Energy Efficiency Trends Vol. 21

Essential insight for consumers and suppliers of non-domestic energy efficiency in the U.K.

January 09, 2018





SUPPORTED BY

Bird & Bird

Bird & Bird supports its clients to achieve energy savings, security of supply and reputational benefits from implementing energy management solutions. The firm has an international, market-leading legal team with over ten years' experience in all aspects of energy management. For more information, please call Michael Rudd, Partner, on +44 (0) 20 7415 6000, email michael.rudd@twobirds.com or visit www.twobirds.com or wisit www.twobirds.com or wisi



Bellrock delivers a full range of property and facilities management services to over 40,000 retail commercial and public sector properties throughout the UK. Utilising in-house expertise and selective partners, it also provides a consolidated and integrated approach to delivering the complete range of energy services, tailored to strategic property asset and lifecycle objectives. For more information, please call Richard Singleton, Managing Director (Corporate), on +44 (0) 116 201 6800, email enquiries@bellrock.co.uk or visit www.bellrock.fm



The Environmental Industries Commission (EIC), founded in 1995, represents the businesses which provide the technology and services that deliver environmental performance across the economy. In short, we are the voice of the green economy. Our members are innovative and the leading players in their field, including technology manufacturers, developers, universities and consultancies. For more information, please call Matthew Farrow, Executive Director, on +44 (0) 20 7654 9944, email matthew.farrow@eic-uk.co.uk or visit www.eic-uk.co.uk



APC Lighting specialises in Lighting products and services for the purpose of maximising energy and operational efficiency in buildings. The company delivers a seamless, in-house service from initial site survey through to completed installation for leading private and public sector organisations, helping to improve building environments and meet energy efficiency objectives. For more information, please call Sam Stageman, Sales Director, on +44 (0) 330 313 3231, email sam.stageman@apcplc.com or visit www.apcplc.com/lighting

ENDORSED BY







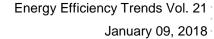
Contents

Section 1.	Introduction	1
Section 2.	Executive Summary 2.1. Supplier trends 2.2. Consumer trends	2 2 3
Section 3.	Supplier trends 3.1. The order book 3.2. Staff numbers 3.3. Sale prices 3.4. Industry risk 3.5. Government Effectiveness	4 4 5 5 6 7
Section 4.	Consumer Trends 4.1. Technologies and measures 4.2. Property types 4.3. Project costs 4.4. Project finance 4.5. Financial payback 4.6. Measurement and verification 4.7. Consumers not undertaking energy efficiency	8 8 9 10 10 11 11
Section 5.	Special feature	13
Appendices		18
Appendix A:	Methodology	18
Appendix B:	Supplier respondents	19
Appendix C:	Consumer respondents	20
About US		21
Contact US		22



Table of figures

Figure 1: Market Monitor – tracking industry confidence	. 2
Figure 2: Consumers commissioning efficiency projects	. 3
Figure 3: Trends in orders from national customers	. 4
Figure 4: Trends in orders from overseas customers	. 4
Figure 5: Trends in the number of staff employed	. 5
Figure 6: Trends in sale prices achieved	. 5
Figure 7: Key issues of concern to energy-efficiency suppliers, 3Q 2017	. 6
Figure 8: Trends in key issues of concern	. 6
Figure 9: Trends in industry views on energy efficiency policy	. 7
Figure 10: Industry views of the wider economy's management	. 7
Figure 11: Uptake of energy efficiency technologies, 3Q 2017 versus four-	
quarter average	
Figure 12: Trends in top technologies for consumer uptake	. 8
Figure 13: Breakdown of commissioned projects by property type, 3Q 2017	. 9
Figure 14: Trends of commissioned projects by property type	. 9
Figure 15: Trends in capital costs	10
Figure 16: Trends in finance models	10
Figure 17: Trends in expected payback periods	11
Figure 18: Trends in the use of good practice M&V	11
Figure 19: Consumer reasons for lack of efficiency uptake, 3Q 2017 versus	
four-quarter average	12
Figure 20: The Clean Growth Strategy sets a target to improve energy efficiency in commercial buildings by at least 20% by 2030. Do you think this	
target is:	
Figure 21: The Clean Growth Strategy sets an ambition for as "many homes a	S
possible" to have EPC rating of C by 2035. Should this apply to commercial	
buildings also?	14
Figure 22: The Minimum Energy Efficiency Standards (MEES) which will make it unlawful to let commercial properties with an Energy Performance	
Certificate (EPC) rating of 'F' or 'G' from April 2018 currently contain several	
instances in which the property owner can claim exemption, such as lack of	
tenant consent, property devaluation etc. Do you feel that:	15
Figure 23: Besides the MEES, to what extent do you agree that the following	
policies should be a priority for the government?	16
Figure 24: Energy efficiency policies are only effective if they are properly	
monitored and enforced. Do you think the enforcement by local authorities and	
other inspectors is:	
Figure 25: Who completed the survey? 3Q 2017	
Figure 26: Breakdown of respondents by supplier type, 3Q 2017	19
Figure 27: Supplier respondents' organisation size (no. of employees), 3Q 2017	10
Figure 28: Consumer respondents by sector, 3Q 2017	
Figure 29: Consumer respondents by sector, 3Q 2017	_U
	20







