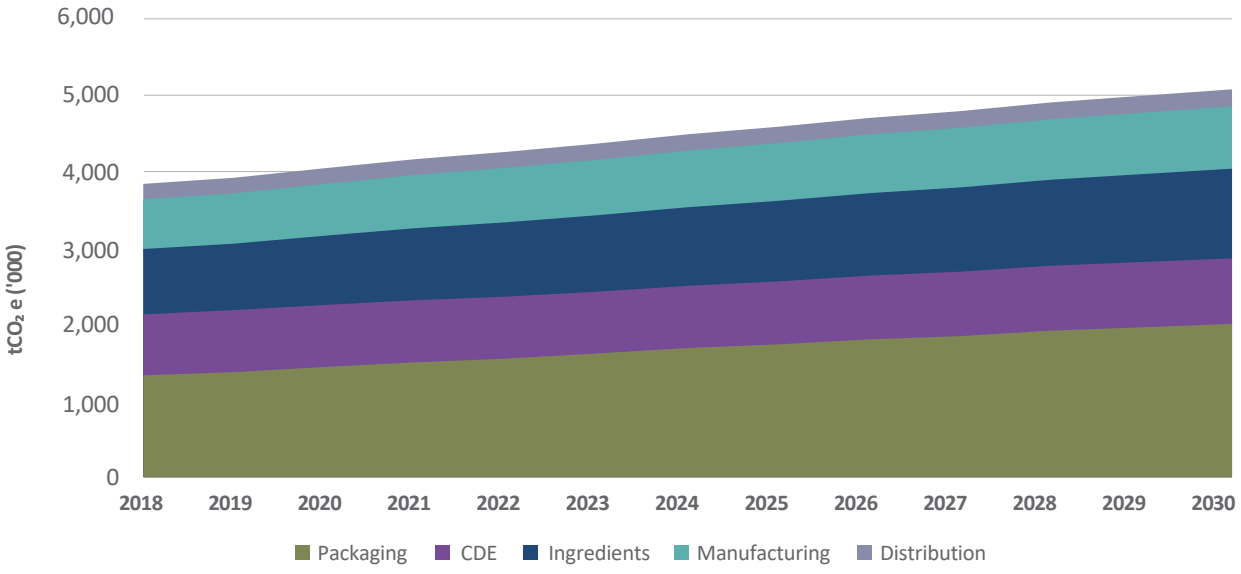


Figure 3: BAU Scenario Carbon Emissions Projection



More than 80% of our emissions are Scope 3 emissions (i.e., outside of our operational control). Working with our suppliers, customers and consumers will therefore be critical to reducing our footprint and meeting, if not exceeding, our SBT.

Key reduction opportunities include:

1. **Transitioning from fossil fuel based-electricity to renewable electricity (RE) – Scope 2**
   The biggest source of emissions in our core operations is from electricity use. We target to achieve 100% RE in our core operations by 2026. We will install RE generation systems on our sites and purchase RE from credible sources.

2. **Increasing recycled content in our PET bottles and cans – Scope 3**
   Our target projection includes 70% recycled PET and 100% recycled aluminium use in our primary packaging by 2030. A significant contribution is expected from our Chinese Mainland operations, where current regulations do not permit the use of recycled content in PET food-grade packaging. We and TCCC continue to engage with the Chinese government on this matter.

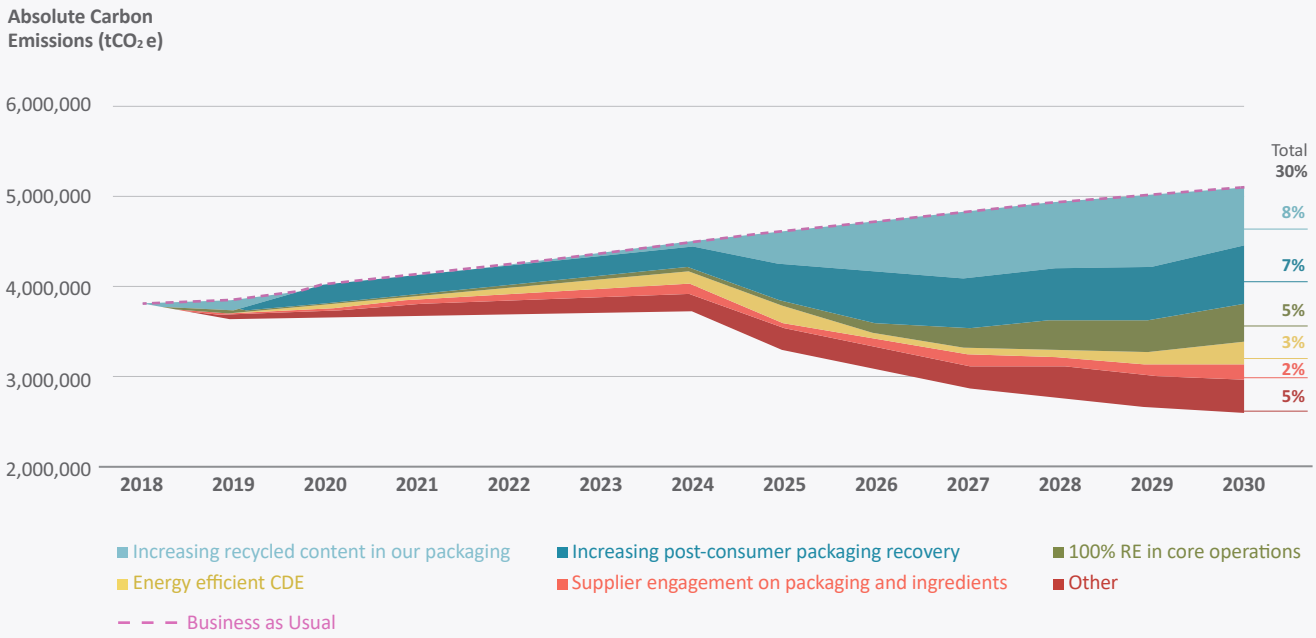
3. **Increasing packaging collection and recovery rates – leading to increased recycling – Scope 3**
   Our projection includes an increase in the recovery rate of post-consumer single-use primary packaging, in particular in the Chinese Mainland, the U.S. and the Hong Kong SAR, of up to 100% by 2030. We will work with TCCC, other bottlers and relevant government stakeholders to pilot and expand programmes to support the collection, recovery and reuse of post-consumer materials. In the Hong Kong SAR, we support the Drink Without Waste (DWW) initiative and have invested in New Life Plastics (NLP), a state-of-the-art plastics recycling facility.

4. **Supplier engagement on packaging and ingredients – Scope 3**
   Ingredients and packaging materials we buy from our suppliers are a key source of Scope 3 emissions. We will work with TCCC to engage our suppliers to (a) produce supplier-specific emission factors and (b) develop plans to reduce their emissions by encouraging and incentivising energy efficiency and RE procurement.

5. **Energy-efficient CDE – Scope 3**
   Our projection incorporates energy efficiency gains through technological improvements to offset the expansion of our growing CDE fleet – with coolers in the Chinese Mainland being the key equipment segment.

RESET modelled the potential contribution of these reduction opportunities towards our target. We expect these opportunities, when implemented, to deliver an overall 30% absolute reduction in Scope 1, 2 and 3 emissions.

Figure 4: Emission Savings Projection by Reduction Opportunity Compared with the BAU Scenario



2.2. Limitations of the Modelling Results

The modelling results are subject to assumptions and data available at the time of calculation in 2019. This includes our forecasted business portfolio in 2030 and the projected effectiveness of identified reduction opportunities, for instance:

- Technology improvements to energy efficiency (e.g., CDE, manufacturing processes)
- Market maturity in purchased renewable electricity and recycled packaging material
- Customer preferences and our business growth
- Regulation and policy change (e.g., ability to use recycled content in PET food-grade packaging)

2.3. Updating our Projections

In these annual progress reports, we will report on material changes that impact our BAU scenario projections. To date these include:

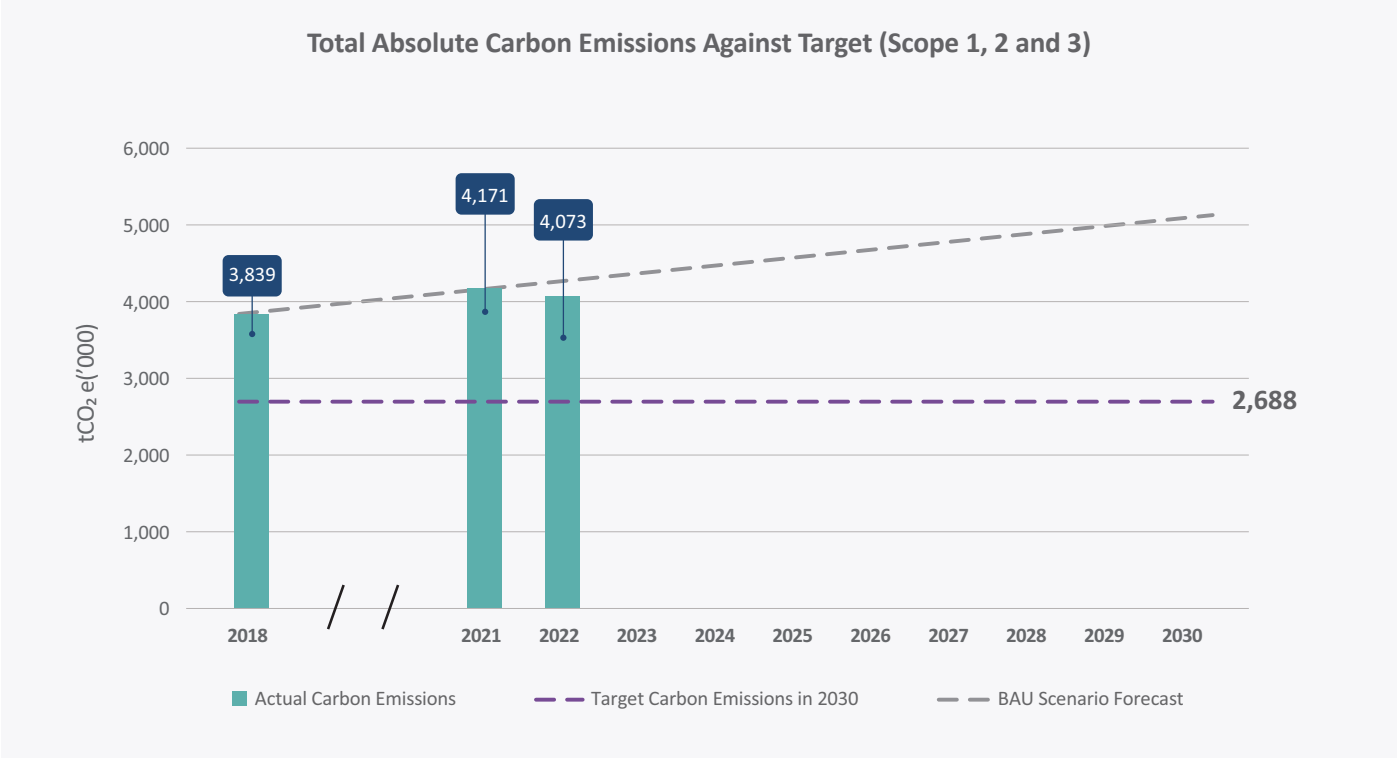
- An 84% increase in the projected electricity consumption in the U.S. until 2026, mainly due to the addition of blow moulding capability in five bottling plants
- 10+ preform manufacturing lines will be added to our Chinese Mainland bottling plants in 2022-2030

The boundary and methodology of our baseline emissions will be adjusted along with our emissions tracking to provide better completeness and accuracy, such as moving our emission factor from a global 'proxy' to a supplier-specific one.

The calculation method for Scope 3 emissions is expected to be evolved continuously for better quality data. The current boundary and methodology for Scope 3 calculation in each pillar are described in Appendix A and B respectively. Despite the updated Scope 3 methodology since 2021, we have still identified the data limitation, deviated from the ideal data we envision. It is expected that these limitations will mostly be addressed by 2026. By then, we will recalculate all the historical years' data using a consistent methodology to demonstrate the actual reduction progress.

3. PERFORMANCE OVERVIEW

3.1. Absolute Emissions Against Targets



Remark 1 The Scope 3 emissions only account the five identified material pillars: Ingredients, Packaging, Manufacturing – Scope 3, Third-party Distribution and Cold Drink Equipment (CDE). For more detail of the emission boundary, please refer to Appendix A.

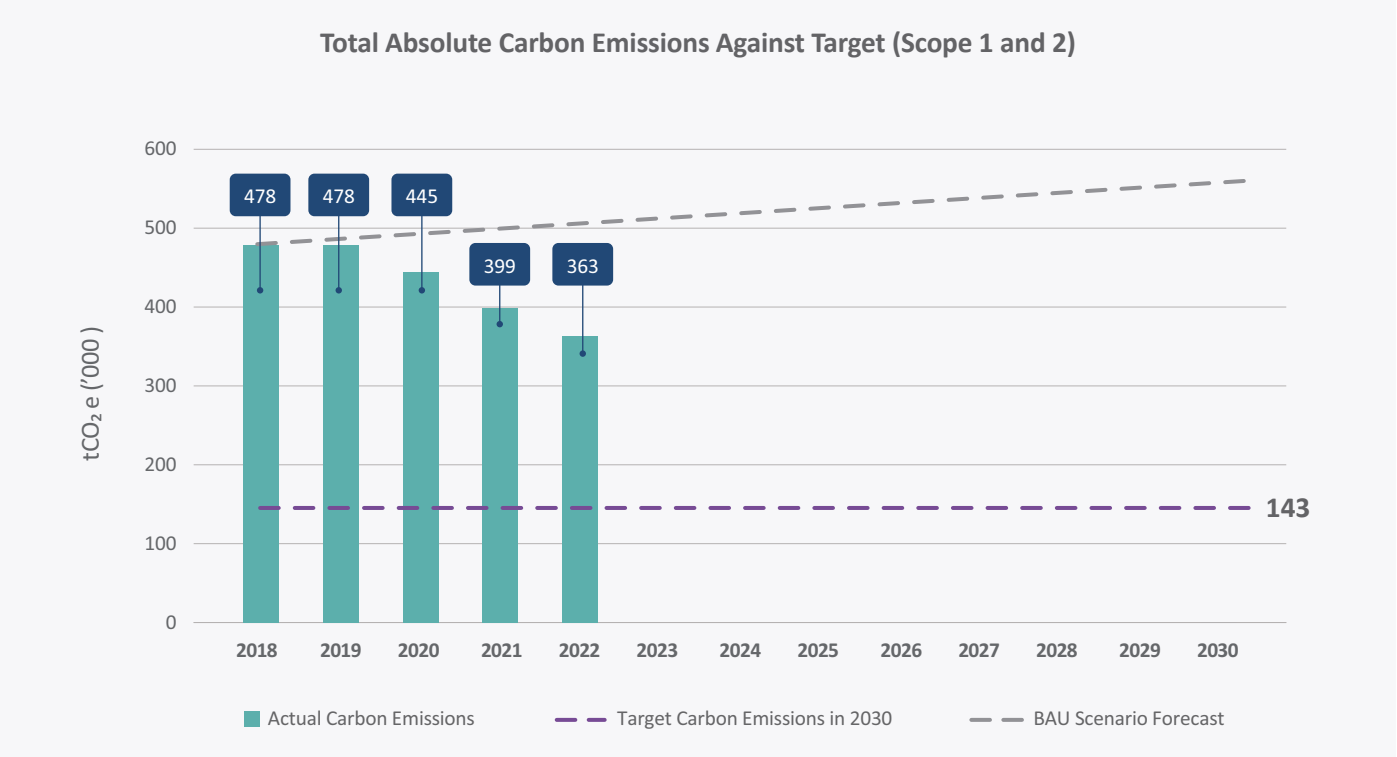
Remark 2 Due to limited data availability, 2019 and 2020 Scope 3 emissions are not recalculated based on the updated methodology, and are not shown in this report.

Remark 3 For the 2018 baseline, except for the emission sources explained in the footnote[1] (~10% of the baseline emissions), the data sources of other target Scope 3 emissions are now aligned with the latest year.

Compared to the base year of 2018, total absolute Scope 1, 2 and 3 emissions in 2022 have experienced a slight increase of 5%. As Scope 3 emissions contribute the majority of total emissions, the reasons for the changes may mainly lie in the Scope 3 emission drivers:

- **Scope 3 CDE:** The rise is mainly contributed by the larger emissions in CDE, driven by the increased number of CDE in 2022. The change is most significant in Chinese Mainland, where the number of CDE is 1.5 times more than in 2018.
- **Scope 3 Packaging:** Another main factor is packaging. In 2022, Chinese Mainland's purchased packaging weight has increased by 10% from 2018.
- **Scope 3 Packaging:** Besides, use of recycled material in food packaging remains restricted in the Chinese Mainland due to the food safety standards.
- **Scope 2 Electricity:** Despite the small increase in the overall Scope 1, 2 and 3 emissions, reductions have been achieved in some areas, mainly in Scope 2, i.e., purchased electricity (see the following page for more information).

[1] CDE in the Taiwan Region, Hong Kong SAR and USA; Third-Party Distribution in all 4 markets; Packaging & Ingredients in the Taiwan Region

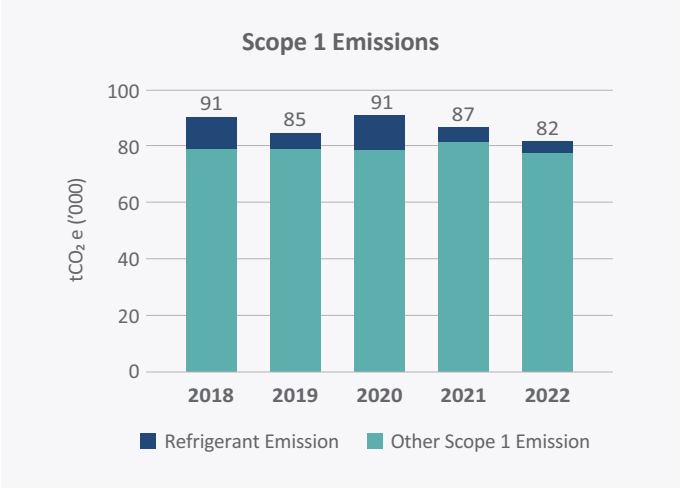


Compared to the base year of 2018, total absolute Scope 1 and 2 emissions in 2022 reduced by 24%. Given the insignificant amount of Scope 1 emissions and limited interventions on the Scope 1 emission sources, the reduction is largely explained by the reduction initiatives in Scope 2 emissions, especially electricity.

