

# **Energy Efficient Scotland**

## **Strategic Outline Case for Proposed Development of a National Delivery Mechanism**

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## Terms and Acronyms

### Defined terms

Fuel poor households	Under the definition set out in the Fuel Poverty (Target, Definition and Strategy) (Scotland) Bill 2018 <sup>1</sup> , a household is determined to be suffering from fuel poverty if the fuel costs necessary to maintain an acceptable standard of living constitute more than 10% of the households adjusted net income; and if after deducting fuel costs, the remaining income is insufficient to maintain an acceptable standard of living.
Intervention	A physical measure or behavioural action aimed at improving the energy efficiency of a building.
Lever	An investment, programme, policy, regulation or law which is intended to result in one or more interventions being undertaken.
Low regrets actions	Low regret actions are broadly recognised as those where associated dis-benefits and relatively low and whose benefits are relatively large. In this context, low regret actions do not refer to the measures to increase energy efficiency and decarbonise heat that are sensible.
Large Commercial Sector	Defined as any commercial business with greater than 250 employees.
Small and medium enterprises (SMEs) <sup>2</sup>	Medium - enterprises which are neither micro nor small, which employ fewer than 250 persons and which have an annual turnover not exceeding £39.28 million, and/or an annual balance sheet total not exceeding £33.78 million.  Small - an enterprise which employs fewer than 50 persons and whose annual turnover and/or annual balance sheet total does not exceed £7.86 million.  Micro - an enterprise which employs fewer than 10 persons and whose annual turnover and/or annual balance sheet total does not exceed £1.57 million.
Self-funded households	Self-funded is a term used to represent households with higher incomes or greater access to finance than those living in fuel poor conditions <sup>3</sup> . The improved financial situation of this sub-group is assumed to reflect a greater ability to self-finance (including via loans etc.) energy efficiency measures.

<sup>1</sup> Scottish Government, 'The Fuel Poverty (Target, Definition and Strategy) (Scotland) Bill 2018', June 2018.

<sup>2</sup> Scottish Government definition.

<sup>3</sup> Many "self-funded" households are capital constrained or may be at the margin of the fuel poor indicator / eligibility and therefore in practice have limited ability to self-finance energy efficiency retrofit.

## Acronyms and abbreviations

ABS	Area Based Schemes
BEIS	Department for Business, Energy and Industrial Strategy
CARES	Community and Renewable Energy Scheme
COBEN	Community Benefits of Civic Energy
ECO	Energy Company Obligation
EES	Energy Efficient Scotland
EESSH	Energy Efficiency Standard for Social Housing
EIF	Energy Investment Fund
EPC	Energy Performance Certificate
ESOS	Energy Savings Opportunity Scheme
EST	Energy Savings Trust
EU	European Union
FITS	Feed-in Tariffs
HEEPS	Home Energy Efficiency Programmes for Scotland
HES	Home Energy Scotland
LCITP	Low Carbon Infrastructure Transition Programme
LHEES	Local Heat and Energy Efficiency Strategies
NDM	National Delivery Mechanism
RES	Resource Efficient Scotland
RHI	Renewable Heat Incentive
SEPA	Scottish Environment Protection Agency
SHQS	Scottish Housing Quality Standard
ZWS	Zero Waste Scotland

# 1 Executive summary

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## 1.1 Background

The Scottish Government has developed a Strategic Outline Case (SOC) for a National Delivery Mechanism for its Energy Efficient Scotland (EES) programme.

Energy Efficient Scotland is an ambitious, 20 year programme aimed at making Scotland's existing buildings near zero carbon wherever feasible by 2050, in a way that is socially and economically sustainable. It will deliver across two key policy areas:

- **Fuel poverty:** the programme aims to remove poor energy efficiency as a driver of fuel poverty;
- **Climate change:** the programme supports Scotland's targets to reduce greenhouse gas emissions, with projected emissions reductions in the residential and services sector of 23% and 59% respectively by 2032 (versus 2015 levels).

In a 2017 consultation, Scottish Government asked about how best to deliver the Energy Efficient Scotland programme. One of the messages it received was the potential need for a national mechanism to oversee the delivery of the programme. A national delivery mechanism was suggested as it reflects the duration and complexity of the programme, and the significant investment involved.

## 1.2 Approach

Part 1 of this Strategic Outline Case presents an assessment of the state of development of the EES programme relative to its overall targets, and a consideration of the potential gaps and/or additional activities that might be expected to maximise its chances of meeting its objectives on a timely and effective basis, in order to make the strategic case for a National Delivery Mechanism (NDM).

The analysis identifies 10 potential areas (the roles) where additional activity, capabilities and resources may be beneficial. This established a baseline of "programme need" against which to consider the merits of various delivery model options.

In Part 2, the 10 Roles were tested, validated and refined. Adjustments were made to reflect detailed circumstances of existing activities and the latest developments in on-going work.

The resulting 10 Roles were then used as a framework against which to consider a range of potential delivery body options, to assess at a high level the extent to which the delivery body would be expected to be suited to carry out each individual role.

In assembling the list of NDM options, a wide spectrum of structures were considered, starting with those requiring the least change and within Central Government and extending to arm's length bodies that would require greater work to establish but would have greater potential autonomy. Certain cases were discarded as they offered little obvious benefit relative to a similar option that was evaluated more fully. For example Community Interest Companies and Charities were not separately evaluated but were

considered to be adequately encompassed by the evaluation of Public Corporations (which can be established with a not for profit distributing remit). Similarly the Trading Fund option was not evaluated on the grounds that there is almost no recent example of the structure being employed anywhere in the UK. Included in the evaluation was a baseline case of the existing trajectory of development work, which itself is likely to see considerable enhancement to capabilities within the Programme and Scottish Government resources.

Our initial evaluation of the 10 Roles against the models selected highlighted that the operating characteristics of the different models influences the likelihood that they can effectively tackle the different role, but at the same time different models have different mixes of strengths and no single model is likely to perfectly address all 10 roles. The outcome of this evaluation led to a proposed shortlist of 7 models to take forward for further consideration in the SOC.

For each of these, a second tier evaluation was carried out against a set of criteria designed to identify how well each NDM option might be expected to perform in terms of its Commercial, Financial and Management Cases. Given the early stage of model development, this evaluation is indicative. The evaluation does however provide a guideline for those models likely to be the best fit with the Roles and which should be the focus of further development beyond the SOC stage.

The **commercial case** considered the likely contractual and business framework within which each model would need to operate to deliver the Roles (and its wider functions as appropriate). Distinctions between models can be catered for by adapting a basic framework of relationships with the Scottish Government itself, with Local Authorities, the supply chain and owners & occupiers of buildings, that would allow any of the options to function.

The **financial case** considered at a preliminary level, the potential indicative differential costs of creating and operating each model (relative to the baseline of existing Scottish Government activities). This analysis concluded that the financial case was unlikely to be a major differentiator between options, although of course a more developed view of the costs of operation (in particular) will need to be set against affordability constraints in due course at the next stage of Business Case.

The **management case** recognises that the trajectory to create more substantial arm's length entities will be more complex, costly and time consuming, than to proceed with largely internally driven enhancements to Scottish Government's own delivery capabilities and resources. Our evaluation considered the timeline during which the 10 Roles would be likely to come on stream and the effect that this could have on whether a particular model was likely to be appropriate shorter or longer term, and whether a transition from one model another over time might be appropriate. A key potential trigger for Role driven change is likely to be the point at which regulatory intervention is expected to be active. This is considered in the management Case.

The Socio-Economic case considered the potential impact of the programme's goals, as well as considering the scale of the Programme in the context of the likely indicative range of financial costs of any of the options.

The analysis demonstrated in the document demonstrates the costs are likely not to be material in the context of programme benefits, in effect if any NDM is able to materially increase the probability of benefits being released or to accelerate likely benefit realisation by some years, the present value of those benefits is likely to be decisive. However this conclusion does require further validation beyond the SOC stage.

## 1.3 Findings

Part 1 uses the current state of the Scottish energy efficiency landscape to identify the delivery roles a new mechanism could take on in order to enhance the delivery of EES. It also includes a number of observations in relation to the current energy efficiency delivery landscape in Scotland, including:

- **Meeting all EES targets will require delivery on a significant scale over a prolonged period:** bringing all of Scotland's housing stock up to the required standard will necessitate an average of 66,000 measures installed a year between now and 2040.
- **Meeting some targets will require measures over and above energy efficiency:** meeting EPC Band B necessitates the installation of renewable low-carbon energy systems, whose greater complexity will need to be appropriately managed in delivery.
- **Property owner "buy in" is required:** engagement will be needed to ensure that householders are convinced of the benefits of the programme.
- **Engagement with private landlords is needed** to raise awareness of the incentives on offer.
- **A significant escalation of help to fuel poor households is required,** in particular Warmer Homes Scotland.
- **A focal point for non-domestic properties is required** to drive awareness and uptake.
- **Greater coordination between supply chains and consumers** is needed to maximise opportunities in the sector.
- **The trajectory of energy efficiency installation in Scotland is in line with the rate required to meet EES targets,** although there has been a slowing of progress in recent years.

Part 1 also includes analysis of a number of delivery areas where particular improvements are needed (the 'case for change'), namely:

- Enforcement.
- Engagement and education.
- Funding.
- Monitoring and data.

- Coordination and coherence.
- Capacity building.
- Quality assurance.

The 10 Roles identified for the delivery mechanism stem from the needs in each of these areas. Part 1 concludes by assessing the case for each of the 10 Roles to be carried out by a national delivery body. **There is a case for a delivery body to take on these roles.**

The analysis presented in Part 2 suggests the following conclusions can be drawn:

- A **'plain vanilla' steering group structure** is unlikely to provide the coordination or resource required, and in any case the Scottish Government has already created an Energy Efficient Scotland Steering Group with resources in the relevant directorates. Our counterfactual is therefore a Scottish Government steering group with roots in the relevant directorates and a collaborative structure to facilitate the involvement of other EES delivery partners (e.g. Local Authorities, supply chains).
- A **bespoke EES Directorate in Scottish Government** offers advantages over a steering group structure offering a central point of reference, while also relatively easy to configure. It could provide a single point of contact with delivery partners, and provide clear signals to the market, and would provide Scottish ministers with a high degree of control.
- An **Executive Agency** appears to offer relatively little advantage over a bespoke Directorate, given that it remains under direct ministerial control. It is not clear that it would offer any material improvement in delivering the functions identified.
- A **Non Ministerial Office (NMO)** has parliamentary accountability. It appears that the functions identified generally suit accountability to Ministers better (to ensure alignment with policy objectives), although it will be important to address concerns around regulatory responsibilities sitting in central Government.
- The case for a **Public corporation** depends critically on the case for revenue generation. This needs further work to explore whether such a case really exists in a way that will enhance delivery since the major sources of revenue would need to be commercial. The Scottish Government do not use Public corporations often, mainly due to the 50% commercial funding requirement.
- A **Non Departmental Public Body (NDPB)** could act in a regulatory role without creating a conflict. However, its creation will require significant time and resources, as legislation will be required.

## 1.4 Conclusion

Based on analysis within Part 2 of this Strategic Outline Case, the leading options would appear to be a new EES Directorate and an NDPB. Summarised below are the key points from our assessment of each of the four cases which make up Part 2.

Table 1: Key comments on all models

	Economic	Financial	Commercial	Management
<b>Key comments on all models</b>	<p>Differences in cost between different models are likely to be small, relative to the benefits of the EES programme.</p> <p>The key driver of the economic case (in future iterations of the business case) will therefore be the degree to which models maximise the likelihood of delivering programme benefits.</p> <p>The delivery body working on the rollout of Broadband as part of the UK Universal Service Commitment is very similar in structure to that of our EES Directorate combined option working alongside LAs.</p>	<p>Models that are closer to Government are cheaper to set up and run as they involve no new external structures.</p> <p>More arm’s length bodies outside the Civil Service may have greater potential for driving operational efficiencies.</p> <p>This means that the Executive Agency and Non-Ministerial Office have a weaker financial case, as these involve a new structure within Civil Service.</p>	<p>New bodies outside of the Civil Service perform best as they offer flexibility around delivery, charging and performance incentivisation.</p> <p>Steering Group and local delivery models have less accountability to ministers due to their decentralised structure, i.e. drawing members from different directorates while working with a number of other bodies.</p> <p>NMOs have limited ability to remain flexible due to the increases time required for parliamentary approval for changes in function.</p>	<p>NDPB and Public Corporation performs strongly across all aspects of the management case.</p> <p>A new ministerial Directorate also perform strongly, although it may be constrained in its ability to offer long term commitments beyond the current political cycle.</p>

Work is ongoing on the regulatory model for the programme, and is expected to report in spring. That would seem a good point at which to revisit the possibility of a revenue based model such as a Public Corporation, but also to look at the question of whether the regulatory function should be hived off in a separate entity.

The issue of how a new delivery body would catalyse and distribute funding also needs to be addressed in future iterations of the business case, when there is greater clarity around funding availability and mechanisms.

## 2 Introduction

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### 2.1 Background

#### 2.1.1 The Energy Efficient Scotland programme

Scottish Ministers designated energy efficiency as a national infrastructure priority in 2015, recognising the many benefits delivered by improving the energy performance of buildings. The EES programme represents the delivery of this priority.

EES is a 20 year programme with a set of actions aimed at making Scotland's existing buildings near zero carbon wherever feasible by 2050, and in a way that is socially and economically sustainable. By the end of the programme EES aims to transform the energy efficiency and heating of Scotland's buildings, making them more comfortable and easier to heat.

EES delivers across two key policy areas of Government: fuel poverty and climate change. It has two main objectives:

- **Removing poor energy efficiency as a driver for fuel poverty.** The Scottish Government is committed to removing poor energy efficiency as a driver of fuel poverty, and the programme will be the primary mechanism by which this is achieved; and
- **Reducing greenhouse gas emissions** through more energy efficient buildings and decarbonising heat supply. The programme also supports Scotland's targets to reduce greenhouse gas emissions. The programme targets will see emissions reductions in the residential and services sectors of 23% and 59% respectively by 2032 (compared to 2015 levels).

To achieve these two key objectives the Scottish Government is proposing to set long term mandatory energy performance standards for all buildings in Scotland to reach by 2040, including more ambitious targets for properties with fuel poor households.

Achieving these objectives will create opportunities and realise multiple benefits across Scotland. As well as supporting the drive to eradicate fuel poverty and reduce emissions, it will help to keep bills affordable, make homes and businesses more comfortable to live and work in, and improve health and wellbeing outcomes. It is also expected to increase the productivity and competitiveness of Scottish businesses and make a positive contribution to the Scottish economy.

In January 2017, the Scottish Government asked stakeholders about the delivery of the programme, and one of the messages was the potential need for a national mechanism to oversee the delivery of Energy Efficient Scotland. This reflected the fact that the programme would run for 20 years, span multiple terms of the Scottish Parliament and will involve activities as varied as improving the energy efficiency of buildings, decarbonising the heat supply to off-gas grid properties and supporting the development of district heating networks. In addition, the programme will also involve significant investment. The Scottish Government is investing over £0.5 billion in the Programme in

the four years from 2016–17, and significant additional private investment will be needed alongside this to achieve programme targets. Due to the duration and significant investment involved, and the complexity, it was felt that the programme could benefit from some form of national delivery mechanism that would develop and provide the national capacity and expertise to deliver the programme.

Following this, the Scottish Government decided to explore the case for a national delivery mechanism for EES, developing a strategic outline case (SOC) in line with HM Treasury Green Book guidance<sup>4</sup> for the SOC assessment level for potential projects.

## 2.2 Aim and structure of this report

This report sets out the strategic outline case for a national delivery mechanism for EES. It is divided into two main parts:

- **Part 1 (strategic case)** focuses on the national context in which the EES programme sits, and highlights where changes could enhance the delivery of the EES. Based on this, it describes the roles and tasks required, and summarises the strategic need for some form of national delivery mechanism to carry out these functions; and
- **Part 2 (preferred way forward)** identifies a long list of options for the form a national delivery body could take. A shortlist of options is created by assessing the ability of different structures to perform the delivery roles required. The remaining options on the shortlist are then assessed against criteria in order to develop high level initial iterations of the economic, financial, commercial and management cases in order to identify preferred options.

Part 1 is structured as follows:

- **Chapter 3** sets out the strategic context of the EES programme, with detail around the national context for energy efficiency in Scotland, summarising wider government policies and objectives and emphasising the challenges implicit in achieving these national objectives and targets;
- **Chapter 4** describes the EES programme’s objectives, key targets and route map;
- **Chapter 5** summarises the current energy efficiency landscape in Scotland, including an overview of the current state of the building stock, a summary of the existing levers and administering organisations currently contributing towards achieving those targets, and the key characteristics of the supply chain and quality assurance providers;
- **Chapter 6** reviews the current drivers and delivery options that are in place to deliver against the targets and proposals set out in EES, and identifies where improvements and changes are needed to meet these proposals; and
- **Chapter 7** identifies the roles that a delivery body would need to play to enhance the delivery of EES, and sets out the case for these roles being carried out by a

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<sup>4</sup> [The Green Book: appraisal and evaluation in central government.](#)

national level body. Chapter 5 reviews current drivers for energy efficiency action and highlights where positive changes could improve the overall outcomes sought by EES. In short it summarises the rationale for intervention and what needs to be done to change how energy efficiency is delivered. In doing this, it inherently starts to make the case for change and action at national level.

