DECEMBER 2017

EECA Energy-Efficient Lighting Update

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GAME CHANGERS

Executive Summary

LIGHT BULB USAGE

- Versus 2014, awareness, consideration and usage for LEDs have all improved substantially. The results for CFL are broadly stable though usage has eased.
- 42% say they use LEDs more vs 3 years ago, though most users are low users or flirt users.
- 33% have never used LEDs before – often citing *cost* and *fittings* as being barriers.
- Although 28% intend to stop using incandescent bulbs, there are still a sizeable proportion who intend to keep buying these bulbs.

LED use has grown significantly in recent years, which indicates that in terms of marketing, education, and engagement, the market is nearing a tipping point where this is no longer required. The remaining scope lies in low/non-users who are wedded to incandescent bulbs. This segment's main barrier to use is up-front costs, they accept low energy use benefits.

ATTITUDES ABOUT BULBS

- Versus 2014, energy-efficient lighting is more important (65%, up 8 points) and more appealing (71%, up 8 points).
- Versus 2014, the appeal of LEDs has grown to become the most appealing bulb type in 2017, while appeal of CFLs declined significantly.
- The most appealing qualities of LED and CFL bulbs are *lower power bills* and *longevity*. But for incandescent bulbs it's about being *cheap to buy* and *fit for purpose*.

The majority of people accept the superiority and benefits of LEDs, with up-front costs the main barrier amongst lower users who tend to be female, renters and low-income. As part of a strategy to overcome this barrier, LED bulbs could be repositioned for this group as an 'appliance', an investment that they can take with them when they shift homes.

LED BULBS & EE LIGHTING

- Supermarkets are a common shopping channel for light bulbs.
- In the home, LEDs are more likely to be used in higher-usage areas (bedrooms, kitchen / dining areas, lounge / living areas).
- 47% believe the benefits of LEDs outweigh the barriers, but 25% believe the opposite.
- Indicatively versus 2014, people are more positive about the benefits of energy-efficient bulbs, but more see *price* and *suitable fittings* as a barrier.

There may be scope to better inform people about LED bulbs by addressing concerns around costs vs. benefits and light fittings. Supermarkets are a valuable channel for in-store communications, but hardware stores are presently a major channel for LED bulb purchase which may require attention. With further price drops expected in 2018, the cost-benefit equation may change.

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Why & how we're conducting this research

RESEARCH OBJECTIVES

- Provide an updated understanding of the role of efficient lighting in the home.
- Measure known and identify potentially unknown barriers towards efficient lighting options among NZ consumers to understand if there has been a shift in perceptions.
- Understand whether people are happy with current energy-efficient lighting alternatives (particularly LEDs) vs. incandescent.

RESEARCH METHODOLOGY

- Online survey of a randomly-selected general population sample from the Research Now panel (n=502).
- Interviews were completed from 16th to 20th November 2017, the average interview duration was 13 minutes.
- The data wasn't weighted because sampling quotas were managed to ensure a sample representative of the 2013 Census for age, gender and region.
- The margin of error on a sample size of 502 is ±4.37%. For the NZ population the figure used is 4,837,817 from the Statistics NZ estimate as at 11 December 2017.

SAMPLE PROFILE

We interviewed a nationally representative sample for this study based on age, gender & region

(n=502)
respondents

13 minutes
average duration

48% Male

52% Female

21% 18-29 years

35% 30-49 years

25% 50-64 years

19% 65+ years

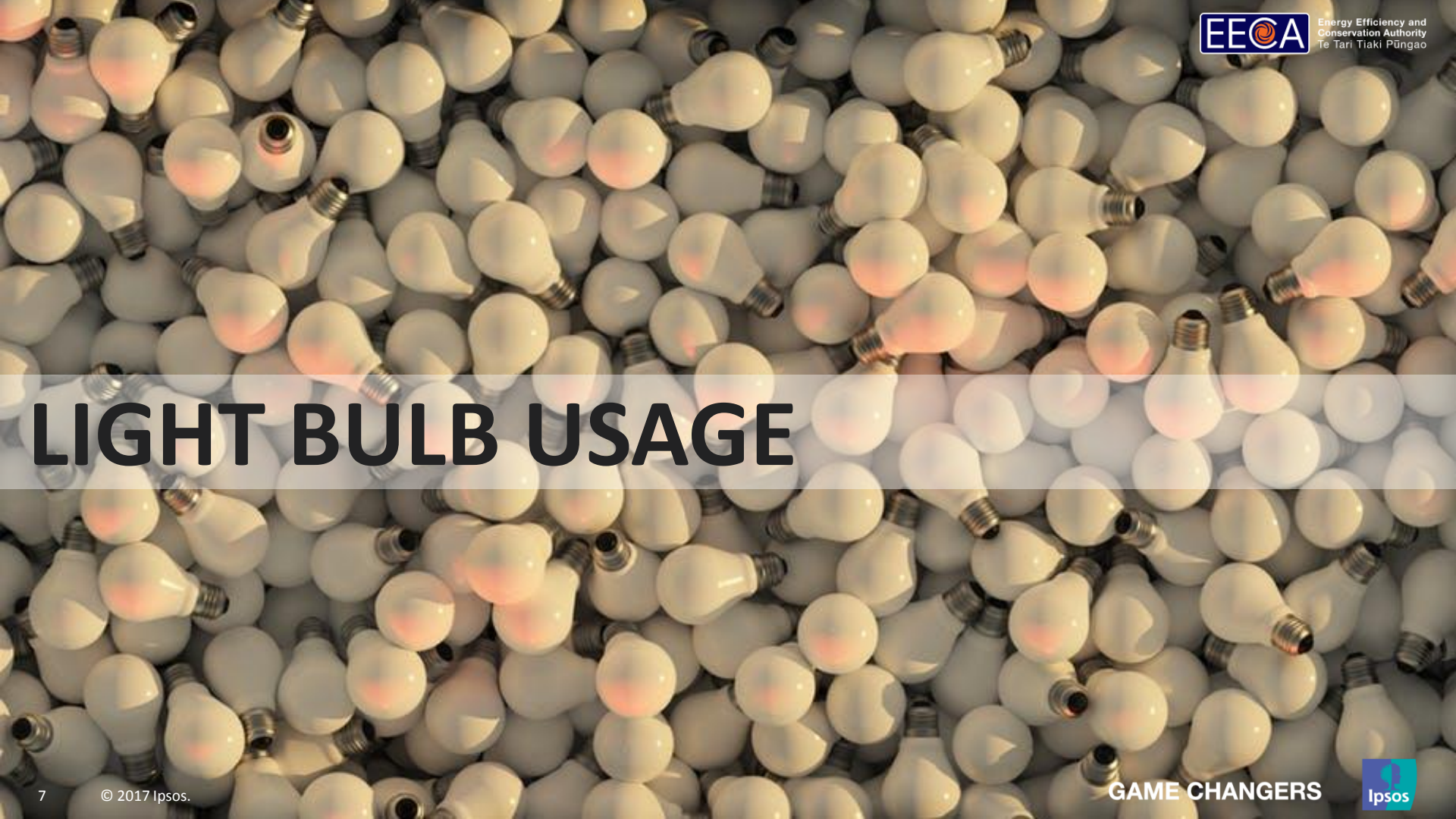
65% Homeowner
29% Renter
6% Other living arrangements

20% Northern Regions (excl. AKL)
33% Auckland Region
23% Central Regions
24% Southern Regions

7% NZ Maori
69% NZ European
9% Other European
2% Pacific Islander
5% Chinese
4% Indian
5% Other Asian

37% $60,000 or less
7% $60,001 to $70,000
17% $70,000 to $100,000
10% $100,001 to $120,000
6% $120,001 to $140,000
8% $140,001 or more
16% Don't know / Refused

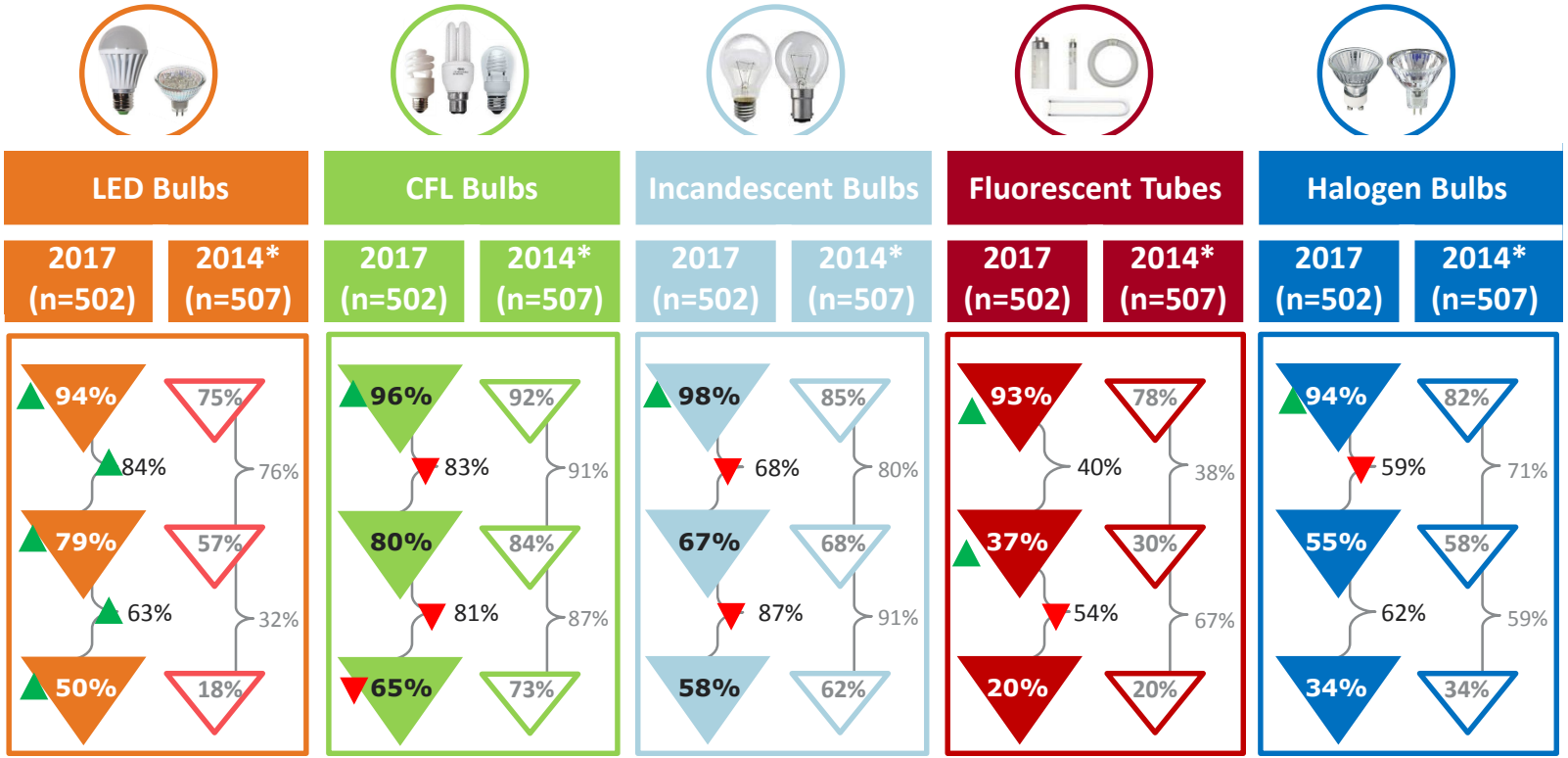
41% Household with children
17% Single / one-person household
9% In a flatting arrangement
21% Older couple, no kids at home
10% Younger couple without kids



LIGHT BULB USAGE

LIGHT BULB FUNNEL

Awareness, consideration & usage of LEDs improved significantly since 2014, but there is still scope to convert more who consider using LEDs into users



Green triangle is sig. ↑, Red triangle is sig.↓ than 2014

*Note: 2014 EECA Change In State research

EL9: Using the options below, which best describes what you use in your home currently?