- **Scope 2 – Electricity:** The drop in emissions is mostly a result of the expansion of the offsite renewable electricity procurement in the Chinese Mainland despite an increase in production volume.
- **Scope 2 – Electricity:** Other factors include increasing onsite-generated renewable electricity in the Taiwan Region and U.S.
- **Scope 2 – Electricity:** The drop in the Hong Kong SAR's grid factor compared to the base year is also one of the drivers.

More details of the reduction initiatives, renewable electricity percentage change and grid factor improvement by market are shown in Section 4.1, Appendix F and Appendix H, respectively.

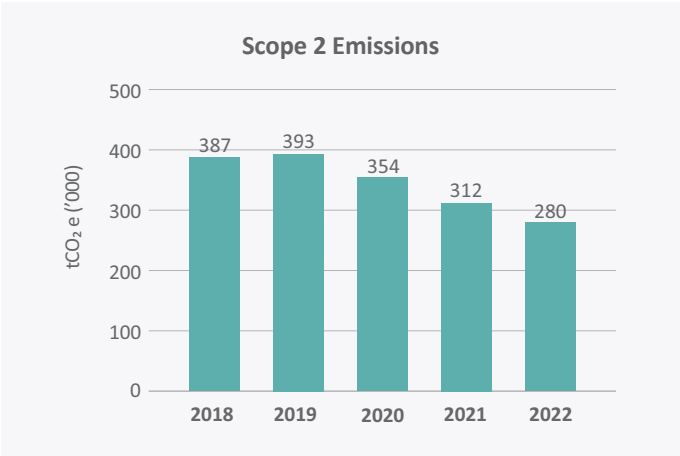
3.2. Absolute Emissions by Emissions Scope



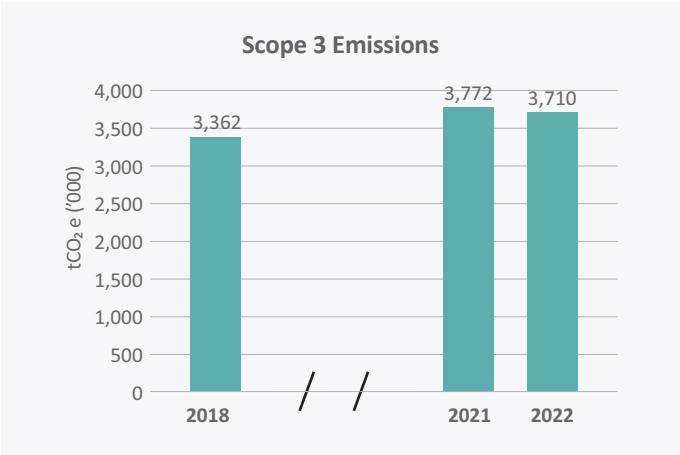
Our total Scope 1 emissions decreased by 10% against the 2018 level. The reason for the variation in annual Scope 1 emissions is the fluctuation of the refrigerant refilling amount (see blue area).

After excluding refrigerant, Scope 1 emission in the past few years have been steady, with a slight growth of 4% in 2021. The reason may be the replacement of purchased steam in a few plants in the Chinese Mainland with onsite natural gas boilers since mid-2020, which is covered under Scope 1.

Comparing to the previous year, Scope 1 emissions reduced primarily because of lower production volume in 2022.

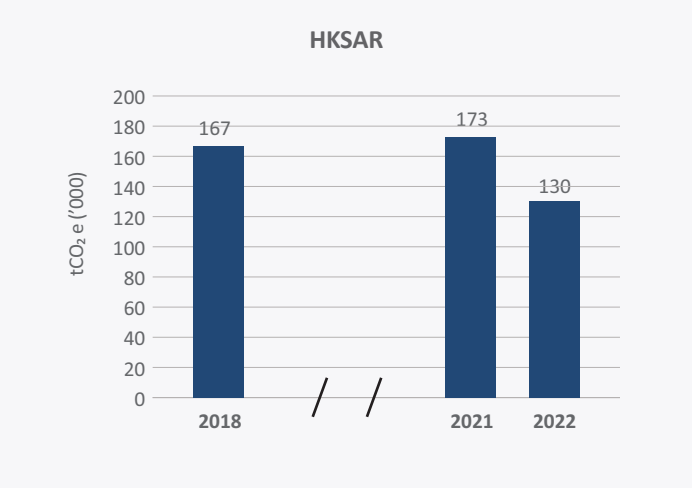


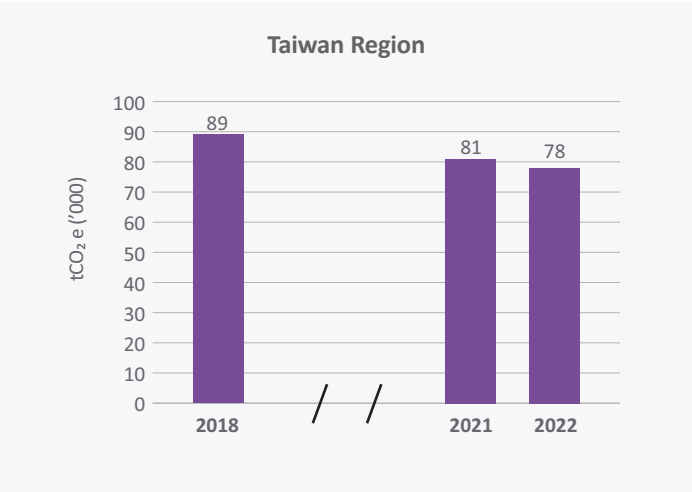
A decreasing trend is presented in our Scope 2 emissions. The reduction pattern is more obvious in 2021 and 2022, (-19% and -28% respectively). This is greatly contributed by the expanded renewable electricity consumption and greener electricity grid.

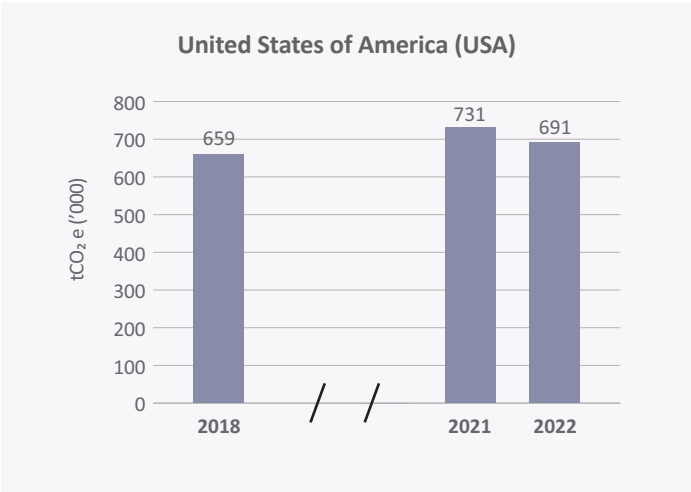


Scope 3 emissions contributes the majority of Swire Coca-Cola's total emissions. For details of the Scope 3 emission trend and key reduction projects, refer to Sections 4.2 and 5.2 respectively.

3.3. Absolute Scope 1, 2 & 3 Emissions by Market





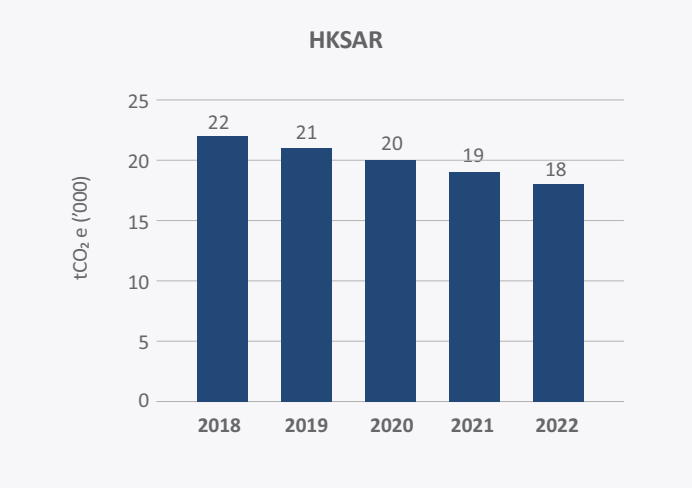


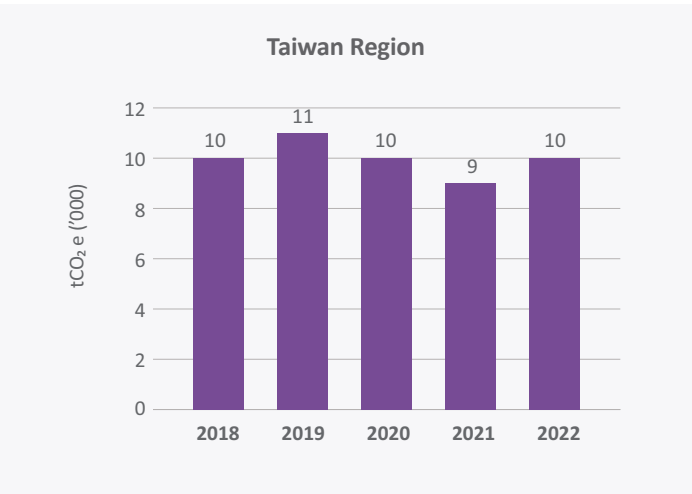
While the majority of 2018 baseline emissions are revised with the improved data source, we are still working to align our baseline methodology for certain Scope 3 emission sources[2] to enable meaningful trend analysis.

