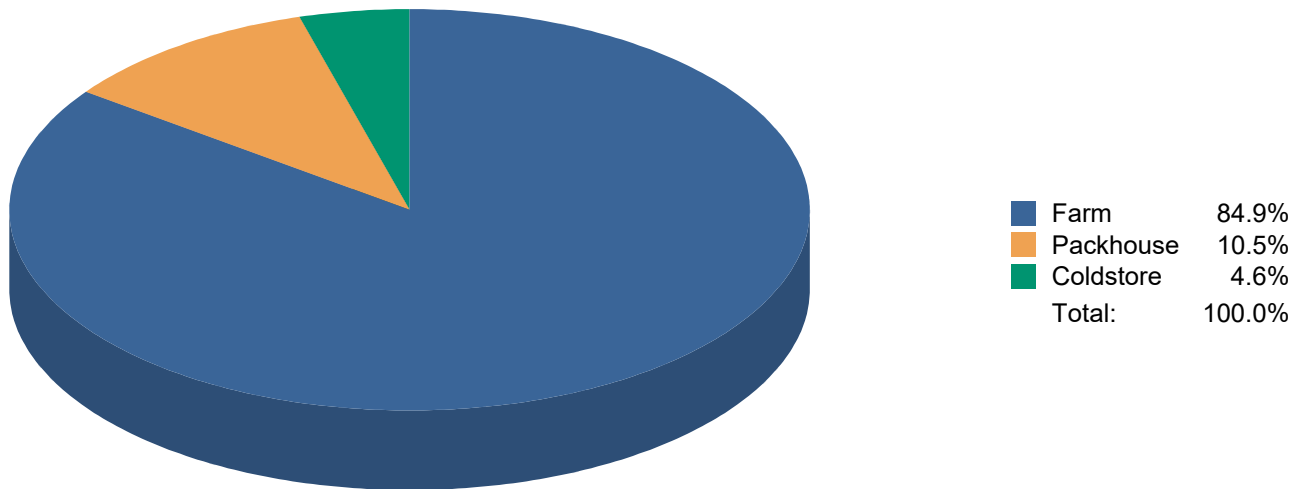


Carbon Calculator Results

Business Name: ZANDBERG SUIDERLAND PLASE (PTY) LTD & Wespak (T
Country Name: South Africa
Creation Date: 10/15/2025 12:00:19AM
Data Collection Period: Nov 2023 to Oct 2024
Report Grade: B2 - This dataset has been checked by CCC and is not part of the benchmark.

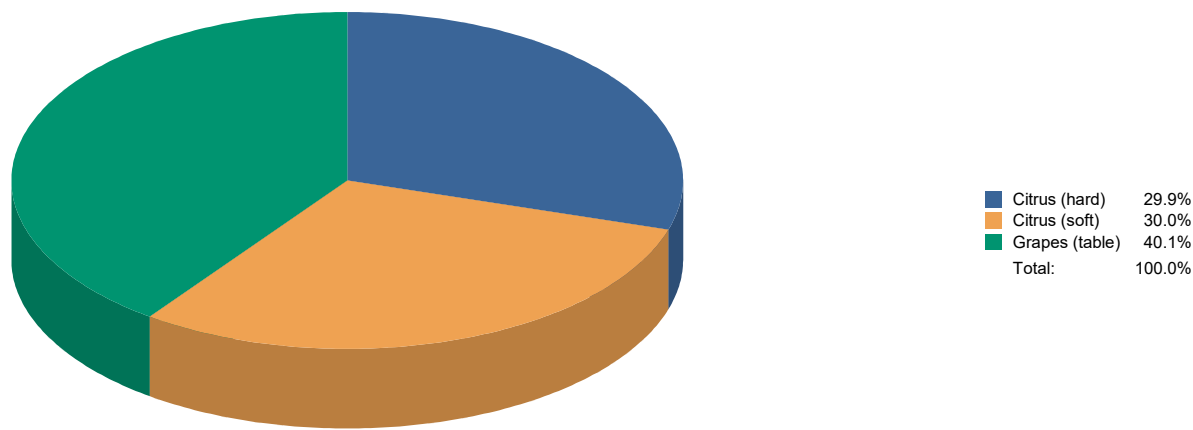
Business Unit - Boundary View



Boundary	Tonne CO ₂ e	%
Farm	721.21	84.87
Packhouse	89.65	10.55
Coldstore	38.92	4.58
Total	849.78	100.00

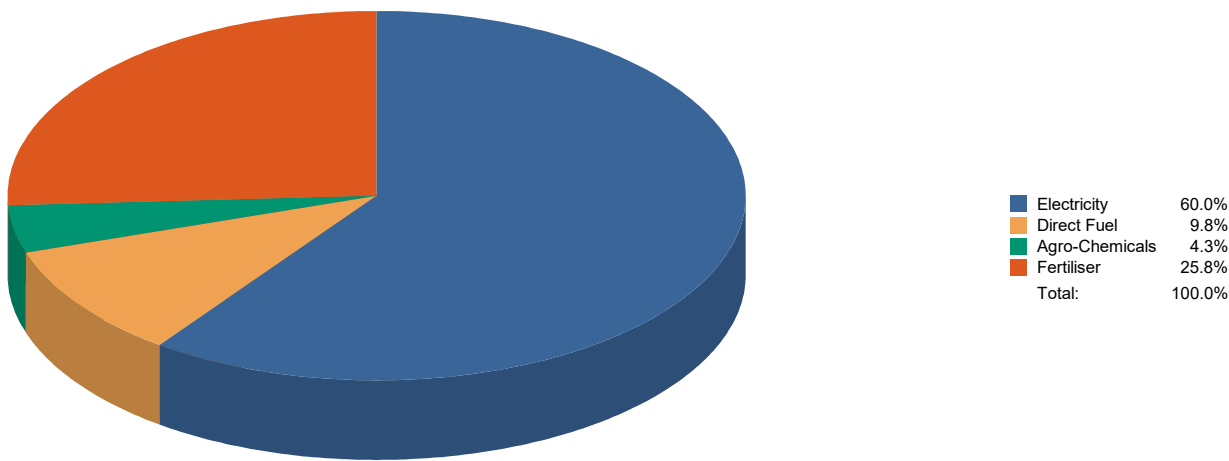
The Carbon Calculator must be completed on an annual basis. This allows users to monitor their carbon footprint trend and analyse improvements.

