



While the COVID-19 pandemic has curtailed industrial activities and human movement globally, it also gave us a brief glimpse of what the world could look like with clearer skies and cleaner air.

At SATS, our journey towards greater sustainability constantly challenges us to improve the way we operate by using our resources responsibly and preserving the environment. Looking ahead, we remain committed to pursuing innovative solutions that help us build a resilient, sustainable business for the benefit of our customers, our communities and our planet.



Treasuring Resources



Use Scarce Resources Efficiently

[view more](#)



Reduce Emissions

[view more](#)



Caring for the Environment

Enhancing our operational efficiencies and reducing our carbon footprint and waste while shifting to renewable and sustainable sources of energy, water and raw materials to lessen our impact on the environment.

Our Primary Stakeholders

- Customers
- Employees
- Shareholders
- Local Communities
- The Environment

United Nations' Sustainable Development Goals





Use Scarce Resources Efficiently

In order to achieve equitable growth without exerting excessive strains on and causing irreversible damage to the environment, we are constantly developing ways to shift from a take-make-waste linear production model to a circular, more sustainable one. Integrating digital technology, energy-efficient innovations and environmentally conscious practices into our operations, we strive to optimise the use of resources by reducing wastage, increasing efficiencies and creating productive and sustainable cycles of renewal and regeneration.

● Use Scarce Resources Efficiently

Strengthening our recycling capabilities

Across our operations, the largest categories of materials used are agricultural products and packaging materials such as carton boxes, plastic, and glass. As part of our longstanding, holistic approach towards waste reduction, we have been working with our licensed vendors to recycle plastic, metal, carton boxes, cooking oil and glass at SICC 1 and 2 since 2008.

In terms of resources, water is an essential part of our operations and we require a great volume daily for food processing and facility maintenance. With climate change altering weather patterns and the amount of rainfall, water scarcity will become a growing concern globally. At the current rates of consumption and population growth, it is estimated that two-thirds of the world's population may face water shortages by 2025¹⁵. Given the enormity of the issue, we have a responsibility to conserve and recycle water as much as possible.

In 2019, we set up on-site rainwater collection systems at SATS Aero Laundry (SAL), while working with partners to develop extensive water recycling projects. AISATS Bengaluru, one of our joint ventures in India, implemented a rainwater harvesting system at its Airfreight Terminal. Fitted with carbon filters, the system is designed to remove debris and silt from the water collected before recharging it into the groundwater table. In Bengaluru, recycled water from our sewage treatment plant (STP) is used for washroom and landscape maintenance. An average of 562 kilolitres of recycled water, an amount that can fill approximately 2,973 standard bathtubs¹⁶, from our STP is generated and utilised each month.

In our Singapore facilities, we are working to increase the volume of recycled water from 50,000 litres to 220,000 litres per day. The recycled and treated greywater is used for toilet flushing, general washing, irrigation and in cooling towers. By 2030, we aim to treat 100% of the wastewater generated across our operations based on local regulatory requirement, and recycle 50% of wastewater for non-food use.

Practising conscious consumption

At SATS, we strive to contribute to Singapore's zero-waste ambitions by reducing the amount of waste generated in our operations and by practising conscious consumption throughout our organisation. Sustainability is an integral part of our business and our management actively incorporates environmental considerations into the business decision-making process.

This year, we commissioned KPMG to conduct an Impact Accounting study to evaluate the true social cost of electrifying our ground support equipment (GSEs), which is one of our environmental initiatives. In this study, we put dollar values on different types of unpriced environmental impacts such as carbon emissions and wastewater. Results from this study will help us to refine our sustainability strategy and make more informed capital investment decisions. We are also working with partners to reduce our dependence on single-use plastic packaging materials by developing sustainable and recyclable packaging¹⁷.

When added up, individual decisions can have a collective and significant impact on the environment. Within SATS, we encourage our employees to consume consciously and reduce their use of products with high environmental impact. As part of our efforts to help our staff adopt more sustainable habits in their daily lives, we have designed and distributed SATS-branded personal cutlery during our PCEO walkabout, to promote the use of reusable cutlery and cups at all in-house functions and staff canteens.



