Environmental Performance

Details	Unit	2019	2020	2021	2022
Energy use within the organization[1]					
Total energy consumption within the organization (non-renewable energy)	**Gigajoules**	**560,931**	**601,592**	**543,853.66**	**588,998.95**
	Megawatt-hours	**155,814**	**167,109**	**151,070**	**163,610.82**
Energy intensity ratio (energy per FTE)	Gigajoules per FTE	24.61	25.75	25.91	30.47
Total electricity consumption[2]	**Gigajoules**	**417,024**	**440,680**	**415,335.41**	**436,641.69**
	Megawatt-hours	**115,840**	**122,411**	**115,371**	**121,289.36**
Total chilled water consumption[3]	**Megawatt-hours**	**11,034**	**10,403**	**9,823**	**8,140.58**
Total emissions from chilled water	Tonnes of CO_2 equivalent	5,516	5,200	4,910	4,069.47
Total fuel consumption from non-renewable energy[4]	**Gigajoules**	**139,488**	**160,912**	**128,518.25**	**152,357.26**
Diesel fuel for emergency power generators and fire pumps	Gigajoules	990	1,469	706	154.77
	Liters	27,174	40,329	19,385	4,249.71
Diesel fuel for vehicles used in operations	Gigajoules	6,492	7,163	7,297	10,280.53
	Liters	178,252	196,675	200,366	292,399.16
Gasoline fuel for vehicles used in operations	Gigajoules	132,007	152,280	121,517	141,921.96
	Liters	4,333,773	4,850,223	4,113,663	4,684,617.09

Details	Unit	2019	2020	2021	2022
Air business travel[5]					
Total air business travel	Total distance (kilometers)	6,461,483	829,886	93,430	1,972,307
Total emissions from business travel from air	Tonnes of CO_2 equivalents	680.51	84.78	9.74	247.36
Greenhouse gas emission (GHG emission)[6]					
Total Direct (Scope 1) GHG emissions	Tonnes of CO_2 equivalent	12,312	14,039	11,619	21,771.02
Total energy indirect (Scope 2) GHG emissions	Tonnes of CO_2 equivalent	67,430	61,193	57,674	60,632.55
Total GHG Scope 1 and 2 emissions	Tonnes of CO_2 equivalent	79,742	75,232	69,293	82,403.57
Total GHG Scope 1 emissions intensity	Tonnes of CO_2 equivalent per FTE	0.54	0.64	0.55	1.11
Total GHG Scope 2 emissions intensity	Tonnes of CO_2 equivalent per FTE	2.96	2.78	2.75	3.14
Total GHG Scope 1 and 2 emissions intensity	Tonnes of CO_2 equivalent per FTE	3.50	3.41	3.30	4.25
Water and effluents[7]					
Total water withdrawal	**Million cubic meters**	**0.62**	**0.58**	**0.46**	**0.50**
In all aresa (Third-party water; Fresh water ≤ 1,000 mg/L Total dissolved solids)	Cubic meters	620,082	578,300	461,668	501,555
- In areas with water stress	Cubic meters	N/A	N/A	40,055	48,816
Water withdrawal intensity	Cubic meters per FTE	27.20	26.09	21.99	25.95
Total emissions from water withdrawal	Tonnes of CO_2 equivalent	334.60	325.12	249.09	334.66

Details	Unit	2019	2020	2021	2022
Total water discharge to surface water	**Cubic meters**	**496,066**	**462,640**	**369,334**	**401,244**
Volume (≤ 1,000 mg/L total dissolved solids)	Cubic meters	496,066	462,640	369,334	401,244
- Total water discharge to surface water in areas with water stress	Cubic meters	N/A	N/A	32,044	39,052
- Volume (≤ 1,000 mg/L total dissolved solids)	Cubic meters	N/A	N/A	32,044	39,052
Total water consumption	**Cubic meters**	**124,016**	**115,660**	**92,334**	**100,311**
- Total water consumption in areas with water stress	Cubic meters	N/A	N/A	8,011	9,763
Use of recycled water					
Total recycled water used	Cubic meters	50,109	42,399	23,543	11,393
Equivalent of the total volume of water consumed	Percentage	8	7.33	5	2
Waste[8]					
Total waste generated	**Metric tonnes**	**3,841.59**	**4,559.34**	**2,753.74**	**3,003.95**
Waste generated intensity	Kg per FTE	168.51	206.79	131.19	155.42
	Metric tonnes per FTE	0.17	0.21	0.13	0.16

