Department of Energy & Climate Change

THE ENERGY TECHNOLOGY LIST:

Call for Evidence

December 2015

The Energy Technology List

Call for Evidence

The Energy Technology List

URN 15D/512

Any enquiries regarding this publication should be sent to us at ETLcallforevidence@decc.gsi.gov.uk.

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Executive Summary

1. The Energy Technology List (ETL) is a Government-backed energy efficiency scheme that encourages private and public sector organisations to procure energy saving or energy efficient (herein called energy efficient) plant and machinery. International experience shows that product lists can form an important part of measures to promote energy efficiency market transformation. For businesses, purchases of listed products can be used to claim Enhanced Capital Allowances (ECAs), a form of tax relief that can produce cash flow benefits.
2. The ETL has been in operation since 2001 and has grown to include around 16,000 products across 16 technology groups. As a result, it has developed into a significant procurement tool that has been incorporated into Government Buying Standards and embedded into the procurement strategies of major UK companies. The ETL aims to simplify investment decisions and help overcome information barriers, as well as reduce transaction costs for buyers, sellers and government.
3. On 28 September, the Government launched a consultation on reforming the business energy efficiency tax landscape[1]. This Call for Evidence is being conducted independently of that consultation, although its findings may be used to support the development of policy options considered. The primary purpose of this Call for Evidence is to seek evidence to help DECC ensure that the ETL continues to deliver our energy efficiency policy ambitions effectively whist providing value for money for UK tax payers. However, we are also keen to improve our understanding of stakeholder perceptions of the interdependence between the ETL and ECAs.
4. We would welcome evidence and views from stakeholders on the effectiveness of the ETL itself and the likely take-up of similar measures, implemented either in respect of energy efficiency or other technologies, in the UK or in other countries. This evidence will be used to identify and inform the development of potential measures to improve the ETL and inform decisions on which, if any, to take forward. Evidence could range from formal research to individual perspectives. Useful types of information include, but are not limited to the following:-
    - Experience of the barriers faced by organisations considering purchasing energy efficient technologies
    - Experience of the effectiveness of the ETL at addressing the barriers to adopting energy efficient technologies
    - Examples of uses of and other impacts derived from the existence of the ETL
    - Commercial, third sector, or academic research studies
    - Evaluations of the ETL or related policies
    - Statistics on take-up and/or cost of similar or analogous policy measures
    - Examples of policies which have been effective at addressing similar barriers in other countries or other policy contexts
    - Examples of impacts of Enhanced Capital Allowances specifically related to the ETL

[1] Consultation on reforming the business energy efficiency tax landscape which ran from 28 September to 9 November 2015 - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/464304/PU1853_business_energy.pdf

5. While you will not necessarily have evidence or views to submit on all questions, we do encourage you to submit responses to as many or as few of the questions as you wish.

Who should respond?

We would welcome responses to this Call for Evidence from;

- any organisations that have procured, or that have the potential to procure, energy efficient plant and machinery;
- organisations involved in the manufacture and supply of plant and machinery;
- tax advisors, energy managers or energy assessment specialists;
- academics and consultancies who have conducted studies into the barriers to deployment/ adoption of energy efficient plant and machinery or the effectiveness of the ETL as a measure to address those barriers; and
- academics and consultancies that have conducted research into similar policies to ETL the results of which are directly relevant to this call for evidence.

General Information

Issued: 11 December 2015

Respond by: 29 January 2016

Enquiries to:

Sustainable Energy Using Products Team,
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2nd Floor Area C,
3 Whitehall Place,
London, SW1A 2AW
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Email: ETLcallforevidence@decc.gsi.gov.uk
Reference: URN 15D/512 – Energy Technology List – Call for Evidence

How to respond:

Your response will be most useful if it is framed in direct response to the questions posed, though further comments and evidence are also welcome. Electronic responses to the above email address are preferred, however, you may also respond in hardcopy, to the above address, if you prefer.

Confidentiality and data protection:

Information provided in response to this Call for Evidence, including personal information, may be subject to publication or disclosure in accordance with the access to information legislation (primarily the Freedom of Information Act 2000, the Data Protection Act 1998 and the Environmental Information Regulations 2004).

If you want information that you provide to be treated as confidential please say so clearly in writing when you send your response to the Call for Evidence. It would be helpful if you could explain to us why you regard the information you have provided as confidential. If we receive a request for disclosure of the information we will take full account of your explanation, but we cannot give an assurance that confidentiality can be maintained in all circumstances. An automatic confidentiality disclaimer generated by your IT system will not, of itself, be regarded by us as a confidentiality request.

1. Introduction

1.1 This Call for Evidence is of relevance to public and public sector energy consumers and for Combined Heat and Power developers. It seeks evidence on the uptake and effectiveness of the Energy Technology List (ETL) as a mechanism to encourage the uptake of energy efficient plant and machinery by the private and public sectors.

1.2 The adoption of energy efficient equipment can offer useful carbon savings and also deliver significant cost savings for purchasers throughout the lifetime of the equipment, despite attracting an initial price premium in relation to less efficient equivalents. The ETL is a government-managed list of energy efficient plant and machinery, such as boilers, boiler controls, electric motors, air conditioning, refrigeration systems and refrigeration controls. For a product to be on the ETL, it must meet specific energy saving or energy efficient criteria.

1.3 The ETL is part of the Enhanced Capital Allowance Scheme for energy saving technologies (ECA) - a form of accelerated tax relief. ECAs allow businesses to claim a type of first year allowance on purchases of ETL listed products that allows a greater proportion of the cost of an investment to qualify for tax relief, thereby providing a cash-flow boost. For those organisations not paying corporation tax (e.g. charities, public sector), the ETL allows the identification of equipment which will have reduced running costs compared to unlisted products.

1.4 This Call for Evidence is interested in stakeholders' views on the ETL as a measure to address barriers to the adoption of energy efficient plant and machinery. DECC would like to seek stakeholder views on the effectiveness of the ETL to address those barriers. We would also welcome evidence and views on the effectiveness and likely take-up of similar measures, implemented in respect of other technologies, in the UK or in other countries.

