



# Carbon Neutral Program

Public Disclosure Summary

September 2021

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## 1. INTRODUCTION

### 1.1 About BTS Group Holdings PCL

- BTS Group Holdings PCL is a privately owned, multi-industry conglomerate that operates across 3 business platforms; MOVE, MIX and MATCH. Listed on the Stock Exchange of Thailand (SET), BTS Group is a constituent member of the SET50 'Blue Chip' index, MSCI Asia Pacific Index, FTSE4Good Index and Dow Jones Sustainability Index and among the largest companies in Thailand.
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#### 1.1.1 Sustainability Awards and Recognition

We always assess ourselves against rigorous environmental, social and governance (ESG) frameworks. Though recognition is not the primary goal, we are proud our efforts and progress have been acknowledged at both a national and international level.



#### A Carbon Neutral Company

Thailand's first and only Carbon Neutral Company in the Rail Transportation sector (certified by Thailand Greenhouse Gas Management Organisation)

Member of  
**Dow Jones  
Sustainability Indices**  
Powered by the S&P Global CSA

#### #1 Global Ranking in Dow Jones Sustainability Indices (DJSI)0

Included in the DJSI for the 3 consecutive years (2018) and ranked first globally in the DJSI Transportation and Transportation Infrastructure (TRA) sector

**Sustainability Award**  
Gold Class 2021  
**S&P Global**

#### Sustainability Award, 'Gold Class' in the Transportation and Transportation Infrastructure sector (2020)

Included in the S&P Global Sustainability Yearbook 2021 and the sole recipient of the Gold Class designation in TRA sector.



FTSE4Good

#### A constituent of FTSE4Good Index Series

Recognised as constituent of FTSE4Good Index Series for the 4<sup>th</sup> consecutive year



#### A constituent of MSCI Indices, with 'AA' ESG ratings (2020)

4 years ranked among leading companies (A list) in emerging markets in ESG operations with 'AA' rating (2020)



#### The Asset ESG – 'Platinum' awards

2 years in the Asset ESG award Platinum awards (2019-2020) and amongst the best-in-class Thai companies that received this prestigious recognition



#### Thailand Sustainability Investment (THSI)

2 years in a row in the THSI from The Stock Exchange of Thailand (2019-2020) and amongst the listed Thai companies with outstanding performance on ESG aspects



### ESG 100

Included in the ESG100 (the top 100 ESG achieving companies out of 803 listed companies) by THAIPAT's ESG Rating Unit



### Sustainability Award 2020

Sustainability Disclosure Award 2020 from the Thaipat Institute owing to transparent public disclosure of the Company's performance in its Sustainability Report



### '5-Star' rating or 'Excellent' rating in Corporate Governance

Certified member of Thai Private Sector Collective Action Against Corruption and assessed as '5star' rating or 'Excellent' in Corporate Governance Scoring, for the 9<sup>th</sup> consecutive year



### Transport Deal of the Year, Thailand

BTS Group's second green bond of THB 8.6bn won the Transport Deal of the Year, Thailand at The Asset Triple A Infrastructure Awards 2021

## 1.2 Commitment to Sustainability

### 1.2.1 Our Ambition

#### ■ Vision

- To serve our community with unique and sustainable solutions that greatly contributes to an improved life

#### ■ Mission

- We build inclusive infrastructure, platforms and innovate quality services for our community using a sustainable approach

#### ■ Values

- Delivering Customer Satisfaction, Creating Shareholder Value, Supporting Sustainable Growth, Developing Communities

## 1.3 Carbon Neutral Account Boundary

In FY 2020/21, operating revenue came from the MOVE business (Operating and Maintenance (O&M) revenue of Green Line extension for Silom Line, Sukhumvit Line, Southern and Northern Green Lines and Gold Line, fare box revenue from BRT, revenue from Electrical and Mechanical (E&M) works and train procurement service for Green Line and Gold Line, construction revenue for Pink Line and Yellow Line) accounting for 89.9% of the total operating revenue.