Part 2 is structured as follows:

- **Chapter 8** identifies potential body structures for the national delivery mechanism, and rules out delivery models that could not feasibly carry out the delivery functions identified;
- **Chapter 9** sets out the economic case for the potential models;
- **Chapter 10** sets out the preliminary financial case;
- **Chapter 11** sets out the preliminary commercial case; and
- **Chapter 12** sets out the preliminary management case.

## 2.3 Source material

Material underpinning the strategic case has been drawn from:

- Relevant strategy and consultation documents from the Scottish Government;
- Responses from Scottish Government consultations on EES (previously known as Scotland’s Energy Efficiency Programme, or SEEP);
- Consultation with a wide range of Scottish Government stakeholders; and
- Relevant research papers.

## Part 1

# The Strategic Case

## 3 Strategic Context

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### 3.1 Key points

The EES Programme has been created by the Scottish Government with the aim to reduce Scotland's existing buildings to near zero carbon through decarbonisation and reducing energy demand.

It is proposed that Local Authorities will take on a new responsibility to produce and deliver Local Heat and Energy Efficiency Strategies over the next 15 to 20 years. Several challenges will be faced in order to deliver the national programme. This chapter explores how these uncertainties can be managed.

### 3.2 National context

The Climate Change (Scotland) Act 2009<sup>5</sup> set out the Scottish Government's target to cut carbon emissions by 80%, relative to a 1990 baseline, by 2050. As of February 2018, the Government was on track to meet its interim target of a 42% reduction by 2020<sup>6</sup>.

Scotland's Climate Change Plan, published in February 2018, confirmed the Government's ambition to progress to a 66% reduction in emissions by 2032<sup>6</sup>. Energy efficiency and decarbonisation of energy supply are key to this. The accompanying Scottish Energy Strategy document<sup>7</sup> outlines targets to increase the productivity of energy use across the Scottish economy by 30%, and supply 50% of Scotland's energy for heat, transport and electricity consumption from renewables by 2030. Reflecting this, the Scottish Government's Infrastructure Investment Plan (2015)<sup>8</sup> identifies energy efficiency as a national infrastructure priority.

Over 50% of Scotland's energy consumption is used for heating and/or cooling households, businesses and public service buildings<sup>9</sup>. Therefore, increasing the energy efficiency of Scotland's building stock will be central to the delivery of the Government's ambition.

In June 2018, the Fuel Poverty (Target, Definition and Strategy) (Scotland) Bill was published<sup>1</sup>. The proposed target is that no more than 5% of households will be in fuel poverty by 2040. Improving energy efficiency is seen as the primary driver to achieve this.

Furthermore, the Scottish Government has stressed the importance of capitalising on associated opportunities to grow and diversify the economy, improve health and wellbeing, and protect and enhance the natural environment. These, it notes, can be achieved through:

- Encouraging trade and inward investment;

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<sup>5</sup> Scottish Parliament, Climate Change (Scotland) Act 2009 (asp 12), Edinburgh (2009).

<sup>6</sup> Scottish Government, 'Climate Change Plan: The Third Report on Proposals and Policies 2018-2032', February 2018.

<sup>7</sup> Scottish Government, 'Scottish Energy Strategy: The future of energy in Scotland', December 2017.

<sup>8</sup> Scottish Government, 'Infrastructure Investment Plan 2015', Edinburgh 2015.

<sup>9</sup> Scottish Government, 'Energy Efficient Scotland' May 2018.

- Supporting research and innovation;
- Workforce ‘up-skilling’;
- Delivering affordable energy and clean growth;
- Development of regional partnerships;
- Supply chain development;
- Supporting SMEs and new businesses;
- Upgrading infrastructure;
- Community regeneration; and
- Inclusive growth nationwide.

Therefore, the Scottish Government argues that improvements in the energy efficiency of buildings can not only make a significant contribution to the national energy and climate change targets, but will also help towards the Government’s wider aim of “creating a more successful country, with opportunities for all of Scotland to flourish, through increasing sustainable economic growth”<sup>10</sup>.

### 3.3 Energy Efficient Scotland

The Scottish Government has created the EES programme with the aim of making Scotland’s existing buildings “near zero carbon wherever feasible by 2050”. This will be achieved, Government proposes, through focusing on reducing energy demand and decarbonising heat supply and it will involve an estimated investment in excess of £10bn over a 20-year period<sup>9</sup>. Plans for decarbonising electricity and transport infrastructure will be tackled, in parallel, through other policies and programmes<sup>6</sup>.

In the shorter term, EES will focus on reducing energy demand through improving the energy efficiency of residential, commercial, public and industrial sector buildings and implementing ‘low-regrets’ low-carbon technologies, such as district heating systems. In the longer term, the programme will also respond to and integrate the UK Government’s decision on the future of the natural gas grid, a decision expected in the mid-2020s.

It is expected that the programme may potentially include the creation of a new responsibility for Local Authorities to produce and deliver Local Heat and Energy Efficiency Strategies (LHEES).

These 15 to 20 year plans would outline the most appropriate approach for each authority to identify, cost and prioritise local energy efficiency and heat decarbonisation opportunities, contributing towards overall EES programme targets. The focus for LHEES will be on energy demand reduction, low carbon heat in off-gas grid areas and community district heating systems.

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<sup>10</sup> Scottish Government, ‘Scotland’s Economic Strategy’, March 2015, Pg. 4.

An initial transition period, which began in May 2018, is supporting Local Authorities to develop their LHEES and the projects underpinning them and to test proposals through funded pilot schemes. The LHEES and roles for Local Authorities may evolve over time, and Local Authorities could be closely involved in tasks including the provision of advice, monitoring, enforcement, and district heating regulation.

### 3.4 A National Delivery Mechanism?

The question of whether a national delivery mechanism is now required in Scotland to coordinate consistent, sustained delivery of EES, was raised in consultation responses related to SEEP (now EES)<sup>11</sup>. Given the scale and technical complexity of the EES programme, the range and sheer number of stakeholders involved and its far-reaching and ambitious targets, several responses questioned the need for a national delivery mechanism to support and drive delivery of objectives and targets across multiple parliamentary cycles and maximise societal-wide benefits, including fuel poverty, health, regeneration, economic and environmental benefits.

### 3.5 Nature of the challenge

Delivering national programmes of energy efficiency across residential and commercial buildings will have challenges, including scale, complexity, uncertainty, and will require the best possible understanding of how to engage citizens and organisations in cooperative behavioural change.

This strategic case presents the outcomes and targets of EES and summarises the massive scale of what needs to be undertaken across Scotland's domestic and non-domestic building stock, but the complexity and challenges of achieving this must not be underestimated. It is important to learn the lessons from national successes and failures, such as the failure of a national residential energy efficiency scheme with the UK Government's Green Deal. The consequent Select Committee report<sup>12</sup> notes a range of reasons for this, including:

- Lack of engagement with potential customers before implementation of the scheme to identify its attractiveness;
- Lack of marketing of the scheme generally and specifically in terms of the comfort benefits for customers, not just financial benefits;
- The scheme's administration was too complex;
- Interest rates on loans to homeowners were too high to make them attractive;
- There was no mechanism for measuring progress against the scheme's objectives, including its impact on fuel poverty; and

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<sup>11</sup> Scottish Government, 'Scotland's Energy Efficiency Programme: Second consultation on local heat & energy efficiency strategies, and regulation of district and communal heating', November 2017.

<sup>12</sup> <https://publications.parliament.uk/pa/cm201617/cmselect/cmpubacc/125/12504.htm>, accessed 22 October 2018.

- There was no enforcement of quality assurance standards or compliance. Poor work and miss-selling damaged the reputation of the scheme and made customers wary.

The case of delivering EES' outcomes and targets have considered the potential challenges and uncertainties and how they can be managed best in considering the potential roles for a national delivery mechanism.

## 4 Objectives

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### 4.1 Key points

This chapter outlines the domestic and non-domestic sector proposals for achieving the EES objectives, outlined in the EES route map.

This is followed by an outline of wider objectives such as customer protection, monitoring and legislation, and the proposals to achieve these targets.

### 4.2 EES targets

EES has two overarching objectives<sup>9</sup>:

1. Remove poor energy efficiency as a driver for fuel poverty; and
2. Reduce greenhouse gas emissions by 23% in the domestic and 59% in the non-domestic sectors by 2030 relative to 2015 levels, through improved energy efficiency and decarbonising the heat supply of buildings.

### 4.3 EES delivery proposals

Meeting these objectives must be done in a socially and economically sustainable way that improves the affordability of fuel bills to reduce fuel poverty, improves health and well-being for the most vulnerable members of society and increases the productivity and competitiveness of Scottish businesses.

The EES route map<sup>9</sup> notes this will involve a phased approach with specific targets defined by building sector. The targets apply to all buildings where, the EES route map notes, 'it is technically feasible and cost effective to achieve them'. For each sector (domestic and non-domestic) and sub-sector, specific proposals have been identified in the route map. These proposals are summarised in Table 2.

In addition, the EES route-map sets out a number of objectives and proposals for the wider delivery of EES. These are designed to ensure successful and effective programme delivery, and maximise the benefits to society and the wider economy; they are outlined in Table 3.

Having summarised EES's objectives and delivery route-map, the next section of the strategic dimension summarises the current state of Scotland's domestic and non-domestic building stock to assess the step-change required to meet EES targets. It also describes the existing arrangements that the EES Programme will build on and incorporate or interact with.

Table 2: Sector-specific EES targets and the proposals for achieving these targets

Sector / sub-sector	Objectives	Proposals from the EES route map
<b>Domestic Sector</b>	<b>By 2040 all Scottish homes achieve an EPC C</b>	<b>A mixture of encouragement and regulation that will differ between sub-sectors.</b>
Owner Occupiers	All owner-occupied homes to reach EPC C by 2040.	Owner occupiers will not be compelled to improve energy efficiency but will be initially be encouraged to make the most of programmes and advice, without sufficient progress, mandatory action could be considered post 2030. Many will be engaged through local authority area based schemes but if sufficient progress has not been made by 2030, action will become mandatory.
Private Rented	Private rented homes to be EPC E by 2022, EPC D by 2025 and EPC C by 2030.	New regulations will require landlords to bring units up to EPC E by 31 <sup>st</sup> March 2022 or when changing tenancy after 1 <sup>st</sup> April 2020. Units must then be improved to EPC D by 31 <sup>st</sup> March 2025 or when changing tenancy after 1 <sup>st</sup> April 2022.
Social Rented	Maximise the number of social rented homes achieving EPC B by 2032.	No social housing should be let after 2025 if energy efficiency is below EPC D.
Fuel Poor	All homes with households in fuel poverty to reach EPC C by 2030 and EPC B by 2040.	Continue to target funding at fuel poor households throughout the programme.
<b>Non-Domestic Sector</b>	<b>Assessed and improved to the extent that is technically feasible and cost effective by 2040</b> <i>Consultation is ongoing to set out more detailed proposals for this sector by 2020 and introduce regulation by 2021<sup>9</sup>.</i>	<b>Move to a benchmarking system for assessing energy efficiency and build on the current Climate Change Act by extending regulation by 2040 to incorporate all non-domestic buildings.</b> <b>This will be phased based on building size, starting with the largest.</b>
Public Sector	<i>Under consultation.</i>	Establish a baseline of energy efficiency in public sector buildings and continue to support the public sector to become the vanguard of energy efficiency and reach its target ahead of the 2040 deadline.
Industrial	<i>Under consultation.</i>	Whilst the focus is on building efficiency, important work is required to introduce initiatives and incentives to make industrial operations more energy efficient and decarbonised. A first step for this is to identify the amount of energy consumed and carbon emitted by industrial processes to benchmark performance of industrial operations.

Table 3: Wider objectives and proposals for EES delivery

Delivery Aspect	Objectives	Proposals from the EES route map
<b>Customer Protection</b>	<p>Establish trust in EES.</p> <p>Ensure products and services are of the highest quality.</p> <p>Protect customers, boost confidence and attract investment.</p>	<ul style="list-style-type: none"> <li>– Instil robust quality assurance requirements at every stage of the delivery process.</li> <li>– Create an integrated, accessible and effective quality assurance framework that will be applicable under all circumstances.</li> <li>– Customer protection focussing on quality, customer care, competence skills, training and health and safety.</li> <li>– Individuals and businesses carrying out work under programme umbrella to be appropriately trained and adhere to Programme Code of Conduct and remove individuals or businesses who do not adhere to code of conduct.</li> <li>– Programme finance to only be available when programme approved individuals or businesses are used.</li> <li>– Programme standards to be robustly enforced.</li> <li>– A simple and effective redress system for customers if things go wrong.</li> </ul>
<b>Skills and Supply Chain</b>	<p>Create a substantial Scottish market and supply chain for energy efficiency services and technologies.</p> <p>For every £100m spent, support 1,200 full time jobs (or equivalent) across the Scottish economy.</p> <p>Ensure supply chain can capture new opportunities.</p>	<ul style="list-style-type: none"> <li>– Provide support and actively promote market opportunities.</li> <li>– Increase activity in the skills and supply chain during the transition period.</li> <li>– Keep supply chain updated on work and skills training opportunities.</li> <li>– Provide clarity on quality assurance and consumer standards that are expected from the supply chain.</li> <li>– Help the industry to overcome any inefficiencies to ensure participation is financially viable.</li> <li>– Promote opportunities that are available to SMEs.</li> </ul>

	<p>Ensure opportunities are available to SMEs and larger businesses.</p> <p>Ensure the quality of work carried out is of a high standard.</p>	
<p><b>Monitoring</b></p>	<p>Ensure the Programme is on track to meet its visions, aims and objectives.</p> <p>Monitor and measure the outcomes to capture the impact on people and communities.</p> <p>Ensure the most accurate possible baseline for both the domestic and non-domestic building stock.</p> <p>Provide clarity, from the start, on the information which will determine Programme success.</p>	<ul style="list-style-type: none"> <li>– Monitor and evaluate the Programme throughout its lifetime.</li> <li>– Adapt and flex the programme where necessary.</li> <li>– Publish a monitoring and evaluation framework that is ready for implementation at the end of the transition period, covering the domestic and non-domestic sectors, and outcome indicators.</li> <li>– Engage with stakeholder on framework development.</li> <li>– Present a regular, multi-year review and Programme evaluation aligned with key policy areas including Fuel Poverty and the Climate Change Plan.</li> <li>– Review available data, identify gaps and work with relevant bodies to collect good quality data.</li> <li>– Publish a building stock baseline by 2020 to monitor progress against.</li> </ul>
<p><b>Legislation</b></p>	<p>Review existing legislation and consider what new or amended duties are required to support the programme.</p> <p>Support quality assurance standards through regulation.</p>	<ul style="list-style-type: none"> <li>– Fuel Poverty Bill<sup>1</sup> will set out a new statutory fuel poverty target.</li> <li>– Adapt and flex the programme where necessary.</li> <li>– Develop, if necessary, a wider EES Bill to be a vehicle for further legislative change.</li> <li>– Consider establishing new or amended powers for ministers to set long-term standards with associated powers for assessment, monitoring, review and enforcement.</li> <li>– Explore a statutory duty for local authorities to develop LHEES.</li> <li>– Consider creating new powers and duties to regulate district heating, including licensing and consent.</li> </ul>

## 5 Existing Arrangements

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### 5.1 Key points

This chapter outlines the existing situation in Scotland and presents the basis for the Reference Scenario in which the roles proposed for a national delivery mechanism are not addressed in taking the programme forward.

It also provides a summary of ‘where we are now’ in relation to the EES targets and objectives set out in Chapter 3, including an overview of the current state of Scotland’s building stock, a summary of the existing levers and administering organisations currently contributing towards achieving those targets, and the key characteristics of the supply chain and quality assurance providers.

This establishes the status quo from which any changes, whether initiated by a national delivery mechanism or otherwise, will be based.

### 5.2 Scottish domestic housing stock

According to Housing Statistics for Scotland there are 2.59 million domestic buildings in Scotland, of which 2.49 million are occupied. Of the occupied dwellings, 58.1% are owner occupied, 15.2% are rented privately, 23% are socially rented and 3.7% are vacant private dwellings and second homes.<sup>13</sup>

The 2016 Scottish House Condition Survey<sup>14</sup> provides a snapshot of domestic building condition, based on a survey of 2,850 households, covering all tenures, across Scotland. Comparing data from previous surveys provides a time series with which to approximate the current rate of progress towards targets. Some of the key trends are presented below.