Base: Total sample

Accompanying increased acceptance & use of LEDs, there has been a corresponding increase in rejection of incandescent lightbulbs





	2014* (n=507)	LED Bulbs	2014* (n=507)	CFL Bulbs	2014* (n=507)	Incandescent Bulbs	2014* (n=507)	Fluorescent Tubes	2014* (n=507)	Halogen Bulbs
Yes I use them	18%	**50%**	73%	**65%**	62%	**58%**	20%	**20%**	34%	**34%**
High users (most or virtually all)	N/A	19%	N/A	28%	N/A	18%	N/A	1%	N/A	3%
Flirt users (quarter to half)	N/A	16%	N/A	19%	N/A	17%	N/A	2%	N/A	7%
Only a few	N/A	15%	N/A	17%	N/A	23%	N/A	16%	N/A	25%
No but I would consider using them	39%	**29%**	11%	15%	7%	9%	10%	**17%**	23%	20%
No and I don't know if I would consider them	10%	10%	2%	**7%**	4%	**10%**	15%	**23%**	11%	**21%**
No and I wouldn't consider them	7%	5%	6%	9%	13%	**21%**	32%	33%	13%	**19%**
I don't know what this is	25%	**6%**	8%	**4%**	15%	**2%**	22%	**7%**	18%	**6%**

Green is sig. ↑, Red is sig.↓ than 2014

***Note:** 2014 EECA Change in State research. Proportions for each bulb type weren't specifically asked in 2014.*

***EL9:** Using the options below, which best describes what you use in your home currently? / **EL9b:** And how much of the lighting in and around your home would each of the following light bulbs. **Base:** Total sample (n=502)*

WHO ARE THE DIFFERENT BULB USER TYPES?

Incandescent high users skew towards females, younger & renters; LED low / non-users skew towards female, lower-income households & renters; LED high users skew towards males, aged 50+, higher-income households & homeowners

18% of the market are incandescent high users (I.B. high)
65% of the market are LED low / non-users (LED low / non)
19% of the market are LED high users (LED high)

Gender	Total (n=502)	I.B. high (n=90)	LED low / non (n=327)	LED high (n=97)
Male	48%	38%	43%	53%
Female	52%	62%	57%	47%

Age group	Total (n=502)	I.B. high (n=90)	LED low / non (n=327)	LED high (n=97)
18-29 years	21%	31%	22%	21%
30-39 years	16%	21%	17%	19%
40-49 years	19%	12%	20%	11%
50-64 years	25%	20%	23%	28%
65 years+	19%	16%	18%	22%

Ethnicity	Total (n=502)	I.B. high (n=90)	LED low / non (n=327)	LED high (n=97)
European	77%	89%	80%	73%
Maori	7%	7%	6%	8%
Pacific	2%	1%	2%	1%
Asian	14%	4%	12%	21%

Household type	Total (n=502)	I.B. high (n=90)	LED low / non (n=327)	LED high (n=97)
Younger couple, no kids	10%	12%	10%	15%
HH with youngest child under 5yo	12%	13%	12%	10%
HH with youngest child 5-13yo	11%	11%	11%	7%
HH with youngest child 14-17yo	7%	1%	6%	6%
HH with youngest child 18yo+	12%	11%	9%	21%
Older couple, no kids	21%	12%	18%	27%
Living alone	17%	18%	21%	7%
Flatting	9%	19%	12%	4%
Extended family	0%	0%	0%	1%
Others	1%	2%	1%	2%

Annual household income	Total (n=502)	I.B. high (n=90)	LED low / non (n=327)	LED high (n=97)
Low (up to $60k)	37%	36%	42%	30%
Mid ($60-100k)	23%	29%	23%	25%
High ($100k+)	24%	14%	19%	32%

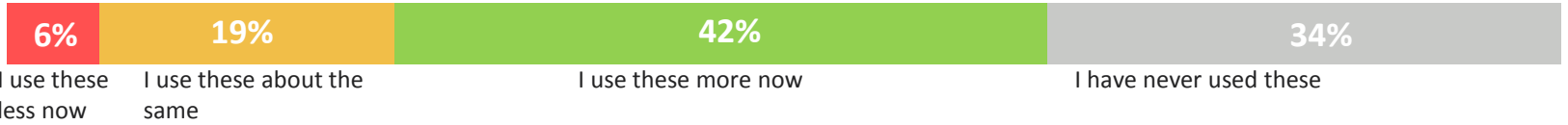
Home ownership	Total (n=502)	I.B. high (n=90)	LED low / non (n=327)	LED high (n=97)
Owner	65%	50%	59%	74%
Renter	29%	40%	36%	19%
Other	6%	10%	5%	7%

Green is sig. ↑, Red is sig.↓ than total

LED & CFL – CHANGES OVER PAST 3 YEARS

Although incandescent use is waning & LED use is rising, a third of those aware of LEDs have never used them, suggesting there is still room to encourage their trial & adoption

LED Bulbs
(n=474)



CFL Bulbs
(n=484)

Incandescent Bulbs
(n=490)

Note: *Reasons why people use incandescent bulbs more / less / same weren't asked in the questionnaire.*

NLQ3: *Which best describes how the proportion of each light bulb type you use in your home has changed compared to 3 years ago, if at all?* ***Base:*** *Those who are aware of the light bulb*

LED USAGE COMPARED TO 3 YEARS AGO

Main drivers of increased use are *energy efficiency* & *replacement*; the barriers indicate there's scope to better inform people's perceptions around *costs* & *light fittings*

LED Bulbs
(n=474)

Why using LEDs less?	(n=28*)
Cost of LEDs is high	14%
Dislike light LEDs produce	14%
Reduced need, only need for certain lights	14%
Issues with fittings / switches	7%
New house	7%
Changed to another bulb type	7%

Why using LEDs more?	(n=198)
Energy-efficient, power saving	28%
Replacing old bulbs with LEDs	25%
Longer-lasting	14%
Cost-effective longer term	13%
Better light quality	10%
LEDs are better bulbs	8%

Why never used LEDs?	(n=160)
Cost, too expensive	17%
Fittings don't suit LEDs	17%
Don't know enough about LEDs	12%
No need / no use for LEDs	11%
Haven't considered LEDs	9%
Dislike the light LEDs produce	4%

"They give out awful lighting."

"Not as much use for them."

"The cost of the bulbs."

"They are cheaper to run and last longer."

"Their energy efficiency, their brightness, the fact that they are available in many more fittings now."

"We replaced previous lights with these fittings - they became less expensive."

"Expensive. When the price comes down I will seriously consider them."

"I am not sure we have the correct fittings for them."

"Don't know much about them or what value they would have."

***Caution:** Small base (n<30)*

***NLQ4b:** You told us that the proportion of LED bulbs in your home **increased / stayed the same / decreased,** compared to 3 years ago, please can you tell us how come? **Base:** Those aware of each bulb NLQ3, NLQ4b based on applicable respondents*

CFL USAGE COMPARED TO 3 YEARS AGO

Close to half of those people who say they are using CFLs less are switching towards LEDS rather than slipping back towards inefficient lighting options

CFL Bulbs
(n=484)

Why using CFLs less?	(n=119)
Changing to LEDs	37%
Dislike light CFLs produce	12%
Prefer LEDs	9%
Bulbs are expensive	8%
Not energy-efficient	8%
Issues with fittings / switches	6%
Not reliable / durable	6%

"LED are a better option, they're more environmentally friendly, they last longer, the light is better and they don't contain mercury, so as our CFL bulbs die, they're being replaced with LED."

"I stopped purchasing them because LEDs last longer and are as cheap to buy."

Why using CFLs more?	(n=176)
Energy-efficient, power saving	33%
Replacing old bulbs with CFLs	18%
Longer-lasting	16%
Cost-effective longer-term	15%
Moved house	7%
Better for the environment	7%

"They are cost efficient and produce longer hours of bulb life."

"Because they are more energy efficient and cheaper to run."

"Last longer, so I try to buy them when I need to replace bulbs."

Why never used CFLs?	(n=69)
Prefer / use / changed to LED	13%
Prefer / use other types	10%
Cost, too expensive	9%
Toxic materials, radiation, mercury	9%
I don't like how CFLs look	9%
Don't know enough about CFLs	9%

"We switched to LEDs a long time ago and didn't have a need for them."

"Quite happy with the current bulbs we have been using since shifting to this house."

Green is sig. ↑, Red is sig.↓ than LED Bulbs

NLQ4a: *You told us that the* ***proportion of CFL bulbs*** *in your home* ***increased / stayed the same / decreased,*** *compared to 3 years ago, please can you tell us how come?* ***Base:*** *Those aware of each bulb NLQ3, NLQ4a based on applicable respondents*

LEDs have the highest levels of stated continued use or intention to replace compared to other bulb types; only a fifth of the market actively reject LED bulbs

	LED Bulbs	2014*	CFL Bulbs	2014*	Incandescent Bulbs	2014*	Fluorescent Tubes	2014*	Halogen Bulbs	2014*
I plan to continue to use these types of bulbs	43%	18%	43%	59%	27%	30%	14%	17%	24%	30%
I plan to start using these when I need replacement bulbs in the future	19%	31%	10%	18%	5%	5%	5%	5%	6%	10%
I plan to stop using these types of bulbs in the future	4%	9%	17%	6%	28%	33%	8%	8%	13%	18%
I don't know	13%	N/A	11%	N/A	6%	N/A	10%	N/A	13%	N/A
Don't use and don't consider	21%	42%	19%	17%	34%	32%	63%	70%	44%	42%

Green is sig. ↑, Red is sig.↓ than 2014

***Note:** 2014 EECA Change in State research, please note that 'Don't know' wasn't an option.*

***EL11:** And thinking about the following types of light bulbs that you currently use or don't use in your home, how likely are you to continue to use, start using if you haven't already, or stop using? **Base:** Total sample – 2017 (n=502), 2014 (n=507)*

COMPARING BULB USAGE WITH FUTURE INTENT

LEDs users are committed to using LEDs & CFL users are shifting in that direction as well; but there's still scope to increase momentum away from incandescent bulb usage

	LED Bulb users		CFL Bulb users		Incandescent Bulb users	
	All users '17 (n=253)	All users '14* (n=98)	All users '17 (n=327)	All users '14* (n=383)	All users '17 (n=290)	All users '14* (n=309)
LED bulbs						
I plan to continue using these	81%	70%	38%	17%	35%	18%
I plan to start using when I need replacement bulbs	13%	23%	22%	35%	20%	30%
I plan to stop using these bulbs	3%	7%	4%	9%	3%	11%
CFL bulbs						
I plan to continue using these	27%	58%	64%	79%	43%	52%
I plan to start using when I need replacement bulbs	8%	6%	8%	14%	13%	23%
I plan to stop using these bulbs	27%	15%	23%	8%	16%	8%
Incandescent bulbs						
I plan to continue using these	20%	21%	22%	24%	46%	46%
I plan to start using when I need replacement bulbs	4%	2%	5%	4%	7%	7%
I plan to stop using these bulbs	28%	42%	34%	36%	42%	47%

Green is sig. ↑, Red is sig.↓ than 2014

***Note:** 2014 EECA Change in State research*

***EL9:** Using the options below, which best describes what you use in your home currently? / **EL11:** And thinking about the following types of light bulbs that you currently use or don't use in your home. How likely are you to continue to use, start using if you haven't already, or stop using? **Base:** Re-based on total sample – 2017 (n=502), 2014 (n=507)*