1.5 Useful types of evidence would include the following;

- Experience of the barriers faced by organisations considering purchasing energy efficient technologies
- Experience of the effectiveness of the ETL at addressing the barriers to adopting energy efficient technologies
- Examples of other impacts derived from the existence of the ETL
- Commercial, third sector, or academic research studies
- Evaluations of the ETL or related policies
- Statistics on take-up and/or cost of similar or analogous policy measures
- Examples of policies which have been effective at addressing similar barriers in other countries or other policy contexts
- Examples of impacts of Enhanced Capital Allowances specifically related to the ETL

1.6 On 28 September, the Government launched a consultation on reforming the business energy efficiency tax landscape[2]. This Call for Evidence is being conducted independently of that consultation although its findings may be used to support the development of policy options considered. The primary purpose of this Call for Evidence is to seek evidence to help DECC ensure that the ETL continues to deliver our policy

[2] Consultation on reforming the business energy efficiency tax landscape which ran from 28 September to 9 November 2015 - https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/464304/PU1853_business_energy.pdf

ambitions efficiently and effectively. This evidence will be used to identify and inform the development of potential measures to improve the ETL and inform decisions on which, if any, to take forward. We are also keen to improve our understanding of stakeholder perceptions of the interdependence between the ETL and ECAs.

2. Policy Context and Rationale

Background

2.1 The ETL intends to address information barriers to improve the uptake of energy efficient plant and machinery in the UK. A lack of information about product energy efficiency; in particular energy performance information[3], may make it difficult to make the 'right' decision when purchasing a product. Where information is available it might be too costly or time consuming to access or interpret. It is hoped that the ETL overcomes such barriers by providing information about energy efficient plant and machinery against a set of transparent protocols.

2.2 The ETL can overcome barriers relating to procurement. Product consumers may opt for equipment with the lowest upfront purchase cost rather than taking into account operating costs. However, such immediate cost savings often prove to be a false economy in the longer term. Considering the future operating cost of the equipment before investing can help fully inform an investment decision to reduce future expenditure. The ETL is designed to help organisations that do not have the 'in-house' capacity, either in terms of resource or technical knowledge, to assess their procurement options for optimal efficiency performance.

2.3 The ETL also aims to provide energy efficiency information that is verified by product testing. The lack of good quality, trusted product and/or performance information may be a barrier to take up of energy-efficient products. The ETL is one of a suite of measures that seek to tackle this barrier and support awareness-raising. By ensuring that products are tested, it is hoped that the ETL list is considered an unbiased and trustworthy source.

2.4 The ETL has the potential to reduce transaction costs for business and government. By selecting products from a trusted list organisations may be able to reduce transactions costs (e.g. costs related to product search, verification and procurement). Sellers placing products on a trusted list can reduce the cost of sale (e.g. costs to identify customers, developing trust, tendering, product verification, lost sales). By encouraging energy efficient technology uptake, government can reduce transaction costs between buyers and sellers through an '*assess once, use many times'* approach.

2.5 However, we do not have enough evidence about whether the ETL overcomes information barriers and transactions costs effectively and are conducting this Call for Evidence to seek stakeholder views.

Market Transformation through Product Policy

2.6 The ETL also seeks to promote market transformation, resulting in overall improvement in the energy performance of equipment. There is some evidence from international experience (e.g. in the Netherlands, Spain, Canada and Japan) that technology listing

[3] https://www.gov.uk/government/publications/research-to-assess-the-barriers-and-drivers-to-energy-efficiency-in-small-and-medium-sized-enterprises

can form an important part of a package of measures to promote energy efficiency market transformation.[4] Technology lists are particularly relevant for promoting standardised equipment and components that have clear-cut and easily defined benefits for energy efficiency compared to comparable alternatives. Over time, trusted technology lists are expected to result in an average improvement in the energy performance of installed equipment due to plant replacement with more efficient equipment (see Figure 1 below).

Figure 1 – Improving average product performance

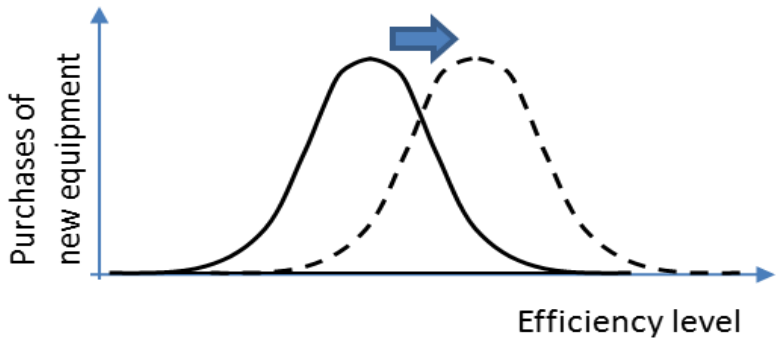


Figure 1: By setting energy efficient performance ambitions, over time, the average performance of all plant supplied to the market improves.

2.7 Trusted technology lists such as the ETL set a performance threshold for best performing energy efficient products available to the market. This threshold is used by qualifying products that can be listed on the ETL. Customers purchase ETL listed products and this encourages manufacturers to develop new products that meet the performance threshold. As more energy efficient products are supplied the performance of the average product in the market increases (see figure above). Over time this should lead to reduced energy use by the market. So technology lists should transform both the supply of products to the market and the related market activities (e.g. servicing, maintenance, consumables). This could stimulate economic renewal and innovation.