#### 5.2.1 Energy efficiency

Energy Performance Certificates (EPC) were introduced in 2009 to assess the amount of energy needed for space and water heating, ventilation and lighting and, where applicable, energy generated through renewables (such as photovoltaics and solar hot water heating).

In general, the interventions with a lower cost that create less disruption to occupants are installed first, however, these are only sufficient to obtain the lower EPC ratings. To achieve EPC targets that align with EES targets (EPC C+), increasingly deep retrofits and bespoke interventions are required, including the installation of renewable and low carbon energy supply systems. These interventions are in most cases associated with increasing cost and degree of physical change to properties.

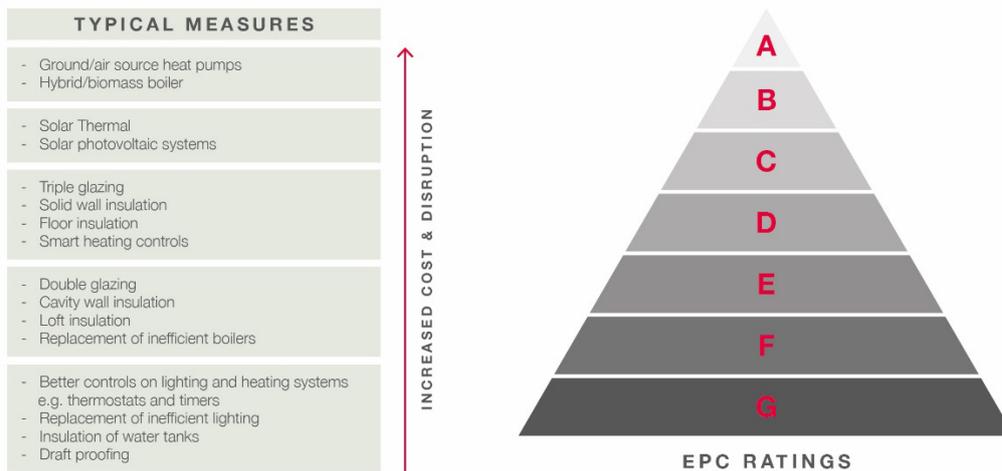
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<sup>13</sup> Scottish Government, ‘Housing Statistics for Scotland – Key Information and Summary Tables’, September 2018, <https://www.gov.scot/Topics/Statistics/Browse/Housing-Regeneration/HSfs/KeyInfoTables>, [Accessed 2 October 2018].

<sup>14</sup> Scottish Government, ‘Scottish House Condition Survey: 2016 Key Findings’, December 2017.

The trajectory of energy efficiency installation in Scotland is in line with the rate required to meet EES targets, although there has been a slowing of progress in recent years. There are significant variations in EPC ratings across different housing types, with a smaller proportion of owner-occupied properties achieving EPC Band C or above. More details around the measures typically required to achieve different EPC ratings, and Scotland’s progress to date, is set out in Annex 2.

**Figure 1:** Typical installation measures required to progress to higher EPC ratings

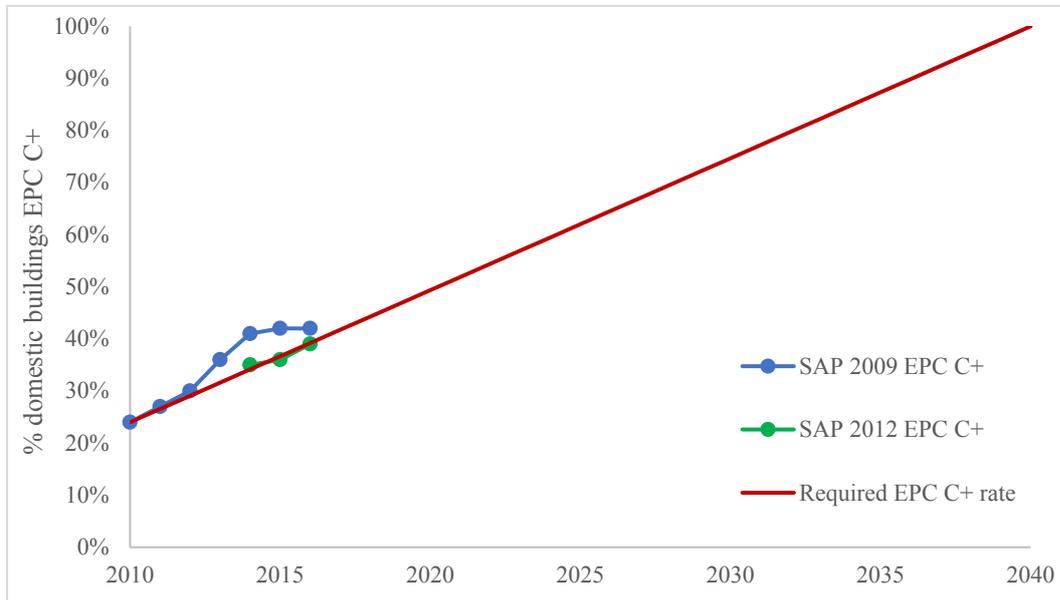


In 2012 an update was made to the Standard Assessment Procedure (SAP) methodology. Using SAP 2009 provides a longer time series from which to understand the rate of progress, whereas using SAP 2012 provides a more accurate representation of the current situation. Figure 2 shows the progress towards the EES target of achieving EPC C or better for all buildings by 2040, compared with a simple linear projection towards the 2040 target.

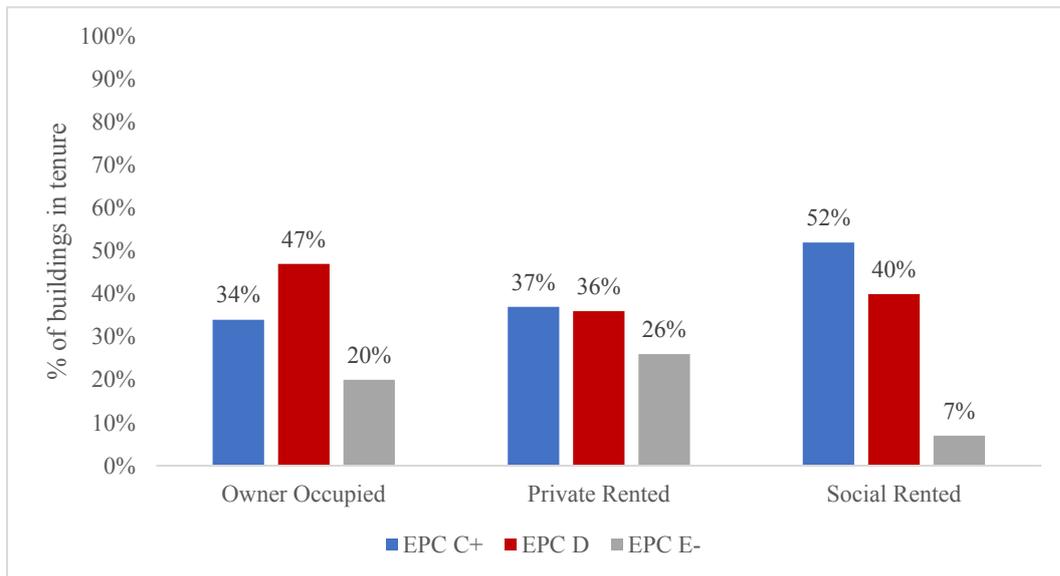
This shows that the rate of progress since 2010 has been in line with the rate required to meet EES targets. In 2013 and 2014, the rate of progress exceeded the required rate, however, this was followed by a stagnation in 2015, before return to a moderate rate of progress in 2016.

The distribution of energy efficiency varies widely between stock of different tenures (Figure 3). Over half of buildings in the social rented sector already meet the EPC C+ target, with only 7% EPC E or below. In contrast, 34% of owner occupied and 37% of private rented buildings achieve the target, with 20% and 26%, respectively, EPC E or below.

**Figure 2:** Progress in number of domestic buildings achieving EPC C+, based on SAP 2009 and SAP 2012 methodologies, compared with a projected linear rate of progress to achieve the EPC C+ EES target for all domestic buildings.



**Figure 3:** The proportion of buildings at EPC C+, EPC D, and EPC E- in 2016, based on the SAP 2012 methodology, split by domestic tenure.<sup>15</sup>

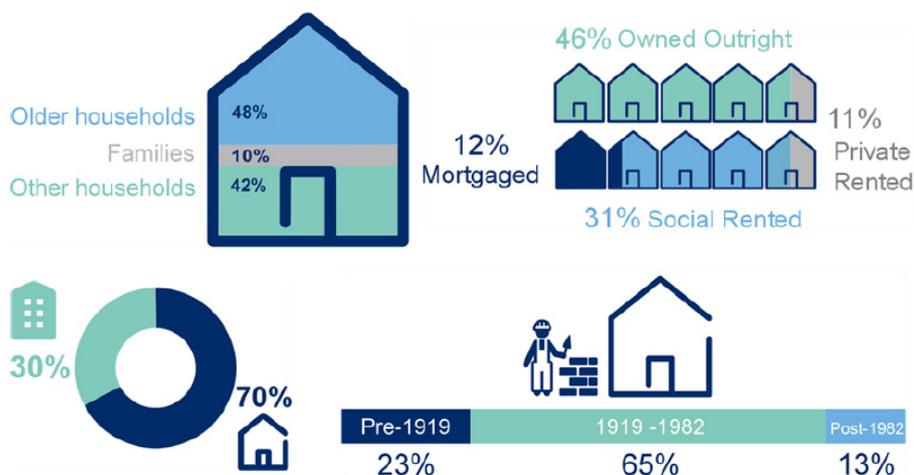


<sup>15</sup> Note: totals may not add due to rounding.

### 5.2.2 Fuel poverty

In 2016, 649,000 (26.5%) households in Scotland were fuel poor<sup>16</sup>, with 183,000 (7.5%) living in extreme fuel poverty<sup>17</sup>. Fuel poverty is transient and households can move into and out of fuel poverty over time as circumstances change. Figure 4 illustrates the composition of fuel poor households. Fuel poor households in Scotland are distributed across all tenures, with 58% owner occupied, 31% in the social rented sector and 11% private rented, showing that energy efficiency improvements across all sectors would impact on fuel poverty.

**Figure 4:** The characteristics of fuel poor households in Scotland in 2016 (credit: Scottish Government<sup>14</sup>).



Some 4.3% fewer domestic households were in fuel poverty in 2016 compared to 2015. An analysis of the driving factors behind this attributed 63% of this reduction to lower fuel prices and 35% to energy efficiency improvements<sup>14</sup>. It is therefore important to note that fuel poverty is not directly correlated to energy efficiency, but is a function of various complex factors, including the price of fuel and the level of household income. Therefore, whilst energy efficiency improvements can contribute to reducing fuel poverty, the impact of changes in other variables also need to be considered when assessing the overall prevalence of fuel poverty.

### 5.3 Scottish non-domestic building stock

There are approximately 200,000 non-domestic buildings in Scotland, 10% of which are in the public sector and, in comparison to the domestic sector, much less is known about the energy efficiency of these buildings. In contrast to domestic EPC assessments, which consider both energy performance and carbon emissions, non-domestic EPC ratings are based only on projected carbon emissions. Any building with a floor area over 250m<sup>2</sup> that

<sup>16</sup> Definition of fuel poor in this case is a household spending more than 10% of its income on household fuel use.

<sup>17</sup> Definition of extreme fuel poverty: a household which spends more than 20% of its income on household fuel use.

is occupied by a public authority and regularly visited by the public must obtain and display an EPC.

Fifteen percent of non-domestic buildings in Scotland have an EPC rating and, of these, 5% have a rating of EPC B+, 22% are EPC C or D and 73% are EPC E or worse<sup>18</sup>. This sample size illustrates the level of uncertainty in understanding the energy performance of buildings in the non-domestic sector. The EES route map has set out a proposal to create a non-domestic benchmarking standard and to produce a baseline on the current state of the building stock by 2020<sup>9</sup>.

## 5.4 Existing levers for energy efficiency and heat decarbonisation

The current energy efficiency landscape in Scotland consists of a range of levers aimed at promoting, incentivising and enabling the retrofitting of energy efficient technologies and the installation of renewable, low-carbon technologies. These include:

- Free, independent, impartial advice;
- Grants for fuel-poor households;
- Financial incentives such as low/no interest loans;
- Regulation & legislation; and
- Procurement support.

For the purpose of reviewing the existing levers, they have been split into those applicable to the domestic sector and those applicable to the non-domestic sector. These are illustrated in Figure 5 and Figure 6 respectively. Within these two sectors, some levers apply to all buildings, whereas others are targeted at specific sub-sectors.

It is important to note that, in some cases, the longevity of the lever is unclear. For some financial instruments, budgets are determined on a rolling basis for each financial year with no confirmed programme commitment beyond this. In these cases, programmes have been included based on the duration for which a budget has been allocated.

The levers are administered and funded by a wide range of organisations, including the UK and Scottish Governments, alongside several arm's length or independent organisations. An overview of these organisations is provided in the following section. All levers currently impacting the Scottish building stock have been included to give an appreciation of what is currently contributing towards EES targets. Figure 5 and Figure 6 also outline whether each lever is or is not within the remit of the EES Programme.

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<sup>18</sup> Scottish Government, 'Energy Efficient Scotland Consultation: Making our homes and buildings warmer, greener and more efficient', May 2018.

Figure 5 A summary of the levers that are currently supporting energy efficiency and low carbon heat improvements in the domestic sector

