The New Zealand Sustainability Dashboard

ARGOS

Putting Realistic Numbers into Wine's Story

The AgriBusiness Group

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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?

AERU

Food Miles - Comparative Energy/Emissions Performance of New Zealand's Agriculture Industry

Caroline Saunders
Andrew Barber
Greg Taylor

Research Report No. 285
July 2006

CHRISTCHURCH
NEW ZEALAND
www.lincoln.ac.nz

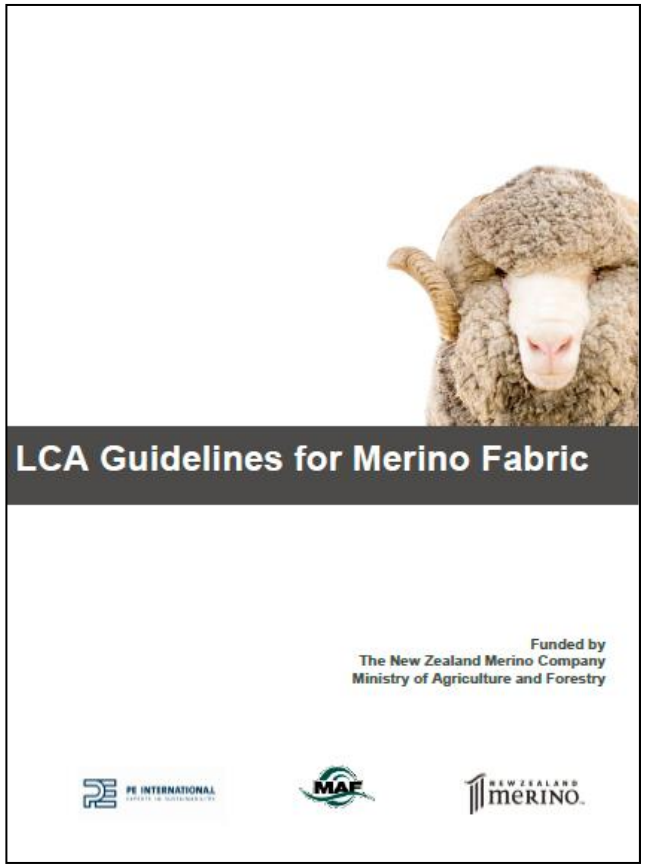
Lincoln University

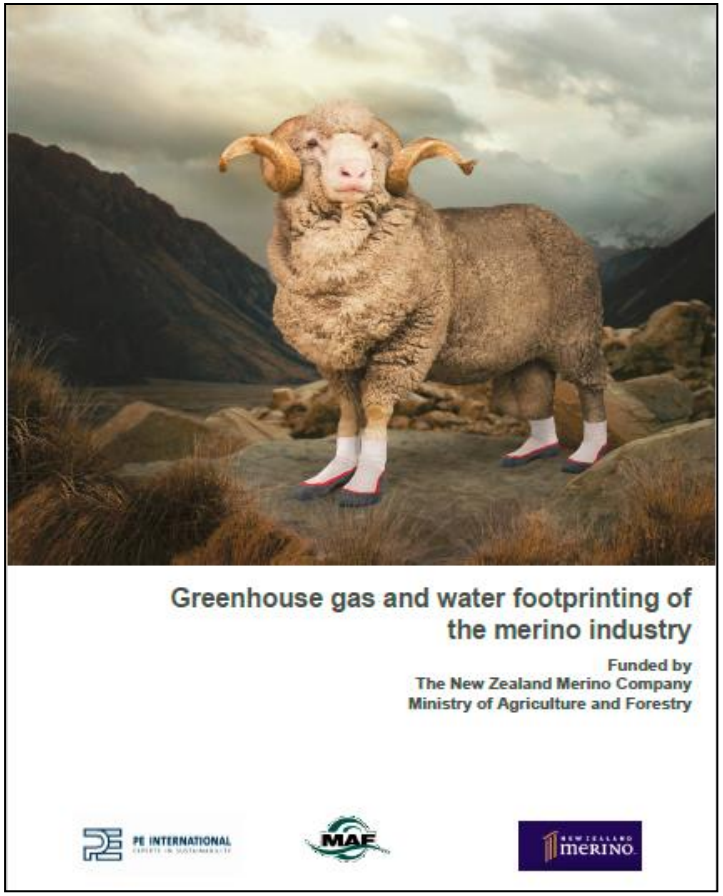
There is increasing demand on land to produce food and fuel to protect the environment.

