



Our Sustainability Journey



- Established in Australia 1954 (UK: 1895)
- **Wool Spinning Mill in Bendigo**
- Carpet Tufting Plant and Head Office in Dandenong
- **220 employees across Australia and NZ**
- Wool, wool-blends & synthetic yarns
- **Residential and Commercial markets: 10% exports**
- Accredited to ISO 9001 (Quality) since 1997
- Accredited to ISO 14001 (Environmental) since 2010



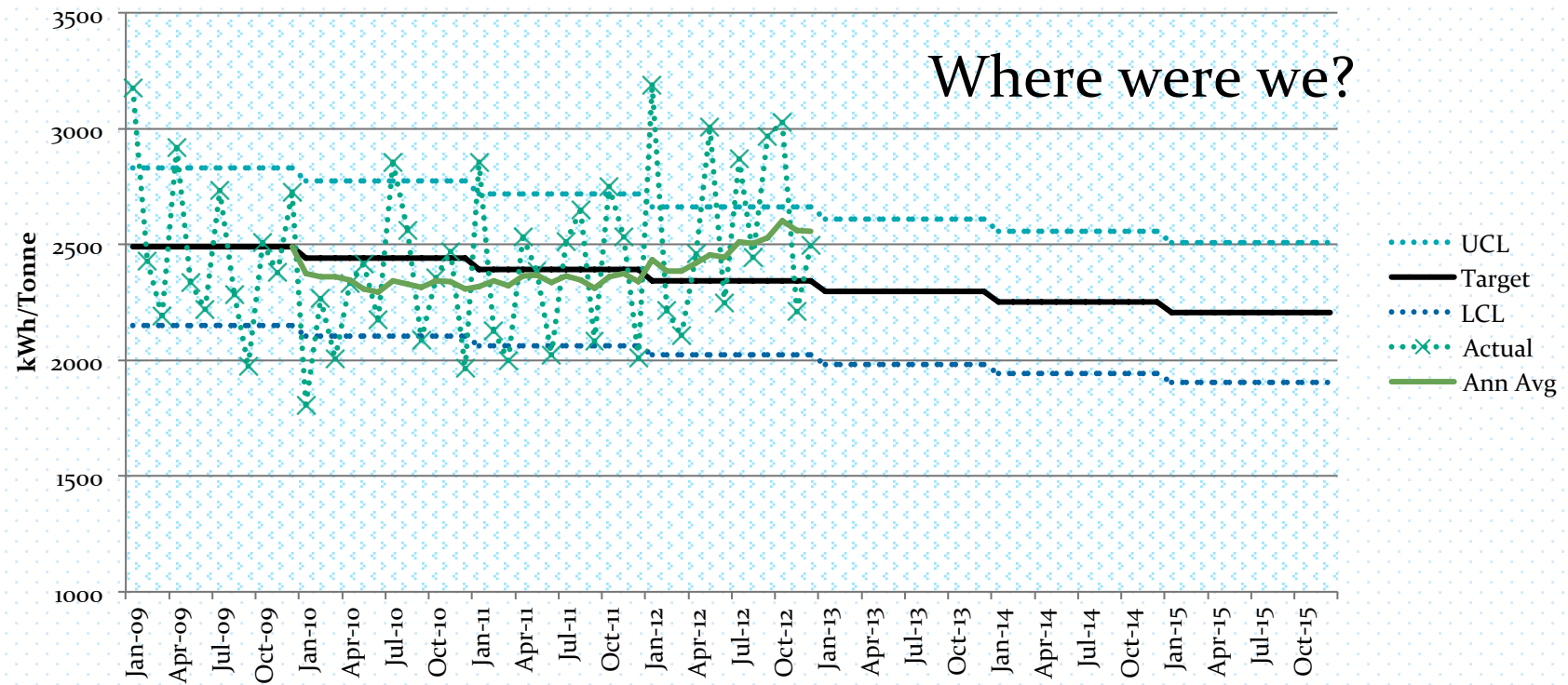