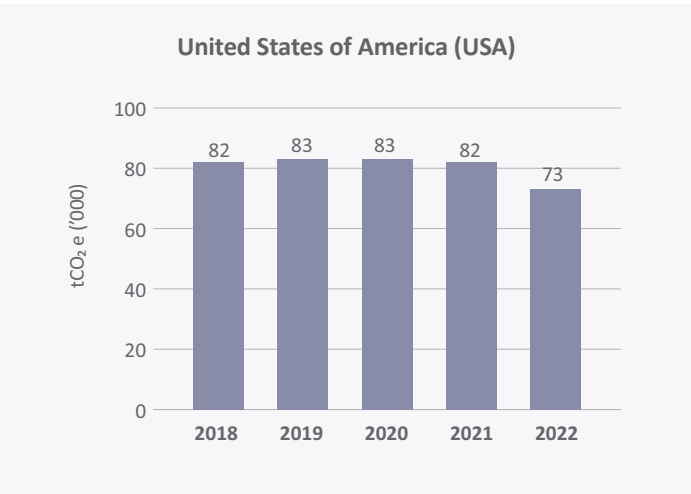
Region	Description
Hong Kong SAR	The overall reduction is largely contributed by the increased RGB and aluminium recycled content and recycling rate in the Hong Kong SAR (see Section 4.2).
Chinese Mainland	The overall increase is mainly explained by the 1.5 time increase in the number of CDE. Despite the increase, a fair amount of reduction is found in Scope 2, with the additional RE procurement plan and onsite PV program (i.e., solar energy generation) (see Section 4.1).
Taiwan Region	The Scope 3 baseline for the Taiwan Region was based on extrapolation, which may not be comparable to the improved methodology used in 2021 and 2022. Back-casting of the Scope 3 baseline is in progress.
United States	Despite the slight increase in recycled PET (rPET) content in US packaging (see Section 4.2), the increased packaging amount leads to a small rise in emissions in 2022 compared to 2018.

[2] CDE in in the Taiwan Region, Hong Kong SAR and USA; Third-Party Distribution in all four markets; Packaging & Ingredients in the Taiwan Region

3.4. Absolute Scope 1 & 2 Emissions by Market







Region	Description
Hong Kong SAR	The decreasing trend in emissions is owing to the reduced production volume in 2018-2020. There was a sharp drop in grid factor in 2021 despite the rise in electricity consumption.
Chinese Mainland	Absolute emission in the Chinese Mainland have plunged by 28% against 2018. The reduction rate in 2021 is comparably higher than the previous year, resulting from the skyrocketed volume of renewable electricity procured (explained in Section 4.1). The further reduction in 2022 is from the additional RE procurement plan and on-site PV program (i.e., solar energy generation). It is noted that Chinese Mainland contributed 72% to our total Scope 1 and 2 emissions in 2022.
Taiwan Region	Although its production volume has grown in 2018 to 2022, the impact is offset by energy efficiency and grid factor improvement. The slight increase from 2021 to 2022 is due to a combination of new line testing, less renewable electricity purchased and a rise in the grid factor.
United States	The Scope 1 and 2 emissions in the United States have shrunk by 11% from 2018, which is mainly led by the grid factor improvement. The other factor of the reduction is the updated proxy on energy consumption for the Sales and Distribution Centres in 2022. The updated proxy is based on the average energy consumption per floor area of each grid region in 2021. In 2022, our Salt Lake City facility installed the blow moulding equipment. While the increased emission was likely offset by the lower production volume during the year, it is expected to drive our electricity consumption up by 85% when the switch is completed in all five plants in 2026.

4. EMISSION REDUCTION PROJECTS

4.1. Key Projects for Scope 1 and 2 Emission Reduction

Scope	Reduction Measures	Progress Updates
Scope 1	Increasing efficiency of chillers and coolers at manufacturing sites	**Chinese Mainland** An upgrade to the compressed air system and chilling system at our plant in Shenmei Jinqiao, Shanghai, now achieves 2,600 MWh in annualized savings. **Taiwan Region** The cooled-water chiller and high air pressure compressor were replaced, achieving a total energy saving of approximately 720,000 kWh/year. Besides, the retrofitting of the existing coolers using hydrocarbon refrigerants contributed to a total Scope 1 emissions reduction of around 270 tonnes/year.
Scope 1 and 2	Increasing efficiency of Towngas boilers and air compressors	**Hong Kong SAR** The Hong Kong SAR replaced Towngas boilers and air compressors with more efficient models to improve performance. Combined with other energy-saving initiatives, the energy-use ratio (EUR) has been reduced by approximately 6.5%. Other initiatives to improve energy efficiency include the upgrade of LED lights, passenger lift, spot cooling and laser incision machine.
Scope 2	Incorporating sustainable principles in building design	**United States** The newly opened warehouse facility in Colorado Springs incorporates sustainable principle in its design: • Reducing energy usage by generating sunlight and natural warmth through design: West-facing offices and meeting spaces with an open-floor concept and glass façade.

Scope	Reduction Measures	Progress Updates
Scope 2	100% RE consumption from bottling plants	**Chinese Mainland** Overall, On-site and Offsite RE provided approximately 99,766 MWh of renewable electricity in 2022, equivalent to 27% of our electricity consumption in our Chinese Mainland manufacturing sites. These are a result of the below initiatives: New On-site PV installation projects: • The newly installed solar PV system in Wenzhou, Huizhou and Hangzhou have contributed to a 9% increase in on-site RE consumption in 2022. • Please refer to Appendix G for the pipeline of on-site solar PV projects. Offsite RE agreements: • In 2022, four additional sites (six in total) entered into offsite RE agreements. • Electricity consumption is now 100% renewable at our Yunnan, Hubei, Hangzhou and Wenzhou sites and partially renewable at Gunagxi and Anhui plants. **United States** Onsite PV installation project in United States has covered approximately 1% of the total electricity consumption in the United States. Please refer to Appendix G for the pipeline on-site solar PV projects. **Taiwan Region** No new project implemented in 2022, while the current rooftop solar PV panel in the Taiwan Region could support approximately 5% of its electricity consumption. Despite being reflected as a Scope 2 emission reduction in this report, renewable energy generated is not counted towards our RE target progress as we do not retain the environmental attributes.

4.2. Key Projects for Scope 3 Emission Reduction

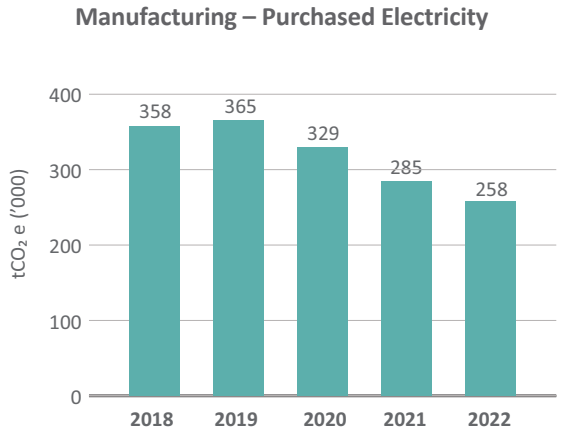
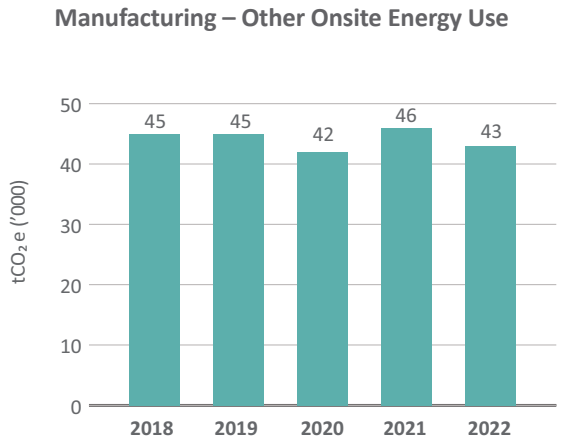
Scope 3 Category	Pillar	Reduction Measures	Progress Updates
Category 1: Purchased Goods and Services	Packaging	Increasing recycled primary packaging content	**United States** In 2022 in the U.S., the recycled content in the Aluminium was 72%. In 2022, Dasani bottled water 20oz is in 100% rPET bottles. Overall recycled content in bottled water and sparkling were 24% and 25.6%, respectively. **Hong Kong SAR** In the Hong Kong SAR, all water except for the 4.8L and 5L bottles is now in 100% rPET bottles and since 2021, carbonated beverages in 600ml bottles use 25% rPET. **Taiwan Region** In the Taiwan Region, the regulation regarding recycled content in food-grade packaging has changed in 2022. The rPET content in packaging is now in the pipeline. **Chinese Mainland** In the Chinese Mainland, work is being done to build a process around recycled content adoption in food-grade packaging. In 2022, 3.2% of aluminium used was recycled content.
		Increasing primary packaging post-consumer recovery rates & enhancing transparency	Globally, we are hindered in obtaining data that is timely and credible. Work with TCCC and the industry is ongoing in this space to try and rectify this situation. Being part of the beverage industry, our U.S. business supported the U.S. state of Colorado to pass the Extended Producer Responsibility (EPR) legislation (HB22-1355) in 2022.