Business Unit - Commodity View



Commodity	Tonne CO ₂ e	%
Citrus (hard)	253.76	29.86
Citrus (soft)	255.29	30.04
Grapes (table)	340.73	40.10
Total	849.78	100.00

Farm - Emission Source View



Emission Source	Tonne CO ₂ e	%
Electricity	433.06	60.05
Direct Fuel	70.97	9.84
Agro-Chemicals	31.00	4.30
Fertiliser	186.19	25.82
Total	721.21	100.00

Business Name:

ZANDBERG SUIDERLAND PLASE (PTY) LTD & Wespak (Table Grapes) PTY LTD

Dataset:

10/15/2025 12:00:19AM

Data Collection Period:

Nov 2023 to Oct 2024

Farm Commodity Benchmark

Commodity	Kg CO2e per Kg Fruit	Benchmark
Citrus (hard)	2.05	The CCC regional average is 0.23 Kg CO2e per Kg Fruit and consist of 24 data points.
Citrus (soft)	0.50	The CCC regional average is 0.27 Kg CO2e per Kg Fruit and consist of 21 data points.
Grapes (table)	0.38	The CCC regional average is 0.37 Kg CO2e per Kg Fruit and consist of 5 data points.

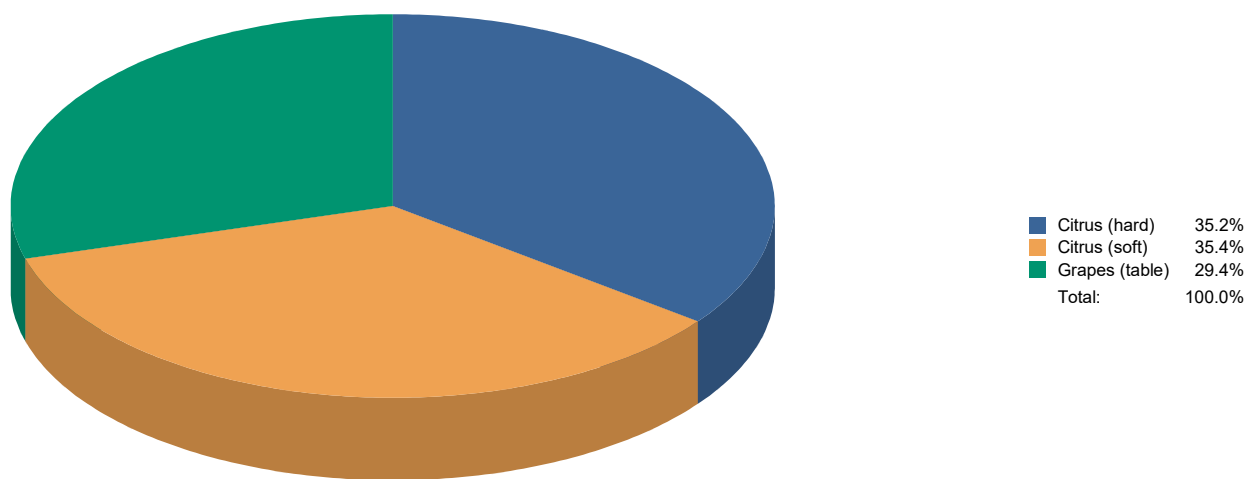
Farm Hectare Breakdown

Commodity	Tonne CO ₂ e per Bearing Ha
Citrus (hard)	19.52
Citrus (soft)	22.57
Grapes (table)	14.10

Farm Scope Breakdown

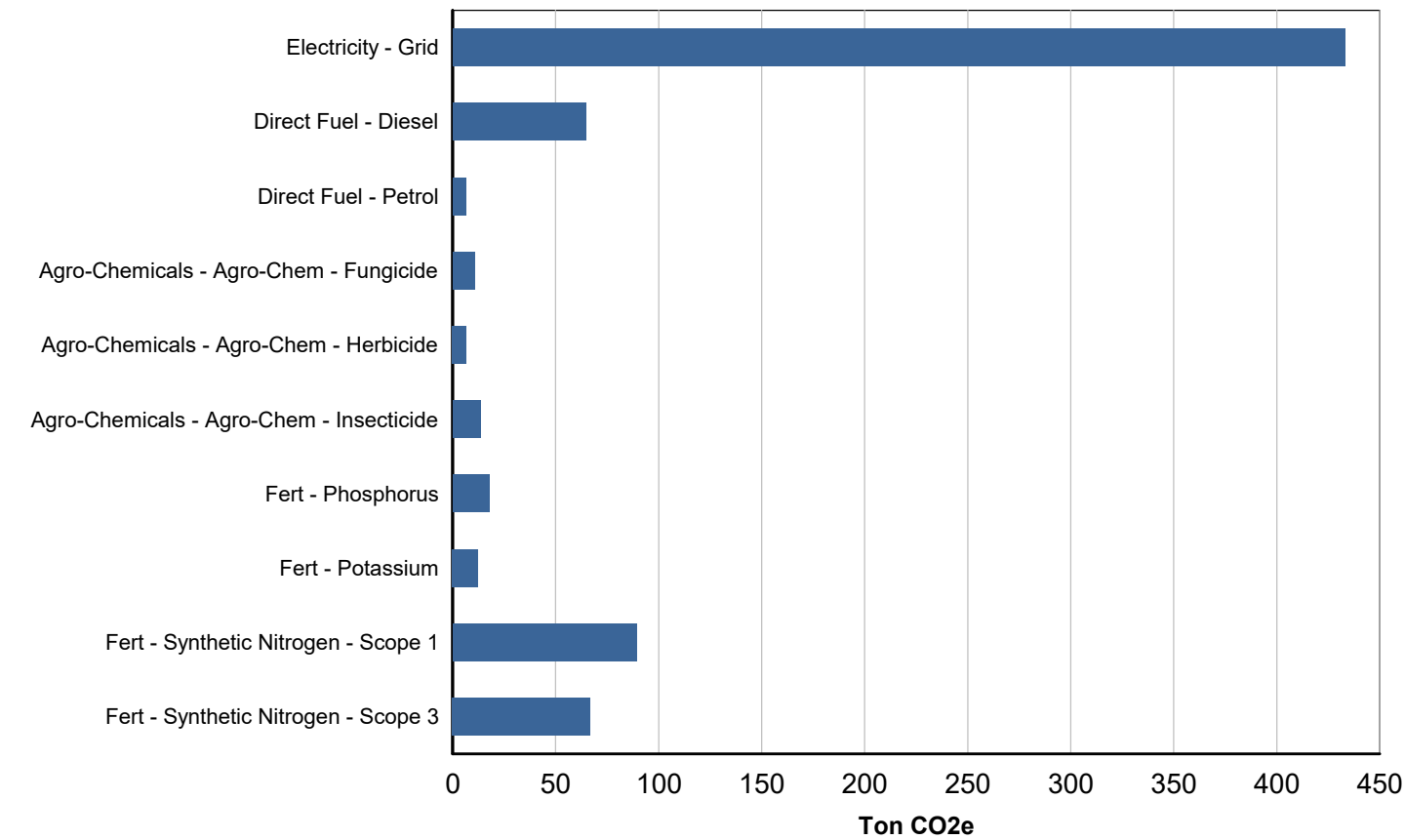
	Tonne CO ₂ e	%
Scope 1	160.12	22.20
Scope 2	433.06	60.05
Scope 3	128.03	17.75
Total	721.21	100.00

