

1. Participation

Number of surveys distributed:	1472
Number of surveys returned:	48
Participation rate:	3.26%

2. Regional participation

Region	Surveys returned	Comments
Batlow (New South Wales)	2	There are only two main packhouses in the region and one of these declined as it had received a previous audit
Goulburn Valley (Victoria)	10	Larger enterprises with larger energy bills = stronger interest
Adelaide Hills (South Australia)	4	
Stanthorpe (Queensland)	3	
Swan Hill (Victoria)	3	
Tasmania	7	Better response, not apparent why
Western Australia	3	
Yarra Valley/Southern Victoria	9	Good response. A cohort of grower/innovators abounds in this region
Young (New South Wales)	3	
Orange (New South Wales)	3	
Other (Renmark, South Australia)	1	Unfortunately, there we no other responses from that region
Total	48	

3. Fruit types respondents produce

	No of Respondents			
	Apples	Pears	Summerfruit	Cherries
Total number of respondents who produce this crop	35 (73%)	13 (27%)	16 (33%)	18 (38%)
% of production				
≥ 75%	20	1	5	6
50-75%	4	2	3	2
25-50%	6	3	6	3
< 25%	5	7	2	7

Notes to help interpret this table

- Most respondents produced more than one crop type.
- 73% of respondents produced apples
- for 20 respondents, apples were 75% or more of the fruit they produced

4. Utilisation of trusted, energy-related service advisors

54% of respondents listed a trusted **refrigeration** technician/advisor

48% of respondents listed a trusted **electrical** technician/advisor

44% of respondents listed a trusted **irrigation** technician/advisor

38% of respondents listed a trusted **packing line** technician/advisor. These were mainly GP Graders and Colour Vision Systems.

25% of respondents listed a trusted **controlled atmosphere** technician/advisor. ACS and Storefresh were commonly listed.

12.5% of respondents listed a trusted **power monitoring** technician/advisor. The most frequently mentioned names were Utilcor and Arora.

5. Energy types utilised on the orchard

100% of respondents used **electricity**

100% of respondents used **diesel fuel**

83% of respondents used **LPG**

29% of respondents used **petrol**

4% of respondents used **natural gas**

6. Irrigation types used

100% of respondents used **drip/microsprinklers**

8% of respondents used **overhead sprinklers**

7. Annual electricity usage

7.1 Annual electricity usage

Maximum usage 6,025,178 kWh

Minimum usage 11,961 kWh

Average usage 485,554 kWh

Median usage 169,231 kWh

7.2 Annual spend on electricity

Maximum spend \$968,154

Minimum spend \$4,742

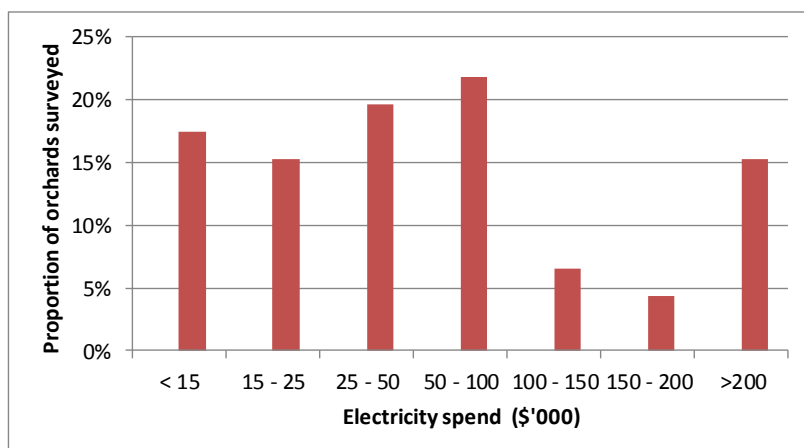
Average spend \$105,779

Median spend \$46,692

7.3 Annual electricity spend distribution

Spend in \$'000. Note: the distribution of usage follows the distribution of electricity cost and cost is easier to understand.

