

# Participating in the voluntary carbon market



# Pangolin Associates

## **Energy, Carbon & Sustainability**

- Comprehensive GHG assessments, verifications and assurance (RGEAs)
- NGERS, NCOS, NABERS, ERF
- Energy audits – Measurement & Verification (M&V)
- Offsets
- Strategic Energy and Emissions Management – Profile, Risk & Opportunity, MACC

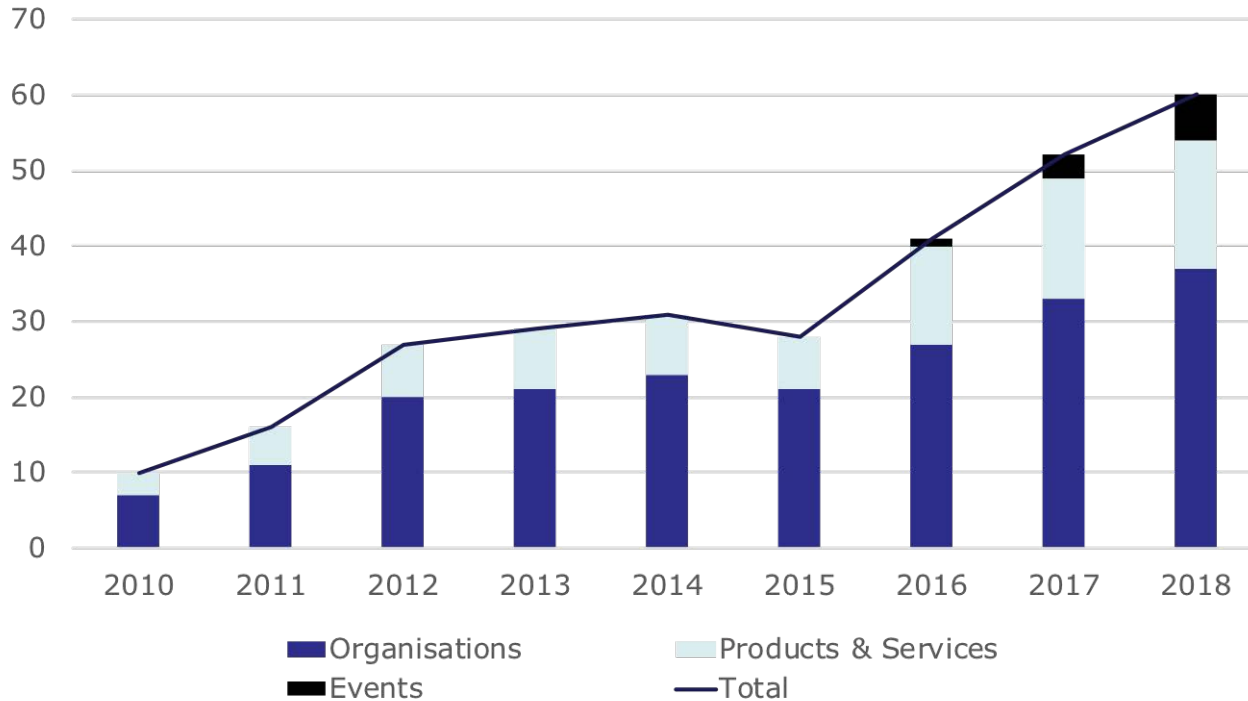
# Pangolin Associates



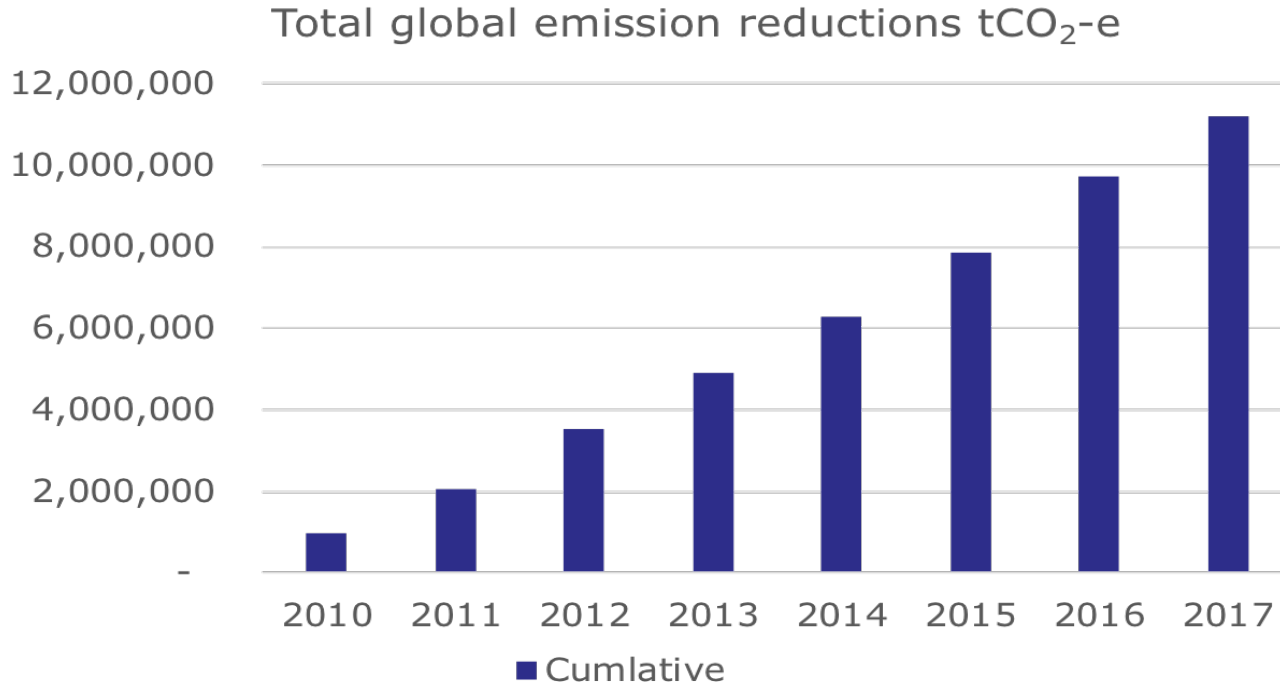
A certified carbon neutral organisation  