15. World Wildlife Fund.

16. Calculated based on standard bathtubs with a capacity of 50 gallons (approximately 189 litres).

17. See 'Tackle Food and Packaging Waste' section, p 26.

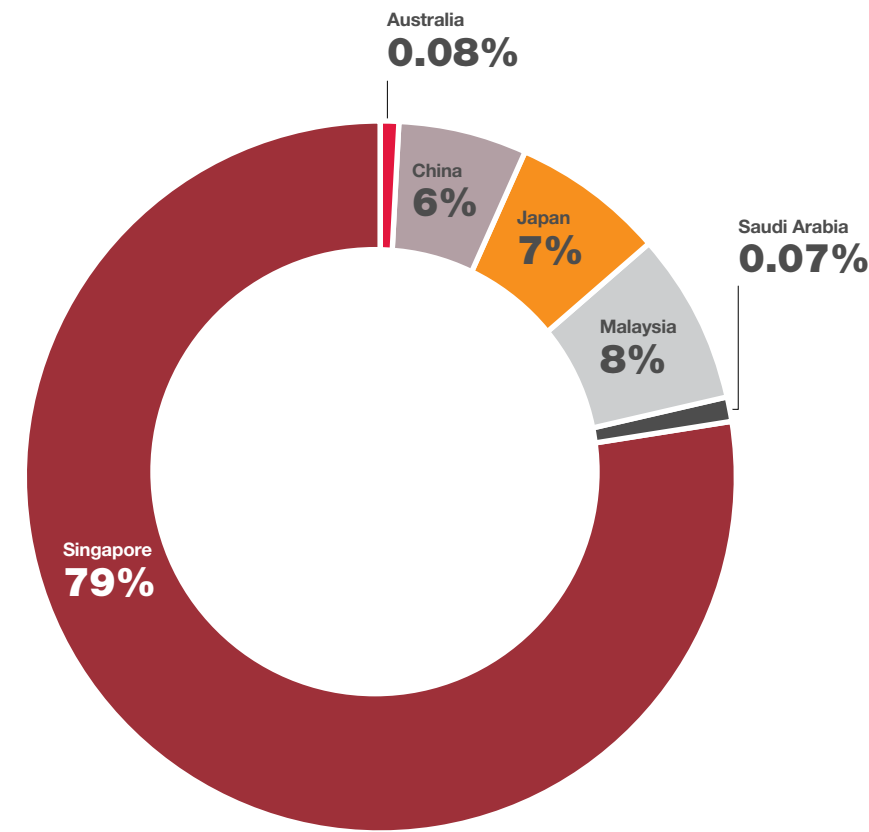
● Use Scarce Resources Efficiently

Total water withdrawal¹⁸

During this reporting period, SATS withdrew a total of 1,640 megalitres of water from our global operations, most of which was withdrawn by our operations in Singapore (which saw a reduction in volume from 1,353 megalitres of water in FY2018-19 to 1,296 megalitres of water in FY2019-20). SATS' overseas operations in Australia, China, Japan, Malaysia and Saudi Arabia withdrew a total of 344 megalitres of water during the reporting year.

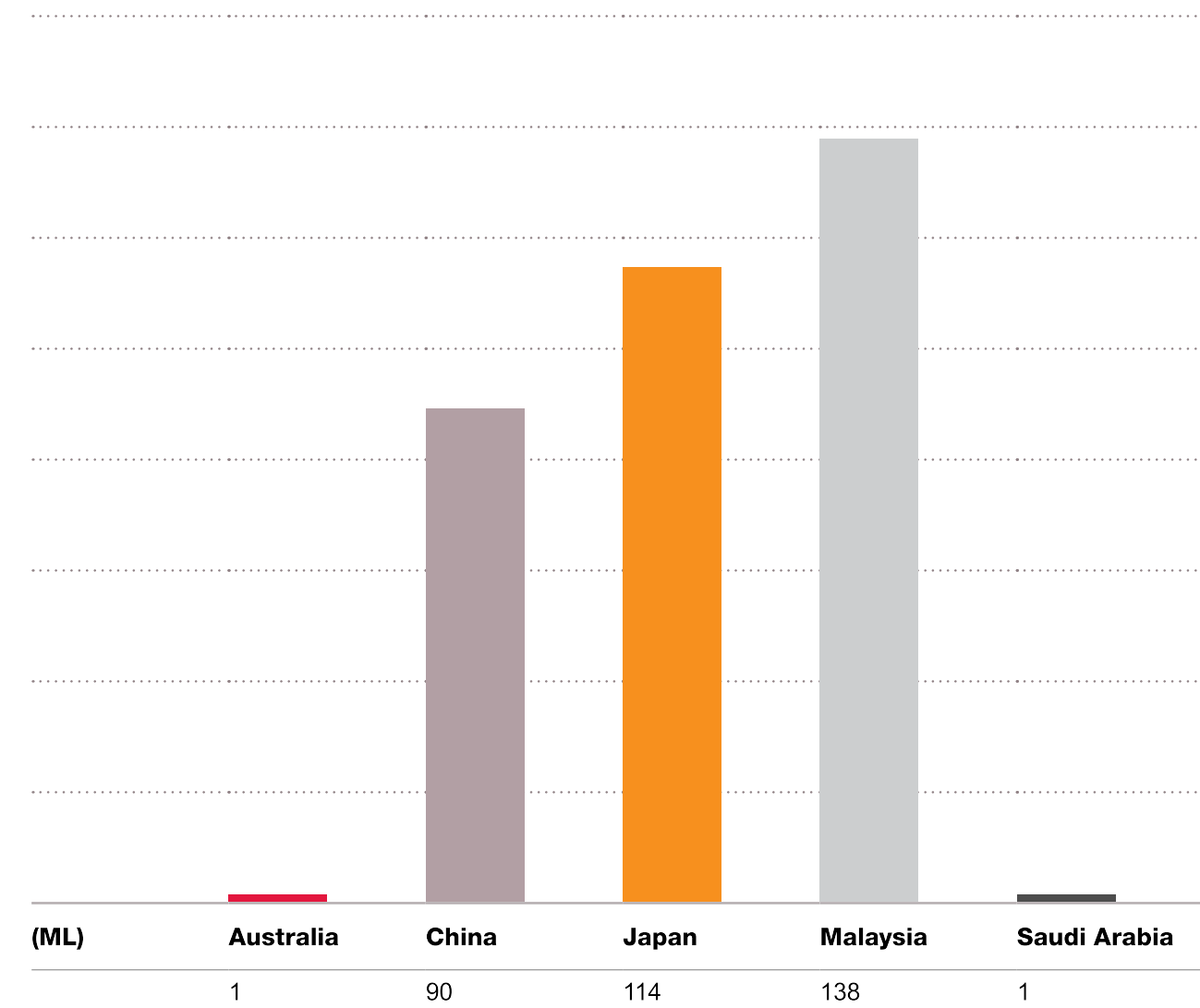
18. The term 'water consumption' in previous reports has been replaced with 'water withdrawal' in this report to align with the latest GRI Standards definitions.