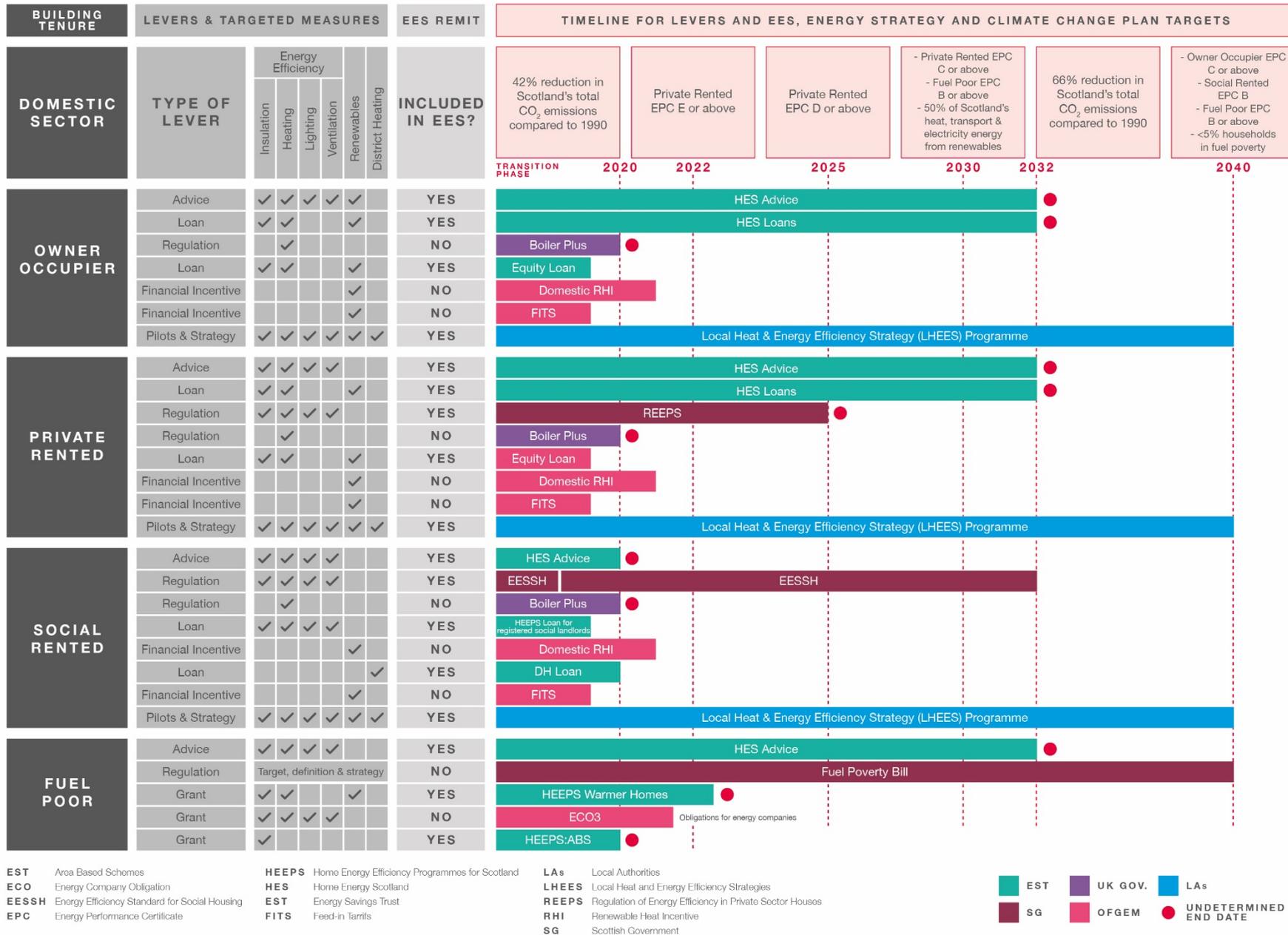
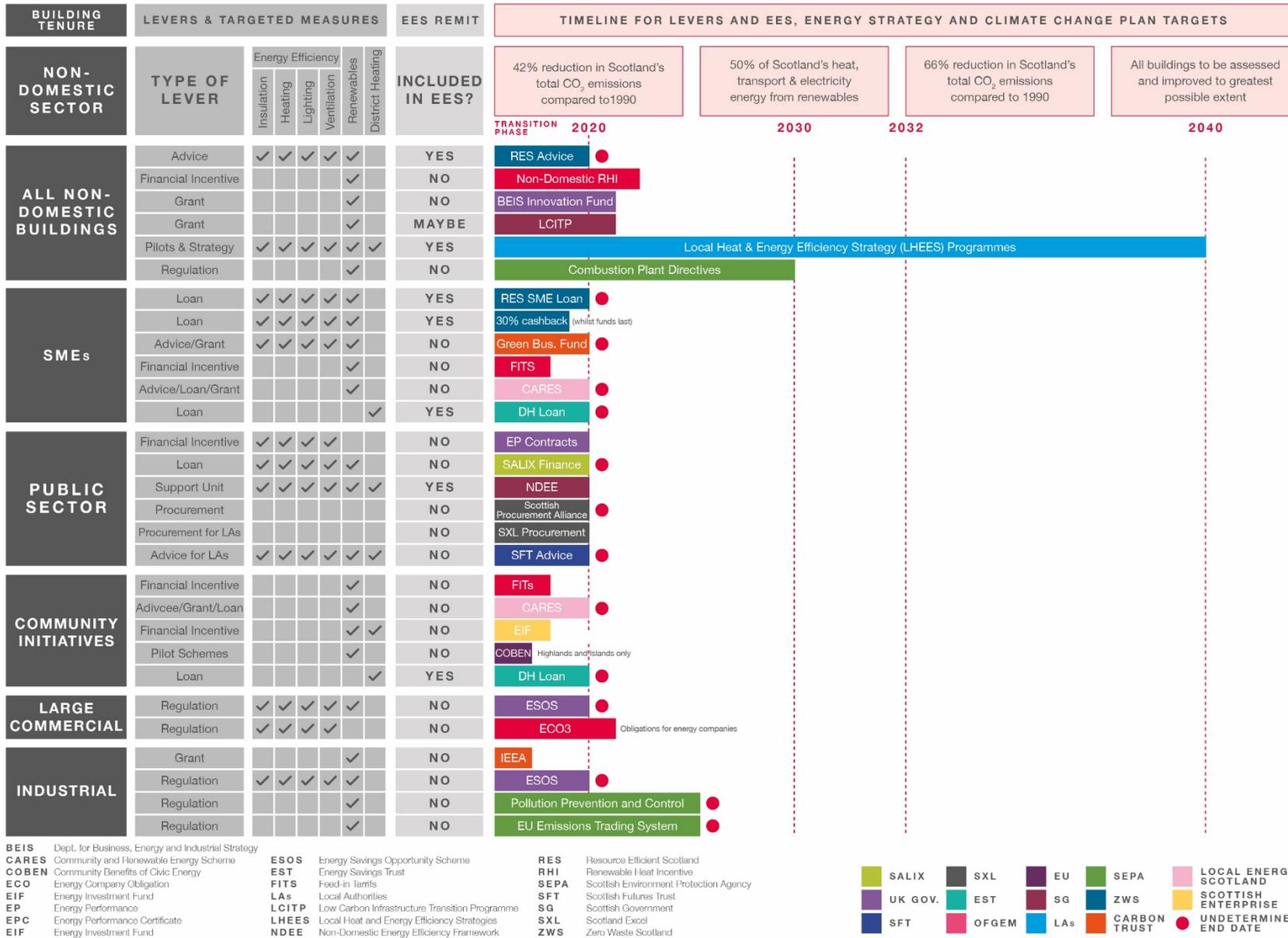


Figure 6 A summary of the levers that are currently supporting energy efficiency and low carbon heat improvements in the non-domestic sector



## 5.5 Existing delivery structures

Figure 5 and Figure 6 demonstrate that the existing levers for building energy efficiency are administered by a wide range of organisations, particularly in the non-domestic building sector. To appreciate the current landscape fully, it is important to understand the responsibilities of each organisation and their relationship to Government, outlined in Table 4 below.

Table 4: Organisations responsible for administering levers and their relationship to government

Administering Organisation	Description	
<b>Energy Saving Trust (EST)</b>	An independent, not for profit organisation, working on behalf of UK governments to help people save energy. In Scotland it is funded by the Scottish Government and private sector <sup>19</sup> .	Independent, funded by Government.
<b>Zero Waste Scotland (ZWS)</b>	A not-for-profit company, funded by the Scottish Government to support the delivery of its policies on waste and resource use, energy efficiency and a low carbon economy <sup>20</sup> .	Directly accountable to the UK and/or Scottish Government
<b>Scottish Environment Protection Agency (SEPA)</b>	A publicly-funded organisation, SEPA is Scotland's principal environmental regulator. It is required to publish plans and performance reports to the Scottish Government and the Scottish public. Performance is monitored against SEPA's five-year corporate plans and annual operating plans <sup>21</sup> .	Directly accountable to the UK and/or Scottish Government
<b>Warmworks Scotland</b>	Warmworks Scotland is a partnership between the Energy Saving Trust, Everwarm and Changeworks to deliver the Scottish Government's flagship national fuel poverty scheme, Warmer Homes Scotland. <sup>22</sup>	Independent Joint Venture, funded by Government.
<b>Carbon Trust</b>	An independent, private company, funded by a range of government organisations, of which DEFRA is the main contributor <sup>23</sup> .	Independent, funded by Government.
<b>Local Energy Scotland</b>	A consortium, set up by the EST, Changeworks, The Energy Agency, SCARF and The Wise Group in order to administer and manage CARES, which is funded by the Scottish Government <sup>24</sup> .	Independent, funded by Government.
<b>Ofgem</b>	A non-ministerial government department and an independent National Regulatory Authority, recognising by EU directives. It is governed by the Gas and Electricity Markets Authority (GEMA) and recovers its costs from the licensing fees paid by the companies they regulate <sup>25</sup> .	Independent and self-funded
<b>Salix Finance Ltd.</b>	An independent, not-for-profit, government funded organisation. In Scotland it is funded by the Scottish Government and is focussed on improving energy efficiency in the public sector <sup>26</sup> .	Independent, funded by Government.

<sup>19</sup> Energy Saving Trust, <http://www.energysavingtrust.org.uk>, [Accessed 17 September 2018].

<sup>20</sup> Zero Waste Scotland, <https://www.zerowastescotland.org.uk/>, [Accessed 17 September 2018].

<sup>21</sup> Scottish Environment Protection Agency, <https://www.sepa.org.uk/>, [Accessed 17 September 2018].

<sup>22</sup> Warmworks Scotland, <https://www.warmworks.co.uk/>, [Assessed 20 October 2018].

<sup>23</sup> Carbon Trust, <https://www.carbontrust.com/home/>, [Accessed 17 September 2018].

<sup>24</sup> Local Energy Scotland, <https://www.localenergy.scot/>, [Accessed 17 September 2018].

<sup>25</sup> Ofgem, <https://www.ofgem.gov.uk/>, [Accessed 17 September 2018].

<sup>26</sup> SALIX, <https://www.salixfinance.co.uk/>, [Accessed 17 September 2018].

<b>Scottish Enterprise</b>	A non-departmental public body of the Scottish Government. It is Scotland's main economic development agency. Its investment arm, the Scottish Investment Bank (SIB), aims to increase the supply of finance and support the growth of Scottish SMEs <sup>27</sup> .	Directly accountable to the UK and/or Scottish Government
<b>Scottish Housing Regulator (SHR)</b>	The independent regulator of Registered Social Landlords and local authority housing services in Scotland. It is a non-ministerial department, directly accountable to the Scottish Parliament. They regulate social landlords to protect the interests of people who receive services from them <sup>28</sup> .	Independent, funded by Government.

<sup>27</sup> Scottish Enterprise, <https://www.scottish-enterprise.com/>, [Accessed 17 September 2018].

<sup>28</sup> Scottish Housing Regulator, <https://www.scottishhousingregulator.gov.uk/>, [Accessed 17 September 2018].

## 5.6 Current state of delivery aspects

The EES objectives described in Chapter 4, incorporate targets for enhancing the delivery of EES to help maximise the wider benefits of the programme. To understand whether there is a strategic need for change in these areas, this chapter summarises the existing characteristics and perspectives of the supply chain and the services provided by the main organisations involved in quality assurance and customer protection.

### 5.6.1 The supply chain

In October 2017, the Energy Saving Trust published a report<sup>29</sup> providing insights into the energy efficiency and low carbon markets from both demand and supply perspectives. This included a characterisation of the current supply chain for energy efficiency in Scotland, based on responses from 80 suppliers.

A key theme was the importance of SMEs in the supply chain. SMEs are often a householder’s first port of call for energy efficiency advice. The Scottish Government and Local Authorities must therefore ensure that SMEs provide the necessary advice and deliver high quality home improvements that reduce energy consumption, especially space heating.

In addition, the EST report found that many suppliers are cautious about the scale of opportunities that will be available to them over the next 3 years. The Government therefore faces the challenge of communicating the opportunities on offer from the EES programme, so that suppliers can invest in the capacity and skills required to deliver programme targets.

### 5.6.2 Quality assurance

There is a range of organisations and teams within Scotland responsible for quality assurance and consumer protection related to energy efficiency in buildings. The roles of some of these are presented below, however there are additional contributors, including ombudsman organisations and independent guarantee schemes.

Table 5: Summary of quality and regulatory bodies

Body	Description	Responsibilities
<b>Trading Standards Scotland</b>	The national team for trading standards in Scotland. It is funded by the Department for Business Energy and Industrial Strategy (BEIS) and managed by the Convention of Scottish Local Authorities (COSLA).	<ul style="list-style-type: none"> <li>– Coordination and enforcement of cross-boundary cases.</li> <li>– Supports local authority trading standards teams<sup>30</sup>.</li> </ul>

<sup>29</sup> Energy Savings Trust, ‘Energy Efficiency and Low Carbon Market Research’, October 2017.

<sup>30</sup> COSLA, <http://www.cosla.gov.uk/about/who-we-are/trading-standards-scotland>, [Accessed 19 September 2018].

Table 5: Summary of quality and regulatory bodies

<p><b>Local Trading Standards</b></p>	<p>Aim to maintain a fair-trading environment by supporting legitimate businesses and enforcing compliance. In Scotland, these are delivered by small teams within local councils<sup>31</sup>.</p>	<ul style="list-style-type: none"> <li>– Provide protection for consumers and businesses across the UK through enforcement, intervention and advice.</li> </ul>
<p><b>Citizens Advice Scotland</b></p>	<p>Has responsibility for consumer advice and advocacy within the Scottish consumer protection landscape.</p>	<ul style="list-style-type: none"> <li>– Advise consumers who have a complaint about goods or services purchased<sup>32</sup>.</li> </ul>
<p><b>Heat Trust</b></p>	<p>Sets out a common standard for the quality and level of customer service that heat suppliers should provide their customers. It also provides an independent process with the Energy Ombudsman for settling any complaints between consumers and their heat supplier<sup>33</sup>.</p>	<ul style="list-style-type: none"> <li>– Setting standards for heat suppliers.</li> <li>– Complaints resolution.</li> </ul>
<p><b>Ofgem</b></p>	<p>Ofgem can apply to the courts for an order to stop non-compliance with certain consumer regulation including the Enterprise Act (2002), Consumer Rights Act (2015), and Business Protection from Misleading Marketing Regulations (2008)<sup>25</sup>.</p> <p>They also have consumer protection codes for Renewable Heat Incentive (RHI) provision, whereby all heating systems and installers must be Microgeneration Certificate Scheme (MCS) certified.</p>	<ul style="list-style-type: none"> <li>– Works to address complaints from consumers where misleading information has been provided, the heating system is underperforming, or there is a discrepancy between the information in the contract and the actual service provided.</li> </ul>

<sup>31</sup> Trading Standards Scotland, <http://www.tsscot.co.uk/business-advice>, [Accessed 19 September 2018].

<sup>32</sup> Citizens Advice Scotland, <https://www.cas.org.uk/>, [Accessed 19 September 2018].

<sup>33</sup> Heat Trust, <http://www.heattrust.org/index.php/about>, [Accessed 15 October 2018].

## 5.7 Summary of existing arrangements

This chapter presented a summary of the existing framework. The key points are as follows:

- 39% of domestic buildings currently meet the domestic EES target of EPC C or above;
- The rate of progress in the domestic sector has previously exceeded the average rate required to meet EPC targets, however progress stagnated in 2015;
- Energy efficiency varies widely between the stock of different domestic tenures, with a larger proportion of social rented buildings currently achieving ESS targets compared with private rented and owner-occupied buildings;
- There are 649,000 fuel poor households in Scotland aggregated across all tenures. Whilst energy efficiency improvements will impact this, the contribution of other factors such as fuel price and income also need to be considered;
- There is much greater uncertainty around the energy performance of buildings in Scotland's non-domestic sector as only 15% of non-domestic buildings have an EPC rating;
- There is a range of levers currently acting on the energy performance of Scotland's buildings. The longevity of these levers, and the measures they target, vary;
- Levers are administered by a wide range of organisations, particularly in the non-domestic sector. These organisations have different relationships to the Scottish Government and, as such, only certain levers are within the remit of EES;
- The supply chain consists of predominantly smaller companies with fewer than ten employees. Suppliers are currently cautious about the future market demand and the scale of opportunities that will become available; and
- There is a large number of organisations, standards and processes which contribute to quality assurance and customer protection for energy efficiency and low carbon retrofits in Scotland.

## 6 Business Needs for Energy Efficient Scotland

### 6.1 Key points

HM Treasury guidance on the business case for programmes states that the Strategic Case should include an analysis of “the organisation’s business needs in terms of the improvements and changes that are required for the programme to fulfil its agreed spending objectives.”<sup>34</sup>

This chapter summarises the current drivers and delivery options that are in place to deliver against the targets and proposals set out in EES, and identifies where improvements and changes are needed to meet these proposals. More detail around specific areas of EES delivery is set out in annex 2.

### 6.2 Needs by sector

The table below summarises the challenges in different sectors, the mechanisms in place to deliver, and the improvements and changes that are required:

Table 6: Summary of challenges and mechanisms by sector

Sector	Scale of challenge	Current mechanisms	Changes/improvement required
<b>Domestic (general)</b>	<ul style="list-style-type: none"> <li>– 1.58m homes to be improved (an average of 66,000 homes per year).</li> <li>– After ‘early adopters’ install measures, other property owners will be harder to engage with.</li> <li>– Different parts of domestic market face different challenges.</li> </ul>	– N/A.	<ul style="list-style-type: none"> <li>– SHR to monitor performance and compliance with EESSH2, including minimum standard of EPC D from 2025.</li> </ul>

<sup>34</sup> HM Treasury 2018. Guide to Developing the Programme Business Case. London: OGL. Page 18.

