



# **SCCL SBT Progress Report 2021**

Swire Coca-Cola Ltd

Date: May 2022







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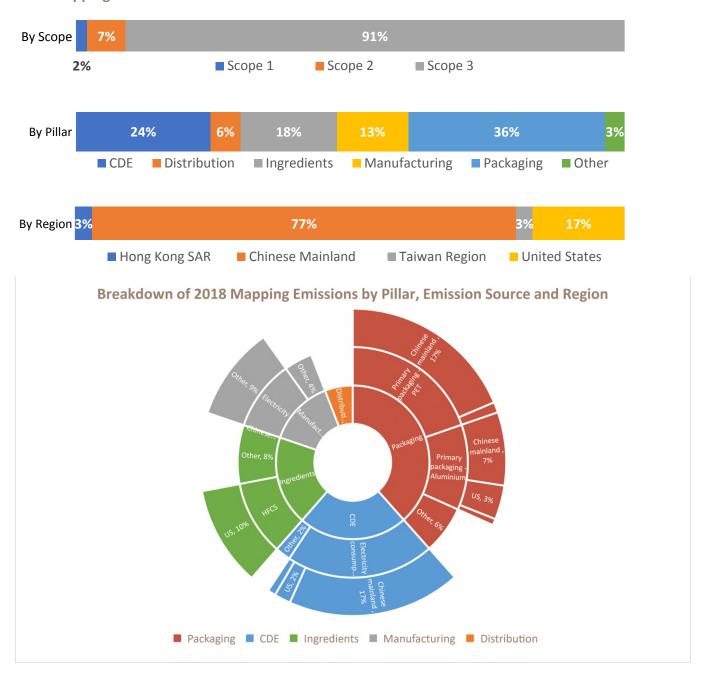


# 1. Background and Recap of 2018 Carbon Modelling Study

#### 1.1. SCCL 2018 Mapping Emissions and Business As Usual (BAU) Scenario Projection

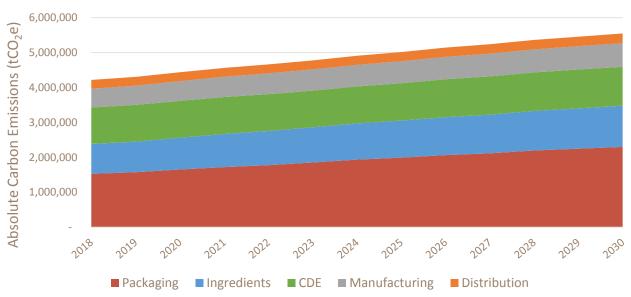
In 2018, Swire Coca-Cola Ltd engaged a specialist consultant, RESET Carbon, to help us map our carbon emissions across the entirety of our business. Below is an overview of the findings.

#### 2018 Mapping Emissions Breakdown









#### 1.2. Reduction Opportunities: What efforts can we take to reduce emissions?

Next, SCCL identified carbon reduction opportunities across the business through intensive consultation with SCCL's internal teams and The Coca-Cola Company (TCCC) experts. Reduction opportunities were integrated into the carbon emission projections to analyse the contribution of each reduction opportunity to meet the reduction target.

Due to the significance of the Scope 3 emissions (which by definition are outside of SCCLs operational control), reducing these emissions is critical to successfully meet, if not exceed, the targets. The key reduction opportunities include:



# Key Scope 2 Reduction Opportunities

All purchased electricity in core operations from

100% Renewable Energy



We plan to transition to all purchased electricity in Core Operations to electricity derived from 100% renewable energy in the United States and Mainland China by **2026**. Aside from onsite renewable energy installations, this will require us to look for innovative and credible ways of procuring renewable energy offsite.

# Key Scope 3 Reduction Opportunities

#### **PACKAGING**

#### The use of Recycled content in primary packaging

- Our projection includes 70% recycled PET and 100% recycled aluminium packaging in our products by 2030.
- A significant proportion of the contribution is expected to come from Chinese Mainland where the use of recycled content in PET food-grade packaging is not currently permitted by regulations. Engaging in dialogue with the Chinese mainland government together with our value chain partners at TCCC is an ongoing initiative.

#### Increasing primary packaging post-consumer Collection & Recovery rates – leading to increased Recycling rates

- Our projection includes an increase in the recovery rate of post-consumer single-use primary packaging's, in particular PET bottles and aluminium cans in Mainland China, the US and in Hong Kong, of up to 100% by 2030.
- We will work in collaboration with TCCC, external bottlers and relevant government stakeholders to pilot and expand programmes to support the collection, recovery and reuse of post-consumer materials.
- In Hong Kong, in addition to supporting the #Drink Without Waste (DWW) initiative, we have also invested in a state-of-the-art plastic recycling facility which is expected to commence operation in late 2021.

drinkwithoutwaste.org www.nlplastics.com.hk



#### **SUPPLIERS**

# Supplier engagement on packaging and ingredients

- The raw ingredient and packaging materials we buy from our suppliers are a key source of embedded carbon
- We will work with TCCC to engage our suppliers to (a) produce Supplier Specific Emission factors, and then b) to work up plans to reduce their carbon emissions by encouraging and incentivising increased energy efficiency and renewable energy procurement

