

ENERGY EFFICIENCY TRENDS VOL. 14

Essential insight for consumers and suppliers
of non-domestic energy efficiency in the UK

March 2016



Bloomberg
NEW ENERGY FINANCE

SUPPORTED BY:



ENDORSED BY:



CONTENTS

SECTION 1.	INTRODUCTION	4
SECTION 2.	EXECUTIVE SUMMARY	5
2.1.	SUPPLIER TRENDS.....	5
2.2.	CONSUMER TRENDS.....	6
SECTION 3.	SUPPLIER TRENDS	7
3.1.	THE ORDER BOOK.....	7
3.2.	STAFF NUMBERS.....	8
3.3.	SALE PRICES.....	8
3.4.	INDUSTRY RISK.....	9
3.5.	GOVERNMENT EFFECTIVENESS.....	10
SECTION 4.	CONSUMER TRENDS	11
4.1.	TECHNOLOGIES & MEASURES.....	11
4.2.	PROPERTY TYPES.....	12
4.3.	PROJECT COSTS.....	13
4.4.	PROJECT FINANCE.....	14
4.5.	FINANCIAL PAYBACK.....	14
4.6.	MEASUREMENT AND VERIFICATION.....	15
4.7.	CONSUMERS NOT UNDERTAKING ENERGY EFFICIENCY.....	15
APPENDICES		17
APPENDIX A:	METHODOLOGY	17
APPENDIX B:	SUPPLIER RESPONDENTS	18
APPENDIX C:	CONSUMER RESPONDENTS	19
ABOUT US		20
CONTACT US		21
		22

TABLE OF FIGURES

Figure 1: Market Monitor – tracking industry confidence, Q3 2012 – Q1 2016(e)	5
Figure 2: Consumers commissioning efficiency projects, Q3 2012 – Q4 2015	6
Figure 3: Trends in orders from national customers, Q3 2012 – Q1 2016(e)	7
Figure 4: Trends in orders from overseas customers, Q3 2012 – Q1 2016(e)	7
Figure 5: Trends in the number of staff employed, Q3 2012 – Q1 2016(e)	8
Figure 6: Trends in sale prices achieved, Q3 2012 – Q1 2016(e).....	8
Figure 7: Key issues of concern to energy efficiency suppliers, Q4 2015	9
Figure 8: Trends in key issues of concern, Q3 2012 – Q4 2015	9
Figure 9: Trends in industry views on energy efficiency policy, Q3 2012 – Q4 2015.....	10
Figure 10: Industry views of the wider economy’s management, Q3 2012 – Q4 2015	10
Figure 11: Uptake of energy efficiency technologies, Q4 2015 v four-quarter average	11
Figure 12: Trends in top technologies for consumer uptake, Q3 2012 – Q4 2015.....	12
Figure 13: Breakdown of commissioned projects by property type, Q4 2015.....	12
Figure 14: Trends of commissioned projects by property type, Q3 2012 – Q3 2015	13
Figure 15: Trends in capital costs, Q3 2012 – Q4 2015.....	13
Figure 16: Trends in finance models, Q3 2012 – Q4 2015.....	14
Figure 17: Trends in expected payback periods, Q3 2012 – Q4 2015	14
Figure 18: Trends in the use of good practice M&V, Q3 2012 – Q4 2015	15
Figure 19: Consumer reasons for lack of efficiency uptake, Q4 2015 v four-quarter average.....	16
Figure 20: Who completed the survey? Q4 2015.....	17
Figure 21: Breakdown of respondents by supplier type, Q4 2015.....	18
Figure 22: Supplier respondents’ organisation size (no. of employees), Q4 2015.....	18
Figure 23: Consumer respondents by sector, Q4 2015.....	19
Figure 24: Consumer respondents’ organisation size (no. of employees), Q4 2015	19

SECTION 1. INTRODUCTION

Welcome to the latest edition of UK *Energy Efficiency Trends*, the leading source of market information and insight for the energy efficiency sector.

This edition takes the temperature of consumer and supplier market activity in the fourth and final quarter of 2015 (October-December). In headline, the key trends reported in Q3 have largely continued into Q4 – the ‘tale of two sectors’ analogy used last time is sustained here.

On the supplier side, the general trend towards declining market confidence continues in response to reported declines in customer orders. Perhaps as a consequence, suppliers also reported almost universally negative views of government action for the sector.

This downbeat view was not reflected on the consumer side however. Rather – and in a substantially similar vein to Q3’s reported activity – consumers were far more positive and progressive in their overall outlook. Some key findings include; eight out of 10 consumers reported undertaking projects in Q4; lighting-based technologies continue to dominate investment choice list; solar saw a jump in uptake this time (a potential negative for efficiency providers); at least 17 distinct organisational/property types benefited from energy-saving investment; spending looked to be on the increase; and perhaps most progressively, there were signs of increasing awareness (and deployment) of robust performance measurement to help ensure that these investments do return the financial savings that were expected.

Looking ahead – if these trends continue – it may be that suppliers will increasingly need to ‘up their game’ in order to meet rising customer expectations and to stand out in an increasingly competitive market place.



Tom Rowlands-Rees
Bloomberg NEF



Ian Jeffries
EEVS Insight

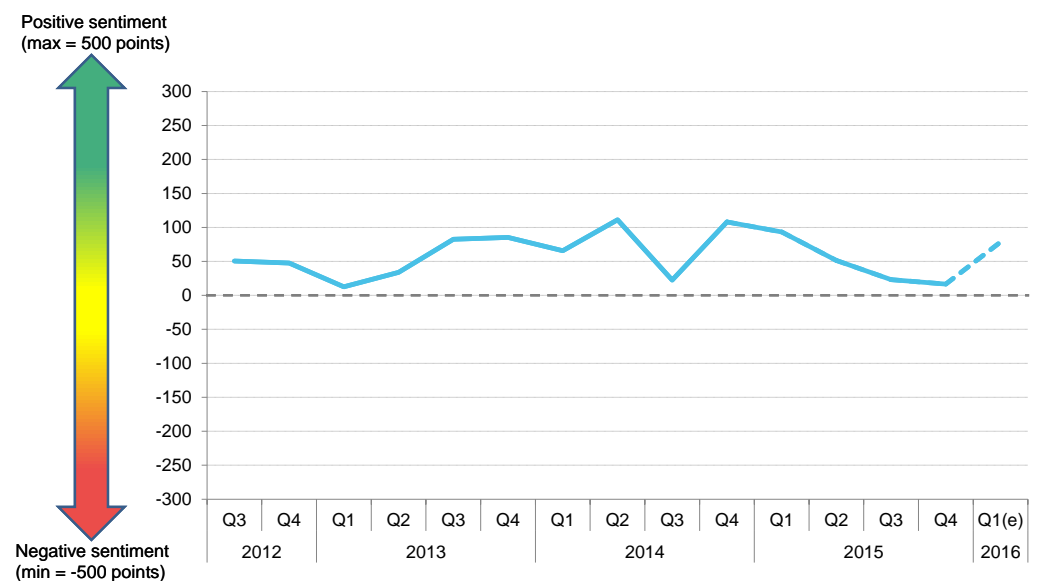
SECTION 2. EXECUTIVE SUMMARY

The EEVS/Bloomberg *Energy Efficiency Trends* Survey (Vol.14) was conducted between 17 February and 4 March 2016 and completed by 67 UK-based respondents (38 consumer organisations and 29 suppliers). Their answers related to the situation in the fourth quarter of 2015.

2.1. SUPPLIER TRENDS

- The market monitor – which combines trends in supplier order books, staffing levels, sale prices and government action – fell for the fourth consecutive quarter in Q4 2015, to 17 points, just above the 13-point low in Q1 2013.
- The decline was largely driven by a continued downward trend in national orders, where the confidence indicator hit an all-time low. Suppliers citing falling orders accounted for the highest proportion yet (28%).
- Confidence in staffing trends also dipped in Q4 and, whilst overseas orders and sale prices picked up, the changes were marginal and the broad trend of stable overseas orders and stable prices continued over the year.
- Customer demand remained the dominant topic of concern for suppliers of energy efficiency in Q4. The remaining 52% of respondents cited a broad mix of concerns – including falling energy prices and the “perception of cheap energy costs going forward”.
- A strong trend that emerged over 2015 was a shift away from indifference with regards to the government’s management of energy efficiency policy. Just 7% of respondents cited ‘neutral’ views in Q4 and there was a material uptick in those considering the government’s management of energy efficiency policy as ineffective.

