

The World's Most Sustainable Transportation Company



Sustainability Performance Data 2023/24

BTS GROUP HOLDINGS PCL

ECONOMIC PERFORMANCE

Indicator	Unit	Performance			
		2020/21	2021/22	2022/23	2023/24
Total revenue	THB mn	42,379	31,195	24,139	24,387
Operating revenue	THB mn	34,938	25,823	18,073	17,966
MOVE	THB mn	31,401	20,873	12,293	12,003
MIX	THB mn	2,614	4,298	5,138	5,112
MATCH	THB mn	923	652	642	851
Operating expenses	THB mn	28,607	20,083	11,932	12,001
Employee expenses (salaries, wages, other benefits)	THB mn	2,215	2,800	3,186	3,990
Net profit	THB mn	4,576	3,826	1,836	(5,241)
Dividend payment	THB mn	4,081	4,069	4,070	-
Income tax	THB mn	1,927	1,214	1,538	1,707
Assets	THB mn	212,062	255,810	270,926	272,082
Liabilities	THB mn	136,025	169,683	189,604	205,689
Equity	THB mn	76,037	86,128	81,322	66,392

ENVIRONMENTAL PERFORMANCE

ELECTRICITY INTENSITY

Indicator	Unit	Performance				Target 2023/24
		2020/21	2021/22	2022/23	2023/24	
Total Green Line electricity consumption per car-km operated	kWh per distance car-km	2.24	2.27	2.33	2.47	<2.55
Traction power	kWh/1,000 passengers-km	71.02	107.04	59.06	52.80	<50
Total electricity consumption at all train stations	kWh/Day	80,335	85,342	85,694	85,524	<94,000
Emissions per passenger-kilometre	(gCO ₂ e/passenger-km)	50.36	81.21	44.74	39.74	<50.00

ENERGY CONSUMPTION

Indicator	Unit	Performance				Target 2023/24
		2020/21	2021/22	2022/23	2023/24	
Total electricity consumption	MWh	145,198	149,840	164,380	172,641	n/a
Non-renewable electricity consumed	MWh	145,198	149,840	164,380	172,641	n/a
• Electricity consumption: Traction	MWh	91,392	96,769	109,102	115,573	n/a
• Electricity consumption: Non-traction	MWh	53,806	53,071	55,278	57,068	n/a
Non-renewable fuels (nuclear fuels, coal, oil, natural gas, etc.) purchased and consumed	MWh	11,869	10,178	12,024	11,367	n/a
Fuel consumption for building services	MWh	342	782	923	890	n/a
Fuel consumption for company cars	MWh	879	625	755	1,079	n/a
Fuel consumption for Bus Rapid Transit (BRT)	MWh	10,648	8,771	10,346	9,398	n/a
Total non-renewable energy consumption	MWh	157,067	160,018	176,404	184,008	<182,917
Total Renewable Energy Certificates (REC) purchased	MWh	0	15,688	20,600	25,550	>17,640
Total renewable energy consumption	MWh	0	15,688	20,600	25,550	>17,640
Total electricity consumption from renewable energy	%	n/a	10	13	15	>10
Total cost of energy consumption	THB	515,166,397	564,984,185	820,428,506	824,866,880	n/a
Data coverage	%	97	98	96	95	n/a

GREENHOUSE GAS EMISSIONS

Indicator	Unit	Performance				Target 2023/24
		2020/21	2021/22	2022/23	2023/24	
Total GHG Emissions	Tonnes CO ₂ e	79,475	147,306	153,249	111,106	<175,935
• Scope 1	Tonnes CO ₂ e	3,585	3,500	5,681	4,585	<4,284
• Scope 2 (Location-based)	Tonnes CO ₂ e	69,137	75,481	82,174	86,303	<89,801
• Scope 2 (Market-based)	Tonnes CO ₂ e	69,137	68,139	71,876	73,531	<80,821
• Scope 3	Tonnes CO ₂ e	6,753	68,325	75,692	32,991	<90,830
Data coverage	%	97	98	96	95	n/a

Greenhouse Gas Emissions Target	Base Year Emissions (tCO ₂ e)	Percentage of total base year emissions	Target Year Emissions (tCO ₂ e)	Percentage reduction target from base year	Validation
Scope 1 and 2 combined	FY 2019/20	96.60%	FY 2030/31	9.66%	We have publicly committed to seek validation to the target by the SBTi.
	78,020		70,482		