Operating revenue from the MIX business (Rental and advertising service revenue on Sky Train, BTS stations, outdoor media, office buildings and revenue from digital services, Rabbit Rewards and others) and the MATCH business (Revenue from sales of real estate, rental and service revenue from residential buildings and Thana City golf and sports club, revenue from restaurant business, construction services and others) which accounted for 7.5% and 2.6% of the total operating revenue, respectively. Operating revenue decreased 6.0% YOY from FY 2019/20 primarily driven by decrease in revenue from MIX and MATCH business which were as a result of the COVID-19 pandemic.

In terms of emissions-generating activities, our subsidiary, Bangkok Mass Transit System Public Company Limited (BTSC) which is the mass transit operator is the key consumer of electricity. Therefore, this is our key source of GHG emissions. Operational control is selected for BTS Group in the reporting boundary for which climate-related impact on our business are being reported.

GHG Emissions	Source of GHG Emissions	Boundary	tCO <sub>2</sub> e
Scope 1	1) Stationary Combustion (Diesel, Gasoline) 2) Mobile Combustion (Diesel, Gasoline, Natural Gas) 3) Fugitive emissions Refrigerant	- BTS buildings and cars - Bus Rapid Transit - Refrigerant for the air conditioners in the building and trains	3,570
Scope 2	Electricity - Traction Power Supply - Station and others	- Green line - Gold Line - Bus Rapid Transit	66,820
Scope 3	- Purchased goods and services - Fuel and energy related activities - Waste generated in operations	- BTS buildings and stations, including Bus Rapid Transit, and the electricity consumption for station tenants	4,210

### 1.3.1 Inventory of GHG emissions from the activities

The total GHG emission of BTS Group was increased from FY2017/18 to FY2020/21 because the business expansion in several business; MOVE, MIX and Match especially in MOVE business (Operating and Maintenance). In 2017/2018, Sukhumvit Line Extension (MRT Green Line Project): Bearing-Samutprakan Section was commenced in operation. The 8-station extension covers a distance of 11 kilometres. In 2018/2019, a further extension of the MRT Green Line (Mo Chit - Saphan Mai - Khu Khot section) was commenced in operation. In 2019/2020, the 11-station extension continues from Kasetsart University Station to Khu Khot Station; the travel distance on this new extension makes a combined length on the Green Line of 68.25 km connecting 59 stations, covering 3 provinces: Pathum Thani, Bangkok and Samut Prakan.

Indicators	Total GHG emission through the expansion of mass transit services				Target 2020/2021
	2017/18	2018/19	2019/20	2020/21	
Total GHG Emission (tCO <sub>2</sub> e)	56,813	63,979	75,463	74,600	99,137
Scope 1 (tCO <sub>2</sub> e)	368	1,227	729	3,570	4284
Scope 2 (tCO <sub>2</sub> e)	56,445	62,752	74,734	66,820	89,801
Scope 3 (tCO <sub>2</sub> e)	n/a	n/a	n/a	4,210	5,052

Standard used to collect activity data and calculate emissions:

- ISO 14064-1
- Thailand Greenhouse Gas Management Organization: The National Guideline Carbon Footprint for organization
- The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)

### 1.3.2 Operating Performances

Target	Baseline	Target	Target Status	Saving (tCO <sub>2</sub> e)
6.6% reduction of Scope 2 GHG emission (tCO <sub>2</sub> e)	75,463 (2019)	70,482 (2020)	70,390 (Achieved)	5,073
Energy efficiency (KWh)	69,728 (2020)	82,000 (2021)	80,335 (Achieved)	-
Waste management (tonne)	528.8 (2020)	746.15 (2021)	621.82 (Achieved)	-

## 2. GHG EMISSION REDUCTION MEASURE



### TGO Carbon Footprint for Organisation Certificate

BTS Group received a “Carbon Footprint for Organisation” certification for measuring its carbon footprint. Its carbon footprint label was registered by Thailand’s Greenhouse Gas Management Organization or TGO Certificate No. TGO CFO FY21-061 on May 27, 2021. BTS Group’s carbon footprint of 74,600 tonnes of carbon dioxide equivalent.