Section 1. Introduction

4.25 Years

EEVS/BNEF estimate of median payback period for projects reported by Consumers

21%

Suppliers citing policy uncertainty as their main concern for the industry

Welcome to the latest edition (Vol.21) of U.K. *Energy Efficiency Trends*, the leading source of market insight for the energy efficiency sector.

It won't come as major surprise to readers that Brexit uncertainty can be widely felt across this quarter's results. The main impact seems to be a fragile, waning sense of confidence – and a further sense that things could go either way in the coming months.

While the sector's heart says 'cautious optimism', the head points out that order books were a touch thinner this quarter (and that political uncertainty may have led to consumer belt tightening), that price inflation has made a return (and that the value of the pound may have impacted import costs), and that staff cuts are becoming increasingly noticeable (and that this is perhaps an inevitable consequence).

A further key finding has been the historically low levels of endorsement given to government efforts to support the energy efficiency sector – the government 'could do better' is certainly too kind a precis. So, our partnership with the Environmental Industries Commission (EIC) this time has been particularly welcome and timely. On page 13 we set out a special focus on sector views regarding key government initiatives, the Clean Growth Strategy, Minimum Energy Efficiency Standards (MEES), as well as the sector's priorities for the recently announced Industrial Strategy. These findings are accompanied by expert commentary from EIC Executive Director, Matthew Farrow.

As ever, we hope you find it useful and insightful.



Tom Rowlands-Rees

Bloomberg New Energy

Finance



lan Jeffries
EEVS Insight



Section 2. Executive Summary

The EEVS/Bloomberg *Energy Efficiency Trends* Survey (Vol.21) was completed by 90 U.K.-based respondents (43 consumer organisations and 47 suppliers), between October 30 and November 24, 2017. Their answers relate to the situation in the third quarter of 2017.

2.1. Supplier trends

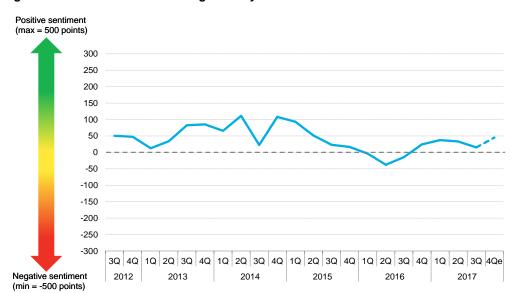


Figure 1: Market Monitor - tracking industry confidence

Source: EEVS, BNEF. Note: based on weighted confidence indicators from Figures 3, 4, 5, 6, and 9. Zero represents neutrality.