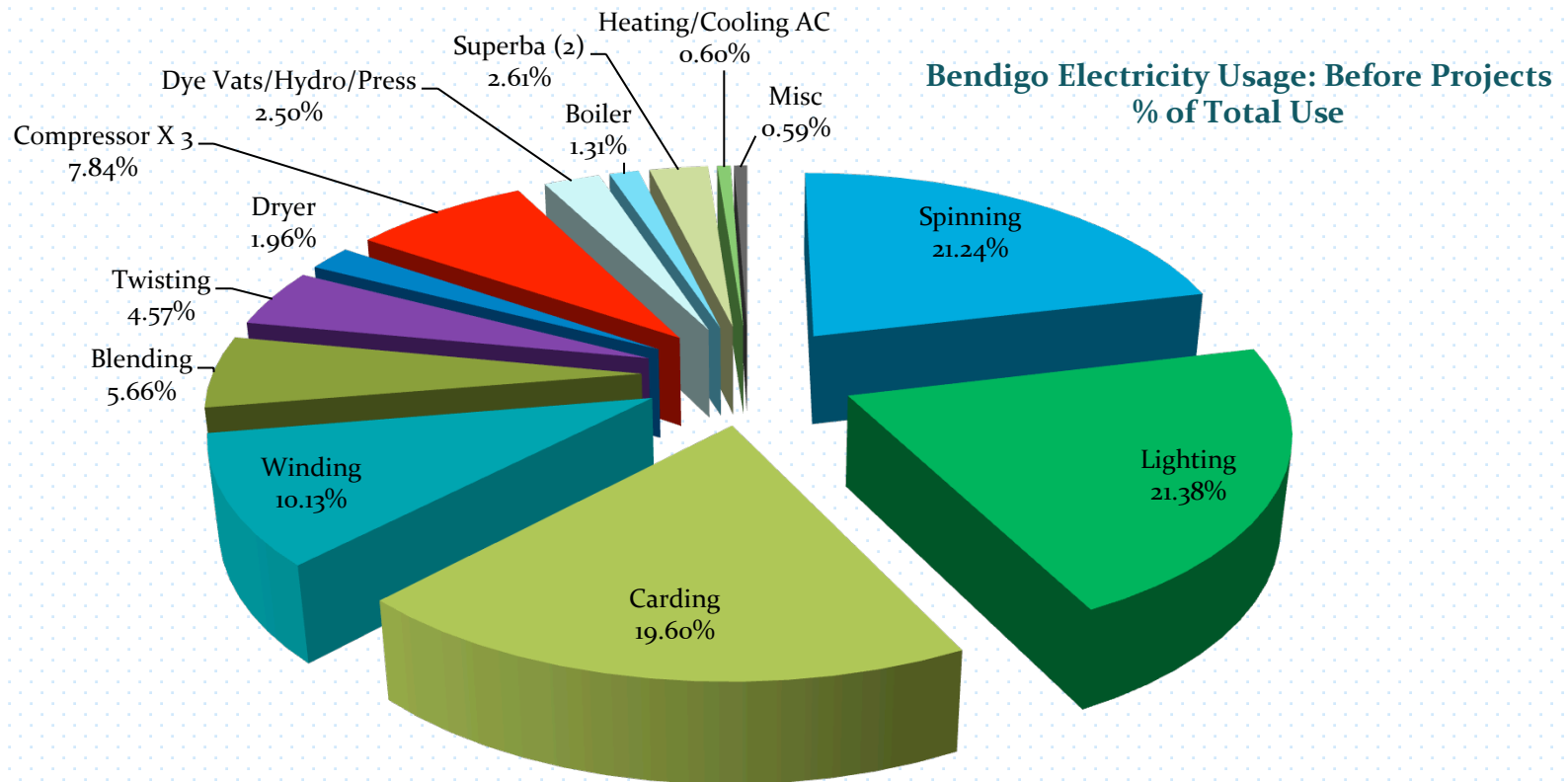
- Commenced working on 14001 in 2008
- Achieved accreditation 2010
- Covers all aspects across the organisation
- Extensive and continuous training for all employees
- Executive position created: OH&S/Environmental Mgt
- Diploma of Sustainability: Kangan
- Develop aspects, resources, services monitoring
- Projects identified and developed from data analysis