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

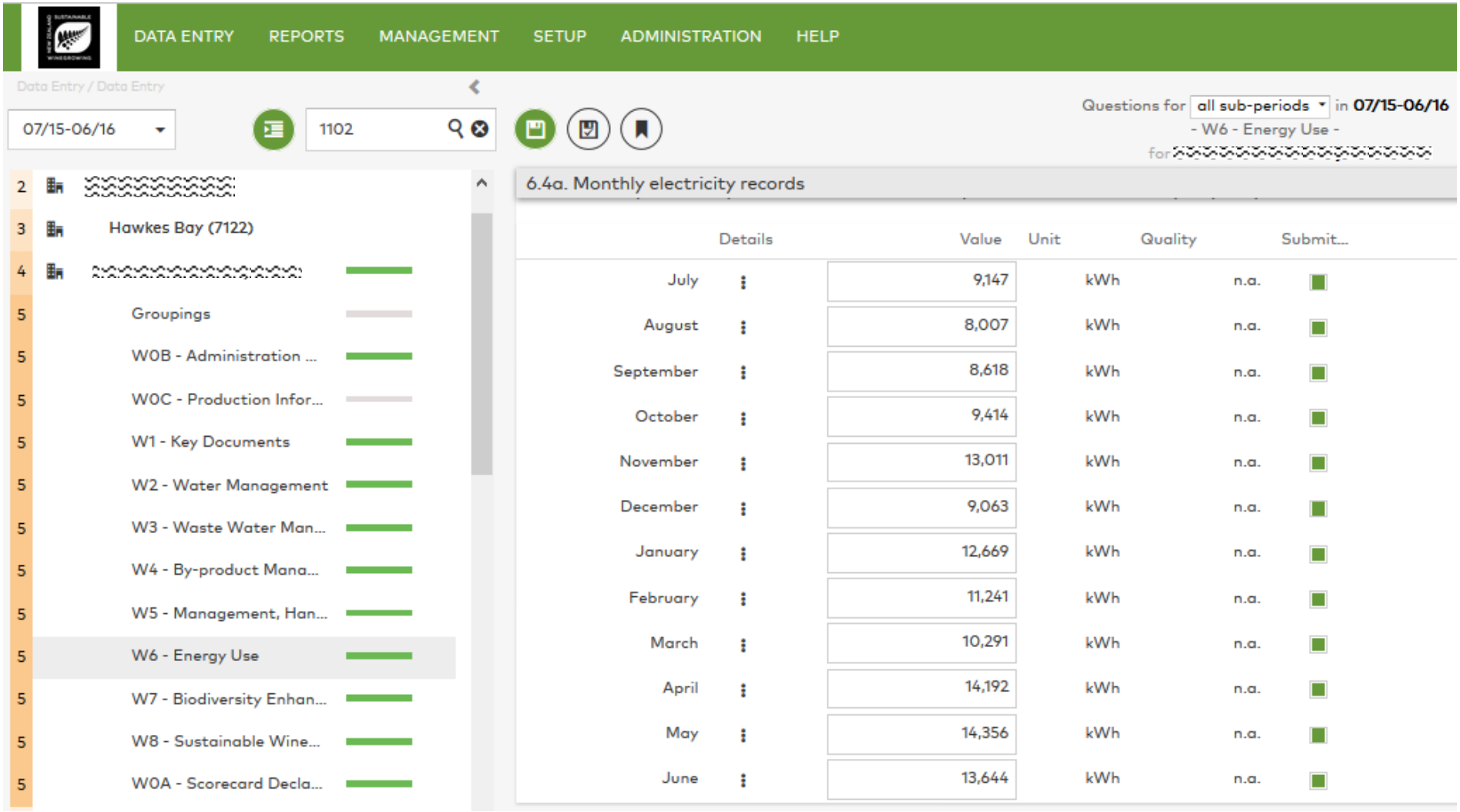
Substance behind the pictures

Pillars of sustainability

- Comprehensive scorecard

Creating a Sustainable Legacy

SUSTAINABLE NEW ZEALAND WINEGROWING

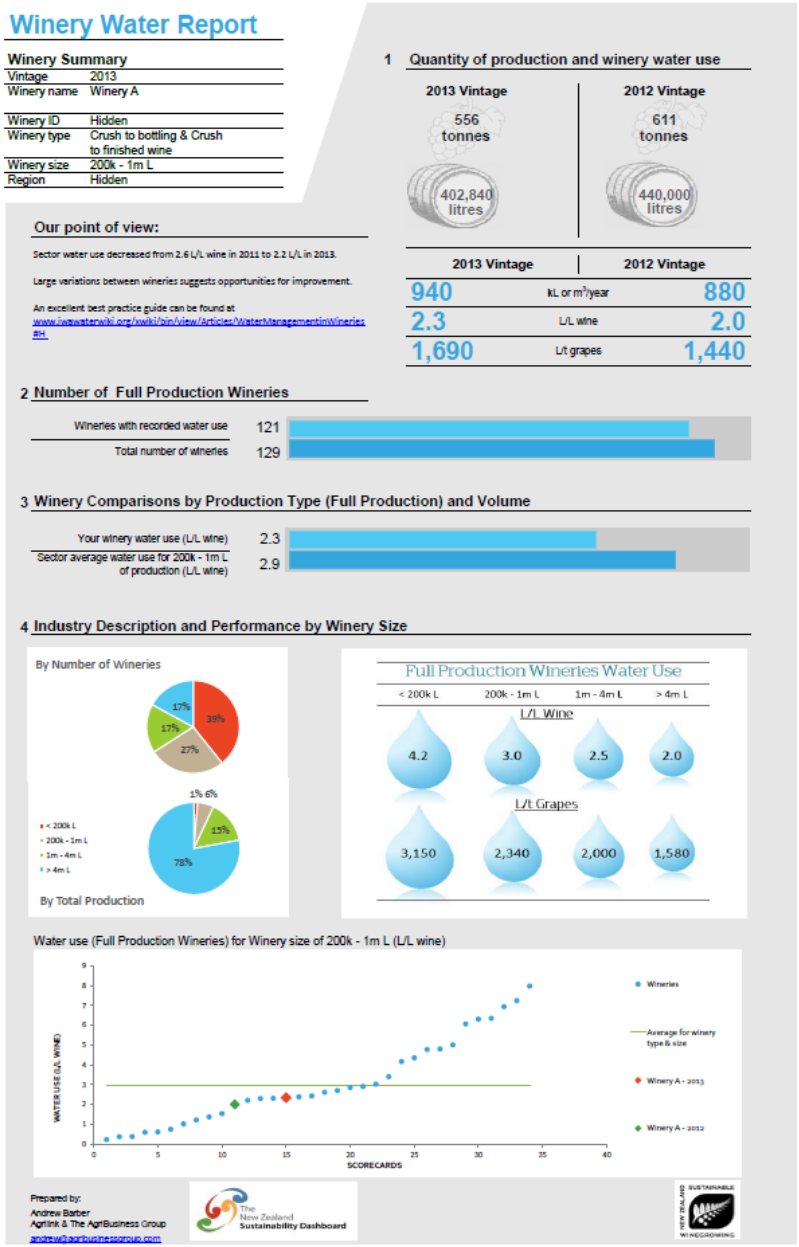

DATA ENTRY
REPORTS
MANAGEMENT
SETUP
ADMINISTRATION
HELP
Data Entry / Data Entry
07/15-06/16
1102
Questions for all sub-periods in 07/15-06/16
- W6 - Energy Use -
for
2
3 Hawkes Bay (7122)
4
5 Groupings
5 W0B - Administration ...
5 W0C - Production Infor...
5 W1 - Key Documents
5 W2 - Water Management
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)

WATER USE (L/L WINE)