2.8 Governments can use technology lists to stimulate different socio-techno market transformation impacts to:-

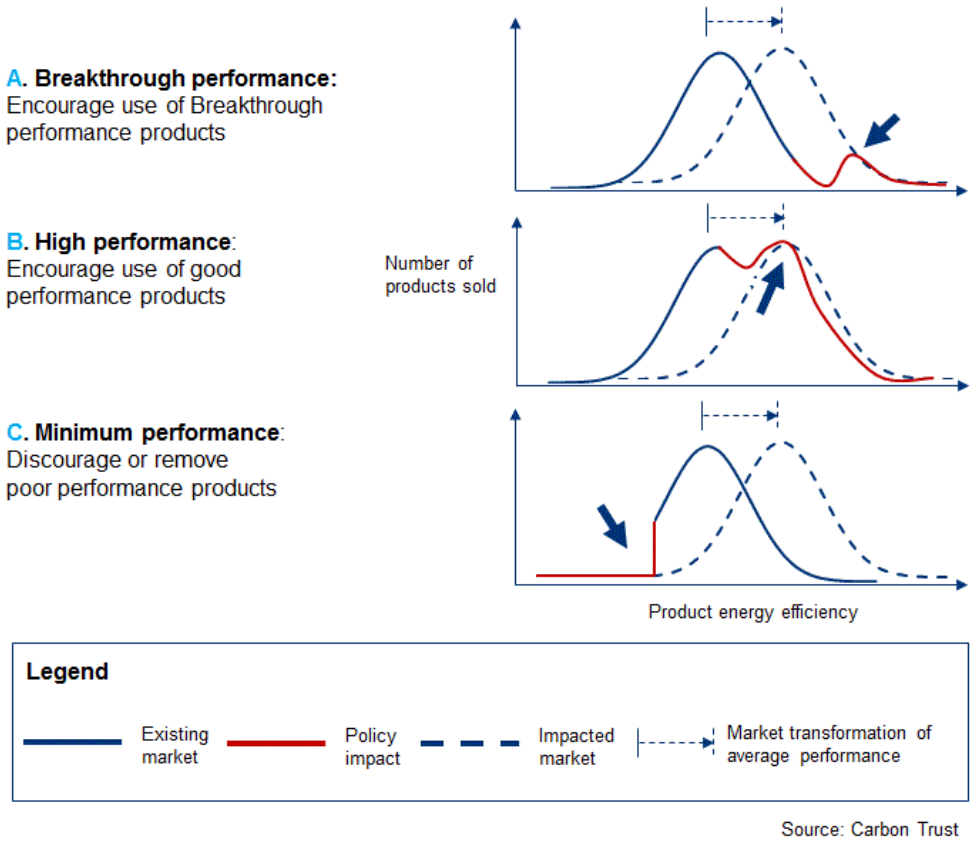
A. **encourage** use of breakthrough performance plant which is emerging in the market - implementing *Leading Equipment Performance Standards* (LEPS) (e.g. Japan)

B. **encourage** use of high performance (i.e. *more efficient)* plant available on the market - implementing *Higher Equipment Performance Standards* (HEPS) (e.g. UK ETL)

C. **discourage** use of the least efficient plant available on the market – implementing *Minimum Energy Performance Standards (MEPS) (e.g. EU Ecodesign)*

[4] See for example Price et al, 2008, *International Experience with Key Program Elements of Industrial Energy Efficiency or Greenhouse Gas Emissions Reduction Target-Setting Programs* ; Naoilly and Batrakova, 2010, *Stimulating energy-efficient innovations in the Dutch building sector*; Mallaburn and Eyre, 2014, *Lessons from energy efficiency policy and programmes in the UK from 1973 to 2013*.

Figure 2 – Setting ambition levels for different market outcomes



Source: Carbon Trust

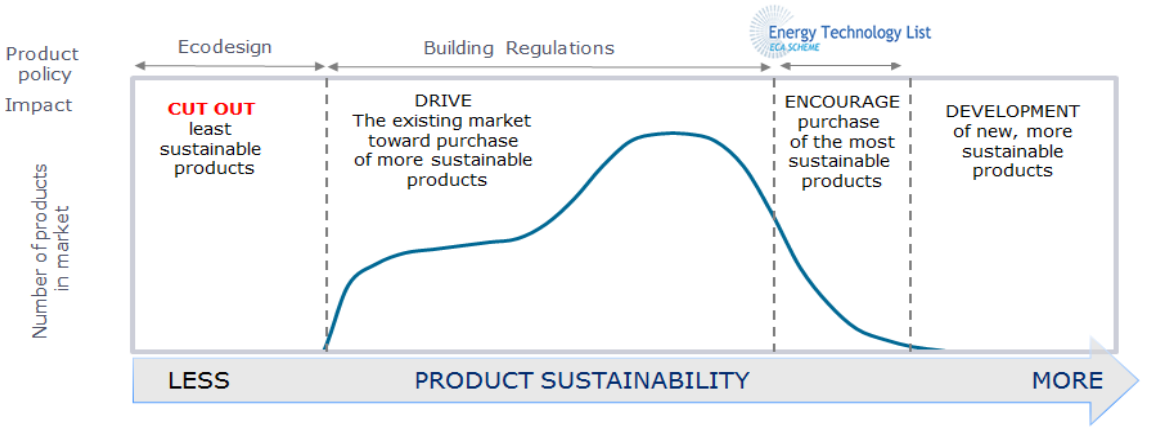
In the figure above, the solid line blue represents the current products in the market, while the dotted blue line represents the intended outcome after the ambition levels are set. The red line highlights the area of policy impact.

Placement and Policy Context of the UK Energy Technology List

2.9 The ETL complements other policies, such as the Energy Savings Opportunity Scheme (ESOS), that require energy audits or management systems. Where those policies help organisations identify cost-effective energy savings measures, the ETL can help inform investment and procurement decisions.

2.10 The continued development of the European Union's Ecodesign and Energy Labelling policies are also strongly linked to the ETL and its criteria are regularly updated to reflect market developments that have been influenced by changes in Ecodesign standards. In this way, the ETL can be said to provide a 'market pull' effect in the same way that Energy Labelling does for domestic appliances to encourage take-up of the top performing quartile of products. Whilst the Ecodesign standards cut out the least sustainable products in the market, the ETL acts as an incentive to purchase the most sustainable products at the other end of the market (see Figure 3).

Figure 3 – How the ETL encourages the top quartile of energy savings retrofit products



Source: Carbon Trust

2.11 The Government recognises that its approach differs from other EU Member States. The Dutch Government's MIA-VAMIL/ Environment Lists, for example, use qualifying criteria and assess compliance by the review of projects that deploy technology that meets those criteria [5]. The list contains environmentally friendly assets or investments that qualify for fiscal incentives. The Flanders Ecologiepremie Plus List and the Basque Clean Technologies List for tax deduction offer further examples.

