The New Zealand Sustainability Dashboard

ARGOS

# Putting Realistic Numbers into Wine's Story

The AgriBusiness Group


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**Agrilink New Zealand**

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AGRI LINK

WEA NZ CONFERENCE

Blenheim, 21st July 2016

NEW ZEALAND SUSTAINABLE WINEGROWING

# Outline

- Context and background
  - Food miles,
  - NZ Merino,
  - Sustainable Winegrowing New Zealand

- Building reports from the grower & winery up
  - Individualised reporting
  - The industries performance

# Outline

- Aspirational goals
  - Realistic
  - The dilemma

- Energy, aspirational goals

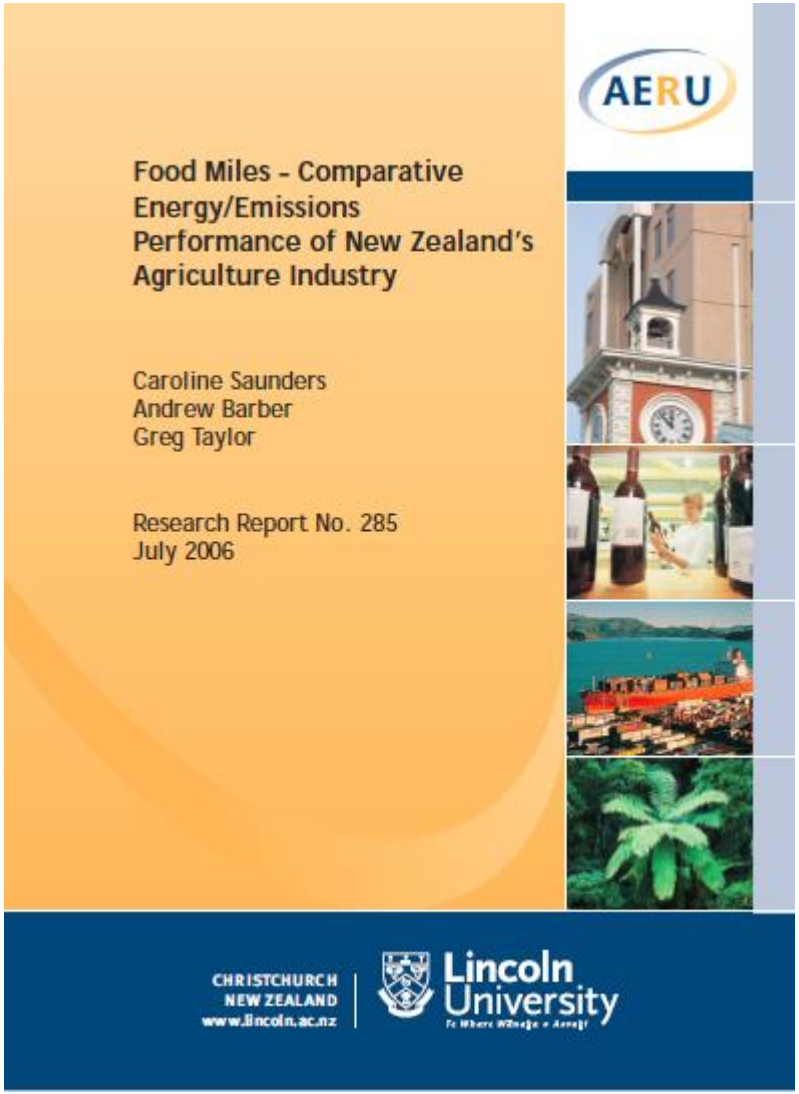
- Where do the stories go next?
  - Origin Green, Ireland
  - The New Zealand Sustainability Dashbard

# Context

Why choose Anchor Butter that's shipped frozen

when you can choose Country Life?

Before Anchor Butter reaches your table it's frozen and shipped over 11,000 miles from New Zealand.
Country Life, however, is made with milk from British farms and is proud to carry the Red Tractor logo for food standards. So why choose anything else?

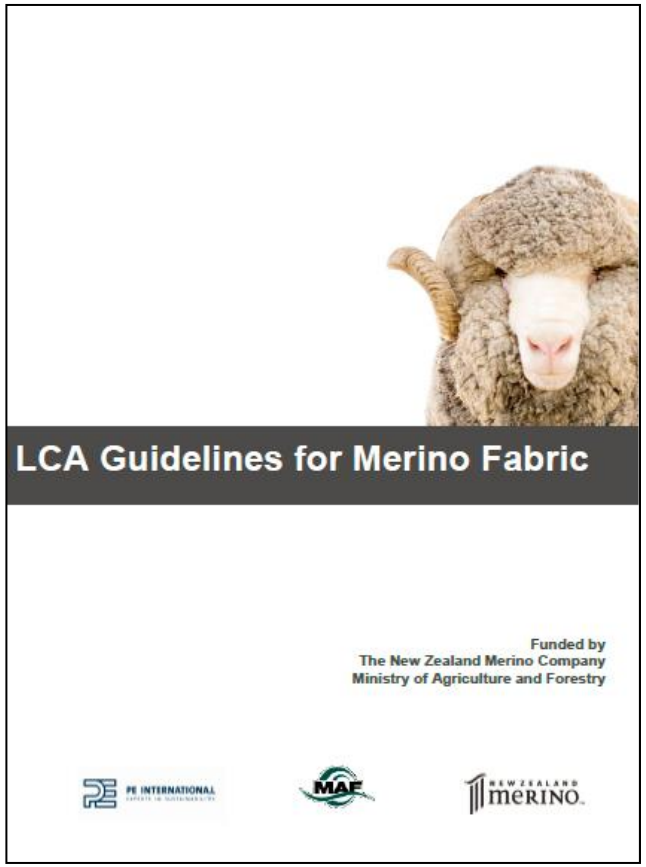



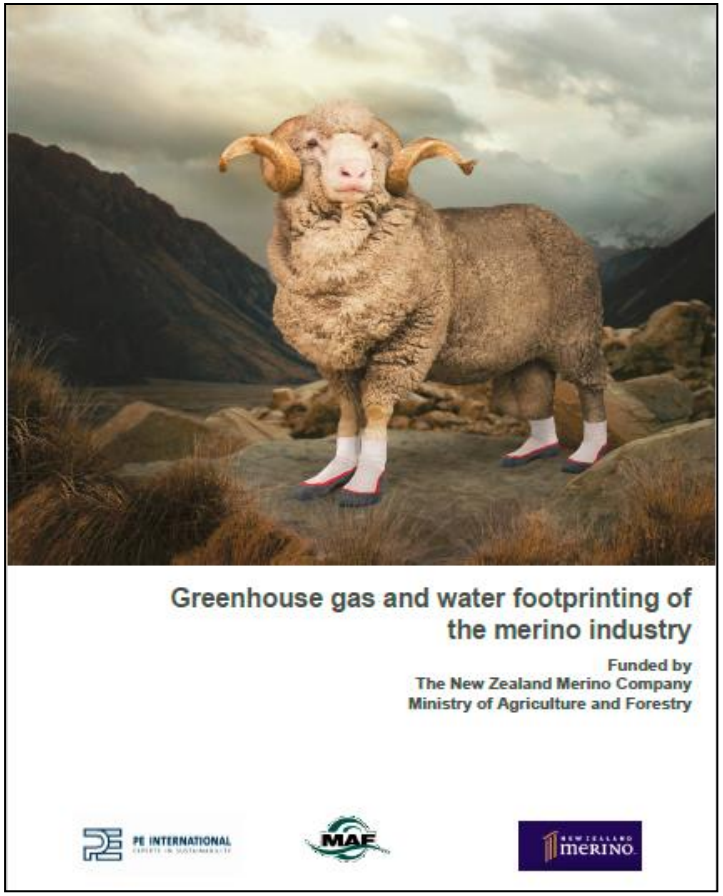
There is increasing demand on land to produce food and fuel to protect the environment.