#### **COLD DRINK EQUIPMENT**

#### **Energy efficient CDE**

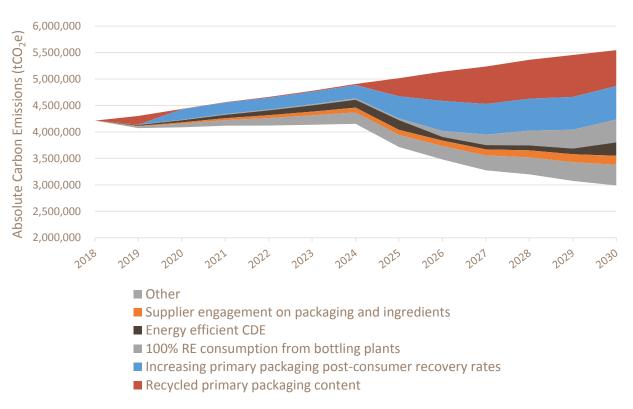
 Our projection incorporates energy efficiency gains through technological improvements to offset the expansion of our growing cold drink equipment (CDE) fleet – with coolers in the Chinese mainland being the key equipment segment.



# 1.3. Modelling Carbon Reductions: How much reduction can we achieve with the opportunities we implement?

The modelling tells us that although the vast majority of emissions are in our value chain (Scope 3), this is where the biggest reduction opportunities also lie, and we will need to work closely with our value chain partners to reduce emissions. We expect these reduction opportunities, when implemented, to deliver a 24% absolute reduction in Scope 3 emissions by 2030.

Emission Savings Projection by Reduction Opportunity Compared with the BAU Scenario





#### 1.4. Potential Changes in the Modelling Results

In these annual progress reports, we will report on material changes that will impose an impact on our 2018 BAU scenario projections. To date these include:

- An 84% increase over the 2018 baseline projection from now until 2026 in electricity consumption in our bottling plants in the U.S. mainly due to the addition of blow moulding capability across 5 bottling plants
- A number (not determined yet) of preform manufacturing lines are being added to our Chinese Mainland bottling plants

Also, it is acknowledged that the modelling results are subject to assumptions made in our original model including business portfolio forecasts and the effectiveness of our reduction opportunities. These assumptions depend greatly on our prediction of the future, for instance:

- technology advancement in terms of energy efficiency improvement (e.g., CDE, manufacturing processes)
- market maturity in purchased renewable electricity and recycled packaging material
- customer's preference and our business growth
- regulation and policy change (e.g., the use of recycled content in PET food-grade packaging)

#### **Philosophy of this Annual Progress Report**

This annual report aims to transparently state where we, SCCL, are within each Scope, each market and each material emission source on achieving our 2030 SBT.

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.

While the calculation method for Scope 3 emissions is expected to continuously evolve for better quality data, recalculating the baseline Scope 3 emissions annually would be time-consuming and challenging. To avoid comparing emissions across years with an inconsistent methodology, we have taken out the historical emissions (i.e., from 2018 to 2020) from this report to avoid giving an inappropriate message that a reduction in Scope 3 emissions has been achieved.

In the next section, we have transparently listed the current methodology for the Scope 3 calculation in each pillar. We have also identified the data limitation and the ideal data we envision. It is expected that these limitations will mostly be addressed by 2026. By then, we will be able to recalculate all the historical years' data using a consistent methodology to demonstrate the actual reduction progress.



## 2. Methodology and Boundary Update in 2021

#### 2.1. Updates in Scope 1 & 2 Emissions Boundary

In the Chinese Mainland, emission from electricity use in sales centres has been included in 2021, while their contribution is less than 1% of total Chinese Mainland's Scope 1 and 2 emissions, so the recalculation of the baseline emissions will not be performed.

#### 2.2. Updates in Scope 3 Emissions Boundary

During the Scope 3 mapping exercise, with the reason of the materiality and data availability, several emission sources are excluded from SCCL's Scope 3 target boundary. For the same reason, the emissions activities from all other copackers besides SCMC are excluded.

The emission sources that are covered by SCCL's target boundary together contributed over 80% of SCCL's total 2018 Mapping Scope 3 emissions. The emission sources are grouped based on the five primary pillars following the same classification by TCCC, and the list with the 2021 quantification methodology is shown in the table below:

Pillar	Emission Sources	Methodology
Ingredients	Purchased ingredients	Multiply the weights of ingredients with the relevant upstream emission factors <sup>1 2</sup> .
Packaging	Purchased primary packaging	Multiply the weights of packaging materials with the upstream emission factor <sup>1</sup> .  The emission factor incorporates both the recycled content and recycling rate of the materials.
Manufacturing	Energy consumption in bottling plants owned by SCMC	Multiply the SCMC energy consumption for making SCCL products with the fuel emission factor.
	Upstream emissions of fuel and electricity in bottling plants	Multiply the SCCL energy consumption with upstream energy emission factors <sup>3</sup> .

<sup>&</sup>lt;sup>1</sup> Cradle-to-gate emission factor

<sup>&</sup>lt;sup>2</sup> For CPS, 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.