Figure 1: Market Monitor – tracking industry confidence, Q3 2012 – Q1 2016(e)



Source: EEVS, BNEF. Note: based on weighted confidence indicators from Figures 3, 4, 5, 6, and 9. Zero represents neutrality. 500/-500 indicate the maximum degrees of positive/negative sentiment possible.

2.2. CONSUMER TRENDS

- In the final quarter of 2015 – and consistent with Q3 – more than eight out of 10 consumers reported that they had commissioned energy efficiency projects during the quarter, an uptick on the long-term trend (around seven out of 10).
- Lighting-based technologies continued to outperform other energy-saving technologies, with both high efficiency lighting and controls enjoying material increases in Q4. A surge in solar PV projects in the quarter also pushed this renewable technology up the leader board.
- Offices (22%) continued to lead the way as the property type most likely to benefit from building upgrades, although with 16 other categories also listed, a wide range of building types are currently benefiting from energy-saving investments.
- Whilst the headline trend in capital costs has been one of volatility, there were signs of emergent stability with only modest variations in Q4 against the previous quarter of 2015. Q4 saw a material uptick in median investment values – which had dipped over 2015 – back towards the long-term trend of around £100k per project.
- Financing arrangements remained broadly stable, with in-house capital the foundation stone for the vast majority of projects. However, the emergent trend in the use of combination funding (i.e. in-house and external finance together) reported during 2015 continued into Q4 with around four out of 10 projects now funded using at least some external source of finance. Projects wholly funded using third-party finance remained few, however.
- Financial payback periods have largely come back to the long-term trend line following a dip in Q1 and Q2 2015. The median payback was reported in Q4 to be around four years.
- Use of performance measurement (M&V) saw some interesting changes in the quarter. Not only was there growth in reported use, but also a material decline in respondents reporting that they didn't know if investment saving performance was being measured for their projects – potentially pointing to rising levels of M&V awareness within the sector.

Figure 2: Consumers commissioning efficiency projects, Q3 2012 – Q4 2015



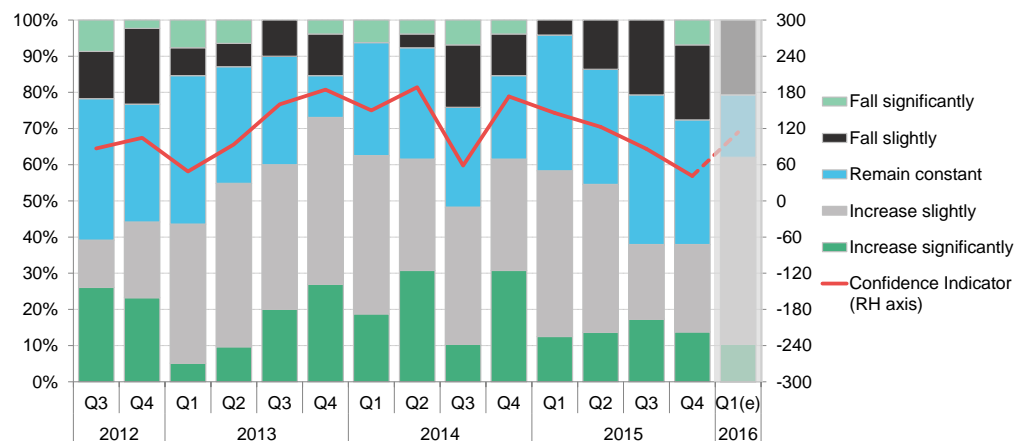
Source: EEVS, BNEF. Note: shows the proportion of respondents who have commissioned (or plan to commission) projects in a given quarter.

SECTION 3. SUPPLIER TRENDS

This section of the report presents the survey findings for the supply-side of the industry (organisations delivering a broad range of building-related energy efficiency technologies, measures and services to the non-domestic market). The survey was completed by 29 UK-based supplier organisations.

3.1. THE ORDER BOOK

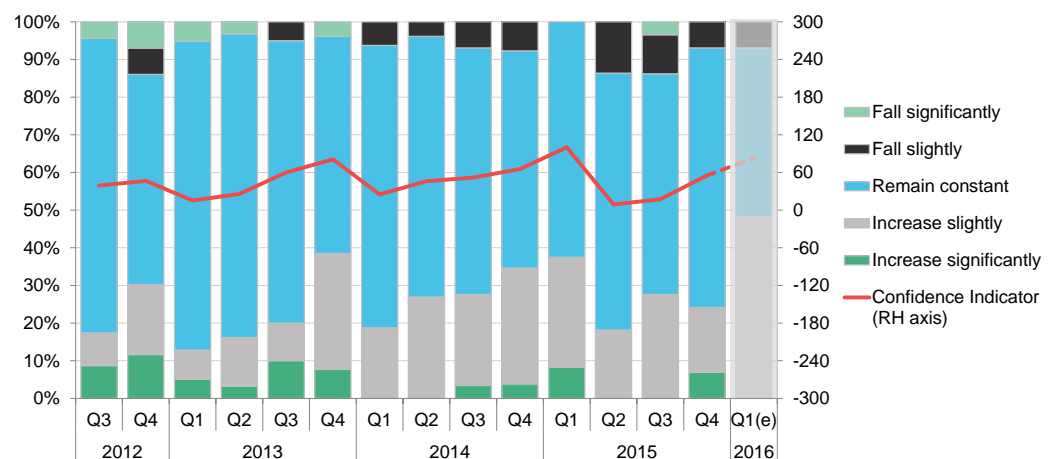
Figure 3: Trends in orders from national customers, Q3 2012 – Q1 2016(e)



Source: EEVS, BNEF. Note: the confidence indicator is an input to the market monitor in Figure 1. Zero represents neutrality. 500/-500 indicate the maximum degrees of positive/negative sentiment possible.

Suppliers of energy efficiency took a knock in terms of national orders over 2015. The confidence indicator fell consecutively in each quarter of the year, hitting an all-time low of 41 points in Q4. Whilst the proportion of respondents citing rising orders was unchanged from Q3, those with falling orders accounted for the highest proportion yet – at 28%.

Figure 4: Trends in orders from overseas customers, Q3 2012 – Q1 2016(e)



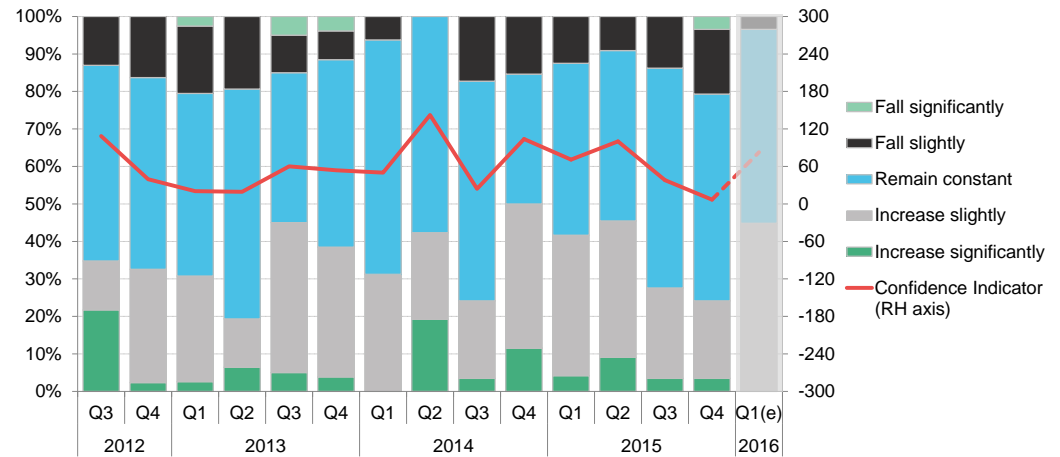
Source: EEVS, BNEF. Note: the confidence indicator is an input to the market monitor in Figure 1. Zero represents neutrality. 500/-500 indicate the maximum degrees of positive/negative sentiment possible.

