

# A REVIEW OF THE ACCELERATED CAPITAL ALLOWANCES SCHEME FOR ENERGY EFFICIENT EQUIPMENT

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An Roinn Airgeadais  
Department of Finance

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## 1. Introduction

The Accelerated Capital Allowances (ACA) scheme for Energy Efficient Equipment (EEE) was established, through the Finance Act 2008, to incentivise companies and sole-traders to purchase highly energy efficient equipment. The ACA scheme is designed to improve energy efficiency among Irish companies and sole-traders<sup>1</sup> and to assist Ireland in meeting our own national targets and binding and non-binding EU targets on energy savings and the reduction of carbon emissions.

The ACA scheme is based on the long standing approach to the treatment of capital allowances for plant and machinery, whereby wear and tear can be taken into account as a deduction for tax purposes. However, the ACA scheme allows a company to write down the cost of such equipment in the year of purchase, rather than over the eight year period that is standard for plant and machinery capital allowances. This provides an incentive for companies and sole-traders to choose a qualifying energy efficient option when purchasing equipment.

The ACA scheme was initially introduced for a trial period of three years. This was extended by a further three years on two subsequent occasions, by Finance Act 2011 and Finance Act 2014; the latter extended the scheme until 31<sup>st</sup> December 2017.

The ten categories of qualifying equipment under the ACA scheme are:

- ❖ Building Energy Management Systems (BEMS)
- ❖ Lighting
- ❖ Motors and Drives
- ❖ Information and Communications Technology (ICT)
- ❖ Heating and Electricity Provision
- ❖ Process and Heating, Ventilation and Air-conditioning (HVAC) Control Systems
- ❖ Electric and Alternative Fuel Vehicles
- ❖ Catering and Hospitality Equipment
- ❖ Electromechanical Systems
- ❖ Refrigeration and Cooling Systems

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<sup>1</sup> The scheme was extended to cover sole-traders through Section 17, Finance Act 2016.

The operation of the ACA scheme does not result in tax foregone by the State, as such investments by companies and sole-traders would qualify for the standard wear and tear allowance in any case. However, the scheme provides a cash flow benefit to the companies and sole-traders investing in the qualifying equipment as they can claim their tax deduction in one year, as compared to the standard eight years. This incentivises the energy efficient option where possible. The net result for the State is an adjusted cash flow in respect of taxation.

## 2. Context of Energy Plan

### 2.1 European Policy Context

Modern energy policy is focused on three main objectives:

- ❖ Competitiveness
- ❖ Secure supply
- ❖ Sustainability

Energy efficiency is a key focus in achieving these objectives. With this in mind, the European Union has set about enhancing energy efficiency by 2020, through a series of targeted goals. Among these, the informally termed '20-20-20' targets strive towards a 20% reduction in greenhouse gas emissions and a 20% increase in the share of energy consumption produced from renewable resources by 2020. This represents a unified approach to climate and energy policy which will strive to tackle climate change, strengthen EU energy security in the EU, and enhance competitiveness.

While these specific targets are legally binding on EU member states, the overall 2020 targets, which includes a 20% primary energy savings target, are not. However, if these energy efficiency goals are not achieved, there could be unintended consequences for renewable energy sources.

In 2011, the European Energy Efficiency Plan (EEP) placed a renewed focus on achieving 2020 targets. Despite progress at a national level across the EU, these 2020 targets were not on track to be met at the time. In response, this revised platform set out a series of policy measures which covered the entire energy chain from supply to end use, in an effort to resolve these concerns.

Furthermore, the Energy Efficiency Directive (EED) 2012 provided a legal framework for the EEP to deliver its targets. This required that Member States provide indicative national targets and set out legally binding measures to target energy efficiency more effectively. Among these binding measures were the Energy Efficiency Obligation Scheme<sup>2</sup>. In order to achieve the target of new energy savings of 1.5% annually, the Government has utilised additional measures, including the ACA scheme.

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<sup>2</sup> Introduced in Ireland as the EU (Energy Efficiency Obligation Scheme) Regulations S.I. No. 131/2014.

In November 2016 the European Commission proposed an update to the EED which included meeting a new target of 30% energy efficiency for 2030. Measures to update the Directive to ensure the new target was met were also established.

## [2.2 National Energy Efficiency Action Plan \(NEEAP\)](#)

Under the NEEAP, the Government have committed to achieving a 20% reduction in overall energy demand by 2020 through a range of energy efficiency measures. Over the same time period, the Government has committed to achieving a 33% reduction in public sector energy use as a standard bearer for this commitment. The Government's first Public Sector Energy Efficiency Strategy published in January 2017 provides the framework and enhanced supports to deliver on this goal.