<sup>&</sup>lt;sup>3</sup> Well-to-tank emission factor (including transmission and distribution loss from electricity)



Pillar	Emission Sources	Methodology	
Distribution	Third-party distribution	<ul> <li>Each region has different methodology based on the davailability. We first prefer data of actual of availability. We first prefer data of actual of consumption, to travelling distance, then lastly estimate from transportation volume, or spend. The following last the data source of each region:</li> <li>Hong Kong SAR: Estimated from transportation volume.</li> <li>Chinese Mainland: Spend data (Please note that act fuel consumption data will be available in 2022)</li> <li>Taiwan Region: Travelling distance data</li> <li>U.S.: Spend data (Please note that travelling distance data will be available in 2022)</li> </ul>	
	Upstream emissions of fuel electricity in vehicles and distribution centres	Multiply the SCCL energy consumption with upstream energy emission factors <sup>3</sup> .	
Cold Drink Equipment (CDE)	Annual electricity consumption of CDE, consisting of coolers, vending machines and fountains.	Multiply the total annual electricity consumption value (EC value) of CDE with the electricity grid factor.	
		Annual EC value: Multiply daily EC value <sup>4</sup> with the number of equipment and operating days (assumed as an all-year operation).	

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<sup>&</sup>lt;sup>4</sup> Collected by either ways of (1) supplier testing required by TCCC; or (2) using the average value calculated by TCCC



#### 2.3. Current Scope 3 Data and Ideal Data

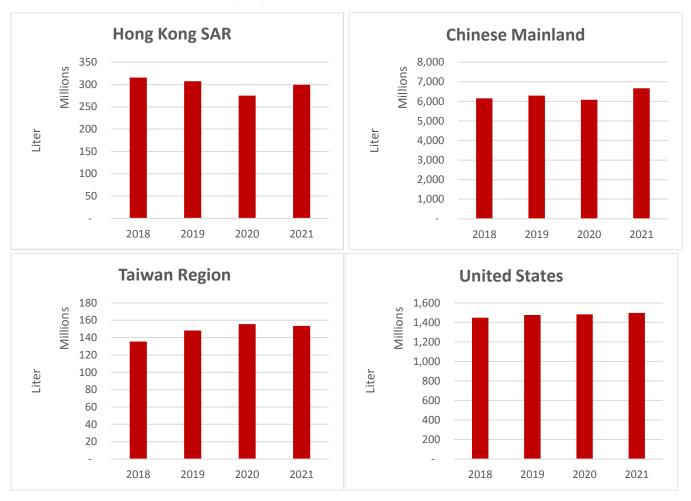
Pillar	Current Data	Ideal Data
Ingredient	Global industry average data for quantification	Factory-specific emission factors from suppliers
Packaging	<ul> <li>Global industry average data for quantification</li> <li>Rely on the unverifiable nationally published reporting on collection rate and recycling rate</li> </ul>	<ul> <li>Factory-specific emission factors from suppliers</li> <li>Collection rate and recycling rate specific to the municipality/province</li> </ul>
Third-party Distribution	Extrapolation from transportation volume/use of spend data	Actual fuel consumption data/distance data
Cold Drink Equipment (CDE)	<ul> <li>Average energy consumption data value calculated by TCCC or actual energy consumption derived from supplier testing</li> <li>Missing data for CDE (especially for historical energy consumption data)</li> <li>Assumptions in energy consumption patterns by customers</li> </ul>	Actual energy consumption data from the units

#### 2.3.1. Example of the Ideal Data:

The difference between the emissions calculated by different data can be huge. An illustration is that 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 an industry average data for quantification, the emission results will be underestimated or overestimated. Hence, an accurate emission for the materials used by SCCL cannot be illustrated. This shows the importance of using supplier-specific emission factors.



#### 2.4. Production Volume Change by Market



Production volume remains a key overriding metric as our SBT is all about driving absolute emission reductions, so if production volume grows greater than originally forecast, further absolute emission reductions will be required to achieve the 2030 targets.

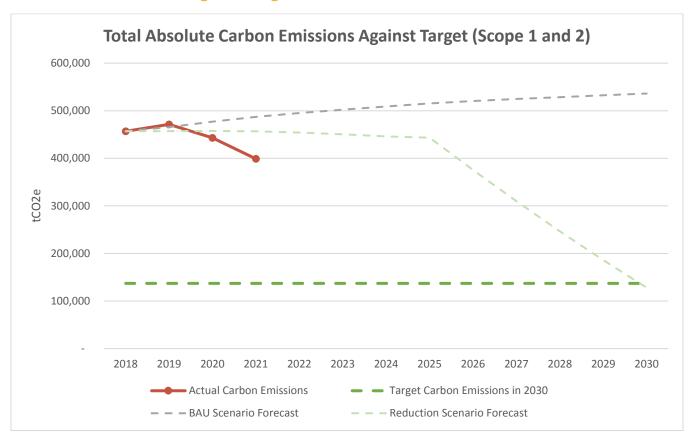
Production volume has remained quite stable in the United States for the past 4 years, with an increase of 3% in 2021 against 2018. For the Hong Kong SAR, despite a pandemic-related drop in 2020, only a decrease of 5% in 2021 compared to 2018 is seen. Within the same timeframe, the production volume in the Taiwan Region has risen by 13% against 2018, despite a slight drop of 1% from the previous year. In the Chinese Mainland, while the production volume was steady in the past 3 years, it increased 8% from 2018 to 2021.

Overall, there is an increase of 7% in the total production volume in 2021 compared to 2018.