The broad trend of stable overseas orders continued throughout 2015, with the bulk of respondents reporting constant levels. However with Q4 marking the end of our third full-year of data, we observe a cyclical trend in the results. In 2013, 2014 and 2015, the confidence indicator

for overseas orders dipped in Q1 and then recovered over the subsequent three quarters of the year. It will be interesting to see whether Q1 2016 follows this trend or breaks the cycle as suggested by expectations of respondents to the Q4 survey.

3.2. STAFF NUMBERS

Figure 5: Trends in the number of staff employed, Q3 2012 – Q1 2016(e)

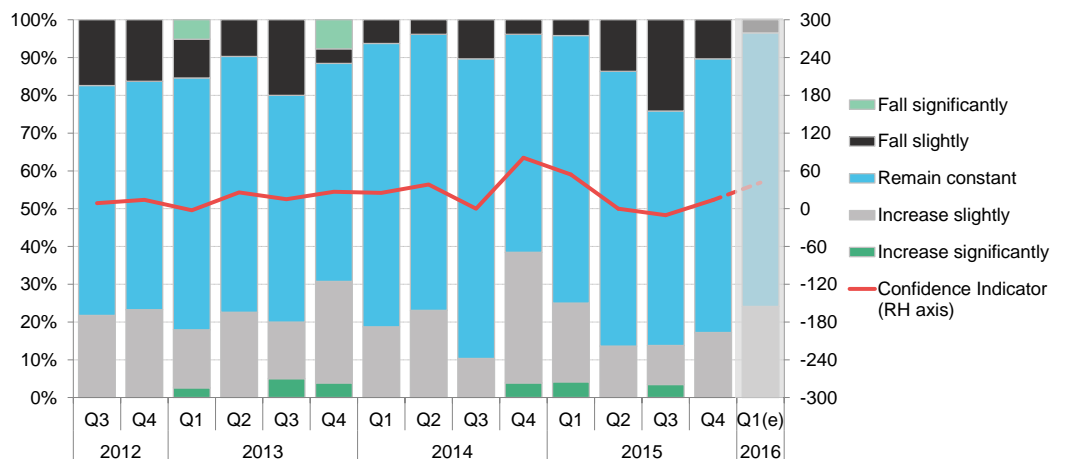


Source: EEVS, BNEF. Note: the confidence indicator is an input to the market monitor in Figure 1. Zero represents neutrality. 500/-500 indicate the maximum degrees of positive/negative sentiment possible.

After seven quarters without any respondents citing significant falls in the number of staff employed, Q4 saw 3% enter this category. Whilst the bulk of respondents continued to see stable staffing levels, the confidence indicator dropped for a second consecutive quarter – hitting an all-time low of 7 points in Q4.

3.3. SALE PRICES

Figure 6: Trends in sale prices achieved, Q3 2012 – Q1 2016(e)

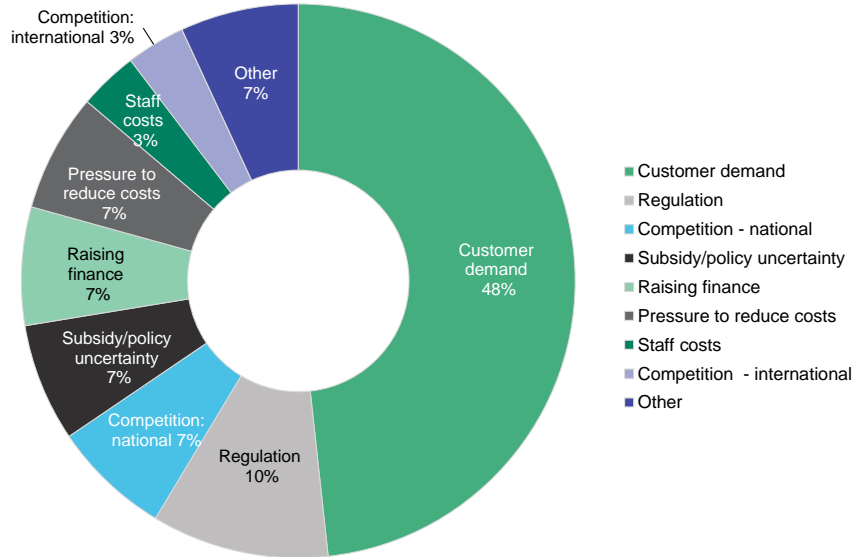


Source: EEVS, BNEF. Note: the confidence indicator is an input to the market monitor in Figure 1. Zero represents neutrality. 500/-500 indicate the maximum degrees of positive/negative sentiment possible.

Figure 6 shows that the broad trend of stable prices continued over 2015, despite a small dip in the confidence indicator earlier in the year. The vast majority of suppliers have kept prices constant over the past three years and Q4 was no exception, with 72% reporting no changes.

3.4. INDUSTRY RISK

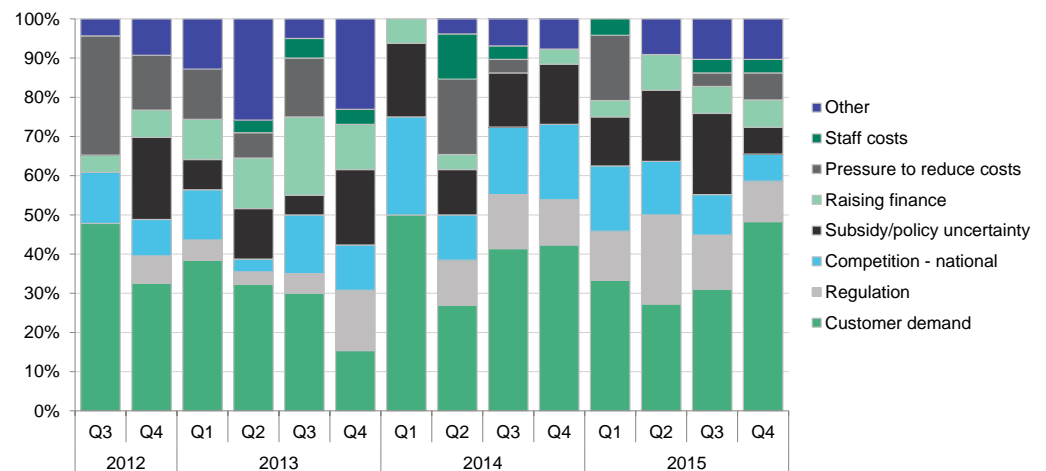
Figure 7: Key issues of concern to energy efficiency suppliers, Q4 2015



Source: EEVS, BNEF. Note: each supplier respondent was asked to select their primary issue of concern. Therefore results sum to 100%.

Whilst customer demand remains the dominant concern for suppliers (accounting for almost 50% in Q4), views on other supplier concerns have shifted over time. In 2012, pressure to reduce costs was a key concern for an average 22% of respondents over the period. In 2013, raising finance featured as the second most cited concern for suppliers. National competition emerged in 2014, with an average 18% of respondents citing this as their primary concern over the year. Looking at 2015 as a whole, regulation and subsidy/policy uncertainty together nearly overtook customer demand, representing an average 30% of respondents over the year. However, Q4 has seen consolidation around customer demand with the remaining 52% of respondents citing a broad mix of concerns. Among these were, falling energy prices and the “perception of cheap energy costs going forward”.

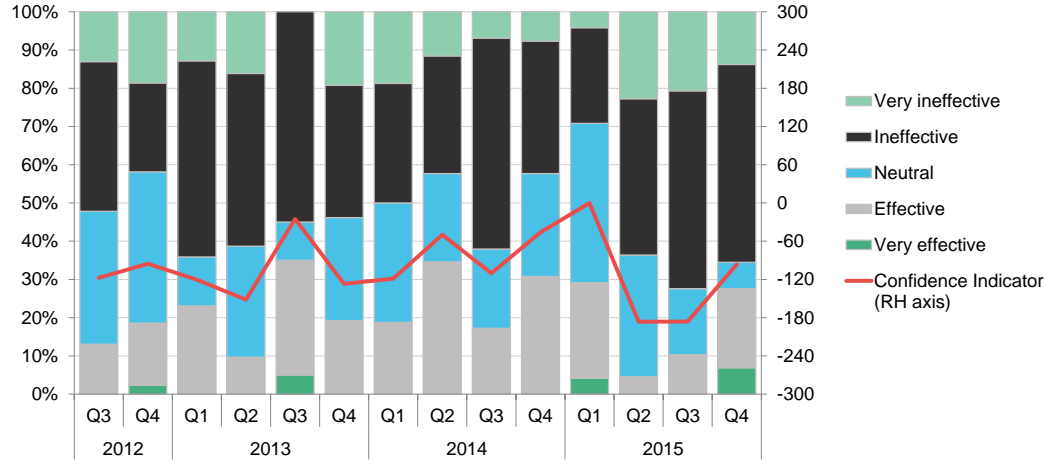
Figure 8: Trends in key issues of concern, Q3 2012 – Q4 2015



Source: EEVS, BNEF. Note: each supplier respondent was asked to select their primary issue of concern, therefore results sum to 100% in each period.