3. The Energy Technology List

Background to aims and benefits of the ETL

3.1 The ETL was established in 2001 and was designed to promote energy efficient plant and machinery products and reward businesses for investing in them through the ECA scheme. This allows a business to offset the cost of purchasing eligible plant and machinery against its taxable profits, as well as benefitting from reduced energy costs through the use of more energy efficient equipment.

3.2 The ETL is in two-parts; the Energy Technology Criteria List (ETCL) and the Energy Technology Product List (ETPL). The ETPL is generally thought of by stakeholders when they refer to the ETL: however unless explicitly stated this document refers to the ETL in its entirety. The ETCL defines the specific criteria that a product must meet in order to be listed on the ETPL. Those criteria include functional specification, energy efficiency and other performance measures. The ETPL is the list of products that have been assessed as being compliant with the ETCL criteria. Both lists are reviewed annually by DECC to ensure that the criteria and listed products fully reflect technological advancements in the market place, changing market trends/dynamics, and the development of EU products legislation and other regulations. The ETPL is also updated monthly to enable product suppliers to list new products and/or remove products no longer sold to the market.

[5] See: http://www.measures-odyssee-mure.eu/public/mure_pdf/industry/NLD3.PDF; Netherlands Enterprise Agency website: http://english.rvo.nl/subsidies-programmes/mia-environmental-investment-rebate-and-vamil-arbitrary-depreciation-environmental-investments

3.3 Due to its use with the ECA scheme, the ETL is limited to generic plant and machinery as opposed to bespoke or sector specific products, in order to comply with EU State Aid rules. Any significant changes to scope of the ETL could require State Aid approval from the European Commission.

3.4 Technologies currently include:-

- Air to air energy recovery
- Automatic monitoring and targeting (AMT) equipment
- Boiler equipment
- Combined heat and power (CHP)
- Compressed air equipment
- Heat pumps
- Heating, ventilation and air conditioning (HVAC) equipment
- High speed hand air dryers
- Lighting
- Motors and drives
- Pipework insulation
- Refrigeration equipment
- Solar thermal systems
- Uninterruptible power supplies
- Warm air and radiant heaters
- Waste heat to electricity conversion equipment

Within the above technology categories, there are 58 separate sub-technology categories listed on the ETCL.

3.5 Due to the sheer number and product variations available Automatic Monitoring and Targeting (AMT) systems, CHP, lighting products, pipework insulation and air source split and multi-split heat pumps are not individually listed. Spending on such products that meet the appropriate criteria can qualify for an ECA. In this case customers (e.g. businesses) should seek confirmation from their suppliers that the equipment complies with ETCL criteria prior to purchase.

Energy Technology List delivery

3.6 The ETL is delivered on DECC's behalf by the Carbon Trust. The Carbon Trust has delivered the ETL since its inception, firstly as a DECC arms-length body and then under contract after winning an open tender competition in 2012. The ETL portal and website is maintained by Fivium Ltd under a separate contract. DECC's overall budget for running the ETL is approximately £1.4 million per annum.

3.7 When the scheme was created, information was disseminated via the Carbon Trust's website. The first ETL website was created in 2003 and a second, which allowed organisations to make part of their applications for new products to be listed on the

ETL/ETPL online was created in 2007. In February 2013, DECC launched a third generation ETL website that required product applications to be made online[6]. That website also contained detailed information and guidance about the scheme. Since December 2014, the supporting information about the ETL has been hosted on the Gov.UK website[7].

Energy Technology List annual and monthly maintenance

3.8 The ETL aims to identify and promote the top 10-25% performing products in each of its product types. To do this it needs to be alive to technical developments in the market and in the EU regulatory regimes. To support this, the Carbon Trust conducts a rolling programme of research that assesses each technology type on a three-four year cycle. The programme aims to identify technologies with good cost-effective carbon emissions reduction potential and provide the evidence base to develop appropriate interventions for DECC.

3.9 The research programme is designed to develop knowledge on technologies that may cost effectively benefit from support; review the technologies that are currently supported to establish whether technology and/or market developments warrant continued support; and, if necessary, recommend changes to the product eligibility criteria.

3.10 This research programme provides the technical and market knowledge and analysis that underpins the maintenance of the ETCL, including justifications for criteria updates and technology removals. In the case of new technologies, it scopes out support for, and, if appropriate, builds a case for their inclusion on the ETL. The programme delivers robust, high quality evidence bases that are used to form recommendations on the implementation of policy interventions.

3.11 The Government reviews the criteria lists on an annual basis and, acting on advice from the Carbon Trust, revises the criteria as appropriate. This can mean that new criteria are added (e.g. waste heat to electricity conversion equipment in 2015) or existing criteria are either removed (e.g. automatic air purgers in 2013) or amended (e.g. LED Lighting in 2015). Changes to the criteria can have significant impacts on the number of products listed. Repeated tightening of benchmark levels of performance are designed to encourage multiple waves of product innovation that transform the energy efficiency performance of plant supplied to the market; and deliver maximum practical energy efficient performance. At the time the criteria list is updated the product list is also updated to ensure listed products comply with current criteria.

3.12 Manufacturers or sole suppliers of products can make product applications to have their products listed on the ETL. As part of a rigorous application process, proposers must provide technical evidence (e.g. test reports) about the energy efficiency of products and supporting market evidence (e.g. sales brochures). Technical evidence needs to be gathered under controlled test conditions (e.g. product tests undertaken in certified test laboratories using the required test standards and being able to show appropriate quality control approaches) and market evidence is required to show that products are actually

[6] https://etl.decc.gov.uk/engetl/fox/live/ETL_PUBLIC_PRODUCT_SEARCH

[7] https://www.gov.uk/guidance/energy-technology-list

being sold to the market. Proposers' products that pass these verification processes are listed on the ETL at the start of the month following successful verification.