Farm - Commodity View



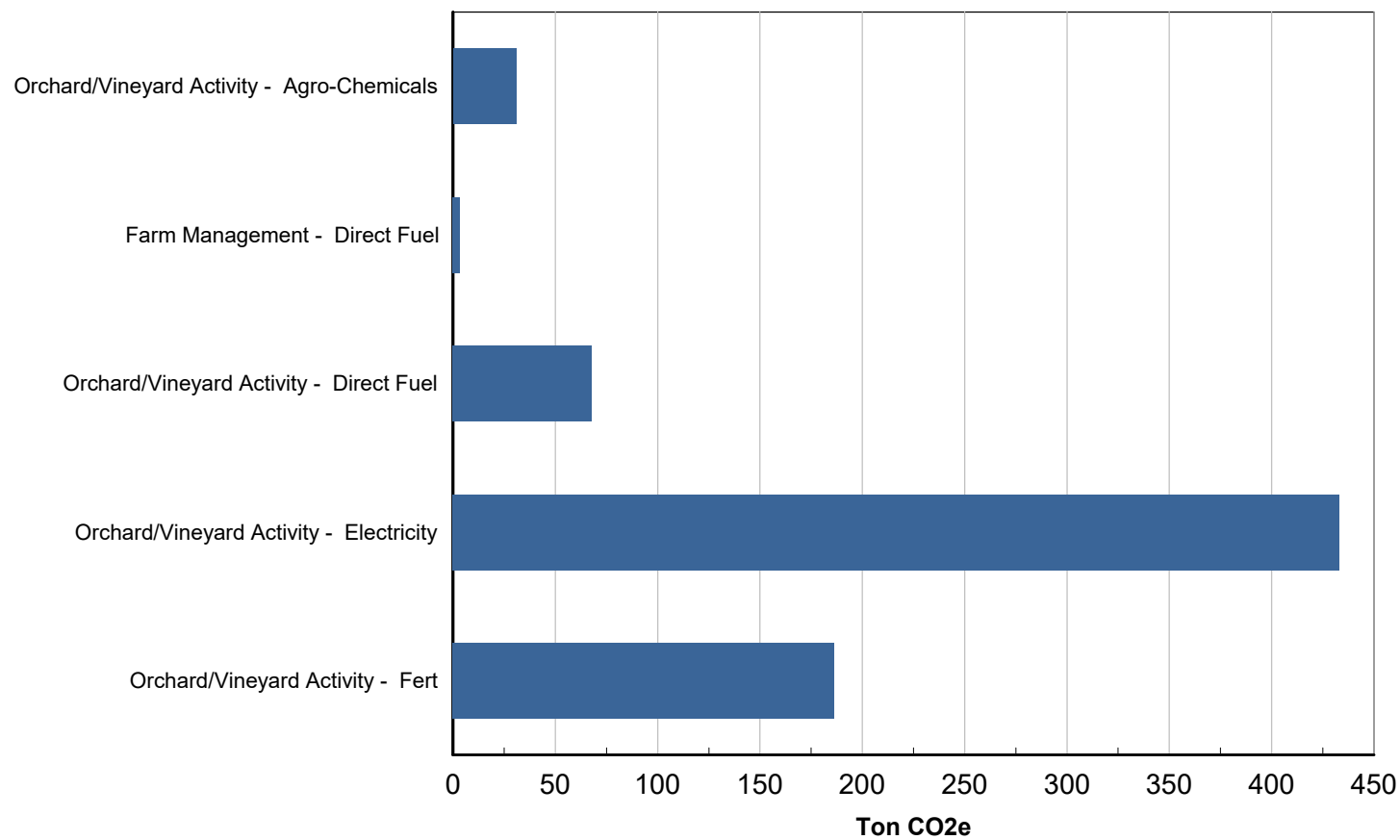
Commodity	Tonne CO ₂ e	%
Citrus (hard)	253.76	35.19
Citrus (soft)	255.29	35.40
Grapes (table)	212.16	29.42
Total	721.21	100.00

Farm - Emission Source Breakdown



Emission Source	Tonne CO ₂ e	%
Electricity - Grid	433.06	60.05
Direct Fuel - Diesel	64.53	8.95
Direct Fuel - Petrol	6.43	0.89
Agro-Chemicals - Agro-Chem - Fungicide	10.87	1.51
Agro-Chemicals - Agro-Chem - Herbicide	6.62	0.92
Agro-Chemicals - Agro-Chem - Insecticide	13.50	1.87
Fert - Phosphorus	17.85	2.47
Fert - Potassium	12.33	1.71
Fert - Synthetic Nitrogen - Scope 1	89.15	12.36
Fert - Synthetic Nitrogen - Scope 3	66.86	9.27
Total	721.21	100.00

Farm - Activity Breakdown



Activity Breakdown	Tonne CO ₂ e	%
Orchard/Vineyard Activity - Agro-Chemicals	31.00	4.30
Farm Management - Direct Fuel	3.27	0.45
Orchard/Vineyard Activity - Direct Fuel	67.69	9.39
Orchard/Vineyard Activity - Electricity	433.06	60.05
Orchard/Vineyard Activity - Fert	186.19	25.82
Total	721.21	100.00