3.5. GOVERNMENT EFFECTIVENESS

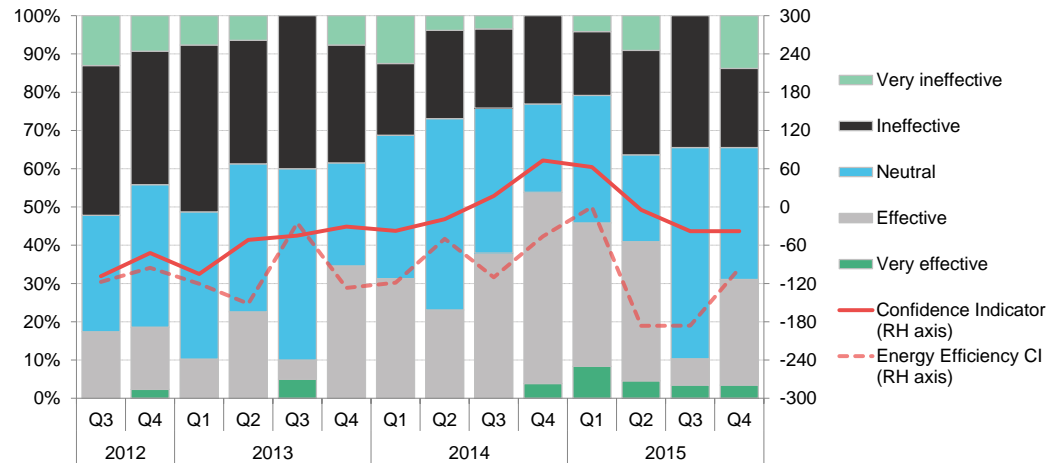
Figure 9: Trends in industry views on energy efficiency policy, Q3 2012 – Q4 2015



Source: EEVS, BNEF. Note: the confidence indicator is an input to the market monitor in Figure 1. Zero represents neutrality. 500/-500 indicate the maximum degrees of positive/negative sentiment possible.

Supplier sentiment with regards to the government’s management of energy efficiency policy started the year from a fairly neutral position, with the confidence indicator at zero in Q1, the bulk of respondents being indifferent to government policy and equal proportions falling in the effective and ineffective camps. A strong trend that emerged over year was a shift away from indifference – with just 7% of respondents citing ‘neutral’ views in Q4. In contrast, there has been a material uptick in those considering the government’s management of energy efficiency policy ineffective.

Figure 10: Industry views of the wider economy’s management, Q3 2012 – Q4 2015



Source: EEVS, BNEF. Note: CI = confidence indicator. The dotted line represents the CI from Figure 9 which is overlaid here for comparison with views on the wider economy. Zero represents neutrality. 500/-500 indicate the maximum degrees of positive/negative sentiment possible.

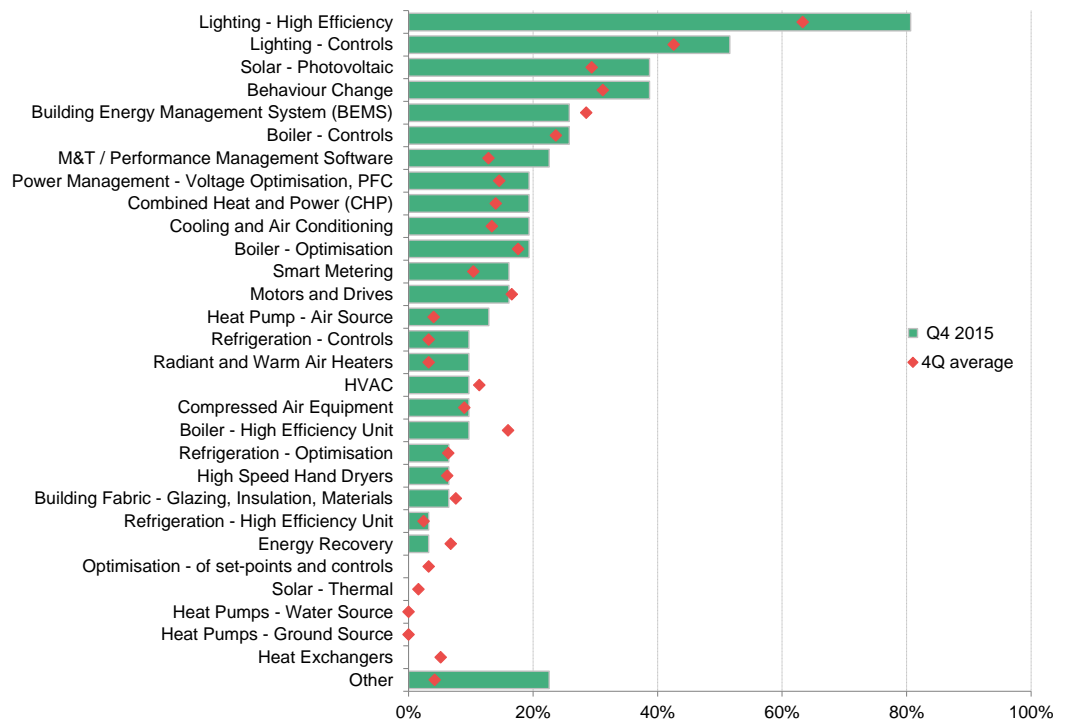
Confidence in the management of the wider economy had been steadily rising up until Q4 2014, where it peaked at 73 points. This trend reversed in 2015 as the indicator dipped back into the red and settled at -38 points in Q4. However, unlike views on energy efficiency policy, the largest proportion of respondents remain neutral with regards to views on management of the wider economy (34% in Q4).

SECTION 4. CONSUMER TRENDS

This part of the report presents feedback from energy and environmental professionals within public and private sector organisations ('consumers'), who are purchasing energy-efficiency technologies and services in relation to the built environment. The latest quarter's survey was completed by 38 UK corporate consumers (of which 82% commissioned a project in the quarter).

4.1. TECHNOLOGIES & MEASURES

Figure 11: Uptake of energy efficiency technologies, Q4 2015 v four-quarter average

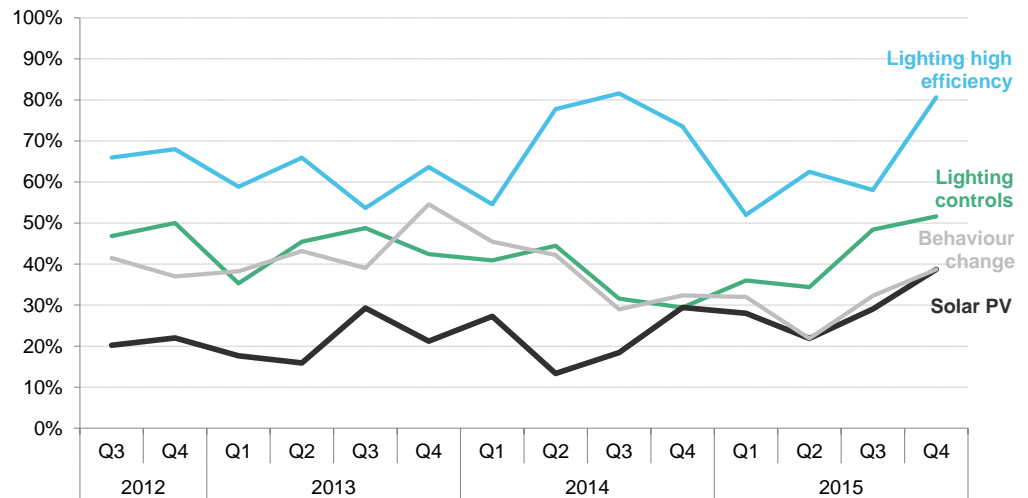


Source: EEVS, BNEF. Note: ranks technologies according to the proportion of consumers who commissioned a project in each technology out of the overall number of consumers commissioning projects. PFC = power factor correction.