#### 3. Performance Overview

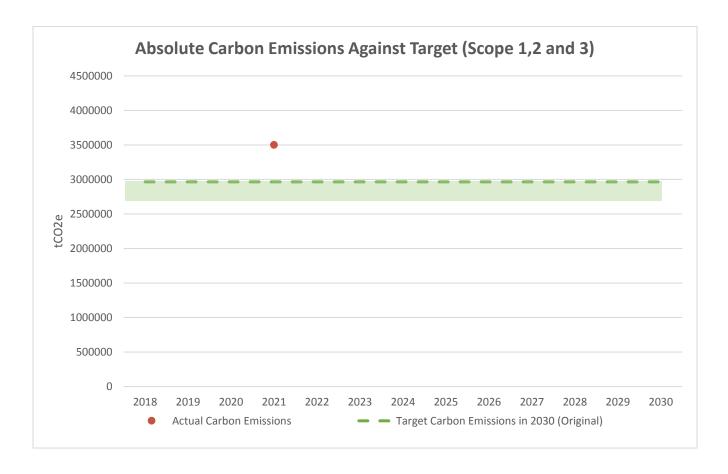
#### 3.1. Absolute Emissions against Targets



Compared to the base year of 2018, total absolute Scope 1 and 2 emissions in 2021 reduced by 13%. The procurement of offsite renewable electricity in the Chinese Mainland has contributed largely to the slight drop in emissions despite an increase in production volume. Other factors include increasing onsite generated renewable electricity in the Taiwan Region and United States, and the sharp drop in the Hong Kong SAR grid factor. More details will be shown in subsequent sections.

In our Scope 1 and 2 Reduction Scenarios, we assumed the transition to renewable energy will be well advanced by 2026 causing a deep reduction, while the actual performance in 2021 outperforms the original prediction.





As stated in earlier sections, the historical calculated emissions from Scope 3 would not be shown in this report to avoid confusion, but we wanted to show this graph for completeness, and to show that this is not omitted.

Additionally, it is expected the recalculation of baseline may influence the 2030 target carbon emissions, which will be updated as well. If the recalculated baseline is lower than the original one, the target carbon emissions will also be lower than the current one (indicated by the pale green shading).



#### 3.2. Absolute Scope 1 & 2 Emissions by Market



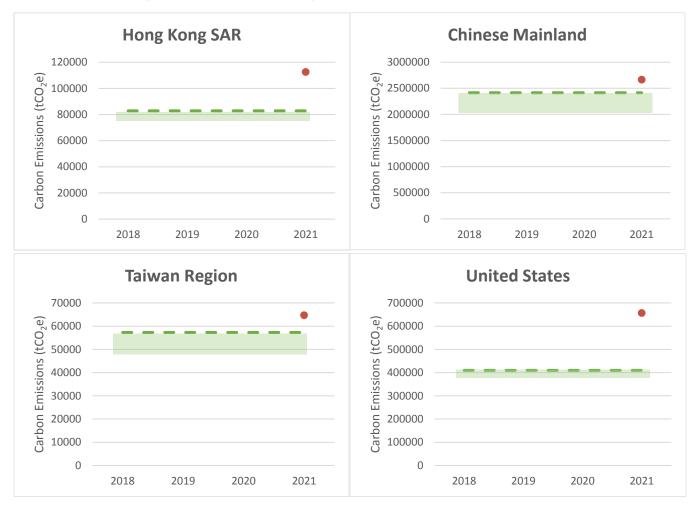
We have demonstrated overall reductions in the Hong Kong SAR and Taiwan Region in the past 4 years, both with a reduction of 13% respectively against 2018. In the Hong Kong SAR, although there is a 10% increase in electricity consumption in 2021, owing to the sharp drop in grid factor, the emission trend continues going downward. In the Taiwan Region, although its production volume has grown markedly by 13%, the impact is offset by the energy efficiency and grid factor improvements.

Similarly, the absolute emissions in the Chinese Mainland declines significantly by 16% against 2018. The reduction rate in 2021 is comparably higher than the previous year (4%), resulting from the higher volume of renewable electricity procured (will be explained in Section 4.2). It is noted that the Chinese Mainland contributed 72% to our total Scope 1 and 2 emissions.

Alternatively, the Scope 1 and 2 emissions in the United States slightly increased by 1% from 2018. The United States plan to install blow moulding equipment across 5 bottling plants from 2022 to 2026, which will drive absolute electricity consumption up by 85% from 2018 consumption levels.



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



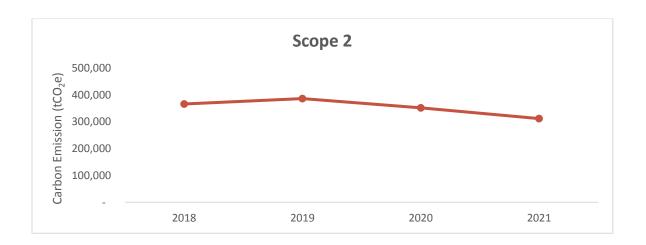
As mentioned above, the 2018 to 2020 emission trend will be populated once the recalculation is performed. For each market as well, the 2030 target emission is expected to differ from the one previously set due to recalculation of baseline. The update of target is anticipated to be lower than the current one (indicated by the pale green shading).