Scope 3 Category	FY 2023/24 Emissions (Tonnes CO ₂ e)	Emissions calculation methodology and exclusions
1. Purchased goods and services	944.05	[Hybrid-method] Water withdrawal, passenger ticket production and paper consumption emissions are calculated using raw data collection and TGO (Thailand Greenhouse Gas Management Organization) emission factors. Purchased stationary, purchased spare parts and maintenance materials emissions are calculated web-based tool from Greenhouse Gas Protocol and Quantis. Contractor commute emissions are calculated using the number of people multiplied by average emissions.
2. Capital goods	-	[Spend-based method] Construction of new capital goods and purchase of capital goods emissions are calculated using web-based tools from Greenhouse Gas Protocol and Quantis. To estimate Category 2 emissions, the basic price in USD purchasing quantity is multiplied with the average emission factor. However, this year BTS Group has not purchased any significant capital goods.
3. Fuel-and-energy-related-activities (not included in Scope 1 or 2)	17,930.73	[Average-data method] Emissions from fuels, fuel from electricity production and electricity loss from transmission are calculated using raw data collection and TGO emission factors.
4. Upstream transportation and distribution	-	Upstream transportation and distribution emissions are not significant for BTS Group, hence they are excluded from calculations.
5. Waste generated in operations	596.37	[Waste-type specific method] Emissions from hazardous waste, non-hazardous waste, and transportation of waste are calculated from raw data collection and TGO emission factors.
6. Business travel	28.14	[Distance-based method] Plane emissions are calculated from passenger-km and average emission factor. The emission factor used to calculate Category 6 emissions is sourced from the UK Government DEFRA GHG Conversion Factors. This emission factor is multiplied with the activity data to accurately determine the emissions in this category.
7. Employee commuting	3,137.61	[Distance-based method] A survey was sent to all employees that asked for their distance to work, main mode of travel, and number of working days per week. This is multiplied by the emission factor of each respective mode of travel to get the emissions for this category. The emission factor is sourced from the UK Government DEFRA GHG Conversion Factors and TGO emission factors.
8. Upstream leased assets	-	Not applicable because BTS Group does not have any upstream leased assets.
9. Downstream transportation and distribution	-	Downstream transportation and distribution emissions are not significant for BTS Group, hence they are excluded from calculations.
10. Processing of sold products	-	Not applicable because there is no direct use-phase of sold products in BTS service.
11. Use of sold products	-	Not applicable because there is no sold product or service which emits significant amount of emissions.
12. End of life treatment of sold products	-	Not applicable because BTS Group does not have any sold products or services with emissions in the end of life treatment stage.
13. Downstream leased assets	3,846.88	[Average-data method] Tenants electricity consumption is multiplied by TGO emission factor.
14. Franchises	-	Not applicable because there is no operation of franchises in our business.
15. Investments	6,506.83	[Investment-specific method] Emission factor is based on investment allotment of VGI.
Other upstream	-	All significant upstream GHG emissions are already covered under Scope 3 from Category 1 to Category 8.
Other downstream	-	All significant downstream GHG emission are already covered under Scope 3 from Category 9 to Category 15.

Remarks:

- In FY 2020/21, the BTSC data used to calculate Scope 3 emissions covers the water consumption of BTS buildings and stations, including Bus Rapid Transit, the electricity consumption for station tenants. In FY 2021/22, the Scope 3 emissions was due to increased coverage of the purchase of Green Line trains, which was deemed significant and material to the Company.
- BTSC’s GHG emissions are from the BTS Green Line project including Bus Rapid Transit and Gold Line project. VGI’s GHG emissions are from station media, LCD screens, and VGI head office operations.
- The data used to calculate the carbon dioxide emissions for electricity consumption (emission factor) is 0.4999 tons of carbon dioxide equivalent per megawatt-hour (tCO₂e/MWh), referenced from the Journal of Thailand Greenhouse Gas Management Organisation (TGO) published in April 2022.
- Scope 1 emissions under BTSC covers the fuel consumption of BTS and VGI buildings and cars, Bus Rapid Transit, the refrigerant for the air conditioners in the building and trains.
- Scope 2 emissions reported here are Market-based emissions.
- The data of total costs of energy consumption covers the BTS Green Line project, Gold Line project, and the Bus Rapid Transit, and VGI.