Figure 11 ranks technologies in descending order based on the proportion of commissioned projects that included that technology. Lighting-based technologies continued to dominate the list in Q4, with both high-efficiency lighting and controls enjoying material increases. Interestingly, solar PV moved up the list into third spot in the quarter, alongside behaviour change¹. Overall, the chart shows that consumers are generally deploying a wide variety of technologies and measures – with only a handful not seeing any take-up in the latest quarter.

¹ In *Volume 13 of Trends*, we included a special feature on behaviour change (see section 5).

Figure 12: Trends in top technologies for consumer uptake, Q3 2012 – Q4 2015

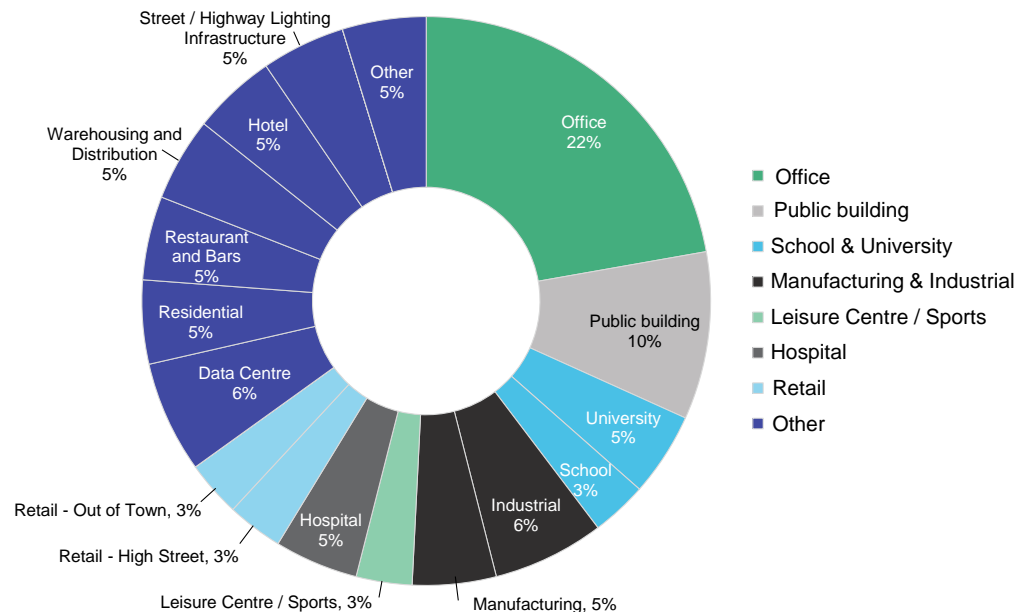


Source: EEVS, BNEF. Note: shows the proportion of respondents who commissioned a project in the respective category out of the total number of respondents who commissioned a project.

Figure 12 shows purchase trends for the top four technologies, based on the most recent Q4 2015 research. It demonstrates that as well as being most popular in the quarter, high-efficiency lighting (81%), lighting controls (52%) and solar PV (39%) were as popular today as any point since 2012.

4.2. PROPERTY TYPES

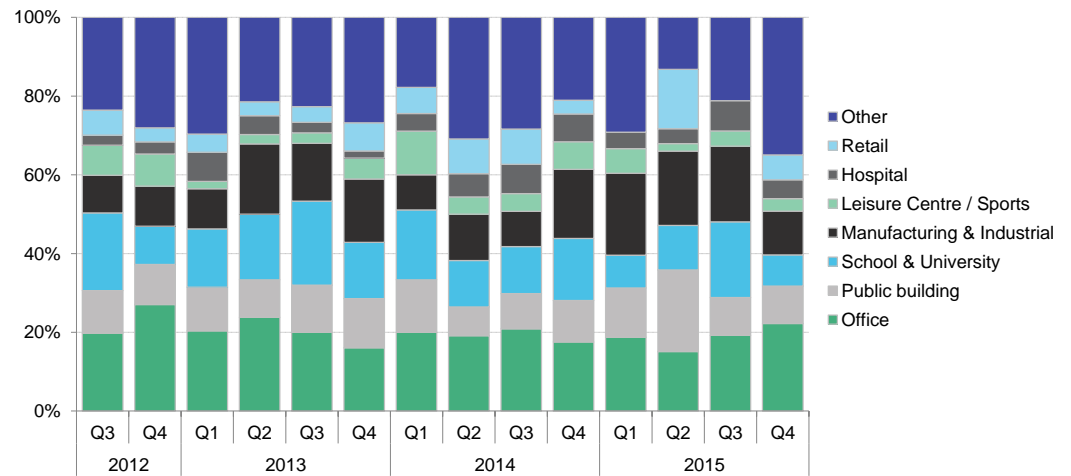
Figure 13: Breakdown of commissioned projects by property type, Q4 2015



Source: EEVS, BNEF

Figures 13 and 14 show that whilst offices (22%) represented the leading consumer category, and beneficiary of energy efficiency upgrades, there has also been widespread and continued uptake across a range of property types – a trend that should be cause for optimism among industry suppliers as the market appears to be increasingly broad-based.

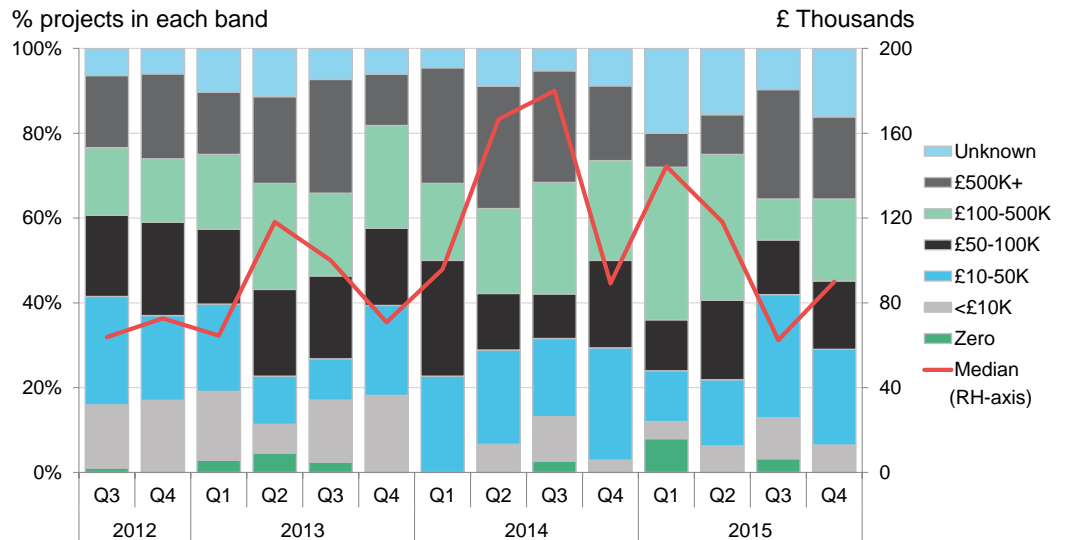
Figure 14: Trends of commissioned projects by property type, Q3 2012 – Q3 2015



Source: EEVS, BNEF

4.3. PROJECT COSTS

Figure 15: Trends in capital costs, Q3 2012 – Q4 2015

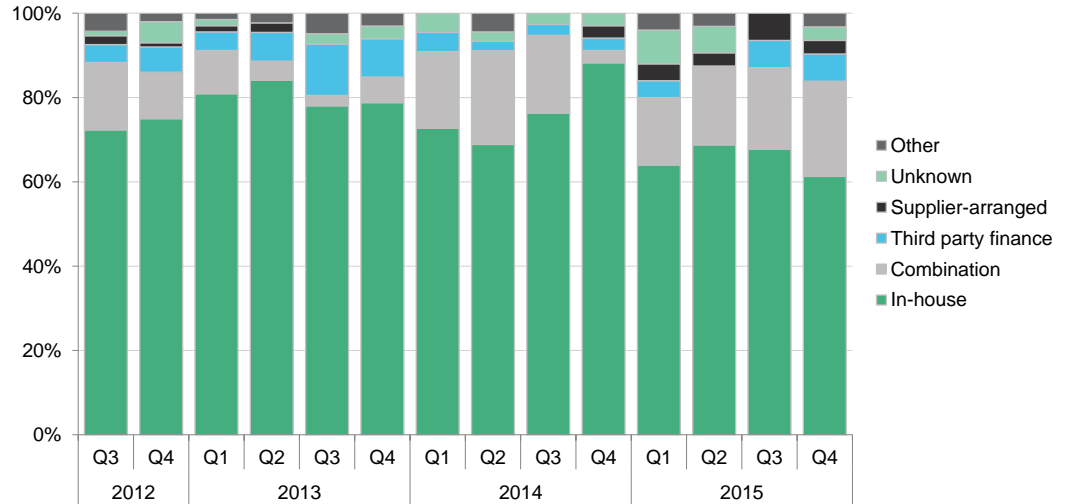


Source: EEVS, BNEF. Note: the line shows the cost trend for energy efficiency projects over time based on the estimated median.

