



GHG Performance and Target 2023

July 2024



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TCO2e	2020	2021	2022	2023	Target 2023
GHG Scope 1+2	3,026,639	3,149,000	3,260,005	3,384,406	≤ 3,460,000
GHG Scope 1	3,026,639	3,149,000	3,260,005	3,376,162	≤ 3,450,000
GHG Scope 2	NA	NA	NA	8,244*	≤ 10,000
GHG Scope 3	42,457,685	41,402,673	44,810,959	45,610,062	≤ 50,000,000

* Increasing of GHG scope 2 emission in 2023 due to the boundary of GHG inventory was extended to cover offices and utilities outside main operation.

GHG Scope 3



Category / Ton CO2e	2023
1. Purchased goods and services	1,769,700
2. Capital goods	63,884
3. Fuel and energy	371,852
4. Upstream transportation and distribution	647,250
5. Waste generated in operations ^[1]	0
6. Business travel ^[2]	276
7. Employee commuting	2,079
8. Upstream leased assets	152
9. Downstream transportation and distribution	683,072
10. Processing of sold products	2,311,040
11. Use of sold products	38,903,415
12. End-of-life treatment of sold products ^[3]	0
13. Downstream leased assets	Not relevant
14. Franchises	Not relevant
15. Investments	857,342
Total	45,610,062

Remark : [1] Not including recycling waste, [2] Only transportation by airplane, [3] Not including recycling waste