

Reunert Limited

**Greenhouse Gas Emissions figures for GRI and CDP reporting for the  
financial year ending 30 September 2015**

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7<sup>th</sup> December 2015

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## Appendix C: CDP

### CDP Climate: Question response relevant to GHG emission calculation

#### CDP Climate: Question response relevant to GHG emission calculation (2015)

##### Q# Question

7.1 Please provide your base year and base year emissions (Scopes 1 and 2)

Base year	2015
Scope 1 base year emissions (metric tonnes CO2e)	6 099.97
Scope 2 base year emissions (metric tonnes CO2e)	44 015.99

7.2 Please give the name of the standard, protocol or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 emissions

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)
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7.3 Please give the source for the global warming potentials you have used

CO2	IPCC Fourth Assessment Report (AR4 - 100 year)
CH4	IPCC Fourth Assessment Report (AR4 - 100 year)
N2O	IPCC Fourth Assessment Report (AR4 - 100 year)

7.4 Please give the emissions factors you have applied and their origin; alternatively, please attach an Excel spreadsheet with this data

Fuel/Material/Energy	Emission Factor	Unit	Reference
Diesel/Gas oil	2.67614	kg CO2e per litre	UK Government conversion factors for company reporting, 2015 v2.0
Motor gasoline	2.29968	kg CO2e per litre	UK Government conversion factors for company reporting, 2015 v2.0
Liquefied petroleum gas (LPG)	2.94264	kg CO2e per kg	UK Government conversion factors for company reporting, 2015 v2.0
Liquefied petroleum gas (LPG)	0.21468	Other: kg CO2e per kWh	UK Government conversion factors for company reporting, 2015 v2.0
Natural gas	0.18445	Other: kg CO2e per kWh	UK Government conversion factors for company reporting, 2015 v2.0
Petrol vehicle (passenger average)	0.19126	kg CO2e per km	UK Government conversion factors for company reporting, 2015 v2.0
Electricity (RSA)	1.01000	metric tonnes CO2e per MWh	Eskom Annual Integrated Report, 2015
Electricity (Australia)	0.81360	metric tonnes CO2e per	UK Government conversion factors for company reporting, 2015 v2.0

		MWh	
Electricity (Sweden)	0.01650	metric tonnes CO2e per MWh	UK Government conversion factors for company reporting, 2015 v2.0
Electricity (US)	0.49845	metric tonnes CO2e per MWh	UK Government conversion factors for company reporting, 2015 v2.0

8.1 Please select the boundary you are using for your Scope 1 and 2 greenhouse gas inventory

Financial control

8.2 Please provide your gross global Scope 1 emissions figures in metric tonnes CO2e

6 099.97

8.3 Please provide your gross global Scope 2 emissions figures in metric tonnes CO2e

44 015.99

Are there any sources (e.g. facilities, specific GHGs, activities, geographies, etc.) of Scope 1 and Scope 2 emissions that are within your selected reporting boundary which are not included in your disclosure?

8.4 emissions figures in metric tonnes CO2e

Source	Relevance of Scope 1 emissions from this source	Relevance of Scope 2 emissions from this source	Explain why the source is excluded
Scope 1 fugitive emissions from HVAC	Not relevant		immaterial
Scope 2 purchased electricity excluded at the site Port Elizabeth: Nashua Communications		Not relevant	lack of data

9.2 Please indicate which other Scope 1 emissions breakdowns you are able to provide

9.2a By business division

Business division	Scope 1 emissions (metric tonnes CO2e)
Electrical Engineering	5 233.41
ICT	354.71
Applied Electronics	493.91
Group Services	17.94

10.1 Do you have Scope 2 emissions sources in more than one country or region?

No

10.2 Please indicate which other Scope 2 emissions breakdowns you are able to provide

10.2

a By business division

<b>Business division</b>	<b>Scope 2 emissions (metric tonnes CO2e)</b>
Electrical Engineering	36 450.69
ICT	1 517.67
Applied Electronics	5 219.46
Group Services	828.16

11.2 Please state how much fuel, electricity, heat, steam, and cooling in MWh your organization has consumed during the reporting year

<b>Energy type</b>	<b>MWh</b>
Fuel	29 824.33
Electricity	43 580.19
Heat	0.00
Steam	0.00
Cooling	0.00

11.3 Please complete the table by breaking down the total "Fuel" figure entered above by fuel type

<b>Fuels</b>	<b>MWh</b>
Diesel/Gas oil	3 603.18
Motor gasoline	3 603.27
Liquefied petroleum gas (LPG)	1 369.82
Natural gas	21 248.07