Table 6 (cont): Summary of challenges and mechanisms by sector

Sector	Scale of challenge	Current mechanisms	Changes/improvement required
<b>Social rented</b>	<ul style="list-style-type: none"> <li>– Ambitious target of maximising number of homes at EPC B by 2032</li> <li>– Existing delivery strategies have successfully engaged landlords.</li> </ul>	<ul style="list-style-type: none"> <li>– Scottish Housing Quality Standard (SHQS) and EESH.</li> <li>– Monitoring of progress by Scottish Housing Regulator.</li> </ul>	<ul style="list-style-type: none"> <li>– Agency to enforce non-letting of homes at EPC D and below.</li> <li>– EPC B will require installation of renewable, low carbon energy systems: additional incentives will be required for social landlords to go beyond minimum standards.</li> </ul>
<b>Owner-occupied/private rented</b>	<ul style="list-style-type: none"> <li>– Energy efficiency lower than social rented sector.</li> <li>– In rented sector, the costs of poor energy efficiency fall on the tenant rather than the landlord (who will be responsible for energy efficiency improvements).</li> </ul>	<ul style="list-style-type: none"> <li>– No minimum standards to date: minimum standard for private rented landlords will be introduced in 2020, with mandatory action by 2030 if insufficient progress.</li> </ul>	<ul style="list-style-type: none"> <li>– Means of monitoring and enforcing minimum standards that are introduced.</li> <li>– Need to engage house owners in order to achieve targets.</li> <li>– For rented homes, targeted communications for landlords will be necessary to make them aware of incentives on offer.</li> <li>– Holistic approach to minimise disruption</li> </ul>

			around installation of measures.
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Table 6 (cont): Summary of challenges and mechanisms by sector

Sector	Scale of challenge	Current mechanisms	Changes/improvement required
<b>Fuel poor</b>	<ul style="list-style-type: none"> <li>– In 2016, 649,000 households in fuel poverty.</li> <li>– Fuel poor households to EPC B by 2040.</li> <li>– However, there are other factors than energy efficiency which drive fuel poverty.</li> </ul>	<ul style="list-style-type: none"> <li>– Warmer Homes Scotland installs measures in fuel poor households. At current annual installation rates, only 16% of fuel poor households will be reached by 2040.</li> </ul>	<ul style="list-style-type: none"> <li>– Significant escalation in Warmer Homes Scotland.</li> <li>– Robust monitoring framework which identifies all drivers of fuel poverty.</li> <li>– Campaign to raise awareness of available funds, and more flexibility around funding rules.</li> </ul>
<b>Non-domestic</b>	<ul style="list-style-type: none"> <li>– EPC data only available for 15% of non-domestic buildings.</li> <li>– Likely that huge improvements will be required.</li> </ul>	<ul style="list-style-type: none"> <li>– Various funding schemes available, although uptake has been poor.</li> <li>– Few regulations that focus on industrial energy efficiency.</li> </ul>	<ul style="list-style-type: none"> <li>– Enforcement required to stimulate action and drive progress.</li> <li>– Central focal point to drive awareness and uptake.</li> </ul>
<b>Supply chain</b>	<ul style="list-style-type: none"> <li>– Substantial, diverse market required for energy efficiency</li> </ul>	<ul style="list-style-type: none"> <li>–</li> </ul>	<ul style="list-style-type: none"> <li>– Greater coordination between supply</li> </ul>

	<p>products and services.</p> <ul style="list-style-type: none"> <li>– Many supply chain participants think energy efficiency sector is ‘in decline’.</li> </ul>		<p>chain and consumers to understand future demand.</p> <ul style="list-style-type: none"> <li>– Accessibility of contracts to SMEs.</li> <li>– Promote opportunities for collaboration on district heating projects.</li> </ul>
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### 6.3 Needs across cross cutting policy areas

This section summarises the need for change in areas that cut across all sectors of the Scottish building stock.

Table 7: Cross cutting policy areas

Area	Why it is important	What needs to be done
<b>Customer engagement</b>	<ul style="list-style-type: none"> <li>– Increasing engagement and customer ‘pull’ will be critical to success of EES.</li> </ul>	<ul style="list-style-type: none"> <li>– Identify actions to encourage uptake of energy efficiency measures.</li> <li>– Develop specific approaches for different ‘archetypes’ of householder.</li> <li>– Discuss complexities of retrofit so they are understood by householders.</li> </ul>
<b>Protection and quality assurance</b>	<ul style="list-style-type: none"> <li>– To boost confidence in the programme and secure investment, EES must be a trusted and well respected brand.</li> <li>– The delivery of high quality services is key to this</li> </ul>	<ul style="list-style-type: none"> <li>– Greater clarity and guidance around the requirements that suppliers need to meet to work under the EES brand.</li> <li>– Clearer guidance for consumers on what they should expect from suppliers;</li> </ul>

	<ul style="list-style-type: none"> <li>– A significant proportion of recent energy efficiency work did not meet installation standards<sup>35</sup></li> </ul>	<ul style="list-style-type: none"> <li>– A more consistent and fair redress process for consumers with a single point of contact;</li> <li>– An overarching standards guidance for all installation types and technologies that is updated in line with best practice, with clearer information on potential unintended consequences; and</li> <li>– Increased supplier accountability through greater oversight and increased technical monitoring and auditing of installations and sanctions for poor performance.</li> </ul>
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Table 7 (cont): Cross cutting policy areas

Area	Why it is important	What needs to be done
<b>Monitoring and data</b>	<ul style="list-style-type: none"> <li>– Progress against consumption baselines will need to be measured to justify spending of public money and to identify areas for prioritisation.</li> </ul>	<ul style="list-style-type: none"> <li>– Establish a baseline dataset for the non-domestic sector.</li> <li>– Increase frequency of EPC assessments to ensure accurate dataset is available.</li> <li>– Designation of responsibility for reporting and monitoring.</li> <li>– Make data available to stakeholders e.g. Local Authorities to develop delivery strategies, and ensure that it is clearly signposted and validated.</li> </ul>
<b>Local Authority interaction</b>	<ul style="list-style-type: none"> <li>– Foundation of EES will be design and implementation of LHEES by Local Authorities, however many</li> </ul>	<ul style="list-style-type: none"> <li>– Support Local Authorities and build their capacity.</li> </ul>

<sup>35</sup> Ofgem, ‘Energy Companies Obligation (ECO) technical Monitoring Report’, December 2015.

	Local Authorities face limited resources.	– Facilitate coordination between Local Authorities e.g. around cross-boundary issues.
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## 6.4 Emerging themes

From the analysis above, it appears there are several areas within the existing arrangements in which a strategic change could enhance the delivery of energy efficiency improvements and facilitate the step-change required to meet EES objectives. Table 8 below draws on the coverage of the landscape in previous sections and highlights potential gaps which do not appear to be provided for in existing arrangements, either individually or collectively.

Table 8: A summary of the case for change

Theme	The change required
<b>Enforcement</b>	<ul style="list-style-type: none"> <li>– Ensure all buildings comply with minimum standards across all sectors in a timely manner to ensure EES targets are met.</li> <li>– Facilitate and remove restrictions for improvements across all sectors.</li> <li>– Ensure LHEES are developed and implemented in a timely manner.</li> </ul>
<b>Engagement and education</b>	<ul style="list-style-type: none"> <li>– Greater uptake of available support with improvements made ahead of minimum standard deadlines.</li> <li>– Greater likelihood of consumers implementing improvements beyond minimum standards.</li> <li>– Owner-occupier more likely to make home improvements without the introduction of minimum standards.</li> <li>– Increase innovation by encouraging a move away from standard installation techniques.</li> <li>– Greater competition for public sector contracts, encouraging SMEs to invest in expanding their capacity.</li> </ul>
<b>Funding</b>	<ul style="list-style-type: none"> <li>– Increased ability for holistic, whole-house improvements to reduce the need for multiple visits to achieve EES targets.</li> <li>– Installations in difficult-to-treat areas and building typologies to minimise divergences between modelled and actual performance improvements.</li> <li>– Minimise the potential for unintended consequences such as mould growth and health issues.</li> <li>– Remove funding restrictions to allow levers tackling fuel poverty to incorporate larger-scale energy efficiency improvements to reach EES targets for each home.</li> </ul>
<b>Monitoring and data</b>	<ul style="list-style-type: none"> <li>– Regular monitoring to track the progress of improvements against targets across all sectors to justify funding allocation, support enforcement and identify high priority areas.</li> <li>– The ability to separate the impact of energy efficiency improvements on fuel poverty from other drivers.</li> <li>– Create a database of buildings which are exempt from EES targets Improve the consistency, coordination and availability of relevant data for all users.</li> </ul>
<b>Coordination and coherence</b>	<ul style="list-style-type: none"> <li>– A greater awareness and uptake of levers through a central EES advisory body with an overview across all schemes and areas of EES.</li> <li>– Sharing of best practices and lessons learned between all 32 Local Authorities.</li> <li>– Increase collaboration between Local Authorities.</li> <li>– Facilitate and mediate conversations between stakeholders, including Local Authorities and the supply chain.</li> </ul>
<b>Capacity building</b>	<ul style="list-style-type: none"> <li>– Increase the resource capacity of Local Authorities to develop and implement LHEES and responsibilities arising from the EES Programme, including planning.</li> </ul>

	<ul style="list-style-type: none"> <li>– Increase the technical support and expertise available to stakeholders, particularly Local Authorities.</li> <li>– Encourage investment in the Scottish supply chain to ensure there is enough capacity to deliver EES.</li> </ul>
<p><b>Quality assurance</b></p>	<ul style="list-style-type: none"> <li>– Ensure there are consistent quality assurance standards and customer protection processes across all EES related schemes.</li> <li>– Have a greater overview of supplier performance to identify which suppliers are performing well and which ones aren't.</li> <li>– Ensure that all products and services delivered under the EES brand are of a high quality.</li> </ul>

## 7 Potential Business Scope

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The case for change to deliver on the ambition of EES is set out in the previous chapter. Having established the areas in which there is a strategic need for change, this chapter turns to two key matters informing the scope of the NDM:

- the roles to be performed by the delivery mechanism; and
- the case for these roles to be performed at the national level, i.e. by a *NDM*.

### 7.1 Potential roles of the delivery mechanism

Following identification of the themes and actions where there is a case for change under the EES programme, 10 Roles have been identified which could deliver the change which is needed. These are enumerated below, covering:

- The need for change that the role addresses;
- The tasks that are required within each role; and
- Discussion of whether each role could only reasonably be delivered at a national level, or whether a choice is available of local vs. national.

Table 9: A summary of the case for change

Role	Summary	Tasks	
<p><b>Role 1: Provide capacity, support and expert advice to Local Authorities</b></p>	<p>This role addresses the need to increase the resources and technical expertise available to Local Authorities and to ensure Local Authorities have the ability to deliver and implement LHEES successfully and in a timely manner. It also addresses the need to improve the consistency and availability of data for all users, and share best practices and lessons learned. Provision of technical support has been raised as key by the public bodies currently engaged with the Scottish Government.</p>	<ul style="list-style-type: none"> <li>A. Help to build capacity in local authority resources to enable them to carry out any the responsibilities arising from the EES Programme.</li> <li>B. Provide technical, commercial and legal support and expertise to Local Authorities to help with LHEES development and implementation of the associated low carbon heat and energy efficiency projects.</li> <li>C. Set standards, review, provide feedback, and ultimately approve (or make recommendations for approval of) all LHEESs, ensuring the aggregation of all strategies will result in the required level of support to meeting national-level targets.</li> <li>D. Identify and fill gaps in the data required in the development of robust LHEES and their constituent low carbon heat and energy efficiency projects by working with partners who hold relevant data.</li> <li>E. Provide a guidance and ‘sign-posting’ service to Local Authorities and project sponsors for data required in LHEES and low carbon heat and energy efficiency projects.</li> <li>F. Disseminate lessons learned and best practice on relevant data and its use with all relevant stakeholders.</li> </ul>	<p>Tasks 1A and 1B could be implemented at a national or local level. Tasks 1C-1F, which are services to Local Authorities, would need be delivered at a national level.</p>
<p><b>Role 2: Enforce national-level regulation and support local-level</b></p>	<p>This role addresses the need to assess and remove barriers to progress from existing regulation, ensure all buildings comply with minimum standards set by Scottish Government and</p>	<ul style="list-style-type: none"> <li>A. Monitor local authority progress towards developing and implementing LHEES, inspect projects on the ground and, if necessary, enforce delivery in a timely manner.</li> <li>B. Provide support for Local Authorities to enforce homeowners, landlords and businesses to comply with minimum standards.</li> <li>C. Identify barriers to progression of low carbon heat and energy efficiency projects caused by existing legislation and planning</li> </ul>	<p>Tasks 2A and 2B are only applicable to delivery at a national level. Task 2C could be done at local or national level, but the national approach would create</p>

Role	Summary	Tasks	
<b>enforcement</b>	make sure LHEES are delivered in a timely manner.	requirements. Investigate potential for removing barriers and drive change.	opportunities for greater efficiency and effectiveness by drawing together experience from across Scotland.

Table 9 (cont): A summary of the case for change

Role	Summary	Tasks	
<b>Role 3: Provide clear quality assurance guidelines and effective, consistent customer protection processes</b>	This role addresses the need to build trust in the EES brand by delivering high quality products and services, providing consistent quality assurance and customer protection standards and processes, and having an oversight of supplier performance. Ultimately, this will contribute towards increased consumer engagement.	<ul style="list-style-type: none"> <li>A. Maintain a robust quality assurance framework, with clear criteria for the supply chain on what is expected in terms of advice, products and services relating to the EES programme.</li> <li>B. Provide a central, consistent customer protection advice and redress service for all advice, products and services under the EES programme.</li> <li>C. Maintain an overview of the performance of suppliers including advice, products and services within the EES programme and take action in instances of poor performance.</li> <li>D. Carry-out visits and spot-checks to monitor standards of works against national EES KPIs.</li> <li>E. Carry out vetting of suppliers and ensure they meet the QA criteria.</li> <li>F. Oversee use of the quality mark i.e. ensure only those suppliers who meet criteria are able to use it.</li> </ul>	Task 3A would need be delivered at a national level, whereas tasks 3B-3D could be delivered at either a national level or a local level, or possibly both. For all of these roles, there would be a need for data sharing on a national basis.

<p><b>Role 4:</b> <b>Monitor and report progress against EES targets at a national level and support local-level monitoring and reporting</b></p>	<p>This role addresses the need to track progress towards EES targets, by monitoring activity and outcomes at a local level and aggregating progress to report against national level targets. This includes the requirement to assess and record which buildings are exempt from full EES targets, and the need to separate out the drivers of fuel poverty to assess the contribution of energy efficiency improvements.</p>	<ul style="list-style-type: none"> <li>A. Provide a clear monitoring framework and support for Local Authorities to monitor progress against their LHEES targets.</li> <li>B. Create a fuel poverty monitoring methodology which determines the relative impacts of different factors on the prevalence of fuel poverty.</li> <li>C. Provide clear guidance for Local Authorities to identify buildings for exemption from EES targets owing to technical or economic feasibility and maintain an overview of the building stock this will apply to.</li> <li>D. Aggregate local-level progress reports to report on national-level progress against EES targets.</li> <li>E. Identify underperforming areas and/or programme failures and suggest corrective action for LHEES and the EES programme as a whole to Local Authorities and the Scottish Government respectively.</li> </ul>	<p>All tasks within this role could only be delivered at a national level.</p>
<p><b>Role 5:</b> <b>Provide a central EES focal point and coordination service</b></p>	<p>This role addresses the need to increase collaboration between all 32 Local Authorities, and facilitate partnerships between stakeholders. This will also help support the need to increase consumer awareness and uptake of levers.</p>	<ul style="list-style-type: none"> <li>A. Provide a central advice and signposting service, with an overview of all existing levers and ongoing schemes, for all parties involved in EES, including consumers, the supply chain and developers.</li> <li>B. Facilitate coordination and provide mediation between different parties, including Local Authorities, the supply chain, district heating developers, and possible industrial anchor loads.</li> <li>C. Maintain an overview of all local authority LHEESs and proposed low carbon heat and energy efficiency projects, and identify, facilitate and encourage opportunities for collaboration between Local Authorities.</li> </ul>	<p>All tasks involved in this role would need to be delivered at national level.</p>

Table 9 (cont): A summary of the case for change

Role	Summary	Tasks
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<p><b>Role 6: Provide a national-scale marketing, communication and education service</b></p>	<p>This role addresses the need to raise awareness and uptake of available schemes to increase the number of improvements made both above minimum standards and ahead of deadlines, increase homeowner engagement and facilitate innovation by encouraging a move away from standards, lower-cost measures. It also meets the need to create greater competition for public sector contracts and encourage SMEs to invest in their capacity.</p>	<ul style="list-style-type: none"> <li>A. Develop a strong brand for EES across all relevant sectors.</li> <li>B. Conduct targeted marketing campaigns to promote and raise awareness of relevant levers and funding support for homeowners, landlords and businesses.</li> <li>C. Inform stakeholders of minimum standards and other requirements well ahead of deadlines and provide information and guidance on how to meet them.</li> <li>D. Educate homeowners and tenants on the benefits of making energy efficiency improvements and how to maximise the benefits.</li> <li>E. Educate consumers on how to evaluate value for money using an appropriate price-quality ratio, and ensure public-sector tenders encourage and value innovative solutions.</li> <li>F. Promote public sector contracts and opportunities for the supply chain.</li> </ul>	<p>All tasks within the role could be delivered at either a local or national level, or a combination of both.</p>
<p><b>Role 7: Maintain an overview of funding availability and allocations</b></p>	<p>This role addresses the need to increase the opportunity to implement holistic, whole-house improvements, reduce gaps between modelled and observed performance improvements, facilitate improvements in difficult-to-treat building typologies and minimise the potential for unintended consequences. It also supports the</p>	<ul style="list-style-type: none"> <li>A. Perform periodic analysis on the cost and barriers to delivery of low carbon heat and energy efficiency projects, and on the impact of public funding and financing programmes.</li> <li>B. Provide advice to funding schemes to improve their reach, take-up and effectiveness by, for example, matching funding timescales to realistic time lines for project stages.</li> </ul>	<p>All tasks within this role could only be delivered at a national level.</p>

	requirement to escalate funding available to levers tackling fuel poverty.		
<b>Role 8: Facilitate access to project funding and finance</b>	This role addresses the need to increase the flow of finance to accelerate implementation of low carbon heat and energy efficiency projects. The role also addresses the need to give confidence to supply chains to invest in capacity in Scotland.	<ul style="list-style-type: none"> <li>A. Maintain an overview of financial cash flows, including when loaned funding is expected to be recycled and optimise the allocation of funding between Local Authorities.</li> <li>B. Provide national level assistance to attract private investment to EES projects to help to fill gaps in funding.</li> </ul>	All tasks within this role could only be delivered at a national level.