& founding Australian B Corporation

[pangolinassociates.com](http://pangolinassociates.com)

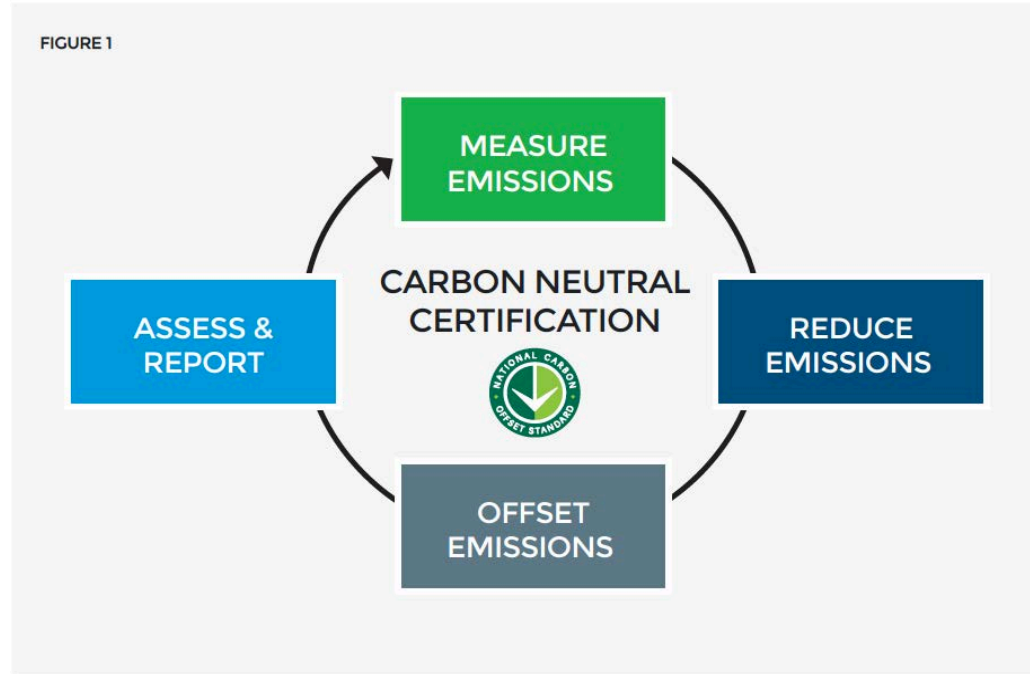
# NCOS certification numbers



# NCOS offsets



# NCOS cycle



# NCOS process

- Establish scope of the certification
- Calculate carbon account for base year
- Develop an emissions reduction strategy
- Prepare a public report
- Review license agreement and trade mark rules
- Arrange for an independent audit
- Submit documents
- Pay admin fee
- Purchase and cancel eligible offsets