The NEEAP is aiming for savings of 31,925 Gigawatt hours (GWh) Primary Energy Equivalent (PEE) by 2020. Ireland's 4<sup>th</sup> NEEAP was published in April 2017. If all measures are successful, a reduction in annual CO<sub>2</sub> emissions of around 7.7 Mt would be achieved. However, an underachievement in the NEEAP would impact on binding renewables targets which if not achieved may result in fines being imposed by the European Commission. The ACA scheme has an effective role to play in ensuring the NEEAP targets are met. In their 2014 report on the ACA scheme, the then Department of Communications, Energy and Natural Resources (DCENR) estimate that the ACA scheme would meet a target of 975 GWh in 2020.

## [2.3 National Mitigation Plan \(NMP\)](#)

The first National Mitigation Plan, published in July 2017, represents an initial step on a pathway to achieve the level of decarbonisation required. This is a whole-of-Government Plan, reflecting in particular the central roles of the key Ministers responsible for the sectors covered by the Plan – Electricity Generation, the Built Environment, Transport and Agriculture, as well as drawing on the perspectives and responsibilities of a range of other Government Departments.

This first Plan provides the foundation for transitioning Ireland to a low carbon, climate resilient and environmentally sustainable economy by 2050. To support this ongoing work, the Plan also includes over 100 individual actions for various Ministers and public bodies to take forward. The ACA scheme is identified in the Plan as one of the existing measures for decarbonising the build environment (BE8).

### 3. Rationale for the scheme

The ACA scheme exists to address significant market failures for companies and sole-traders who might wish to invest in energy efficient products or technologies, as set out below:

- ❖ The social cost of inefficient products results in greater negative externalities such as carbon emissions.
- ❖ Short-sightedness on behalf of purchasers could entail that products which would be cost effective in the long-term are disregarded in favour of inefficient products.
- ❖ Lack of awareness with regard to differences in energy efficient products and/or objective differentiation between products, which can impact negatively on the purchasing habits of consumers
- ❖ The resulting low market demand provides a lack of incentive for innovators and manufacturers to bring new products to the market. There may also be limited access to capital or credit on a similar basis.
- ❖ Companies may also find resistance to a change in social behaviour in respect of energy efficient equipment.
- ❖ Energy efficient equipment is generally more expensive than less efficient equipment, particularly if the new energy efficient product is new to the market.
- ❖ The limitation of existing knowledge in energy efficient equipment. Investment in energy efficient equipment may expand research and development among innovators and manufacturers.

The above market failures can be addressed in part, at least, through the ACA scheme, which provides a clear incentive for choosing the energy efficient option as when compared to a market without intervention. Additionally, the scheme sets minimum criteria that products are required to meet to be eligible. As such, procuring against this register provides an assurance to companies that they are purchasing a product of very high efficiency.



## 4. How the scheme operates

The ACA scheme has been in existence since 9<sup>th</sup> October 2008,<sup>3</sup> and is based on the existing structure for Capital Allowances, also known as Wear and Tear Allowances.<sup>4</sup> However the scheme is only available with certain restrictions:

- ❖ The scheme is only available to companies, and to sole-traders since 1 January 2017, for incurred expenditure on approved energy efficient equipment, used in carrying out a trade, which is owned by the company or sole trader in question. The equipment should be in use, for the purposes of the trade, at the end of the chargeable period in order for allowances to be claimed.
- ❖ This equipment must be new and must qualify under the ACA specified list and meet specific energy-efficient criteria. This is covered through a biannual order of the Minister for Communications, Climate Action and Environment and the Minister for Finance, through which any item must fall within one of the ten classes of technology listed in Schedule 4A of the TCA 1997. This list is managed by the Sustainable Energy Authority of Ireland (SEAI)
- ❖ Additionally, the company must incur a minimum amount of expenditure on the equipment, which varies between technologies and is listed in Schedule 4A TCA 1997.

The ACA scheme is designed such that:

- ❖ It is a clear tax intervention open to all companies paying corporation tax, and sole traders not in the charge of corporation tax.
- ❖ The qualifying energy efficient products are very clearly defined and simply differentiated.
- ❖ There are transparent and objective qualification criteria to define the list of eligible products.

The SEAI has a role in promoting the scheme to stakeholders and users. The SEAI also ensures that equipment meets the energy efficiency standards prior to inclusion on the register.