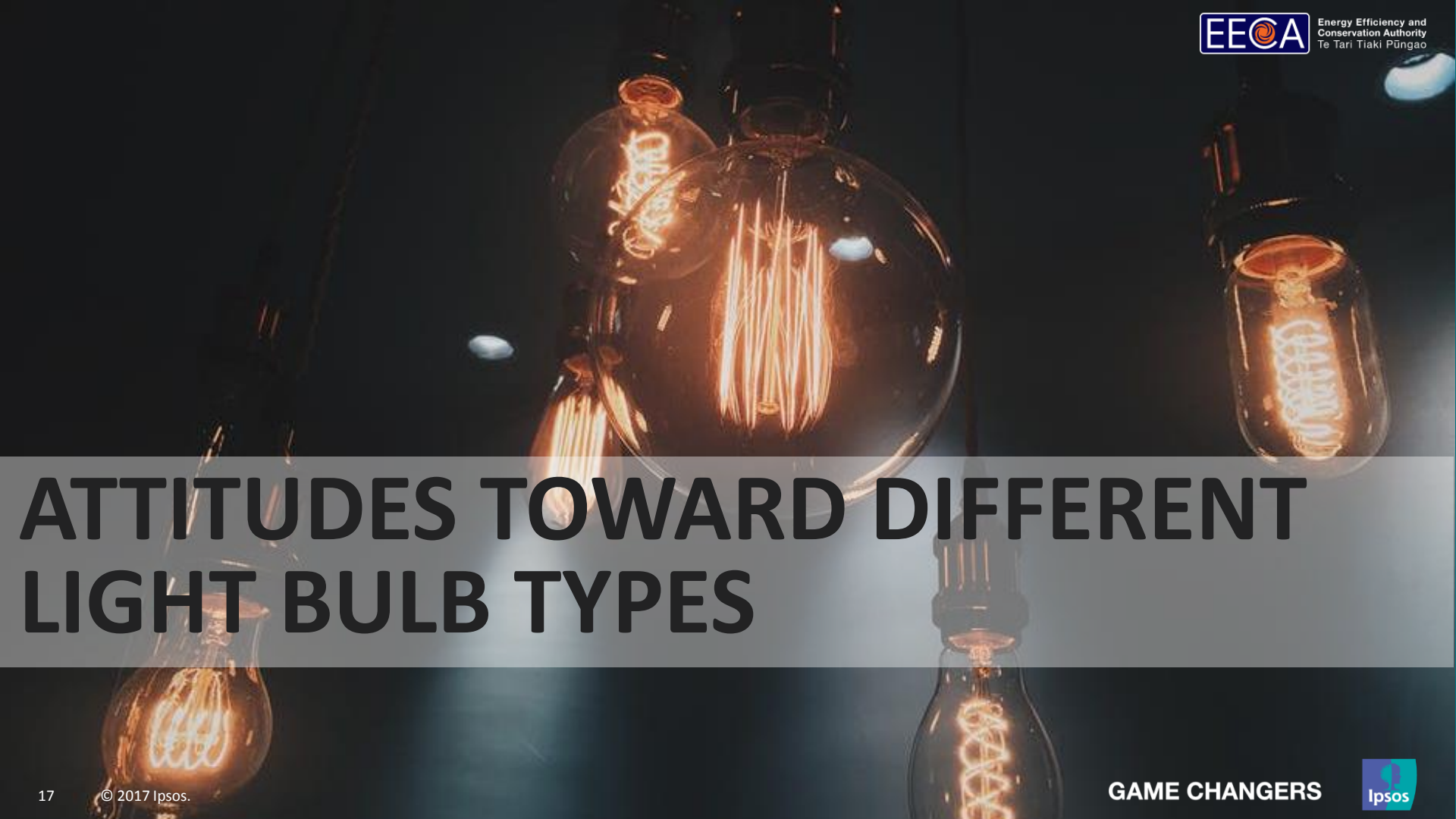
COMPARING BULB PROPORTIONS WITH FUTURE INTENT

High users of incandescent bulbs are fairly steadfast in their commitment to continued use, but there is potential to shift use amongst those whose incandescent usage is lower

	Total '17 (n=502)	LED Bulb users: Low users (n=76)	LED Bulb users: Flirt users (n=78)	LED Bulb users: High users (n=97)	CFL Bulb users: Low users (n=87)	CFL Bulb users: Flirt users (n=95)	CFL Bulb users: High users (n=142)	Incandescent Bulb users: Low users (n=113)	Incandescent Bulb users: Flirt users (n=83)	Incandescent Bulb users: High users (n=90)
LED bulbs										
I plan to continue using these	43%	71%	78%	91%	54%	46%	23%	45%	42%	13%
I plan to start using when I need replacement bulbs	19%	17%	18%	6%	8%	21%	30%	24%	22%	16%
I plan to stop using these bulbs	4%	5%	3%	0%	5%	2%	4%	4%	4%	1%
CFL bulbs										
I plan to continue using these	43%	50%	27%	8%	48%	60%	77%	49%	55%	26%
I plan to start using when I need replacement bulbs	10%	11%	8%	7%	11%	7%	6%	7%	17%	16%
I plan to stop using these bulbs	17%	14%	44%	24%	30%	31%	13%	26%	13%	3%
Incandescent bulbs										
I plan to continue using these	27%	32%	23%	8%	33%	28%	11%	35%	40%	69%
I plan to start using when I need replacement bulbs	5%	7%	5%	2%	5%	8%	1%	6%	7%	7%
I plan to stop using these bulbs	28%	30%	36%	20%	31%	40%	32%	52%	48%	23%

Green is sig. ↑, Red is sig.↓ than total

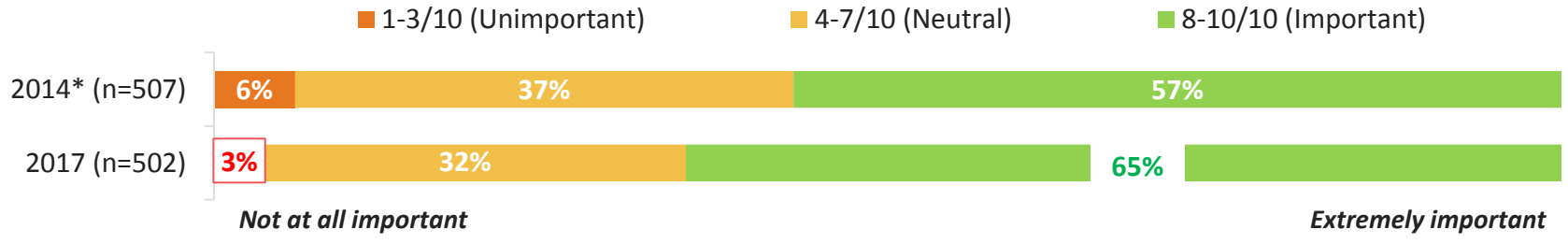
__EL9:__ Using the options below, which best describes what you use in your home currently? / __EL11:__ And thinking about the following types of light bulbs that you currently use or don't use in your home. How likely are you to continue to use, start using if you haven't already, or stop using? __Base:__ Re-based on total sample (n=502)



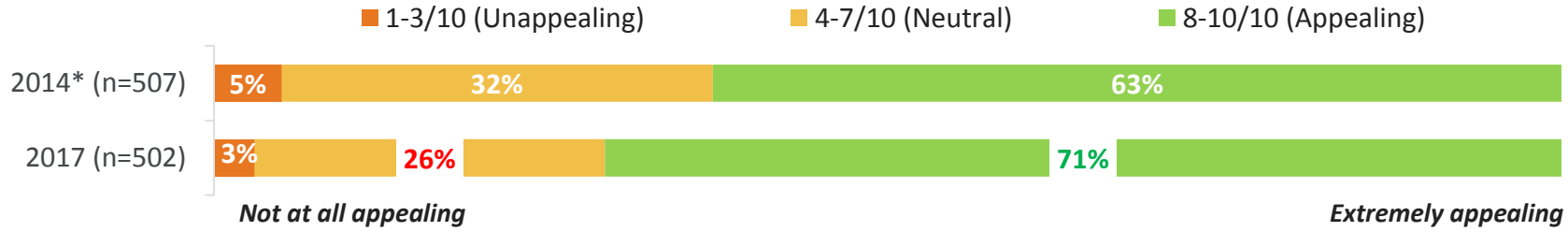
ATTITUDES TOWARD DIFFERENT LIGHT BULB TYPES

The *importance* & *appeal* of energy-efficient lighting have improved significantly, suggesting that people have bought into & are receptive to messaging around lighting

Energy-Efficient Lighting Importance (10pt scale)



Energy-Efficient Lighting Appeal (10pt scale)



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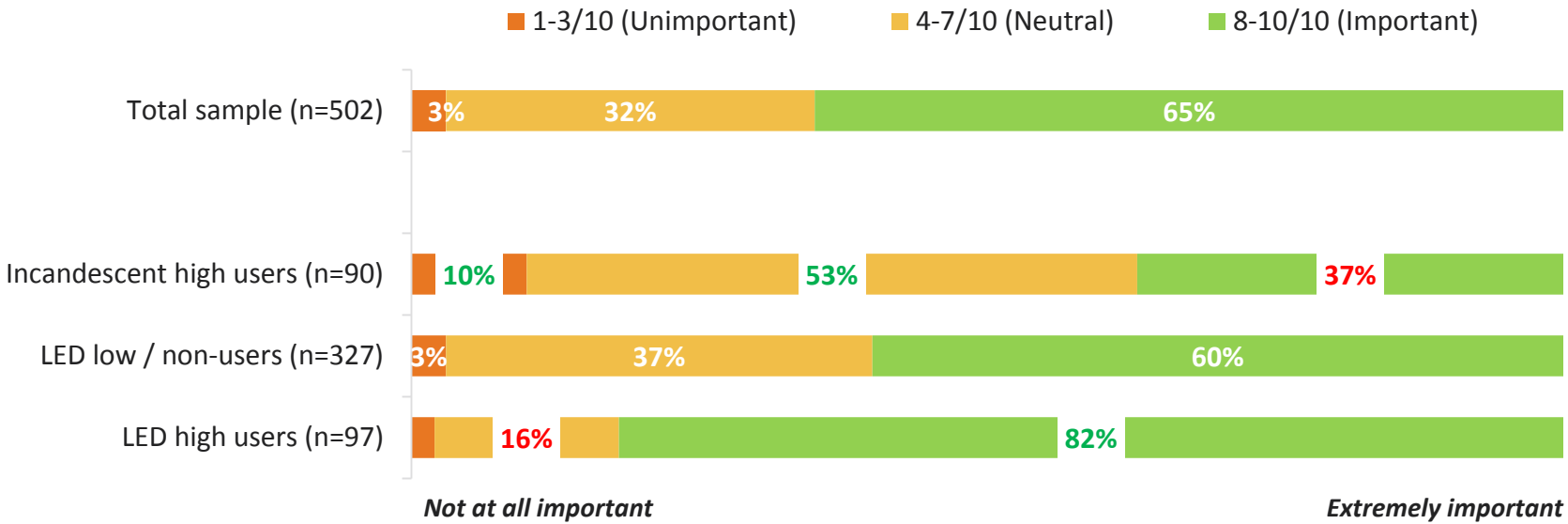
***Note:** 2014 EECA Change in State research*

***EL1:** Thinking about energy-efficient lighting, how important is it to you to use energy-efficient lighting in your home? / **EL4a:** How appealing is the overall idea of energy-efficient lighting to you? **Base:** Total sample*

It is clear that the importance people place in efficient lighting is part of the pathway to LED use; high users of incandescent place a significantly lower level of importance on this

Energy-Efficient Lighting Importance (10pt scale)

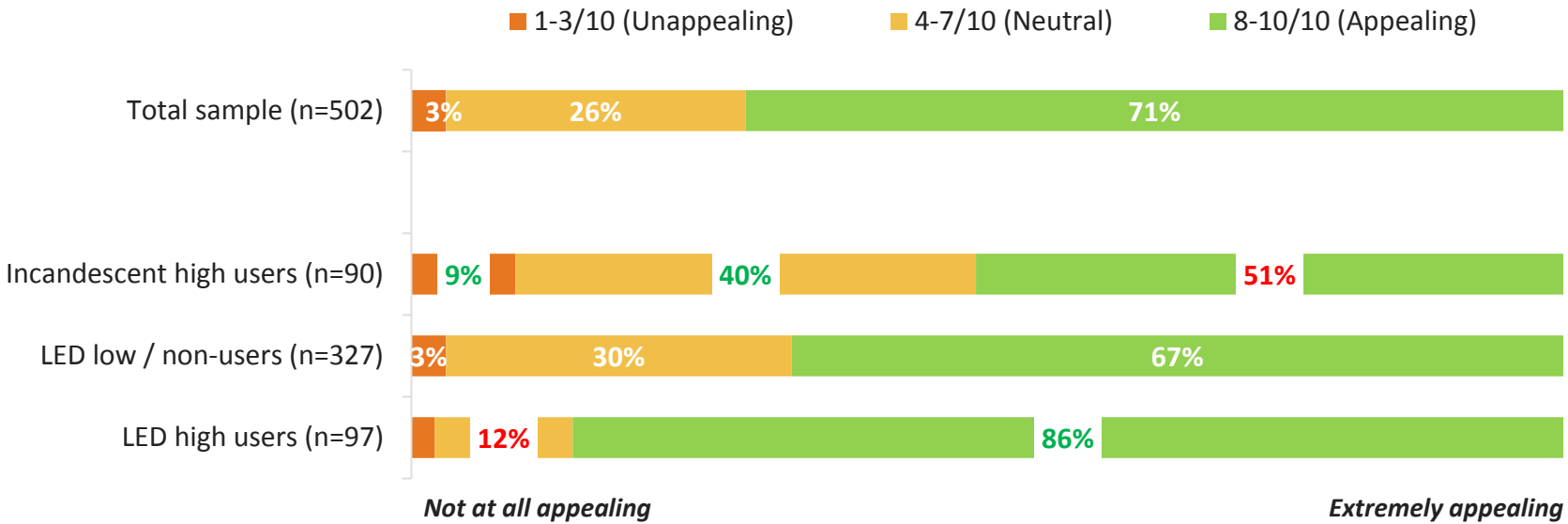


Green is sig. ↑, Red is sig.↓ than total

EL1: Thinking about energy-efficient lighting, how important is it to you to use energy-efficient lighting in your home?
Base: Total sample (n=502)