Detailed Carbon Emissions Breakdown

Detailed Activities	Tonne CO ₂ e	%
Electricity - Grid - Orchard/Vineyard Activity - BO	390.89	54.20
Electricity - Grid - Orchard/Vineyard Activity - NBO	42.17	5.85
Direct Fuel - Diesel - Orchard/Vineyard Activity - BO	56.16	7.79
Direct Fuel - Diesel - Orchard/Vineyard Activity - NBO	6.06	0.84
Direct Fuel - Diesel - Farm Management	2.31	0.32
Direct Fuel - Petrol - Orchard/Vineyard Activity	5.47	0.76
Direct Fuel - Petrol - Farm Management	0.96	0.13
Fert - - Synthetic Nitrogen - Orchard/Vineyard Activity - BO	152.42	21.13
Fert - - Synthetic Nitrogen - Orchard/Vineyard Activity - NBO	3.59	0.50
Fert - - Phosphorus - Orchard/Vineyard Activity - BO	17.81	2.47
Fert - - Phosphorus - Orchard/Vineyard Activity - NBO	0.04	0.01
Fert - - Potassium - Orchard/Vineyard Activity - BO	12.07	1.67
Fert - - Potassium - Orchard/Vineyard Activity - NBO	0.25	0.03
Agro-Chemicals - Agro-Chem - Fungicide - Orchard/Vineyard Activity - BO	10.81	1.50
Agro-Chemicals - Agro-Chem - Fungicide - Orchard/Vineyard Activity - NBO	0.07	0.01
Agro-Chemicals - Agro-Chem - Insecticide - Orchard/Vineyard Activity - BO	13.48	1.87
Agro-Chemicals - Agro-Chem - Insecticide - Orchard/Vineyard Activity - NBO	0.02	0.00
Agro-Chemicals - Agro-Chem - Herbicide - Orchard/Vineyard Activity - BO	6.62	0.92
Total	721.21	100.00

Business Name: ZANDBERG SUIDERLAND PLASE (PTY) LTD & Wespak (Table Grapes) PTY LTD

Dataset: 10/15/2025 12:00:19AM

Data Collection Period: Nov 2023 to Oct 2024

Farm Consumption Benchmarks

Commodity	Consumption Measure	Result	Benchmark
Citrus (hard)	kL Water per Ton Fruit	650.10	The CCC regional average is 108.74 kL Water per Ton Fruit and consist of 22 data points.
Citrus (hard)	kL Water per Bearing Ha	6,174.45	The CCC regional average is 3757.61 kL Water per Bearing Ha and consist of 22 data points.
Citrus (hard)	kWh Orchard / Vineyard Electricity per Ton Fruit	1,096.49	The CCC regional average is 107.23 kWh Orchard / Vineyard Electricity per Ton Fruit and consist of 22 data points.
Citrus (hard)	kWh Orchard / Vineyard Electricity per Bearing Ha	10,414.15	The CCC regional average is 4112.58 kWh Orchard / Vineyard Electricity per Bearing Ha and consist of 22 data points.
Citrus (hard)	Liters Orchard / Vineyard Diesel per Ton Fruit	64.36	The CCC regional average is 9.17 Liters Orchard / Vineyard Diesel per Ton Fruit and consist of 22 data points.
Citrus (hard)	Liters Orchard / Vineyard Diesel per Bearing Ha	611.32	The CCC regional average is 335.51 Liters Orchard / Vineyard Diesel per Bearing Ha and consist of 22 data points.
Citrus (hard)	Kg Pure N per Ton Fruit	43.01	The CCC regional average is 5.81 Kg Pure N per Ton Fruit and consist of 22 data points.
Citrus (hard)	Kg Pure N per Bearing Ha	408.49	The CCC regional average is 236.96 Kg Pure N per Bearing Ha and consist of 22 data points.

Commodity	Consumption Measure	Result	Benchmark
Citrus (soft)	kL Water per Ton Fruit	169.32	The CCC regional average is 88.74 kL Water per Ton Fruit and consist of 19 data points.
Citrus (soft)	kL Water per Bearing Ha	7,736.21	The CCC regional average is 3696.30 kL Water per Bearing Ha and consist of 19 data points.
Citrus (soft)	kL Water per Non-Bearing Ha	733.50	The CCC regional average is 1450.77 kL Water per Non-Bearing Ha and consist of 19 data points.
Citrus (soft)	kWh Orchard / Vineyard Electricity per Ton Fruit	227.93	The CCC regional average is 110.05 kWh Orchard / Vineyard Electricity per Ton Fruit and consist of 19 data points.
Citrus (soft)	kWh Orchard / Vineyard Electricity per Bearing Ha	10,414.15	The CCC regional average is 4628.26 kWh Orchard / Vineyard Electricity per Bearing Ha and consist of 19 data points.
Citrus (soft)	Liters Orchard / Vineyard Diesel per Ton Fruit	13.38	The CCC regional average is 6.75 Liters Orchard / Vineyard Diesel per Ton Fruit and consist of 19 data points.
Citrus (soft)	Liters Orchard / Vineyard Diesel per Bearing Ha	611.32	The CCC regional average is 266.62 Liters Orchard / Vineyard Diesel per Bearing Ha and consist of 19 data points.
Citrus (soft)	Kg Pure N per Ton Fruit	10.48	The CCC regional average is 7.36 Kg Pure N per Ton Fruit and consist of 19 data points.
Citrus (soft)	Kg Pure N per Bearing Ha	478.98	The CCC regional average is 291.53 Kg Pure N per Bearing Ha and consist of 19 data points.