# System for calculating carbon footprint flawed

# Merino's numbers

- Show me the evidence




# New Zealand Wine

- Isn’t afraid to throw round their own pictures

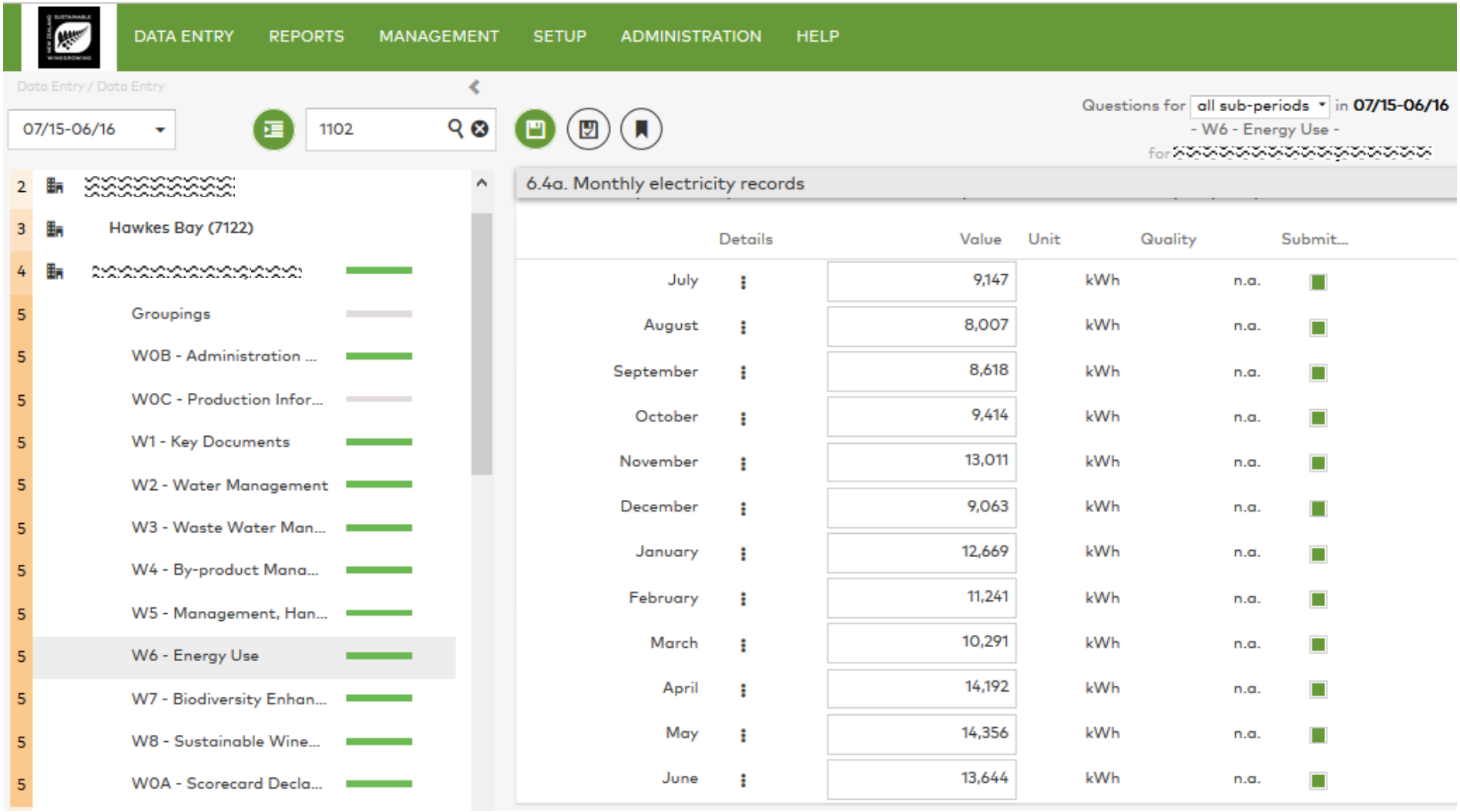
# Substance behind the pictures

Pillars of sustainability

- Comprehensive scorecard

*Creating a Sustainable Legacy*

SUSTAINABLE NEW ZEALAND WINEGROWING

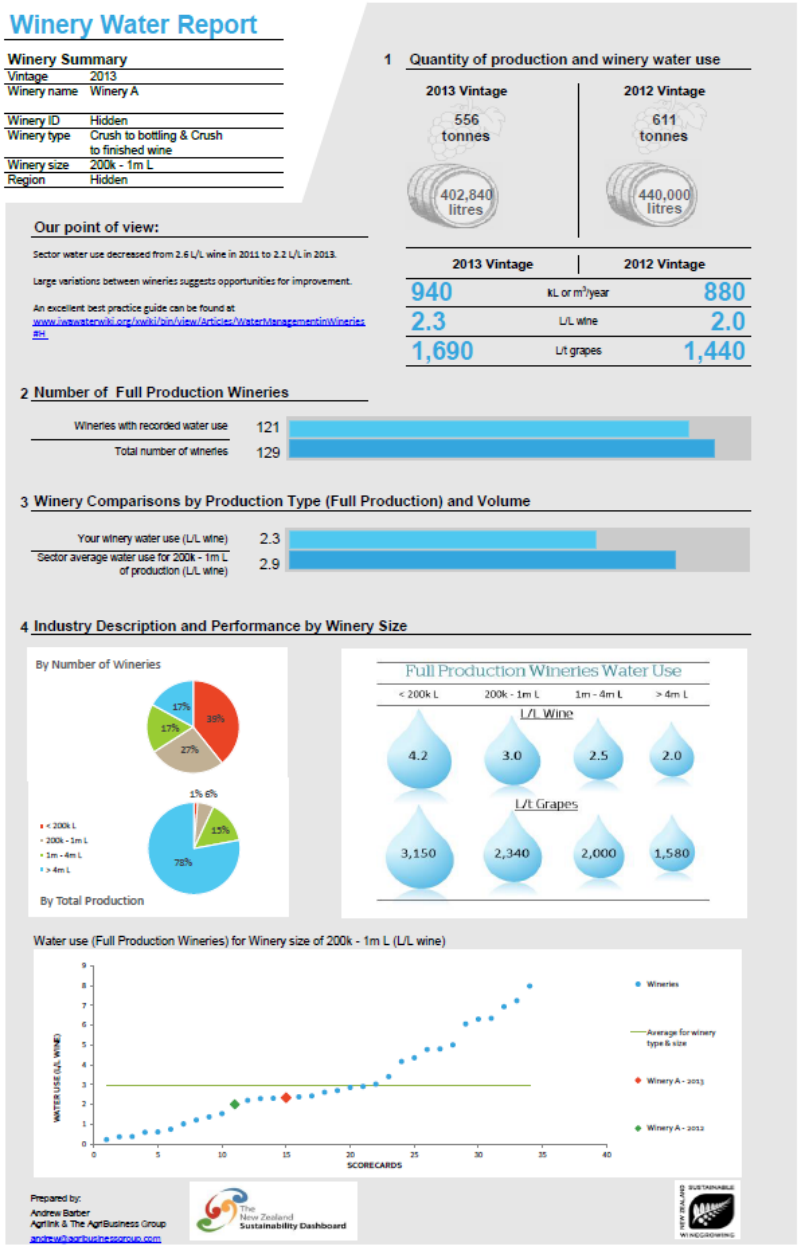

DATA ENTRY
REPORTS
MANAGEMENT
SETUP
ADMINISTRATION
HELP
Data Entry / Data Entry
07/15-06/16
1102
Questions for all sub-periods in 07/15-06/16
- W6 - Energy Use -
for
2
3 Hawkes Bay (7122)
4
5 Groupings
5 W0B - Administration ...
5 W0C - Production Infor...
5 W1 - Key Documents
5 W2 - Water Management
5 W3 - Waste Water Man...
5 W4 - By-product Mana...
5 W5 - Management, Han...
5 W6 - Energy Use
5 W7 - Biodiversity Enhan...
5 W8 - Sustainable Wine...
5 W0A - Scorecard Decla...
6.4a. Monthly electricity records
Details
Value
Unit
Quality
Submit...
July 9,147 kWh n.a.
August 8,007 kWh n.a.
September 8,618 kWh n.a.
October 9,414 kWh n.a.
November 13,011 kWh n.a.
December 9,063 kWh n.a.
January 12,669 kWh n.a.
February 11,241 kWh n.a.
March 10,291 kWh n.a.
April 14,192 kWh n.a.
May 14,356 kWh n.a.
June 13,644 kWh n.a.

# Reporting

- Focused on  building reporting from the grower and winery up

- 1. Demand
- 2. That is the level for action and change

# Individualised reporting



## Winery Water Report

**Winery Summary**

| | |
|---|---|
| Vintage | 2013 |
| Winery name | Winery A |
| Winery ID | Hidden |
| Winery type | Crush to bottling & Crush to finished wine |
| Winery size | 200k - 1m L |
| Region | Hidden |

**1 Quantity of production and winery water use**

| 2013 Vintage | 2012 Vintage |
|---|---|
| 556 tonnes | 611 tonnes |
| 402,840 litres | 440,000 litres |

**Our point of view:**

Sector water use decreased from 2.6 L/L wine in 2011 to 2.2 L/L in 2013.

Large variations between wineries suggests opportunities for improvement.

An excellent best practice guide can be found at www.iwawaterwiki.org/xwiki/bin/view/Articles/WaterManagementinWineries#H

| 2013 Vintage | | 2012 Vintage |
|---|---|---|
| 940 | kL or $m^3$/year | 880 |
| 2.3 | L/L wine | 2.0 |
| 1,690 | L/t grapes | 1,440 |

**2 Number of Full Production Wineries**

| | |
|---|---|
| Wineries with recorded water use | 121 |
| Total number of wineries | 129 |

**3 Winery Comparisons by Production Type (Full Production) and Volume**

| | |
|---|---|
| Your winery water use (L/L wine) | 2.3 |
| Sector average water use for 200k - 1m L of production (L/L wine) | 2.9 |

**4 Industry Description and Performance by Winery Size**

By Number of Wineries





By Total Production

Full Production Wineries Water Use

| | < 200k L | 200k - 1m L | 1m - 4m L | > 4m L |
|---|---|---|---|---|
| L/L Wine | 4.2 | 3.0 | 2.5 | 2.0 |
| L/t Grapes | 3,150 | 2,340 | 2,000 | 1,580 |

Water use (Full Production Wineries) for Winery size of 200k - 1m L (L/L wine)