As with importance, there's a noticeable relationship between perception & behaviour regarding energy-efficient lighting, with the highest level amongst high LED users

Energy-Efficient Lighting Appeal (10pt scale)

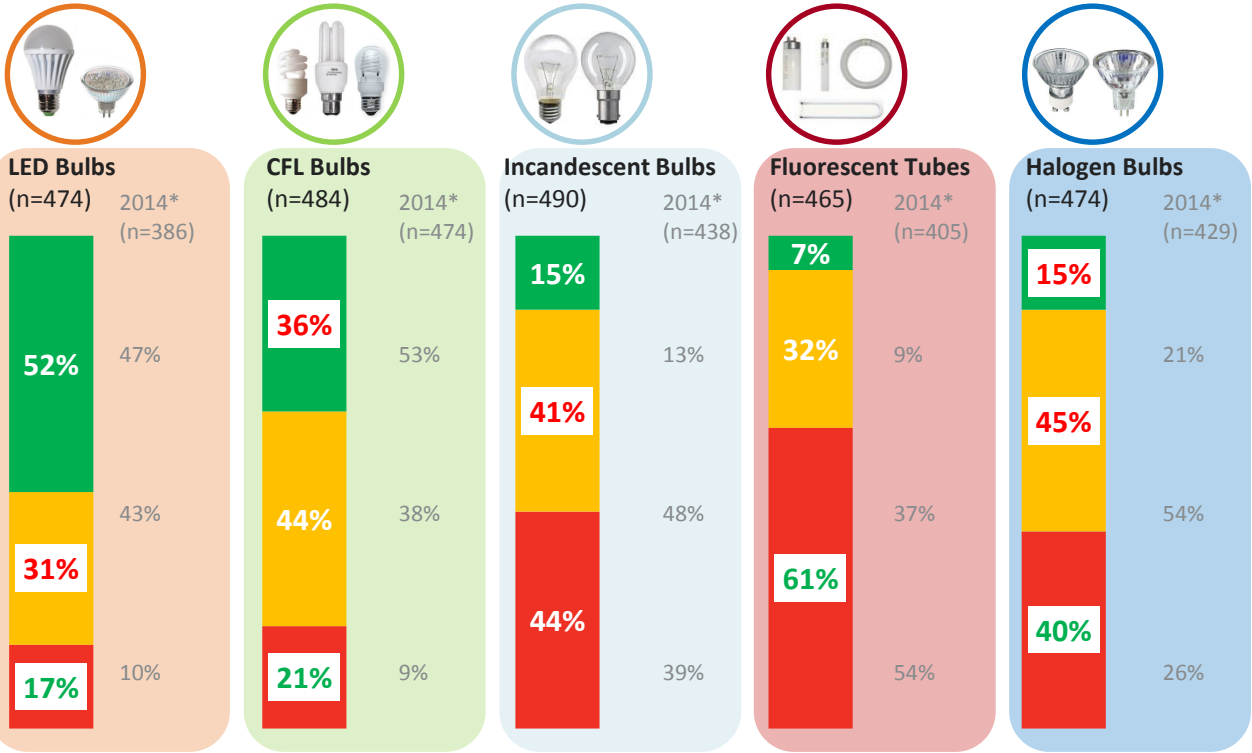


Green is sig. ↑, Red is sig.↓ than the total sample

EL4a: How appealing is the overall idea of energy-efficient lighting to you?
Base: Total sample (n=502)

APPEAL OF DIFFERENT LIGHT BULBS

At a total market level, LED bulbs are the most appealing light bulb to *meet people's lighting needs*, improving since 2014 & mostly at the expense of CFL bulbs



**Note:* *2014 EECA Change in State research*

EL4b: *How appealing are the different types of light bulbs below in terms of meeting your lighting needs?* ***Base:*** *Those aware of the light bulb type*

However, when split by segments of interest, the appeal of LEDs still has scope to improve amongst LED low / non-users & incandescent high users

Comparing T3B (8-10/10) Appeal

	LED bulbs	CFL bulbs	Incandescent bulbs
Total sample (n=474 to 490)	52%	36%	15%
Incandescent high users (n=82 to 90)	**28%**	29%	**43%**
LED low / non-users (n=299 to 322)	**36%**	**46%**	18%
LED high users (n=90 to 97)	**85%**	**10%**	**4%**

Green is sig. ↑, Red is sig.↓ than total

EL4b: How appealing are the different types of light bulbs below in terms of meeting your lighting needs?
Base: Those aware of the light bulb type

PERCEIVED VALUE OF DIFFERENT LIGHT BULBS

Lower power bills **&** ***longer-lasting bulbs*** **are generally accepted benefits of LEDs; but there's room to challenge perceptions about** ***being fit for purpose*** **&** ***quick to light up***

	LED Bulbs (n=474)	2014* (n=386)	CFL Bulbs (n=484)	2014* (n=474)	Incandescent Bulbs (n=490)	2014* (n=438)	Fluorescent Tubes (n=465)	2014* (n=405)	Halogen Bulbs (n=474)	2014* (n=429)
Lower power bills	61%	53%	61%	85%	14%	14%	25%	32%	24%	22%
Light bulbs last longer	51%	49%	45%	74%	16%	13%	38%	41%	32%	28%
Brightness	34%	46%	14%	18%	36%	44%	43%	55%	49%	61%
Quality of the light produced	33%	41%	15%	27%	26%	27%	34%	38%	43%	52%
Fit for purpose	30%	34%	22%	44%	45%	23%	46%	59%	43%	43%
Quickly lights up to full strength	23%	38%	6%	13%	37%	62%	29%	37%	34%	50%
Inexpensive to buy	20%	13%	16%	17%	70%	79%	22%	17%	20%	13%
Safe for use	20%	16%	11%	15%	18%	18%	14%	11%	18%	13%
Easy to dispose of	10%	9%	4%	5%	25%	21%	10%	6%	11%	13%
Better for the environment	1%	N/A	1%	N/A	0%	N/A	0%	N/A	0%	N/A

Green is sig. ↑, Red is sig.↓ than 2014

***Note:** 2014 EECA Change in State research*

***EL6:** Now think about what you value most from... **Base:** Those aware of the light bulb type*

Across user types, the 1st & 2nd most valuable attributes of each bulb type are consistent, indicating a broader value proposition needs to develop for high incandescent users

Most valuable
2nd most valuable
3rd most valuable

	LED Bulbs				CFL Bulbs				Incandescent Bulbs			
	Total (n=474)	I.B. high (n=83)	LED non / low (n=299)	LED high (n=97)	Total (n=484)	I.B. high (n=82)	LED non / low (n=319)	LED high (n=90)	Total (n=490)	I.B. high (n=90)	LED non / low (n=322)	LED high (n=94)
Lower power bills	61%	47%	56%	72%	61%	54%	64%	51%	14%	21%	16%	12%
Quality of the light produced	33%	33%	32%	31%	15%	18%	16%	13%	26%	20%	25%	26%
Brightness	34%	35%	34%	36%	14%	18%	16%	12%	36%	37%	36%	35%
Fit for purpose	30%	39%	30%	28%	22%	21%	20%	21%	45%	48%	47%	44%
Light bulbs last longer	51%	46%	49%	53%	45%	44%	45%	43%	16%	26%	16%	16%
Quickly lights up to full strength	23%	23%	22%	28%	6%	6%	6%	2%	37%	31%	39%	31%
Easy to dispose of	10%	13%	11%	5%	4%	2%	3%	7%	25%	20%	24%	28%
Inexpensive to buy	20%	30%	21%	24%	16%	17%	16%	20%	70%	77%	71%	64%
Safe for use	20%	14%	19%	24%	11%	11%	10%	14%	18%	19%	17%	19%
Better for the environment	1%	1%	1%	0%	1%	1%	1%	0%	0%	0%	0%	0%

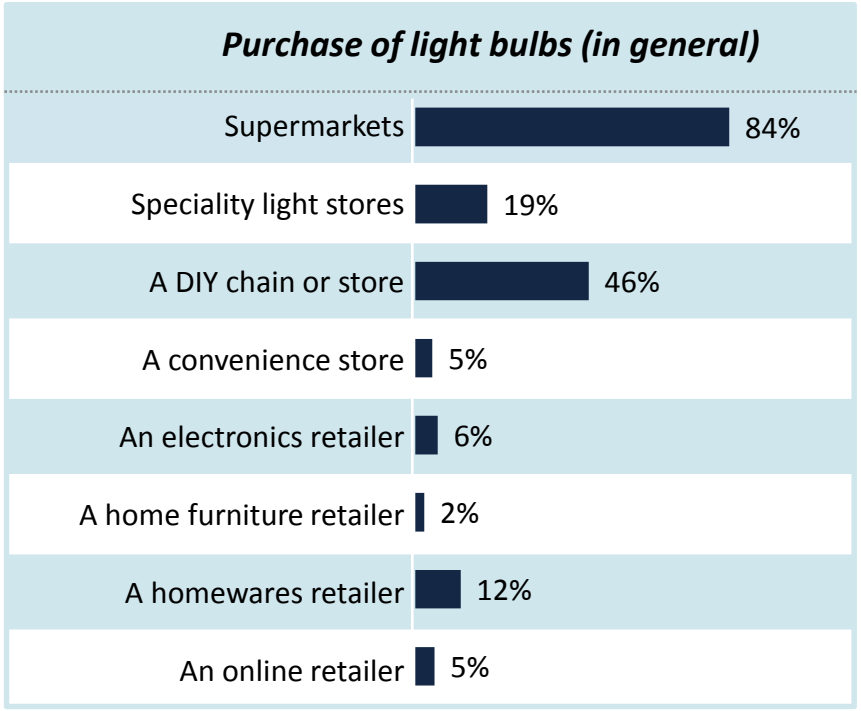
Green is sig. ↑, Red is sig. ↓ than total

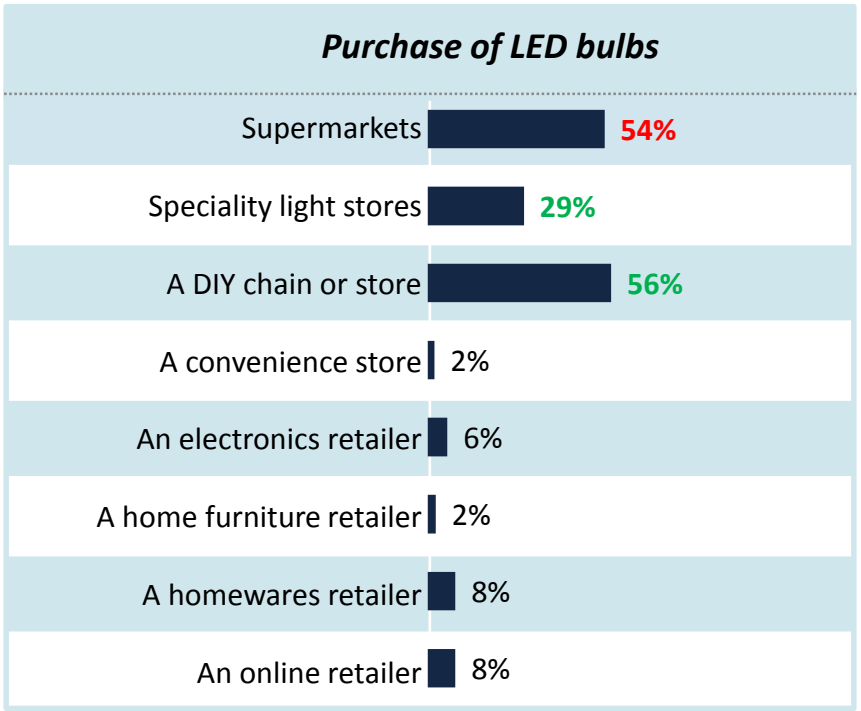
EL6: *Now think about what you value most from...*
Base: *Those aware of the light bulb type*