Water Withdrawal by Country



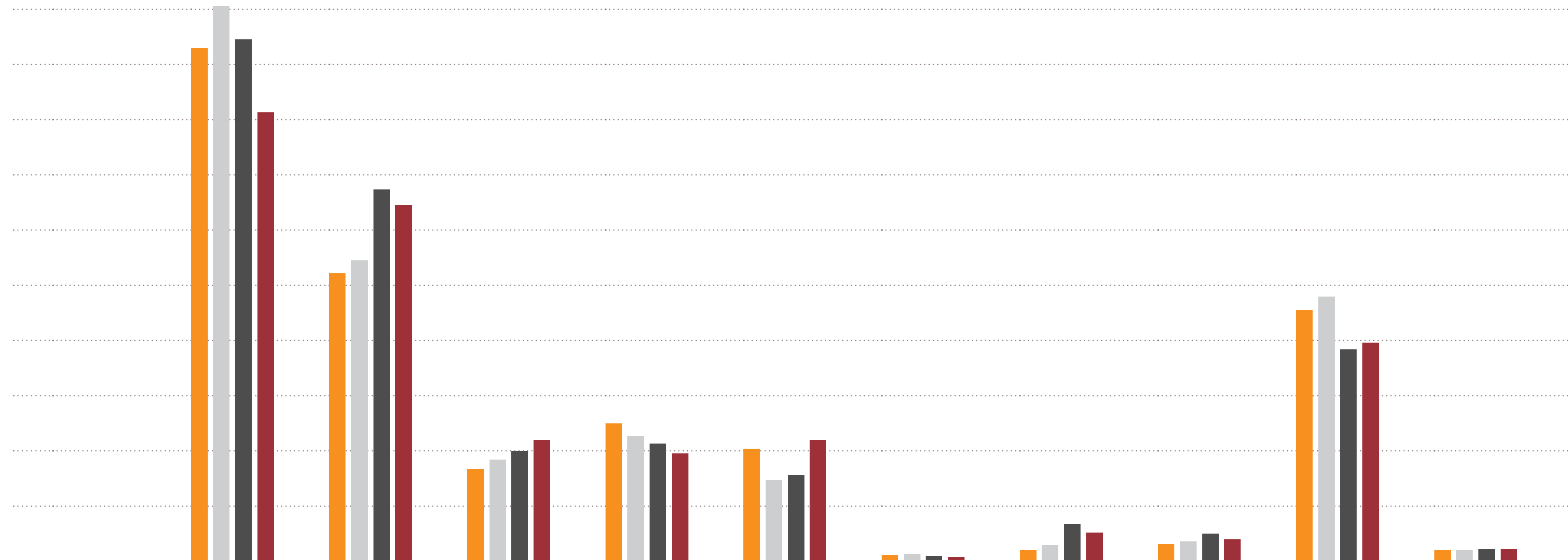
■ Australia	■ Malaysia
■ China	■ Saudi Arabia
■ Japan	■ Singapore

Water Withdrawal by Overseas Operations



● Use Scarce Resources Efficiently

Water Withdrawal on Singapore Premises



(ML)	SICC 1	SICC 2	AFT	SFS	PI	SATS DN	MBCCS	PTB	SAL	SMC
FY2016-17	464	260	83	124	101	5	9	15	227	9
FY2017-18	502	272	91	113	73	6	14	17	239	9
FY2018-19	472	336	99	106	77	4	33	24	191	10
FY2019-20	406	322	109	97	109	3	25	19	197	10