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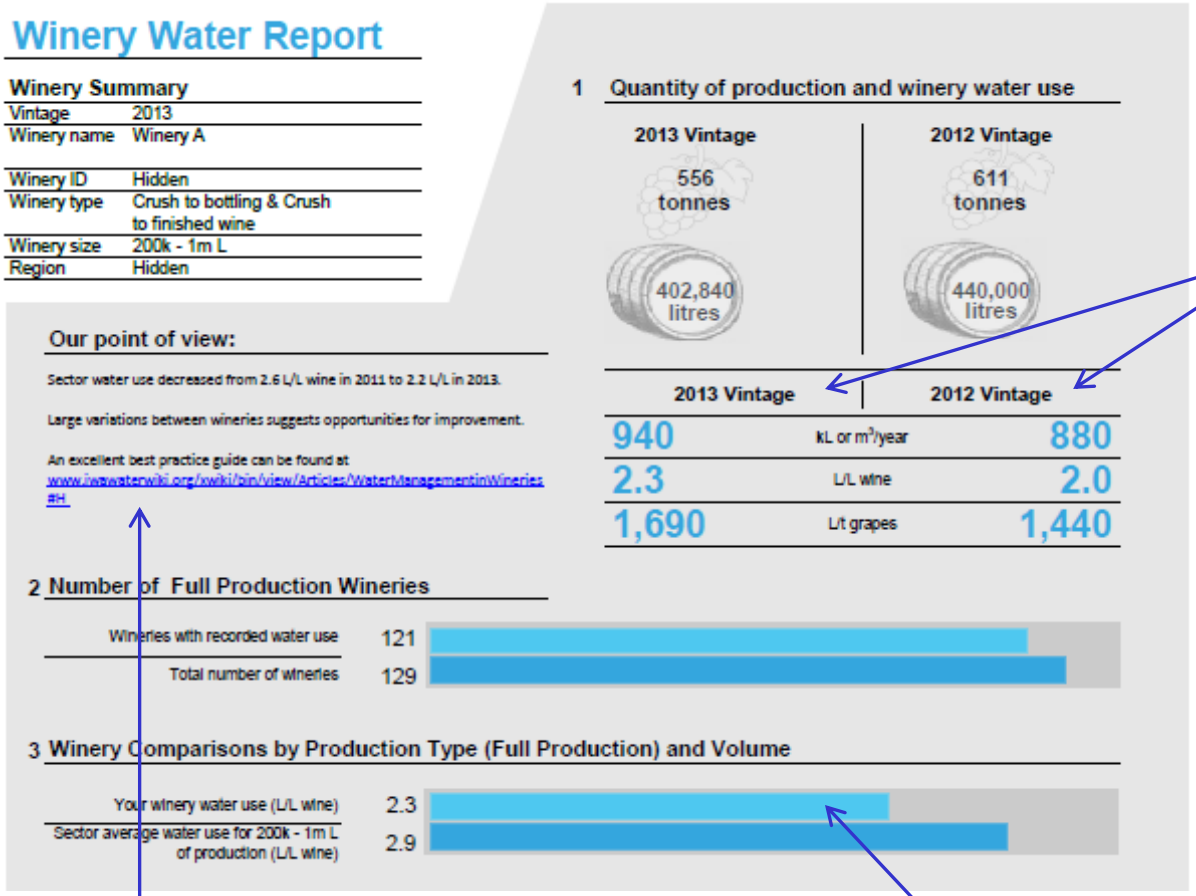
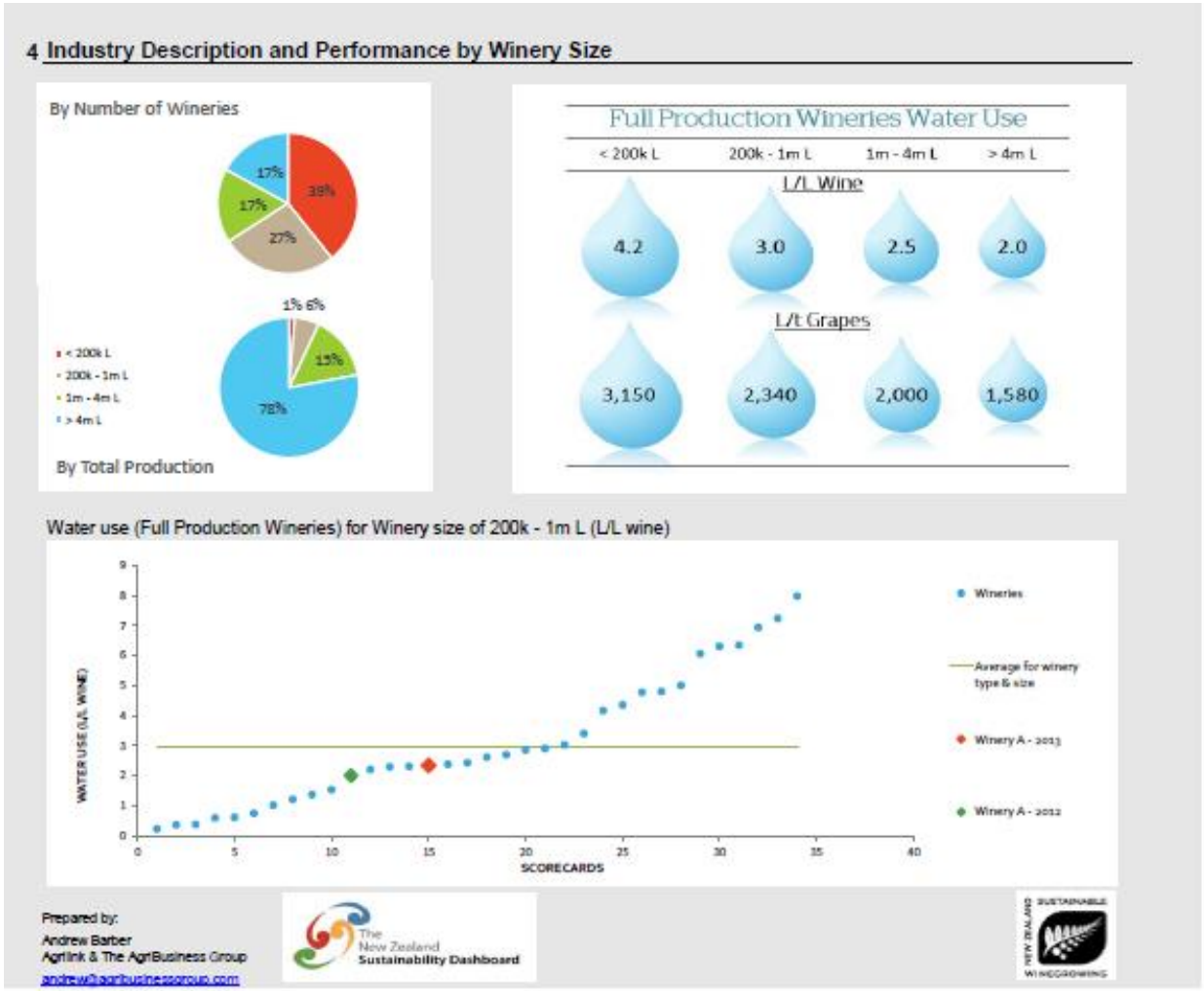
The New Zealand Sustainability Dashboard




Your performance compared to the previous vintage

Links to learning resources

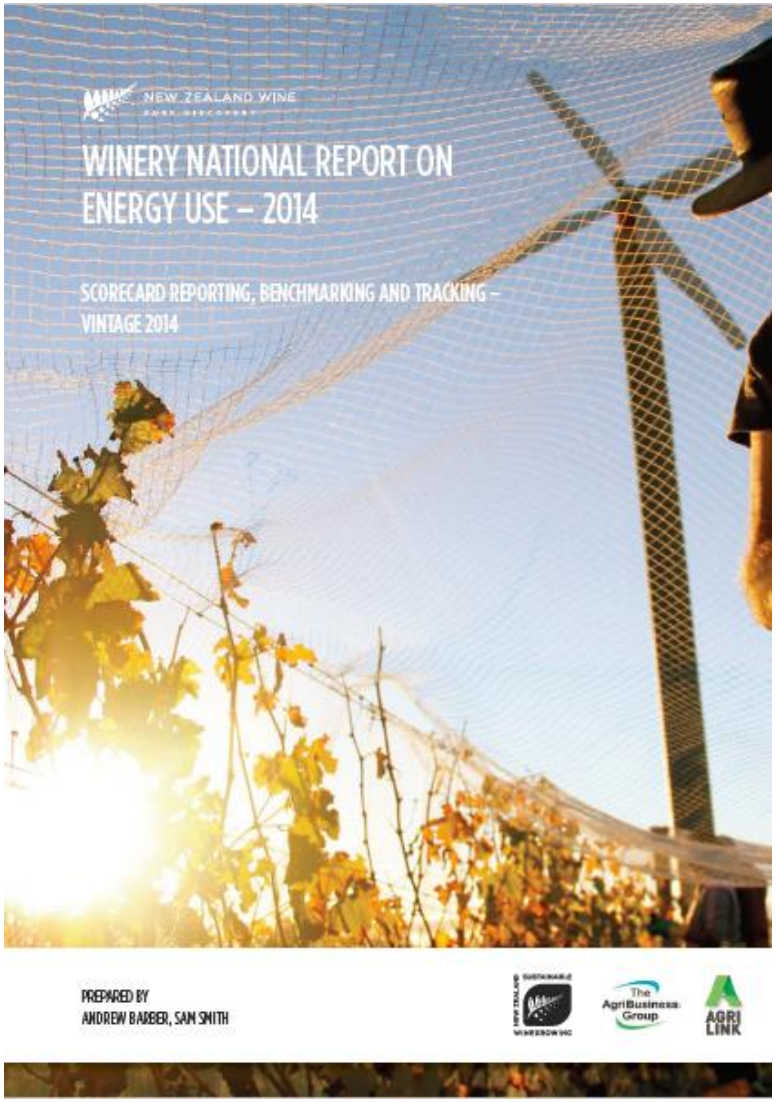
Your performance compared to the same sized wineries