SCORECARDS

Wineries

Average for winery type & size

Winery A - 2013

Winery A - 2012

Prepared by:
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Agrilink & The AgriBusiness Group
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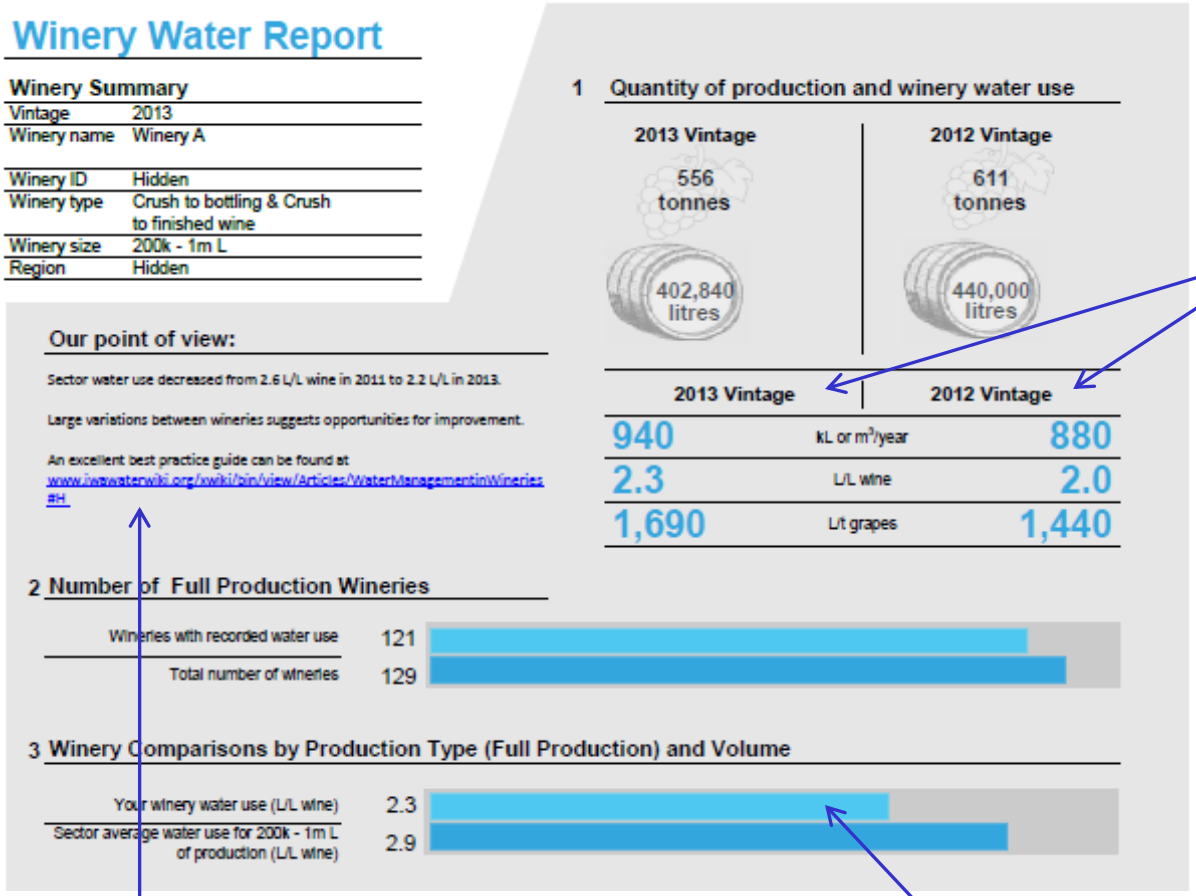
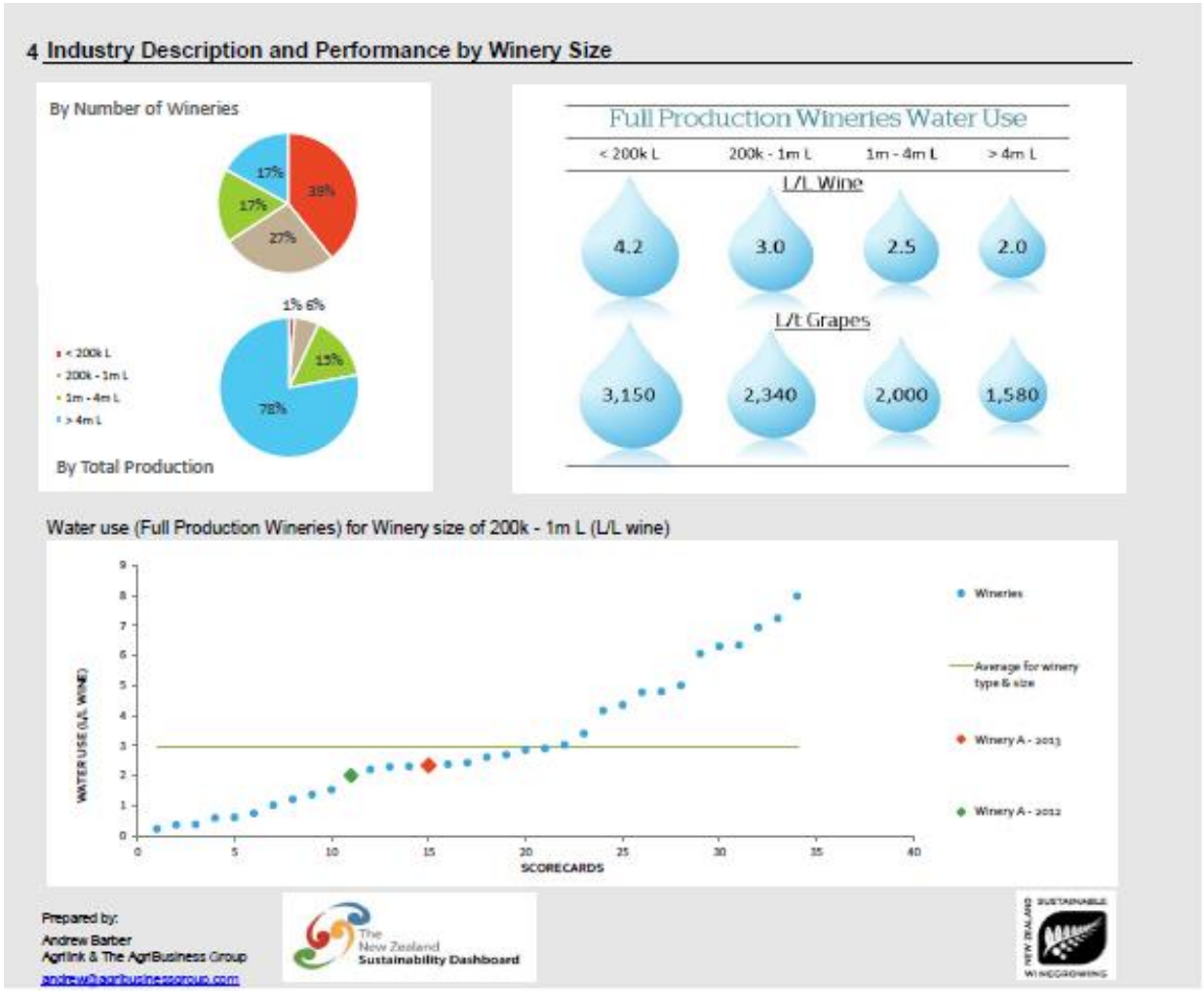
The New Zealand Sustainability Dashboard