- For the second successive quarter, we report a slight downturn in the composite
 EEVS/Bloomberg Market Monitor (see Fig.1 below) pointing to a barely-sustained and fragile
 level of confidence.
- This wavering confidence is likely to be driven by the drop off in projects being commissioned by consumers over the last three quarters (Fig. 2), a mini-trend corroborated by the largely flat volume of orders being booked by suppliers (Fig. 3). In addition, overseas orders saw a material decline this quarter (Fig. 4), and following 12 months of growth, staffing levels also saw a material drop -- some 21% of suppliers reporting falling headcount this quarter.
- 'Consumer demand' (28%) remains the key issue of concern. However, given the above reported slowdown, it is perhaps surprising that this hasn't been flagged more widely. By contrast, there has been an increased concern reported in relation to 'policy uncertainty' and 'regulation' – more than likely reflecting the ongoing uncertainty around Brexit.



• The sector's policy concerns are also evident in the unequivocal feedback in relation to government effectiveness; just 11% consider energy efficiency policy to be effective (Fig. 9); just 19% consider it to be effective at managing the wider U.K. economy (Fig.10).

2.2. Consumer trends

0%

2012

2013

100% 90% 80% 70% 60% 50% 40% 30% 20% 10%

Figure 2: Consumers commissioning efficiency projects

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

2014

3Q 4Q 1Q 2Q 3Q

2015

2016

2017

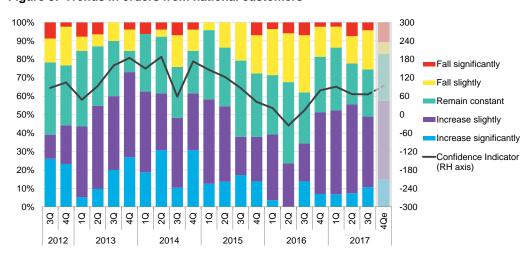
- Lighting and lighting controls continued to lead consumer purchasing (Fig. 11), followed by behaviour change initiatives and building energy management and control systems (BEMS).
- Activity remained low this quarter as consumers continued to rein in the volume of projects being commissioned (Fig. 2). However, in investment terms, whilst the number of smaller projects (£50-£100k band) reported tightened, this was balanced by an uptick in the commissioning of large projects (£500k+) (Fig. 15).
- Project funding continues to be overwhelmingly from in-house sources, although a material
 uptick in 'combination' funding (i.e. in house and external sources) was reported this quarter,
 following three consecutive quarters of little reported use (Fig. 16).
- Payback expectations for consumers softened slightly this quarter (Fig.17) the median timeperiod rose to over four years this quarter.



Section 3. Supplier trends

3.1. The order book

Figure 3: Trends in orders from national customers



Source: EEVS, BNEF. Note: the confidence indicator is an input to the market monitor in Figure 1. Zero represents neutrality.

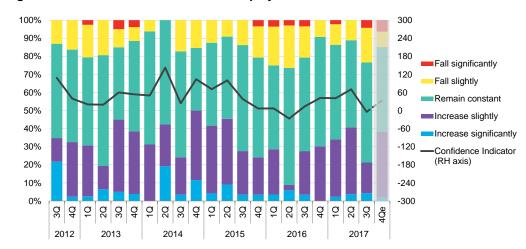
100% 300 90% 240 80% 180 Fall significantly 70% 120 Fall slightly 60% 60 Remain constant 50% 0 Increase slightly 40% -60 Increase significantly 30% -120 Confidence Indicator (RH axis) 20% -180 10% -240 -300 g g g ā g g đ ā g g g g ð. g 2013 2014 2015 2016 2017

Figure 4: Trends in orders from overseas customers

Source: EEVS, BNEF. Note: the confidence indicator is an input to the market monitor in Figure 1. Zero represents neutrality.

3.2. Staff numbers

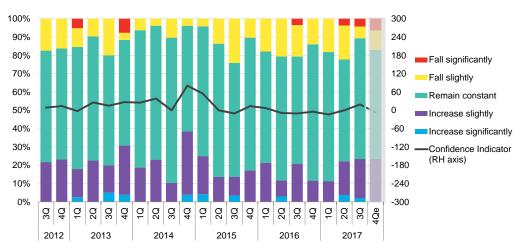
Figure 5: Trends in the number of staff employed



Source: EEVS, BNEF. Note: the confidence indicator is an input to the market monitor in Figure 1. Zero represents neutrality.