Table 9 (cont): A summary of the case for change

Role	Summary	Tasks	
<b>Role 9: Support supply chain development and expansion</b>	This role addresses the need to encourage, support and facilitate investment and capacity expansion within the Scottish energy efficiency and low carbon market supply chain, including through encouraging SMEs to apply for large public-sector contracts.	<ul style="list-style-type: none"> <li>A. Facilitate and create opportunities for conversations between consumers and the supply chains to provide the supply chain with a clear picture of future demand. Should look to align this with current market engagement that Energy and SPCD are undertaking.</li> <li>B. Input and assist in the use of Public Contracts Scotland (PCS), to ensure advertising of all supply chain opportunities under the EES banner. Where required, assist in creation of local level procurement support.</li> <li>C. Escalate services to provide guidance and training to SMEs for making applications to public sector contracts.</li> </ul>	Task 9B would need to be delivered at a national level, whilst tasks 9A, 9C and 9D could feasibly be delivered at either a national or local level, while there could also be a national element, where

		<p>D. Provide additional training courses and workforce upskilling opportunities to increase the pool of talent available to the supply chain to facilitate expansion.</p>	<p>training isn't available locally, where procurement is done as part of a national / regional process.</p>
<p><b>Role 10: Data Infrastructure</b></p>	<p>This role addresses the need for tailored data infrastructure, to allow the secure and efficient sharing of data between Local Authorities, Scottish Government and the delivery architecture accountable for delivery of EES.</p>	<p>A. Develop and implement data services and infrastructure for the secure collation and storage of Local Authority data on the implementation of EES. B. Provide on demand access to data sources required for the continuous monitoring and assessment of progress on a national level.</p>	<p>All tasks within this role could only be delivered at a national level.</p>

## 7.2 Benefits, risks, constraints and dependencies of a National Delivery Mechanism

The foregoing roles respond to the needs case and represent a comprehensive programme of activities which the evidence indicates are necessary to meet the ambitions of EES. Some of these roles naturally fit at a national level, but others could be performed at local or national level (or a mix of both). This Chapter presents a summary of the strategic benefits associated with these roles being performed at a national level, and considers the risks, constraints and dependencies associated with an NDM with these functions.

The following criteria has been identified to judge whether a role needs to be done by a national delivery body. These criteria inform the strategic benefits assessment:

- Can the role only be performed at a national level (e.g. it relates to oversight of Local Authorities).
- Is there a need for a single, national focal point in relation to an activity?
- Is there an ongoing role over time?
- Will activities be on a large scale, and quite replicable, such that there is scope for a delivery body to generate scale economies?
- Is there a need for a consistent approach at a national level?
- Is a strong national brand important?

Consideration of these criteria drives the assessment of the benefits, risks, constraints and dependencies associated with the possible roles of an NDM in Table 10 below. Analysis in Table 10 is then used to assess whether there is a positive case for an NDM in relation to these functions in Section 7.3 below.

Table 10: The benefits, risks, constraints and dependencies associated with the possible roles of an NDM

NDM Role	Potential benefits of national level delivery	Risks, disbenefits and uncertainties	Constraints and dependencies
<p><b>Provide support and expertise to Local Authorities during LHEES development and implementation</b></p>	<ul style="list-style-type: none"> <li>– The relationship with Local Authorities means that LHEES overview and coordination services could only be provided by a national level body.</li> <li>– As a national requirement, LHEES support role would be most effective through a single focal point for Local Authority engagement.</li> <li>– Greater consistency of advice and the approach taken by Local Authorities.</li> <li>– Reduced burden for developers with consistent national processes and requirements.</li> <li>– Consistency and quality of support for Local Authorities will help make LHEESs more implementable.</li> <li>– Proven LHEES measures can be shared more rapidly and scaled through adoption.</li> <li>– A national overview and sharing of best practice and ‘what works’.</li> <li>– Support for collaboration on cross local authority issues and opportunities, including the potential for cost reductions on shared procurement and the ability to develop larger, joint projects.</li> <li>– Potential for economies of scale of some local authority activities e.g. advice services are aggregated at a national level.</li> </ul>	<ul style="list-style-type: none"> <li>– Lack of local authority capacity and leadership may undermine the value of a support service.</li> <li>– Local Authorities may view support as a loss of autonomy over LHEES.</li> <li>– A national level advice may not account well enough for variations in the specific local challenges and approaches required, or for the differing levels of readiness/resourcing among Local Authorities.</li> <li>– ZWS and SFT already provide support to Local Authorities with LHEES developments. This could be a starting point for an NDM, or a potential for overlap / confusion of roles.</li> <li>– Given the diversity of zones and challenges inherent in various building tenures and typologies, there is uncertainty around the early stages of the LHEES role, beyond strategy.</li> <li>– There is uncertainty around the variation and changes in the functions required to implement the different phases of LHEES.</li> </ul>	<ul style="list-style-type: none"> <li>– Budget, resources and powers allocated to new body.</li> <li>– Budget and resources allocated to Local Authorities (in relation to LHEES activities).</li> <li>– No formal guidance, checking and enforcement framework yet in place to ensure quality of LHEES.</li> <li>– The projects and phases outlined within LHEES frameworks will determine the support required.</li> <li>– The interaction between LHEES and the role of existing national levers.</li> <li>– Overlaps with SEPA regarding the overall impact on the natural environment.</li> </ul>

NDM Role	Potential benefits of national level delivery	Risks, disbenefits and uncertainties	Constraints and dependencies
	<ul style="list-style-type: none"> <li>- An NDM could provide tailored support to Local Authorities according to need.</li> </ul>		
<p><b>Enforce national-level regulation and support local-level enforcement</b></p>	<ul style="list-style-type: none"> <li>- Greater ability to ensure existing and new regulation is aligned with core priorities of EES for both domestic and non-domestic sectors.</li> <li>- Better consistency in application and enforcement of minimum standards and best practices.</li> <li>- Increased accountability of Local Authorities to ensure full strategies are delivered.</li> </ul>	<ul style="list-style-type: none"> <li>- A national level enforcement agency would be less identifiable and trusted by customers in a local level. It will be important to build off existing local networks.</li> <li>- Risks overcomplicating the flows of information given that Local Authorities and national government already share data.</li> </ul>	<ul style="list-style-type: none"> <li>- Budget, resources and powers allocated to new body.</li> <li>- Overlap with SHR, which already regulates and monitors social rented sector.</li> <li>- Lack of regulation currently across building tenure typologies and tenures to support</li> </ul>

Table 10: The benefits, risks, constraints and dependencies associated with the possible roles of an NDM

NDM Role	Potential benefits of national level delivery	Risks, disbenefits and uncertainties	Constraints and dependencies
	<ul style="list-style-type: none"> <li>- Reduction in restrictions for stakeholders to access funding and participate in EES and LHEES programmes.</li> <li>- Not applicable to delivery at a local level, however national level delivery of training and support available to enable delivery locally.</li> <li>- Stakeholders reporting compliance to one national body.</li> <li>- Facilitates sharing of best practice around enforcement between Local Authorities.</li> </ul>	<ul style="list-style-type: none"> <li>- Risk of lack of local flexibility in enforcement capability at a national level.</li> </ul>	<ul style="list-style-type: none"> <li>- Local Authorities in implementing strategies.</li> <li>- Requirement for appropriate delegated/devolved powers for delivery to conduct enforcement.</li> <li>- No regulatory enforcement framework to support Local Authorities in implementing strategies.</li> </ul>

	<ul style="list-style-type: none"> <li>Standardised reporting of enforcement carried out at local level (economies of scale at national level).</li> <li>Early identification of local resourcing shortages.</li> </ul>		
<p><b>Provide clear quality assurance guidelines and effective, consistent customer protection processes</b></p>	<ul style="list-style-type: none"> <li>Single point of contact for interaction with industry in development of guidelines.</li> <li>Alignment of supply chain awareness over requirements and customer expectations.</li> <li>Consistency in quality of services, advice and products for EES across Scotland.</li> <li>Greater trust in the EES brand and increased likelihood of consumers engaging in the EES Programme.</li> <li>Single delivery mechanism well placed to raise awareness of standards and processes over time.</li> <li>Scope for standardised consumer protection processes which offer economies of scale.</li> </ul>	<ul style="list-style-type: none"> <li>Damaging the brand through bad consumer experiences</li> <li>Difficult to establish link with improved delivery of EES strategies and projects.</li> <li>Risk of confusion due to overlap with numerous organisations, quality guarantee schemes and ombudsman organisations currently providing a customer protection service.</li> <li>Uncertainty around how frequently consumer protection processes will be required.</li> <li>Uncertainty around the extent to which consumers are protected by existing protections.</li> </ul>	<ul style="list-style-type: none"> <li>Budget and resource allocated to new body.</li> <li>Degree to which consumer protection is required will depend on awareness and supplier adherence to standards.</li> </ul>
<p><b>Monitor and report progress against EES targets at national-level and support local-level</b></p>	<ul style="list-style-type: none"> <li>Ongoing understanding of progress against targets, allowing informed intervention to prevent programme failure.</li> <li>Scale and frequency of reporting required creates potential for economies of scale which an NDM could exploit.</li> </ul>	<ul style="list-style-type: none"> <li>A delivery mechanism must support and supplement existing reporting structures at a local level rather than duplicate them.</li> <li>It is unclear what the reporting requirements will be at this stage.</li> </ul>	<ul style="list-style-type: none"> <li>Budget and resource allocated to new body.</li> <li>Regularity of national level progress reports dependent on regular ground work monitoring by Local Authorities.</li> </ul>

<b>monitoring and reporting</b>	<ul style="list-style-type: none"> <li>– Identification of underperforming areas and adaption of EES</li> </ul>		
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Table 10: The benefits, risks, constraints and dependencies associated with the possible roles of an NDM

<b>NDM Role</b>	<b>Potential benefits of national level delivery</b>	<b>Risks, disbenefits and uncertainties</b>	<b>Constraints and dependencies</b>
	<ul style="list-style-type: none"> <li>– Programme and strategies to combat these.</li> <li>– NDM can work with Local Authorities to reduce monitoring burden through streamlined processes.</li> <li>– NDM can benchmark and guide Local Authorities on compliance with reporting requirements.</li> </ul>	<ul style="list-style-type: none"> <li>– Not clear how reporting around EES will coordinate with central Government reporting (at Scottish and UK level) around carbon reduction and fuel poverty.</li> <li>– Benefit of reports to delivering EES programme may be limited.</li> </ul>	<ul style="list-style-type: none"> <li>– Local Authorities must have the resource to monitor at local level to feed into NDM monitoring of overall picture.</li> </ul>
<b>Provide a central data management and distribution service</b>	<ul style="list-style-type: none"> <li>– NDM provides single, identifiable focal point for all stakeholders.</li> <li>– Data management type tasks sit best outside central government on a day to day basis.</li> <li>– NDM can raise awareness of its role over time.</li> <li>– Greater consistency in data availability for users.</li> <li>– Identification of data gaps and inconsistencies that can be addressed.</li> </ul>	<ul style="list-style-type: none"> <li>– None identified.</li> </ul>	<ul style="list-style-type: none"> <li>– GDPR and data security need to be designed in.</li> <li>– Data viewing and editing permissions need to be appropriately managed and restricted.</li> <li>– Cost of operating a central data management and distribution service.</li> <li>– Accurate data collection is dependent on inputs received from others.</li> </ul>
<b>Provide a central EES focal point and</b>	<ul style="list-style-type: none"> <li>– Delivery mechanism provides a clear starting point for all stakeholder to obtain advice and</li> </ul>	<ul style="list-style-type: none"> <li>– Changes to branding could undermine established value or the retention of</li> </ul>	<ul style="list-style-type: none"> <li>– HES already provide this service for domestic sector.</li> </ul>

<p><b>coordination service</b></p>	<p>direction towards the most appropriate schemes.</p> <ul style="list-style-type: none"> <li>– NDM can address barriers to delivery of project that cut across local authority lines.</li> <li>– Given scale of energy efficiency roll out required, scale of advice/coordination service is potentially large- NDM can take advantage of economies of scale in delivering this.</li> <li>– Strong, trusted NDM brand will be best means of driving awareness.</li> </ul>	<p>existing brands inhibits a perception of an integrated approach.</p> <ul style="list-style-type: none"> <li>– Lack of local authority "buy-in" and time taken to develop relationships to support development.</li> <li>– Risk of overlaps with HES and RES services, creating a more confused delivery landscape.</li> <li>– EES route map indicates that Local Authorities could become more involved in advice provision, but scope is unclear at this stage.</li> <li>– Scale of advice service required is unclear at this stage.</li> </ul>	<ul style="list-style-type: none"> <li>– Similar service provided by RES for SMEs/communities.</li> </ul>
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Table 10: The benefits, risks, constraints and dependencies associated with the possible roles of an NDM

NDM Role	– Potential benefits of national level delivery	– Risks, disbenefits and uncertainties	– Constraints and dependencies
<p><b>Provide a national-scale marketing, communication and education service</b></p>	<ul style="list-style-type: none"> <li>– A single national body allows for the creation of a strong brand, driving increased engagement in the programme, particularly from homeowners.</li> <li>– In order to increase public awareness and buy in marketing will need to be on a large scale with multiple iterations. A single delivery body can exploit potential economies of scale here</li> </ul>	<ul style="list-style-type: none"> <li>– A “marketing and communication push” is only for a short and not sustained period.</li> <li>– HES provide marketing campaigns for domestic consumers, creating the risk of confusion and overlap.</li> <li>– Marketing provided by existing or new schemes out of EES remit may create confusion.</li> </ul>	<ul style="list-style-type: none"> <li>– Budget and resource allocated to provision of service.</li> <li>– Nature of communications will vary according to state of the programme.</li> <li>– Overlaps with marketing campaigns by HES and individual scheme providers.</li> </ul>

	<p>and can build up experience and expertise about what works best.</p>		
<p><b>Facilitate access to project funding and finance</b></p>	<ul style="list-style-type: none"> <li>– A single national body is well placed to have visibility across the various funding schemes.</li> <li>– Given its other functions, a single delivery body is well placed to provide investors with confidence in the long term robustness of the energy efficiency pipeline.</li> </ul> <p>Provides a strong brand which investors can identify with and trust.</p>	<ul style="list-style-type: none"> <li>– If there is no control over funding terms then funding uptake may be limited.</li> <li>– If there is no influence over policy then private investment may be limited.</li> <li>– If a fund management role is taken on this will create a significant administrative and regulatory burden.</li> </ul>	<ul style="list-style-type: none"> <li>– Flexibility of funding and extent to which a new mechanism can influence this depends on the relationship with the organisation holding the purse strings.</li> </ul>
<p><b>Support supply chain development and expansion</b></p>	<ul style="list-style-type: none"> <li>– Delivery Mechanism creates single focal point to bring together consumers and supply chain.</li> <li>– Delivery Mechanism well placed to use PCS portal at minimum cost.</li> <li>– Single point of contact to work across existing procurement governance structures including; Scottish Procurement, Scotland Excel, National Procurement NHSS and APUC.</li> <li>– Training activities are replicable/repeatable, and can be rolled out at scale (and improved) by an NDM.</li> <li>– Consistent national standards of training and guidance provided to the supply chain.</li> <li>– A focal point, positioned to encourage SMEs to participate in procurement process for multiple Local Authorities.</li> </ul>	<ul style="list-style-type: none"> <li>– There are already organisations providing training and upskilling, meaning the landscape could become increasingly complex.</li> <li>– There is uncertainty around the scale of demand for training services, which may vary over the course of the EES Programme.</li> </ul>	<ul style="list-style-type: none"> <li>– Overlap with education and training services available for SMEs through RES.</li> <li>– Even an enlarged supply chain is unable to support roll out of all LHEES in accordance with required timescales.</li> </ul>

Table 10: The benefits, risks, constraints and dependencies associated with the possible roles of and NDM.