Figure 15 has shown relatively high levels of volatility in the capital cost of energy efficiency projects since 2012. However, Q4 saw some stability returning, with only modest variations from our Q3 2015 dataset. Overall, the chart shows a healthy balance of project sizes across the spectrum. However, the median value has enjoyed a material uptick back towards the £100k mark and the longer-term trend line for project costs.

4.4. PROJECT FINANCE

Figure 16: Trends in finance models, Q3 2012 – Q4 2015

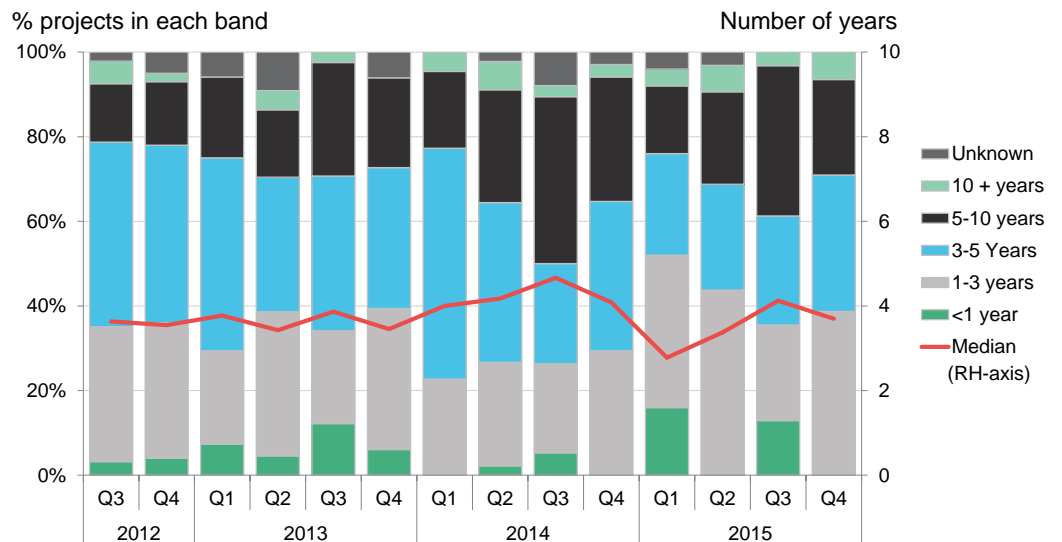


Source: EEVS, BNEF

Figure 16 shows that funding of energy savings initiative continues to come from in-house sources for the majority of consumers. However, Q4 saw a continuation of the mini-trend observed over the preceding three quarters – an increasing proportion of projects adopting at least some external sources of finance, with combination finance becoming increasingly prominent. Projects wholly funded using third-party finance remain few, however.

4.5. FINANCIAL PAYBACK

Figure 17: Trends in expected payback periods, Q3 2012 – Q4 2015

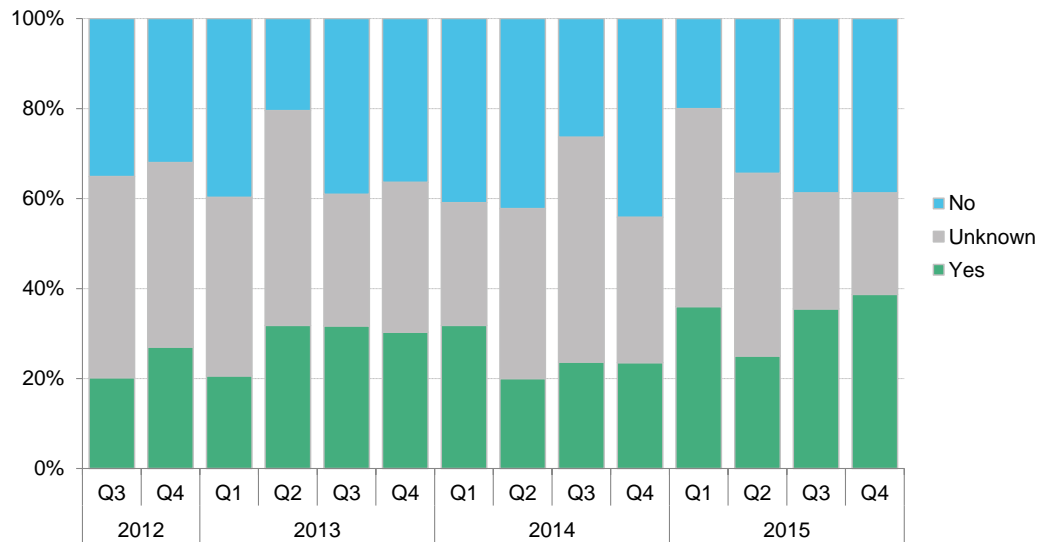


Source: EEVS, BNEF. Note: the line shows the expected payback trend for energy efficiency projects based on the estimated median.

Figure 17 shows financial payback periods have largely come back to the long-term trend line following a dip in Q1 and Q2 2015. The median payback was reported in Q4 to be about four years.

4.6. MEASUREMENT AND VERIFICATION

Figure 18: Trends in the use of good practice M&V, Q3 2012 – Q4 2015



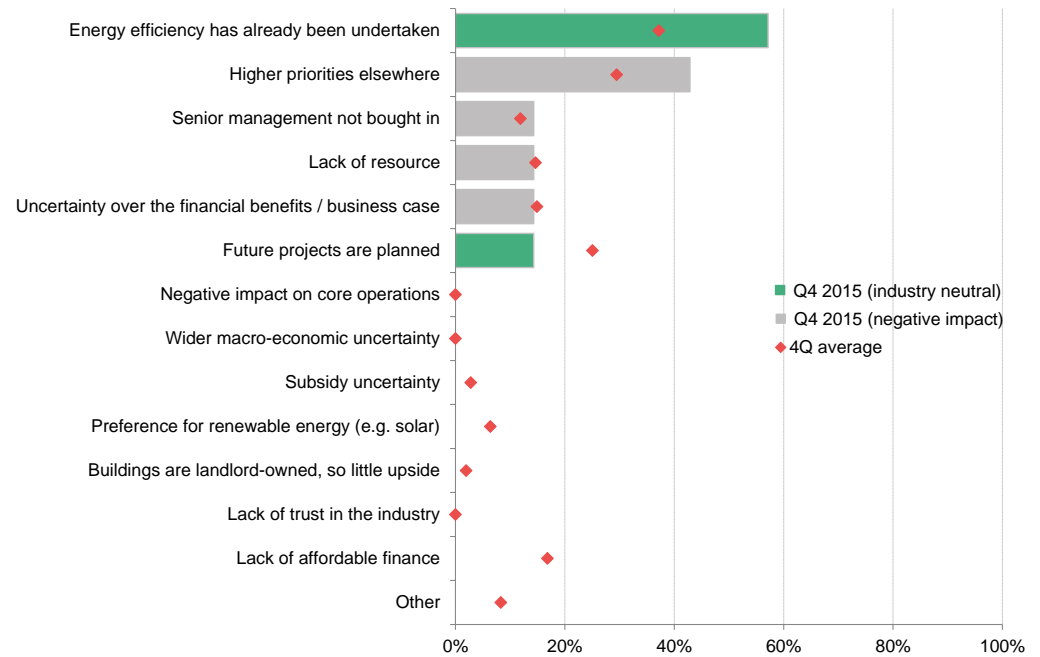
Source: EEVS, BNEF. Note: M&V = measurement & verification

Figure 18 shows some growth in use of savings performance measurement ('M&V') in quarters three and four of 2015. Moreover, the chart shows a material drop in consumers reporting that they didn't know if their project's energy saving performance was being measured and verified. This could suggest rising levels of awareness in relation to performance measurement within the sector.

