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Information about the report

Kesko's Greenhouse gas (GHG) inventory report illustrates the reporting requirements of the GHG Protocol Corporate Standard and the Scope 3 Standard. Inventory report includes information about Kesko's Scope 1, 2, and 3 emissions and other relevant information.

Part 1: Descriptive information

Descriptive information	
Company name	Kesko Corporation
Description of the company	<p>Kesko is a Finnish listed trading sector company. Kesko operates in the grocery trade, the building and technical trade, and car trade. Its divisions and chains act in close cooperation with retailer entrepreneurs and other partners. Kesko has around 1,800 stores engaged in chain operations in Finland, Sweden, Norway, Estonia, Latvia, Lithuania, Poland and Denmark*.</p> <p>* The acquisition in Denmark was completed in January 2024.</p>
Chosen consolidation approach	Financial control
Description of the businesses and operations	We report direct and indirect (Scope 1, 2 and 3) GHG emissions from our operations according to the GHG Protocol standard.

included in the company's organizational boundary	<p>The GHG emissions reported under Scope 1 and 2 include all operating divisions and all operating countries. Scope 1 and 2 emissions include fuel consumed for self-produced energy, fuel consumed for transportation and logistics, purchased energy, and refrigerant leakages.</p> <p>Scope 3 emissions occur from sources owned or controlled by other entities in the value chain. Kesko's Scope 3 emissions include emissions from all operating divisions. From the operating countries, however, the inventory is mainly focused on Finland. Data was also collected from other operating countries where reliable data were available on a category by category basis. These deviations as well as other limitations in the boundary are reported in connection with the categories and indicators in question.</p>
The reporting period covered	1.1.-31.12.2023
A list of Scope 3 activities included in the report	<p>The following Scope 3 activities are included in the report:</p> <p>Category 1: Purchased goods and services</p> <ul style="list-style-type: none"> • Purchased goods for resale • Fresh water <p>Category 2: Capital goods</p> <ul style="list-style-type: none"> • New constructed buildings <p>Category 3: Fuel- and energy-related activities (not included in scope 1 and 2)</p> <ul style="list-style-type: none"> • Upstream emissions • Transport and distribution losses <p>Category 4: Upstream transportation and distribution</p> <ul style="list-style-type: none"> • Postal services • Outsourced contract operators <p>Category 5: Waste generated in operations</p> <ul style="list-style-type: none"> • Waste • Waste water <p>Category 6: Business travel</p> <p>Category 7: Employee commuting</p> <p>Category 9: Downstream transportation and distribution</p> <ul style="list-style-type: none"> • Customer commuting

	<p>Category 11: Use of sold products</p> <p>Category 12: End-of-life treatment of sold products</p> <p>Category 14: Franchises</p>
<p>A list of Scope 1, Scope 2, and Scope 3 activities excluded from the report with justification for their exclusion</p>	<p>The following list presents the Scope 3 activities excluded from the report:</p> <p>Category 2: Capital goods – category limitations</p> <ul style="list-style-type: none"> • This category is relevant for Kesko. The category includes buildings, store and office furniture. Buildings are included in the 2023 inventory. Emissions from store and office furniture are not included, since reliable information was not available. <p>Category 4: Upstream transportation and distribution – category limitations</p> <ul style="list-style-type: none"> • Life cycle emissions of purchased products for resale are assumed to include emissions from transportation. Hence, these emissions are not calculated and reported separately in order to avoid double accounting. <p>Category 8: Upstream leased assets – category excluded</p> <ul style="list-style-type: none"> • This category is not relevant for Kesko. Kesko does not have assets that are leased and not already included in the Scope 1, 2 or 3 activities. <p>Category 10: Processing of sold products – category excluded</p> <ul style="list-style-type: none"> • This category is not relevant for Kesko. Kesko does not sell any intermediate products. <p>Category 13: Downstream leased assets – category excluded</p> <ul style="list-style-type: none"> • This category is not relevant for Kesko. Kesko does not have assets that are leased for other companies and are not already included in the Scope 1, 2 or 3 activities. <p>Category 15: Investments – category excluded</p> <ul style="list-style-type: none"> • This category is not relevant for Kesko. Kesko does not have Scope 3 emissions associated with investments and the company does not provide financial services.
<p>The year chosen as base year and rationale for choosing the base year</p>	<p>Kesko has set science-based 1.5°C emissions reduction targets approved by the Science Based Targets initiative (SBTi). Base year of the SBT targets is 2020.</p>