LED BULBS

GAME CHANGERS

LED bulb buyers are significantly less likely to shop for LEDs at supermarkets; however, supermarkets remain a valuable channel for EECA in-store marcoms





Green is sig. ↑, Red is sig.↓ than light bulbs in general

NLQ7a: *Please can you tell us where you usually buy your light bulbs?* ***Base:*** *Total sample (n=502)*
NLQ7b: *Please can you tell us where you usually buy your LED light bulbs?* ***Base:*** *LED bulb users (n=253)*

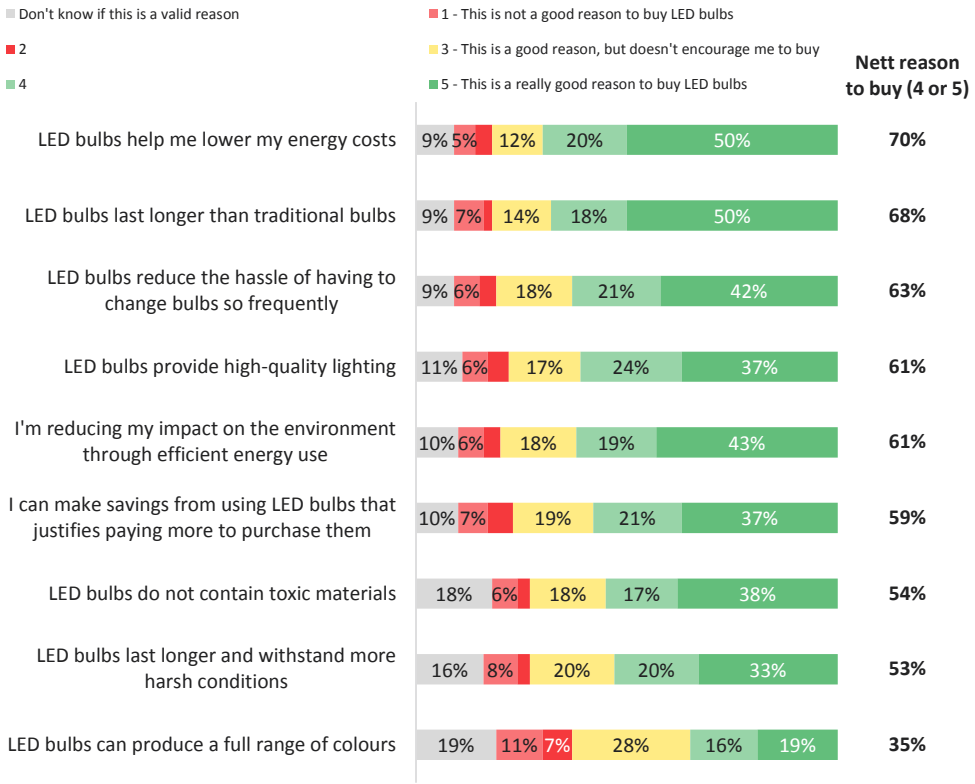
There is scope for EECA to persuade more people to use LEDs more widely in higher-usage areas of the home, particularly *bedrooms*, *kitchen / dining areas*, *bathrooms* & *hallways*

LED bulbs usage by room type

	Bedrooms	Lounge / living	Kitchen	Bathrooms	Hallways	Other rooms	Outdoors
Virtually all of them	28%	38%	38%	23%	27%	22%	12%
Most of them	10%	9%	11%	12%	11%	6%	6%
Around half of them	10%	7%	8%	6%	5%	6%	5%
About a quarter of them	4%	6%	6%	4%	3%	4%	6%
Only a few	13%	11%	16%	14%	9%	14%	12%
None	30%	26%	19%	39%	40%	42%	49%
Don't know	1%	0%	0%	0%	1%	1%	2%
Not applicable	3%	3%	2%	2%	4%	4%	8%

NLQ2: *Can you tell us about the proportion of* ***LED bulbs*** *you use in?*
Base: *LED bulb users (n=253)*

Virtually all benefits of LED bulbs are seen as positive reasons to buy, thus indicating that there is scope to build perceptions beyond accepted *lower energy costs* & *lasting longer*



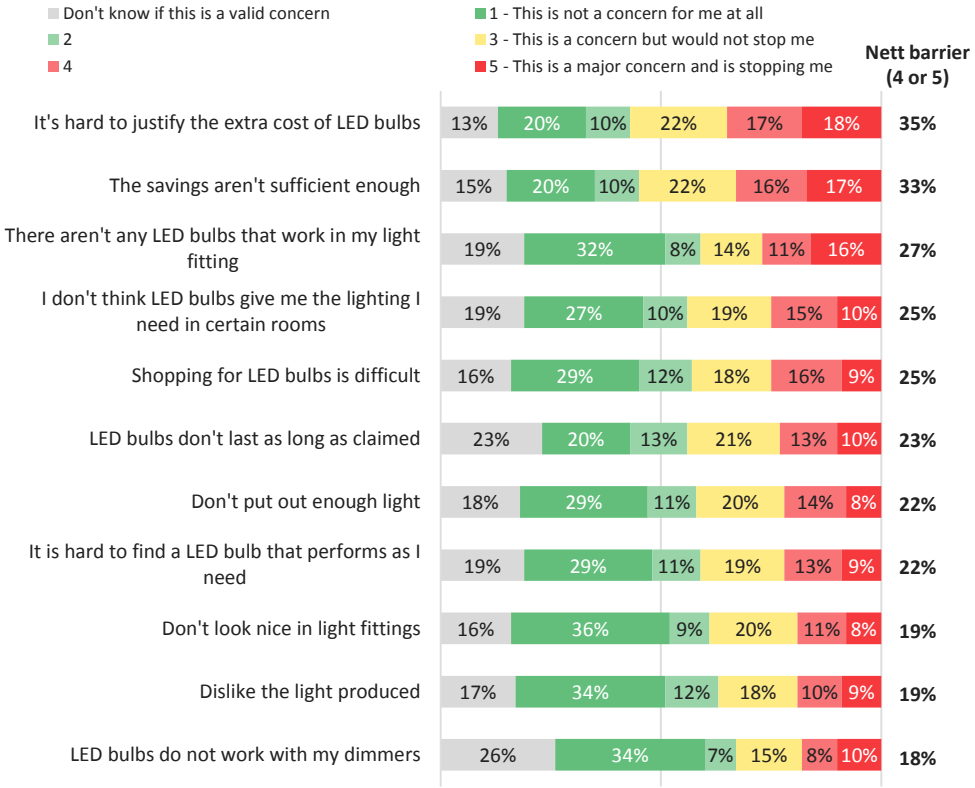
- *"The quality of light from these bulbs is great for both bathroom and kitchen use."*
- *"They look better than some bulbs that are available."*
- *"There is a better shelving arrangement when buying LED bulbs."*
- *"Since LED bulbs produce less heat than other bulbs, they can be used in environments where heat can be dangerous."*
- *"They are compact and fit in to existing sockets."*

QLT9: *Please tell us to what extent you feel that these are good reasons for you to buy LED bulbs.* ***Base:*** *Those aware of LED bulbs (n=474)*

QLT9a: *Is there anything else that you feel are good reasons to buy LED bulbs?* ***Base:*** *Those who had another good reason for purchasing LEDS (n=107)*

REASONS AGAINST BUYING LEDS

Upfront costs & *sufficient savings* are two areas EECA can better educate consumers about LEDs, although neither are barriers stopping the majority of those aware of LEDs



- *"Finding them at the right price; I will only purchase if they had a major sale."*
- *"As time goes by, the LED bulbs will become dimmer (not as bright) significantly."*
- *"Comparing relative light levels between what has been traditional (wattage) and the new (lumens) so a correct equivalent lighting level can be obtained."*
- *"The rating of LED bulbs in terms of lumens, as opposed to equivalent incandescent ratings, make buying the right bulb difficult."*
- *"They have a horrible hard light. I bought some LED Christmas lights, and even with coloured covering they look harsh."*

QLT6: *Please tell us to what extent you feel that these are concerns that stop you from buying LED bulbs.* ***Base:*** *Those aware of LED bulbs (n=474)*
QLT6a: *Is there anything else that concerns you about LED bulbs?* ***Base:*** *Those... (n=103)*

While people have bought into the benefits of LEDs outweighing the barriers, there's scope for EECA to address concerns around *costs*, *savings* & *compatible* light fittings

How the benefits of LEDs currently compare with barriers

Note: *This wasn't asked in historic research.*

Top-3 Barriers

35% It's hard to justify the extra cost of LED bulbs

33% The savings from LED bulbs aren't sufficient enough to pay so much more for them

27% There aren't any LED bulbs that work in my light fittings

Top-3 Benefits

70% I believe that LED bulbs help me lower my energy costs

68% LED bulbs last longer than traditional bulbs

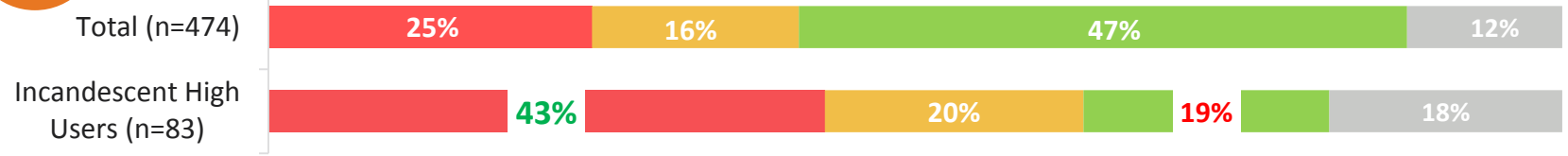
63% LED bulbs reduce the hassle of having to change bulbs frequently

NLQ6: *Thinking about the benefits and barriers towards LED bulbs, please indicate how the benefits currently compare with the barriers for you personally.* ***Base:*** *Those aware of LED bulbs (n=474)*

Incandescent high users find barriers outweigh the benefits by over 2 to 1; a sizeable proportion don't believe in the longer-term *cost* benefit of using LED bulbs

How the benefits of LEDs currently compare with barriers

Note: *This wasn't asked in historic research.*



Top-3 Barriers

- **55%** (vs. 35% total) — It's hard to justify the extra cost of LED bulbs
- **45%** (vs. 33% total) — The savings from LED bulbs aren't sufficient enough to pay so much more for them
- **37%** (vs. 25% total) — I don't think LED bulbs give me the lighting I need in certain rooms

Top 3-Benefits

- **60%** (vs. 70% total) — I believe that LED bulbs help me lower my energy costs
- **59%** (vs. 68% total) — I believe that LED bulbs last longer than traditional bulbs
- **56%** (vs. 61% total) — I believe I'm reducing my impact on the environment through efficient energy use

Green is sig. ↑, Red is sig.↓ than total

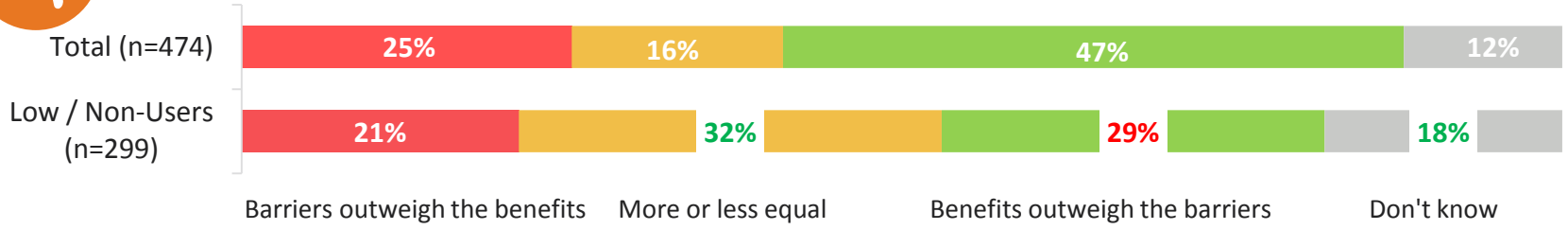
NLQ6: *Thinking about the benefits and barriers towards LED bulbs, please indicate how the benefits currently compare with the barriers for you personally.* ***Base:*** *Those aware of LED bulbs (n=474), Incandescent High Users aware of LED bulbs (n=83)*

BENEFITS VS. BARRIERS – LED LOW / NON-USERS VS. TOTAL

LED low / non-users are more divided, suggesting further work is required to convince them of the long-term *financial* benefits, given they believe they help lower energy costs