Your performance compared to the previous vintage

Links to learning resources

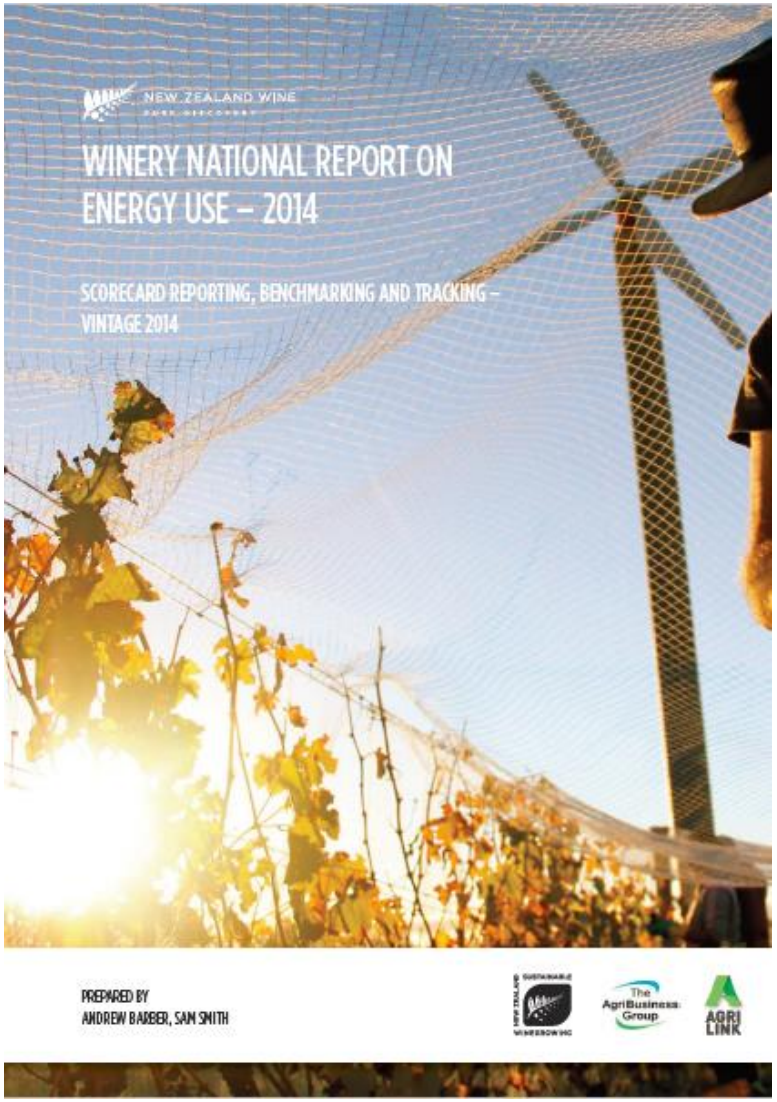
Your performance compared to the same sized wineries