Details	Unit	2019	2020	2021	2022
Total weight of hazardous waste diverted from disposal	**Metric tonnes**	**34.59**	**32.14**	**45.14**	**19.63**
- Recycled (e-waste)	Metric tonnes	34.59	32.14	45.13	19.37
- Landfill (Batteries and light bulbs managed by the municipality)	Metric tonnes	N/A	N/A	0.010	0.26
Total weight of non-hazardous waste directed to disposal	**Metric tonnes**	**3,807**	**4,527**	**2,708.6**	**2,984.30**
- Landfill	Metric tonnes	3,267	3,961	2,147	2,599.07
- Total weight of non-hazardous waste disposed by landfill (General waste) (from the five headquarter buildings)	Metric tonnes	N/A	1,148	478.57	607.44
- Recycled	Metric tonnes	N/A	12.15	19.43	32.28
- Total weight of non-hazardous waste disposed by recycling (Recycled waste) (from the five headquarter buildings)	Metric tonnes	N/A	12.15	19.43	32.28
- Total weight of paper sent to recycling[9]	Metric tonnes	540	554	542.5	352.97
Total weight of recycled waste	**Metric tonnes**	**575**	**598**	**607**	**405**
Total weight of disposed waste	**Metric tonnes**	**3,267**	**3,961**	**2,147**	**2,599**
Paper used[10]					
Total weight of A4 office paper used	Metric tonnes	1,012	1,037	918.3	816.02
Total emissions from A4 office paper used	Tonnes of CO_2 equivalent	1,153	1,182	1,046.8	930.26

Note:

1. Total energy consumption within the Bank is calculated based on the Energy Content of Fuel Table (Net Calorific Value) of the Department of Alternative Energy Development and Efficiency, Ministry of Energy. Energy consumption includes electricity, diesel fuel for emergency power generators and fire pumps, and gasoline volume for vehicles used in the Bank's operations, but excludes total chilled water consumption at the branches that were rented by the Bank.
2. Data of the Bank's electricity consumption is from the meters of the Metropolitan Electricity Authority and the Provincial Electricity Authority. The higher electricity consumption during 2020-2022 was due to the extension scope of data collection to cover electricity usage in branches located in rented spaces as well as all the Bank's ATM and the electricity consumption from those ATM without meters was estimated from the average rate of electricity consumption of each type of ATM the Bank is using. In 2022, the electricity consumption is higher than in 2021 due to post Covid-19 pandemic recovery which meant the business activities returned to normal.
3. Total chilled water consumption at the rented branches is estimated from the British Thermal Unit (BTU). The data was collected from usage space, cooling load, number of operating days and operating hours of the rented branches.
4. Based on data from the Bank's fuel expense database, in 2020 the volume of fuel consumption of back-up power generators increased because of higher electricity consumption from power generators in more buildings additional to the previous year. In 2022, the volume of fuel consumption substantially increased in accordance with the increased number of diesel cars that were used in the Bank's business activities, along with post Covid-19 pandemic recovery which led the business activities return to normal.
5. The data covers air travel for business purposes of the employees. Between 2020-2021, the volume of air travel significantly declined due to the Covid-19 pandemic. In 2022, the volume of air travel greatly increased due to post Covid-19 recovery which let the business activities return to normal. Note that the calculation of GHG emissions was based on the emission factor standards of the Ministry of Energy and the 2019 UK Industrial Policy.
6. Greenhouse gases consist of Carbon Dioxide (CO_2), Methane (CH_4), Nitrous Oxide (N_2O), Sulfur Hexafluoride (SF_6) and Chlorofluorocarbons (CFCs).
7. GHG under Scope 1 consists of direct emissions that the Bank controls and monitors calculated from a. fuel consumption of back-up power generators, fire pumps and vehicles used for day-to-day operations, b. the volume of refrigerants leaking from the air-conditioning system and fire extinguisher chemicals estimated from purchasing orders, and c. the volume of methane gas from septic tanks estimated from the number of employees of each building. The calculation of the quantity of Scope 1 GHG emissions is based on the emission factor according to the quantification of the carbon footprint of an organization set by the Thailand Greenhouse Gas Management Organization (Public Organization).
8. GHG under Scope 2 consists of indirect emissions that the Bank controls and monitors calculated from the electricity consumption of the Bank referring to the meters of the Metropolitan Electricity Authority and the Provincial Electricity Authority including electricity consumption from ATM without meters estimated from the average rate of electricity consumption of each type of ATM the Bank is using. The emission factor for 2019 is 0.5821 $kgCO_2e/kWh$ and for 2020-2022 is 0.4999 $kgCO_2e/kWh$, based on the emission factor according to the assessment of carbon footprint of an organization set by the Thailand Greenhouse Gas Management Organization (Public Organization) in January 2017 and in April 2020 respectively.
9. Water consumption volume is calculated from the meters of the Metropolitan Waterworks Authority and the Provincial Waterworks Authority. For 2021, water consumption declined due to the Covid-19 pandemic. However, in 2022, the volume of water consumption increased due to post Covid-19 recovery which led business activities to return to normal.
10. General waste covers 1. general waste from the group of five head office buildings that comprises the Silom Head Office Building, Trinity Complex Building, Rama III Building, Building 3 and Saengthong Thani Tower, which was disposed of by Bang Rak District Office and Yannawa District Office using landfill methods, and 2. general waste from other buildings apart from the group of five head office buildings, namely branch buildings nationwide and operation support centers which was estimated using the average weight of waste per person from the Department of Public Works and Town and Country Planning, the number of employees and the number of working days. The Bank started collecting recycled waste data separately in July 2020. The data covers only the group of five head office buildings and the recycled waste in this report includes cans, plastic cups, plastic bottles, glass bottles and paper boxes, but excludes electronic waste, used paper in office, and checks which were sent separately for recycling.
11. The data of total weight of used paper in office and checks sent for recycling in 2022 is less than in 2021 due to the Bank being in the process of outsourcing to a new service provider for recycling which caused some paper not being sent for recycling.
12. The data from the Bank's paper requisition database is calculated from the emission factor in accordance with the carbon footprint of paper products set by the Thailand Greenhouse Gas Management Organization (Public Organization) and is equivalent to 1.140 $kgCO_2e/kg$.

Data Boundaries:

- **Energy consumption and GHG emissions**
  Data from 2019 covered the group of five head office buildings (namely, the Silom Head Office Building, Trinity Complex Building, Rama III Building, Building 3 and Saengthong Thani Tower), operation support centers and branches excluding branches located in rental spaces. Since 2020, the data coverage was extended to the whole organization which are the group of five head office buildings, all operation support centers, all branches and all ATM nationwide.
- **Water consumption**
  Data from 2019 covered the group of five head office buildings (namely, the Silom Head Office Building, Trinity Complex Building, Rama III Building, Building 3 and Saengthong Thani Tower), operation support centers and branches, excluding branches located in rental spaces. Since 2020, the data coverage was extended to the whole organization namely the group of five head office buildings, all operation support centers and all branches nationwide.
- **Fuel energy consumption for all types of vehicles used in the Bank's operations**
  Data covers the whole organization namely the group of five head office buildings, all operation support centers and all branches nationwide.
- **Waste**
  Data covers the whole organization namely the group of five head office buildings, all operation support centers and all branches nationwide.