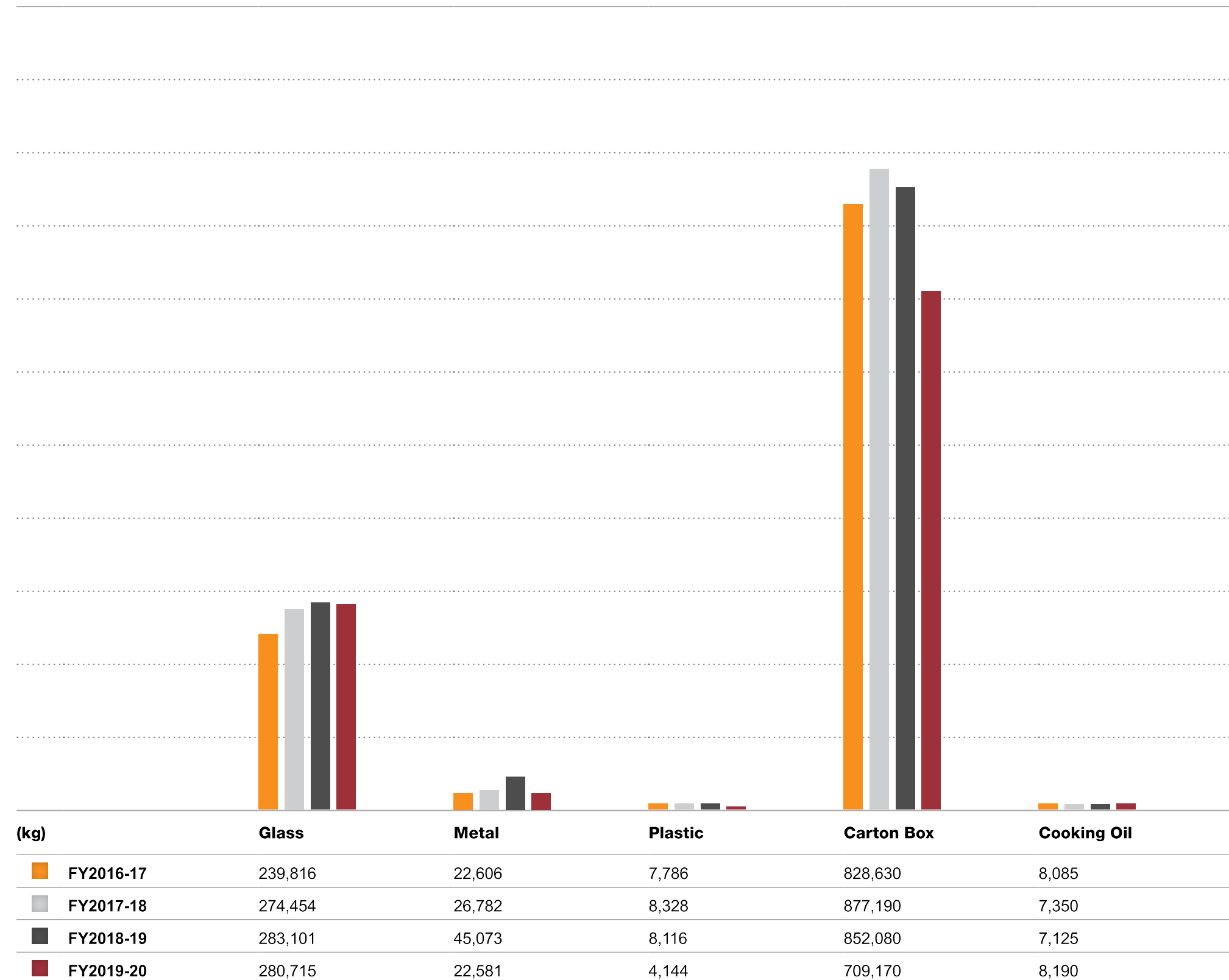
● Use Scarce Resources Efficiently

Weight of hazardous waste and non-hazardous waste in FY2019-20

During this reporting period, our operations in Singapore generated about 148 tonnes and 7,734 tonnes of hazardous and non-hazardous waste respectively. About 59.5% of our non-hazardous waste was recycled.

Hazardous Waste	Weight (kg)	Disposal Method
Waste Oil	59,390	Recycled
Oily Water	66,030	Sent to wastewater treatment plant
Waste Sludge	930	Incineration
Hazardous Solid Waste	21,700	Incineration
Total Hazardous Waste	148,050	
Non-hazardous Waste	Weight (kg)	Disposal Method
General Waste	3,133,154	Incineration
from Cargo		
Paper	218,165	Recycled
Metal	79,689	Recycled
Plastic	280,138	Recycled
Wood	2,998,239	Recycled
from Catering		
Glass	280,715	Recycled
Metal	22,581	Recycled
Plastic	4,144	Recycled
Carton Box	709,170	Recycled
Cooking Oil	8,190	Recycled
Total Non-hazardous Waste	7,734,185	

Weight of Waste Recycled at SICC 1 and SICC 2



Reduce Emissions

Driven mostly by the burning of fossil fuels, the increasingly visible and debilitating impacts of climate change on societies, economies and the environment have given nations and industries a strong impetus to reduce their carbon emissions and develop more renewable sources of energy.

As a leading provider of gateway services and food solutions in the region, we have a pivotal role to play in mitigating climate change by taking meaningful actions to reduce carbon emissions across our businesses.

In 2019, we built upon our earlier progress and replaced diesel-powered group support equipment with electric ones, improved energy efficiency, as well as harnessed renewable energy to power more of our operations. We will continue to monitor and measure our carbon emissions and work towards our target reduction of carbon footprint.

Monitoring our environmental footprint

Last year, NEA, CAG and relevant SATS business units conducted a joint carbon footprint audit across our Singapore operations. Covering SICC 1, SICC 2, SATS Food Services (SFS), SAL, Airfreight Terminal (AFT), SATS Maintenance Centre, MBCCS and SATS Cargo, the exercise enabled us to establish a carbon emission baseline against which we can benchmark future performance and set appropriate targets.

As part of our sustainability commitment, we report our carbon emissions where we have operational control, for Singapore and overseas facilities, in accordance with the guidelines in *GHG Protocol Corporate Standards*. For more information on the calculation methodology, please see Annex B.

Expanding renewable energy capacity and improving energy efficiency

This year, we continued to reduce our carbon footprint by increasing the share of renewable energy in our operations and converting to more energy-efficient equipment.

In Singapore, we partnered with Sembcorp Industries to install rooftop solar panels with a combined peak capacity of 8.1 megawatt-peak, enough to power 22 4-room HDB flats for a month¹⁹. Overseas, our India joint venture, AISATS Bengaluru, installed a 1.3 megawatt-peak rooftop solar power plant at the AFT facility and a 0.35 megawatt-peak solar power plant at the SATS Coolport facility. The combined output of these two installations now supply up to 55% of AISATS Bengaluru's electricity demand, and contributed INR 2.75 million in cost savings for the first half of the financial year.

In line with our sustainability goals, we continued to enhance our infrastructure in order to improve energy efficiency. For instance, to reduce energy consumption and heat generation, AISATS Bengaluru replaced 99% of existing compact fluorescent lamps with LED lighting. This has resulted in energy savings of 262,080 kWh per year.

Converting to less carbon-intensive equipment

Another important step SATS takes towards lowering emissions within our operations is to convert our existing equipment, including our diesel- or petrol-powered GSEs, to less carbon-intensive ones.

To date, we have made substantial progress in electrifying our fleet of GSEs across many of our operations. For example, in compliance with local environmental regulations, our teams in Beijing Capital International Airport and Beijing Daxing International Airport replaced some fossil fuel-based equipment with electrical GSEs and converted units with retrofits. In Indonesia, our subsidiary, PT JAS, has also embarked on an electrification programme with the purchase of six electric tractors for operations at Jakarta Cengkareng Airport Terminal 3. Moving forward, we will tap on the findings of our ongoing Impact Accounting study to refine our GSE conversion plans.

In addition, we are actively exploring the conversion of other fossil fuel-powered equipment to less carbon-intensive alternatives. This year, AISATS Hyderabad converted a towable conveyor belt that consumes 1.2 litres of diesel per hour to one that is powered by solar-powered batteries charged by solar panels installed onsite. The upgrade has enabled savings in consumable, maintenance and spare part costs as well as a reduction in noise levels, fuel consumption and carbon emissions.