11.4 Please provide details of the electricity, heat, steam or cooling amounts that were accounted at a low carbon emission factor

<b>Basis for applying a low carbon emission factor</b>	<b>MWh associated with low carbon electricity, heat, steam or cooling</b>	<b>Comments</b>
Non-grid connected low carbon heat, steam or cooling, generation owned by company	62.91	

14.1 Please provide data on sources of Scope 3 emissions that are relevant to your organization

<b>Sources of Scope 3 emissions</b>	<b>Evaluation status</b>	<b>metric tonnes CO2e</b>	<b>Methodology</b>

Purchased goods and services	Relevant, calculated	121 094.91	Includes 'cradle to gate' emissions in consumption of procured materials and supply of municipal water. Mass of materials such as paper, aluminium, steel, galvanised steel and PVC were recorded in kilograms and converted to tonnes to apply the relevant emission factor from the UK Government conversion factors for Company Reporting, v2.0, 2015. Material use conversion factors are based on their origin i.e. comprised of primary material or recycled materials. For primary materials these factors cover the extraction, primary processing, manufacture and transportation of materials to the point of sale. For secondary materials, the factors cover sorting, processing, manufacture and transportation to the point of sale. Municipal water supply sourced from municipal accounts was recorded in kilolitres and an emission factor from UK Government conversion factors for Company Reporting, v2.0, 2015 was applied.
Capital goods			
Fuel-and-energy-related activities (not included in Scope 1 or 2)			
Upstream transportation and distribution			
Waste generated in operations	Relevant, calculated	716.43	Includes waste disposal emissions of end of life disposal of different materials using a variety of different disposal methods, and treatment of municipal water. Various waste types are recorded in kilograms and converted to tonnes to apply the relevant emission factor. Waste emission factors were sourced from the UK Government conversion factors for Company Reporting, v2.0, 2015, and applied according to open loop recycling, closed loop recycling or landfill waste disposal method. Municipal water effluent sourced from municipal accounts was recorded in kilolitres and an emission factor from UK Government conversion factors for Company Reporting, v2.0,

			2015 was applied.
Business travel	Relevant, calculated	2 997.61	<p>Business Travel includes emissions from rental vehicles, air travel and reimbursed land travel in employee vehicles.</p> <p>Rental vehicle emissions were provided by the car rental agency in a combination of grams of CO<sub>2</sub>e or kilometers travelled by car size. For kilometers travelled by car size the relevant kg CO<sub>2</sub>e per km emission factor sourced from the UK Government conversion factors for Company Reporting, v2.0, 2015 was applied.</p> <p>Air travel activity was provided by the travel agency in a combination of grams of CO<sub>2</sub>e and passenger kilometers flown. Where passenger kilometers were provided flights were grouped by length and class to apply the appropriate kg CO<sub>2</sub>e per pkm emission factor, sourced from the UK Government conversion factors for Company Reporting, v2.0, 2015. Domestic flights were categorised as domestic regardless of distance. International flights less than 3700 km were categorised as short haul, and flights above 3700 km were categorised as long haul. The emission factors apply an 8% uplift factor. The factors applied exclude the influence of non-CO<sub>2</sub> climate change effects of aviation (water vapour, contrails, NO<sub>x</sub> etc).</p> <p>Reimbursed land travel in employee vehicles data is made up of a combination of fuel spend, litres of fuel used (by fuel type) and kilometers travelled. Where fuel spend information was available volume of fuel was estimated using annual average fuel price. Emissions from volume of fuel and kilometers travelled were calculated using the appropriate kg CO<sub>2</sub>e per kg fuel or kilometer travelled, sourced from the UK Government conversion factors for Company Reporting, v2.0, 2015.</p>
Employee commuting	Relevant, not yet calculated		

Upstream leased assets	Relevant, calculated	6 516.07	Includes fuel usage in leased assets and vehicles and purchased electricity in leased sites. Fuel use emissions calculated from a combination of litres of fuel consumed and kilometers travelled, using the appropriate emission factor sourced from UK Government conversion factors for Company Reporting, v2.0, 2015. Purchased electricity emissions calculated from kwh purchased electricity. Grid emissions factors applied sourced from Eskom Annual Integrated Report 2015 for Southern Africa and UK Government conversion factors for Company Reporting, v2.0, 2015 for countries outside of Southern Africa.
Investments			
Downstream transportation and distribution			
Processing of sold products			
Use of sold products			
End of life treatment of sold products			
Downstream leased assets			
Franchises			
Other (upstream)			
Other (downstream)			

## Appendix D: GRI G4

### G4 Sustainability Reporting Guidelines: Question response relevant to GHG emission calculation

#### G4 Sustainability Reporting Guidelines: Question response relevant to GHG emission calculation

Q# Question

G4-  
EN3

#### ENERGY CONSUMPTION WITHIN THE ORGANIZATION

Report total fuel consumption from non-renewable sources in joules or multiples, including fuel types used.

a

	TJ
Diesel	12.97
Petrol	12.97
Natural gas	76.49
LPG	4.93
<b>Total</b>	<b>107.37</b>

c Report in joules, watt-hours or multiples, the total: Y

	kwh
Electricity consumption	43 643 093

e Report total energy consumption in joules or multiples.