NDM Role	– Potential benefits of national level delivery	– Risks, disbenefits and uncertainties	– Constraints and dependencies
<p><b>Data Infrastructure</b></p>	<ul style="list-style-type: none"> <li>– Delivery Mechanism able to create single focal point for gathering of required data.</li> <li>– Delivery Mechanism well placed to review and compare the quality of data submissions from all local level data sets.</li> <li>– A single body able to effectively assess what data quality and format is required for use as a monitoring tool, able to escalate and ensure data submissions robust.</li> <li>– Delivery Mechanism well placed to use PCS portal at a reasonable cost.</li> </ul>	<ul style="list-style-type: none"> <li>– Risk of handling and storage public data, particularly data on consumers which could be considered sensitive, such as on vulnerability factors.</li> <li>– Significant data security risk holding data.</li> <li>– Risk that body is unable to adequately configure data sharing framework due to data sensitivities.</li> </ul>	<ul style="list-style-type: none"> <li>– Risk of legislate and data regulations blocking the ready access and sharing of required data.</li> <li>– Risk that Local Authorities and other partners are unable submit the required data.</li> </ul>

## 7.3 Summary

The scale of ambition of EES and the complexity of the challenges implicit in delivering it support the need to change how energy efficiency in buildings is delivered in Scotland. The evidence presented in this strategic case makes a clear case for a NDM to enhance existing policies, programmes and delivery mechanisms.

Based on an assessment of needs, a number of roles and tasks have been identified which a delivery mechanism could perform, and the benefits and risks of these being implemented by a NDM have been reviewed. Table 11 presents a summary of the rationale for a NDM.

Table 11: Summary of the case for a National Delivery Mechanism in delivering required roles

NDM Role	Summary of the case for a National Delivery Mechanism
<p><b>Provide support and expertise to Local Authorities during LHEES development and implementation</b></p>	<ul style="list-style-type: none"> <li>– By definition support to all Local Authorities in developing LHEES must be provided at a national level.</li> <li>– A single national body provided consistency of support to all Local Authorities and an effective means of sharing best practice.</li> <li>– There is potential for economies of scale in some guidance activities, e.g. if customer advices services are aggregated are aggregated level.</li> <li>– There is potential for overlap with existing advice roles e.g. ZWS, which will need to be managed.</li> </ul>
<p><b>Enforce national-level regulation and support local-level enforcement</b></p>	<ul style="list-style-type: none"> <li>– A single national body can ensure greater consistence in application and enforcement of standards.</li> <li>– It creates efficiencies because reporting from individual local bodies is to a single body and can be standardised.</li> <li>– The national perspective provides early identification of local resourcing issues.</li> <li>– It will be crucial to work with Local Authorities’ existing local networks given residents’ greater familiarity with them.</li> </ul>
<p><b>Provide clear quality assurance guidelines and effective, consistent customer protection processes</b></p>	<ul style="list-style-type: none"> <li>– Single national body provides consistency and a single point of contact for industry.</li> <li>– The delivery mechanism will be well placed to raise awareness of standards of process over time.</li> <li>– There is a risk of confusion due to overlap with existing quality guarantee schemes.</li> <li>– This is an area where failure could contaminate the whole EES brand.</li> </ul>
<p><b>Monitor and report progress against EES targets at national-level and support</b></p>	<ul style="list-style-type: none"> <li>– A single national body is best placed to monitor and understand progress against Scotland’s target.</li> <li>– It can quickly identify underperforming areas of the programme.</li> </ul>

NDM Role	Summary of the case for a National Delivery Mechanism
<b>Local-level monitoring and reporting</b>	<ul style="list-style-type: none"> <li>– The likely scale and frequency of reporting required will create potentials for economies of scale which a single body can exploit.</li> <li>– Care will need to be taken that local processes are supported and not duplicated.</li> </ul>

Table 11 (cont): Summary of the case for a National Delivery Mechanism in delivering required roles

NDM Role	Summary of the case for a National Delivery Mechanism
<b>Provide a central data management and distribution service</b>	<ul style="list-style-type: none"> <li>– Single body provides an identifiable focal point and greater consistency and quality of data.</li> <li>– There is a heavily IT dependent role of the type which best sits outside central government.</li> </ul>
<b>Provide a central EES focal point and coordination service</b>	<ul style="list-style-type: none"> <li>– Single national body by definition offers a focal point.</li> <li>– Care will be needed to manage overlaps with existing HES and RES services.</li> </ul>
<b>Provide a national-scale marketing, communication and education service</b>	<ul style="list-style-type: none"> <li>– A strong brand and identity such as a single national body can provide, is crucial to driving awareness and buy in.</li> <li>– There is likely to be a high volume of communication at various points in the programme this offers scope for significant economies of scale which a NDM can unlock.</li> <li>– Care will need to be taken to avoid confusion with existing publicity campaigns.</li> </ul>
<b>Facilitate access to project funding and finance</b>	<ul style="list-style-type: none"> <li>– A single delivery body provides visibility for investors around the project pipeline.</li> <li>– Taking on a significant fund management role would create significant regulatory burden.</li> </ul>

**Support supply  
chain development  
and expansion**

- A national delivery body would creating a single focal point driving consistency in standards.
- Provision of training is repeatable/replicable meaning there are economies to be exploited.
- Care will need to be taken to manage overlap with existing training bodies and existing procurement governance structures.

## Part 2

### Preferred Way Forward

## 8 Potential models for delivery

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### 8.1 Key points

This chapter introduces the long list of options as a potential mechanism for the new EES delivery architecture. A first pass review is then applied of these mechanisms, to identify if they have the ability to fulfil the 10 Roles identified in Chapter 7 as being important to the NDM.

7 mechanisms have been identified that could potentially fit and deliver the strategic roles. These mechanisms are:

- Steering Group & Scottish Government Delivery;
- Creation of EES Directorate;
- Scottish Government Local Collaborative Structure;
- Executive Agency;
- Non-Ministerial Office;
- Executive NDPB; and
- Public Corporation.

Other models were also considered but discarded due to a lack of perceived fit with EES requirements.

### 8.2 Introduction

Chapter 7 outlined how a set of 10 Roles are likely required to enable the successful delivery of EES. It was explained how it might be expected to lead to a higher likelihood of success. It would be expected that these roles are delivered at either a national or local level (or a mixture of both).

This chapter presents an outline of the different available options for the structure and architecture of the proposed NDM, in order to enable the delivery of these 10 Roles. This chapter includes:

- A potential long list of options for different delivery architectures;
- A high level summary of the potential structures and frameworks of these different options and an outline of the key differences between these models; and
- A “first pass” assessment of the long list of mechanisms, looking to identify which of these options could potentially be used to deliver the required roles outlined in Chapter 7, and conversely, which options may appear to be structurally suitable for delivery and will not be considered for further review.

## 8.3 Identification of potential models (the long list)

“The long list” is outlined below, the set of delivery models identified as potentially able to support the delivery of EES.

This list has been identified through: desk based research from the policy team constructing this report; from specific input from the Scottish Governments’ internal stakeholders and from the learnings of previous work completed on the subject of delivery models to support EES, including the learnings from the SFT. These options are broadly split across three distinct groups:

- **Internal government delivery** – Whereby responsibility for delivery would sit within current frameworks of the Scottish Government.
- **Amendment of existing bodies** – Whereby responsibility for delivery would sit within an existing body suitable for taking on the required roles, either within or outside of Scottish Governmental control.
- **New bespoke body** – Development of a new bespoke body, tasked with and accountable for the delivery of the 10 Roles in support of the EES agenda.

Table 12: The long list of options

Delivery Options		Overview
<b>Internal government delivery</b>		
<b>1</b>	<b>Steering Group</b>	<ul style="list-style-type: none"> <li>– Development of a specialist Steering Group formed of representatives from within relevant directorates of the Scottish Government. In isolation, the group would be responsible for managing all potential roles of the new EES architecture, such as monitoring progress and providing advice and assistance to those organisations currently involved in deliver EES initiatives, i.e. Local Authorities. The group would have a formal enduring remit of ensuring the successful delivery of EES and would be staffed by civil servants and representatives of relevant groups.</li> </ul>
<b>2</b>	<b>Steering Group &amp; Scottish Government delivery</b>	<ul style="list-style-type: none"> <li>– Development of a specialist Steering Group formed of representatives from within relevant directorates of the Scottish Government, as above. This is in addition to large scale resourcing and investment in additional functions within the Scottish Government Directorates and Local Authorities to enable delivery.</li> <li>– This would include, delivery of the required functions outlined in the strategic case such as enforcement, engagement, funding, monitoring etc. However, here the delivery function of the Steering Group would be limited, as actual role delivery would be carried out by staff within the relevant directorates. The Steering Group would likely function as an overarching co-ordination body.</li> </ul>
<b>3</b>	<b>Scottish Government Local Collaborative Structure</b>	<ul style="list-style-type: none"> <li>– A Strategic Board made up of Ministers and local government leaders, which provides and adapts the strategic direction to the Programme, as needed. This board would oversee an EES Delivery Board which would bring a range of stakeholders together (Inc. senior SG and local government officials). This body would look to provide direction and resourcing to; workstreams (or similar) involved in policy and/or on-the-ground delivery of the Programme, co-led by SG, COSLA, local authority and/or other officials, as needed. The EES Delivery Board could be rebranded to be the single-point-of-access.</li> </ul>

Delivery Options		Overview
<b>4</b>	<b>Steering Group &amp; Development of new directorate</b>	<ul style="list-style-type: none"> <li>– Development of a specialist Steering Group formed of representatives from within relevant directorates of the Scottish Government, alongside the creation of a bespoke new directorate tasked with the delivery of EES. The entire new directorate would be accountable for the delivery of the required functions to deliver EES, working with other directorates where appropriate. Both Steering Group and Directorate would be staffed by civil servants. This new body could be created by either lateral transfers of existing Civil Service staff, new hires or a mixture of the two.</li> </ul>

Table 12 (cont): The long list of options

Delivery Options		Overview
<b>Amendments of existing body</b>		
5	<b>Amendments of existing bodies within Scottish Government control</b>	<ul style="list-style-type: none"> <li>Allocation of one or more of the expected functions of the new EES programme to either an individual or multiple bodies currently in control of the Scottish Government. With additional funding, and with one of these organisations acting as a focal point, delivery of the overarching programme could be done through these existing organisations with sole accountability for individual workstreams placed within either the same, or multiple existing bodies. Funding would likely have to come directly from the Scottish Government.</li> </ul>
6	<b>Amendments of existing bodies outside Scottish Government control</b>	<ul style="list-style-type: none"> <li>Allocation of one or more of the expected functions of EES to either individual or multiple bodies currently not in control of the Scottish Government, but with a remit and working to deliver relatable policy in Scotland. Additional funding would be required directly from government. One of these organisations would act as the focal point for the programme, or alternatively a central area (Steering Group) could be tasked to deliver this role within the Scottish Government. Delivery of the overarching EES agenda (this individual roles) could be done through these either one or multiple of these existing organisations.</li> </ul>
<b>New bespoke body</b>		
7	<b>Executive Agency</b>	<ul style="list-style-type: none"> <li>A newly developed independent body separated from any government department. This body would be responsible for all delivery aspects of EES, and would work with other government directorates and bodies where appropriate. This body would not necessarily be mandated to itself deliver EES functions, but would at a minimum manage their delivery with the possibility of outsourcing work to other organisations.</li> <li>This body would be staffed by civil servants including the Chief Executive, who would be directly accountable to Ministers of the Scottish Government (likely Housing or Energy). The agency would not be a statutory body but would operate in accordance with a Framework Document which is approved by Ministers.</li> </ul>

Delivery Options		Overview
<b>8</b>	<b>Non-Ministerial Office</b>	<ul style="list-style-type: none"> <li>– Would function in a similar manner as an Executive Agency as an agent to ensure delivery of all aspects of EES, with the potential for outsourcing of individual projects where appropriate. However an NMO would be a statutory body headed by a board or statutory officeholders appointed by Ministers. An NMO would not be part of the Scottish Government but part of the Scottish Administration in their own right.</li> <li>– Funded by Parliament and required to publish their own annual report and accounts in the same way as the Scottish Government is required to do. Directly accountable to the Scottish Parliament for the discharge of their statutory functions, but may carry out statutory duties for Ministers.</li> </ul>

Table 12 (cont): The long list of options

Delivery Options		Overview
<b>New bespoke body</b>		
<b>9</b>	<b>Executive NDPB</b>	<ul style="list-style-type: none"> <li>– An Executive NDPB set up to provide both independent advice, but to also function in a delivery role. The body would manage the overall delivery of all aspects of EES (with potential for outsourcing), and function as an arm’s length department. As an example, this could involve the body either directly taking on, or managing the delivery of enforcement, educational or data infrastructure driven roles within EES, as well as other roles.</li> <li>– The body would be accountable to the Scottish Government through their key performance measures and established in statue. The body would be set up through legislation, employ its own staff and prepare their own accounts for presentation to Parliament. The body could also potentially raise revenue independently of government where commercial activities fit within the remit of delivery of EES.</li> </ul>
<b>10</b>	<b>Public Corporation</b>	<ul style="list-style-type: none"> <li>– Creation of a Public Corporation, this model functions as above, as the overall delivery agent responsible for the delivery of all aspects of EES. A Public Corporation is a commercial enterprise under Government control, employing its own staff, who are not civil servants, managing their own budgets and reporting to a Board whose members are appointed by Ministers.</li> <li>– This could be established either as a statutory body E.G. Scottish Water, or as a company regulated by company law. As a commercial organisation this body would need a revenue generating role outside of simply government funding (at least 50% of revenues), these could potentially be based on areas such as consultancy services, energy efficiency installations, accreditation provision, licencing or potentially the role of a Public Energy Supplier (a POEC).</li> </ul>
<b>11</b>	<b>Trading Fund</b>	<ul style="list-style-type: none"> <li>– A trading fund focussed on delivery of EES. This body would handle all delivery aspects of EES, while also handling its own revenues and expenses separately from overall government finances. A Trading Fund would function more like a business, as opposed to having to obtain funding from the government's legislature and feeding income back into its treasury.</li> </ul>

		<ul style="list-style-type: none"> <li>– As a trading fund model, a significant proportion of operational funding would be required to fund from commercial sources. Similar to a Public Corporation, this body would need a revenue generating role outside of simply government funding. It is noted that there has been a tendency to not set up new trading funds by the Scottish Government, and that this body is primarily suited towards operations which are all commercially orientated.</li> </ul>
<b>12</b>	<b>Charitable Trust</b>	<ul style="list-style-type: none"> <li>– A charitable trust established for charitable purposes while also working as a delivery agent for EES. This body would enjoy a varying degree of tax benefits, however due to government charity law would be severely restricted on the potential roles it could fulfil.</li> </ul>

## 8.4 Option feasibility

Several of these options have been initially discounted as unviable, given constraints and limitations on them as mechanisms. These options have not been taken forward for any further consideration, but outline them and the reasons for discarding them below:

### **Publicly energy company**

The Scottish Government has stated its ambition to develop a public energy company with the aim of tackling fuel poverty. Options for the delivery model of the energy company are being tested through the outline business case that is being developed between November 2018 and early 2019. The aim is for a model that is co-designed with Local Authorities to maximise local benefits, supplying energy through a not-for profit, white label approach. The public energy company will operate on a level playing field with other commercial suppliers but will have a public sector ethos at its heart which will determine the product it offers and the way it operates.

There is potential scope to align the delivery of the energy company with that of EES, but as a commercially acting organisation the energy company might raise potential conflicts of interest if it formed part of a NDM for EES. In addition, the differing scope of the energy company, i.e. energy supply, to that of EES as well as ongoing development of the energy company model to be implemented means that the public energy company has not been included as part of the analysis in this SOC.

For these reasons a public energy company has not been considered as a potential delivery mechanism. However, the public energy company is a long-term ambitious project which is likely to move over time from an initial focus on White label supply to generation and supplying energy directly. As the scope of the energy company increases so will cross-overs in desired outcomes and opportunities to align delivery with EES, and the Scottish Government will need to assess options to make the most of these opportunities as they arise.

### **Trading Funds**

Generally Trading Funds are only involved in commercial facing or business activities, as they are structured to enable the relevant department to handle its own revenues and expenses separately from overall government finances. Trading funds have similar characteristics to Public Corporations but without the advantages of a corporate status. Moreover the Trading Fund model has been used increasingly sparingly in recent years and is a model which is now very rarely (if at all) deployed.

### **Charities and Trusts**

There is little scope for Charities and Trusts to act as the delivery mechanism for EES. Charity legislation imposes strict requirements on the purposes and potential roles which Charities may undertake and restricts the relationships between Government and any entity designated as a charity (e.g. with regard to levels of Ministerial influence or control). There is a general presumption against new public bodies holding charitable

status. Charities and Trusts have therefore not been considered further as a sole delivery body.