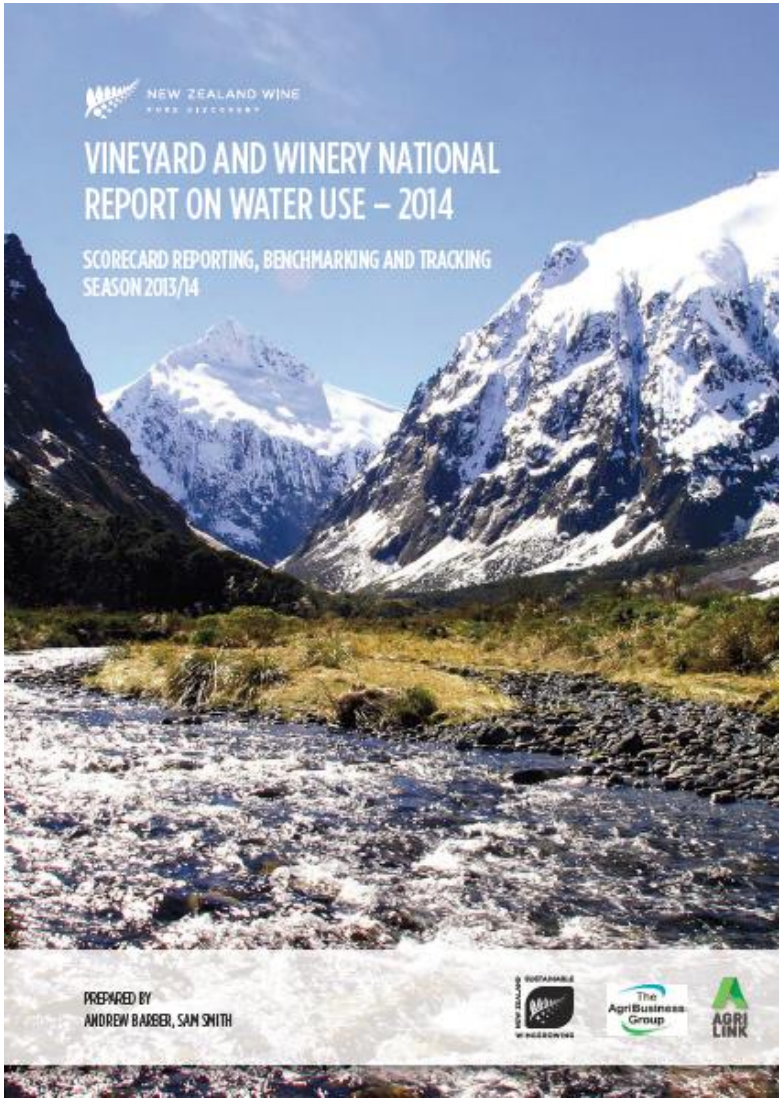


Your performance compared to the spread of same sized wineries

Electronic Dashboards

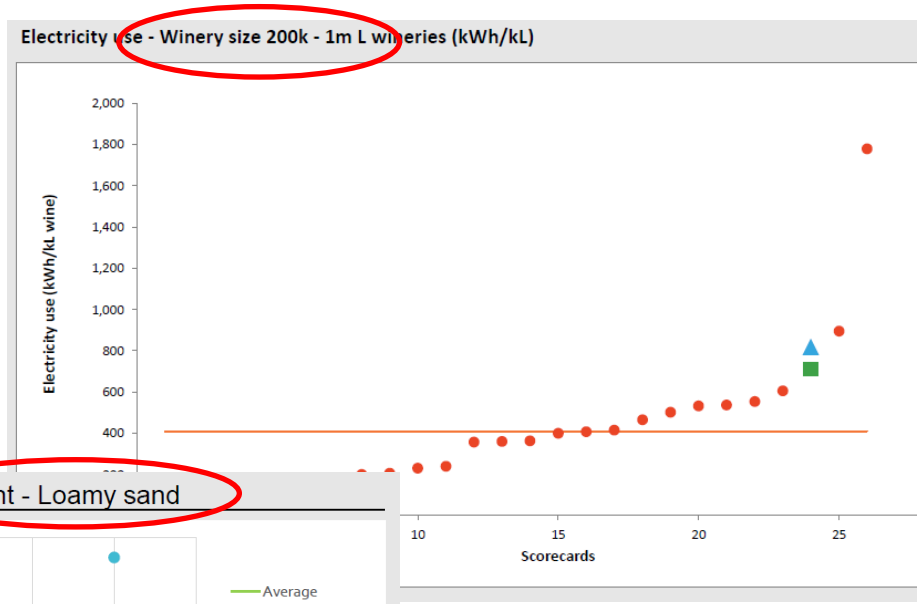
Developing the Industries Story

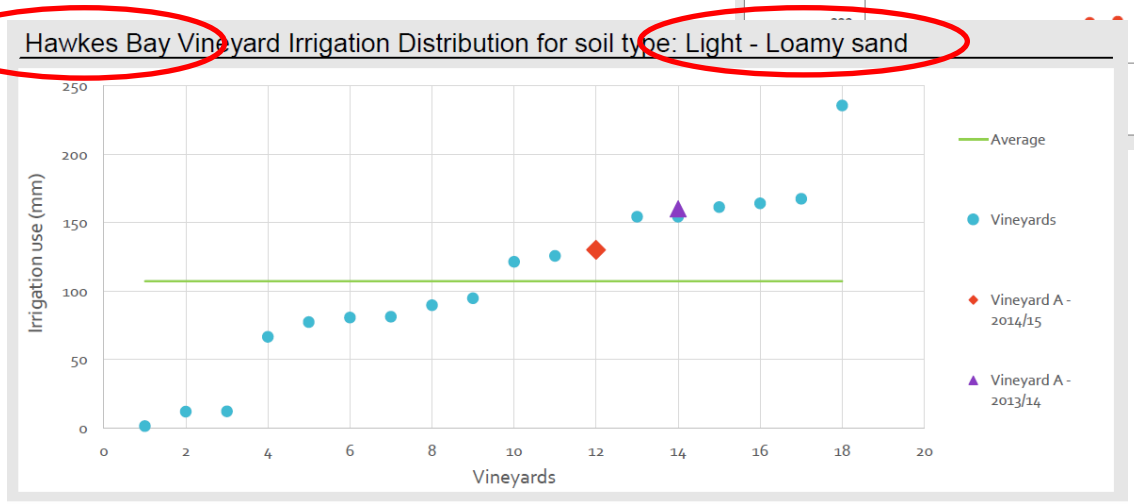




Setting targets vs benchmarks

- 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%

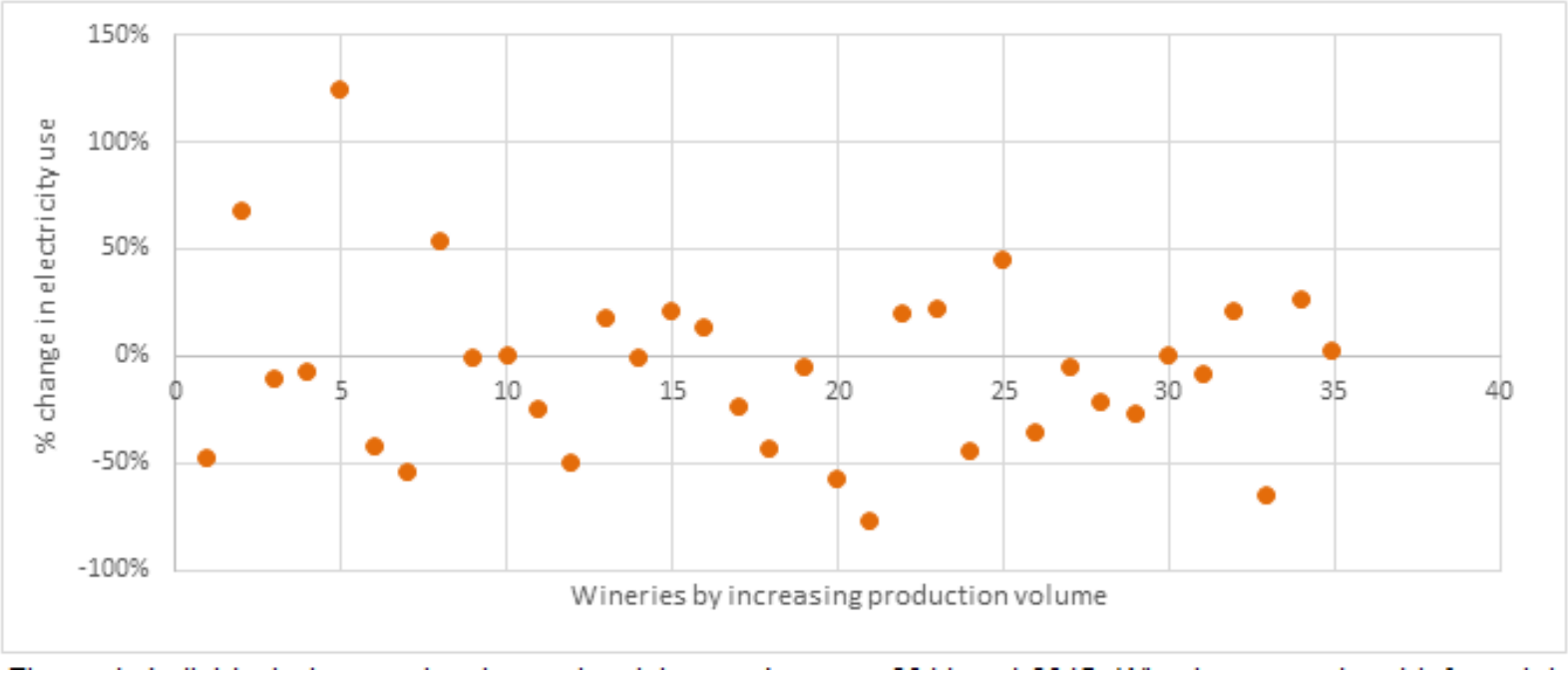
