

Calculation and results of greenhouse gas emissions of Port of Tallinn

updated 24.01.2025



PORT OF **(1)** TALLINN

The Port of Good News

Methodology for calculating GHG and associated changes

- Greenhouse Gases (GHG) CO₂, N₂O, and CH₄ expressed as CO₂ equivalents.
- Since 2022, the calculation of GHG emissions has adopted guidelines developed by the Stockholm Environment Institute (SEI), which take into account Estonian-specific assumptions and conditions. Consequently, compared to previous years' reports on GHG emissions data, there have been retroactive clarifications and changes.
- The calculation model relies on internationally recognized methodologies and standards for GHG footprint calculations, particularly the Greenhouse Gas Protocol. However, the model also considers Estonian-specific assumptions and conditions, providing a standardized methodological basis and dataset for Estonian organizations to calculate their GHG footprint.
- Since 2022, a new residual electricity mix methodology has been introduced for calculating electricity emissions, resulting in increased electricity emissions from 2019 to 2021. Changes have also occurred due to adjustments to previous years' indicators and improvements in the quality of primary data.
- The SEI model is updated annually, leading to changes in emission factors, which consequently result in retrospective updates to CO₂ emissions.



CO₂ mapping



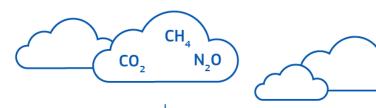
Scope 2

Port indirect





Purchased electricity for port-owned buildings and operations



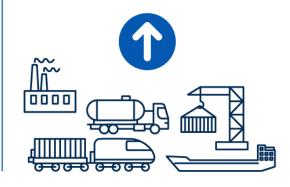
Scope 1

Port direct



Port-owned fleet vehicles, buildings, stationary sources Scope 3

Port Tenants and other sources



Ships, trucks, cargo handling equipment, rail, harbour craft, port employee vehicles, buildings, purchased electricity

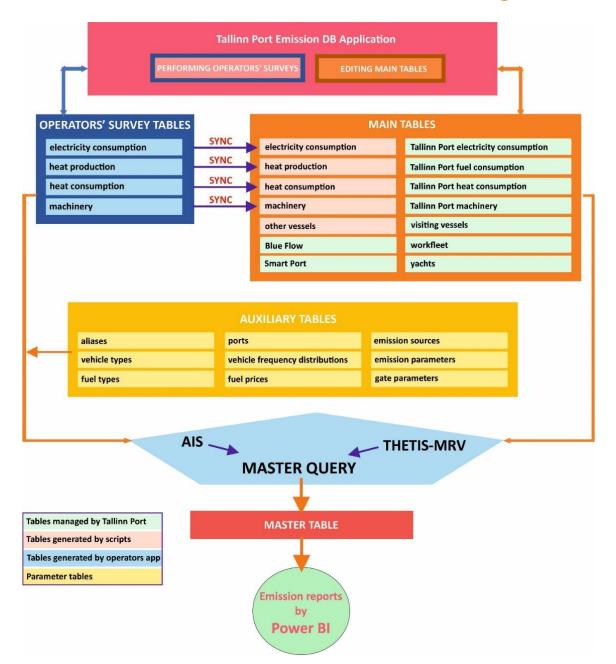
Linking different technologies / databases





Key building blocks:

- 1. Central database
- 2. Supporting databases
- 3. Calculation scripts
- 4. Visualization tools