3.3. Sale prices

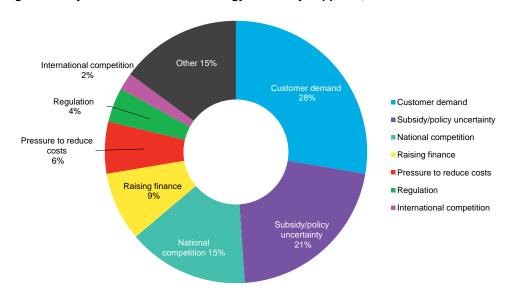
Figure 6: Trends in sale prices achieved



Source: EEVS, BNEF. Note: the confidence indicator is an input to the market monitor in Figure 1. Zero represents neutrality.

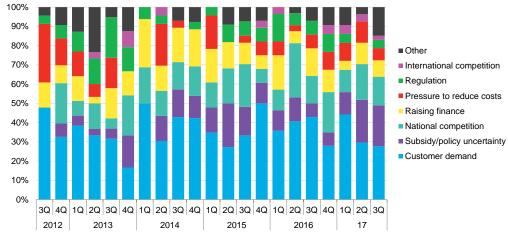
3.4. Industry risk

Figure 7: Key issues of concern to energy-efficiency suppliers, 3Q 2017



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

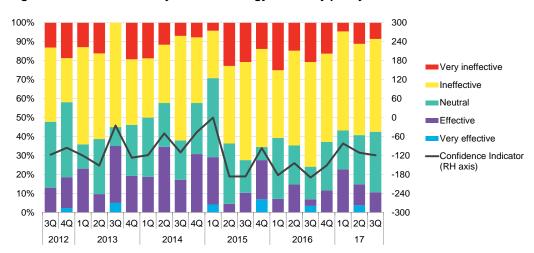
Figure 8: Trends in key issues of concern



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

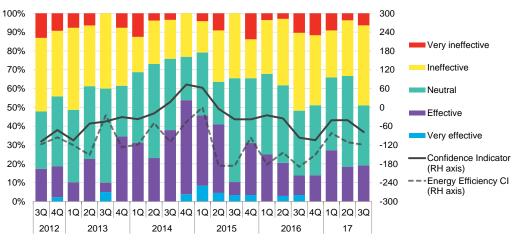
3.5. Government Effectiveness

Figure 9: Trends in industry views on energy efficiency policy



Source: EEVS, BNEF. Note: the confidence indicator is an input to the market monitor in Figure 1. Zero represents neutrality.

Figure 10: Industry views of the wider economy's management

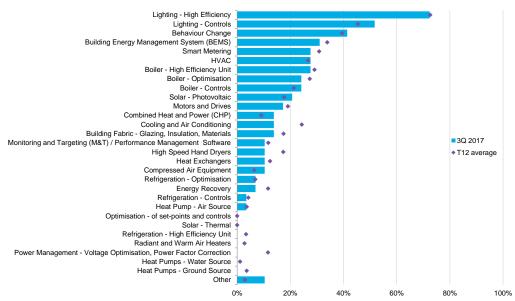


Source: EEVS, BNEF. Note: CI = confidence indicator. The dotted line represents the CI from Figure 9, which is overlaid here for comparison with views on the wider economy. Zero represents neutrality.

Section 4. Consumer Trends

4.1. Technologies and measures

Figure 11: Uptake of energy efficiency technologies, 3Q 2017 versus 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.

100% 90% Lighting - High Efficiency 80% 70% 60% **Lighting - Controls** 50% 40% 30% **Building Energy** 20% Management System (BEMS) 10% 3Q 4Q 2Q 3Q 2Q 3Q 1Q 2Q 3Q 2Q 3Q 2013

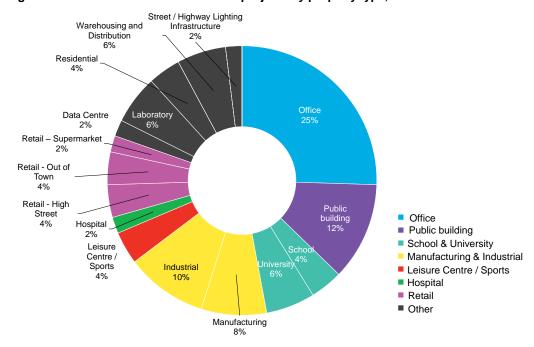
Figure 12: Trends in top technologies for consumer uptake

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.