The Finance Act 2016 extended accessibility of the scheme to sole-traders and non-corporates from 1 January 2017. Previously, the regime was only available to companies. The purpose of this change was to encourage businesses in the farming and marine sectors, in particular, to invest in energy efficient equipment. It is not expected that there would be a substantial increase in cost from this measure, as

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<sup>3</sup> Provision for the Accelerated Capital Allowances (ACA) scheme for Energy Efficient Equipment is provided for by Section 285A of the TCA 1997.

<sup>4</sup> Provision for standard Capital Allowances is provided under Section 284 of the Taxes Consolidation Act 1997.

take up among previously eligible farming business was limited. However, the relevant tax returns since the inclusion of this measure will not be available until late 2018.

## 5. Benefits and potential issues

### 5.1 Benefits of the Scheme

The operation of the ACA scheme provides a number of benefits, both from a micro and macro-economic perspective:

- ❖ Compliance with both binding and non-binding EU targets to achieve energy efficiency goals.
- ❖ Improved consumer confidence through empowering consumers to make informed decisions, as consumers are assisted in purchasing energy efficient equipment. This has the potential to build a significant market for these goods, allowing for greater efficiency in the available products.
- ❖ Improved cash flow for organisations, through the writing down of investment costs against profits in the first year, rather than over eight years. Operating costs will also be reduced through reduced energy use, per unit output.

### 5.2 Potential Issues

There are also potential issues created by the operation of the ACA scheme, including:

- ❖ Potential to make the tax code more complex.
- ❖ Negative externalities, if certain energy efficient products are not captured.
- ❖ Possibility for subjective judgement on qualifying products.
- ❖ Requirement to frequently review criteria.
- ❖ Need to capture new products.
- ❖ Tax receipts are affected from a cash flow perspective in the current year.

Furthermore, qualitative research was carried out by the SEAI in 2016 to identify potential issues among claimants and product providers, and a means of rectifying these issues. The survey sample was small, but provided useful feedback on the scheme:

- One difficulty in making the ACA scheme work is that businesses buy into an energy efficient package, which likely doesn't identify the compliant component.
- The process to get products registered was considered time consuming and unsynchronised with the speed of development and change in the market. As a result market leading equipment in key areas was not on the register.
- No/low involvement of the finance function (e.g. Company Accountant, Financial Advisor, Finance Director). This was considered a significant problem as these individuals were

considered the key decision makers due to their better understanding of the tax benefits, and their longer term perspective and the fact they would take on board running costs.

The surveyed panel indicated a number of solutions to these queries.

- Self-regulation for streamlined access to Triple E listing.
- Targeting of the finance function, such as a continual professional development module and highlighting the above the line financial benefit.
- Overhauling the website and online system and a simplification of the application process for the ACA scheme.

### 5.3 Comparison of Costs and Benefits

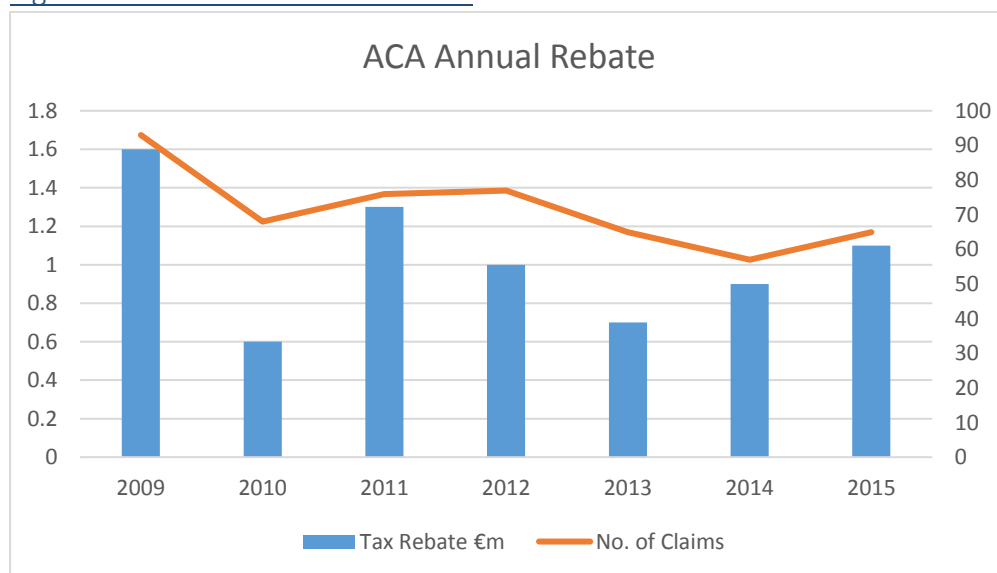
While there is no cost to the exchequer overtime from this scheme, the annual rebate in 2015 amounted to €1.1 million for 65 claimants, as shown in Figure 5.3.A .There has been a notable decline in the rebate (€1.6 million) and number of claimants (93) since 2009, shown in the graph in Figure 5.3.B. However, since 2011 these have both been relatively steady. This could suggest that the relative decline in claims and thus the rebate may be due to the effects of the economic recession from 2009 onwards, rather than any specific changes to the scheme.