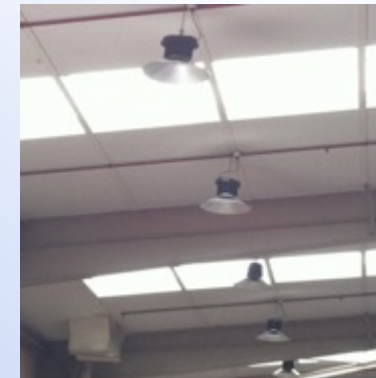
Electricity Usage:BDO: kWh/Tonne Control Chart

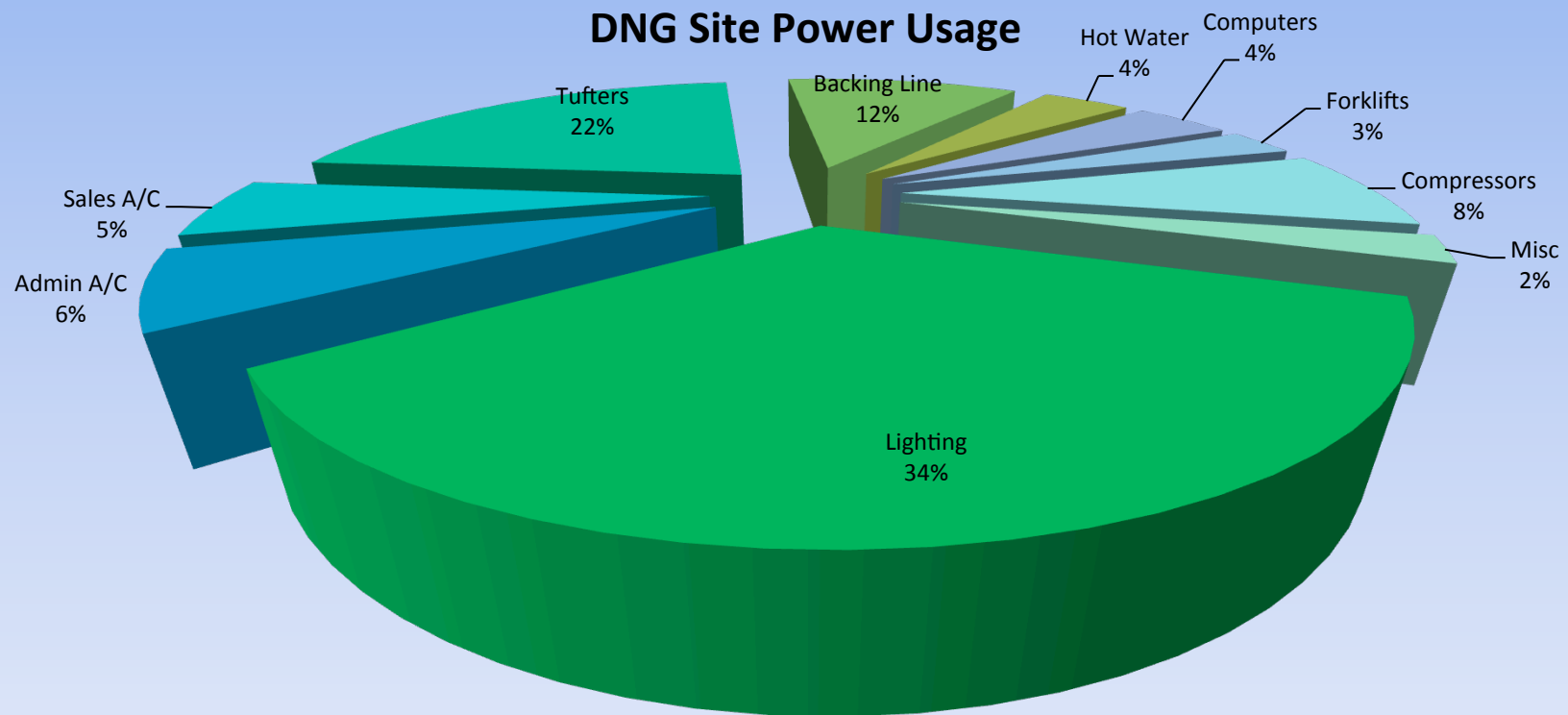




• Developed Lighting Project at Bendigo Plant

- 210 MV hibay @ 485w/light = 567,100kWh/ann
- 400 Fluoro tubes @ 48w/light = 106,900kWh/ann
- Lighting total = 674,000kWh/ann (\$55K)
- 210 LED hibays @ 100w/light = 116,930kWh/ann
- 200 LED tubes @ 18w/light = 20,050kWh/ann
- LED Total = 136,980kWh/ann (\$11K)
- Saving 537,000kWh (\$44k)
- GHG Emission Reduction 700 tonnes
- Project cost \$86K
- Payback 2 years
- Received CTIP funding \$ for \$





- LED Project at Dandenong site
 - 70 hibays : 1000 tubes
 - Reduction of ~240,000kWh/ann
 - Automatic Lux detectors to use external light
-
- | | |
|--------------------------|------------|
| • Project cost | \$85K |
| • Savings | \$20K |
| • GHG Emission Reduction | 315 tonnes |
| • Payback | 4.25 years |
| • Received CTIP funding | \$ for \$ |





- Gas Heating at BDO used 9,500gj/ann (\$57K)
 - Very old gas-hungry hot air heating: low efficiency
 - Replaced with 13 overhead radiant heaters
 - Reduced usage to 1,800gj/ann (\$11K)
-
- | | |
|--------------------------|------------|
| • Project cost | \$80K |
| • Saving | \$46K |
| • GHG Emission Reduction | 400 tonnes |
| • Payback | 1.7 years |
| • Received CTIP funding | \$ for \$ |



Hot Air Heater



Infrared Radiant Heaters



ANDAR Wool Dryer Project

- Used steam tubes to generate heat (~11,000gj/ann)
- **Steam produced in 400hp boiler: 65-70% eff**
- Installed gas burners in dryer (~2,000gj/ann)
- **Secondary energy to primary energy**

- Project cost \$96K
- **Savings \$54K/ann**
- GHG Emission Reduction 460 tonnes
- **Payback 1.8 years**
- Received CTIP funding \$ for \$



- ANDAR Dryer used to dry fibre after dyeing
- Secondary Energy used (Steam)
- Boiler only 65-70% efficiency
- Steam slow to react and very wasteful and big \$
- Remove Steam pipes & replace with gas burners (Primary Energy)
- Installed moisture control system to maximise energy