	TJ
Total energy	264.48

f Report standards, methodologies, and assumptions used.

Carbon Disclosure Project Technical note: Conversion of fuel data to MWh
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g Report the source of the conversion factors used.

World Resources Institute (2008). GHG Protocol tool for stationary combustion. Version 4.0.
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G4-  
EN5

#### ENERGY INTENSITY

a Report the energy intensity ratio.

Business unit	Energy per Rm revenue
	TJ
CBI Electric	0.05
Nashua	0.00
Reutech	0.02
Group Services	0.14
Total Reunert Ltd	0.03

b Report the organization-specific metric (the ratio denominator) chosen to calculate the ratio.

	TJ energy per Rm revenue
Metric	Rm revenue



- c Report the types of energy included in the intensity ratio: fuel, electricity, heating, cooling, steam, or all.

Fuel and electricity

- d Report whether the ratio uses energy consumed within the organization, outside of it or both.

Energy consumed within the organisation

G4-EN15

**DIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 1)**

- a Report gross direct (Scope 1) GHG emissions in metric tons of CO2 equivalent, independent of any GHG trades, such as purchases, sales, or transfers of offsets or allowances.

	<b>Metric tonnes CO2e</b>
Scope 1 emissions	6 099.97

<b>Business unit</b>	<b>Stationary fuel combustion</b>	<b>Mobile fuel combustion</b>	<b>Stationary fuel non-energy use</b>	<b>Total</b>
<b>Metric tonnes CO2e</b>				
Electrical Engineering	4 387.60	831.02	14.80	5 233.41
ICT	1.88	352.83		354.71
Applied Electronics	38.93	454.98		493.91
Group Services	0.20	17.74		17.94
<b>Total Reunert Ltd</b>	<b>4 428.60</b>	<b>1 656.57</b>	<b>14.80</b>	<b>6 099.97</b>

- b Report gases included in the calculation (whether CO2, CH4, N2O, HFCs, PFCs, SF6, NF3, or all).

<b>Gases</b>
CO2
CH4
N2O

- c Report biogenic CO2 emissions in metric tons of CO2 equivalent separately from the gross direct (Scope 1) GHG emissions.

not applicable / 0

- e Report standards, methodologies, and assumptions used.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)  
 Calculations based on published factors including:  
 Liquid fuel: kg CO2e per litre fuel  
 Gaseous fuel: kg CO2e per kwh  
 Gaseous fuel: kg CO2e per kg  
 Liquid fuel: kg CO2e per kilometre travelled in passenger vehicle

- f Report the source of the emission factors used and the global warming potential (GWP) rates used or a reference to the GWP source.

UK Government conversion factors for Company Reporting, 2015 v2.0.  
 GWP rates based on IPCC Fourth Assessment Report (AR4 - 100 year)

- g Report the chosen consolidation approach for emissions (equity share, financial control, operational control).

Financial control

G4-  
EN16

**ENERGY INDIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 2)**

- a Report gross energy indirect (Scope 2) GHG emissions in metric tons of CO2 equivalent, independent of any GHG trades, such as purchases, sales, or transfers of offsets or allowances.

	<b>Metric tonnes CO2e</b>
Scope 2 emissions	44 015.99

<b>Business unit</b>	<b>Purchased electricity</b>
<b>Metric tonnes CO2e</b>	
Electrical Engineering	36 450.69
ICT	1 517.67
Applied Electronics	5 219.46
Group Services	828.16
Total Reunert Ltd	44 015.99

- b Report gases included in the calculation, if available.

<b>Gases</b>
CO2

- e Report standards, methodologies, and assumptions used.

The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)  
Calculations based on published kg CO2e per kwh factors by country.

- f Report the source of the emission factors used and the global warming potential (GWP) rates used or a reference to the GWP source.

South African grid emission factor sourced from Eskom’s Annual Integrated Report, 2015. The South African grid emission factor has been applied to Lesotho. Australia, Sweden and USA emission factors sourced from UK Government conversion factors for Company Reporting, 2015 v2.0.