#### 3.4. Absolute Emissions by Emission Scope

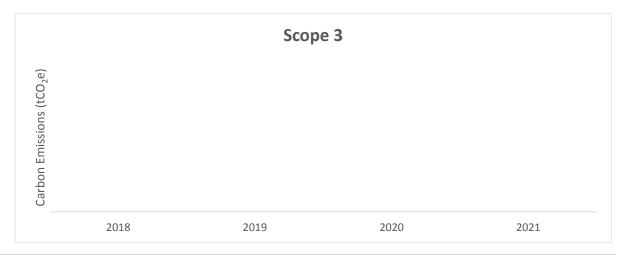


Our total Scope 1 emissions decreased by 4 % against the 2018-level. The reason for the variation of the yearly Scope 1 emission is due to the fluctuation of the refrigerant refilling amount. After excluding refrigerant, the Scope 1 emissions in the past 4 years has been steady, with a slight growth of 4% in 2021. The reason may be the replacement of purchased steam in a few plants in the Chinese Mainland by on-site natural gas boilers since mid-2020, which is covered under Scope 1.



Over the past 3 years, there were only moderate fluctuations in Scope 2 emissions, while in 2021, our Scope 2 emissions decline significantly by 15% in 2021 against 2018.

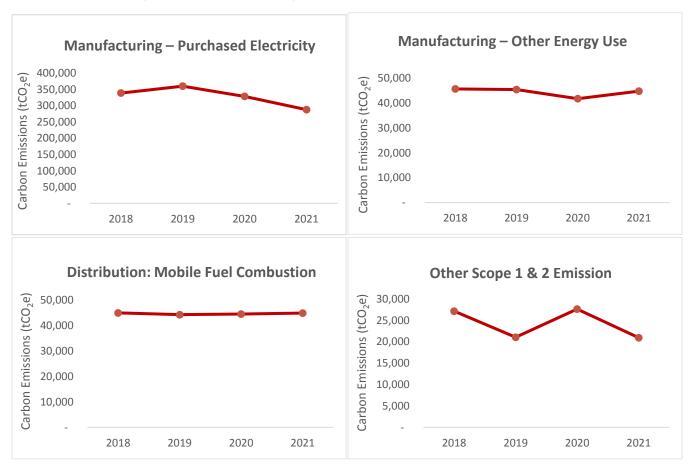




(Created as a placeholder for completeness, will be populated when recalculation of historical years data is performed)



#### 3.5. Absolute Scope 1 & 2 Emissions by Emission Source



Pillar	Description
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%).
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.
Distribution: Mobile Fuel Combustion	Emissions from the fuel (gasoline and diesel) consumed by our vehicle fleet.



Other Scope 1 & 2 Emissions	Emissions of refrigerant from our Cold Drink Equipment (CDE) and the	
	energy use in distribution centres and sales centres.	

These charts show a similar trend with the previous section where the emissions associated with energy use were steady reducing while the refrigerant emissions were fluctuating.



# Scope 3

1] As per the GHG protocols, Scope 3 can be broken down into

Scope 3 Category	Included/Excluded from Target Boundary	Emissions in 2018 (tCO2e)
1. Purchased Goods and Services	Included – Emissions from primary packaging, ingredients, energy use from copackers in Chinese Mainland.  Excluded – Emissions from secondary and tertiary packaging, water, energy use from other copackers	Total: 2,919,038 Included: 2,557,667
2. Capital Goods	Excluded - Manufacturing Equipment	252,877
3. Fuel and Energy Related Activities	Included - Well-to-Tank Emissions Associated with Fossil Fuel Consumption (with Transmission and Distribution Losses)	124,420
4. Upstream transportation and distribution	Included – Third party transportation and distribution	172,181
5. Waste generated in operations	Excluded – Waste from our manufacturing sites (solid waste & wastewater)	5,846
6. Business travel	Excluded – All air and rail business travel.	39,549
7. Employee Commuting	Excluded – Employee commuting	20,400
8. Upstream leased assets	Excluded – Leased office	14,558
9. Downstream transportation and distribution	Not Applicable	N/A
10. Processing of sold products	Not Applicable	N/A
11. Use of sold products	Not Applicable	N/A
12. End-of-life treatment of sold products	Excluded - EOL disposal of packaging by the customer	70,098
13. Downstream leased assets	Included – Cold Drinks Equipment electricity use	1,042,805
14. Franchises	Not Applicable	N/A
15. Investments	Not Applicable	N/A



2] Accuracy of data – can be viewed in TCCCs infographic below. Today, SCCL Scope 3 data sits in the top brown line. As our journey matures, we will endeavor to drive our data from 'proxy' global data points to supplier specific data points.