4.2. **Property types**

Figure 13: Breakdown of commissioned projects by property type, 3Q 2017



Source: EEVS, BNEF

2013

Source: EEVS, BNEF

2014

Figure 14: Trends of commissioned projects by property type 100% 80% ■ Other ■ Retail 60% ■ Hospital ■ Leisure Centre / Sports Manufacturing & Industrial 40% School & University ■ Public building Office 20% 0% 3Q 4Q 1Q 2Q 3Q 2012

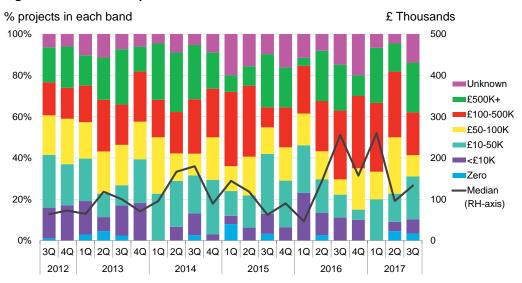
2015

2016

2017

4.3. Project costs

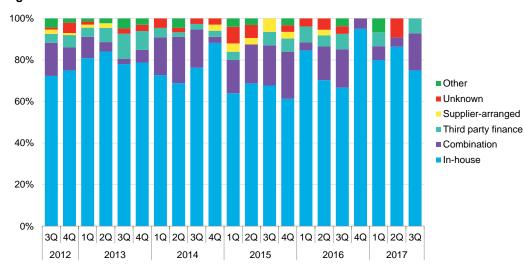
Figure 15: Trends in capital costs



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

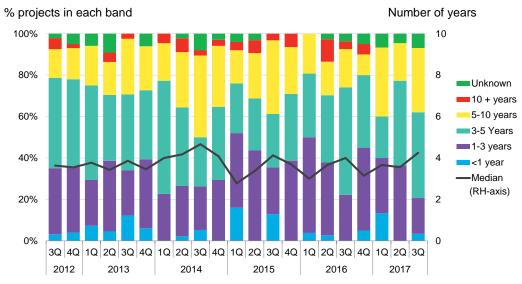
4.4. Project finance

Figure 16: Trends in finance models



4.5. Financial payback

Figure 17: Trends in expected payback periods



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

4.6. Measurement and verification

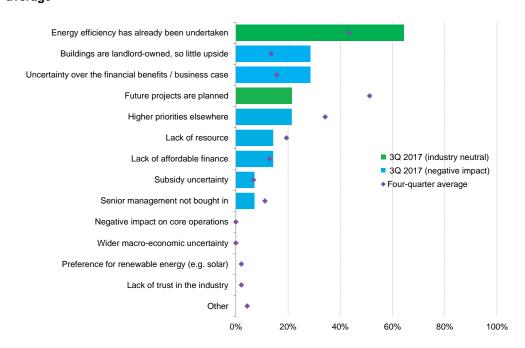
Figure 18: Trends in the use of good practice M&V



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

4.7. Consumers not undertaking energy efficiency

Figure 19: Consumer reasons for lack of efficiency uptake, 3Q 2017 versus 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%.

Section 5. Special feature





Matthew Farrow

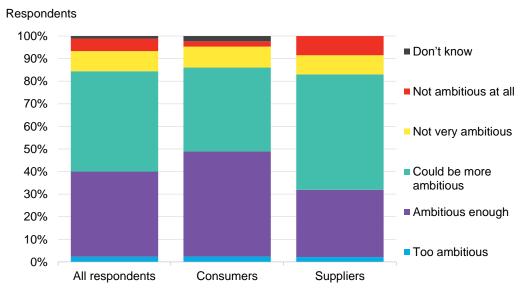
With renewed government focus on energy efficiency following the release of their *Clean Growth Strategy*, for this edition we worked with policy experts the Environmental Industries Commission (EIC) to help us sense the sector's reaction. Matthew Farrow, Executive Director, analyses the results below.