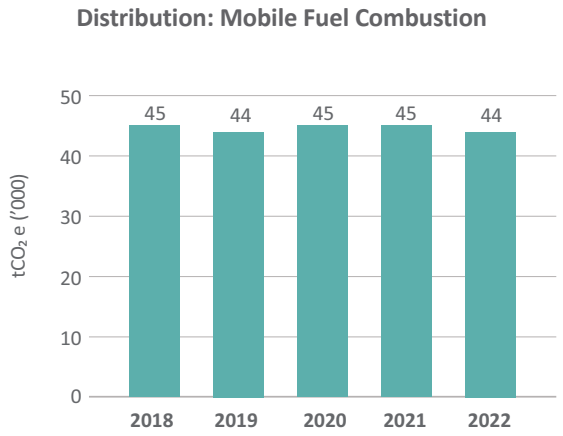
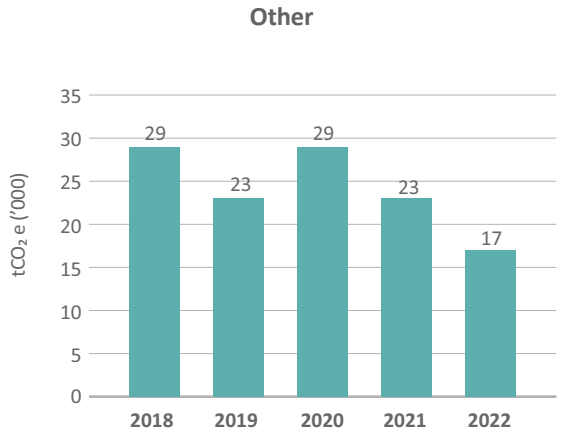
Scope 3 Category	Pillar	Reduction Measures	Progress Updates
Category 1: Purchased Goods and Services	Packaging and Ingredients	Collecting supplier-specific data on packaging and ingredients	With the purpose of moving from the application of global emission factors to supplier and location specific emission factors, Swire Coca-Cola has started working on building a platform to collect supplier data in the Chinese Mainland.
Category 13: Downstream Leased Assets	Cold Drink Equipment (CDE)	Improving energy efficiency for CDE	**Chinese Mainland** Transition of the older, less energy-efficient CDE to models with higher energy efficiency. • In 2020, one smaller cooler type (398L) was transitioned, bringing a 39% energy efficiency improvement. In 2022, through proactive collaboration between our group-level Procurement team and our beverage cooler suppliers, the 'next generation' CDE, which operates at a 50% lower energy consumption compared to the current equipment, has been identified. As the new technology is phased-in across the Chinese Mainland, this will result in a significant reduction in Scope 3 emissions.
		Switching refrigerants used in CDE to low-emission refrigerants	**Taiwan Region** Since 2021, in the Taiwan Region, our CDE team innovated a technology to retrofit old CDE models to make them compatible with environmentally responsible refrigerants, i.e., HFO (R1234yf). We are now working with customers to transition all our CDE to use these refrigerants by 2025. By 2022, 43% of CDE has made the switch.

5. PERFORMANCE BY EMISSION SOURCE

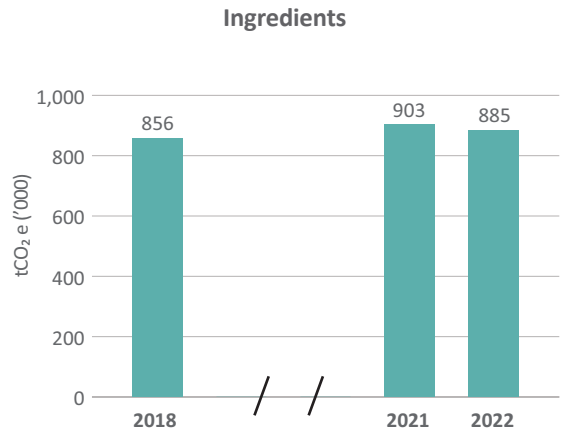
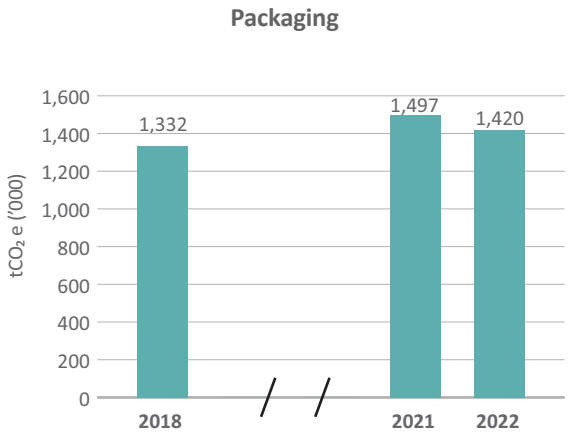
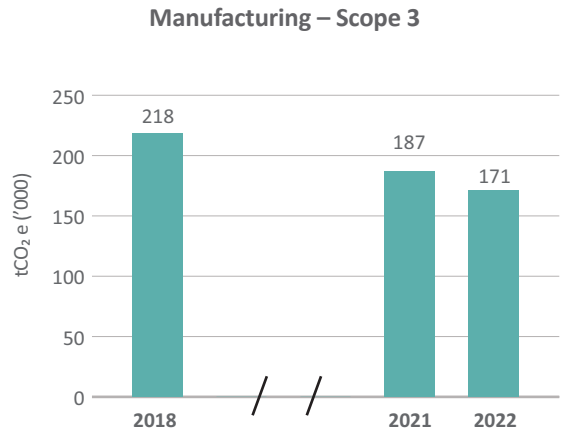
5.1. Absolute Scope 1 & 2 Emissions by Emission Source

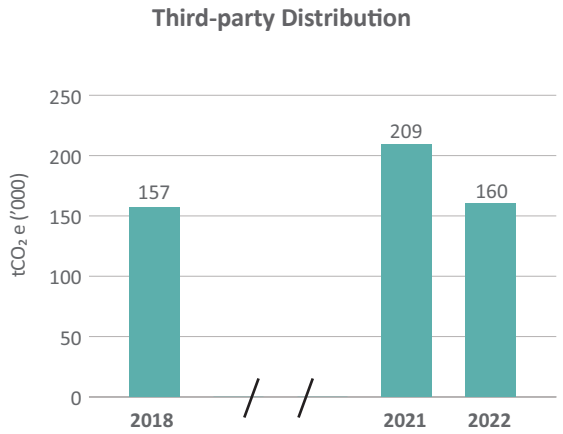
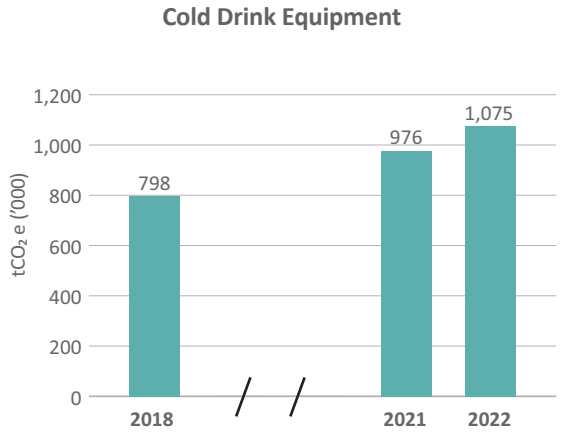
The below charts show a similar trend to Section 3.2, where the emissions associated with energy use were steadily reducing while the refrigerant emissions were fluctuating.