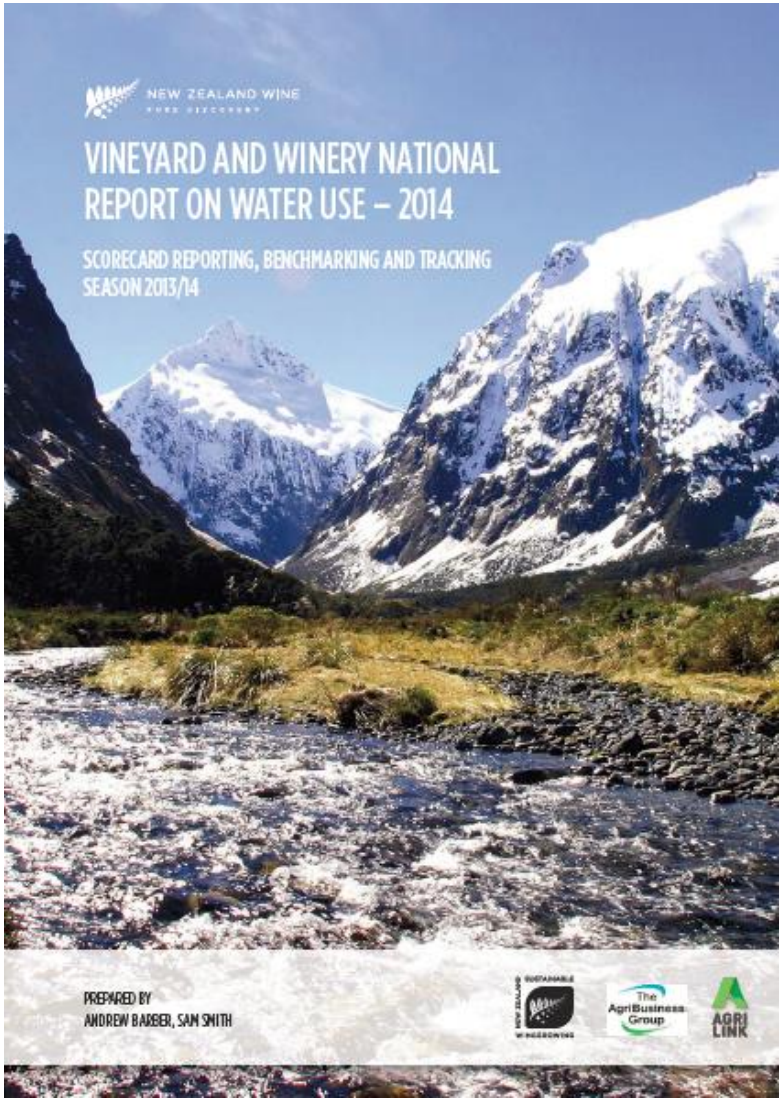



Your performance compared to the spread of same sized wineries

# Electronic Dashboards

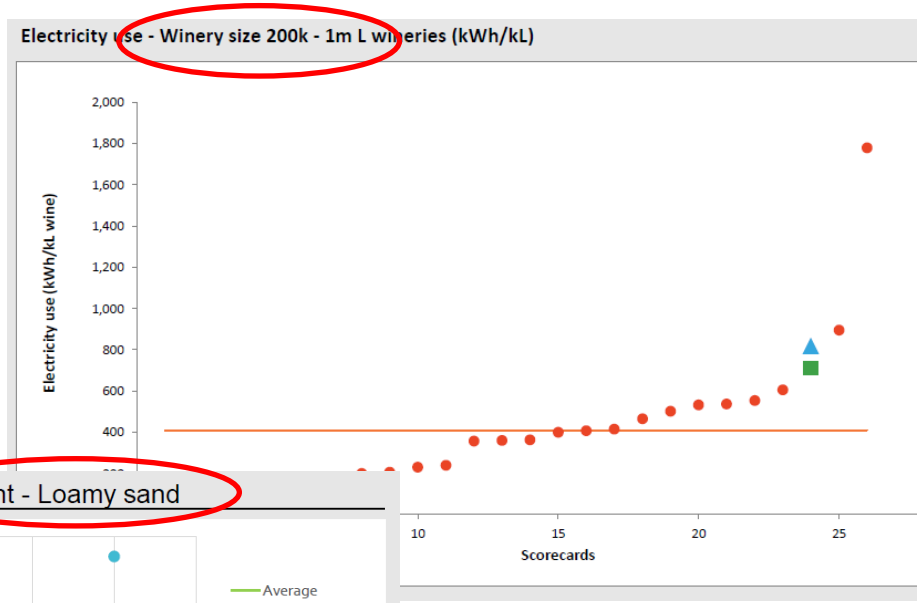
# Developing the Industries Story

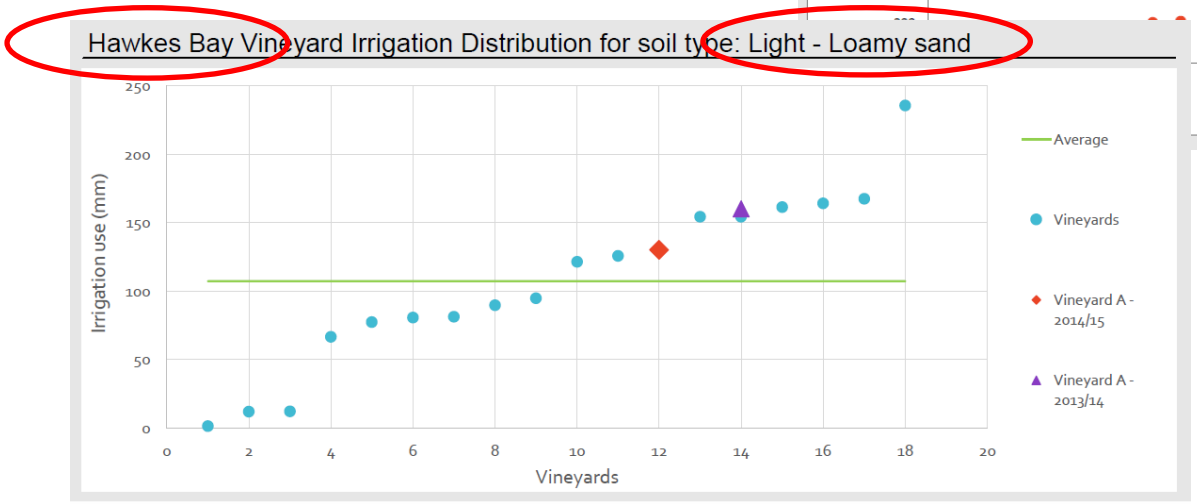


# Setting targets vs benchmarks

- Previously we have set tuned benchmarks
  - Winery size
  - Vineyard region and soil type



# Aspirational Goal Dilemma

- Setting ambitious targets and potentially having to admit failure, versus
- Achieving an unambitious target with time to spare

- Getting close to an ambitious target has a bigger overall impact
- However failing is often a bigger story

# Putting in realistic numbers

- The use of sustainable renewable energy is **maximised**
- 100% renewable energy sources
- Sounds wonderful but isn't realistic for the industry
- Sounds wonderful and can/will be achieved by a winery

# Wineries leading the way

- Mt Difficulty Wines use a wood burning boiler

- Yealands Winery use pruning boilers, wind turbines and solar panels. Meeting 15 – 20% of their needs and targeting 50%

# Built the baseline and 2 scenarios Winery – Renewable energy

- Baseline: 81% renewable energy sources
- Scenario 1 - 50% off-grid: 90% renewable
- Scenario 2 - 100% renewable sources

| Industry Targets (Winery) | Baseline | Scenario 1 | Scenario 2 |
|---|---|---|---|
| 81% | 100% | 0% | 0% |
| 85% | 60% | 30% | 10% |
| 90% | 20% | 60% | 20% |