Spend (\$'000)	Proportion
< 15	17%
15 - 25	15%
25 - 50	20%
50 - 100	22%
100 - 150	7%
150 - 200	4%
>200	15%



7.4 Electricity price

Maximum price: \$0.48/kWh

Minimum price: \$0.15/kWh

Average price: \$0.26/kWh

Median price: \$0.26/kWh

8. Annual LPG usage

8.1 Annual LPG usage

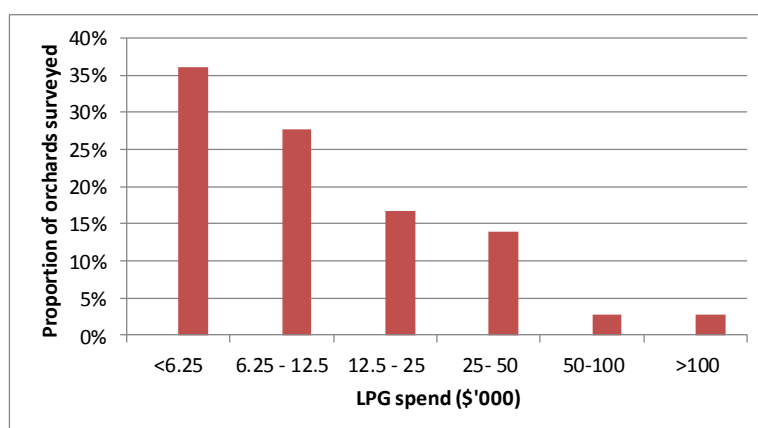
Maximum usage	142,257 L/yr
Minimum usage	510 L/yr
Average usage	17,488 L/yr
Median usage	9,000 L/yr

8.2 Annual spend on LPG

Maximum spend	\$105,802
Minimum spend	\$1,040
Average spend	\$16,315
Median spend	\$10,000

8.3 Annual LPG spend distribution

Spend (\$'000)	Proportion
<6.25	36%
6.25 - 12.5	28%
12.5 - 25	17%
25- 50	14%
50-100	3%
>100	3%



8.4 LPG price

Maximum price:	\$2.93/L
Minimum price:	\$0.56/L
Average price:	\$1.11/L
Median price:	\$1.07/L

Note: data has been checked and the prices given here are what was reported by the respondent or has been calculated with data they supplied

9. Annual diesel usage

9.1 Annual diesel usage

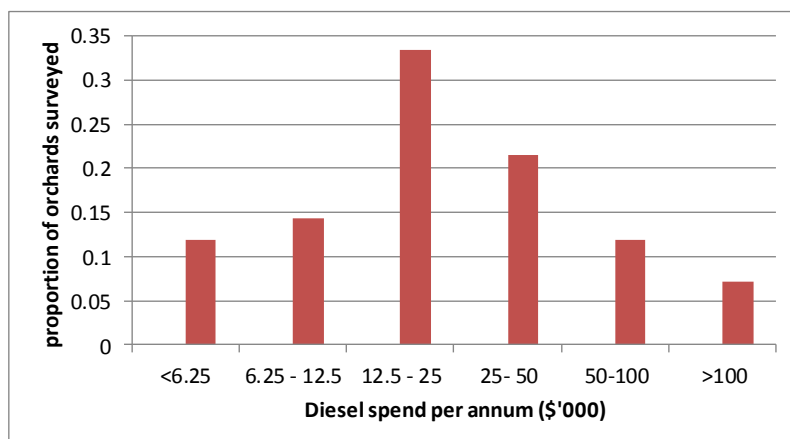
Maximum usage	149,884 L/yr
Minimum usage	400 L/yr
Average usage	22,725 L/yr
Median usage	15,000 L/yr

9.2 Annual spend on diesel

Maximum spend	\$219,763
Minimum spend	\$600
Average spend	\$32,691
Median spend	\$18,696

9.3 Annual LPG spend distribution

Spend (\$'000)	Proportion
<6.25	12%
6.25 - 12.5	14%
12.5 - 25	33%
25- 50	21%
50-100	12%
>100	7%