Overall industry

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

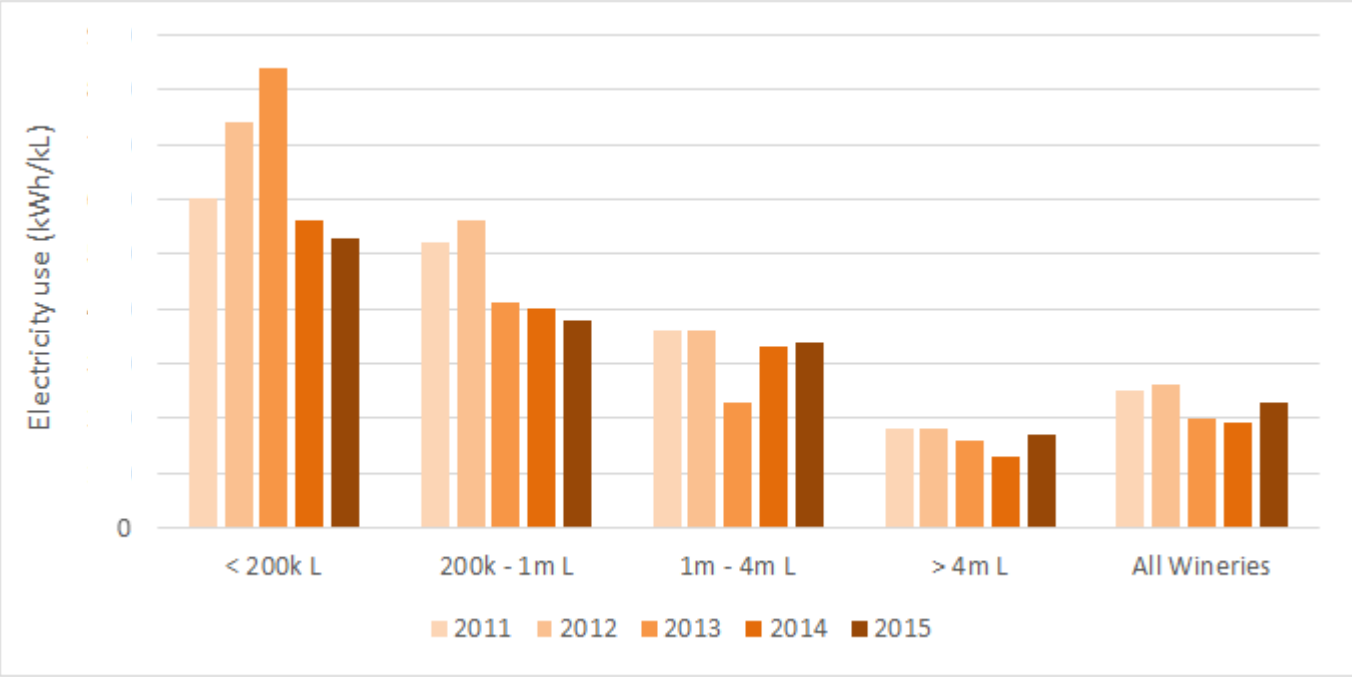
Energy Efficiency

- Winery size does not affect change



Energy Use

- Knowing historical performance informs our future



Informed Aspirational Goals

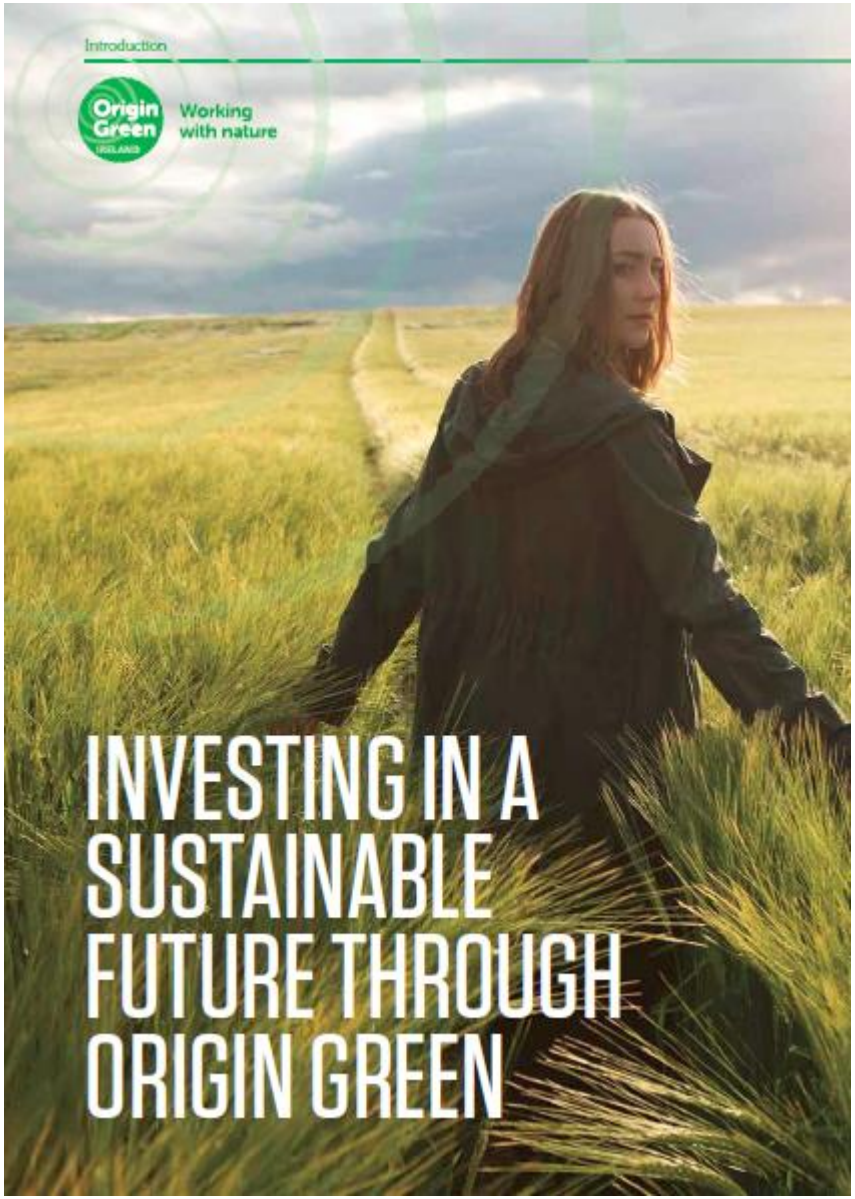
- The median NZ winery has been achieving energy savings of 1% per year
