



*Modernising  
Manufacturing*

*Energy Efficiency  
at Orora*

*Peter Dobney*

*GM Resources and Energy*

# Orora is an award-winning packaging company with innovation and customer focus



# The Orora Way –How we deliver Value to Shareholders and Customers



*What We Deliver*

**OUTPERFORMANCE THROUGH...**

Customer  
Focus

Safety

Financial  
Discipline

Our  
People

# Orora's Approach to Energy Efficiency

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- Top Down Approach
  - Set Resource Efficiency Targets
  - Endorsement of targets from Orora's MD
  - Sustainability KPIs for Site Managers
- Visibility of Energy Performance at a site and group level
  - Foundation Footprint/sustainability database
  - Benchmarking of individual sites and groups
  - Regular Monitoring and Reporting
  - Feedback to sites
- Engagement with workforce
  - Posters and Displays
  - Training
  - Tool box talks
- Capital for Energy Efficiency Projects
  - Projects must meet investment hurdle rate
  - Look at additionality (other benefits)

# 5 Year Resource Efficiency Targets set by Orora's MD



## Greenhouse Gas



**-10%**

CO<sup>2</sup> tonnes / \$M net sales

## Water



**-10%**

kL / \$M net sales

## Landfill

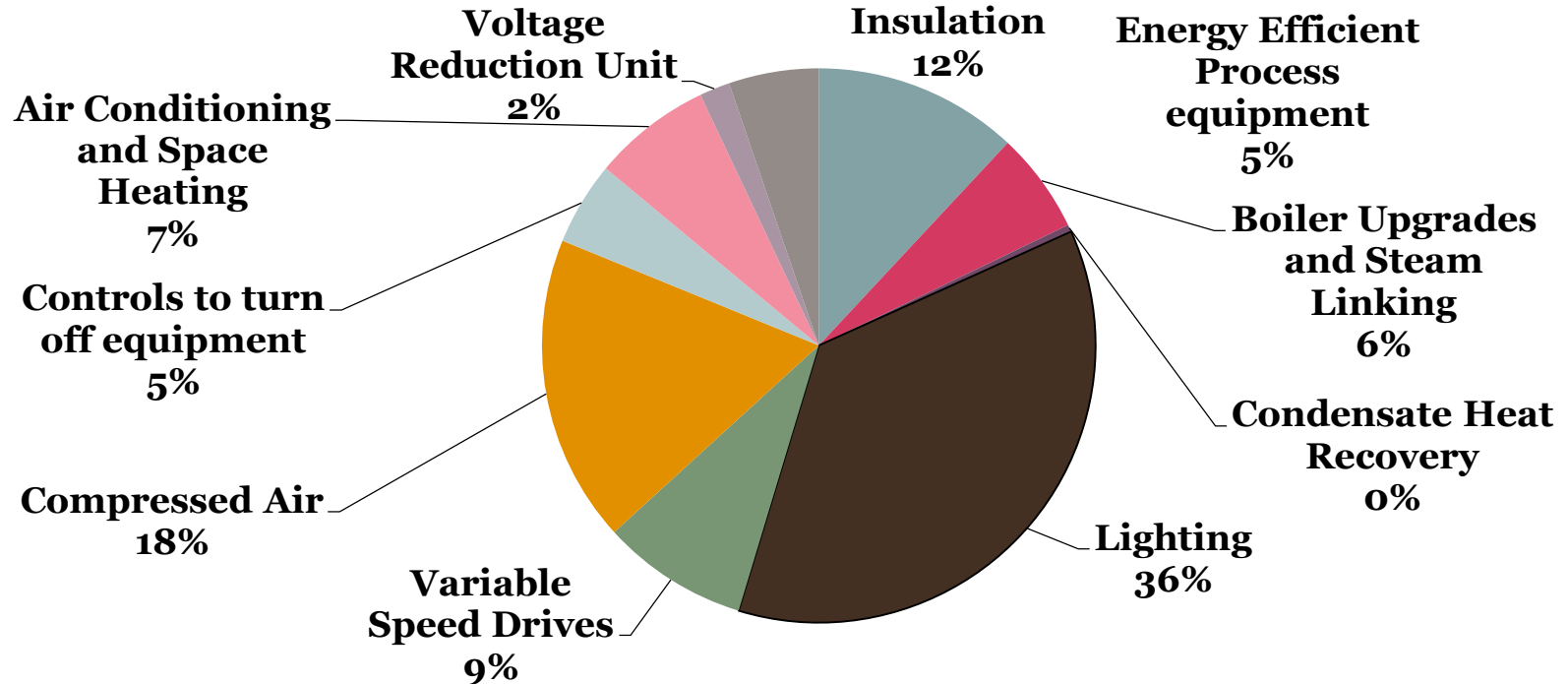


**-25%**

tonnes / \$M net sales

Cal 2013 Baseline Year

# Efficiency outcomes by technology



## **Energy Efficiency**

- Reduce energy wastage
  - Leakage reduction
  - Operating hours
  - Unnecessary operation of equipment
  - Inappropriate use of say compressed air
- Invest in more efficient equipment
  - High efficiency motors
  - Lighting
  - Major equipment
- Improved controls
  - Combustion controls
  - Air compressor optimisation
  - Automatic shut offs
- Optimising equipment efficiency
- Optimising process conditions
  - Wider control bands
  - Tighter control bands
- Recover waste heat
- Demand reduction