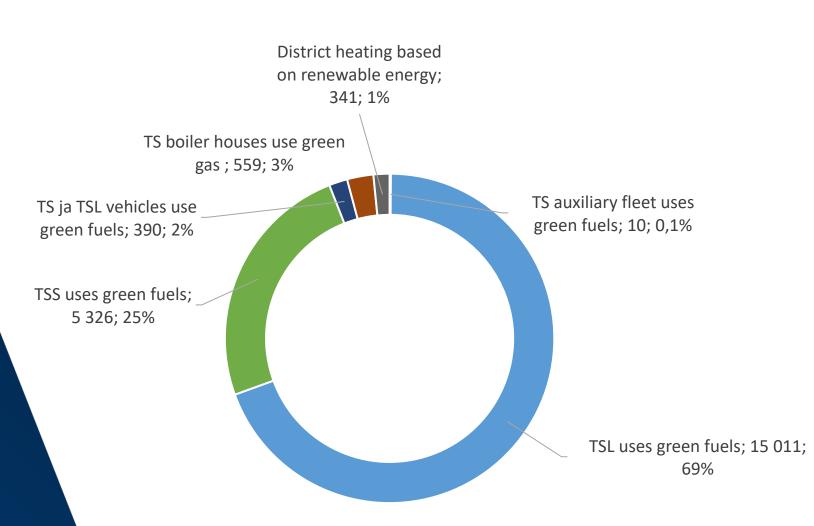






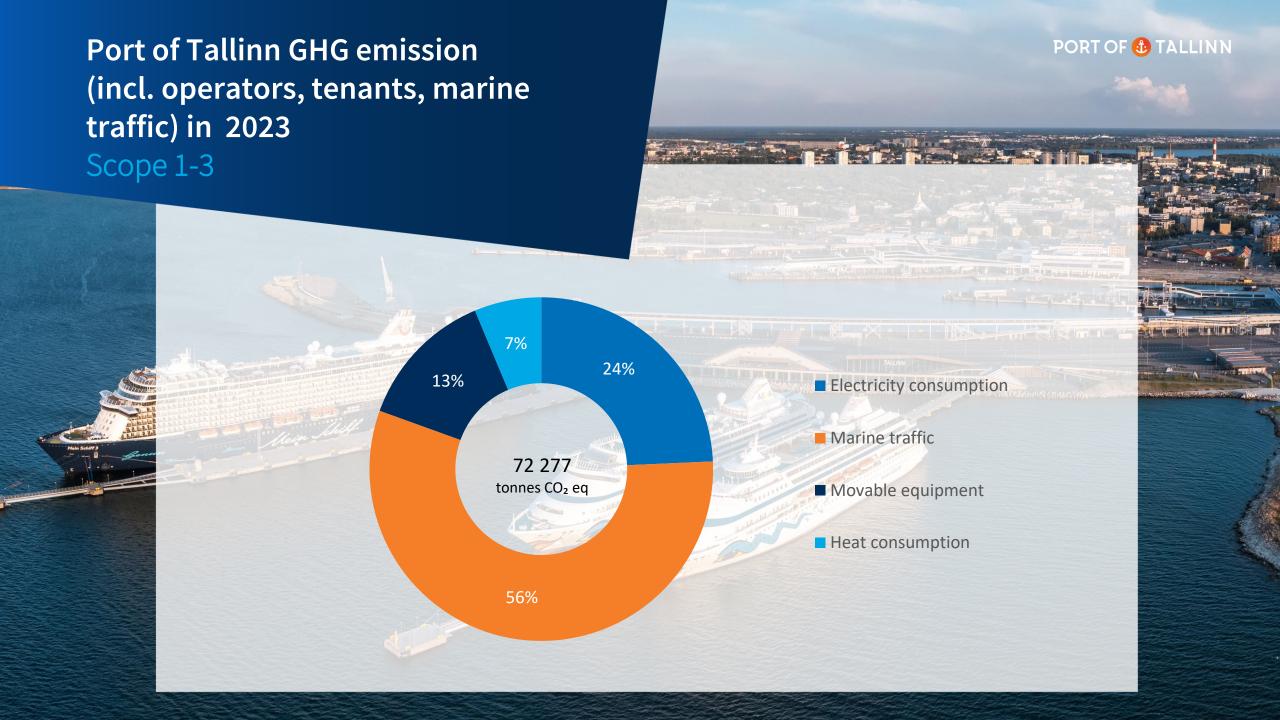
The Port of Tallinn Group **GHG** emission 2019-2024 Scope 1-2 33 086 30 000 23 797 Heat consumption 23 796 23 840 25 000 21 655 21 633 ■ Movable equipment 20 000 15 000 ■ Vessels owned by Port of Tallinn 10 000 ■ Electricity consumption 5 000 2022 2019 2021 2023 2024 2020 *The values for 2019 and 2020 have been updated using the emission factor for the respective years and by adopting the methodology for calculating residual electricity mix, and therefore do not match the values reported in the 2020 report. The greenhouse gas (GHG) emission figures published in previous annual reports have changed due to changes in emission factors and significant improvements in emission data accuracy