Emission Source & Description	Performance
Scope 2: Manufacturing – Purchased Electricity Emissions are associated with energy use in manufacturing plants, which is the major source of our Scope 1 and 2 emissions (75%).	
Scope 1: Manufacturing – Other Energy Use Emissions associated with energy use in boilers mainly (and other minor supporting equipment such as forklifts). A key problem area remains in finding alternative, no-emission power sources for the boilers within the manufacturing plants. At best, these are powered from natural gas, and at worst in 8 manufacturing plants in the Chinese Mainland, we acquire steam (made centrally in industrial zones and piped to us), which is made from the combustion of thermal coal.	

Emission Source & Description	Performance
Scope 1: Distribution: Mobile Fuel Combustion Emissions from the fuel (gasoline and diesel) consumed by our vehicle fleet.	
Other Scope 1 & 2 Emissions Emissions of refrigerant refilled at our own sites for Cold Drink Equipment (CDE) and onsite cooling, as well as energy use in distribution centres and sales centres.	

5.2. Absolute Scope 3 Emissions by Emission Source by Materiality

Pillar & Description	Performance
Ingredients (Cat. 1 Purchased Goods and Services) Emissions from extraction, processing, refining and transportation of raw ingredients such as sugar, HFCS and concentrates.	
Packaging (Cat. 1 Purchased Goods and Services) Emissions from extraction, processing, manufacturing and transportation of primary packaging materials such as PET, aluminium cans and returnable glass bottles.	
Manufacturing – Upstream (Cat. 1 Purchased Goods and Services & Cat. 3 Fuel and Energy Related Activities) Upstream emissions of purchased fuels and electricity including transmission and distribution (T&D) losses and emissions associated with key copacker energy consumption for manufacturing.	

Pillar & Description	Performance
Third-party Distribution (Cat. 4 Upstream Transportation and Distribution) Emissions from third-party fleets for distributing Swire Coca-Cola's products.	
Cold Drink Equipment (Cat. 13 Downstream Leased Assets) Emissions from electricity consumption of CDE such as coolers and vending machines at point-of-sale.	

6. APPENDIX

6.1. Appendix A – Target Boundary

Scope 1 & 2 Emissions Boundary

The target boundary covers all Scope 1 and 2 emissions associated with all Swire Coca-Cola wholly and majority owned operations (i.e., bottling plants, sales and distribution centres), in four markets: the Chinese Mainland, Hong Kong SAR, Taiwan Region and U.S. It covers the below emission sources:

- Scope 1 – Stationary fuel combustion
- Scope 1 – Mobile fuel combustion
- Scope 1 – Fugitive emissions from refrigerants
- Scope 2 – Purchased electricity
- Scope 2 – Purchased steam
- Scope 2 – Purchased Towngas

The historical years' emission boundaries and emission have been updated when there are any changes in Swire Coca-Cola's business structure. Below are the updates as of 31 Dec 2022:

Year	Updates
2020	• Added emissions from packaging production of Luquan packaging centre in the Chinese Mainland.
2021	• Added emissions from electricity use in sales centres in the Chinese Mainland Note: They contribute less than 1% of our total Scope 1 and 2 emissions in the Chinese Mainland, so do not materially impact the baseline
2022	No additional update

Scope 3 Emissions Boundary

Swire Coca-Cola's Scope 3 target covers emissions sources that contributed over 80% of its total Scope 3 emissions in 2018. Several emission sources are excluded from our target boundary because they are either not material or data is not available. For example, the emissions associated with Swire Coca-Cola's largest copackers[3], CCBMH ("Coca-Cola Bottlers Manufacturing Holdings Limited"), were also included in the Scope 3 target boundary. Meanwhile, emissions associated with all other copackers were excluded (estimated to be less than 5% of total emissions).

In line with the GHG Protocol, our target boundary is described below. We included the material Scope 3 emissions in the target boundary based on the 2018 Scope 3 emission mapping result. They are then grouped into five pillars following TCCC's classification system (in green):

Scope 3 Category	Included in Target Boundary	% of 2018 Scope 3 Mapping Emissions	Target Boundary	
			Included	Excluded
1. Purchased Goods and Services	Partially	Included: 54.86% Excluded: 7.75%	**Pillar – Ingredient** Emissions from ingredients (e.g., sugar, carbon dioxide as ingredient) **Pillar – Packaging** Emissions from primary packaging (e.g., PET, aluminium, glass) **Pillar – Manufacturing** Emissions from energy use from CCBMH	Emissions from secondary and tertiary packaging, water, energy use from other copackers
2. Capital Goods	No	5.42%		Manufacturing Equipment

[3] Co-packers are third-party contract bottlers who produce and supply beverages

Scope 3 Category	Included in Target Boundary	% of 2018 Scope 3 Mapping Emissions	Target Boundary	
			Included	Excluded
3. Fuel and Energy Related Activities	Yes	2.67%	**Pillar – Manufacturing** Well-to-Tank Emissions Associated with Fossil Fuel Consumption (with Transmission and Distribution Losses)	
4. Upstream transportation and distribution	Yes	3.69%	**Pillar – Third-party Transportation** Third party transportation and distribution	
5. Waste generated in operations	No	0.13%		Waste from our manufacturing sites (solid waste & wastewater)
6. Business travel	No	0.85%		All air and rail business travel
7. Employee Commuting	No	0.44%		Employee commuting
8. Upstream leased assets	No	0.31%		Leased office
12. End-of-life treatment of sold products	No	1.50%		EOL disposal of packaging by the customer
13. Downstream leased assets	Yes	22.37%	**Pillar – Cold Drinks Equipment (CDE)** Cold Drinks Equipment electricity use	

The Scope 3 categories listed in below table are excluded from Swire Coca-Cola's target boundary due to irrelevance:

Excluded Scope 3 Category	Reason for Exclusion
9. Downstream transportation and distribution	Emissions from third-party transportation have all been included under Category 4 – Upstream transportation and distribution
10. Processing of sold products	Swire Coca-Cola has no intermediate products for downstream processing
11. Use of sold products	Swire Coca-Cola has no sold products consume fuel or energy
14. Franchises	Swire Coca-Cola has no franchises
15. Investment	Swire Coca-Cola has no relevant investment activities

6.2. Appendix B – Calculation Methodology

Scope 1 and 2 Calculation Methodology

Emissions are calculated in accordance with the Greenhouse Gas Protocol developed by World Resources Institute and World Business Council on Sustainable Development. Scope 1 and 2 emission-related sources are accounted, including:

Scope 1 – Direct GHG Emissions

Aggregating Scope 1 Emissions from:

- Fuels (includes Diesel – Forklift, Diesel – Stationary, Fleet – Diesel – Heavy Duty, Fleet – Diesel – Passenger Car, Fleet – Gasoline - Passenger Car, Liquefied Petroleum Gas (LPG), Natural Gas and Towngas)
- Emissions from Refrigerants (includes carbon dioxide, HFC-22, HFC-409A, HFC-134A, HFC-404A, HFC-407C and HFC-410A)

Scope 2 – Indirect GHG Emissions

Aggregating Scope 2 Emissions from:

- Electric Power
- Steam
- Towngas

The sources of emission factors for the reporting of carbon emissions are presented in the table below:

Emission Source	Source of Emission Factors
Stationary fuel combustion **Mobile fuel combustion**	**Hong Kong SAR**: Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purpose) in the Hong Kong SAR **Chinese Mainland & Taiwan Region**: DEFRA 2022 **United States**: The Climate Registry – General Reporting Protocol USA Transport Sector
Fugitive emissions from refrigerant	Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purpose) in the Hong Kong SAR
Purchased electricity	Refer to Appendix H
Purchased steam	**Chinese Mainland**: DEFRA 2022
Purchased Towngas	**Hong Kong SAR**: Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings (Commercial, Residential or Institutional Purpose) in the Hong Kong SAR

Scope 3 Calculation Methodology

Scope 3 Category	Pillar	Emission Sources	Methodology
Category 1: Purchased Goods and Services	Ingredients	Purchased ingredients	Multiply the weights of ingredients with the relevant upstream emission factors[4, 5].
Category 1: Purchased Goods and Services	Packaging	Purchased primary packaging	Multiply the weights of packaging materials with the upstream emission factor[4]. The emission factor incorporates both the recycled content and recycling rate of the materials.