# Vineyards – Renewable energy

- Baseline: 18% renewable energy sources
- Scenario 1 – biofuel + 50% off-grid: 24%
- Scenario 2 – 100% renewable sources

| Industry Targets (Vineyard) | Baseline | Scenario 1 | Scenario 2 |
|---|---|---|---|
| 18% | 100% | 0% | 0% |
| 23% | 75% | 20% | 5% |
| 33% | 35% | 50% | 15% |

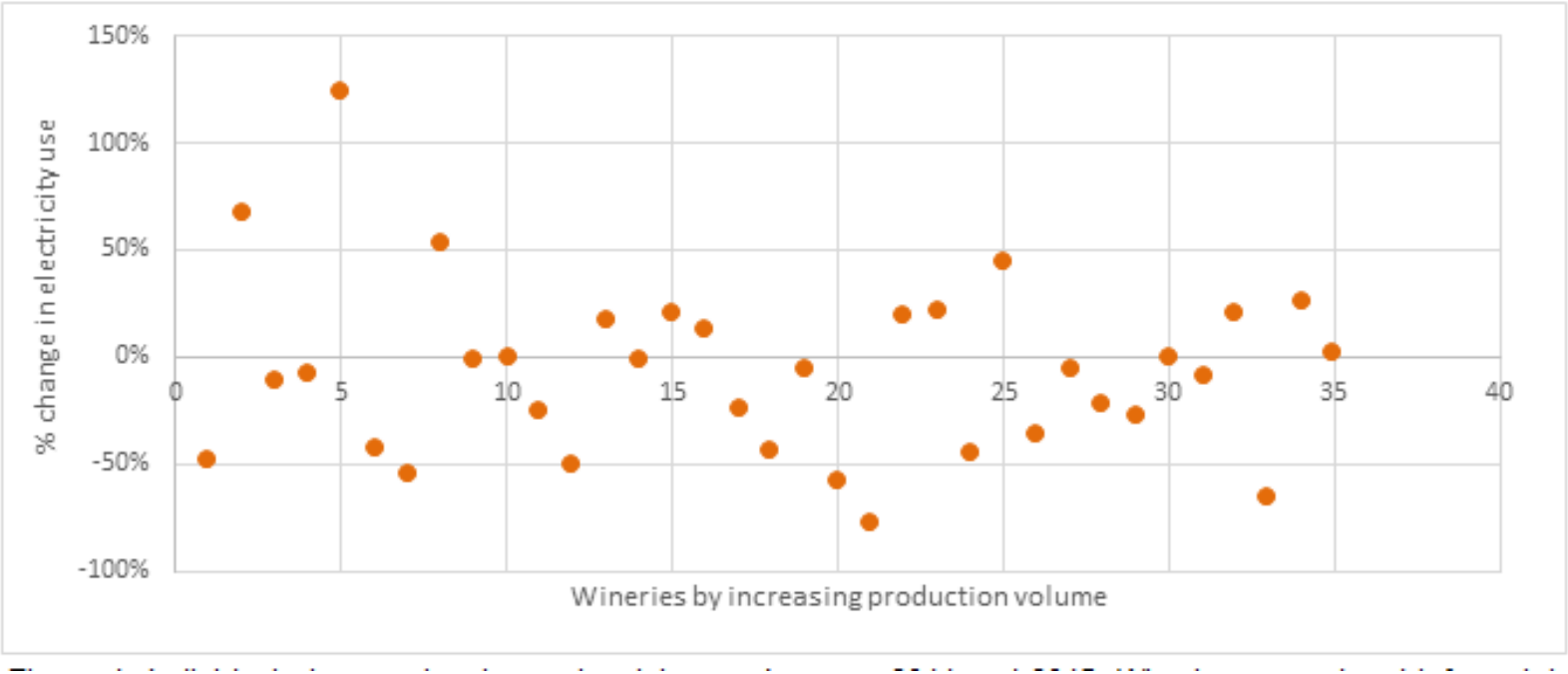
# Overall industry

| Industry Targets | Date | Vineyard | Winery |
|---|---|---|---|
| 43% | Now | 18% | 81% |
| 46% | 2040 | 19% | 86% |
| 56% | 2075 | 34% | 90% |

- 100% renewable energy sources
- Individuals yes
- Anything over 50% is a considerable stretch for the whole industry