How the benefits of LEDs currently compare with barriers

Note: *This wasn't asked in historic research.*



Green is sig. ↑, Red is sig. ↓ than total

Top-3 Barriers

- **43%** (vs. 35% total) It's hard to justify the extra cost of LED bulbs
- **40%** (vs. 33% total) The savings from LED bulbs aren't sufficient enough to pay so much more for them
- **30%** (vs. 25% total) I don't think LED bulbs give me the lighting I need in certain rooms

Top-3 Benefits

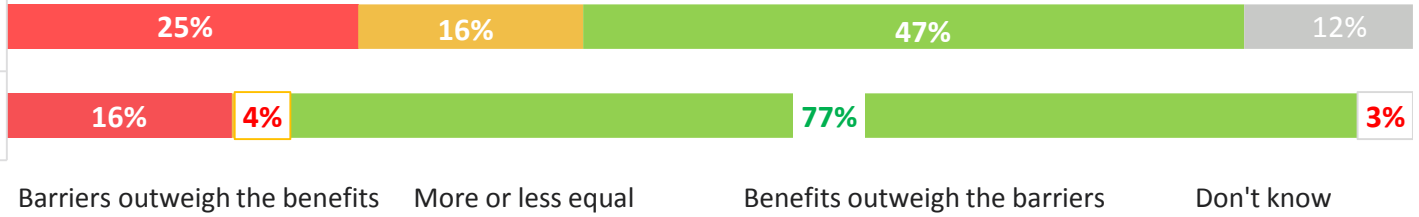
- **64%** (vs. 70% total) I believe that LED bulbs help me lower my energy costs
- **61%** (vs. 68% total) I believe that LED bulbs last longer than traditional bulbs
- **57%** (vs. 61% total) I believe I'm reducing my impact on the environment through efficient energy use

NLQ6: *Thinking about the benefits and barriers towards LED bulbs, please indicate how the benefits currently compare with the barriers for you personally.* ***Base:*** *Those aware of LED bulbs (n=474), LED Low / Non-Users aware of LED bulbs (n=299)*

For LED high users the barriers are small relative to the benefits

How the benefits of LEDs currently compare with barriers

Note: *This wasn't asked in historic research.*



Green is sig. ↑, Red is sig.↓ than total

Top 3-Barriers

20% (vs. 35% total) It's hard to justify the extra cost of LED bulbs

18% (vs. 33% total) The savings from LED bulbs aren't sufficient enough to pay so much more for them

18% (vs. 27% total) There aren't any LED bulbs that work in my light fittings

Top-3 Benefits

87% (vs. 70% total) I believe that LED bulbs help me lower my energy costs

83% (vs. 68% total) I believe that LED bulbs last longer than traditional bulbs

80% (vs. 63% total) I believe LED bulbs reduce the hassle of having to change bulbs so frequently

NLQ6: *Thinking about the benefits and barriers towards LED bulbs, please indicate how the benefits currently compare with the barriers for you personally.* ***Base:*** *Those aware of LED bulbs (n=474), LED High Users (n=97)*

Indicatively the market today is more positive about the benefits of LED bulbs than it was about energy-efficient lighting 4 years ago, particularly in terms of *lighting quality*

Note: We surveyed people in the EECA Consumer Monitor Jul-Sep 2013 using similar statements, but asked in terms of energy-efficient lighting. As a result, wave-on-wave comparisons are indicative only.

Benefits of LED bulbs, % T2B agree it's a benefit on a 5pt scale	2017 (n=474)	Benefits of EE bulbs, % T2B agree it's a benefit on a 5pt scale*	2013* (n=762)	Change
LED bulbs help me lower my energy costs	70%	I believe that EE light bulbs help me lower my energy costs	60%	+10%
LED bulbs last longer than traditional bulbs	68%	I believe that EE bulbs last longer than traditional bulbs	58%	+10%
LED bulbs reduce the hassle of having to change bulbs so frequently	63%	I believe EE light bulbs reduce the hassle of having to change bulbs so frequently	53%	+10%
LED bulbs provide high-quality lighting	61%	I believe EE bulbs provide high-quality lighting	35%	+27%
I'm reducing my impact on the environment through efficient energy use	61%	I'm reducing my impact on the environment through efficient energy use	53%	+8%
I can make savings from using LED bulbs that justifies paying more to purchase them	59%	I can make savings from using EE bulbs that justifies paying more to purchase them	52%	+7%
LED bulbs do not contain toxic materials	54%	Not available	N/A	N/A
LED bulbs last longer and withstand more harsh conditions	53%	Not available	N/A	N/A
LED bulbs can produce a full range of colours	35%	Not available	N/A	N/A

Green is sig. ↑, Red is sig.↓ than 2013

***Note:** Sourced from EECA Consumer Monitor Jul-Sep '13.*

***QLT9:** Please tell us to what extent you feel that these are good reasons for you to buy LED bulbs (2017) / energy-efficient light bulbs (2013)? **Base:** 2017 – Those aware of LED bulbs (n=474), 2013 – Total sample (n=762)*

Indicatively, there's scope to better inform people about the *costs* vs. benefits of LEDs & how to find LEDs that *work with their existing light fittings*

Note: We surveyed people in the EECA Consumer Monitor Jul-Sep 2013 using similar statements, but asked in terms of energy-efficient lighting. As a result, wave-on-wave comparisons are indicative only.

Barriers for LED bulbs, % T2B agree it's a benefit on a 5pt scale	2017 (n=474)	Barriers for EE bulbs, % T2B agree it's a benefit on a 5pt scale*	2013* (n=762)	Change
It's hard to justify the extra cost of LED bulbs	35%	It's hard to justify the extra cost of EE bulbs	25%	+10%
The savings from LED bulbs aren't sufficient enough	33%	The savings from EE bulbs aren't sufficient enough	22%	+11%
There aren't any LED bulbs that work in my light fitting	27%	There aren't any EE bulbs that work in my light fitting	25%	+2%
I don't think LED bulbs give me the lighting I need in certain rooms	25%	I don't think EE bulbs give me the lighting I need in certain rooms	26%	-1%
Shopping for LED bulbs is difficult	25%	Not available	N/A	N/A
LED bulbs don't last as long as claimed	23%	Not available	N/A	N/A
LED bulbs don't put out enough light	22%	EE bulbs don't put out enough light	21%	+1%
It is hard to find a LED bulb that performs as I need	22%	It is hard to find an EE bulb that performs as I need	22%	=
LED bulbs don't look nice in light fittings	19%	Spiral and stick efficient light bulbs don't look nice in light fittings	25%	-6%
Dislike the light produced	19%	I don't like the light that EE bulbs produce	20%	-1%
LED bulbs do not work with my dimmers	18%	Not available	N/A	N/A

Green is sig. ↑, Red is sig.↓ than 2013

***Note:** Sourced from EECA Consumer Monitor Jul-Sep '13.*

***QLT6:** Please tell us to what extent you feel that these are concerns that stop you from buying LED bulbs (2017) / energy-efficient bulbs (2013)? **Base:** 2017 – Those aware of LED bulbs (n=474), 2013 – Total sample (n=762)*

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APPENDIX – PROFILING BULB USERS & CFL USAGE IN THE HOME

58% of the market PROFILE OF INCANDESCENT BULB USERS (I)

Demographically, users of incandescent bulbs are broadly similar to the NZ rep average, but are slightly more likely to be of European ethnicity

Gender	Total (n=502)	I.B. users (n=290)
Male	48%	46%
Female	52%	54%

Age group	Total (n=502)	I.B. users (n=290)
18-29 years	21%	20%
30-39 years	16%	17%
40-49 years	19%	19%
50-64 years	25%	25%
65 years+	19%	19%

Ethnicity	Total (n=502)	I.B. users (n=290)
European	77%	82%
Maori	7%	7%
Pacific	2%	1%
Asian	14%	10%

Type of area	Total (n=502)	I.B. users (n=290)
City	66%	69%
Town	26%	24%
Rural	8%	7%

NZ region	Total (n=502)	I.B. users (n=290)
Auckland	33%	30%
Northern (excl. AKL)	20%	19%
Central	23%	24%
Southern	24%	27%

Home ownership	Total (n=502)	I.B. users (n=290)
Owner	65%	64%
Renter	29%	29%
Other	6%	7%

Annual household income	Total (n=502)	I.B. users (n=290)
Low (up to $60k)	37%	38%
Mid ($60-100k)	23%	24%
High ($100k+)	24%	21%

Household type	Total (n=502)	I.B. users (n=290)
Younger couple, no kids	10%	10%
HH with youngest child under 5yo	12%	12%
HH with youngest child 5-13yo	11%	12%
HH with youngest child 14-17yo	7%	6%
HH with youngest child 18yo+	12%	9%
Older couple, no kids	21%	20%
Living alone	17%	18%
Flatting	9%	11%
Extended family	0%	0%
Others	1%	2%

PROFILE OF INCANDESCENT BULB USERS (II)

Aside from being heavy users of incandescent bulbs, they tend to lag behind the NZ average in terms of LED bulb usage; however, their CFL usage is broadly in line with the national average, albeit few high users

NLQ7a Shopping for light bulbs	Total (n=502)	I.B. users (n=290)
Supermarket	84%	90%
DIY chain store	46%	42%
Lighting specialist	19%	18%

EL9 Light bulb usage	Total (n=502)	I.B. users (n=290)
Incandescent	58%	100%
CFL	65%	66%
LED	50%	41%
Fluorescent	20%	21%
Halogen	34%	38%

EL9 Light bulb consideration	Total (n=502)	I.B. users (n=290)
Incandescent	67%	100%
CFL	80%	85%
LED	79%	74%
Fluorescent	37%	37%
Halogen	55%	59%

NLQ7b Shopping for LED bulbs	Total (n=502)	I.B. users (n=290)
DIY chain store	28%	22%
Supermarket	27%	22%
Lighting specialist	15%	13%

NLQ3 LED usage now vs. 3 years ago	Total (n=502)	I.B. users (n=290)
A lot more	28%	20%
Slightly more	11%	13%
About the same	18%	19%
Slightly less	2%	3%
A lot less	3%	3%
Never used	32%	43%

EL11 LED future intention	Total (n=502)	I.B. users (n=290)
Continue using	43%	47%
Start using / use more	19%	28%
Stop using	4%	4%
Don't know	13%	21%

EL9b Light bulb proportions in the home		Total (n=502)	I.B. users (n=290)
Incandescent	Low / non-users	23%	40%
	Flirt-users	17%	29%
	High-users	18%	31%
CFL	Low / non-users	18%	21%
	Flirt-users	19%	26%
	High-users	28%	19%
LED	Low / non-users	16%	17%
	Flirt-users	16%	16%
	High-users	19%	8%
Fluorescent	Low / non-users	17%	18%
	Flirt-users	2%	2%
	High-users	1%	1%
Halogen	Low / non-users	25%	27%
	Flirt-users	7%	9%
	High-users	3%	2%

Green is sig. ↑, Red is sig.↓ than total

18% of the market PROFILE OF INCANDESCENT BULB HIGH USERS (I)

Energy Efficiency and Conservation Authority
Te Tari Tiaki Pūngao

Demographically, high users of incandescent bulbs are more likely to be younger, renters, flatting & of European ethnicity; they also skew towards being females

Gender	Total (n=502)	I.B high (n=90)
Male	48%	38%
Female	52%	62%

Age group	Total (n=502)	I.B high (n=90)
18-29 years	21%	31%
30-39 years	16%	21%
40-49 years	19%	12%
50-64 years	25%	20%
65 years+	19%	16%

Ethnicity	Total (n=502)	I.B high (n=90)
European	77%	89%
Maori	7%	7%
Pacific	2%	1%
Asian	14%	4%

Type of area	Total (n=502)	I.B high (n=90)
City	66%	66%
Town	26%	27%
Rural	8%	7%

NZ region	Total (n=502)	I.B high (n=90)
Auckland	33%	29%
Northern (excl. AKL)	20%	19%
Central	23%	29%
Southern	24%	23%

Home ownership	Total (n=502)	I.B high (n=90)
Owner	65%	50%
Renter	29%	40%
Other	6%	10%

Annual household income	Total (n=502)	I.B high (n=90)
Low (up to $60k)	37%	36%
Mid ($60-100k)	23%	29%
High ($100k+)	24%	14%

Household type	Total (n=502)	I.B high (n=90)
Younger couple, no kids	10%	12%
HH with youngest child under 5yo	12%	13%
HH with youngest child 5-13yo	11%	11%
HH with youngest child 14-17yo	7%	1%
HH with youngest child 18yo+	12%	11%
Older couple, no kids	21%	12%
Living alone	17%	18%
Flatting	9%	19%
Extended family	0%	0%
Others	1%	2%