#### EMISSION FACTOR SPECIFICITY - GUIDING PRINCIPLES

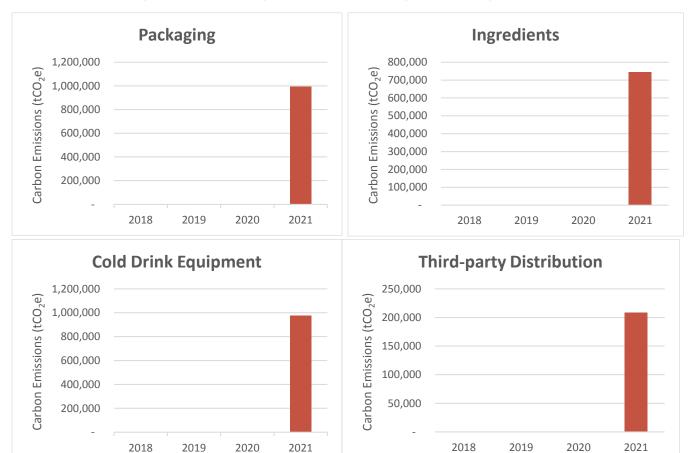


- Prioritize key, high-emitting categories (Metals, Sugar, PET, Glass CDE approach will differ).
- In order to substitute with a more specific factor, the same factor must be obtained (or estimated) for the Base year (2015) as well, and the baseline must be recalculated.
- Based on availability of factors, we will combine factors at different levels in a "hybrid" approach and adding to a total number for each supplier category.

3] Limited assurance on a range of Scope 3 data points. SCCL will work on expanding these limited assured data points from 2022 and will be referenced this in next year's report.



## 3.6. Absolute Scope 3 Emissions by Emission Source by Materiality



Pillar	Description
Ingredients	Emissions from extraction, processing, refining and transportation of raw ingredients such as sugar, HFCS and other concentrates.
Packaging	Emissions from extraction, processing, manufacturing and transportation of primary packaging materials such as PET, aluminium cans and returnable glass bottles.
Manufacturing (Scope 3)	Upstream emissions of purchased fuels and electricity including transmission and distribution (T&D) losses, emissions associated with copacker energy consumption for manufacturing and third-party vehicle fleets for distribution.
Distribution (Third-party fleet)	Emissions from third-party fleets for distributing SCCL's products.



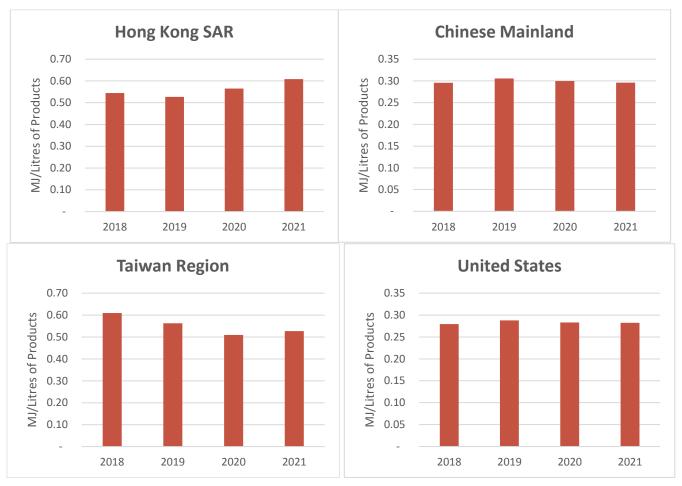
Cold Drink	Emissions of the electricity consumption of coolers and vending machines at point-of-sale.
Equipment (CDE)	

These graphs show the 2021 actual Scope 3 data. The 2018 to 2020 data will be populated after the recalculation with the latest quantification methodology.



## 4. Driving Factors Analysis

#### 4.1. Energy Use Ratio (EUR) Improvement by Market (Scope 1 & 2)



The EUR is a metric to track the amount of energy used in manufacturing plants to produce one litre of beverage (i.e., excluding the fuel consumption for distribution).

The EUR in both the United States and the Chinese Mainland remain stable throughout the past 4 years, with a slight increase of 1 % in the United States compared with 2018.

For the Taiwan Region, despite a slight rise in 2021 against 2020, its EUR still demonstrates a significant decline compared to 2018 (13%).

The increase of EUR in the Hong Kong SAR in 2021 increased by 12% against 2018.



#### 4.2. Change in Renewable Energy (RE) % by Market (Scope 2)



In addition to the portion of electricity consumption generated by onsite photovoltaic panels in the Chinese Mainland, in 2021, offsite renewable electricity have been procured in a few sites. Therefore, these result in significant increase in the percentage of total electricity consumption that is sourced from renewable energy in the Chinese Mainland, from 3% in 2018 to 22% in 2021. In terms of the total renewable electricity consumption amount, this translate to an increase of 671% in 2021 against 2018.

In the Taiwan Region and the United States, there is also a critical jump in the volume of renewable electricity consumption. Compared to 2020, when the two regions first started procuring renewable electricity, volume growth of 80% and 68% was found in the Taiwan and United States markets in 2021. In terms of the proportion of total electricity consumption sourced from renewable energy, in the Taiwan Region, a moderate increase from 1% in 2020 to 6% in 2021 is seen. On the contrary, due to higher electricity consumption, that in the United States remains low (0.75%) in 2021 despite the climb compared to 2020 (0.24%).