4.7. CONSUMERS NOT UNDERTAKING ENERGY EFFICIENCY

Figure 19 overleaf shows respondent feedback on reasons for not investing in energy efficiency. This chart has become sparsely populated over time, with consumers reporting fewer material barriers to the take-up of energy-efficiency investments. Of the reasons given, having already undertaken energy efficiency topped the list for not investing currently, whilst the principal barrier was considered to be higher priorities elsewhere within the organisation.

Figure 19: Consumer reasons for lack of efficiency uptake, Q4 2015 v four-quarter average



Source: EEVS, BNEF. Note: Respondents not commissioning projects may have cited multiple reasons. The chart shows the proportion of respondents in each category out of overall respondents, not commissioning projects. Results therefore do not sum to 100.

APPENDICES

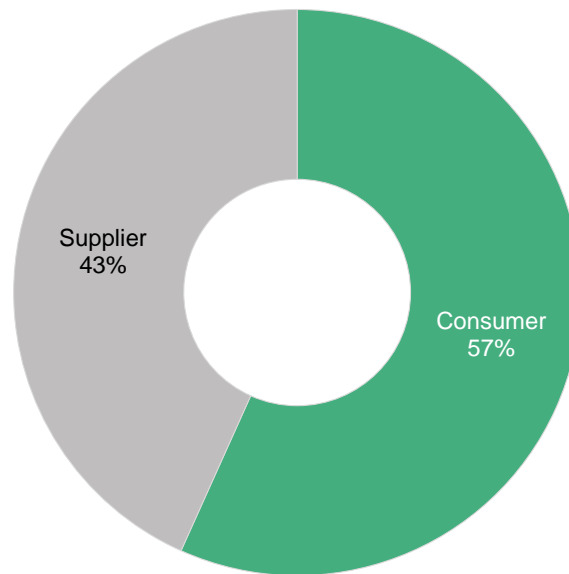
Appendix A: Methodology

The EEVS/Bloomberg *Energy Efficiency Trends* Survey (Vol.14) was conducted between 17 February and 4 March 2016 and completed by 67 UK-based respondents (38 consumer organisations and 29 suppliers).

This is the 14th in a series of reports showing industry trends in non-residential energy efficiency. Initially the report covered a broad range of European countries, but since Volume 8, it has presented UK-based results only, as these consistently accounted for the bulk of data received.

In focusing the report on a single country with better data coverage, we were able to present cleaner, more robust results. This coincided with a revamp of the analysis including – among other modifications – the introduction of a set of time series charts. This is the seventh iteration of the revamped report.

Figure 20: Who completed the survey? Q4 2015

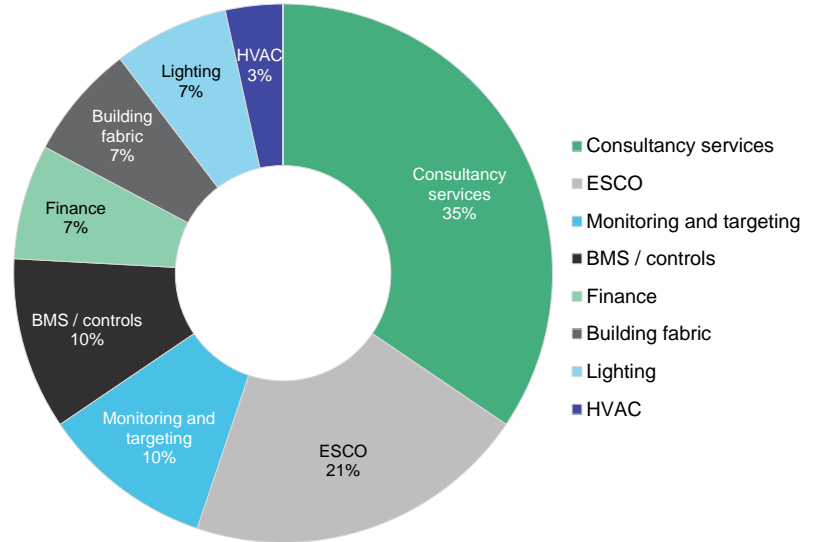


Source: EEVS, BNEF

Figure 20 shows the breakdown of respondents according to type. Prior surveys have typically seen between 60% and 80% of responses coming from consumer organisations. However, 2015 saw a move towards a more balanced split with the proportion of consumer respondents slipping to just below the lower band previously observed in Q3 and staying at this level in Q4.

Appendix B: Supplier respondents

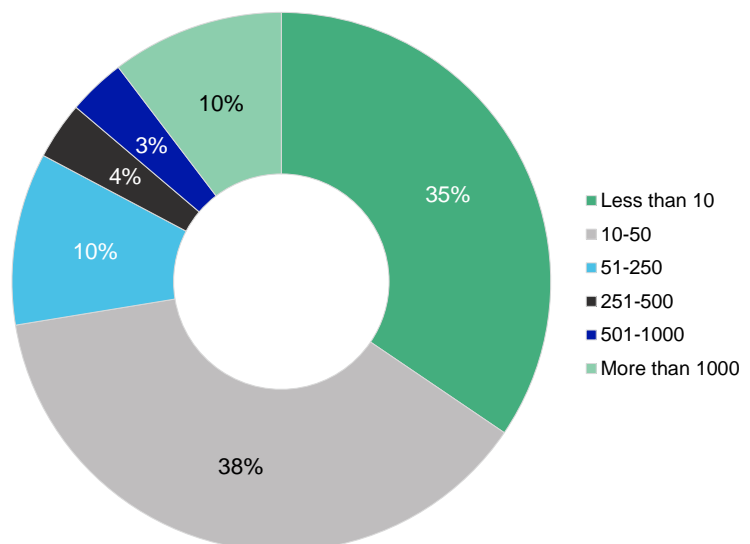
Figure 21: Breakdown of respondents by supplier type, Q4 2015



Source: EEVS, BNEF

Q4 saw broad representation from suppliers across eight different business types. However, consultancy services continued to represent the largest share of respondents – accounting for 35% in Q4 2015. This was followed by ESCOs (21%), and monitoring and targeting (10%).

Figure 22: Supplier respondents' organisation size (no. of employees), Q4 2015

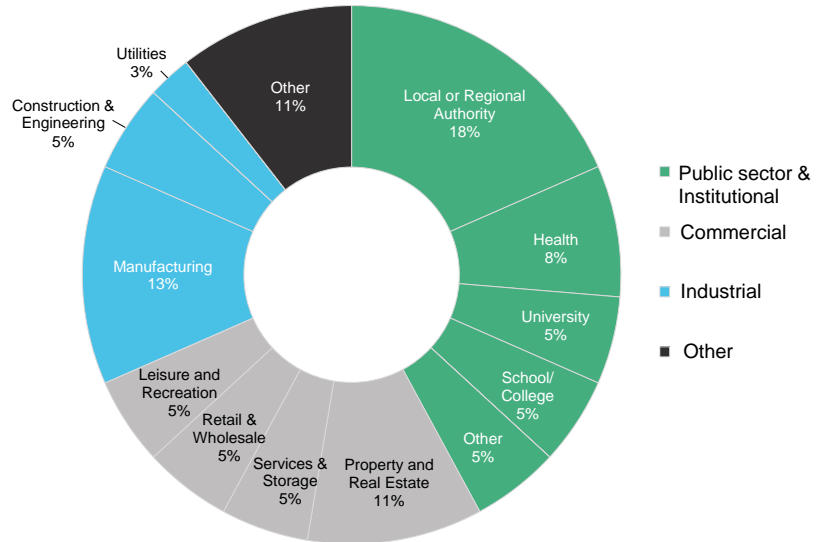


Source: EEVS, BNEF

Small and medium-sized organisations employing fewer than 250 staff have dominated supplier responses since the survey began, accounting for between 60% and 93%. Suppliers with 10 to 50 employees represented the largest proportion of responses in Q4 (38%), followed by small organisations with less than 10 staff (35%).