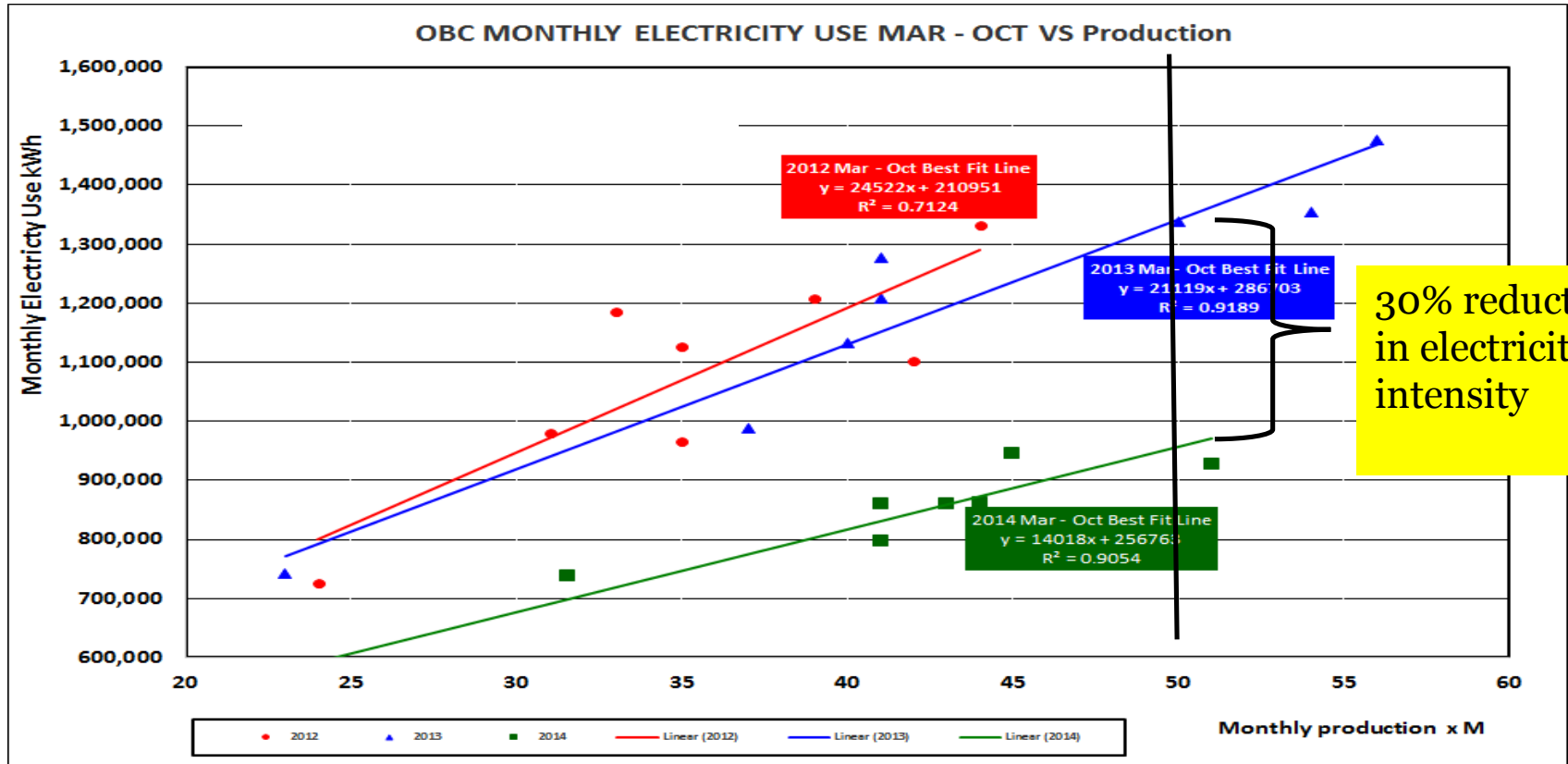
## **Energy Productivity**

- Reduce Wastage
  - Raw material wastage
  - Product wastage
  - Unnecessary operation of equipment
- Product innovation
  - Less energy
  - Lower temperatures
- Increased plant utilisation
  - Faster job changes
  - Higher uptime
- Increase output of existing equipment
  - Overcome barriers to speed up equipment
  - Operator training and motivation
- De-bottleneck processes
  - Make more with same process envelope
- Light weight products
  - Less raw material
  - Less energy involved
  - Higher strength materials

**A successful Energy Efficiency Program needs to address both Energy Efficiency and Energy Productivity**



# Benchmarking Performance Drives Energy Efficiency and Productivity – Producing More Product, Using Less Energy



- Operating in a Global Marketplace means that you need to be on top of your game.
- Sustainability and Modernisation of Manufacturing go hand in hand.
- To get results you need to:
  - Set targets
  - Have a top down approach backed up with resources to achieve sustainable results.
  - Provide capital and resources
  - Go beyond Energy Efficiency to Energy Productivity to unlock greater efficiencies.