WASTE MANAGEMENT

Indicator	Unit	Performance				Target 2023/24
		2020/21	2021/22	2022/23	2023/24	
Total waste generated	Metric tonnes	674.43	598.31	815.54	854.86	n/a
Hazardous waste	Metric tonnes	116.33	95.09	156.23	100.16	n/a
Non-hazardous waste	Metric tonnes	558.10	503.23	659.31	754.70	n/a
Total waste recycled/reused	Metric tonnes	64.46	36.62	87.47	78.72	n/a
Total waste recycled	Metric tonnes	32.86	24.01	53.52	64.71	n/a
Hazardous waste	Metric tonnes	0.00	0.98	6.73	2.92	n/a
Non-hazardous waste	Metric tonnes	32.86	23.03	46.80	61.79	n/a
Total waste reused	Metric tonnes	31.60	12.60	33.95	14.01	n/a
Hazardous waste	Metric tonnes	14.60	1.67	26.96	4.73	n/a
Non-hazardous waste	Metric tonnes	17.00	10.93	6.99	9.28	n/a
Total waste disposed	Metric tonnes	609.86	564.46	728.07	776.14	<788.00
Waste landfilled	Metric tonnes	574.25	547.81	713.68	762.01	n/a
Hazardous waste	Metric tonnes	70.85	75.79	108.15	78.38	n/a
Non-hazardous waste	Metric tonnes	503.40	472.02	605.53	683.63	n/a
Waste incinerated (with recovery)	Metric tonnes	30.56	16.38	14.20	13.94	n/a
Hazardous waste	Metric tonnes	30.56	16.38	14.20	13.94	n/a
Non-hazardous waste	Metric tonnes	0.00	0.00	0.00	0.00	n/a
Waste incinerated (without recovery)	Metric tonnes	5.05	0.27	0.19	0.19	n/a
Hazardous waste	Metric tonnes	0.33	0.27	0.19	0.19	n/a
Non-hazardous waste	Metric tonnes	4.72	0.00	0.00	0.00	n/a
Waste otherwise disposed	Metric tonnes	0.00	0.00	0.00	0.00	n/a
Waste disposed of unknown disposal method	Metric tonnes	0.00	0.00	0.00	0.00	n/a
Data coverage	%	97	98	96	95	n/a

WATER CONSUMPTION

Indicator	Unit	Performance				Target 2023/24
		2020/21	2021/22	2022/23	2023/24	
Total net fresh water consumption	Million cubic metres	0.2134	0.2111	0.1995	0.2287	<0.2200
Withdrawal: total municipal water supplies (or from other water utilities)	Million cubic metres	0.2134	0.2111	0.1995	0.2287	n/a
• Withdrawal: Fresh surface water (lakes, rivers, etc.)	Million cubic metres	0	0	0	0	n/a
• Withdrawal: Fresh groundwater	Million cubic metres	0	0	0	0	n/a
Discharge: Water returned to the source of extraction at similar or higher quality as raw water extracted	Million cubic metres	0	0	0	0	n/a
Data coverage	%	97	98	96	95	n/a

RETURN ON ENVIRONMENTAL INVESTMENTS

Indicator	Unit	Performance				Target 2023/24
		2020/21	2021/22	2022/23	2023/24	
Capital investments for energy saving projects	THB	1,325,940	290,602	192,500	313,500	n/a
Operating expenses	THB	3,946,533	416,423	157,824	183,612	n/a
Total Expenses (= capital investment + operating expenses)	THB	5,272,472	707,026	350,324	497,112	n/a
Savings, cost avoidance, income, tax incentives, etc.	THB	838,251	222,126	131,419	226,321	n/a
Data coverage	%	97	98	96	95	n/a

SOCIAL PERFORMANCE

EMPLOYMENT

Indicator	Unit	Performance			
		2020/21	2021/22	2022/23	2023/24
Total number of employees	Persons	5,088	5,357	5,880	6,451
Male		2,473	2,693	2,924	3,317
Female		2,615	2,664	2,956	3,134
By type of hiring					
Permanent employees (total)	Persons	4,958	5,220	5,755	6,213
Male		2,377	2,591	2,841	3,185
Female		2,581	2,629	2,914	3,028
Temporary employees (total)	Persons	130	137	125	238
Male		93	102	83	132
Female		37	35	42	106
By period of working					
Full time employees (total)	Persons	5,083	5,357	5,879	6,448
Male		2,467	2,693	2,924	3,316
Female		2,616	2,664	2,955	3,132
Part time employees (total)	Persons	5	0	1	3
Male		3	0	0	1
Female		2	0	1	2
By position level					
Top management level (total)	Persons	144	124	163	147
Male		96	84	108	91
Female		48	40	55	56
Junior management level (total)	Persons	354	437	471	505
Male		180	205	233	277
Female		174	232	238	228
Staff (total)	Persons	4,590	4,796	5,246	5,799
Male		2,197	2,404	2,583	2,949
Female		2,393	2,392	2,663	2,850
By age					
< 30 years (total)	Persons	2,138	2,216	2,328	2,583
Male		923	997	1,030	1,226
Female		1,215	1,219	1,298	1,357
30-50 years (total)	Persons	2,666	2,813	3,130	3,381
Male		1,355	1,481	1,620	1,784
Female		1,311	1,332	1,510	1,597