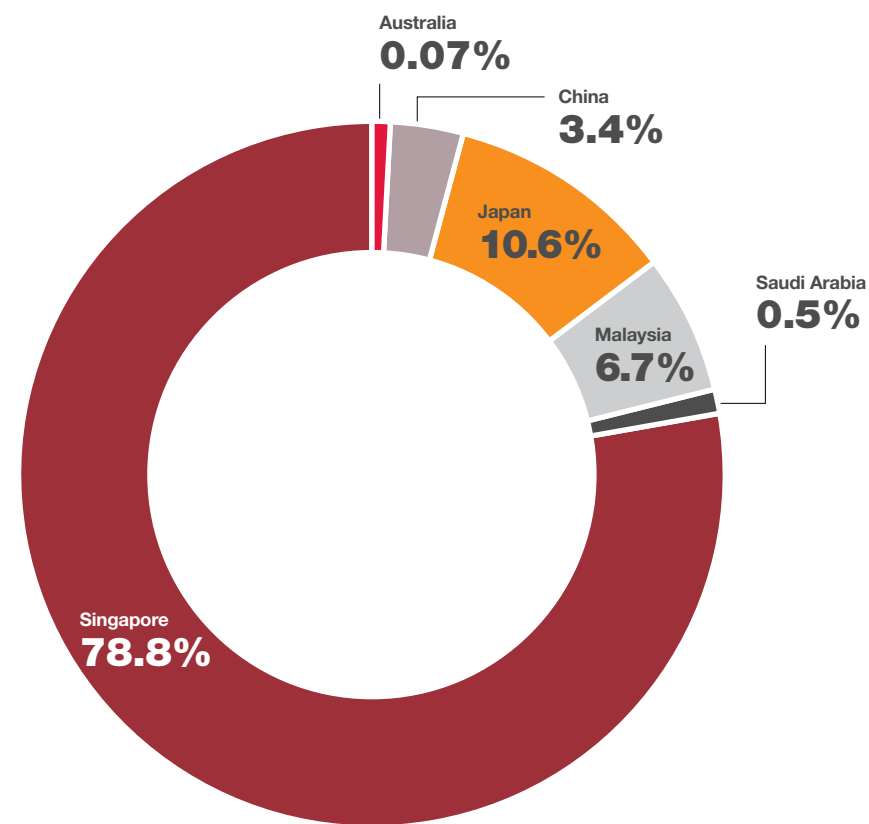
19. Based on Singapore's 2019 energy statistics as published by the Energy Market Authority.

● Reduce Emissions

Total energy consumption

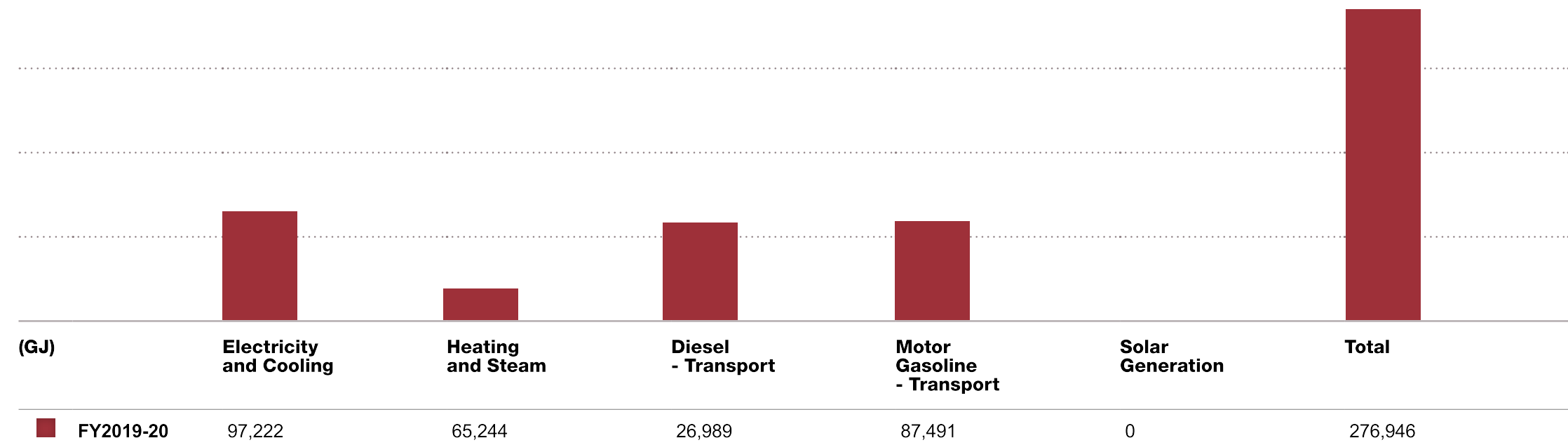
During this reporting period, a total of 1,307,792 gigajoules (GJ) of energy was consumed by SATS global operations.