Green is sig. ↑, Red is sig.↓ than total

GAME CHANGERS

Ipsos

18% of the market PROFILE OF INCANDESCENT BULB HIGH USERS (II)

High users of incandescent bulbs are less likely to use or consider other types of bulbs, particularly LEDs & CFLs; the majority have never used LEDs before

NLQ7a Shopping for light bulbs	Total (n=502)	I.B high (n=90)
Supermarket	84%	96%
DIY chain store	46%	27%
Lighting specialist	19%	6%

EL9 Light bulb usage	Total (n=502)	I.B high (n=90)
Incandescent	58%	100%
CFL	65%	33%
LED	50%	17%
Fluorescent	20%	8%
Halogen	34%	17%

EL9 Light bulb consideration	Total (n=502)	I.B high (n=90)
Incandescent	67%	100%
CFL	80%	66%
LED	79%	58%
Fluorescent	37%	23%
Halogen	55%	47%

NLQ7b Shopping for LED bulbs	Total (n=502)	I.B high (n=90)
DIY chain store	28%	7%
Supermarket	27%	9%
Lighting specialist	15%	3%

NLQ3 LED usage now vs. 3 years ago	Total (n=502)	I.B high (n=90)
A lot more	28%	8%
Slightly more	11%	6%
About the same	18%	9%
Slightly less	2%	2%
A lot less	3%	4%
Never used	32%	63%

EL11 LED future intention	Total (n=502)	I.B high (n=90)
Continue using	43%	13%
Start using / use more	19%	16%
Stop using	4%	1%
Don't know	13%	28%

EL9b Light bulb proportions in the home		Total (n=502)	I.B high (n=90)
Incandescent	Low / non-users	23%	0%
	Flirt-users	17%	0%
	High-users	18%	100%
CFL	Low / non-users	18%	22%
	Flirt-users	19%	8%
	High-users	28%	3%
LED	Low / non-users	16%	93%
	Flirt-users	16%	4%
	High-users	19%	2%
Fluorescent	Low / non-users	17%	6%
	Flirt-users	2%	1%
	High-users	1%	1%
Halogen	Low / non-users	25%	13%
	Flirt-users	7%	2%
	High-users	3%	1%

Green is sig. ↑, Red is sig.↓ than total

PROFILE OF LED BULB USERS (I)

Demographically, LED users are more likely to be home owners living in higher-income households

Gender	Total (n=502)	LED users (n=253)
Male	48%	53%
Female	52%	47%

Age group	Total (n=502)	LED users (n=253)
18-29 years	21%	19%
30-39 years	16%	15%
40-49 years	19%	18%
50-64 years	25%	28%
65 years+	19%	20%

Ethnicity	Total (n=502)	LED users (n=253)
European	77%	74%
Maori	7%	7%
Pacific	2%	1%
Asian	14%	17%

Type of area	Total (n=502)	LED users (n=253)
City	66%	66%
Town	26%	25%
Rural	8%	9%

NZ region	Total (n=502)	LED users (n=253)
Auckland	33%	37%
Northern (excl. AKL)	20%	19%
Central	23%	19%
Southern	24%	25%

Home ownership	Total (n=502)	LED users (n=253)
Owner	65%	75%
Renter	29%	19%
Other	6%	6%

Annual household income	Total (n=502)	LED users (n=253)
Low (up to $60k)	37%	27%
Mid ($60-100k)	23%	25%
High ($100k+)	24%	34%

Household type	Total (n=502)	LED users (n=253)
Younger couple, no kids	10%	9%
HH with youngest child under 5yo	12%	13%
HH with youngest child 5-13yo	11%	12%
HH with youngest child 14-17yo	7%	8%
HH with youngest child 18yo+	12%	15%
Older couple, no kids	21%	25%
Living alone	17%	9%
Flatting	9%	6%
Extended family	0%	1%
Others	1%	2%

Green is sig. ↑, Red is sig.↓ than total

PROFILE OF LED BULB USERS (II)

Aside from being heavier users of LED bulbs, they're more likely to continue using LEDs & usage has increased a lot in the past 3 years; they're less likely to use incandescent & CFL bulbs

NLQ7a Shopping for light bulbs	Total (n=502)	LED users (n=253)
Supermarket	84%	76%
DIY chain store	46%	57%
Lighting specialist	19%	29%

EL9 Light bulb usage	Total (n=502)	LED users (n=253)
Incandescent	58%	47%
CFL	65%	57%
LED	50%	100%
Fluorescent	20%	28%
Halogen	34%	44%

EL9 Light bulb consideration	Total (n=502)	LED users (n=253)
Incandescent	67%	58%
CFL	80%	75%
LED	79%	100%
Fluorescent	37%	43%
Halogen	55%	60%

NLQ7b Shopping for LED bulbs	Total (n=502)	LED users (n=253)
Supermarket	28%	56%
DIY chain store	27%	54%
Lighting specialist	15%	29%

NLQ3 LED usage now vs. 3 years ago	Total (n=502)	LED users (n=253)
A lot more	28%	54%
Slightly more	11%	17%
About the same	18%	24%
Slightly less	2%	2%
A lot less	3%	2%

EL11 LED future intention	Total (n=502)	LED users (n=253)
Continue using	43%	81%
Start using / use more	19%	13%
Stop using	4%	3%
Don't know	13%	4%

EL9b Light bulb proportions in the home		Total (n=502)	LED users (n=253)
Incandescent	Low / non-users	23%	26%
	Flirt-users	17%	15%
	High-users	18%	6%
CFL	Low / non-users	18%	21%
	Flirt-users	19%	18%
	High-users	28%	18%
LED	Low / non-users	16%	31%
	Flirt-users	16%	31%
	High-users	19%	38%
Fluorescent	Low / non-users	17%	24%
	Flirt-users	2%	2%
	High-users	1%	2%
Halogen	Low / non-users	25%	33%
	Flirt-users	7%	8%
	High-users	3%	3%

Green is sig. ↑, Red is sig.↓ than total

PROFILE OF LED LOW USERS (I)

Demographically, LED low users are more likely to live in mid-income households & are generally more likely to be females & homeowners

Gender	Total (n=502)	LED low (n=76)
Male	48%	41%
Female	52%	59%

Age group	Total (n=502)	LED low (n=76)
18-29 years	21%	20%
30-39 years	16%	17%
40-49 years	19%	18%
50-64 years	25%	27%
65 years+	19%	18%

Ethnicity	Total (n=502)	LED low (n=76)
European	77%	79%
Maori	7%	5%
Pacific	2%	1%
Asian	14%	16%

Type of area	Total (n=502)	LED low (n=76)
City	66%	68%
Town	26%	20%
Rural	8%	12%

NZ region	Total (n=502)	LED low (n=76)
Auckland	33%	35%
Northern (excl. AKL)	20%	21%
Central	23%	18%
Southern	24%	26%

Home ownership	Total (n=502)	LED low (n=76)
Owner	65%	72%
Renter	29%	25%
Other	6%	3%

Annual household income	Total (n=502)	LED low (n=76)
Low (up to $60k)	37%	**22%**
Mid ($60-100k)	23%	32%
High ($100k+)	24%	33%

Household type	Total (n=502)	LED low (n=76)
Younger couple, no kids	10%	8%
HH with youngest child under 5yo	12%	17%
HH with youngest child 5-13yo	11%	13%
HH with youngest child 14-17yo	7%	5%
HH with youngest child 18yo+	12%	13%
Older couple, no kids	21%	26%
Living alone	17%	9%
Flatting	9%	8%
Extended family	0%	1%
Others	1%	0%

Green is sig. ↑, Red is sig.↓ than total

PROFILE OF LED LOW USERS (II)

LED low users are more likely to use fluorescent & halogen bulbs & are more likely to be high users of CFLs; over the past 3 years LED usage is about the same to slightly more, while the majority plan to continue using LEDs

NLQ7a Shopping for light bulbs	Total (n=502)	LED low (n=76)
Supermarket	84%	91%
DIY chain store	46%	53%
Lighting specialist	19%	25%

EL9 Light bulb usage	Total (n=502)	LED low (n=76)
Incandescent	58%	63%
CFL	65%	74%
LED	50%	100%
Fluorescent	20%	34%
Halogen	34%	58%

EL9 Light bulb consideration	Total (n=502)	LED low (n=76)
Incandescent	67%	72%
CFL	80%	89%
LED	79%	100%
Fluorescent	37%	46%
Halogen	55%	72%

NLQ7b Shopping for LED bulbs	Total (n=502)	LED low (n=76)
Supermarket	28%	55%
DIY chain store	27%	62%
Lighting specialist	15%	24%

NLQ3 LED usage now vs. 3 years ago	Total (n=502)	LED low (n=76)
A lot more	28%	29%
Slightly more	11%	24%
About the same	18%	39%
Slightly less	2%	3%
A lot less	3%	4%

EL11 LED future intention	Total (n=502)	LED low (n=76)
Continue using	43%	71%
Start using / use more	19%	17%
Stop using	4%	5%
Don't know	13%	7%

EL9b Light bulb proportions in the home		Total (n=502)	LED low (n=76)
Incandescent	Low / non-users	23%	32%
	Flirt-users	17%	20%
	High-users	18%	12%
CFL	Low / non-users	18%	17%
	Flirt-users	19%	13%
	High-users	28%	43%
LED	Low / non-users	16%	100%
	Flirt-users	16%	0%
	High-users	19%	0%
Fluorescent	Low / non-users	17%	28%
	Flirt-users	2%	3%
	High-users	1%	4%
Halogen	Low / non-users	25%	46%
	Flirt-users	7%	4%
	High-users	3%	8%

Green is sig. ↑, Red is sig.↓ than total

PROFILE OF LED LOW & NON-USERS (I)

Demographically, LED low / non-users are more likely to be renters; they're also generally more likely to be female & living in lower-income households

Gender	Total (n=502)	LED low / non (n=327)
Male	48%	43%
Female	52%	57%

Age group	Total (n=502)	LED low / non (n=327)
18-29 years	21%	22%
30-39 years	16%	17%
40-49 years	19%	20%
50-64 years	25%	23%
65 years+	19%	18%

Ethnicity	Total (n=502)	LED low / non (n=327)
European	77%	80%
Maori	7%	6%
Pacific	2%	2%
Asian	14%	12%

Type of area	Total (n=502)	LED low / non (n=327)
City	66%	67%
Town	26%	25%
Rural	8%	8%

NZ region	Total (n=502)	LED low / non (n=327)
Auckland	33%	30%
Northern (excl. AKL)	20%	22%
Central	23%	24%
Southern	24%	24%

Home ownership	Total (n=502)	LED low / non (n=327)
Owner	65%	59%
Renter	29%	36%
Other	6%	5%

Annual household income	Total (n=502)	LED low / non (n=327)
Low (up to $60k)	37%	42%
Mid ($60-100k)	23%	23%
High ($100k+)	24%	19%

Household type	Total (n=502)	LED low / non (n=327)
Younger couple, no kids	10%	10%
HH with youngest child under 5yo	12%	12%
HH with youngest child 5-13yo	11%	11%
HH with youngest child 14-17yo	7%	6%
HH with youngest child 18yo+	12%	9%
Older couple, no kids	21%	18%
Living alone	17%	21%
Flatting	9%	12%
Extended family	0%	0%
Others	1%	1%

Green is sig. ↑, Red is sig.↓ than total

PROFILE OF LED LOW & NON-USERS (II)

LED low / non-users are more likely to shop for bulbs at the supermarket, they're more likely to use, consider & be high users of incandescent & CFL bulbs; they are also more likely to have never used LEDs before

NLQ7a Shopping for light bulbs	Total (n=502)	LED low / non (n=327)
Supermarket	84%	92%
DIY chain store	46%	40%
Lighting specialist	19%	13%

EL9 Light bulb usage	Total (n=502)	LED low / non (n=327)
Incandescent	58%	67%
CFL	65%	73%
LED	50%	24%
Fluorescent	20%	17%
Halogen	34%	32%

EL9 Light bulb consideration	Total (n=502)	LED low / non (n=327)
Incandescent	67%	75%
CFL	80%	87%
LED	79%	68%
Fluorescent	37%	34%
Halogen	55%	55%

NLQ7b Shopping for LED bulbs	Total (n=502)	LED low / non (n=327)
Supermarket	28%	13%
DIY chain store	27%	14%
Lighting specialist	15%	6%