#### 4.3. Grid Factor (kgCO<sub>2</sub>e/kWh) Improvement by Market (Scope 2)

Market	Source of Grid Factor in 2021	2018	2019	2020	2021	% Change
Hong Kong SAR	CLP (2020) <sup>5</sup>	0.510	0.510	0.500	0.370	-27%
Chinese Mainland (East)	Baseline Emission Factors for	0.811	0.811	0.805	0.792	-2%
Chinese Mainland (South)	Regional Power Grids in China (2019 Edition) <sup>6</sup>	0.896	0.896	0.837	0.804	-10%
Chinese Mainland (Central)		0.952	0.952	0.901	0.859	-10%
Chinese Mainland (Weighted average)		0.858	0.856	0.829	0.806	-6%
Taiwan Region	Bureau of Energy Ministry of Economic Affairs (Taiwan) - 2020 Annual Carbon Emission Coefficient <sup>7</sup>	0.590	0.590	0.509	0.502	-15%
United States (WECC Northwest)	eGRID 2021 (2019 data) <sup>8</sup>	0.298	0.298	0.292	0.326	9%
United States (WECC Southwest)		0.476	0.476	0.466	0.434	-9%
United States (WECC Rockies)		0.625	0.625	0.581	0.567	-9%
United States (Weighted average)		0.409	0.409	0.394	0.398	-3%

<sup>&</sup>lt;sup>5</sup> CLP (2021) 2020 Sustainability Report - page 147, retrieved from <a href="https://www.clp.com.cn/wp-content/uploads/2021/04/CLP-Sustainability-Report-2020.pdf">https://www.clp.com.cn/wp-content/uploads/2021/04/CLP-Sustainability-Report-2020.pdf</a>

<sup>&</sup>lt;sup>6</sup> Ministry of Ecology and Environment (2020) 2019 Baseline Emission Factors for Regional Power Grids in China – page 3, retrieved from <a href="http://www.mee.gov.cn/ywgz/ydqhbh/wsqtkz/202012/W020201229610353340851.pdf">http://www.mee.gov.cn/ywgz/ydqhbh/wsqtkz/202012/W020201229610353340851.pdf</a>

<sup>&</sup>lt;sup>7</sup> Bureau of Energy, Ministry of Economic Affairs (2021) 2020 Annual Carbon Emission Coefficient, retrieved from <a href="https://www.moeaboe.gov.tw/ECW/populace/news/Board.aspx?kind=3&menu\_id=57&news\_id=20933">https://www.moeaboe.gov.tw/ECW/populace/news/Board.aspx?kind=3&menu\_id=57&news\_id=20933</a>

<sup>&</sup>lt;sup>8</sup> US EPA eGRID (2021) – 2019 Data, retrieved from <a href="https://www.epa.gov/sites/default/files/2021-02/documents/egrid2019">https://www.epa.gov/sites/default/files/2021-02/documents/egrid2019</a> summary tables.pdf



Grid factor refers to the emission factor (kgCO<sub>2</sub>e/kWh) associated with each unit of electricity provided by the regional electricity system.

All regions have demonstrated improvement in their grid factors, except the WECC Northwest eGRID subregion. This may be due to a slightly higher coal percentage and lower hydro-energy percentage in the energy mix.



# 4.4. Recycled Content, Collection & Recovery Rate for Key Materials (Scope 3)

## 4.4.1. Recycled Content

Package Type	Market	2018	2019	2020	2021
PET - Water	Hong Kong SAR	0%	100%	100%	100%
	Chinese Mainland	0%	0%	0%	0%
	Taiwan Region	0%	0%	0%	0%
	United States	0%	0%	0%	0%
PET - Other	Hong Kong SAR	0%	0%	25%	25%
	Chinese Mainland	0%	0%	0%	0%
	Taiwan Region	0%	0%	0%	0%
	United States	2%	10%	25%	15%
Aluminium	Hong Kong SAR	50%	0%	0%	0%
	Chinese Mainland	0%	0%	11%	10%
	Taiwan Region	0%	0%	0%	0%
	United States	80%	57%	77%	72%
Returnable Glass	Hong Kong SAR	0%	0%	0%	0%
Bottle	Chinese Mainland	0%	32%	32%	35%
	Taiwan Region	55%	55%	55%	25%
	United States	NA	NA	NA	NA



## 4.4.2. Collection & Recovery Rate

Package Type	Market	2018	2019	2020	2021
PET - Water	Hong Kong SAR	7%	0.2%	0.2%	15% <sup>9</sup>
	Chinese Mainland	95%	95%	95%	95%
	Taiwan Region	72%	73%	94%	94%
	United States	30%	30%	30%	30%
PET - Other	Hong Kong SAR	7%	0.2%	13%	15% <sup>9</sup>
	Chinese Mainland	95%	95%	95%	95%
	Taiwan Region	72%	73%	94%	94%
	United States	30%	30%	30%	30%
Aluminium	Hong Kong SAR	18%	18%	18%	18%10
	Chinese Mainland	95%	99%	99%	99%
	Taiwan Region	72%	73%	73%	73%
	United States	49%	49%	49%	49%
Returnable Glass	Hong Kong SAR	95%	95%	95%	95%
Bottle	Chinese Mainland	95%	95%	95%	95%
	Taiwan Region	72%	73%	83%	83%
	United States	NA	NA	NA	NA

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<sup>&</sup>lt;sup>9</sup> The data source in 2021 changed from the Environmental Protection Department (EPD) to the New Life Plastic Limited collection volumes collected through the Baguio Green Group.

 $<sup>^{10}</sup>$  The figure is an estimate based on SCC's investigations into recovery rates for aluminum can in the Hong Kong SAR.