Indicator	Unit	Performance			
		2020/21	2021/22	2022/23	2023/24
> 50 years (total)	Persons	284	328	422	487
Male		195	215	274	307
Female		89	113	148	180
By nationality					
Thai (total)	Persons	5,036	5,288	5,806	6,418
Male		2,427	2,631	2,859	3,287
Female		2,609	2,657	2,947	3,131
Chinese (total)	Persons	n/a	9	15	14
Male		n/a	9	12	13
Female		n/a	0	3	1
British (total)	Persons	n/a	n/a	2	6
Male		n/a	n/a	2	6
Female		n/a	n/a	0	0
Foreigner (other nationalities)	Persons	52	52	57	13
Male		46	47	51	11
Female		6	5	6	2
Foreigner (total)	Persons	52	69	74	33
Male		46	62	65	30
Female		6	7	9	3

Indicator	Unit	Performance			
		2020/21	2021/22	2022/23	2023/24
Total number of new employee hires	Persons	1,110	718	1,112	1,757
By gender					
Male	Persons	480	388	528	905
Female		630	330	584	852
By age					
< 30 years	Persons	736	480	718	1,306
30 – 50 years		366	221	377	422
> 50 years		8	17	17	29

Indicator	Unit	Performance			
		2020/21	2021/22	2022/23	2023/24
Percentage of new employee hires	Percentage	21.82	13.40	18.91	27.24
By gender					
Male	Percentage	9.43	7.24	8.98	14.03
Female		12.38	6.16	9.93	13.21
By age					
< 30 years	Percentage	14.47	8.96	12.21	20.24
30 – 50 years		7.19	4.13	6.41	6.54
> 50 years		0.16	0.32	0.29	0.45

Indicator	Unit	Performance			
		2020/21	2021/22	2022/23	2023/24
Percentage of open positions filled by internal candidates (internal hires)	Percentage	60.24	29.34	29.23	7.61
By gender					
Male	Percentage	27.54	11.31	16.93	3.83
Female		32.70	18.03	12.30	3.78
By age					
< 30 years	Percentage	25.99	11.17	8.96	3.72
30 – 50 years		33.73	17.90	16.48	3.56
> 50 years		0.52	0.27	3.80	0.33

Indicator	Unit	Performance			
		2020/21	2021/22	2022/23	2023/24
Total employee turnover (total number of employees resigned)	Persons	575	546	790	721
By gender					
Male	Persons	245	289	382	353
Female		330	257	408	368
By age					
< 30 years	Persons	293	279	407	420
30 – 50 years		260	240	302	262
> 50 years		22	27	20	39

Indicator	Unit	Performance			
		2020/21	2021/22	2022/23	2023/24
Total employee turnover rate (percentage of employees resigned)	Percentage	11.30	10.19	13.44	11.18
By gender					
Male	Percentage	4.82	5.40	6.50	5.47
Female		6.49	4.80	6.94	5.70
By age					
< 30 years	Percentage	5.76	5.21	7.23	6.51
30 – 50 years		5.11	4.48	5.66	4.06
> 50 years		0.43	0.50	0.54	0.60

Indicator	Unit	Performance			
		2020/21	2021/22	2022/23	2023/24
Voluntary employee turnover rate (percentage of employees who voluntarily resigned)	Percentage	10.69	9.78	12.40	10.87
By gender					
Male	Percentage	4.38	5.10	5.87	5.29
Female		6.31	4.69	6.53	5.58
By age					
< 30 years	Percentage	5.62	5.13	6.92	6.32
30 – 50 years		4.93	4.39	5.14	4.01
> 50 years		0.14	0.26	0.34	0.53