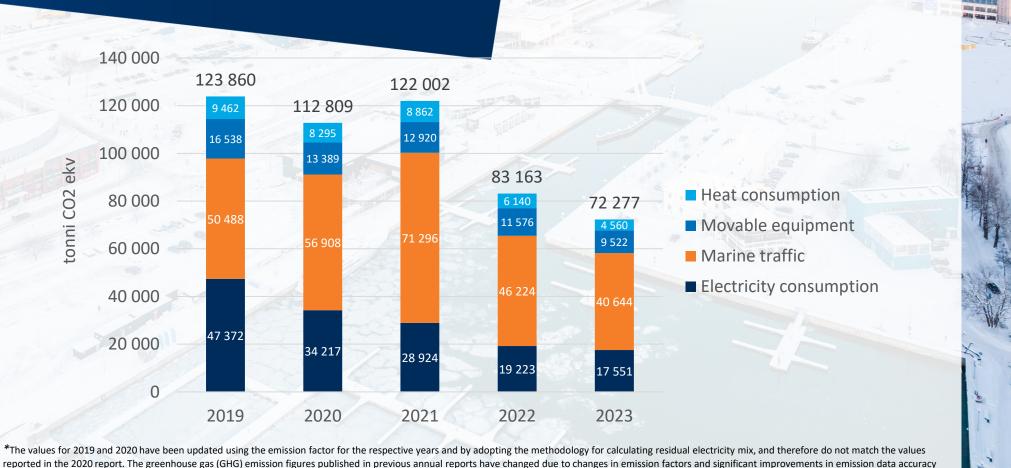
Port of Tallinn Group GHG reduction measures (scope 1-2, 2024= 21 656 t CO_{2ekv})

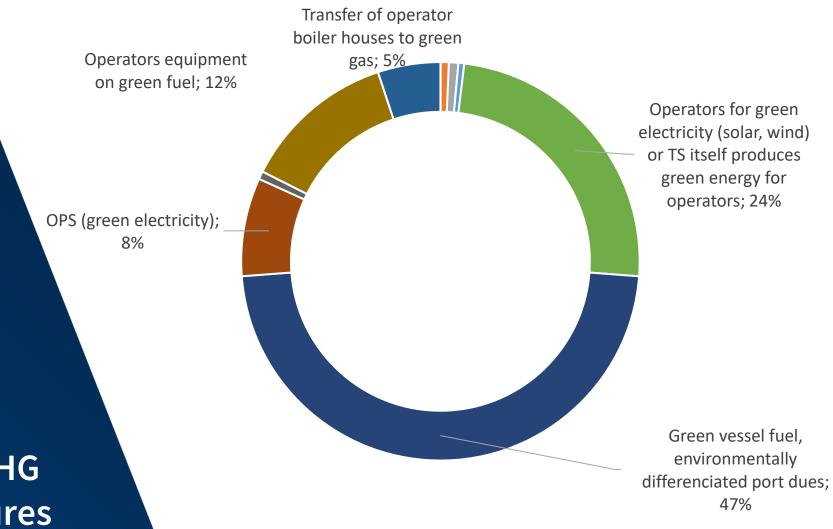




Port of Tallinn GHG emission (incl. operators, tenants, marine traffic) in 2019-2023

Scope 1-3





Port of Tallinn GHG reduction measures scope 1-3, 2023 = 72 277 t CO_{2ekv}