NLQ3 LED usage now vs. 3 years ago	Total (n=502)	LED low / non (n=327)
A lot more	28%	8%
Slightly more	11%	10%
About the same	18%	18%
Slightly less	2%	3%
A lot less	3%	5%
Never used	32%	49%

EL11 LED future intention	Total (n=502)	LED low / non (n=327)
Continue using	43%	21%
Start using / use more	19%	23%
Stop using	4%	5%
Don't know	13%	19%

EL9b Light bulb proportions in the home		Total (n=502)	LED low / non (n=327)
Incandescent	Low / non-users	23%	23%
	Flirt-users	17%	18%
	High-users	18%	26%
CFL	Low / non-users	18%	15%
	Flirt-users	19%	18%
	High-users	28%	40%
LED	Low / non-users	16%	100%
	Flirt-users	16%	0%
	High-users	19%	0%
Fluorescent	Low / non-users	17%	14%
	Flirt-users	2%	2%
	High-users	1%	1%
Halogen	Low / non-users	25%	24%
	Flirt-users	7%	5%
	High-users	3%	4%

Green is sig. ↑, Red is sig.↓ than total

16% of the market PROFILE OF LED FLIRT USERS (I)

Demographically, LED flirts are more likely to be males, homeowners & living in higher-income households; they're also generally more likely be aged 40-49 & living in households with school-aged kids

Gender	Total (n=502)	LED flirts (n=78)
Male	48%	64%
Female	52%	36%

Age group	Total (n=502)	LED flirts (n=78)
18-29 years	21%	18%
30-39 years	16%	10%
40-49 years	19%	26%
50-64 years	25%	27%
65 years+	19%	19%

Ethnicity	Total (n=502)	LED flirts (n=78)
European	77%	68%
Maori	7%	6%
Pacific	2%	1%
Asian	14%	15%

Type of area	Total (n=502)	LED flirts (n=78)
City	66%	71%
Town	26%	21%
Rural	8%	9%

NZ region	Total (n=502)	LED flirts (n=78)
Auckland	33%	42%
Northern (excl. AKL)	20%	14%
Central	23%	15%
Southern	24%	28%

Home ownership	Total (n=502)	LED flirts (n=78)
Owner	65%	80%
Renter	29%	14%
Other	6%	6%

Annual household income	Total (n=502)	LED flirts (n=78)
Low (up to $60k)	37%	28%
Mid ($60-100k)	23%	21%
High ($100k+)	24%	36%

Household type	Total (n=502)	LED flirts (n=78)
Younger couple, no kids	10%	3%
HH with youngest child under 5yo	12%	13%
HH with youngest child 5-13yo	11%	17%
HH with youngest child 14-17yo	7%	12%
HH with youngest child 18yo+	12%	12%
Older couple, no kids	21%	24%
Living alone	17%	12%
Flatting	9%	6%
Extended family	0%	0%
Others	1%	3%

Green is sig. ↑, Red is sig.↓ than total

PROFILE OF LED FLIRT USERS (II)

LED flirts are more likely to be users of halogen bulbs; most are using LEDs slightly to a lot more compared with 3 years ago & most intend to continue using LEDs

NLQ7a Shopping for light bulbs	Total (n=502)	LED flirts (n=78)
Supermarket	84%	81%
DIY chain store	46%	55%
Lighting specialist	19%	28%

EL9 Light bulb usage	Total (n=502)	LED flirts (n=78)
Incandescent	58%	60%
CFL	65%	67%
LED	50%	100%
Fluorescent	20%	28%
Halogen	34%	53%

EL9 Light bulb consideration	Total (n=502)	LED flirts (n=78)
Incandescent	67%	68%
CFL	80%	83%
LED	79%	100%
Fluorescent	37%	49%
Halogen	55%	69%

NLQ7b Shopping for LED bulbs	Total (n=502)	LED flirts (n=78)
Supermarket	28%	51%
DIY chain store	27%	59%
Lighting specialist	15%	29%

NLQ3 LED usage now vs. 3 years ago	Total (n=502)	LED flirts (n=78)
A lot more	28%	49%
Slightly more	11%	26%
About the same	18%	21%
Slightly less	2%	3%
A lot less	3%	1%

EL11 LED future intention	Total (n=502)	LED flirts (n=78)
Continue using	43%	78%
Start using / use more	19%	18%
Stop using	4%	3%
Don't know	13%	1%

EL9b Light bulb proportions in the home		Total (n=502)	LED flirts (n=78)
Incandescent	Low / non-users	23%	28%
	Flirt-users	17%	27%
	High-users	18%	5%
CFL	Low / non-users	18%	17%
	Flirt-users	19%	37%
	High-users	28%	13%
LED	Low / non-users	16%	0%
	Flirt-users	16%	100%
	High-users	19%	0%
Fluorescent	Low / non-users	17%	23%
	Flirt-users	2%	5%
	High-users	1%	0%
Halogen	Low / non-users	25%	36%
	Flirt-users	7%	17%
	High-users	3%	0%

Green is sig. ↑, Red is sig.↓ than total

19% of the market PROFILE OF LED HIGH USERS (I)

Demographically, LED high users are more likely to live in households with adult children; they also generally skew towards being male, aged 50+, Asian ethnicity, homeowners, higher-income households & empty-nesters

Gender	Total (n=502)	LED high (n=97)
Male	48%	53%
Female	52%	47%

Age group	Total (n=502)	LED high (n=97)
18-29 years	21%	21%
30-39 years	16%	19%
40-49 years	19%	11%
50-64 years	25%	28%
65 years+	19%	22%

Ethnicity	Total (n=502)	LED high (n=97)
European	77%	73%
Maori	7%	8%
Pacific	2%	1%
Asian	14%	21%

Type of area	Total (n=502)	LED high (n=97)
City	66%	59%
Town	26%	33%
Rural	8%	8%

NZ region	Total (n=502)	LED high (n=97)
Auckland	33%	34%
Northern (excl. AKL)	20%	20%
Central	23%	23%
Southern	24%	23%

Home ownership	Total (n=502)	LED high (n=97)
Owner	65%	74%
Renter	29%	19%
Other	6%	7%

Annual household income	Total (n=502)	LED high (n=97)
Low (up to $60k)	37%	30%
Mid ($60-100k)	23%	25%
High ($100k+)	24%	32%

Household type	Total (n=502)	LED high (n=97)
Younger couple, no kids	10%	15%
HH with youngest child under 5yo	12%	10%
HH with youngest child 5-13yo	11%	7%
HH with youngest child 14-17yo	7%	6%
HH with youngest child 18yo+	12%	21%
Older couple, no kids	21%	27%
Living alone	17%	7%
Flatting	9%	4%
Extended family	0%	1%
Others	1%	2%

Green is sig. ↑, Red is sig.↓ than total

PROFILE OF LED HIGH USERS (II)

LED high users are less likely to use incandescent or CFL bulbs & are more likely to shop for their bulbs at DIY chain stores or lighting specialists; most are using LEDs a lot more than 3 years ago & the vast majority will continue using LEDs

NLQ7a Shopping for light bulbs	Total (n=502)	LED high (n=97)
Supermarket	84%	61%
DIY chain store	46%	62%
Lighting specialist	19%	33%

EL9 Light bulb usage	Total (n=502)	LED high (n=97)
Incandescent	58%	25%
CFL	65%	36%
LED	50%	100%
Fluorescent	20%	24%
Halogen	34%	27%

EL9 Light bulb consideration	Total (n=502)	LED high (n=97)
Incandescent	67%	38%
CFL	80%	56%
LED	79%	100%
Fluorescent	37%	35%
Halogen	55%	43%

NLQ7b Shopping for LED bulbs	Total (n=502)	LED high (n=97)
Supermarket	28%	60%
DIY chain store	27%	44%
Lighting specialist	15%	34%

NLQ3 LED usage now vs. 3 years ago	Total (n=502)	LED high (n=97)
A lot more	28%	79%
Slightly more	11%	5%
About the same	18%	14%
Slightly less	2%	0%
A lot less	3%	1%

EL11 LED future intention	Total (n=502)	LED high (n=97)
Continue using	43%	91%
Start using / use more	19%	6%
Stop using	4%	0%
Don't know	13%	3%

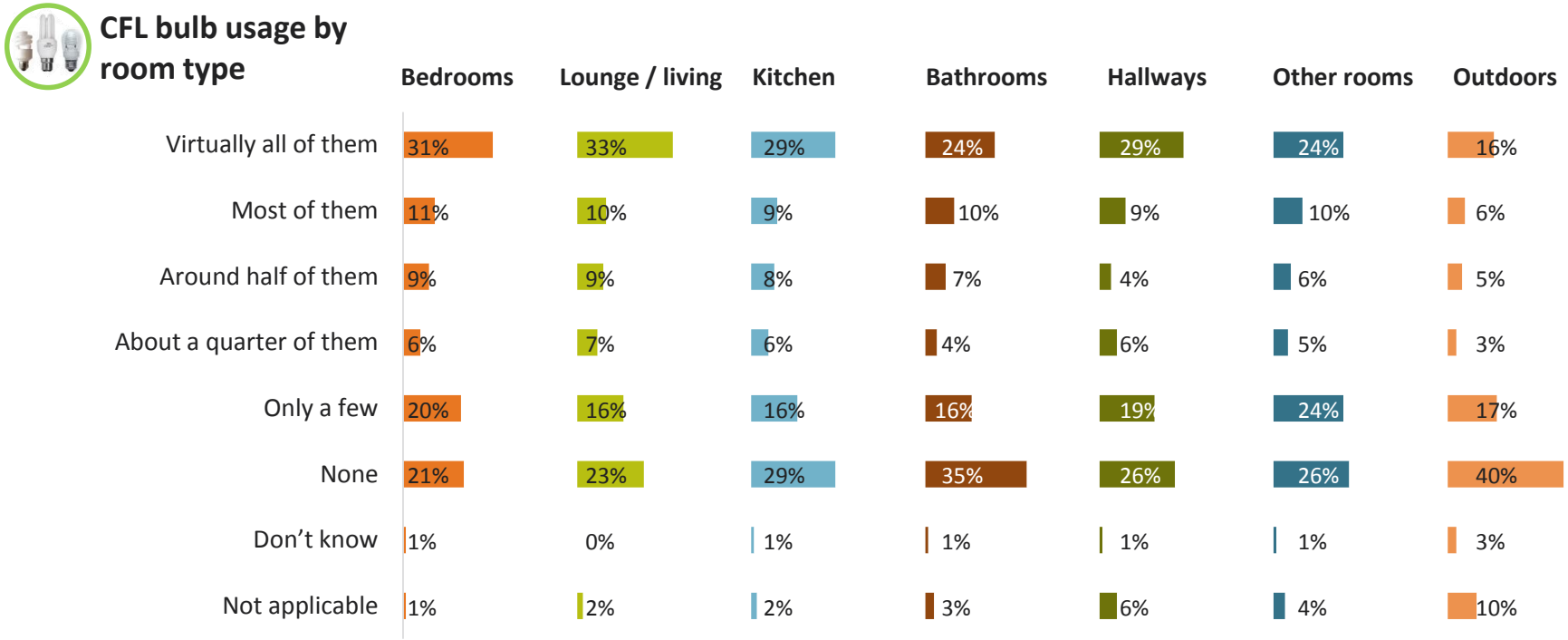
EL9b Light bulb proportions in the home		Total (n=502)	LED high (n=97)
Incandescent	Low / non-users	23%	20%
	Flirt-users	17%	3%
	High-users	18%	2%
CFL	Low / non-users	18%	28%
	Flirt-users	19%	6%
	High-users	28%	2%
LED	Low / non-users	16%	0%
	Flirt-users	16%	0%
	High-users	19%	100%
Fluorescent	Low / non-users	17%	23%
	Flirt-users	2%	0%
	High-users	1%	1%
Halogen	Low / non-users	25%	22%
	Flirt-users	7%	4%
	High-users	3%	1%

Green is sig. ↑, Red is sig.↓ than total

CFL USAGE BY ROOMS

CFLs are more often used in the *bedrooms*, *lounge / living areas*, *kitchen / dining areas* & *hallways*, which are often higher-usage areas; usage is often lower in *bathrooms* & *outdoors*, which are often lower-usage areas

CFL bulb usage by room type



NLQ1: *Can you tell us about the proportion of* ***CFL bulbs*** *you use in?*
Base: *CFL bulb users (n=327)*