Part 2: Greenhouse gas emissions data

Scopes and categories	Metric tons CO _{2e}
Scope 1: Direct emissions from owned/controlled operations	47,385
Scope 2: Indirect emissions from the use of purchased electricity, steam, heating, and cooling*	30,562
* Following the GHG Protocol standard, both market-based and location-based emission figures for electricity consumption has been reported in Kesko's Sustainability Report 2023. The market-based figures are used for emission totals whenever available.	
Upstream Scope 3 emissions	
Category 1: Purchased goods and services	10,745,800
Category 2: Capital goods	27,700
Category 3: Fuel- and energy-related activities (not included in scope 1 or scope 2)	8,300
Category 4: Upstream transportation and distribution	8,700
Category 5: Waste generated in operations	6,400
Category 6: Business travel	1,400
Category 7: Employee commuting	10,800
Category 8: Upstream leased assets	n/a
Downstream Scope 3 emissions	
Category 9: Downstream transportation and distribution	92,000
Category 10: Processing of sold products	n/a
Category 11: Use of sold products	476,900
Category 12: End-of-life treatment of sold products	63,000
Category 13: Downstream leased assets	n/a
Category 14: Franchises	112,600

Part 3: Biogenic CO₂ emissions data

Kesko, as a retail operator, does not practice any operations that would cause biogenic emissions. Retail products include grocery products which life cycle emissions may include biogenic emissions e.g. due cultivation. However, emissions from products for resale are estimated in a high level and it would be challenging to divide those emissions in subcategories. Due to these issues biogenic emissions are not reported.

Part 4: Description of methodologies and data used

Scope	Description of the types and sources of data used to calculate emissions	Methodologies used to calculate or measure emissions, providing a reference or link to any calculation tools used
Scope 1	<p><u>Activity data (primary data):</u></p> <ul style="list-style-type: none"> Fuel consumption for heat production (Finland): consumption in m³ of natural gas and oil registered in the EnerKey Portal (SaaS service). Fuel consumption for electricity and heat production (other operating countries): reported fuel consumption in m³/kWh/litres. Amount of refrigerant leakages (Finland): reported refrigerant fill-ups of refrigerants in kg. Fuel consumption of transportation and logistics (Finland): reported fuel consumption in litres. Fuel consumption of transportation and logistics (other operating countries): reported fuel consumption in litres/kg. <p><u>Emission factors (secondary data):</u></p> <ul style="list-style-type: none"> Fuel for energy production, and transportation and logistics: <ul style="list-style-type: none"> Statistics Finland: Fuel classification 2023 European Environment Agency Refrigerants: <ul style="list-style-type: none"> Department for Environment, Food & Rural Affairs (DEFRA); Greenhouse gas reporting: conversion factors 2022 Onninen Oy (R452A) 	<p><u>Description of the methodologies:</u></p> <ul style="list-style-type: none"> All operating countries are covered in the calculation. At some properties located in leased premises outside Finland, the heating data is not reported because it is included in the lease or the data is not available. <p><u>Assumptions:</u></p> <ul style="list-style-type: none"> Emissions of biodiesel are assumed to be 10 % of the emissions of fossil diesel: Neste Renewable Diesel Handbook, 2020.

Scope 2

Activity data (primary data):

- Electricity (Finland): consumption in kWh registered in the EnerKey Portal (SaaS service), and guarantees of origin for the share renewable energy and nuclear power.
- District heating and cooling (Finland): consumption in MWh of district heating and cooling registered in the EnerKey Portal (SaaS service).
- Electricity and district heating (other operating countries): reported consumption of electricity and district heating in MWh/GJ, and guarantees of origin for the share renewable energy.