Appendix C: Consumer respondents

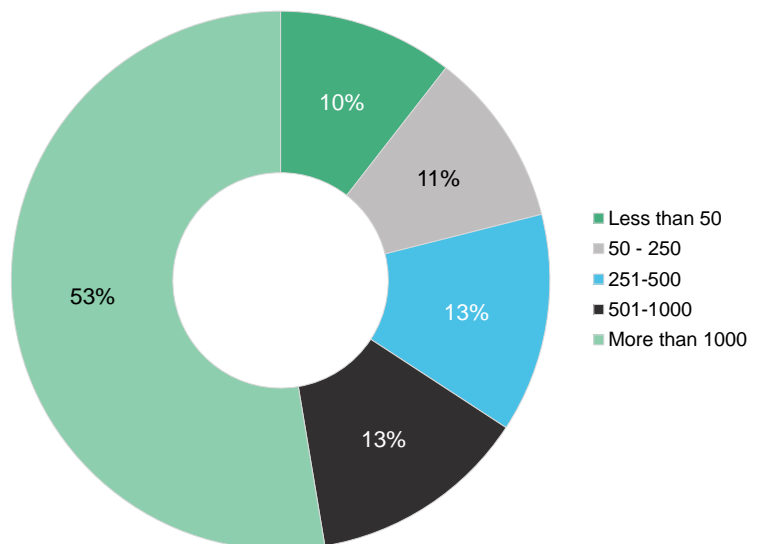
Figure 23: Consumer respondents by sector, Q4 2015



Source: EEVS, BNEF

Since the survey began, we have seen broad representation across both the private and public sectors, with no single category accounting for more than 25%. In Q4 2015, the category with the most respondents remained local/regional authorities, but it accounted for just 18%. Property and real estate saw the biggest jump, from 5% in Q3 to 11% in Q4, whilst manufacturing continued to represent the second biggest group of respondents (13%).

Figure 24: Consumer respondents' organisation size (no. of employees), Q4 2015



Source: EEVS, BNEF

Figure 24 shows that the dominant response category continued to be large organisations of more than 1,000 employees. In Q4, consumer organisations of this size accounted for 53%. The remaining responses fall into four categories with fairly equal representation.

ABOUT US

About EEVS



EEVS is the UK's leading provider of performance assurance, analysis and information services in relation to energy efficiency. Our performance assurance services include working with clients to devise and develop performance management systems and strategies; procurement policies and tender evaluations; due diligence on performance contracts and guarantees; performance and financial risk analysis.

Alongside this, our established team of energy analysts provide high quality, independent Measurement and Verification (M&V) services for all sizes and types of energy saving projects. Since 2011 we have evaluated the savings performance of over 400 schemes to the global good practice standard, IPMVP. Our trusted analysis helps suppliers to credibly prove their project's or technology's saving performance, whilst providing customers with much-needed certainty around their investment's return and value for money.

EEVS wider market information and research services – in particular the *Energy Efficiency Trends* publications – aim to improve the attractiveness, transparency and investability of the energy efficiency market through the provision of reliable market-level performance and trend information. For further details about EEVS and our services, please visit www.eevs.co.uk

About Bloomberg New Energy Finance



Bloomberg New Energy Finance (BNEF) is the definitive source of insight, data and news on the transformation of the energy sector. BNEF has staff of more than 200, based in London, New York, Beijing, Cape Town, Hong Kong, Singapore, Munich, New Delhi, San Francisco, São Paulo, Sydney, Tokyo, Washington D.C., and Zurich.

BNEF Insight Services provide financial, economic and policy analysis in the following industries and markets: wind, solar, bioenergy, geothermal, hydro & marine, gas, nuclear, carbon capture and storage, energy efficiency, digital energy, energy storage, advanced transportation, carbon markets, REC markets, power markets and water. BNEF's Industry Intelligence Service provides access to the world's most comprehensive database of assets, investments, companies and equipment in the same sectors. The BNEF News Service is the leading global news service focusing on finance, policy and economics for the same sectors. The group also undertakes custom research on behalf of clients and runs senior-level networking events, including the annual BNEF Summit, the premier event on the future of the energy industry.

For more information please visit about.bnef.com

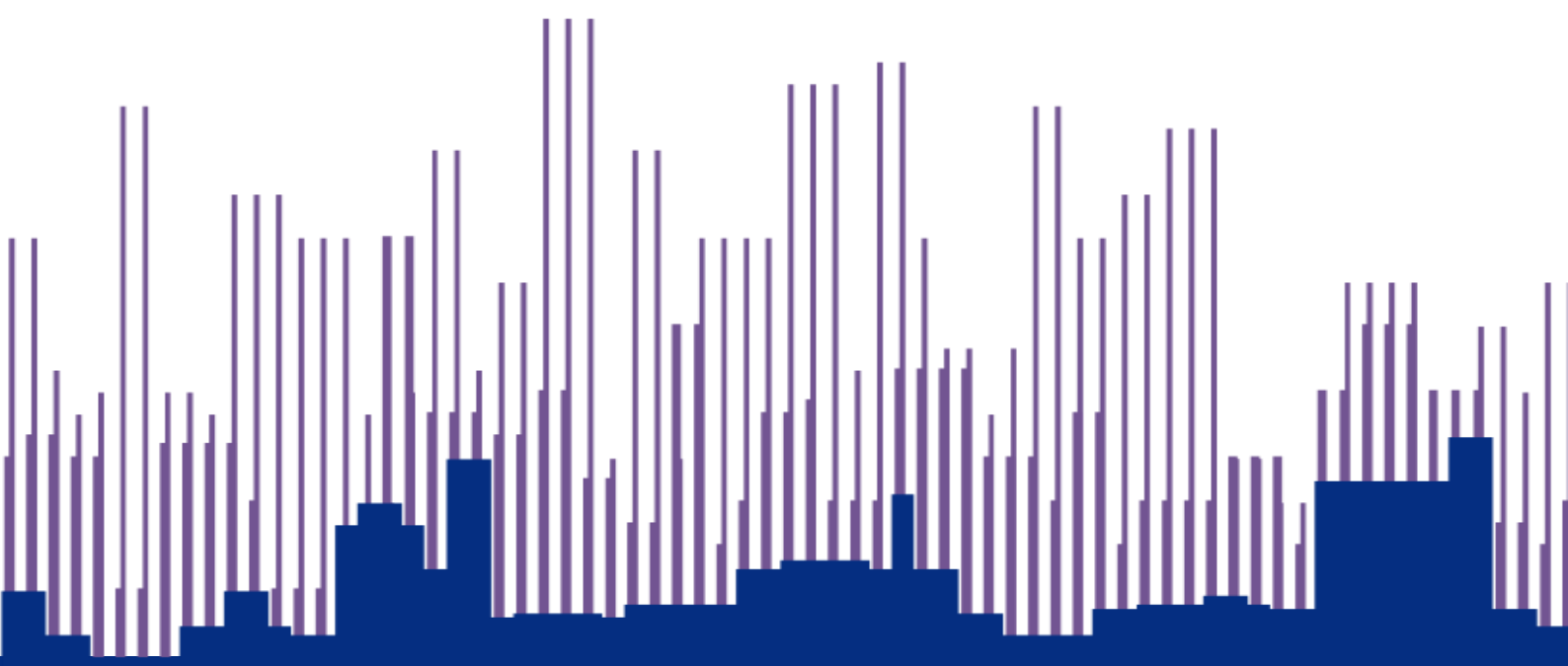
CONTACT US

EEVS:	Ian Jeffries ian@eevs.co.uk +44 (0) 33 0313 8488	EEVS Insight Ltd 26-27 Bedford Square London WC1B 3HP
BNEF:	Tom Rowlands-Rees trowlandsree@bloomberg.net +44 (0) 20 3525 4144 Nicole Aspinall naspinall@bloomberg.net +44 (0) 20 3525 4653	Bloomberg New Energy Finance City Gate House, 39-45 Finsbury Square London EC2A 1PQ

Copyright: © EEVS insight Ltd. 2016. Developed in partnership with Bloomberg New Energy Finance (Bloomberg Finance L.P. 2016). No portion of this document may be reproduced, scanned into an electronic system, distributed, publicly displayed or used as the basis of derivative works without the prior written consent of the joint partners.
For more information on terms of use, please contact ian@eevs.co.uk.

Energy Efficiency Trends Vol. 14

March 2016



Bloomberg
NEW ENERGY FINANCE