Indicator	Unit	Performance			
		2020/21	2021/22	2022/23	2023/24
Total number of employees having the right of maternity/parental leave	Persons	1,958	1,927	2,211	3,114
Male		0	15	150	251
Female		1,958	1,912	2,061	2,863
Total number of employees using the right of maternity/parental leave	Persons	65	56	54	65
Male		0	0	0	4
Female		65	56	54	61
Total number of employees returning to work after maternity/parental leave	Persons	65	56	50	65
Male		0	0	0	4
Female		65	56	50	61
Percentage of employees returning to work and remaining at work after maternity/parental leave	Percentage	100	100	92.59	100
Male		0	0	0	100
Female		100	100	92.59	100

TRAINING

Indicator	Unit	Performance	
		2022/23	2023/24
Average hours per FTE of training and development (total)	Hours/Employee	34.27	77.43
By gender			
Male	Hours/Employee	38.52	73.92
Female		30.06	81.14
By position level			
Top management level	Hours/Employee	4.96	10.16
Junior management level		11.92	16.75
Staff		37.18	84.38

Indicator	Unit	Performance	
		2022/23	2023/24
Training budget	Million Baht	6.22	18.60
Average amount spent per FTE on training and development	Baht/Employee	1,058.55	2,884.58
By gender			
Male	Baht/Employee	2,128.32	5,609.30
Female		2,105.99	5,938.83

HUMAN CAPITAL RETURN ON INVESTMENT

Indicator	Unit	Performance			
		2020/21	2021/22	2022/23	2023/24
Human Capital Return On Investment	-	7.16	5.32	4.83	4.10

EMPLOYEE ENGAGEMENT

Indicator	Unit	Performance			
		2020/21	2021/22	2022/23	2023/24
Employee engagement	Percentage of actively engaged employees	80.00	80.00	85.00	85.00
Data coverage	Percentage of employees who responded to the survey	100.00	100.00	100.00	100.00

Remark:
The latest Group-wide employee engagement survey was conducted in FY 2022/23.

GENDER PAY INDICATORS

Employee Level	Pay ratio of women to men
Executive level (base salary only)	73.89%
Executive level (base salary + other cash incentives)	71.93%
Management level (base salary only)	95.79%
Management level (base salary + other cash incentives)	96.02%
Non-management level (base salary only)	94.83%

PASSENGER SAFETY

Indicator	Unit	Performance				Target 2023/24
		2020/21	2021/22	2022/23	2023/24	
Serious passenger injury rate	Times per million trips	0	0	0	0	<0.03
Passenger fatalities	Times	0	0	0	0	n/a

Definition:

- **Serious passenger injury rate** = (numbers of serious injury cases in 12 months * 1,000,000 passenger-trips)/numbers of passengers in 12 months
- Serious passenger injury cases refer to those which require admission to hospital for observation or treatment immediately after an accident, include injuries due to trespassing onto the track injury involving unsafe condition of BTSC equipment / operation, but exclude suicide, attempted suicide, brawls between passengers or injuries due to passenger's own medical conditions.

OCCUPATIONAL HEALTH AND SAFETY OF EMPLOYEES

Indicator	Unit	Performance				Target 2023/24
		2020/21	2021/22	2022/23	2023/24	
Serious work-related injuries of employees	Times/million working hours	0	0	0	0	<0.6
Lost-Time Injury Frequency Rate (LTIFR) of employees	Times/million working hours	0.1498	0.2774	0.4019	0.4136	<2.0
Work-related fatalities of employees	Persons	0	0	0	0	n/a

OCCUPATIONAL HEALTH AND SAFETY OF CONTRACTORS

Indicator	Unit	Performance				Target 2023/24
		2020/21	2021/22	2022/23	2023/24	
Serious work-related injuries of contractors	Times/million working hours	0	0	0	0	<1.0
Lost-Time Injury Frequency Rate (LTIFR) of contractors	Times/million working hours	0.7212	0.3269	0.5198	0.5433	<2.0
Work-related fatalities of contractors	Persons	0	0	0	0	n/a

Remark:

An “n/a” indicates that the data for that topic was not collected. This applies for the previous 3 years data breakdown for Total number of new hiring employees, Percentage of new hiring employees, Percentage of open positions filled by internal candidates (internal hires), Total employee turnover (total number of employees resigned), Total employee turnover rate (percentage of employees resigned), and the previous 3 years data for Voluntary employee turnover rate (percentage of employees who voluntarily resigned).

CUSTOMER SATISFACTION

Indicator	Unit	Performance				Target 2023/24
		2020/21	2021/22	2022/23	2023/24	
Satisfied customers: MOVE	%	82.4	86.0	87.0	87.0	>79.0
Satisfied customers: MIX	%	91.3	90.0	92.0	94.1	>90.0
Data coverage	% of customers	100	100	100	100	n/a

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