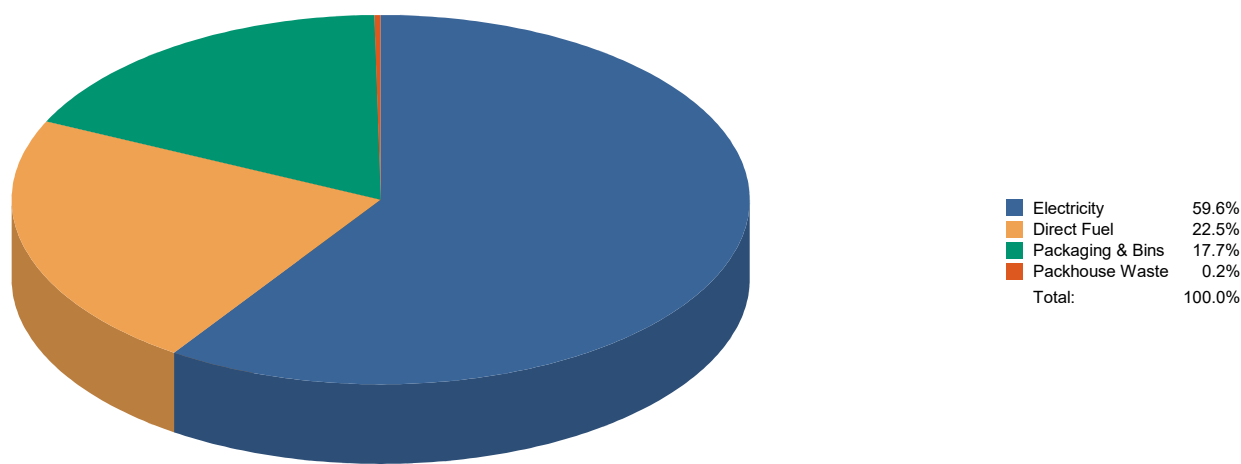
Business Name: ZANDBERG SUIDERLAND PLASE (PTY) LTD & Wespak (Table Grapes) PTY LTD

Dataset: 10/15/2025 12:00:19AM

Data Collection Period: Nov 2023 to Oct 2024

Commodity	Consumption Measure	Result	Benchmark
Grapes (table)	kL Water per Ton Fruit	69.72	The CCC regional average is 58.99 kL Water per Ton Fruit and consist of 5 data points.
Grapes (table)	kL Water per Bearing Ha	2,587.97	The CCC regional average is 1310.55 kL Water per Bearing Ha and consist of 5 data points.
Grapes (table)	kWh Orchard / Vineyard Electricity per Ton Fruit	280.63	The CCC regional average is 273.88 kWh Orchard / Vineyard Electricity per Ton Fruit and consist of 5 data points.
Grapes (table)	kWh Orchard / Vineyard Electricity per Bearing Ha	10,416.15	The CCC regional average is 4997.00 kWh Orchard / Vineyard Electricity per Bearing Ha and consist of 5 data points.
Grapes (table)	Liters Orchard / Vineyard Diesel per Ton Fruit	16.47	The CCC regional average is 9.35 Liters Orchard / Vineyard Diesel per Ton Fruit and consist of 5 data points.
Grapes (table)	Liters Orchard / Vineyard Diesel per Bearing Ha	611.32	The CCC regional average is 205.48 Liters Orchard / Vineyard Diesel per Bearing Ha and consist of 5 data points.
Grapes (table)	Kg Pure N per Ton Fruit	1.34	The CCC regional average is 2.16 Kg Pure N per Ton Fruit and consist of 5 data points.
Grapes (table)	Kg Pure N per Bearing Ha	49.67	The CCC regional average is 59.80 Kg Pure N per Bearing Ha and consist of 5 data points.

Packhouse - Emission Source View



Emission Source	Tonne CO ₂ e	%
Electricity	53.39	59.56
Direct Fuel	20.19	22.52
Packaging & Bins	15.87	17.70
Packhouse Waste	0.19	0.21
Total	89.65	100.00

Business Name:

ZANDBERG SUIDERLAND PLASE (PTY) LTD & Wespak (Table Grapes) PTY LTD

Dataset:

10/15/2025 12:00:19AM

Data Collection Period:

Nov 2023 to Oct 2024

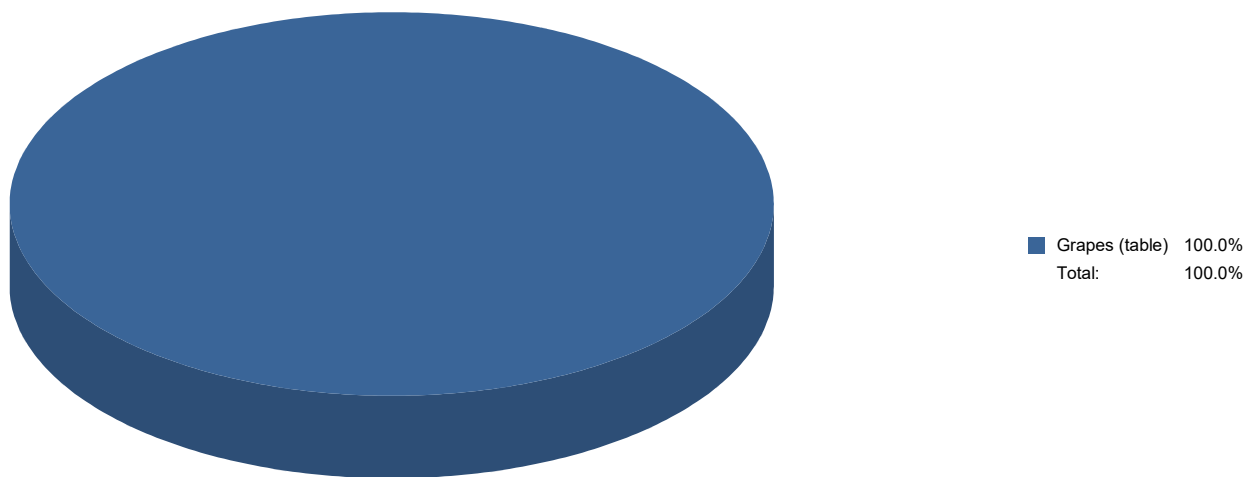
Packhouse Commodity Benchmark

Commodity	Kg CO2e per Kg Fruit	Benchmark
Grapes (table)	0.04	The CCC regional average is 0.38 Kg CO2e per Kg Fruit and consist of 4 data points.