Energy Consumption by Country

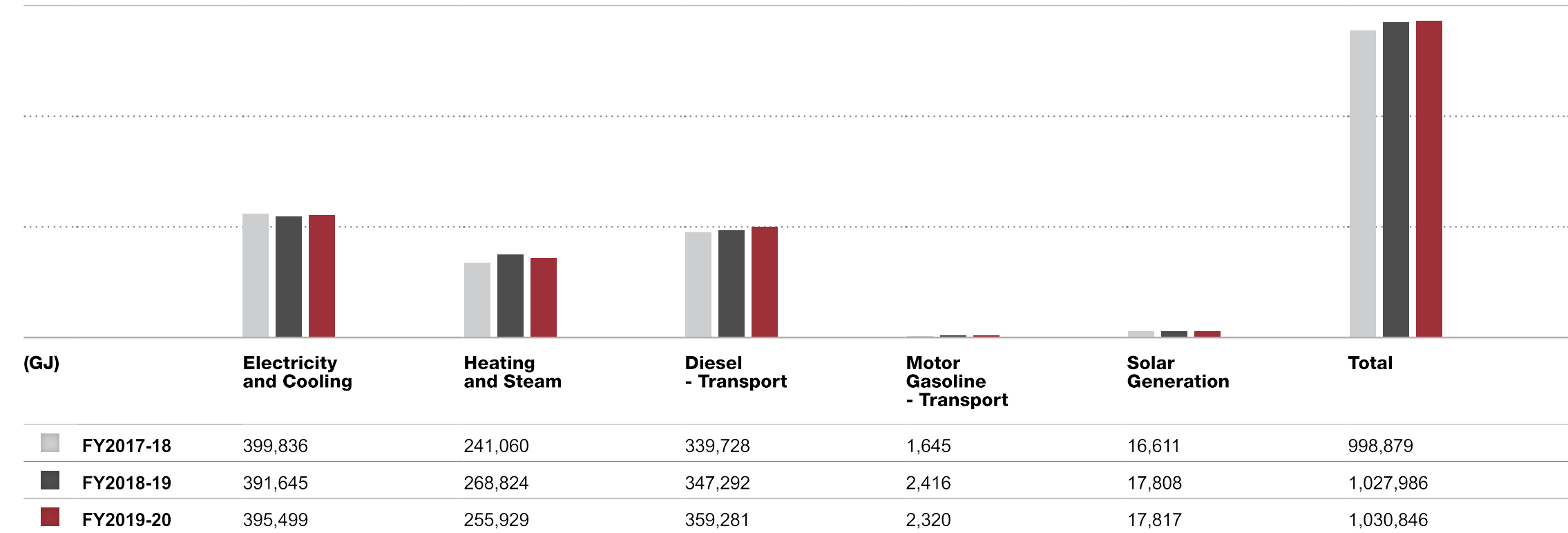


■ Australia	■ Malaysia
■ China	■ Saudi Arabia
■ Japan	■ Singapore

Total Energy for Overseas Operations



Total Energy for Singapore Operations



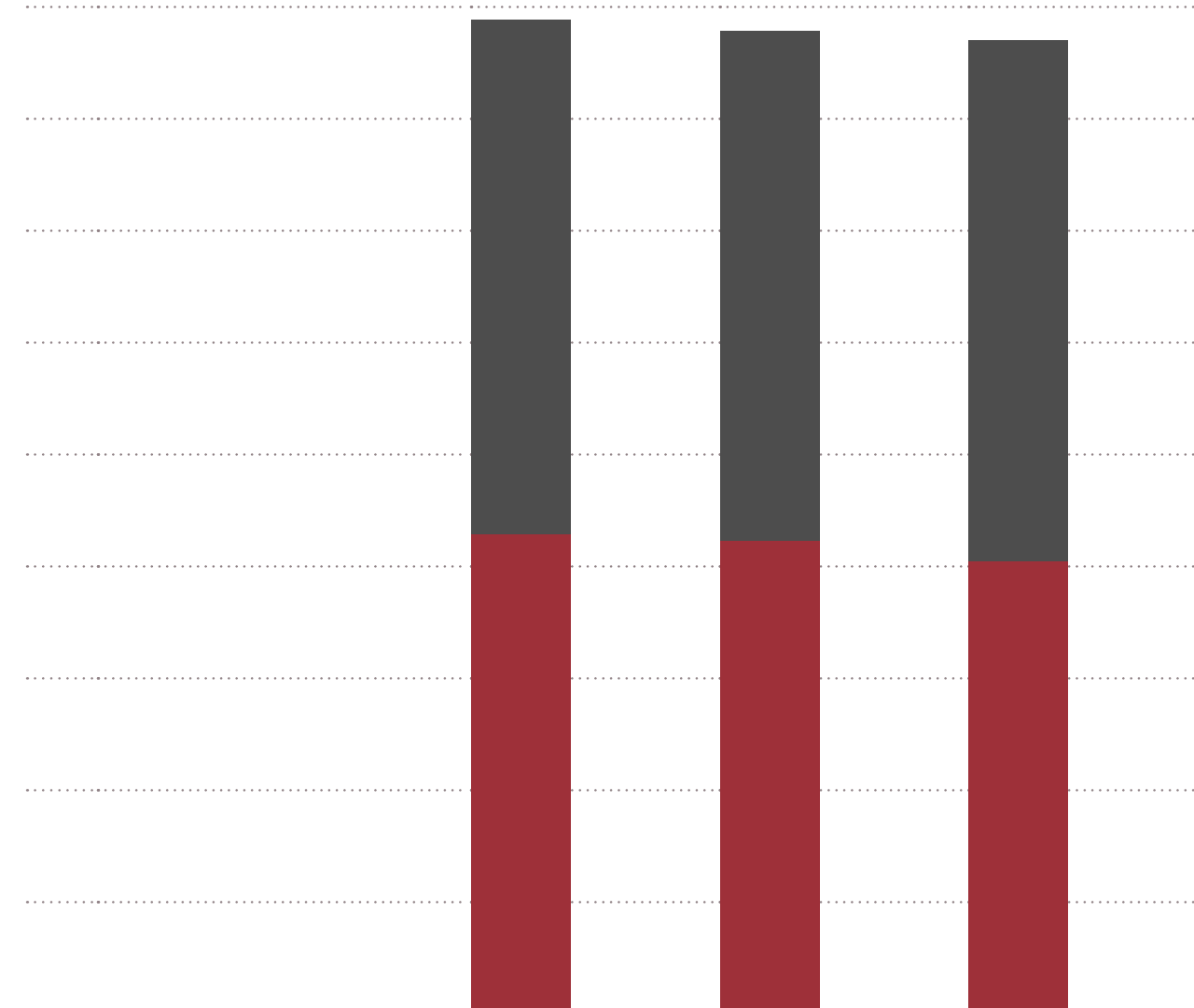
● Reduce Emissions

Scope 1 and Scope 2 Emissions

During this reporting period, our direct emissions (scope 1) amounted to 54,054 tonnes of carbon dioxide equivalent (tCO₂e), and emissions from our purchase of electricity, heat and steam (scope 2) were 62,121 tCO₂e.