- Top 25% achieved savings of at least 7% and averaged 10% savings per year
- The whole industry has achieved 4% savings per year (18% since 2011)

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.

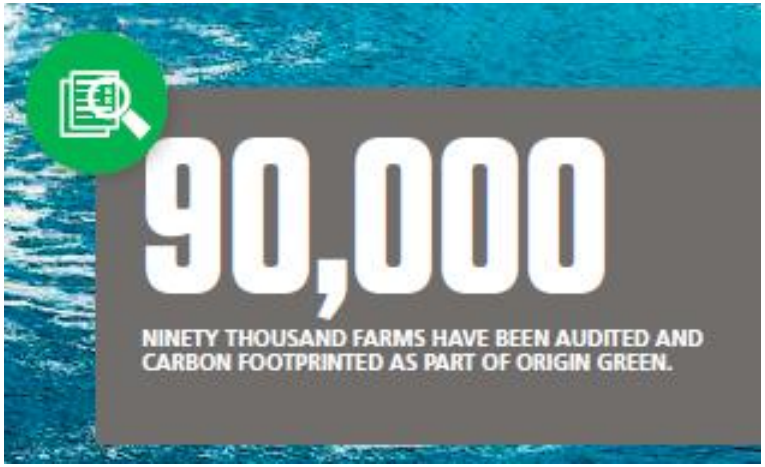
The Next Stage



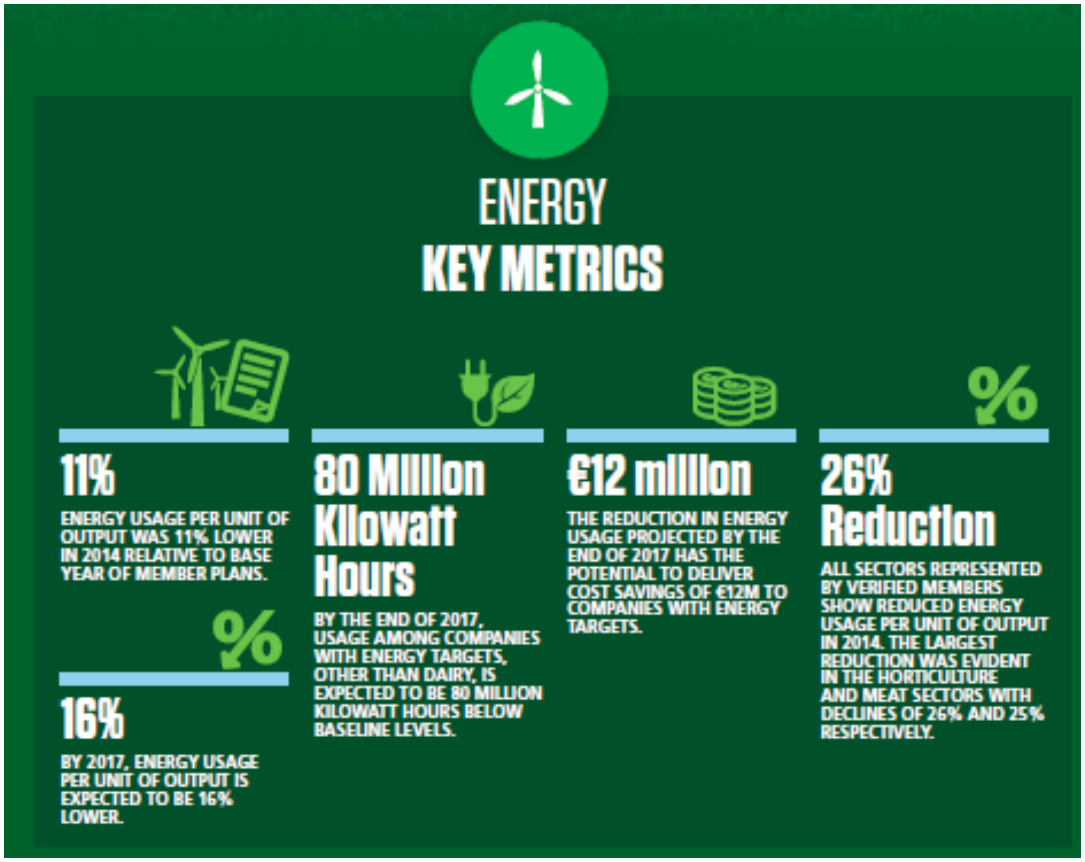
Origin Green IRELAND Working with nature