The Enhanced Capital Allowance Scheme for energy efficient plant and machinery

3.13 An enhanced capital allowance is a type of first year allowance (FYA). FYAs let businesses set 100% of the cost of the assets against taxable profits in a single tax year. This means a company can write off the cost of new plant or machinery against their taxable profits in the financial year the purchase was made, therefore providing a helpful cash-flow boost.

3.14 The ECA claim must be made against a business's taxable profits in the tax year when the investment is made. All businesses that pay income or corporation tax are able to claim 100% of the cost of an asset, as long as it is on the ETL at the time of purchase, allowing the business to deduct the full cost of the asset from its profits before tax.

3.15 First year allowances can be claimed in addition to the Annual Investment Allowance (AIA) and does not count towards the AIA limit. From January 2016, the AIA has been set at £200,000 for the life of the current Parliament.

3.16 The example provided below uses equipment costing £1,000 and assumes the business pays corporation tax at 20% and the main rate for writing down expenditure on plant and machinery at 18%. In this example the business obtains £200 tax relief in year 1, as opposed to £36 in year 1 but would have continued to receive relief over a number of years until all the tax (i.e. £200) is recovered.

Table 1[8] - Effects of Capital Allowance tax relief

Year	Remaining expenditure not previously written-off against profits	Capital allowances available	Effect of tax relief for normal capital allowance	Enhanced capital allowance available	Effect of tax relief for enhanced capital allowance
1	£1,000	18% of £1,000 = £180	20% of £180 = £36.00	100% of £1,000 = £1,000	20% of £1,000 = £200
2	£1,000 - £180 = £820	18% of £820 = £148	20% of £148 = £29.52	£0	£0
3 +	This continues until all the tax (i.e. £200) is recovered.				

3.17 Loss-making companies can also realise the tax benefit of their investment in ETL qualifying technologies with Payable ECAs by surrendering losses attributable to ECAs in return for a cash payment from the Government. The amount payable to any company claiming payable ECAs will be expressed as 18% of the loss that is surrendered. So if a company surrenders a loss of £100,000, the Payable ECA it will receive is £18,000. Payable ECAs are, however, capped. The maximum credit claimable is limited by the

[8] Corporation tax set at 20%. www.gov.uk/corporation-tax-rates/rates
Capital allowances are rounded in the taxpayer's favour. For more information on capital allowance claims and rates visit: https://www.gov.uk/capital-allowances/overviewhttps://www.gov.uk/capital-allowances/overview

total of the company's PAYE and National Insurance payments for the year in which the claim is made or, if greater, £250,000.

Case Study - London Underground

London Underground (LU) purchases significant quantities of electrical and mechanical equipment as part of its investment programme, and is committed to improving its energy efficiency and reducing its carbon emissions.

LU has been able to benefit from the Enhanced Capital Allowances scheme since 2013, and is increasingly using the ETL when purchasing new equipment. Examples of ECA qualifying technologies installed across the Tube network in the past two years include lighting and VRF systems at a number of stations, and variable speed drives within cooling systems and escalators. The new ticket hall at Tottenham Court Road station, opened in early 2015, includes several ETL-listed assets.

LU is updating its project management processes to ensure project teams are using the ETL, and is encouraging its suppliers to make sure their products are listed. The energy efficiency requirements in LU's engineering standards for electrical and mechanical equipment have been aligned to the performance criteria of the ETL.

"The Energy Technology List provides a clear benchmark for energy efficient performance across the range of technologies we use across the Tube network. Combined with the Enhanced Capital Allowance scheme, the ETL supports decision-making within projects and provides a visible indication of our efforts to reduce our carbon emissions."

James Ingram, Energy & Carbon Strategy Manager, London Underground

The Energy Technology List in Operation

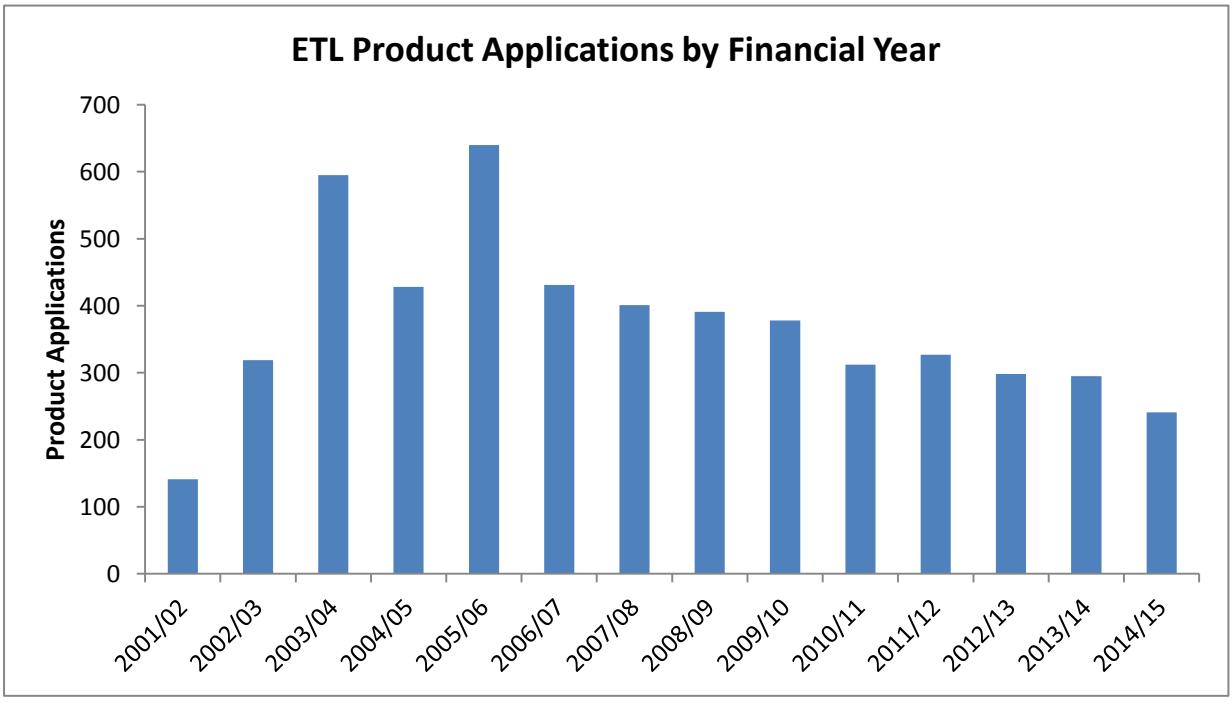
3.18 There are currently around 16,000 products listed by 330 manufacturing and/or supplying companies on the ETL. Those companies range in size from SMEs with predominantly UK reach to international manufacturers with global reach. Since 2001, applications for around 13,000 products have been rejected because they did not meet the criteria. Also changes to the criteria have resulted in over 27,000 products being removed from the ETL during its lifetime.