ANDAR Dryer Project

Steam
Tubes



Secondary Energy



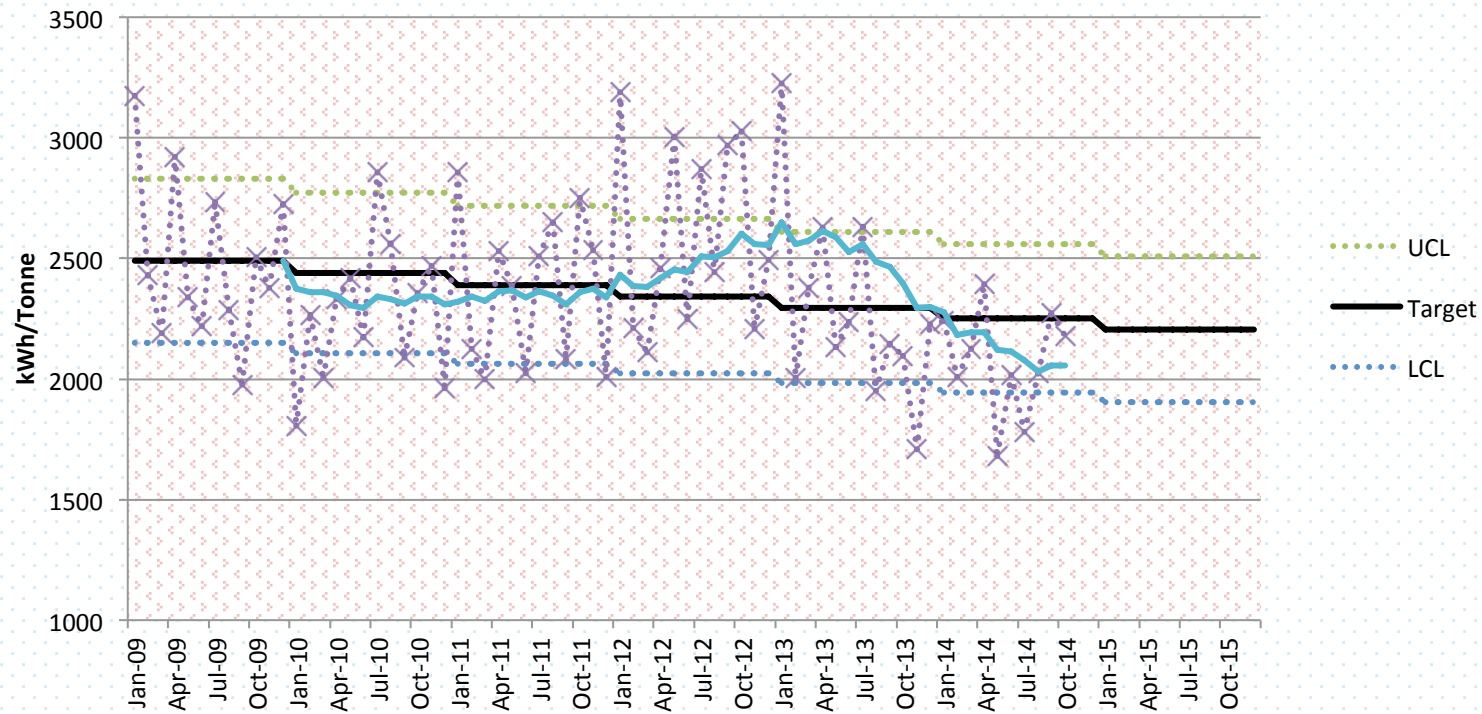