# Scope 3 emission sources (must)

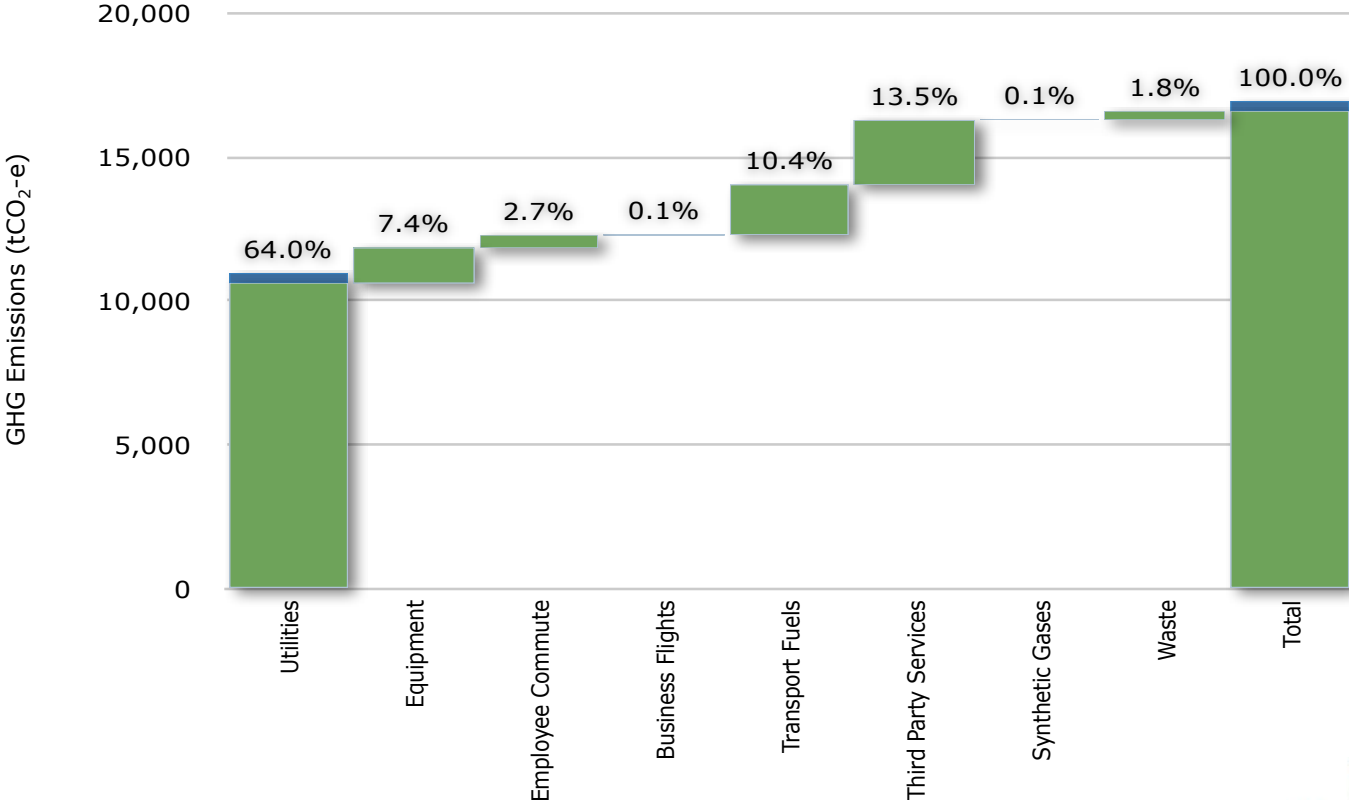
- Waste
- Business travel and accommodation
  - Taxis
  - Rental vehicles
  - Fleet vehicles (this should be included as a Scope 1 source)
  - Flights
  - Accommodation
- Paper
- Base building (if applicable)
  - Electricity
  - Gas
  - Water