# 4.5. Material Emission Intensity (kg CO2e/ kg of Material) (Scope 3)

Material Type	Market	Source of Emission Factor	2018	2019	2020	2021
PET - Water (Preform)	Hong Kong SAR	TCCC LCA packaging tool 4.6; Ifeu; global energy prechains; Plasticseurope	2.65	1.83	1.82	1.70
	Chinese Mainland		1.88	1.88	1.88	1.88
	Taiwan Region		2.08	2.07	NA	NA
	United States		2.45	2.45	2.45	2.45
PET - NCB (Preform)	Hong Kong SAR		2.65	2.71	2.70	2.58
·	Chinese Mainland		1.88	1.88	NA	NA
	Taiwan Region		2.08	2.07	NA	NA
	United States		2.45	2.45	2.45	2.45
PET - Sparkling	Hong Kong SAR		2.65	2.71	2.48	2.36
(Preform)	Chinese Mainland		1.88	1.88	1.88	1.88
	Taiwan Region		2.08	2.07	1.89	1.89
	United States		NA	2.23	2.23	2.32
PET - Water, NCB, Sparkling (Resin)	Hong Kong SAR		NA	NA	NA	NA
	Chinese Mainland		1.37	1.37	1.37	1.37
	Taiwan Region		NA	NA	NA	NA
	United States		NA	NA	NA	NA
Aluminium	Hong Kong SAR	ifeu calculation based on data from Aluminum Association	9.91	NA	13.02	12.21
	Chinese Mainland		NA	NA	7.97	8.03
	Taiwan Region		NA	NA	NA	NA



	United States		7.09	8.15	7.23	7.46
Cane Sugar	Hong Kong SAR	ifeu study for TCCC	0.59	0.59	0.59	0.59
	Chinese Mainland		0.59	0.59	0.59	0.59
	Taiwan Region		0.59	0.59	0.59	0.59
	United States		0.59	0.59	0.59	0.59
Beet Sugar	Hong Kong SAR		0.82	0.82	0.82	0.82
	Chinese Mainland		0.82	0.82	0.82	0.82
	Taiwan Region		NA	NA	NA	NA
	United States		0.82	0.82	0.82	0.82
HFCS	Hong Kong SAR		NA	NA	NA	0.82
	Chinese Mainland		0.82	0.82	0.82	0.82
	Taiwan Region		0.82	0.82	0.82	0.82
	United States		0.82	0.82	0.82	0.82



## 4.6. Cooler Energy Efficiency (Scope 3)

	Market	2018	2019	2020	2021
Cooler Energy	Hong Kong SAR	NA	NA	NA	3.47
Efficiency (kWh / Day / cooler)	Chinese Mainland	NA	NA	NA	3.41
	Taiwan Region	NA	NA	NA	3.74
	United States	NA	NA	NA	3.47

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



# 4.7. Projects in Priority Order

Scope	Reduction Measures	Progress Updates
Scope 1	Increasing efficiency of chillers and coolers	The Taiwan Region replaced their cooled-water chiller and high air pressure compressor, achieving a total energy saving of approximately 720,000 kWh/ year.  Also, in the Taiwan Region, retroffiting of the existing coolers using hydrocarbon refrigerants contributed to a total Scope 1 Greenhouse Gases reduction of around 270 tonnes/ years.
Scope 2	100% RE consumption from bottling plants	Projects have commenced for the Chinese Mainland and the United States.  In Wenzhou, the Chinese Mainland, a PV Installation project has been completed in December 2021. The system generates approximately 2,000,000 kWh of electricity per year. Additionally, purchase of 100% offsite RE has taken place in Shanghai Shenmei, Yunnan and Hubei.  In Colorado Springs, United States, a PV installation project with 900 kW solar capacity is ongoing, which covers more than 100% of the energy needed to power the building on an annual basis.
Scope 3	Increasing recycled primary packaging content	In 2021 in the United States, the recycled content in Aluminum was 72%. rPET within the United States water bottles are moving to 100%, which we believe will happen by 2023. In carbonated drinks rPET % of 500ml bottles got to 100%, when it was 14.7% for other volume bottles in 2021.  In HK all water except for the 4.8L and 5L bottles is now 100% rPET and over 2021, carbonated beverages in ≤600ml got to 25% rPET.  In the Taiwan Region, it looks as if the laws around recycled content in food-grade packaging could be about to change.  In the Chinese Mainland work is being done to build a process around recycled content adoption in food-grade packaging. In 2021, 9.6% of aluminum used was recycled content.
	Increasing primary packaging post-consumer recovery rates	Globally we are hindered in obtaining data that is timely and credible. Work is going on in this space with TCCC and within the industry to try and rectify this situation.



Improving energy efficiency for CDE	Materially this is very much around how quickly we can transition the older and less energy-efficient CDE in the Chinese Mainland to split type higher energy efficient models. One smaller cooler (398L) transitioned in 2020, and a 39% energy efficient improvement was seen. The aim is to carry on this work across the other cooler sizes and combine this with accelerated retirement rates on the older cooler equipment.
Supplier engagement on packaging and ingredients	A project with Nanshan on packaging will commence in 2022, which we will report on next year. This is seen as a pilot to see whether we can move one supplier from a global emission factor to a supplier and location specific emission factor. If so, the intention is that we (with TCCC) will look to roll this methodology out across the other key suppliers.

==== THE END ====