### TGO Carbon Neutral Certificate

BTS Group participated in the Thailand Voluntary Emission Reduction Programme (T-VER) and received a Carbon Neutral certificate from the TGO for the 1<sup>st</sup> year thanks to BTS Group’s achievement in implementing carbon offsetting schemes by joining a carbon credit schemes by joining a carbon credit programme with Mitr Phol Bio-Power (Danchang) Co., Ltd. (Block 2). The cooperation is aimed at driving Thailand towards the status of a Low-Carbon Economy. With this activity, BTS Group becomes the first rail mass transit company that received this carbon neutral status.



### Co-development of greenhouse gas mitigation mechanism (T-VER)

BTS Group collaborated with TGO to develop a greenhouse gas mitigation mechanism with the Thailand Voluntary Emission Reduction Programme (T-VER). This methodology is called “mass transit”. Hypothetically, it is assumed that an organisation should be able to record the amount of greenhouse gas emission reduced from commuters shifting modes to mass transit from other modes of transport such as taxis or buses. The methodology development has completed and launched in August, 2021. This will be benefit both BTS group as well as other rail mass transit operators

In employee engagement, BTS Group offices and stations are reducing energy consumption by 10% of our own operations. This includes changing the lighting from fluorescent to LED light bulbs in both the office and BTS Sky Train stations, changing air-conditioning to reduce the use of R-22 refrigerants (approximately 25-30 units every year), and asking for cooperation from employees to save energy by keeping the air-conditioning temperature at 25°C, turning of lights after use, and using stairs instead of elevators.

For internal incentives programs, as a climate change-related incentive, management is awarded with BTS Spirit Club Points as a form of monetary incentive which are incentivised and associated with Energy Reductions KPIs for all employees. Efficiency of electricity used and electricity reduction initiatives are implemented. BTS Spirit Club Points can be converted into monetary value, with 2 BTS Spirit Club point equivalent to 1 Thai Baht (THB). This incentive is applied to the upper management level, including the Chief Executive Officer (CEO), other named executive officers, and business unit managers.

Voluntary Initiative	Type	Target 2021 (tCO <sub>2</sub> e)
Energy efficiency in building	Heating, Ventilation and Air Conditioning (HVAC)	51.01
Energy efficiency in building	Lighting	0.24
Energy efficiency in building	Lighting	0.09
Transportation	Company fleet vehicle efficiency	60.91
<b>Total Target 2021</b>		<b>112.25</b>

## 2.1 Carbon Offsets

We are honoured to be the first and only carbon neutral mass transit railway company (certified by the Thai Government's Thailand Greenhouse Gas Management Organisation: TGO). This achievement was as a result of BTS Group's sustainable business plan and ongoing efforts to reduce emissions, coupled with the implementation of carbon offsetting schemes by joining a carbon credit programme with Mitr Phol Bio Power project.

In 2020/2021, BTS Group procured 95,000 tCO<sub>2</sub>eq of T-VERs to offset its liability greenhouse gas emissions. BTS Group's carbon offset is in line with Thailand Greenhouse Gas Organization (TGO) standard. In order to maintain carbon neutrality, we established an internal carbon pricing to ensure a standard price for green investments. This price is currently being used for all capital investments related to carbon reduction. This has driven our investment on low-carbon project such as Solar PV installation

### 2.1.1 Summary on offset type, year, serial number and Net CO<sub>2</sub> quantity

Project type	Registry	Transfer Date	Serial Numbers	Quantity
Biomass Energy (Voluntary Offsetting)	T-VERs	23 April 2021	TH-21-2809561-2904560-1-1-6	95,000 tCO <sub>2</sub> eq
<b>Total Gross Scope 1, 2 and 3 Greenhouse Gas Emissions for 2020/2021</b>				<b>74,600</b>
<b>Net Scope 1, 2 and 3 Greenhouse Gas Emissions for 2020/2021</b>				<b>0</b>
<b>Total offsets retired</b>				<b>95,000</b>

### 2.1.2 Our Support to Carbon Markets

BTS Group in collaboration with Thailand Greenhouse Gas Management Organisation (TGO) launched a [new carbon trading methodology](#) namely "Modal Shift from Private Vehicles to Public Passenger Transportation with Electric Vehicles" for Thailand's transport sector for voluntary carbon market on 19 August 2021. The methodology would assist us to achieve emissions targets through generated carbon credits and ensure robustness of transport-related emissions reduction projects.