9.4 Diesel price

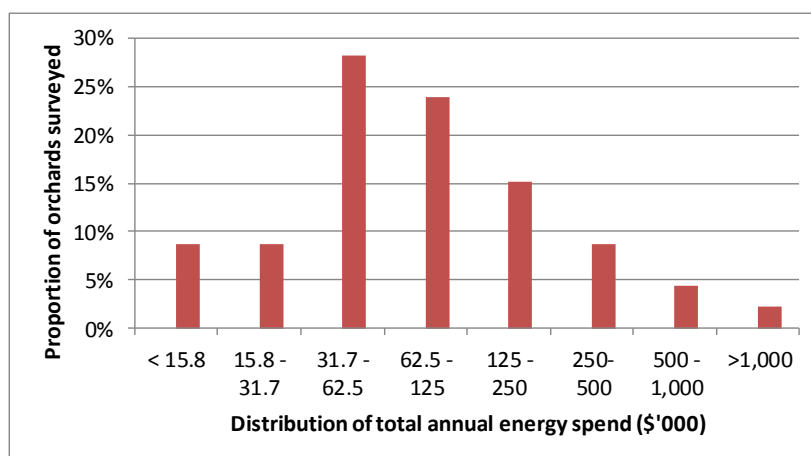
Maximum price:	\$3.89/L
Minimum price:	\$0.38/L
Average price:	\$1.51/L
Median price:	\$1.50/L

Note: data has been checked and the prices listed are the prices given by the respondent or calculated from data they supplied

10. Total annual energy costs

Maximum total energy spend:	\$1,073,956
Minimum total energy spend:	\$6,896
Average total energy spend:	\$149,126
Median total energy spend:	\$81,251

Spend (\$'000)	Proportion
< 15.8	9%
15.8 - 31.7	9%
31.7 - 62.5	28%
62.5 - 125	24%
125 - 250	15%
250- 500	9%
500 - 1,000	4%
>1,000	2%



10.1 Comparison of median annual energy costs

Energy type	Annual median cost
Electricity	\$46,692
Diesel	\$18,696
LPG	\$10,000

11. Responses to attitudinal questions

Percentage of survey respondents whose answers fell in each category

Question	Strongly disagree	Disagree	Don't know	Agree	Strongly Agree
Our business is aware of their current average yearly energy consumption in kWh.	2	26	11	47	15
The cost of energy bills come as a surprise to our business when received.	6	32	2	53	6
We can predict what our energy bills will cost our business in 2015.	19	34	23	21	2
We are currently phasing out the refrigerant R22 due to changes in Australian regulations (<i>please leave blank if you do not use R22 refrigerant</i>).	0	18	27	36	18
Being energy efficient is important to our staff.	2	11	7	57	24
Our business would be interested in implementing energy saving programs that provided a three year payback on investment.	0	0	9	46	46
Our business would be interested in implementing energy saving programs that provided a five year payback on investment.	0	2	18	49	31
Our business would be interested in implementing energy saving programs that provided a seven year payback on investment.	5	19	38	21	17
Our business is aware of government funded programs which can help us to implement energy saving projects	19	30	28	21	2
Our business is aware of new technologies which would help save energy on our site.	11	21	28	36	4
We believe that by implementing energy saving programs and technologies we can save our business money.	0	0	7	63	30
We believe that the "Watts in your Business" program will help increase our awareness and knowledge of energy saving technologies which would help reduce energy consumption and operating costs.	2	0	23	43	32

Question	Strongly disagree	Disagree	Don't know	Agree	Strongly Agree
Our staff practice energy saving behaviours, for example turning off the lights and ensuring that cool store doors are closed.	0	11	0	49	40
When purchasing new equipment we consider both the purchase price and the operating costs of the equipment.	0	9	6	40	45

12. Recent innovations

12.1 Recently installed upgrades

52% of respondents (25 in number) had made energy consumption upgrades to their business in the last two years. Of these the most common were:

- **Refrigeration/coolrooms:** 13 respondents (27%) had made upgrades to refrigeration/coolrooms
- **Irrigation:** 10 respondents (21%) had made upgrades to irrigation
- **Lighting:** 5 respondents (10%) had made upgrades to lighting
- **Supply issues/grid:** 3 respondents (6%) had made upgrades to their supply/grid arrangements
- **Solar power:** 2 respondents (4%) had made upgrades to solar power

Note: several respondents had made more than one type of upgrade.

12.2 Planned upgrades

73% of the respondents (35 in number) planned to make updates to their business within the next two years. Of these the most common were:

- **Solar/wind power:** 17 respondents (35%) are interested in solar power. 2 respondents (4%) are interested in wind power
- **Lighting:** 7 respondents (14%) intend upgrading lighting
- **Coolrooms/refrigeration:** 7 respondents (14%) intend upgrading coolrooms or refrigeration
- **supply/grid issues:** 4 respondents (8%) intend upgrading power supply or power grid issues

Several respondents noted that their ability to execute planned upgrades depended on their financial situation at the time.