Energy efficiency is often described as the Cinderella of energy policy, and not without good reason. While the ugly sisters of nuclear power and shale gas and the prince charming of renewables dominate the headlines and ministers' attention, energy efficiency policy in recent years has been left on the sidelines, with a collection of general promises of simplification but no sense of direction or momentum.

Recently, however, energy efficiency has once again been pulled towards the limelight as the *Clean Growth Strategy* sets store in what it can achieve, and a flurry of consultations have been released. Still, my sense is that although ministers do genuinely understand that making more efficient use of energy is important in both the competitiveness and the climate-change agenda, they are struggling for ideas for how to overcome the perennial challenges of energy-efficiency policy.

EIC's lobbying and work is driven by our member companies and we have an energy efficiency Working Group that is preparing a set of proposals to take to BEIS, setting out how our views on how the ambitions in the *Clean Growth Strategy* could be achieved. As you might imagine, our Working Group (which consists of a mix of consultancies and energy management technology providers) had strong views on the way forward, but we wanted to explore whether these were shared by the wider energy efficiency sector through the *Energy Efficiency Trends* survey.

Figure 20: The Clean Growth Strategy sets a target to improve energy efficiency in commercial buildings by at least 20% by 2030. Do you think this target is:





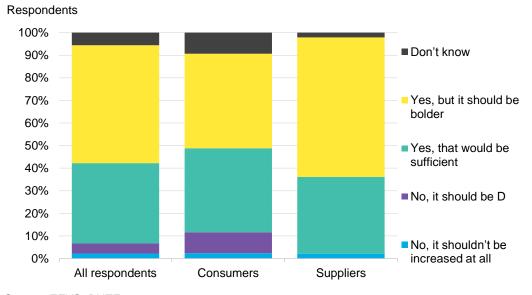
Some 59% of respondents that felt the government's 20% business energy efficiency target was not ambitious enough

Some 93% of respondents agree or strongly agree that tax incentives for energy efficiency should be a focus for government

The first question we asked was about how ambitious the Government and business should be. The Clean Growth Strategy (CGS) sets a target of cutting business spend on energy by 20% against BAU by 2030. We asked if this was suitably ambitious target. Some 59% of respondents felt it wasn't, with 14% saying it was either 'not ambitious at all' or 'not very ambitious', and another 45% saying it 'could be more ambitious'. One might expect suppliers to take this view, but what struck me was that even among energy consumers half felt that more ambition was either possible or needed. This suggests that BEIS are being over cautious and should set a tougher target.

But targets and ambition are no good without meaningful polices to back them up. It's always easier for government to build on what is already in place than to design and implement new policy, so we started by asking some questions about whether certain polices already in place should be extended or toughened up. For example the *Clean Growth Strategy* calls for 'as many homes as possible' to be EPC C rating or above by 2035. So, we asked whether this should be extended to commercial buildings. Strikingly, 88% thought that it should, and most of those actually thought the target should be bolder than a C rating. As before, suppliers were more bullish than consumer respondents but not by much.

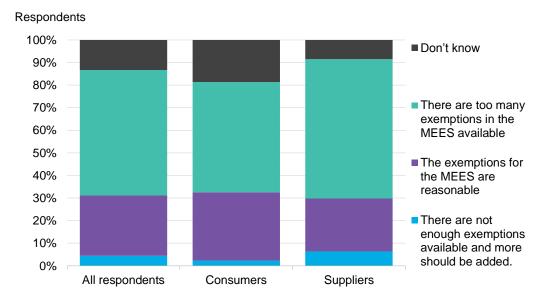
Figure 21: The Clean Growth Strategy sets an ambition for as "many homes as possible" to have EPC rating of C by 2035. Should this apply to commercial buildings also?





We then asked about Minimum Energy Efficiency Standards (MEES) exemptions – a real bugbear of EIC members in this field, who believe that these exemptions often become loopholes. Some 56% of respondents felt that there were too many exemptions, 27% felt the existing exemptions were reasonable, and 4% wanted more exemptions (and about 13% didn't know either way). Suppliers had clearer views – few ticked 'don't know' and a larger majority saw a need for tightening up, although about 6% believed that in fact more exemptions were needed.