Gas Burners



Primary Energy

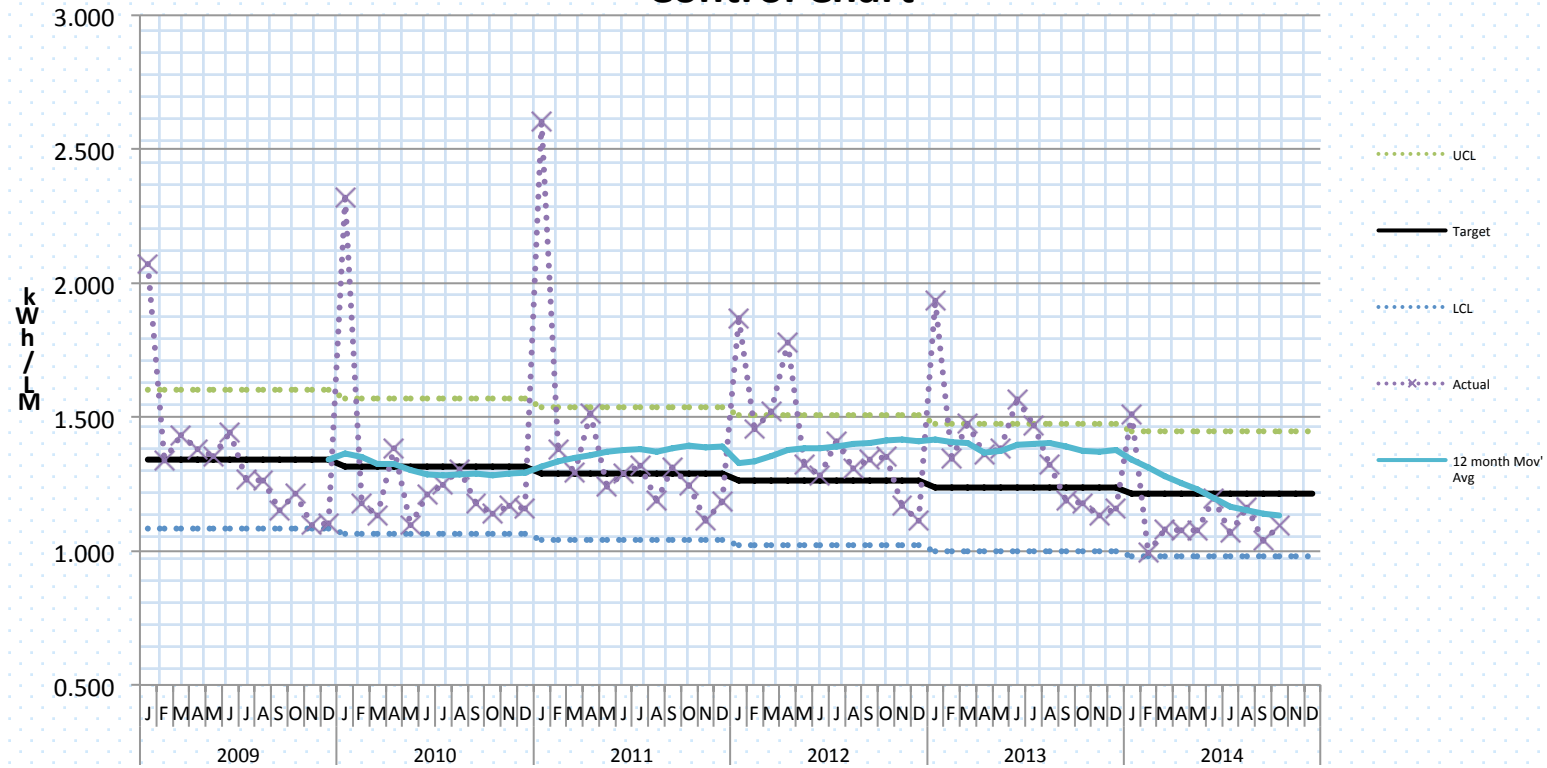