3.19 The current composition of the ETL by technology is shown in Figure 4 below and a breakdown of the numbers of applications received per financial year since the scheme began in 2001 is given at Figure 5.

Figure 4 – ETL listed products by technology type (October 2015)

Technologies	Products
Air to Air Energy Recovery	67
Automatic Monitoring and Targeting Equipment	15
Boiler Equipment	1,350
Compact Heat Exchangers	0
Compressed Air Equipment	55
Heat Pumps	173
Heating, Ventilation and Heating (HVAC) Equipment	60
High Speed Hand Air Dryers	22
Motors & Drives	9,627
Radiant & Warm Air Heaters	210
Refrigeration Equipment	3,967
Solar Thermal Systems and Collectors	202
Thermal Screens	0
Uninterruptible Power Supplies	161
Waste Heat to Electricity conversion equipment	0
Grand Total	**15,909**

Figure 5 – ETL applications 2001-2015



3.20 The ETL was successfully piloted during 2001 and 2002. Between 2003 and 2006 scale up of the ETL approach was undertaken and the number of supported technology categories was expanded. Expansion of the ETL during this time resulted in high numbers of product applications being made. In 2007 with the introduction of the second generation ETL website, process improvements and changes to the way products were listed on the ETL saw a reduction in the number of products applications, but not necessarily a reduction in the number of products proposed each year (i.e. each product application could contain more than one product). Through the recessionary period, the number of product applications held up strongly. Later changes to how a number of technology categories are supported reduced the number of product applications. For example, the split and multi-split heat pumps (including VRF) category became an 'unlisted category' (eligible products are still supported by the scheme) and this removed an appreciable proportion of annual product applications. In 2014, the ETL website was tied in to the Gov.UK website.

3.21 Listed products are allocated a product number and are entitled to display the 'ETL approved' logo (see Figure 6 below). The ETL logo is copyrighted and action is taken to ensure that only authorised companies are able to use it.

Case Study – Mitsubishi Electric

Mitsubishi Electric has been using the Energy Technology List since 2005 across their range of single (M Series and Mr Slim), multi-split and VRF (City Multi) air conditioning units. Mitsubishi Electric is currently working to add their e-series modular chiller range to the List.

"Educating both the installation sector and end customers is a vital part of making the ETL and the Enhanced Capital Allowance work effectively and we actively look at engaging our customers through CPD guides or presentations, and in our regular communications either digitally or in person…. We do see our installation partners using ETL as a benchmark of energy efficiency, particularly with split air conditioning."

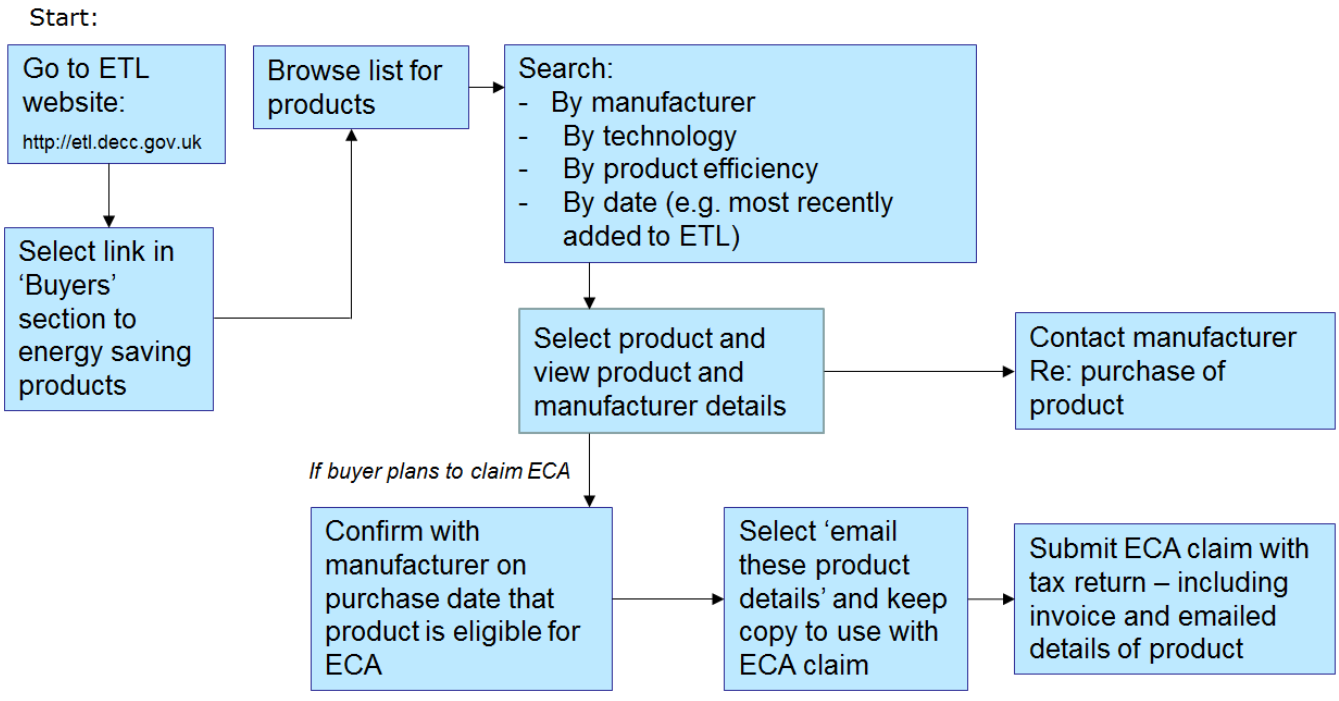
Mark Grayston, Product Manager of City Multi VRF