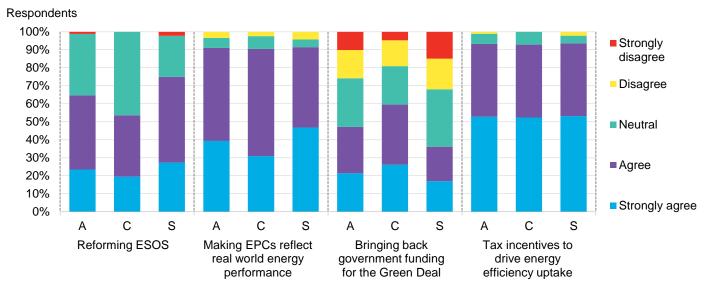
Figure 22: The Minimum Energy Efficiency Standards (MEES) -- which will make it unlawful to let commercial properties with an Energy Performance Certificate (EPC) rating of 'F' or 'G' from April 2018 -- currently contain several instances in which the property owner can claim exemption, such as lack of tenant consent, property devaluation etc. Do you feel that:





We then asked a more general question about what new policies ministers should be focused on. Of the four options we included, 'tax incentives to drive energy efficiency uptake' was the most popular, with 93% agreeing or strongly agreeing that this should be a priority. Something for the next Budget perhaps? Making Energy Performance Certificates (EPCs) reflect real world performance was seen as similarly important, and reform of the Energy Savings Opportunity Scheme (ESOS) attracted 65% support. Bringing back public funding for the Green Deal, however, brought a much more mixed reaction. About a quarter of respondents were opposed and a further quarter were neutral. Interestingly, suppliers tended to be more negative than consumers.

Figure 23: Besides the MEES, to what extent do you agree that the following policies should be a priority for the government?

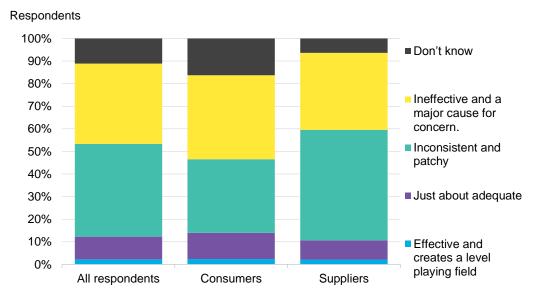


Source: EEVS, BNEF. Note: A = All respondents, C = Consumers, S = Suppliers

Lastly, we asked about enforcement of policies. Environmental policies are only as good as their enforcement mechanisms, and this is especially true of energy efficiency when there are so many actors and stakeholders. Our Working Group feel strongly that poor enforcement is a major obstacle to any new push on energy efficiency, and we wanted to see if the wider community agreed. Judging by the survey responses, the answer seems to be a resounding yes. Over 40% saw enforcement as 'inconsistent and patchy' while about a third went further and saw it as 'ineffective and a major cause of concern'. Ten per cent rated it as 'just about adequate' and a mere 2% plumped for 'effective and creates a level playing field. Energy consumers were marginally less critical and had more 'don't knows' (16%), but the fact remains three quarters of energy consumers have major reservations over whether the regulations that BEIS is building its assumptions on are actually working.



Figure 24: Energy efficiency policies are only effective if they are properly monitored and enforced. Do you think the enforcement by local authorities and other inspectors is:



Source: EEVS, BNEF

So, all in all, a lot of consensus around some clear messages - the Clean Growth Strategy target for energy efficiency lacks ambition, existing policies should be toughened up and tax incentives, EPC and ESOS reform considered. And without better enforcement none of this will be of any value. Plenty for EIC to be talking to Government about in 2018.

If you are interested in getting involved in EIC's work on energy efficiency policy, please get in touch with Matthew at matthew.farrow@eic-uk.co.uk

Appendices

Appendix A: Methodology

The EEVS/Bloomberg *Energy Efficiency Trends* Survey (Vol.21) was conducted between October 30 and November 24, 2017, and completed by 90 U.K.-based respondents (43 consumer organisations and 47 suppliers).