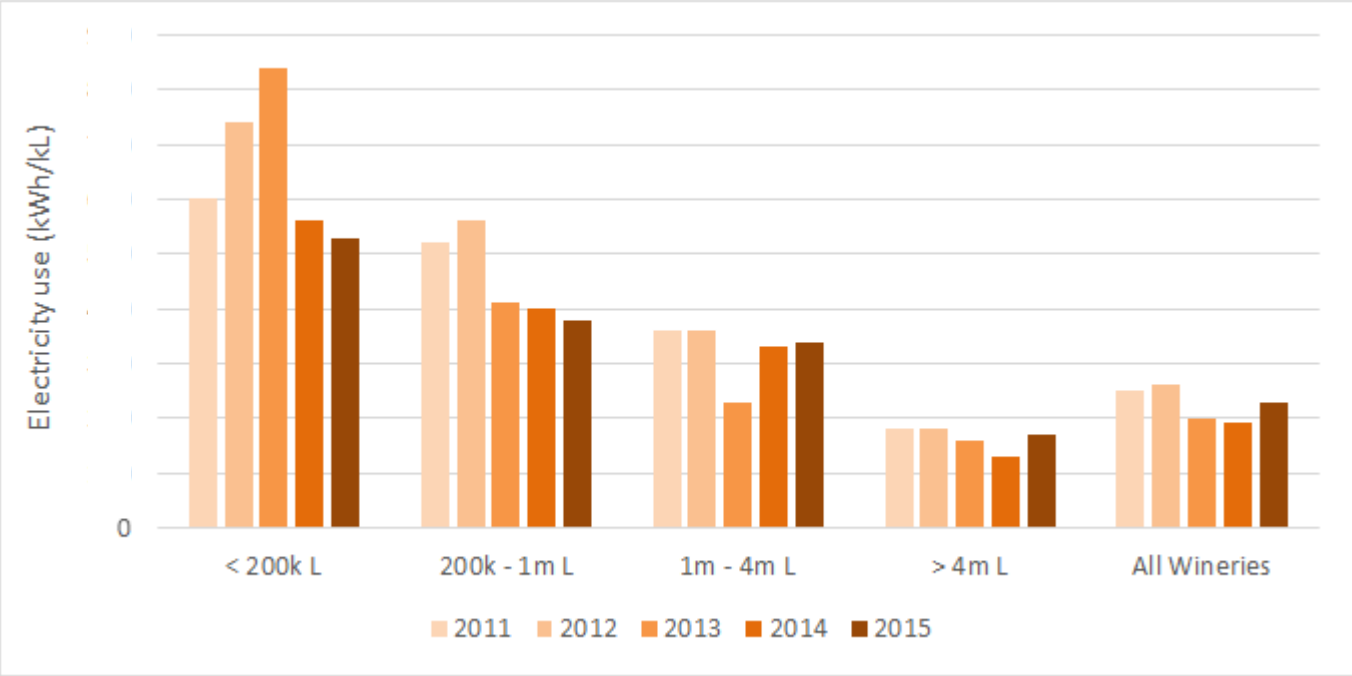
# Energy Efficiency

- Winery size does not affect change



# Energy Use

- Knowing historical performance informs our future



# Informed Aspirational Goals

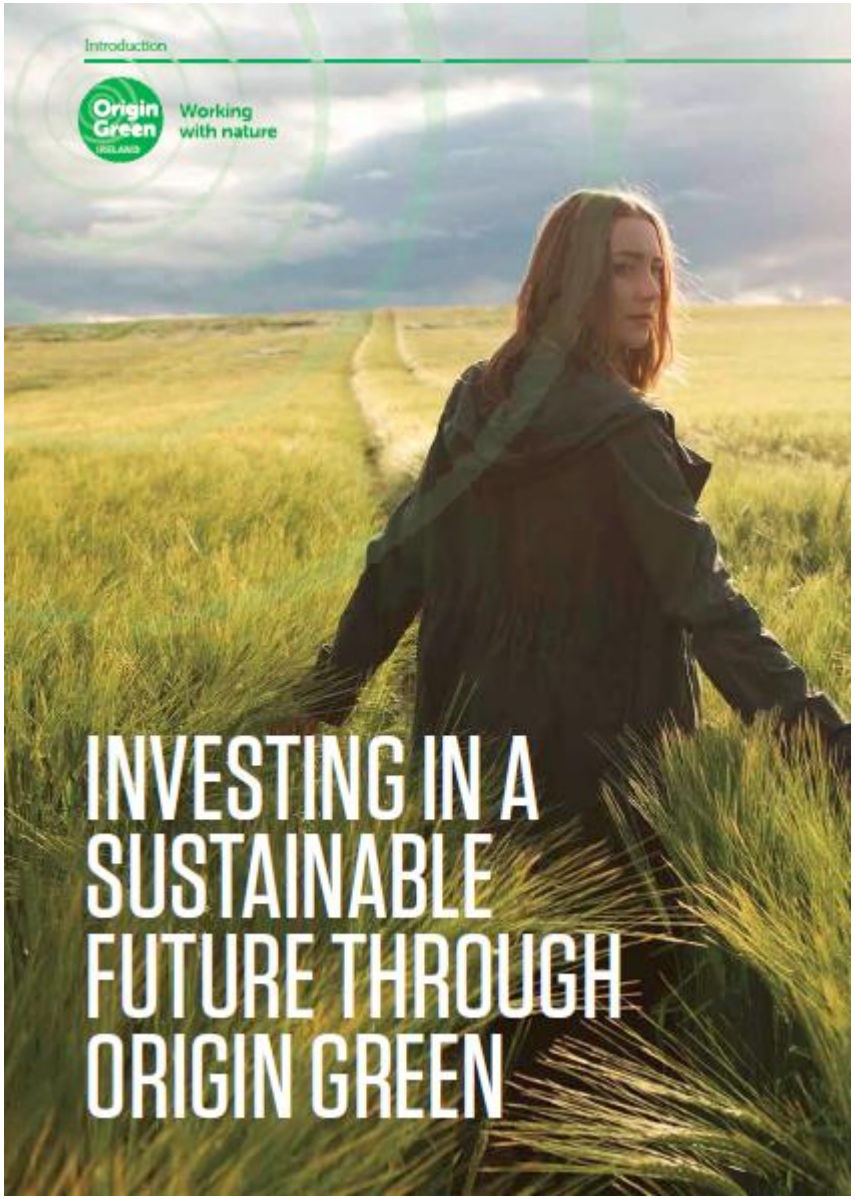
- The median NZ winery has been achieving energy savings of 1% per year
- Top 25% achieved savings of at least 7% and averaged 10% savings per year
- The whole industry has achieved 4% savings per year (18% since 2011)

# Informed Aspirational Goals

- An aspirational industry goal might be, 5% per year, or 20% by 2020

- Still recognising and celebrating those that soar much higher.