Packhouse Scope Breakdown

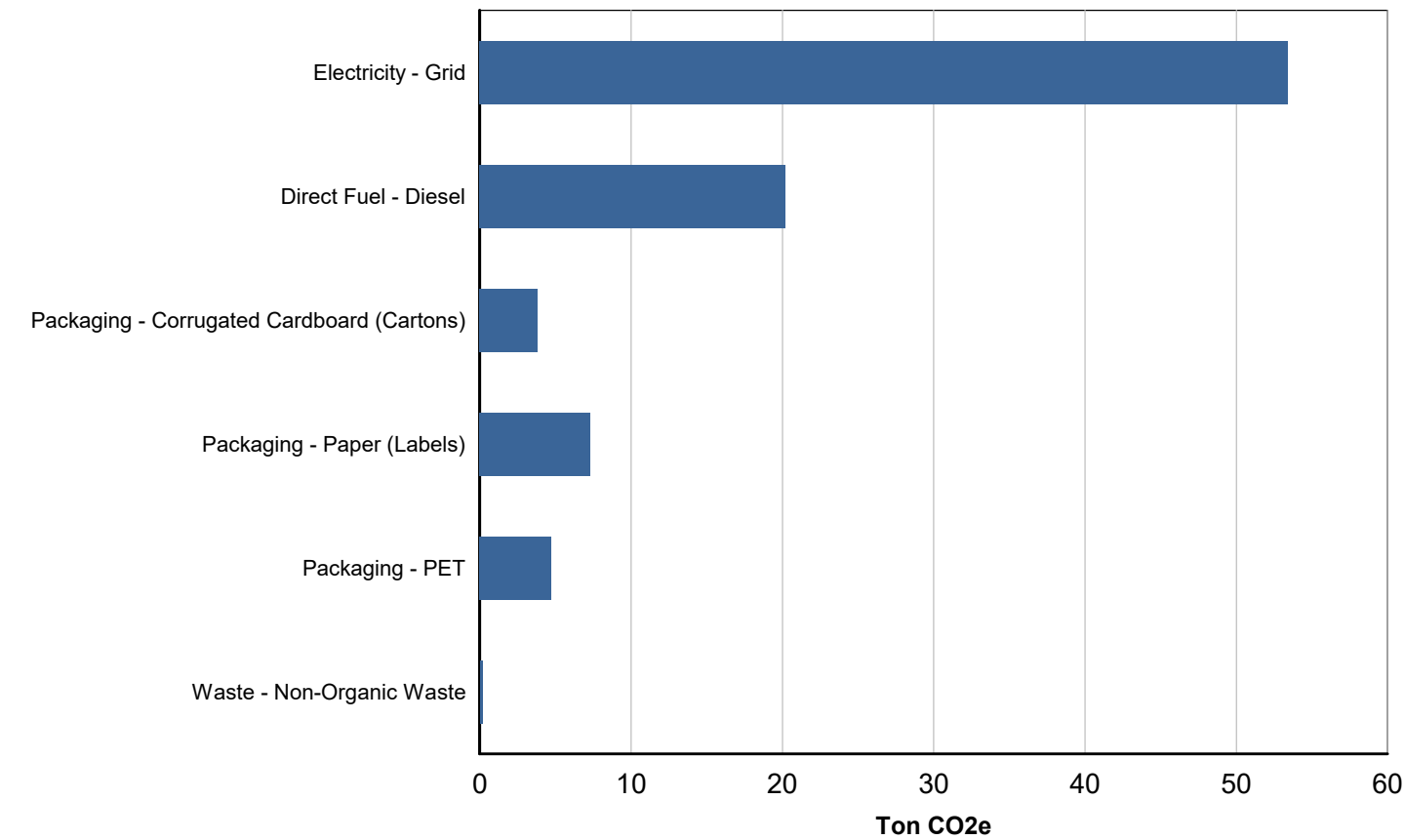
	Tonne CO ₂ e	%
Scope 1	20.19	22.52
Scope 2	53.39	59.56
Scope 3	16.06	17.92
Total	89.65	100.00

Packhouse - Commodity View



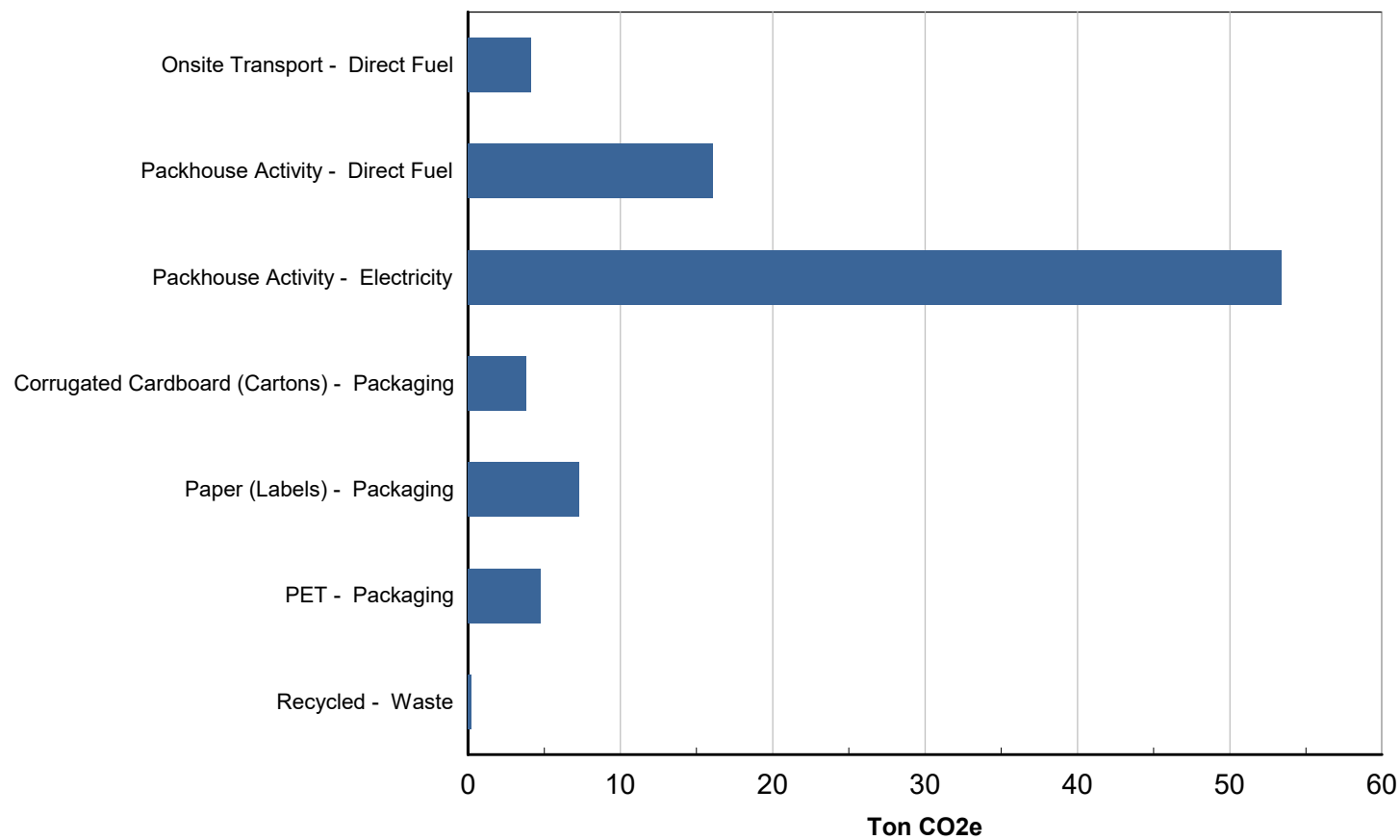
Commodity	Tonne CO ₂ e	%
Grapes (table)	89.65	100.00
Total	89.65	100.00