[4] Cradle-to-gate emission factor (i.e., from raw material extraction to factory gate)

[5] For CPS (Commercial Products Supply), since the weight data of CPS concentrate is not available, it is calculated by multiplying the TCCC provided average CPS emission intensity with the total production volume of non-water products

<table>
<tr><th>Scope 3 Category</th><th>Pillar</th><th>Emission Sources</th><th>Methodology</th></tr>
<tr><td>Category 1: Purchased Goods and Services</td><td rowspan="2">Manufacturing</td><td>Energy consumption in bottling plants owned by CCBMH</td><td>Multiply the CCBMH energy consumption for making Swire Coca-Cola products with the fuel emission factor.</td></tr>
<tr><td>Category 3: Fuel and Energy Related Activities</td><td>Upstream emissions of fuel and electricity in bottling plants</td><td>Multiply the Swire Coca-Cola energy consumption with upstream energy emission factors[6].</td></tr>
<tr><td rowspan="2">Category 4: Upstream Transportation and Distribution</td><td rowspan="2">Distribution</td><td>Third-party distribution</td><td>Each region has different methodology based on the data availability. We first prefer data of actual fuel consumption, to travelling distance, then lastly estimated from distribution volume, or spend. The following lists the data source of each region by year:
<table>
<tr><th>Region</th><th>2018</th><th>2021</th><th>2022</th></tr>
<tr><td>HKSAR</td><td>Spend</td><td colspan="2">Distribution volume</td></tr>
<tr><td>Chinese Mainland</td><td>Spend</td><td>Spend</td><td>Fuel consumption</td></tr>
<tr><td>Taiwan</td><td>Spend</td><td colspan="2">Distance</td></tr>
<tr><td>US</td><td>Spend</td><td>Spend</td><td>Distance</td></tr>
</table></td></tr>
<tr><td>Upstream emissions of fuel & electricity in vehicles and distribution centres</td><td>Multiply the Swire Coca-Cola energy consumption with upstream energy emission factors[6].</td></tr>
<tr><td>Category 13: Downstream Leased Assets</td><td>Cold Drink Equipment (CDE)</td><td>Annual electricity consumption of CDE, consisting of coolers, vending machines and fountains</td><td>Multiply the total annual electricity consumption value (EC value) of CDE with the electricity grid factor.

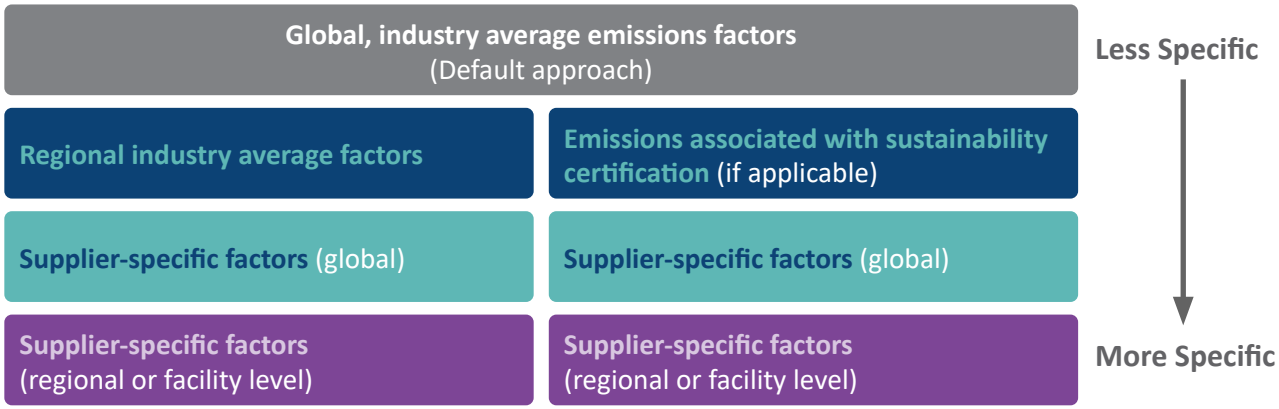
Annual EC value: Multiply daily EC value with the number of equipment and operating days (assumed as an all-year operation).

Remark: In 2018, many CDEs have no supplier testing data, therefore the EC value is derived from average value calculated by TCCC.</td></tr>
</table>

[6] Well-to-Tank emission factor (including transmission and distribution loss from electricity)

6.3. Appendix C – Current Scope 3 Data and Ideal Data

The level of data accuracy can be viewed in the infographic referenced to TCCC's below. Today, SCC's Scope 3 data are mainly calculated by "Global, industry average emissions factors". As our journey matures, we will endeavour to drive our data from 'proxy' global data points to supplier specific data points.



To improve data accuracy, Swire Coca-Cola will work on expanding its limited assured data points to cover some of the Scope 3 emissions. The below table list out the current data and ideal data for Scope 3 emissions:

Pillar	Current Data	Ideal Data
Ingredient	• Global industry average data for quantification	• Factory-specific emission factors from suppliers
Packaging	• Global industry average data for quantification • Rely on the unverifiable nationally published reporting on collection rate and recycling rate	• Factory-specific emission factors from suppliers • Collection rate and recycling rate specific to the municipality/province
Third-party Distribution	• Extrapolation from distribution volume for the Hong Kong SAR • Actual fuel consumption data for the Chinese Mainland • Distance data for the Taiwan Region and USA	• Actual fuel consumption data/distance data
CDE	• Average energy consumption data value calculated by TCCC or actual energy consumption derived from supplier testing • Missing data for CDE (especially for historical energy consumption data) • Assumptions in energy consumption pattern by customers	• Actual energy consumption data from the units

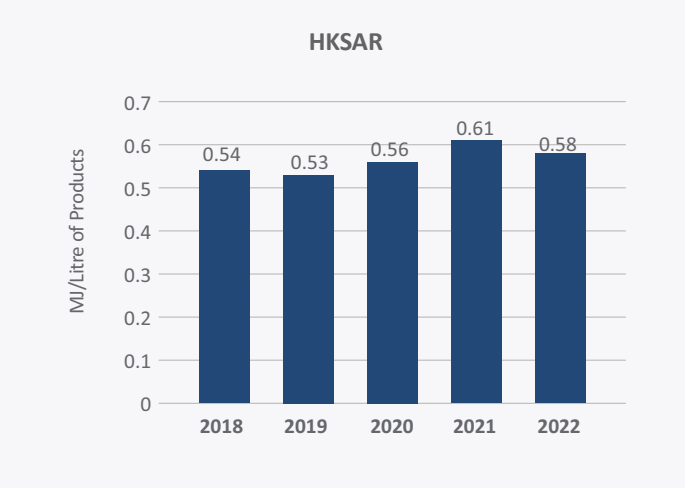
Example of the Ideal Data:

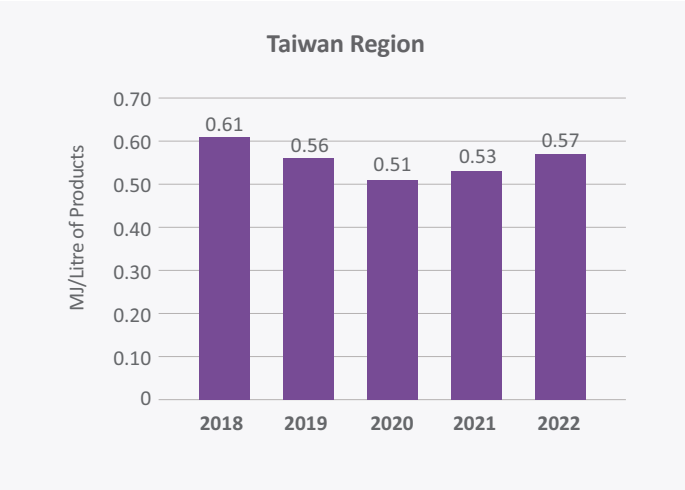
The difference between the emissions calculated using different data can be huge. An illustration is the emissions of virgin aluminium produced in Northern China using intensive grid electricity compared to the emission of 100% recycled aluminium produced in Norway using 100% hydroelectricity. If using industry average data for quantification, the emission results will be underestimated or overestimated. Hence, an accurate emission for the materials used by Swire Coca-Cola cannot be illustrated. This shows the importance of using supplier-specific emission factors.

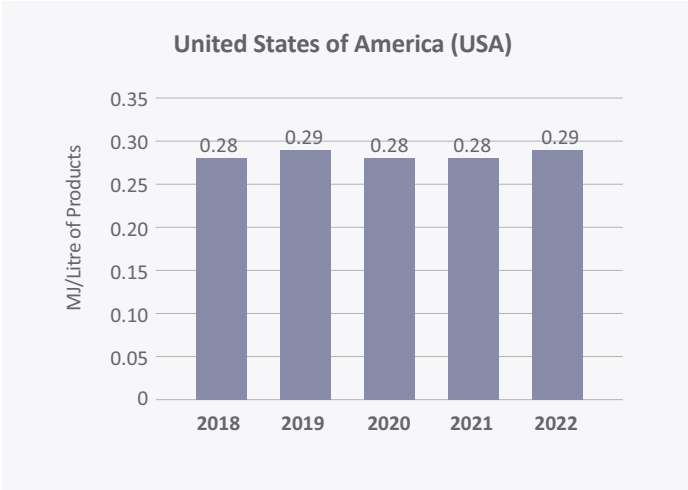
6.4. Appendix D – Production Volume by Market

Production volume (i.e., litre of product produced) remains a key metric as our SBT is all about driving absolute emission reductions. If production volume grows greater than originally forecast, further absolute emission reductions will be required to achieve the 2030 targets.

6.5. Appendix E – Energy Use Ratio (EUR) Improvement by Market (Scope 1 & 2)







Energy use ratio refers to the amount of energy consumed to produce each litre of product. The smaller the number, the more efficiently we are producing the products. This metric is mainly driven by the change in production volume, types of products produced and the energy efficiency to produce the products.

6.6. Appendix F – Change in Renewable Energy (RE) % by Market (Scope 2)

Refer to Section 4.1 for the details of the onsite RE generation and offsite renewable procurement programs.