Emission factors (secondary data):

- Purchased electricity, market-based (Finland): For electricity purchases with Renewable Energy Guarantees of Origin (REGOs) and for nuclear electricity, emission factor used is 0 gCO₂/MWh.
- Purchased electricity, location-based (Finland): [Energy Authority, Residual distribution 2022](#).
- Purchased electricity, market-based (other operating countries): For electricity purchases with Renewable Energy Guarantees of Origin (REGOs) emission factor used is 0 gCO₂/MWh.
- Purchased electricity, location-based (other operating countries): [AIB, European Residual Mixes 2022](#).
- District heating, market-based (Finland): Location specific emission factors: [Paikallisvoima ry, Distroct heat emissions calculator](#).
- District heating, location-based (Finland): [Motiva Oy, 2023](#).

Description of the methodologies:

- We reported Kesko's electricity consumption in Finland for the first time in 2023. Due to technical reasons of reporting in previous years, we have reported the electricity purchased and consumed by Kesko. In other words, in addition to Kesko's own consumption, the figure has included the electricity supplied to, for example, K-retailer entrepreneurs and tenants by Kesko's subsidiary Ankkuri-Energia Oy.
- In some real estates situated in leased properties the heat consumption is included in the rent or the consumption figure is not available and the heat consumption is not reported. The district heating consumption figure in Finland covers about 93% (based on floor area) of the properties managed by Kesko where heating is partly or fully provided by means of district heating.
- All operating countries are covered in the calculation. At some properties located in leased premises outside Finland, the heating data is not reported because it is included in the lease or the data is not available.

	<ul style="list-style-type: none"> District heating, location-based (other operating countries): Emission factors: International Energy Agency IEA. Emission factors. 2022. District cooling, location-based (Finland): 0 gCO₂/kWh: Helen Oy, 2023 and Fortum, 2023. 	
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Scopes and categories	Description of the types and sources of data used to calculate emissions	Description of the data quality of reported emissions	Description of the methodologies, allocation methods, and assumptions used to calculate emissions	Percentage of emissions calculated using data obtained from suppliers or other value chain partners
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Upstream Scope 3 emissions

Category 1: Purchased goods and services	<u>Activity data (primary data):</u> <ul style="list-style-type: none"> Purchased goods and services, grocery trade: retail sales of grocery products by segment in kg. Purchased goods and services, building and technical trade: purchase of building and technical trade products in euros and in kg (gross weight). Purchased goods and services, car trade: number of passenger cars and commercial 	Fair	<u>Description of the methodologies:</u> <ul style="list-style-type: none"> In 2023, we updated the calculation to increase the accuracy of the figures reported for 2023. The most significant changes were related to the categories of purchased goods and services, use of sold products and end-of-life treatment of sold products, where we revised the calculation of emissions from the building and technical trade and the grocery trade, shifting from euro-based calculation to calculation based on product weights. This is 	0%
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vehicles sold in 2023 and average emissions factors of the cars sold in gCO₂/km.

- Consumption of fresh water (Finland): consumption in m³ registered in the EnerKey Portal (SaaS service).
- Consumption of fresh water (other operation countries): reported consumption in m³.

Emission factors (secondary data):

- Emission factors for grocery trade products: The emission factors used in the carbon footprint calculator of [K-Ruoka app carbon footprint calculator](#) developed in collaboration with the Natural Resources Institute Finland (Luke).
- Emission factors and end-of-life scenarios for building and technical trade products: [Emissions database for construction](#).
- Fresh water: [Helsinki Region Environmental Services Authority's \(HSY\), Energy and material balances and greenhouse gas emissions, 2023](#).

a significant change that gives a more accurate picture of the emissions generated in our value chain. However, it significantly reduces comparability with the 2020 baseline.

- K-retailer entrepreneurs' own product purchases are also partially included in the calculation of the grocery trade division.
- Calculation boundary: Kespro, sports trade, and K-Bygg and retail trade of Byggmakker of the building and technical trade division
- The calculation methodology and sources used contain significant amount of uncertainties and can only be used as a very high level estimate of the actual climate impact.
- All operating countries are covered in the calculation.
- In some real estates situated in leased properties the water consumption is included in the rent or the consumption figure is not available and the water consumption is not reported. The water consumption figure of Finland covers around 76% of the sites managed by Kesko in Finland, based on area.

Assumptions:

- Calculations include only new passenger and commercial vehicles sold in 2023. Assumption is that life-cycle-emissions of used cars sold are already accounted by the original seller of the car when bought the first time.