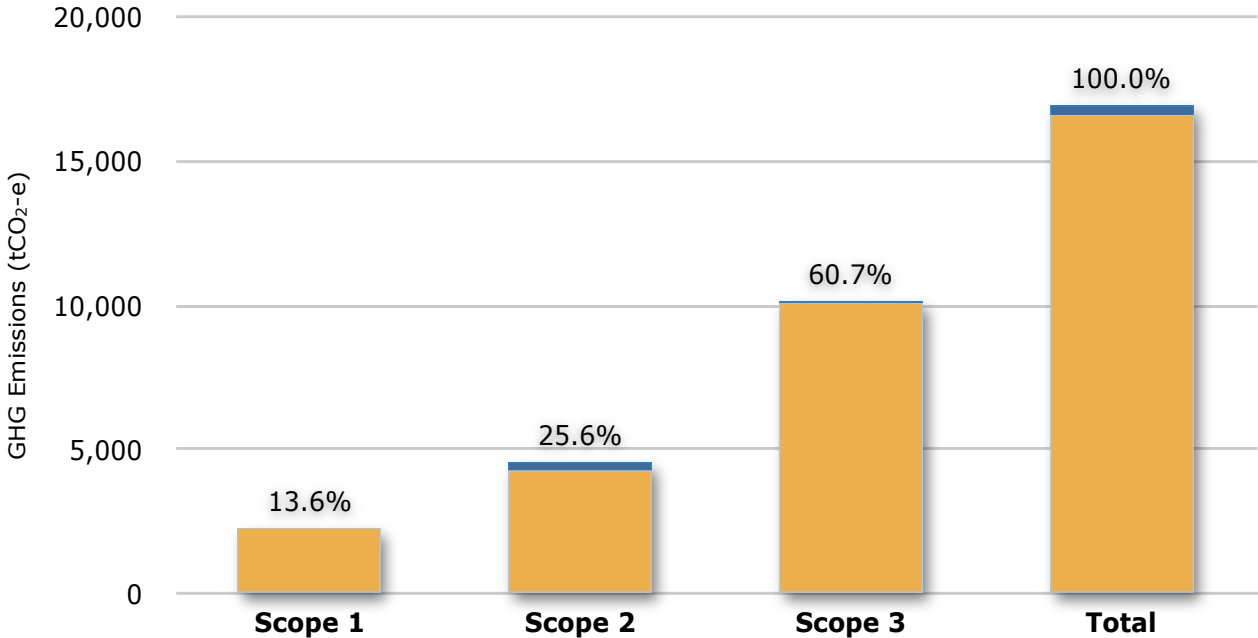
# Scope 3 emission sources (should)

- Staff commute
- Food and catering
- Postage, courier and freight
- IT equipment
- Stationery
- Telecommunications
- Office printing
- Cleaning services
- **Council specific Scope 3 (councils only)**
  - **Asphalt**
  - **Chlorine**
  - **Green waste**
- Data centre electricity

# Example council carbon account by sector



# Example council carbon account by scope



# NCOS costs

Step	Costs (external – ex. GST)	Frequency
Establish boundary and build comprehensive inventory	\$8,000 - \$15,000	Initial
Prepare documents in accordance with the NCOS	\$3,000 - \$6,000	Annual
Purchase Offsets	\$1.50 - \$20/tCO <sub>2</sub> -e	Annual
Independent audit	\$5,000 - \$20,000	Triennial
License Fees	2,000 – 10,000 tCO <sub>2</sub> -e = \$6,909 10,000 – 80,000 tCO <sub>2</sub> -e = \$11,455 (increases with CPI)	Annual
Ongoing calculations and reporting	\$8,000 - \$15,000	Annual

# Offset costs

Offset type	Quality	Price per tonne (AUD)	Sample project
CERS	n/a	\$1.50	<u>CR2 CERS: Usually Wind/hydro projects from India/China</u>
ACCU's		\$18-20.00	<u>Savannah burning projects</u>
VCU's	VCS	\$6.00	<u>Brazil - REDD</u>
VCU's	VCS	\$1.50	<u>China - Youchou Hydropower Project</u>
VERs	Gold standard	\$20.00	<u>Timor-Leste Forest Carbon Gold Standard</u>
VERs	Gold standard	\$6.50	<u>Uganda cookstoves</u>
VERs	Gold standard	\$20.00	<u>Yarra Yarra Biodiversity Corridor Gold Standard</u>

# Offset retirement example



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## Retired VCUs

From Vintage	To Vintage	VCU Serial Numbers	Quantity of VCUs	Registry ID	Project Database ID	Project Name	Project Type	Additional Project Certifications	Additional Issuance Certifications	Origination Program	Project Site State/Province	Project Country	EMA Project Page	Account Holder	Retirement Reason	Beneficial Owner	Retirement Reason Details	Date of Retirement
01/07/2011	15/04/2012	2646-115113330-115113416-VCU-016-MER-AU-14-641-01072011-15042012-0	87	VCSR792	VCSPD641	Redd Forests Grouped Project: Protection of Tasmanian Native Forest	Agriculture Forestry and Other Land Use			Verified Carbon Standard	Tasmania	AUSTRALIA (AU)	<a href="#">View</a>	Pangolin Associates Pty Ltd	Retirement for Person or Organization	Pangolin	Retired on behalf of Reho Travel Pty Ltd for FY15/16	06/12/2016

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APX VCS Registry - Powered by APX Technology

# Other options

- Renewables
  - GreenPower
  - PPAs
  - RECs
- Offset generation on-site
  - ERF or certify
  - >1,000ha
  - Link with other env. programs

## **Christopher Wilson**

Director - Sustainability Advisory Services  
Pangolin Associates Pty Ltd

**t** +61 2 8005 6308

**m** +61 405 988 491

**w** [www.pangolinassociates.com](http://www.pangolinassociates.com)

**e** [chris.wilson@pangolinassociates.com](mailto:chris.wilson@pangolinassociates.com)

Level 14, 70 Pitt Street  
Sydney NSW 2000  
Australia