Packhouse - Emission Source Breakdown



Emission Source	Tonne CO ₂ e	%
Electricity - Grid	53.39	59.56
Direct Fuel - Diesel	20.19	22.52
Packaging - Corrugated Cardboard (Cartons)	3.83	4.27
Packaging - Paper (Labels)	7.30	8.14
Packaging - PET	4.75	5.30
Waste - Non-Organic Waste	0.19	0.21
Total	89.65	100.00

Packhouse - Activity Breakdown



Activity Breakdown	Tonne CO ₂ e	%
Onsite Transport - Direct Fuel	4.14	4.61
Packhouse Activity - Direct Fuel	16.06	17.91
Packhouse Activity - Electricity	53.39	59.56
Corrugated Cardboard (Cartons) - Packaging	3.83	4.27
Paper (Labels) - Packaging	7.30	8.14
PET - Packaging	4.75	5.30
Recycled - Waste	0.19	0.21
Total	89.65	100.00

Business Name:

ZANDBERG SUIDERLAND PLASE (PTY) LTD & Wespak (Table Grapes) PTY LTD

Dataset:

10/15/2025 12:00:19AM

Data Collection Period:

Nov 2023 to Oct 2024

Detailed Carbon Emissions Breakdown

Detailed Activities	Tonne CO ₂ e	%
Electricity - Grid - Packhouse Activity	53.39	59.56
Direct Fuel - Diesel - Packhouse Activity	16.06	17.91
Direct Fuel - Diesel - Onsite Transport	4.14	4.61
Packaging - Corrugated Cardboard (Cartons) - Corrugated Cardboard (Cartons)	3.83	4.27
Packaging - Paper (Labels) - Paper (Labels)	7.30	8.14
Packaging - PET - PET	4.75	5.30
Waste - Non-Organic Waste - Recycled	0.19	0.21
Total	89.65	100.00

Business Name:

ZANDBERG SUIDERLAND PLASE (PTY) LTD & Wespak (Table Grapes) PTY LTD

Dataset:

10/15/2025 12:00:19AM

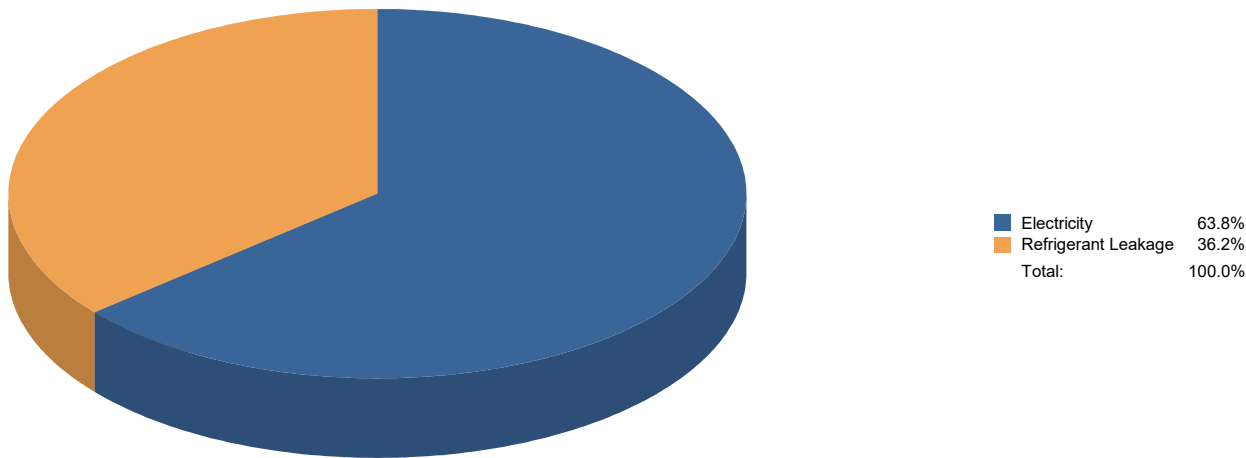
Data Collection Period:

Nov 2023 to Oct 2024

Packhouse Consumption Benchmarks

Grapes (table)	Liters Water per Ton Fruit	266.63	The CCC regional average is 1.41 Liters Water per Ton Fruit and consist of 4 data points.
Grapes (table)	kWh Packhouse Activity Electricity per Ton Fruit	22.67	The CCC regional average is 173.72 kWh Packhouse Activity Electricity per Ton Fruit and consist of 4 data points.
Grapes (table)	Kg Corrugated Cardboard per Ton of Fruit packed	1.66	The CCC regional average is 45.25 Kg Corrugated Cardboard per Ton of Fruit packed and consist of 4 data points.

Coldstore - Emission Source View



Emission Source	Tonne CO ₂ e	%
Electricity	24.84	63.82
Refrigerant Leakage	14.08	36.18
Total	38.92	100.00

Business Name:

ZANDBERG SUIDERLAND PLASE (PTY) LTD & Wespak (Table Grapes) PTY LTD

Dataset:

10/15/2025 12:00:19AM

Data Collection Period:

Nov 2023 to Oct 2024

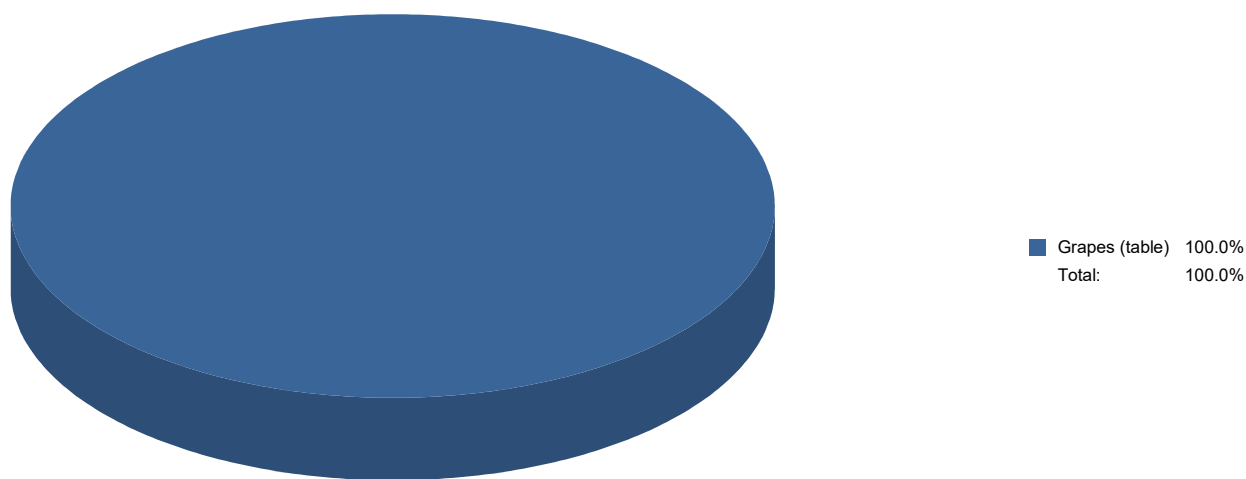
Coldstore Commodity Benchmark

Commodity	Kg CO2e per Kg Fruit	Benchmark
Grapes (table)	0.02	The CCC regional average is 0.38 Kg CO2e per Kg Fruit and consist of 3 data points.

Coldstore Scope Breakdown

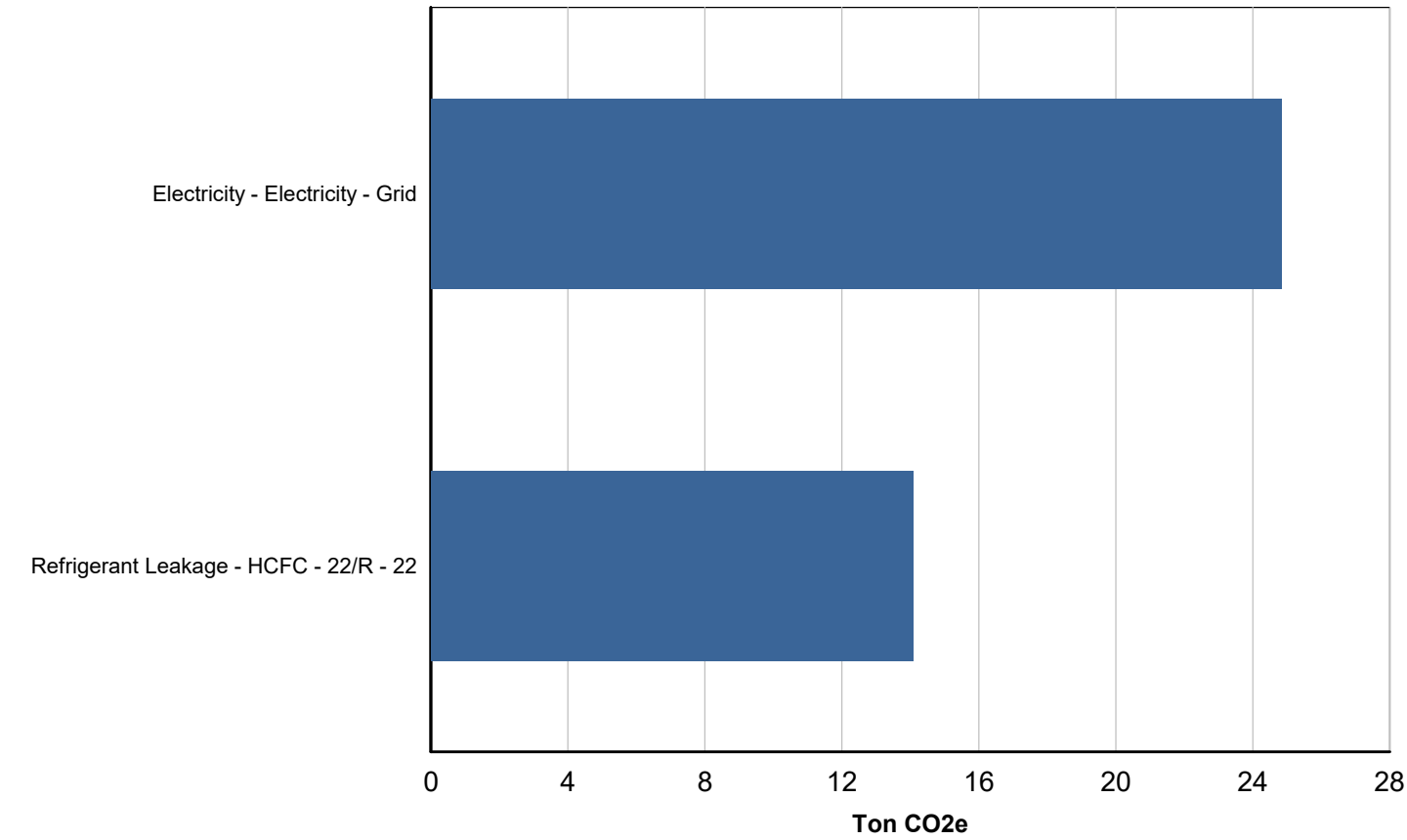
	Tonne CO ₂ e	%
Scope 1	14.08	36.18
Scope 2	24.84	63.82
Total	38.92	100.00

Coldstore - Commodity View



Commodity	Tonne CO ₂ e	%
Grapes (table)	38.92	100.00
Total	38.92	100.00

Coldstore - Emission Source Breakdown



Emission Source	Tonne CO ₂ e	%
Electricity - Electricity - Grid	24.84	63.82
Refrigerant Leakage - HCFC - 22/R - 22	14.08	36.18
Total	38.92	100.00

Business Name: ZANDBERG SUIDERLAND PLASE (PTY) LTD & Wespak (Table Grapes) PTY LTD

Dataset: 10/15/2025 12:00:19AM

Data Collection Period: Nov 2023 to Oct 2024