The 2014 analysis undertaken by DCENR concluded that the ACA scheme provided considerable benefits and strong value for money. The report at the time analysed the data in the below Figure 5.3.A up to 2012. As is evidenced in this table and the general trend in the graph in Figure 5.3.B, there was no significant change in cost or usage of the ACA scheme. Thus for the purposes of this interim review, it can be concluded that the scheme continues to provide considerable value for money.

Figure 5.3.A Annual Rebate (Cost and No. of Claims)

Year	Tax Rebate €m	No. of Claims	Investment in qualifying ACA equipment €m
2009	1.6	93	13.4
2010	0.6	68	5
2011	1.3	76	11.3
2012	1	77	8
2013	0.7	65	5.6
2014	0.9	57	7.2
2015	1.1	65	9

Figure 5.3.B.Trend in Annual Rebate



## 6. International Comparisons

There are many other countries which have tax incentives in place to promote energy efficiency in the corporate sector. These schemes often comprise enhanced capital allowances or accelerated depreciation for energy efficient equipment. However, there are other schemes in place which provide tax credits, exemptions or reductions, in addition to indirect tax incentives, through VAT, excise taxes or customs duties.

Schemes providing types of accelerated capital allowances are in place in Singapore, the Netherlands, and the UK and will be examined in this section:

### 6.1. Singapore – Accelerated Depreciation Allowance (ADAS)

The One Year Accelerated Depreciation Allowance (ADAS) for energy efficient equipment and Technology is a tax incentive scheme available to any person carrying on a trade, profession or business in Singapore. The scheme aims to encourage companies to replace old, energy-consuming equipment with more energy efficient equipment and to invest in energy-saving equipment.

In general, capital expenditure may be written off or depreciated over three years. However, the ADAS scheme allows qualifying equipment to be written off or depreciated in the year of purchase. There are two categories of equipment which can qualify for the ADAS scheme:

1. **Replacement Machines and Equipment:** This must involve the replacement of old equipment with more energy efficient equipment, resulting in significant energy savings. The equipment to be replaced must fall under the List of Approved Replacement Machines and Equipment, for which there are currently seven technologies covered.
2. **Energy-Saving Equipment and Devices:** This must involve the installation of energy-saving equipment which would result in significant energy savings. This equipment must fall under the List of approved energy-saving equipment and devices.<sup>5</sup>

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<sup>5</sup> The lists of eligible technologies for these categories are available here: [http://www.e2singapore.gov.sg/Incentives/OneYear\\_Accelerated\\_Depreciation-Allowance\\_for\\_Energy\\_Efficient\\_Equipment\\_and\\_Technology.aspx](http://www.e2singapore.gov.sg/Incentives/OneYear_Accelerated_Depreciation-Allowance_for_Energy_Efficient_Equipment_and_Technology.aspx)

## 6.2. The Netherlands – Environment Investment Allowance (MIA) and Accelerated Depreciation of Environmental Investment Measures (VAMIL)

In 2000, the Netherlands introduced the Accelerated Depreciation of Environmental Investment Measures (VAMIL) and the Environmental Investment Allowance (MIA) as a tax incentive to stimulate market penetration of environmentally friendly technologies. The MIA provides for an additional allowance in respect of the taxable profit, while the VAMIL offers a liquidity and interest benefit. These two schemes can often be applied simultaneously. The eligible products for both are contained on the Environmental Technology List, from which eligible products must be selected, which is updated annually.

Since 2011, the accelerated depreciation facility for investment in environment-improving assets has been limited to 75% of the total (investment) costs. The MIA deduction from Corporation Tax is available at levels of 13.5%; 27%; or 35% (depending on the ministerial classification of the assets) of the annual amount. The minimum investment amount per asset is €2,500, while the maximum is €25 million. VAMIL and MIA can be combined to further reduce the overall cost of the investment. The level of deduction is determined on a product-by-product basis and is determined by the following criteria:

1. The environmental performance of the product;
2. The level of technological innovation it represents; and
3. The level of additional cost in comparison to a conventional alternative.