6.7. Appendix G – Pipeline On-site Solar PV Project

Region	Facility	Estimated Annual Electricity Generation (MWh)
Chinese Mainland	Huizhou	1,794
	Hangzhou	4,500
	Hubei	2,400
	Dongguan	1,550
	Shanghai	4,500
	Guangzhou	4,500
	Zhengzhou	4,500
United States	Colorado Springs	1,400
	Draper	4,500
	Glendale	1,400
	Tucson	800
	Denver	1,200

6.8. Appendix H – Grid Factor ($kgCO_2$ e/kWh) Improvement by Market (Scope 2)

All regions have demonstrated improvement in their grid factors.

Market	Source of Grid Factor in 2022	2018	2019	2020	2021	2022	% Change
HKSAR	CLP (2021)[7]	0.510	0.510	0.500	0.370	0.390	-24%
Chinese Mainland (East)	Baseline Emission Factors for Regional Power Grids in China (2019 Edition)[8]	0.811	0.811	0.805	0.792	0.792	-2%
Chinese Mainland (South)		0.896	0.896	0.837	0.804	0.804	-10%
Chinese Mainland (Central)		0.952	0.952	0.901	0.859	0.859	-10%
Chinese Mainland (Weighted average)		0.858	0.856	0.829	0.806	0.806	-6%
Taiwan Region	Bureau of Energy Ministry of Economic Affairs (Taiwan) – 2021 Annual Carbon Emission Coefficient[9]	0.590	0.590	0.509	0.502	0.509	-14%
United States (WECC Northwest)	US EPA eGRID – eGRID 2022 (2020 data)[10]	0.298	0.298	0.292	0.326	0.274	-8%
United States (WECC Southwest)		0.476	0.476	0.466	0.434	0.386	-19%
United States (WECC Rockies)		0.625	0.625	0.581	0.567	0.522	-16%
United States (Weighted average)		0.409	0.409	0.394	0.398	0.347	-15%

7 CLP (2022) 2021 Sustainability Report - page 157, retrieved from https://www.clpgroup.com/content/dam/clp-group/channels/sustainability/document/sustainability-report/2021/CLP_Sustainability_Report_2021_en.pdf.coredownload.pdf

8 Ministry of Ecology and Environment (2020) 2019 Baseline Emission Factors for Regional Power Grids in China – page 3, retrieved from http://www.mee.gov.cn/ywgz/ydqhbh/wsqtkz/202012/W020201229610353340851.pdf

9 Bureau of Energy, Ministry of Economic Affairs (2022) 2021 Annual Carbon Emission Coefficient, retrieved from https://www.moeaboe.gov.tw/ECW/populace/news/Board.aspx?kind=3&menu_id=57&news_id=26128

10 U.S. EPA eGRID (2022) – 2020 Data, retrieved from https://www.epa.gov/system/files/documents/2022-01/egrid2020_summary_tables.pdf

6.9. Appendix I – Recycled Content, Collection & Recovery Rate for Key Materials (Scope 3)

Recycled Content

Package Type	Market	2018	2019	2020	2021	2022
PET – Water	HKSAR	0%	N/A	N/A	100%	94%[11]
	Chinese Mainland	0%	N/A	N/A	0%	0%
	Taiwan Region	N/A	N/A	N/A	N/A	N/A
	United States	N/A	N/A	N/A	N/A	24%
PET – Other	HKSAR	0%	N/A	N/A	25%	6%[12]
	Chinese Mainland	0%	N/A	N/A	0%	0%
	Taiwan Region	0%	N/A	N/A	0%	0%
	United States	2%	N/A	N/A	15%	25.6%
Aluminium	HKSAR	50%	N/A	N/A	0%	6%
	Chinese Mainland	0%	N/A	N/A	9.6%	3.2%
	Taiwan Region	0%	N/A	N/A	0%	0%
	United States	80%	N/A	N/A	72%	72%
Returnable Glass Bottle	HKSAR	0%	N/A	N/A	0%	60%
	Chinese Mainland	20%	N/A	N/A	44%	40%
	Taiwan Region	55%	N/A	N/A	25%	50%
	United States	N/A	N/A	N/A	N/A	N/A

[11] Overall percentage for all PET bottled water produced
[12] Overall percentage for all other PET bottles produced

Collection & Recovery Rate

Package Type	Market	2018	2019	2020	2021	2022
PET – Water	HKSAR	7%	N/A	N/A	15%	11%
	Chinese Mainland	80%	N/A	N/A	95%	95%
	Taiwan Region	72%	N/A	N/A	94%	100%
	United States	30%	N/A	N/A	30%	30%
PET – Other	HKSAR	7%	N/A	N/A	15%	11%
	Chinese Mainland	80%	N/A	N/A	95%	95%
	Taiwan Region	72%	N/A	N/A	94%	100%
	United States	30%	N/A	N/A	30%	30%
Aluminium	HKSAR	17.8%	N/A	N/A	17.8%	66%
	Chinese Mainland	80%	N/A	N/A	99%	99%
	Taiwan Region	72%	N/A	N/A	73%	88%
	United States	49%	N/A	N/A	49%	49%
Returnable Glass Bottle	HKSAR	95%	N/A	N/A	95%	83%
	Chinese Mainland	80%	N/A	N/A	95%	95%
	Taiwan Region	72%	N/A	N/A	83%	96.8%
	United States	N/A	N/A	N/A	N/A	N/A

6.10. Appendix J – Material Emission Intensity (kg CO_2 e/kg of Material) (Scope 3)

Material Type	Market	Source of Emission Factor	2018	2019	2020	2021	2022
PET – Water (Preform)	HKSAR	TCCC LCA packaging tool 4.6; Ifeu[13]; Global energy prechains; Plasticseurope	2.65	N/A	N/A	1.96	1.99
	Chinese Mainland		2.19	N/A	N/A	2.09	2.09
	Taiwan Region		N/A	N/A	N/A	N/A	N/A
	United States		N/A	N/A	N/A	N/A	2.34
PET – NCB (Preform)	HKSAR		2.65	N/A	N/A	2.59	2.61
	Chinese Mainland		2.19	N/A	N/A	2.09	2.09
	Taiwan Region		N/A	N/A	N/A	N/A	N/A
	United States		N/A	N/A	N/A	N/A	N/A
PET – Sparkling (Preform)	HKSAR		2.65	N/A	N/A	2.43	2.46
	Chinese Mainland		1.88	N/A	N/A	2.09	2.09
	Taiwan Region		2.08	N/A	N/A	2.09	2.05
	United States		2.51	N/A	N/A	2.40	2.33
PET – Water, NCB, Sparkling (Resin)	HKSAR		N/A	N/A	N/A	N/A	N/A
	Chinese Mainland		1.70	N/A	N/A	1.61	1.61
	Taiwan Region		N/A	N/A	N/A	N/A	N/A
	United States		N/A	N/A	N/A	N/A	N/A

[13] Institute for Energy and Environmental Research

Material Type	Market	Source of Emission Factor	2018	2019	2020	2021	2022
Aluminium	HKSAR	Ifeu calculation based on data from Aluminum Association	15.11	N/A	N/A	18.49	13.98
	Chinese Mainland		14.07	N/A	N/A	11.03	11.51
	Taiwan Region		14.75	N/A	N/A	13.95	12.67
	United States		9.88	N/A	N/A	10.01	9.97
Cane Sugar	HKSAR	Ifeu study for TCCC	0.59	N/A	N/A	0.59	0.59
	Chinese Mainland		0.59	N/A	N/A	0.59	0.59
	Taiwan Region		0.59	N/A	N/A	0.59	0.59
	United States		N/A	N/A	N/A	N/A	N/A
Beet Sugar	HKSAR		0.82	N/A	N/A	N/A	N/A
	Chinese Mainland		N/A	N/A	N/A	N/A	N/A
	Taiwan Region		N/A	N/A	N/A	N/A	N/A
	United States		0.82	N/A	N/A	0.82	0.82
HFCS	HKSAR		N/A	N/A	N/A	N/A	N/A
	Chinese Mainland		0.85	N/A	N/A	0.85	0.85
	Taiwan Region		0.85	N/A	N/A	0.85	0.85
	United States		0.85	N/A	N/A	0.85	0.85

6.11. Appendix K – Cooler Energy Efficiency (Scope 3)

The data of cold drink equipment (CDE) has been collected from 2021 onwards, while the collection of 2018 to 2020 CDE data is still in progress. Hence, the cooler energy efficiency values of previous years are not available.

	Market	2018	2019	2020	2021	2022
Cooler Energy Efficiency (kWh/day/ cooler)	HKSAR	N/A	N/A	N/A	3.47	2.77
	Chinese Mainland	N/A	N/A	N/A	3.41	3.30
	Taiwan Region	N/A	N/A	N/A	3.74	3.63
	United States	N/A	N/A	N/A	3.47	3.47

This report is prepared by RESET Carbon, a carbon consulting company on a mission to help businesses do its part in solving the environmental crisis by making meaningful reductions in their carbon, water, and waste footprint.