Origin Green Sustainability Measures

Staggering / Aspirational Numbers

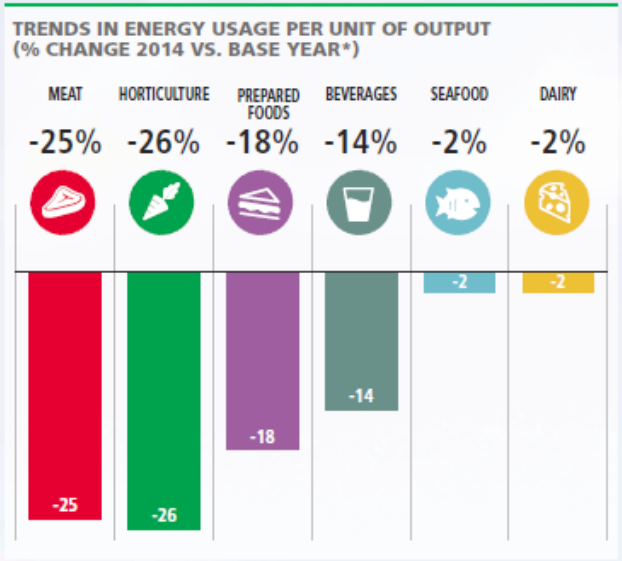


Energy Use

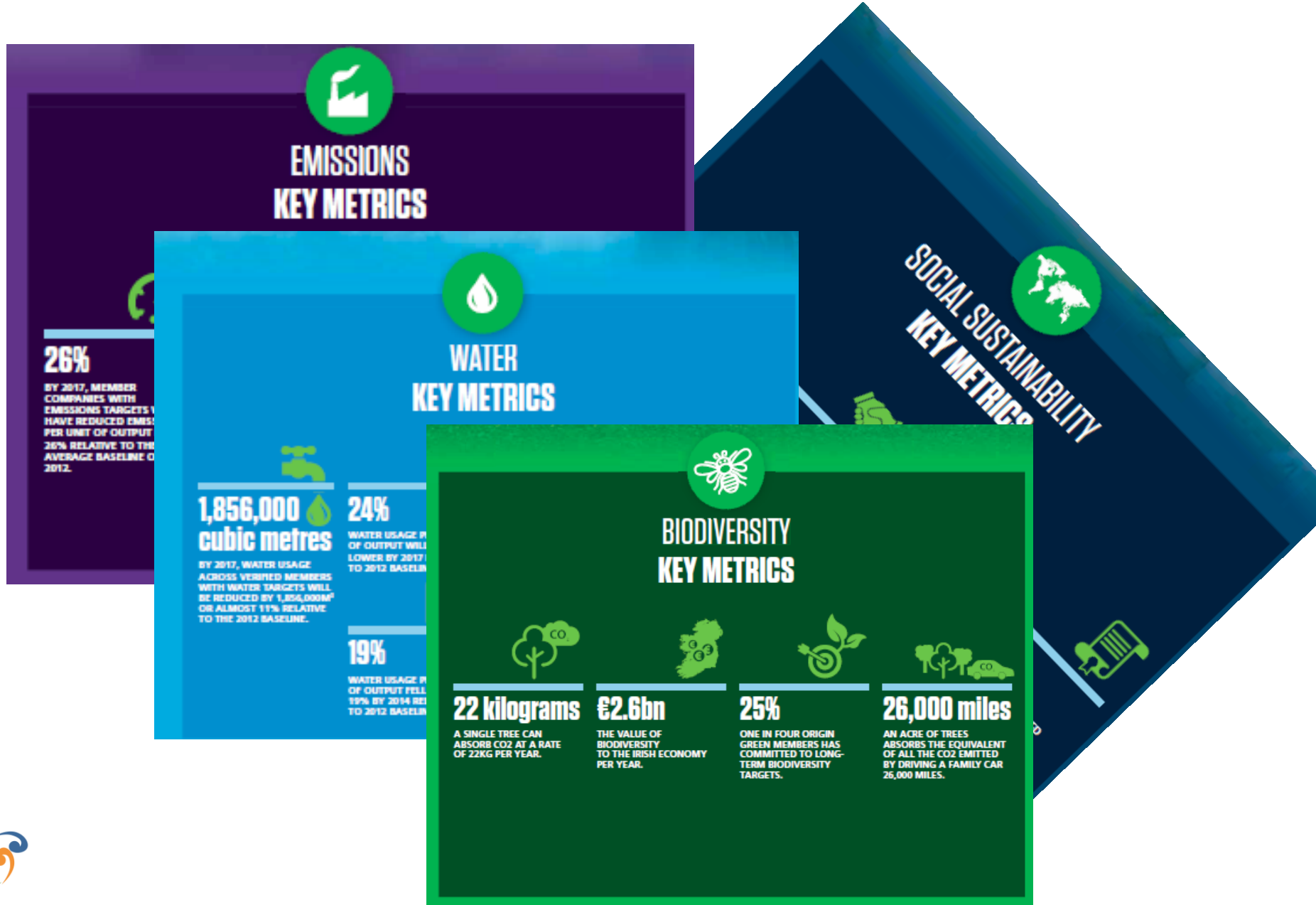


Performance by sector

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

Learning
Monitoring
Assessment

Specific Dashboards

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

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