- g Report the chosen consolidation approach for emissions (equity share, financial control, operational control).

Financial control

G4-  
EN17

**OTHER INDIRECT GREENHOUSE GAS (GHG) EMISSIONS (SCOPE 3)**

- a Report gross other indirect (Scope 3) GHG emissions in metric tons of CO2 equivalent. Exclude any GHG trades, such as purchases, sales, or transfers of offsets or allowances.

	<b>Metric tonnes CO2e</b>
Scope 3 emissions	131 325.02

Business unit	Upstream leased assets	Purchased goods and services	Waste generated in operations	Business travel	Total
<b>Metric tonnes CO2e</b>					
Electrical Engineering	1 629.11	120 998.14	444.35	223.39	123 294.99
ICT	4 702.43	28.45	47.23	1 896.29	6 674.40
Applied Electronics	0.00	67.90	220.22	716.35	1 004.47
Group Services	184.53	0.42	4.63	161.58	351.16
Total Reunert Ltd	6 516.07	121 094.91	716.43	2 997.61	131 325.02

b Report gases included in the calculation, if available.

Gases
CO2
CH4
N2O

d Report other indirect (Scope 3) emissions categories and activities included in the calculation.

Upstream leased assets	Fuel combustion in leased assets and vehicles and purchased electricity in leased buildings
Purchased goods and services	Material use of paper, metals and plastics and municipal water supply
Waste generated in operations	Waste disposal of commercial and industrial waste, paper, glass, metals, oils, electric and electronic equipment, batteries and plastics and treatment of effluent
Business travel	Business travel in rental motor vehicles, commercial airlines and employee vehicles

f Report standards, methodologies, and assumptions used.

<p>The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition)  Calculations based on a combination of emissions data supplied and published factors including:  Fuel use in upstream leased assets: kg CO2e per litre fuel by fuel type and kg CO2e per km travelled by vehicle engine type and size  Purchased electricity in upstream leased assets: kg CO2e per kWh by country  Material use: kg CO2e per tonne product used by source of material  Water supply: kg CO2e per kl of water supplied  Waste disposal: kg CO2e per tonne waste disposed of by material and disposal method  Water treatment: kg CO2e per kl of effluent  Air travel: kg CO2e per pkm travelled (excluding radiative forcing) by distance category and class  Land travel: kg CO2e per km travelled by vehicle engine type and size, kg CO2e per litre fuel by fuel type</p>
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g Report the source of the emission factors used and the global warming potential (GWP) rates used or a reference to the GWP source, if available.

<p>South African grid emission factor sourced from Eskom's Annual Integrated Report, 2015. All other factors sourced from UK Government conversion factors for Company Reporting, 2015 v2.0.  GWP rates based on IPCC Fourth Assessment Report (AR4 - 100 year)</p>
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G4-  
EN18

**GREENHOUSE GAS (GHG) EMISSIONS INTENSITY**

a Report the GHG emissions intensity ratio.

<b>Business unit</b>	<b>Metric tonnes CO<sub>2</sub>e per m<sup>2</sup></b>	<b>Metric tonnes CO<sub>2</sub>e per FTE</b>	<b>Metric tonnes CO<sub>2</sub>e per Rm revenue</b>
<b>Metric tonnes CO<sub>2</sub>e</b>			
Electrical Engineering	0.28	17.63	10.11
ICT	0.13	0.93	0.55
Applied Electronics	0.18	6.96	5.29
Group Services	0.04	14.84	36.79
Total Reunert Ltd	0.23	9.52	5.79

b Report the organization-specific metric (the ratio denominator) chosen to calculate the ratio.

	<b>Metric tonnes CO<sub>2</sub>e per m<sup>2</sup></b>	<b>Metric tonnes CO<sub>2</sub>e per FTE</b>	<b>Metric tonnes CO<sub>2</sub>e per Rm revenue</b>
Metric	m <sup>2</sup>	FTE (permanent employees)	Rm revenue

Report the types of GHG emissions included in the intensity ratio: direct (Scope 1), energy indirect (Scope 2), other indirect (Scope 3).

c

	<b>Metric tonnes CO<sub>2</sub>e per m<sup>2</sup></b>	<b>Metric tonnes CO<sub>2</sub>e per FTE</b>	<b>Metric tonnes CO<sub>2</sub>e per Rm revenue</b>
GHG emissions	Direct stationary fuel combustion + Scope 2	Scope 1 + Scope 2	Scope 1 + Scope 2

d Report gases included in the calculation.

<b>Gases</b>
CO <sub>2</sub>
CH <sub>4</sub>
N <sub>2</sub> O