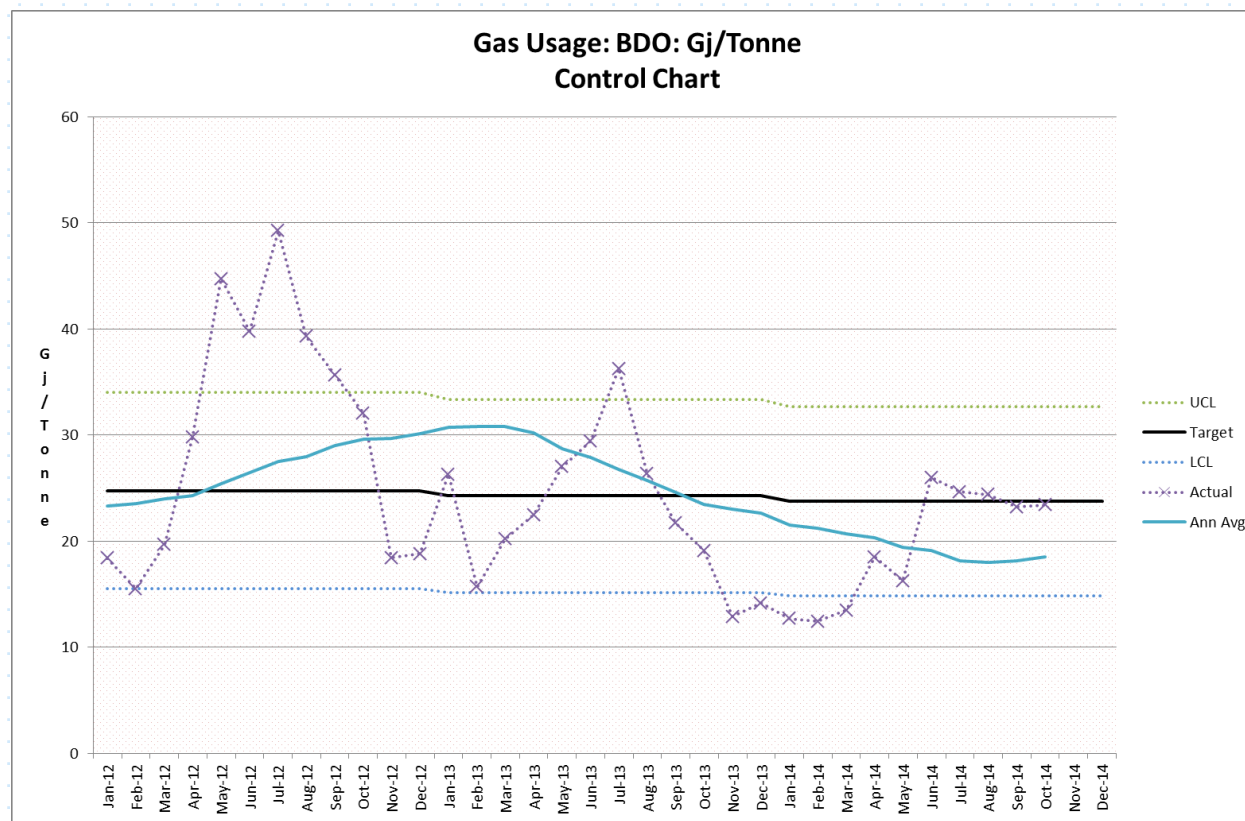
Electricity Usage:BDO: kWh/Tonne Control Chart