			<ul style="list-style-type: none"> Emission distribution during the life-cycle of car: Autoalan tiedotuskeskus, Life cycle effects of cars. 	
Category 2: Capital goods	<p><u>Activity data (primary data):</u></p> <ul style="list-style-type: none"> Heated net area or gross area of new buildings constructed during 2023. <p><u>Emission factors (secondary data):</u></p> <ul style="list-style-type: none"> Emission factor in tCO₂ per heated net area used in the calculations is based on three climate reports executed in Kesko's construction sites. Sites carbon footprint was calculated and average of those footprints is used as a emission factor of all constructed buildings. 	Fair	<p><u>Description of the methodologies:</u></p> <ul style="list-style-type: none"> Only emissions during the construction phase was included. Emissions during the use phase or at the end of building's life-cycle were excluded. All operating countries are covered in the calculation. <p><u>Assumptions:</u></p> <ul style="list-style-type: none"> Estimated life-cycle of a building is assumed to be 50 years. In the climate reports, carbon footprint is calculated per heated net area. In those building where only gross area was available heated net area was assumed based on average heated net area per total gross area of those buildings where information about heated net area was available. 	0%
Category 3: Fuel- and energy-related activities (not included in scope 1 or scope 2)	<p><u>Activity data (primary data):</u></p> <ul style="list-style-type: none"> See Scope 1 and 2 descriptions of the types and sources of activity data used to calculate emissions. <p><u>Emission factors (secondary data):</u></p>	Good	<p><u>Description of the methodologies:</u></p> <ul style="list-style-type: none"> All operating countries are covered in the calculation. For electricity in Finland, the share of renewable electricity and nuclear power were excluded from the calculation. 	100%

	<ul style="list-style-type: none"> • Department for Environment, Food & Rural Affairs (DEFRA): Greenhouse gas reporting: conversion factors 2022. 			
Category 4: Upstream transportation and distribution	<p><u>Activity data (primary data):</u></p> <ul style="list-style-type: none"> • Emission report of Postal services (Finland): reported emissions in tCO₂. • Outsourced transportation ja logistics (Finland): reported fuel consumption in litres. • Outsourced transportation ja logistics (Norway): reported emissions in tCO₂. <p><u>Emission factors (secondary data):</u></p> <ul style="list-style-type: none"> • Statistics Finland: Fuel classification 2023 	Good	<p><u>Description of the methodologies:</u></p> <ul style="list-style-type: none"> • Coverage of the calculations is Finland and Norway. 	100%
Category 5: Waste generated in operations	<p><u>Activity data (primary data):</u></p> <ul style="list-style-type: none"> • Waste amounts (Finland): generated waste amount in tonnes registered in the waste management partners databases. • Waste amounts (other operating countries): reported waste amounts in tonnes. • Waste water (Finland): consumption in m³ registered in the EnerKey Portal (SaaS service). • Waste water (other operation countries): reported consumption in m³. <p><u>Emission factors (secondary data):</u></p> <ul style="list-style-type: none"> • Waste: OpenCO2 database (includes emission factors from Defra and Statistics Finland) 	Good	<p><u>Description of the methodologies:</u></p> <ul style="list-style-type: none"> • The category includes waste that is generated in Kesko's operations. The waste accumulated by K-retailers is not included in the category. • All operating countries are covered in the calculation. • In some real estates situated in leased properties the water consumption is included in the rent or the consumption figure is not available and the water consumption is not reported. The water consumption figure of Finland covers around 76% of the sites managed by Kesko in Finland, based on area. 	100%