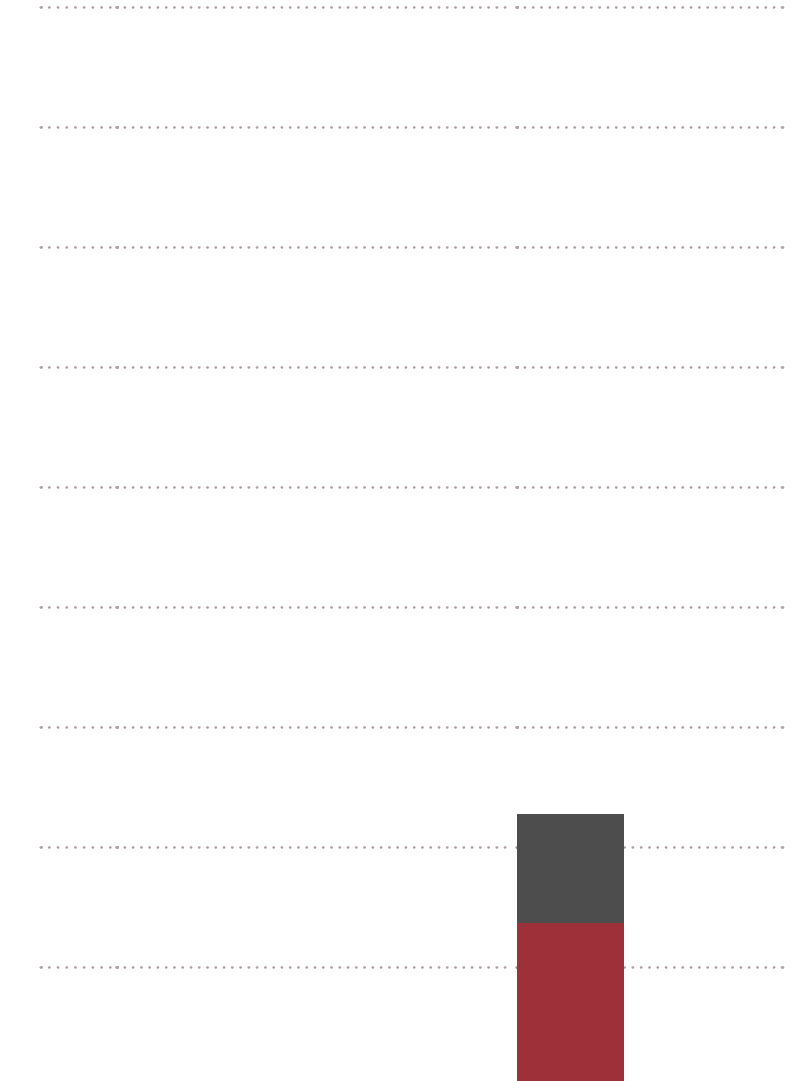
Location	Energy (GJ)	Total Scope 1 (tCO ₂ e)	Scope 2 Emissions (tCO ₂ e)	Total Emissions (tCO ₂ e)
Australia	979	36	113	149
China	44,294	1,151	7,220	8,371
Japan	138,475	4,093	7,611	11,704
Malaysia	87,125	6,074	288	6,362
Saudi Arabia	6,072	91	879	970
Singapore	1,030,846	42,609	46,010	88,619
Total	1,307,791	54,054	62,121	116,175

Scope 1, 2 and Total Emissions for Singapore Operations



(tCO ₂ e)	2020	2019 ^r	2018
Scope 2 emissions	46,010	45,561	46,559
Scope 1 emissions	42,609	42,167	40,347
Total emissions	88,619	87,728	86,906

Scope 1, 2 and Total Emissions for Overseas Operations



(tCO ₂ e)	2020
Scope 2 emissions	16,111
Scope 1 emissions	11,445
Total emissions	27,556

r. 2019 figures were restated after an internal verification exercise.

● Reduce Emissions

Case Study ^{3.1}

The True Impact of Electric GSEs

In support of our 2030 ambition to reduce our carbon emissions, SATS has been progressively transitioning from fossil fuel-based GSEs to electric GSEs. By FY2019-20, we had successfully converted a total of 93 fossil fuel-based GSEs to electric GSEs comprising 78 tractors, nine forklifts and six pallet trucks. This has amounted to 618 tonnes of carbon dioxide in emissions savings, the equivalent of greenhouse gas emissions from 134 passenger vehicles driven for a year²⁰. We continue to deploy fully electric tractors at Changi Airport Terminal 2, 3 and 4 baggage departments.