DNG Electricity Usage:kWh/LM/Month Control Chart







- Entered Premiers Sustainability Awards 2013
- Finalist (1 of 3)
- Received 2 awards:
 - Sustainability in a Large Business
 - Premiers Award for Regional Recognition



Winner
Premier's **Sustainability** Awards 2013





Recognition and acknowledgement for our sustainability credentials

Increased networking with key environmental, industry and government groups

Increased public recognition through the media

Highlights our on-going commitment to the environment

Provides an example of good environmental practices for the community

Increases the opportunities in our marketing activities

Recognises the work of the members (all levels) of the business

Assists in assessment of our environmental program against external criteria (ISO 14001)

Victoria Carpets

Fine carpets since 1895

remain outside the VEET.

electricity is the second largest operational

MEMBER WINS

VIC Premier's Sustainability Awards



12 www.aigroup.com.au INDUSTRY EDITION 61

A I Group member company, Victoria Carpets, has won the Large Business Award and The Premier's Regional Recognition Award at October's Victorian Premier's Sustainability Awards, in recognition of its Bendigo plant's work in energy and emissions reduction.

A project to reduce energy use saw all factory lighting upgraded to LED technology, resulting in a 550,000 kilowatt-hour reduction in energy. Older heaters were also replaced with new technology, resulting in a 6,000 gigajoule reduction in gas usage.



Victoria Carpets

Fine carpets since 1895

Victoria Carpets Managing Director, Phil Smith, said the changes had led to a reduction in energy costs of about 25%. "We looked at where we were using light, electricity, heating and gas and considered ways to break that down and get better results."

"Woollen yarn production is reasonably energy intensive and the initiatives have improved our drying process and the quality of our product, and made it more consistent."

The company is now pursuing another LED lighting project at its Dandenong site and a large water reduction initiative at the Bendigo site.

Victoria Carpets Managing Director, Phil Smith, accepts the Premier's Award from Victorian Minister for Environment and Climate Change, Ryan Smith (left); and shares the spoils with Victoria Carpets WHS/Environment Manager, David Bentley (right)



Path Forward

- Carpet Recycling: LCA & Trials Underway
- Yarn Waste Reductions
- Water Recycling Project Underway: Bendigo
15,000,000L/ann reduction in water use
Trade waste reductions
Energy reductions
- Co-generation & ORC investigations
- On-going Skills Training in Sustainability
- On-going Communications to all Stakeholders



Our Aim

Reduce our impact on the Environment in a way that maximises benefits to the business and the community

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