	<ul style="list-style-type: none"> Waste water: Helsinki Region Environmental Services Authority's (HSY), Energy and material balances and greenhouse gas emissions, 2023. 		<u>Assumptions:</u> <ul style="list-style-type: none"> Amount of waste water is assumed to be same than fresh water consumption. 	
Category 6: Business travel	<p><u>Activity data (primary data):</u></p> <ul style="list-style-type: none"> Reports from travel agencies (Finland): reported emissions in tCO₂, passenger amounts in pax or hotel night in pcs. Business trip kilometres driven using own car: registered kilometres in Kesko's travel system in km. <p><u>Emission factors (secondary data):</u></p> <ul style="list-style-type: none"> Average emission factor of passenger cars at the end of 2023: Traficom, 2023. Average CO₂ emissions by route per passenger or cargo ton per one-way trip: Tallink, 2023. Emission factor of hotel stay: Department for Environment, Food & Rural Affairs (DEFRA): Greenhouse gas reporting: conversion factors 2022. 	Good	<p><u>Description of the methodologies:</u></p> <ul style="list-style-type: none"> Calculation includes emissions from business related air, rail and boat travel, km data of road travel and hotels nights. Coverage of the calculations is Finland. <p><u>Assumptions:</u></p> <ul style="list-style-type: none"> Rail travel in Finland is assumed to be carbon free. 	100%
Category 7: Employee commuting	<p><u>Activity data (primary data):</u></p> <ul style="list-style-type: none"> Employee survey in October 2020: emission calculations are based on the following information: average distance, transportation mode used (car, public transport, walking, cycling, carpooling) and number of workers. 	Fair	<p><u>Description of the methodologies:</u></p> <ul style="list-style-type: none"> Employee commuting includes travelling between home and work place. Coverage of the calculations is Finland. <p><u>Assumptions:</u></p>	50%

	<ul style="list-style-type: none">Company car reports: reported emissions in tCO₂ or registered consumption of fuel in litres.Working days in 2023, average holiday days per employee, and average number of employees in Finland in 2023. <p><u>Emission factors (secondary data):</u></p> <ul style="list-style-type: none">The HSL Commuting Calculator for the Helsinki Area.Emission factors or fuels:<ul style="list-style-type: none">Statistics Finland: Fuel classification 2023European Environment Agency		<ul style="list-style-type: none">Assumption is that 50% of the total emissions of the company cars is work related travelling. That share of emissions is calculated under the category 7 even though part of the emissions are caused by business travel (category 6).	
Category 8: Upstream leased assets	n/a			
Downstream scope 3 emissions				
Category 9: Downstream transportation and distribution	<p><u>Activity data (primary data):</u></p> <ul style="list-style-type: none">Calculation is based on customer information of K-Plussa membership cards in Kesko's operational systems: amount of K-Plussa transactions in pcs and median transaction distance per division in capital region and rest of Finland.K-Kylä research in November 2023: Customers' transportation modes per region, and per chain.	Fair	<p><u>Description of the methodologies:</u></p> <ul style="list-style-type: none">Activity data includes approximately 93% of all K-Plussa households that have used the card when paying their shopping. Emission calculation is extrapolated to cover 100% of K-Plussa households.Average distances between stores and homes were calculated based on median data about distances calculated from customers' postal codes and Kesko's store locations.	50%

	<u>Emission factors (secondary data):</u> <ul style="list-style-type: none">Emission factors for bus: VTT LipastoEmission factor for commuter train, tram and metro 0 gCO₂e: HSL, 2023.Average emission factor of passenger cars at the end of 2023: Traficom, 2023.		<ul style="list-style-type: none">Calculation covers only shopping commutes by K-Plussa households in Finland. <u>Assumptions:</u> <ul style="list-style-type: none">In K-Kylä research about Customers’ transportation modes, following the precautionary principle, if “Other” was selected as a transportation mode emission calculation of car is used.	
Category 10: Processing of sold products	n/a			
Category 11: Use of sold products	See Category 1: Purchased goods and services		See Category 1: Purchased goods and services	
Category 12: End-of-life treatment of sold products				
Category 13: Downstream leased assets	n/a			
Category 14: Franchises	<u>Activity data (primary data):</u> <ul style="list-style-type: none">The store areas of properties owned or leased by K-retailer entrepreneurs were gathered from Kesko’s operational systems.	Fair	<u>Description of the methodologies:</u> <ul style="list-style-type: none">Emissions of energy use in stores owned or leased by K-retailers are calculated based on	100%