Mitsubishi Electric Air Curtain Heat Pump
Image Copyright: Mitsubishi Electric

Figure 6 – The ETL Product Logo

3.22 The Carbon Trust has developed a 'customer journey' map (see Figure 7) that demonstrates the process that purchasers need to follow to identify products on the ETL. From the Gov.UK website a customer can choose (via the Buyers hyperlink) to move to the ETL website where they will be offered the *Find ETL products* search tool. Using this search tool the customer can search by manufacturer, technology and/or date. On undertaking a search, the customer is presented with a list of products that meet their search terms. This list will always include product name, model name, sub-technology, manufacturer, date added to the ETL and – if appropriate – date removed from the ETL. Clicking on a product's detail brings up more information about the selected product and manufacturer.

Figure 7 – ETL 'Purchaser' Customer Journey



Source: Carbon Trust

The Energy Technology List as a procurement tool

3.23 Article 6 of Directive 2012/27/EU on energy efficiency requires Member States to ensure that central governments purchase only products, services and buildings with high energy-efficiency performance. In the UK, this requirement is enacted through Government Buying Standards (GBS)[9]. The GBS are a set of easy to use product specifications for public procurers. They have two levels; mandatory and best practice.

3.24 The GBS have been developed with input from across government, industry and wider stakeholders. They are extensively reviewed with market research and analysis to establish criteria that take long term cost effectiveness and market capacity into account.[10] Where appropriate, the ETL is fully embedded into the GBS.

3.25 Many commercial organisations have adopted the ETL within their procurement strategies. Searching for and verifying the capabilities and performance of energy–efficient products is expensive and time consuming for all companies. Many organisations in, for example, food retail, manufacturing, hospitality, transport, or ICT use the ETL as procurement aid to ensure they are buying energy efficient equipment that delivers good energy and carbon savings and will result in lower running than the less efficient alternatives. Some organisations now go as far as to require a product to be listed on the ETL before they will have a conversation with the seller.

3.26 Private or public sector organisations often use Environmental Assessment Methods (EAMs) to guide the building of new environmentally friendly buildings or the green refurbishment of existing buildings. EAMs such as those provided by RICS (SKA rating) and BRE (BREEAM) ask for customers to choose products from the ETL or which meet ETL criteria. Used in this way the ETL provides two useful solutions. Firstly, it is a tool that helps customers more easily identify energy-efficient equipment, and secondly it permits organisations such as RICS or BRE to gain value from government research on the best available energy efficient products without having to do their own costly research.

[9] https://www.gov.uk/government/collections/sustainable-procurement-the-government-buying-standards-gbs

[10] See: Sustainable procurement: the Government Buying Standards (GBS) https://www.gov.uk/government/collections/sustainable-procurement-the-government-buying-standards-gbs

Case Study – The University of Reading

The University of Reading has used the Energy Technology List to select projects and deliver energy efficiency savings across the University. For example, the University recently installed 72 high-efficiency hand dryers, selected directly from products listed on the Energy Technology List. These products have delivered attractive financial paybacks in terms of the energy saved. It is estimated that the 72 dryers are delivering total energy savings of £8,022 annually – calculated using Salix Finance's hand dryer calculation tool.

As a public body, the University of Reading does not benefit from the tax benefits of the Enhanced Capital Allowance scheme. However the University has used the Energy Technology List across a range of different technologies, from boilers to refrigeration units.

"The Energy Technology List is an invaluable source of information for a number of reasons. It provides independent assurance of products' energy performance, enabling direct comparisons between different manufacturers' products on a like for like basis. This has enabled us to have confidence in procurement decisions for more energy efficient equipment, helping to make the case for large-scale investment… The periodic review of Energy Technology List criteria means we can be confident we are purchasing products at the top end of efficient products currently on the market, and we are working to formally adopt these criteria as the standard across the University."

Dan Fernbank – Energy Manager, University of Reading

The Carrington Building in the heart of the Whiteknights campus at the University of Reading is home to Student Services.

4. The Call for Evidence

4.1 DECC is seeking evidence and views from stakeholders on the effectiveness of the ETL and likely take-up of similar measures, implemented either in respect of energy efficiency technologies, in the UK or in other countries.

4.2 The Call for Evidence has questions that are addressed to product suppliers and manufacturers; customers and purchasers; and tax, procurement and energy management specialists. This is because we are keen to understand the benefits and disadvantages that ETL raises for its principal users. However, we are keen to obtain as broad a range of evidence as possible, so stakeholders outside of these groups should also feel free to respond. Please feel free to respond to all questions even if you feel they are not specifically relevant to your usage of the ETL as we are interested in getting a broad range of evidence and views. Furthermore, feel free to skip any questions that you do not feel are relevant to you.

4.3 DECC would like to understand the value that the ETL provides to businesses considering purchasing energy efficient plant and machinery. This includes those private and public sector organisations that have embedded the ETL into their procurement processes. It also seeks evidence from tax advisors, energy management and non-domestic energy assessment specialists in this regard.

4.4 DECC is keen to understand the value and benefits that ETL approval has to suppliers and manufacturers. We are aware that businesses use ETL approval in different ways; some companies give it prominence on their websites, through PR/twitter and product information sheets whereas others are less engaged in these activities. Linked to this, we would appreciate your views on whether the ETL is fully effective as a tool to raise awareness of energy efficient products or as a mechanism that helps your business to overcome information barriers.

4.5 DECC is also seeking views on the types of technologies and products that could be considered for the ETL in the future and we would welcome stakeholder suggestions, together with supporting evidence, for technologies or products that could be suitable for inclusion on the ETL.