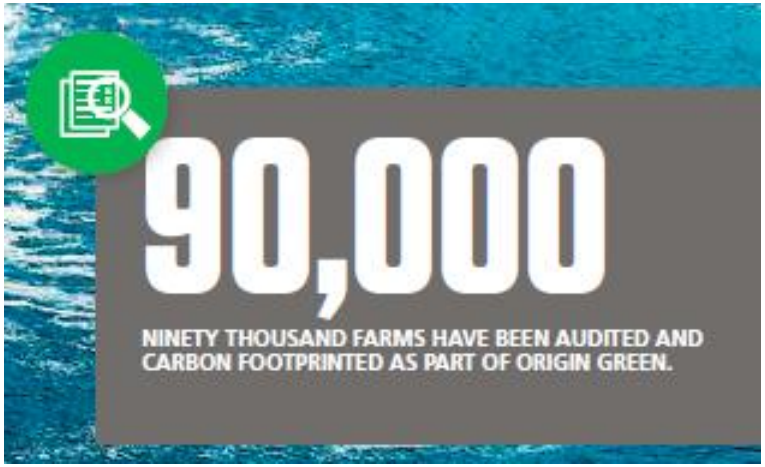
# The Next Stage



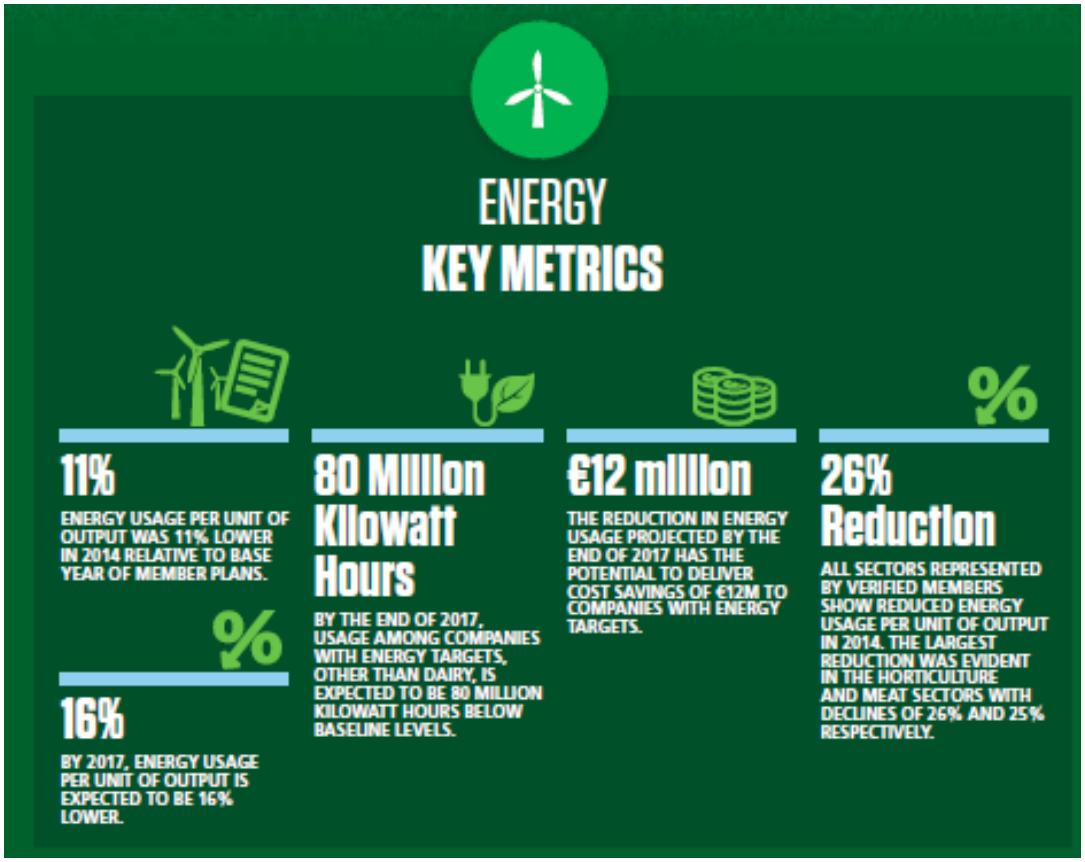

Origin Green IRELAND Working with nature

# Origin Green Sustainability Measures

# Staggering / Aspirational Numbers

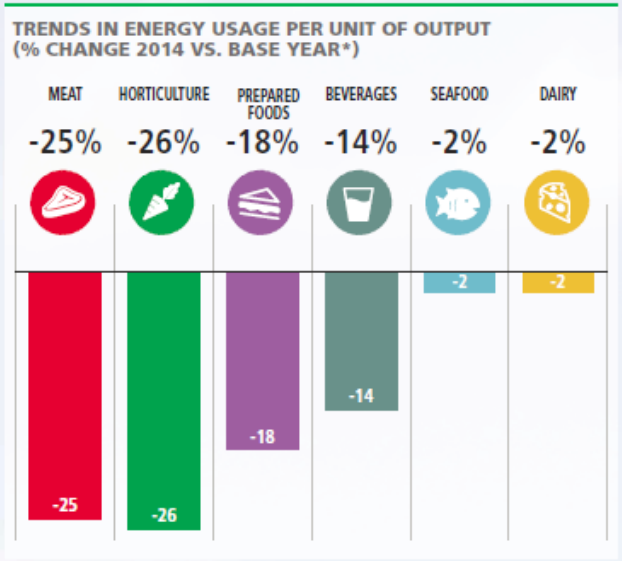



# Energy Use

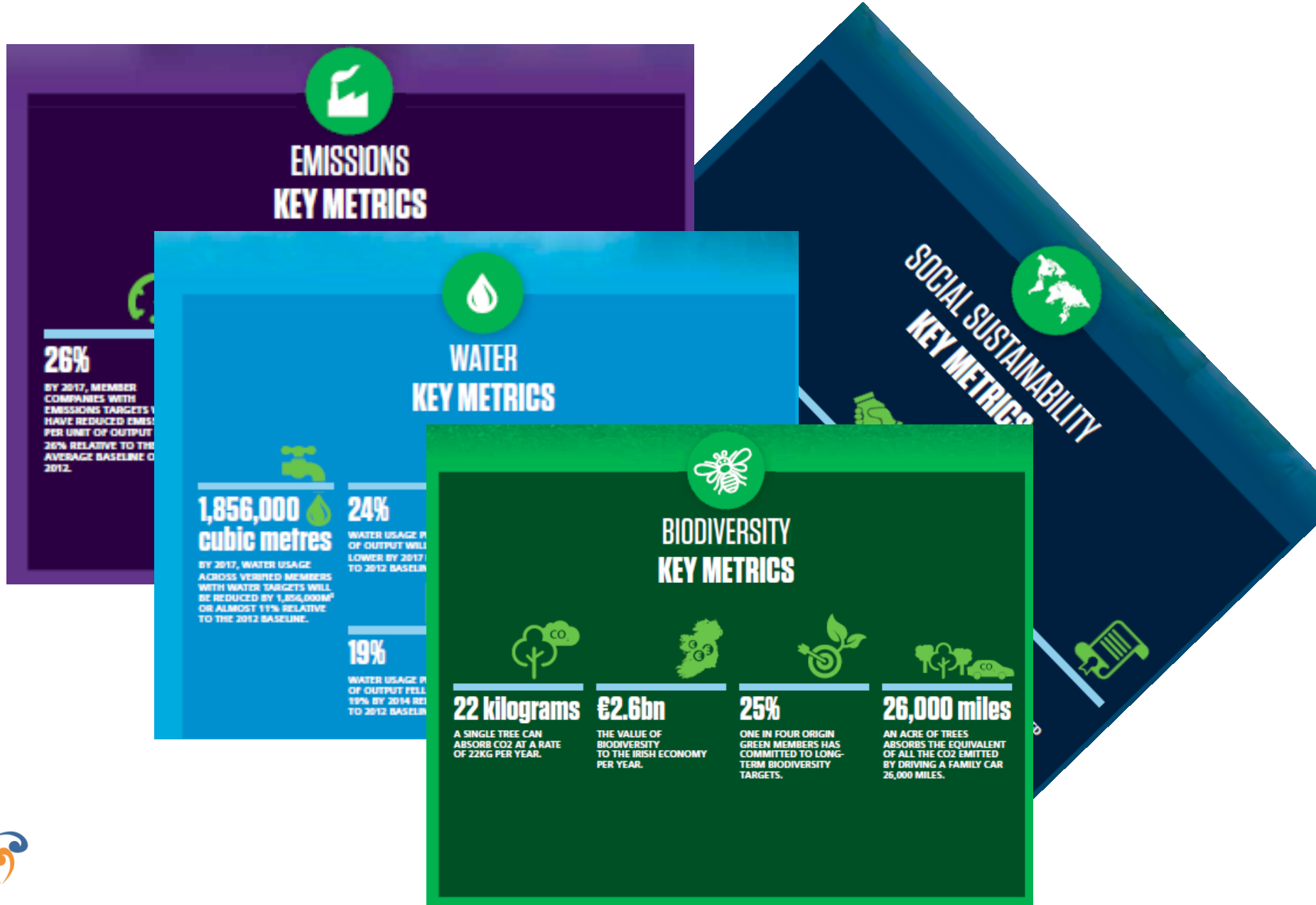



## Performance by sector

All sectors represented by verified members show reduced energy usage per unit of output in 2014. The largest reduction was evident in the Horticulture and Meat sectors with declines of 26% and 25% respectively. Despite increased levels of production in the dairy industry, a reduction of 2% was recorded over the period.



# Right across the board



# National Dashboard

## High level benchmarking of all sectors
## => generic and standardised indicators and measures

National Users

- International
- Government Agencies
- Industry bodies
- Public Consumers

Aggregation and Reporting

Anonymous Data Repository and Data Analysis

The New Zealand Sustainability Dashboard

Standardised Data Collection

| | Kiwifruit | Wine | Maori | Forestry | Organic | Aqua-culture | Sheep & Beef | Others |
|---|---|---|---|---|---|---|---|---|
| Consumers | Cons. | Cons. | Cons. | Public | Cons. | Cons. | Cons. | Cons. |
| Distributor and/or Exporter | Zespri | Wineries SWNZ | Iwi | Forestry company | BioGro others | Aqua-culture NZ | ANZCO … | Exporter |
| Processing | Pack-houses | Wineries | Runanga | Share-holders | Packer | Proces-sors | ANZCO … | Proces-sor |
| Farmers/Growers | Orchard | Vineyard | Farmer, Whanau | Forestry company | Grower | Grower | Supplier | Farmer |


# Specific Dashboards

Per sector – Assessment, Monitoring and Reporting, Learning tools (indicators and measures)

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