	<ul style="list-style-type: none"> • Energy purchased by K-retailers in properties transmitted by Kesko: electricity consumption in kWh registered in the EnerKey Portal (SaaS service), and guarantees of origin for the share renewable energy and nuclear power. • Amount of refrigerant leakages: reported refrigerant fill-ups of refrigerants in kg. • Specific electricity and heating consumptions in tCO₂/kWh registered in the EnerKey Portal (SaaS service). <p><u>Emission factors (secondary data):</u></p> <ul style="list-style-type: none"> • Purchased electricity, location-based (Finland): Energy Authority, Residual distribution 2022. • District heating, location-based (Finland): Motiva Oy, 2023. • Refrigerants: <ul style="list-style-type: none"> ○ Department for Environment, Food & Rural Affairs (DEFRA); Greenhouse gas reporting: conversion factors 2022 ○ Onninen Oy (R452A) ○ Onninen Oy (R134A) ○ Onninen Oy (R448A) ○ Onninen Oy (R449A) 		<p>store areas and specific electricity and heat consumptions.</p> <ul style="list-style-type: none"> • Coverage of the calculations is Finland. • Refrigerant leakages of around 150 properties owned or leased by K-retailer entrepreneurs that are not registered in Kesko's operational systems are not included. <p><u>Assumptions:</u></p> <ul style="list-style-type: none"> • Specific electricity and heating consumptions in K-retailer's properties is assumed to be similar to the stores managed by Kesko. 	
Category 15: Investments	n/a			

Part 5: Greenhouse gas emissions in the base year

Kesko has set science-based 1.5°C emissions reduction targets approved by the Science Based Targets initiative (SBTi). Base year of the targets is 2020.

Scopes and categories	Metric tons CO ₂ e
Scope 1: Direct emissions from owned/controlled operations	38,413
Scope 2: Indirect emissions from the use of purchased electricity, steam, heating, and cooling* * Following the GHG Protocol standard, a market-based and a location-based emission figures for electricity consumption has been reported in Sustainability Report 2022. For heating consumption in Finland, a market-based emission figure is reported for the first time in 2022. The market-based figures are used for emission totals whenever available.	31,940
Upstream scope 3 emissions	
Category 1: Purchased goods and services	7,258,000
Category 2: Capital goods	5,500
Category 3: Fuel- and energy-related activities (not included in scope 1 or scope 2)	12,100
Category 4: Upstream transportation and distribution	10,800
Category 5: Waste generated in operations	6,000
Category 6: Business travel	900
Category 7: Employee commuting	11,500
Category 8: Upstream leased assets	n/a
Upstream scope 3 emissions	
Category 9: Downstream transportation and distribution	80,600
Category 10: Processing of sold products	n/a
Category 11: Use of sold products	2,053,000
Category 12: End-of-life treatment of sold products	154,900
Category 13: Downstream leased assets	n/a
Category 14: Franchises	59,500

Part 6: Other information

Nitrogen oxides (NO_x), sulphur oxides (SO₂) and other significant emissions

The electricity and heating energy consumed in properties in Finland in 2023:

- NO_x emissions: 97.0 tonnes
- SO₂ emissions: 85.7 tonnes
- Radioactive waste: 0.14 tonnes

Kesko's Logistics in Finland in 2023:

- NO_x emissions: 27.1 tonnes
- SO₂ emissions: 0.07 tonnes

Emission factors:

- NO_x and SO₂ for properties: [VTT Tutkimusraportti VTT-R-06150-10. 2010.](#)
- Radioactive waste: [Energy Authority, Residual distribution 2022.](#)
- NO_x and SO₂ for logistics: [European Environment Agency, EMEP/EEA air pollutant emission inventory guidebook 2023.](#)

Kesko's Science Based Targets

Kesko's short-term science-based emissions reductions targets are:

- Kesko Corporation commits to reduce absolute scope 1 and 2 GHG emissions 90% by 2030 from a 2020 base year.
- Kesko Corporation also commits to reduce absolute scope 3 GHG emissions from the use of sold products 17% by 2026 from a 2020 base year.
- Kesko Corporation commits that 67% of its suppliers by spend covering purchased goods and services, will have science-based targets by 2026.

In 2017, Kesko was the first company in Finland to set science-based emissions reductions targets approved by the SBTi. In November 2021, the SBTi approved our updated emissions reductions targets through which we are committed to limiting global warming to 1.5 degrees.

In the autumn of 2023, we committed to setting new long-term emissions reductions targets and to reduce our emissions across the value chain in line with the SBTi's NetZero standard. We will also seek SBTi approval for our new net zero targets.