4.6 We would also like feedback on the ease of use of the ETL product website and the quality of information provided about the ETL on Gov.UK. In particular, are there any significant drawbacks or barriers associated with the ETL that are preventing your organisation from using the scheme and, if so, what could DECC do to remove them?

4.7 We would welcome your views on the benefits of the Government supported energy technology list to your organisations. The remaining questions have been written to help us improve the service that we offer and identify any weak points. We would also appreciate your suggestions for alternative approaches that DECC could consider. Although this call for evidence is focussed on the ETL, we would appreciate your views on the importance that the ECA scheme makes in terms of the investment or procurement decisions made by your organisation.

The Call for Evidence Questionnaire

Call for Evidence Questions: Use of the Energy Technology List
1. What is your role in relation to the Energy Technology List? e.g. customer/purchaser, supplier/manufacturer, product testing, procurement specialist, researcher, energy advisor, tax advisor etc.
2. Does your organisation use the ETL? If so, how? a. How does this use relate to other programmes or initiatives? (e.g. within building/energy audits, procurement strategy, tax relief, for pre-qualification requirements for environmental assessment methods (e.g. BREEAM, SKA Rating) b. How often does your organisation use the Energy Technology List?
3. What do you see as the main impacts of the ETL, both positive and negative? (E.g. carbon reduction, promoting innovation/R&D in energy efficiency, competitiveness.) a. Has your organisation benefited economically from using the ETL? (e.g. through reduced energy costs, use of the tax incentive, promoting sales, improved business reputation, a diversified product range, increased R&D, other). Can you state precisely how? b. If your organisation does not use the ETL, why not? What would encourage you?
Call for Evidence Questions: Customers/purchasers and energy managers/experts
4. What are the benefits / disadvantages of the ETL for buyers/purchasers of technology? a. Do you have any examples? If applicable, what has been the impact to your organisation on: • Costs associated with searching and verifying products • Energy costs • Overall costs (e.g. use of the ECA) • The trustworthiness of available information • Business reputation • Product range • Carbon emissions • Purchasing decisions (e.g. the role of the ETL in procurement strategy; as part of broader tax strategy) b. To what extent do you feel that purchasers see the ETL as a trusted list of information? Where else could similar information be found?
5. How important is the ECA in your organisation's use of the ETL? a. Have there been any barriers in your organisation to claiming the tax incentive under the ECA scheme? Are there any ways in which you feel the ECA scheme could be improved? b. Of the products on the ETL your organisation has bought in the past, what proportion do you estimate that the ECA was claimed on and why? (if known)

Call for Evidence Questions: Suppliers, manufacturers

7. What are the benefits / disadvantages specifically for suppliers and manufacturers of technology? Do you have any examples? In particular what has been the impact of the ETL to your organisation on:

- Costs of identifying and reaching customers
- Costs of verifying products
- Sales
- Trust in quality of products
- Product innovation
- R&D
- Business reputation
- Competitiveness
- Diversified product range

a. Do you have any examples where product/technology sales have increased after qualification on the list? Were the increased sales as a result of qualification?
b. Do you have any examples where product/technology sales have decreased after being taken off the list?
c. How important is the ETL logo to your organisation? How is it used?
d. What impact does the ETL have on products which are also sold to other countries?

8. If you are part of an organisation manufacturing technology, which sectors (sub-sectors) do you work in that are featured in the ETL? Please select multiple options where necessary –

- Air to Air Energy Recovery
- Boiler Equipment
- Combined Heat and Power
- Compressed Air Equipment
- Heat Pumps
- HVAC
- High Speed Hand Dryers
- Lighting
- Motors and Drives
- Pipework Insulation
- Radiant and Warm Air Heaters
- Refrigeration Equipment
- Solar Thermal Systems
- Thermal Screens
- Uninterruptible Power Supplies

9. How appropriate is the product application process?

a. Are the product application support tools useful? e.g. product application checklists, product testing guidance
b. How easy to use are the online product application processes?
c. Which stages of the application process are the most time consuming and/or costly to complete?
d. Are there any ways in which you feel the process could be improved?
e. Can you estimate the cost to your organisation to gain product qualification? (e.g. for staff time, administrative costs)

Call for Evidence Questions: Operation of the scheme
10. Do you have any ideas for improvement of the operation of the ETL? a. Are there any technologies/criteria you would like to see added or removed and why? b. Would including criteria/information on lifetime energy costs be a useful addition? Why? Why not?
11. How usable is the ETCL and ETPL? Specifically: a. Are there any processes that could be improved or simplified? b. What support could be given to navigate these processes? c. How could it be made easier for buyers/sellers to use the list? d. How appropriate is the process and timescale of criteria changes?
12. Can you provide evidence or views on the usability and functionality of the website? Specifically on: a. Usability b. Content. Are there any features you would add or remove?
Call for Evidence Questions: General questions / future options
13. How can the ETL stimulate innovation in energy saving technology? Specifically:- a. Does the ETL stimulate or incentivise innovation/R&D of energy-saving products or equipment? If so, how? b. To what extent are the criteria changes an incentive for innovation in more efficient products? c. How does the level of innovation compare to other sectors/technologies which are not featured on the ETL? d. How far does your organisation seek to go beyond the minimum standards and/or to go beyond energy efficiency standards under the Ecodesign regulations?
14. To what extent do you see the ETL logo as a quality standard?
15. To what extent do you feel your use/involvement with ETL is dependent on the tax incentive available under the ECA?
16. Are there other policy measures which might be more effective in facilitating the market in innovating or implementing energy efficiency solutions? a. Can you provide any evidence on the effectiveness of such measures? (e.g. in other countries/contexts) b. Is there anything further which government can do to help facilitate the market in innovating or implementing energy efficiency solutions?
17. Do you have any other comments?
18. We may wish to be able to ask some additional questions. Would you be happy to be contacted for further information if required? If so, please leave your contact details: Name: Email: Telephone: Job title:
Call for Evidence Questions: Your details
19. What is the name of your organisation (if applicable)?
20. What sector do you work in?
21. What size is your organisation? (fewer than 10, 10-50, 50-250, 250-500, 500+ employees)

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