This is the 21st in a series of reports showing industry trends in non-residential energy efficiency. As the report series evolves, we continue to make minor tweaks.

Initially, the report covered a broad range of European countries, but since Volume 8, it has presented U.K.-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.

Please reach out should you wish to discuss any of the trends observed in the charts.

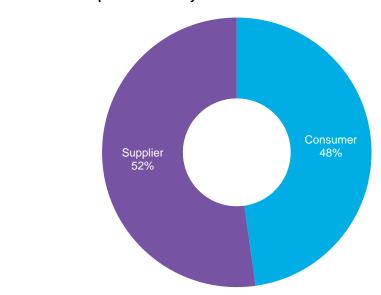
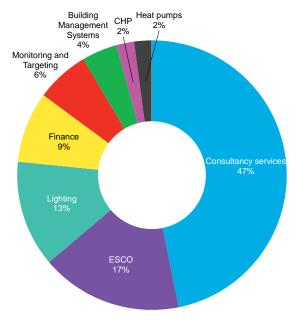


Figure 25: Who completed the survey? 3Q 2017



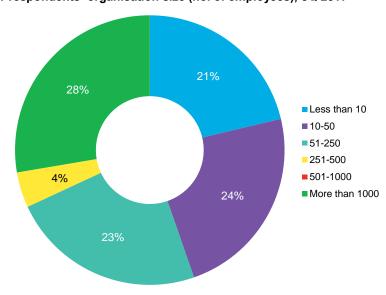
Appendix B: Supplier respondents

Figure 26: Breakdown of respondents by supplier type, 3Q 2017



Source: EEVS, BNEF

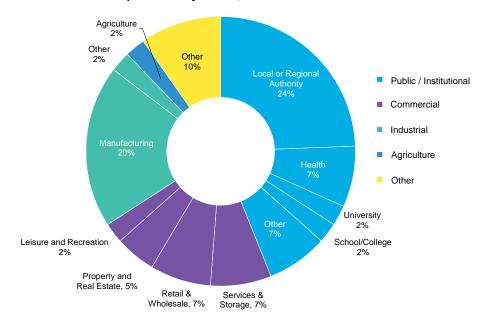
Figure 27: Supplier respondents' organisation size (no. of employees), 3Q 2017





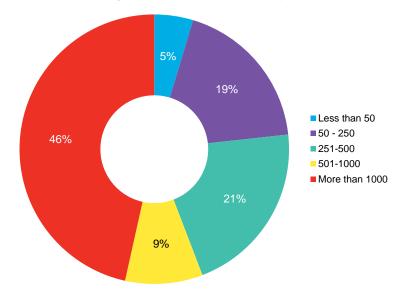
Appendix C: Consumer respondents

Figure 28: Consumer respondents by sector, 3Q 2017



Source: EEVS, BNEF

Figure 29: Consumer respondents' organisation size (no. of employees), 3Q 2017



About US

About EEVS



EEVS is the U.K.'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 hundreds of energy efficiency projects 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, Shanghai, 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 22 Long Acre London WC2E 9LY
BNEF:	Tom Rowlands-Rees trowlandsree@bloomberg.net +44 (0) 20 3525 4144	Bloomberg L.P. 3 Queen Victoria Street London EC4N 4TQ

Copyright:

© EEVS insight Ltd. 2018. Developed in partnership with Bloomberg New Energy Finance (Bloomberg Finance L.P. 2018). 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.

Join the Energy Efficiency Trends Community

Register at www.eevs.co.uk/join-community.html to join the Energy Efficiency Trends reports direct to your email inbox.

By registering you will also be invited to complete the quarterly surveys upon which the research is based. If you are a consumer, financer or supplier of energy efficiency consultancy, products or services, your input would be greatly appreciated. Your responses will be treated anonymously and aggregated to form the published *Energy Efficiency Trends* report.

To find out more about Energy Efficiency Trends, or to download previous editions please visit our website:

www.energyefficiencytrends.com