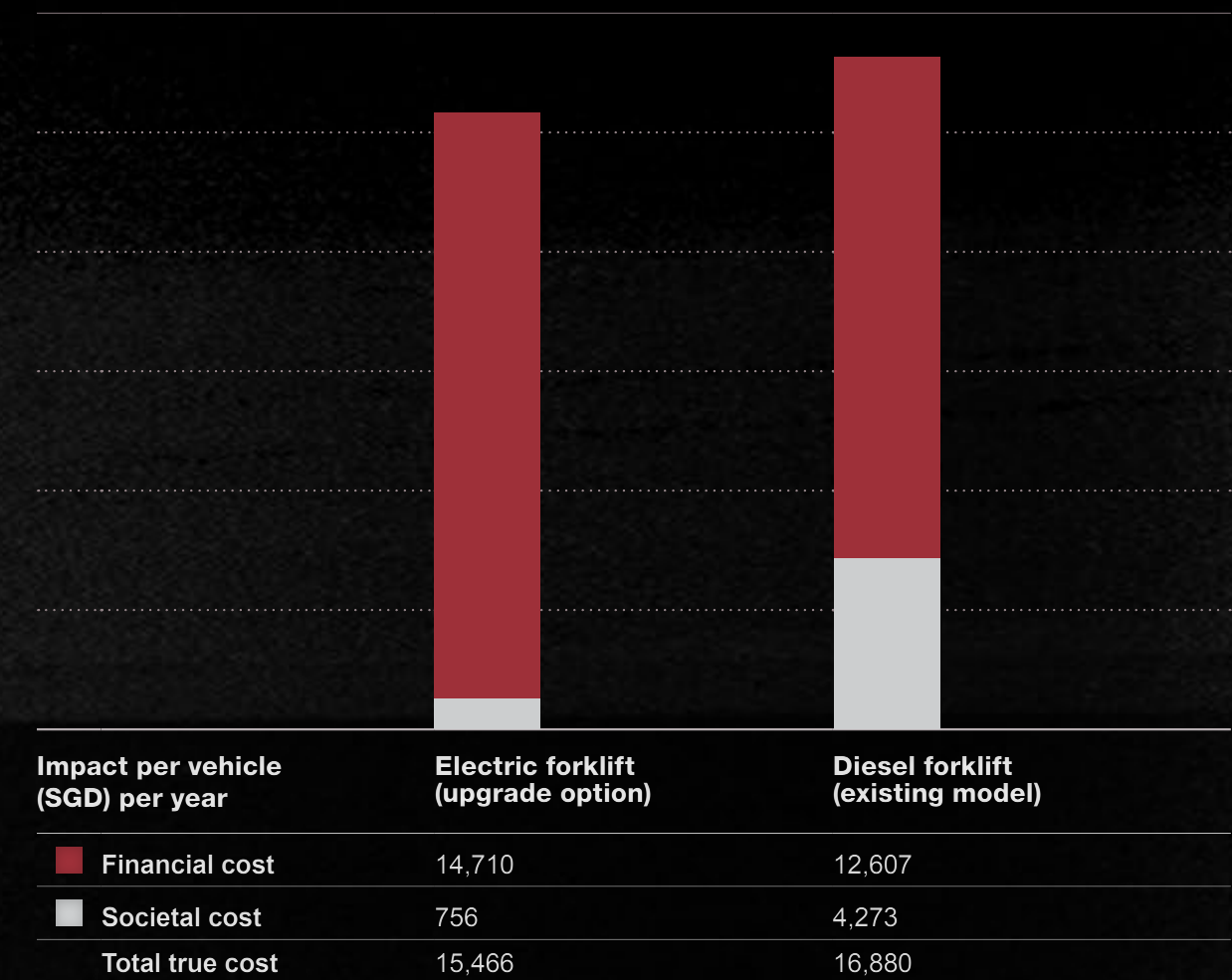
To gain a holistic understanding of the impact of electrifying our GSEs, we engaged a global consultancy firm, KPMG, to conduct a study of the true value of the initiative, with a focus on our Singapore operations. In this study, we compared the true costs of our current GSEs and possible upgrade options against the true value gained by the electrification of our GSEs. Societal costs stemming from the impact of

air pollutants and GHG emissions on aspects such as human health, agricultural productivity and property damage were calculated together with financial costs to derive the true cost of the various types of GSEs.

The assessment showed that while electric vehicle options are typically more expensive from a financial perspective, the true cost of an electric vehicle may be less than a comparable fossil fuel-based vehicle. This is a result of the typically much larger societal cost that fossil fuel-based vehicles have when compared to their electric counterparts, predominantly on account of their significantly larger GHG emissions contributions. This is seen in the example on the right.

Moving forward, we intend to integrate the same type of holistic thinking into the feasibility analysis of our sustainability initiatives, factoring societal costs alongside financial costs, so as to better guide our decision-making processes.

Annual Average True Cost of a Forklift Over its Life-span



²⁰. Calculated using the greenhouse gas equivalencies calculator provided by the United States Environmental Protection Agency.

Case Study ^{3.2}

SATS and Sembcorp Join Forces to Increase Solar Capacity

In October 2019, SATS partnered with Sembcorp in a bid to increase our supply of renewable energy.

Under the partnership, Sembcorp is developing a suite of integrated solutions to help SATS reduce its carbon footprint, which will bring us one step closer to our goal of using 40% renewable energy in buildings owned by SATS by 2030.

One of the first initiatives is the implementation of solar energy systems to power SATS' on-site operations. Sembcorp will install, own and operate rooftop solar panels above SATS Airfreight Terminals 1 to 4, at both of SATS' inflight catering centres as well as the SATS Maintenance Workshop. The solar panels will provide SATS with a combined capacity of approximately 8.1 megawatt-peak.

With this, SATS will achieve a 13% renewable energy share against our total energy consumption. This project is expected to reduce 4.3 million kg of carbon dioxide emissions per year, equivalent to removing about 925 cars from the roads annually. New-generation solar panels, which are capable of harvesting both sunlight and heat to produce electricity and hot water, will also be piloted at this phase, and will be potentially expanded to all future SATS premises, if deemed successful.

As part of this partnership, SATS and Sembcorp will also explore trucking liquefied natural gas (LNG) to SATS and regasifying it to power boilers in both of SATS' inflight catering centres at Changi. LNG is a cleaner alternative to diesel and has 24% lower carbon dioxide emissions. In addition, to further reduce waste and optimise resources for SATS, Sembcorp will look to provide treatment for wastewater recycling.



At SATS, our sustainability goals are to enable more people to eat well and connect seamlessly across Asia, while minimising the impact these activities have on our environment. This partnership with Sembcorp allows us to explore renewable energy solutions that help us reduce our carbon footprint.



Alex Hungate

President and Chief Executive Officer