In 2013, an ex-post evaluation of VAMIL/MIA was carried out by Ecorys for the period 2005-2010. The evaluation scrutinised the effectiveness of the scheme with respect to motivating the investment behaviour of participating companies and focused on the quality of the technology list. In the period examined, there were 57,937 investments made under the scheme, which resulted in a total investment of €8.5 Billion and claims of just under €1 billion. The overall cost, with respect to reduced tax revenues, was found to be in the region of €715 million. The study also found that 9% of businesses would have made the same investment without the incentive schemes, indicating a loss of €64 million from tax revenues annually through the ‘free-rider’ effect.

Furthermore, the Energy Investment Allowance (EIA) is a tax-relief program which allows companies that invest in energy-saving installations, or that make use of sustainable energy, to deduct a certain percentage of the invested sum from their taxable profits in the year in which the goods are

purchased. The minimum investment amount per asset is €2,500. The allowance equals 58% of the annual amount, with a maximum of €118 million, of eligible energy investments.



### 6.3. United Kingdom – Enhanced Capital Allowance (ECA)

The ECA schemes for energy saving and water saving technologies were introduced by the UK Government in 2001 and 2003 respectively. The energy saving scheme operates similarly to the ACA scheme and is an element of the Government's plans to tackle climate change. The ECA schemes provide a 100% first year allowance on these qualifying technologies. This effectively allows business to write off the entire cost of new plant or machinery purchases against their taxable profits in the year of purchase. The list for qualifying products, referred to as the Energy Technology Product List (ETPL) allows 16 categories of products to qualify, with thousands of specified qualifying products.

The objective of the ECA scheme is to bring about a low carbon economy in the UK and reduce UK CO<sub>2</sub> emissions by influencing the design, availability and uptake of the most energy efficient equipment.

Similar to the ACA, this scheme allows businesses to write off the full cost of purchasing new plant or machinery against their taxable profits in the year of purchase. Similarly, there is a list for qualifying products referred to as the Energy Technology Product List (ETPL) which allows 16 categories of products.

An analysis of the ECA was carried out in 2008 by Experian on behalf of HM Revenue and Customs which took the form of an impact assessment. This looked at how effective the scheme was on influencing company purchases of energy saving equipment. This survey focused on those companies which availed of the scheme in the four main categories (Lighting, motors and drives, boiler, and refrigerator equipment) which account for 80% of qualifying expenditure on an annual basis. The analysis found that there was a significant difference in the expenditure patterns of those previously aware of the ACA scheme against those who were unaware of the scheme. This would suggest that the scheme has had an impact on the purchasing decisions of companies. The total amount of CO<sub>2</sub> saved by purchases of all technologies covered by the ECA scheme was an estimated 1,700kT in the first year, with lifetime savings of 9,450kT.

The water efficient saving scheme were recently updated in 2016 to include a new sub-technology for an early leak warning device and thus clarifying the qualifying criteria for Leak Detection Equipment to incorporate changes in technical standards. Furthermore, there were revisions to the energy-saving

scheme in order to revise the qualifying criteria for the ten existing technologies. Overall, these measures were anticipated to save £5 million on an annual basis.

## 7. Recommendations and Conclusions for the scheme

In 2014, the then Department of Communications, Energy and Natural Resources (DCENR), now the Department of Communications, Climate Action and Environment (DCCAIE) recommended:

**That the ACA scheme be continued until 2020 (with a mid-term review in 2017);**

The basis for the continuation of the ACA scheme, as provided by DCENR, was that the scheme facilitates business in improving their cash flow costs and competitiveness; promotes the adoption of best in class technology; and is contributing to our challenging NEEAP energy saving targets. The scheme was extended to the end of 2017, with the possibility of further renewal.

**It is recommended that the ACA scheme should be continued until 2020 (with a further review to be undertaken in 2019/2020).**

Overall, there is evidence to suggest that the ACA scheme has been positive in respect of developing a market for sustainable technologies; improving competitiveness and cash flow for participating businesses; and reducing energy usage and associated emissions. The scheme also provides a positive, though small, contribution towards the NEEAP objectives and our European targets and objectives in tackling carbon emissions. This scheme provides a targeted market intervention to incentivise energy efficient equipment. There are many associated benefits to this scheme. In particular, with regard to meeting national and EU environmental targets. As noted, the 2014 review concluded that the scheme provided strong value for money. As the costs and usage of the scheme have not significantly altered in the time since this review, it can be concluded for the purpose of this mid-term review that the scheme continues to provide value for money. Nonetheless there is potential room for improvement, such as a reduction of the administrative burden and the inclusion of energy efficient products which cannot currently avail of the scheme