## 8.5 Assessment against potential roles

The potential for any new delivery architecture to fulfil the 10 Roles outlined in Chapter 7 has then been reviewed. Based on a set of individual feasibility criteria, each of these options have been assessed against the outlined roles, taking an overall view on their ability to deliver.

- **Resource** – Whether the proposed option currently, or could potentially, possess the required resources to deliver each of the required roles.
- **Skillset** – Whether the proposed option currently, or could potentially, have the technical, commercial and legal expertise required to feasibly deliver the required roles.
- **Co-ordinator** – Whether the proposed option currently, or could potentially, act as a central co-ordination point within the programme, providing a strong brand and sense of continuity throughout delivery.

Weightings to the most important of these roles has also been provided. It is expected that certain roles would require an additional priority weighting on their importance compared to others. Five critical roles from the set of 10 Roles identified in Chapter 7 above, have been identified for the delivery of the programme. These include:

- **Role 1:** Provide capacity, support and expert advice to Local Authorities.
- **Role 5:** Provide a central EES focal point and coordination service.
- **Role 3:** Provide clear quality assurance guidelines and effective, consistent customer protection processes.
- **Role 6:** Provide a national-scale marketing, communication and education service.
- **Role 8:** Facilitate access to project funding and finance.

### 8.5.1 Individual assessments

Within Annex 1, a detailed assessment has been included of each of the options against those strategic roles outlined within Chapter 7. Below, the potential performance of each of the models based on their performance in this assessment has been summarised.

Table 13: Summary of assessment against roles

Delivery Options		Overview	Taken forward to detailed assessment?
1	<b>Steering Group</b>	<ul style="list-style-type: none"> <li>– Broadly, the Steering Group option, in isolation, lacks the required resource available for the delivery of a number of key roles, and would only be able to provide a limited overview role.</li> </ul>	<b>No</b> This option is unlikely to sufficiently resource delivery.
2	<b>Steering Group &amp; Scottish Government delivery</b>	<ul style="list-style-type: none"> <li>– Supplementing a Steering Group with additional delivery support from a number of different Scottish Government Directorates does allow a significant increase in the breadth of delivery roles available.</li> <li>– However, this option would face difficulties as functioning as a central point of reference, and still faces restrictions on delivery as placed within central government.</li> <li>– For instance, central government has limited experience in delivering enforcement activities.</li> </ul>	<b>Yes</b> This option is taken forward as the “do minimum” counterfactual.
3	<b>Steering Group &amp; Development of new Directorate</b>	<ul style="list-style-type: none"> <li>– A delivery mechanism which involved the creation of a new Scottish Directorate is able to improve on the performance of the counterfactual.</li> <li>– This body, similarly to the counterfactual, would be able to draw on the machinery of government to support delivery, while also acting as a single point of reference.</li> <li>– However it would still face constraints on the delivery of certain roles not suited to government.</li> </ul>	<b>Yes</b>
4	<b>Scottish Government Local Collaborative Structure</b>	<ul style="list-style-type: none"> <li>– A delivery mechanism which involved the creation of a new development group with a local level delivery is able to improve on the performance of the counterfactual.</li> <li>– This model would benefit from being closer to the on the ground work being delivered, such as supporting the supply chain and local enforcement.</li> <li>– However developing and managing an effective Collaborative Structure could be novel and challenging across a large number of Local Authorities, potentially with differing levels of resource and expertise to contribute.</li> </ul>	<b>Yes</b>

5	<b>Bodies currently in Scottish Government control</b>	<ul style="list-style-type: none"> <li>– Broadly speaking, there is little scope for the 10 roles and 5 key roles to be delivered solely by existing bodies.</li> <li>– Despite some relevant expertise across the required roles, such as providing technical advice and support, without the significant amendment to the powers and potentially resourcing of these bodies, they would lack the authority, breadth of capability or capacity, including to act as a central point of reference, due size constraints.</li> </ul>	<b>No</b> Unlikely to deliver at scale due to capability and size constraints.
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Table 13 (cont): Summary of assessment against roles

Delivery Options	Overview	Taken forward to detailed assessment?	
6	<b>Bodies outside of Scottish Government control</b>	<ul style="list-style-type: none"> <li>– Bodies outside of Scottish Government control are unlikely to have resources or scale to support delivery, for the majority of the required roles.</li> </ul>	<b>No</b> Unlikely to deliver at scale due to capability and size constraints.
7	<b>Executive Agency</b>	<ul style="list-style-type: none"> <li>– An Executive Agency has the ability to establish a clear central brand and focal point, while also potentially allowing for development of scale and expertise required across the different roles.</li> <li>– This model performs well compared to the counterfactual, it has greater coherence and with suitable resource allocated, greater scope to develop the delivery capacity to fulfil the majority of the required roles.</li> <li>– However, regulatory, enforcement and quality assurance activities might not sit well with a body while under direct Ministerial control.</li> </ul>	<b>Yes</b>
8	<b>Non-Ministerial Office</b>	<ul style="list-style-type: none"> <li>– Similarly to any arm’s length body, NMOs have the capacity and autonomy to enable and deliver the majority of the required roles.</li> <li>– Potentially greater scope for regulatory, enforcement and quality assurance roles given the high degree of separation from direct Ministerial and government control.</li> </ul>	<b>Yes</b>
9	<b>Executive NDPB</b>	<ul style="list-style-type: none"> <li>– The Executive NDPB is the highest performing model regarding role delivery. This model is able to utilise all of the above benefits of being an arm’s length, central delivery agency.</li> <li>– This model is also potentially better able to develop, acquire and retain varies specialist</li> </ul>	<b>Yes</b>

		technical resource given its greater freedoms regarding employment terms.	
<b>10</b>	<b>Public Corporate</b>	<ul style="list-style-type: none"> <li>– Public Corporations are also able to leverage many of the prospective benefits above, and could in principle perform well across all roles.</li> <li>– However, a Public corporation is required to generate at least 50 percent of its revenue from commercial sources and the commercial models that would support this are not yet developed.</li> <li>– A commercial vehicle could also be seen to have a potential conflict of interest between such commercial activities and any regulatory, enforcement or quality assurance role.</li> </ul>	<b>Yes</b>

## 9 Outline economic case

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### 9.1 Key points

This chapter sets out the justification for reform by exploring the socio-economic benefits that EES is expected to provide over the course of the programme. Below, a review of the scale of potential transitional and administrative costs of delivery is presented. The chapter then looks to outline how different delivery architectures could have the potential to better realise benefits of EES overtime.

In summary, the expected “net” incremental costs to be incurred from developing any new delivery architecture, in advance of the counterfactual, are potentially inconsequential. Over the course of the entire 20 year programme of EES, the additional set up costs of any bodies could be dwarfed by the scale of benefits and operational costs the programme has the potential to deliver. A key driver of the economic case in future iterations of the business plan will be the extent to which different delivery models can deliver programme benefits.

Although at this stage, it has not been considered to quantify the potential impacts of different models on these factors over time, it is deemed that they could potentially negatively influence costs, and positively influence benefits to such an extent, that net impacts are larger than under the counterfactual. At this stage, options are not ruled out based on their economic performance.

### 9.2 Introduction

The justification for the use of other delivery models, such as the creation of a specific EES Directorate, or new arm’s length body, requires that these options have incremental net economic benefits above that out the counterfactual. This chapter explores:

- Whether additional reform in advanced of the counterfactual could deliver net economic benefits to the programme; and
- The next steps required to better understand the potential relative merits of each of the options to maximise net economic gains.

Due to the uncertainties at this stage, including a lack of information on costs, benefits, and scope, it has not been sought to provide an individual quantitative assessment of the net benefits of each individual option. Rather, an illustrative outlook into the potential benefits required to justify reform in advance of the counterfactual has been provided.

### 9.3 Justification for reform

EES is predicted to provide a number of socio-economic benefits across Scotland. These potential benefits to be realised across the course of the programme until 2050, include but are not limited to:<sup>36</sup>

- Increasing the overall energy efficiency of the built environment to improve

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<sup>36</sup> Scottish Government: Seep – Programme Business Case.

energy productivity;

- Energy (and cost) savings generated by reduced energy use for heating, particularly for consumers who could be considered vulnerable;
- Reduction in CO2 levels significantly contributing to Scotland meeting its climate change targets;
- Potential of supporting jobs and businesses within local and national economy and reducing the cost of EE measures; and
- Health issues relating to fuel poverty thus helping to the health of a significant percentage of Scottish residents.

The case for additional reform of the current delivery architecture is therefore reliant on whether any new potential delivery models leads to a higher net positive economic impact of the EES programme itself. The economic case for reform for the architecture therefore requires that either:

- Any new delivery architecture, leads to an increased likelihood of meeting programme objectives and decrease in risks of programme delivery; and/or
- Any new delivery architecture leads to a greater realisation of primary potential benefits of the overarching EES programme, or a realisation of these in a more timely manner; and/or
- That any new delivery architecture leads to net savings in the costs of administering and delivering EES.

## 9.4 Transitional and administrative costs

Whether any delivery reform is justified must rely on whether the costs of its creation, are outweighed by the benefits brought by that new architecture. Independently of the ability of different models to realise programme benefits, it can be considered whether reform is justified by better understanding the costs of the programme over time.

All options, including that of the counterfactual, are expected to incur costs to fulfil the required roles to support programme delivery. While in addition, the transition to new delivery models away from the counterfactual will incur additional set up costs.

Below, a high level estimate of what these costs could be has been provided. It is then considered whether the potential incremental costs of delivery of different options negate any potential benefits which might be seen in programme delivery.

### 9.4.1 Cost

#### ***Operational costs***

At present, only indicative estimates of the cost of programme delivery can be made. The estimates presented below should not be treated as an estimate of what a delivery mechanism may cost, as the costs may vary greatly depending on the functions that a delivery mechanism ultimately carries out, and the nature of EES delivery (e.g. local or

national). In addition, operational costs are likely to vary over time, particularly as the delivery mechanism takes on more functions. Costs will need to be assessed in much more detail at any Business Case stage, when more clarity around the functions of the delivery mechanism has emerged.

Scottish Government estimated that in meeting the programme goals for domestic properties, delivery costs could be in the region of £8bn.<sup>37</sup>

Alongside delivery costs (for instance the costs of installation), it is also expected that there would be administrative and operational costs incurred, for operating the overarching EES programme<sup>38</sup>. Over the course of such a lengthy and capital intensive programme, it could be expected that these costs will be significant.

A significant percentage of these operational costs are likely to arise regardless of whether an NDM is implemented. For instance, under the counterfactual, the completion of many of the 10 Roles might still be expected, and their administrative functions, at least partially.

Therefore, it is assumed that the incremental costs of any new delivery architecture would consist of only the incremental set up costs for which it incurred, and any potential changes in operational efficiency which it might deliver. It is therefore worth considering how both these setup up and operational costs compare.

Although there is limited information on the scale of administrative and operational costs of the programme at present, one approach to outline an estimate is to examine the costs of administering similar schemes across GB. One example is the Energy Company Obligation (ECO) energy efficiency scheme. ECO aims to reduce carbon emissions and tackle fuel poverty. As part of ECO, energy suppliers stimulate the delivery of measures that reduce the cost of heating homes for households.

The administrative functions carried out by suppliers in support of ECO are similar to the envisaged roles carried out under a reformed delivery architecture which is expected to be completed even within the counterfactual, these include but are not limited<sup>39</sup> to:

- Promoting the installation of measures to achieve obligations;
- Calculating the carbon saving/cost score of each measure; and
- Performing technical and score monitoring of measures and reporting of results.

Costs for the delivery of these administrative functions are estimated at around £175m, around 11% of the £1624m scheme costs of the ECO3 extension.<sup>40</sup> These estimates do not include administrative costs applicable to the regulator, Ofgem, which undertakes a wider monitoring function.

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<sup>37</sup> Scottish Government: [Energy Efficient Scotland consultation](#).

<sup>38</sup> We further outlined these costs within the Financial Case.

<sup>39</sup> Energy Company Obligation: [Guidance for suppliers](#).

<sup>40</sup> ECO Extension: [Final Stage Impact Assessment](#).

If similar cost profiles were expected for the administrative and operational costs of delivering EES, it might be extrapolated that over the course of the programme, annual administrative costs could total around £44m<sup>41</sup>. Table 14 below outline an indicative level of these administrative and operational delivery costs. It is note that these estimates represent, the “average” year across the course of the programme. It would be expected that during the initial startup phase that administrative costs would be significantly lower.

Table 14: Indicative annual administrative cost estimate<sup>42</sup>

Value	Cost of administration
<b>Administrative proportion</b>	11%
<b>Administration costs</b>	£40m

It could also be that these potential costs are an underestimate, as they would not take into account the completion of all the required roles outlined in the Financial Case, for instance there is no estimate for enforcement activities undertaken by Suppliers under the ECO framework.

**Set up and transitional costs**

There will also be set up and transitional costs involved in the creation of a new body. These set up costs are one off costs associated with initial hiring and contractual requirements of setting up the new delivery organisation. At this stage, a monetised estimate of these costs has not been provided.

As an indicative example, the costs recently assessed as the potential set up costs for the Public Corporation Energy Supplier for the Scottish Government, totaled a maximum of £3.5m<sup>43</sup>. Relative to the operational costs outlined above, it is believed that these costs will be immaterial over the course of the programme.

**9.4.2 Net costs of reform**

The profile for operational costs over time will vary between models. Some models, such as those with more commercial functions further from government control, have higher set up costs.

Over the course of the entire 20 year delivery programme, differences in efficiency of different models could lead to differences in costs however the key consideration is less about cost and more about the delivery of the benefits expected of the programme.

<sup>41</sup> Based on an estimated delivery cost of the entire EES programme budget of £8bn with an annual delivery cost of the course of the 20 year programme of £400m, 2018 prices. Assumptions rely on the expected roll out trajectory being fulfilled and subsequent delivery costs of the entire programme of delivery being met. <https://www.gov.scot/publications/energy-efficient-scotland-consultation-making-homes-buildings-warmer-greener-more/pages/3/>.

<sup>42</sup> Costs calculated taking an upper (15%), Central (11%) and lower (7%) bound estimated burden of administrative costs of delivery.

<sup>43</sup> Scottish Government: [Publicly Owned Energy Company: Strategic Outline Case \(SOC\)](#).

- Relative to the net expected impact of the programme (£8bn), and the potential administration costs over time, expected set up and transitional costs to any new delivery architecture are likely to be inconsequential, when compared with the benefits.
- Due to the potentially large administration and operational costs of Programme delivery over time, further consideration should be given to delivery models which could be effectively incentivised or directed to achieve operational savings in Programme delivery.

Therefore, the economic case need to consider whether the benefits are secured but also consider the scope for cost reduction.

## 9.5 Delivery of benefits

Over and above the potential impact on costs of delivery, different delivery architectures could have the ability to reduce the risks of delivery itself. These models could have the potential to better realise benefits of EES over time. Due to the significant potential programme benefits over a long timer scale, even marginal increases in potential delivery effectiveness could lead to significant net economic gains.

### 9.5.1 Expected impact

The economic benefits of the overarching EES programmes have previously been considered and quantified by the University of Strathclyde<sup>44</sup>. These benefits include but are not limited to:

- Delivery of a gross undiscounted cumulative boost of £7.8billion to real Scottish GDP over the next 30 years. (Corresponding to a projected £1.56billion public spending).
- An anticipated 9.6% reduction in energy required to run Scottish households by the end of the 20 year programme.
- 6,000 sustained (full-time equivalent) jobs.

These benefits have been calculated relying on several key assumptions notably that around 75% of Scotland's private sector housing is upgraded to EPC C and around 50% of its social rented sector properties are upgraded to EPC B by the end of the programme. The outcomes depend financial contributions from households following those of the Scottish Government, and households successfully working with retrofit technology to reduce their energy requirements.

Realisation of these benefits primarily relies on the EES rollout meeting expected timeframes, with an accompanying significant take up of private (household backed) financial investment in domestic retrofit schemes to minimise the required government financial backing required. Without this take up of private financial input, the net multipliers of benefits from government spending on the project would reduce. While,

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<sup>44</sup> Strathclyde University: [Potential Wider Economic Impacts of the Energy Efficient Scotland Programme](#).

unsurprisingly, missing project deadlines for roll out also negatively impacts the expected net benefits of the programme.

If EES is able to achieve the anticipated roll out, the benefits over the course of the programme will be substantial. A 9.6% reduction in Scottish household energy demand today, equates to approximately<sup>45</sup> 4000 GWh of energy consumption across the domestic sector on an annual basis, and around 0.60<sup>46</sup> Mt CO<sub>2</sub>e.

### 9.5.2 Increasing likelihood of successful delivery

Under the counterfactual scenario, completion of the 10 Roles would be delivered using additional functions within the Scottish Government Directorates to enable delivery. This decentralised model, as assessed as part of the role assessment in Chapter 8, would involve a significant spread of delivery partners across Scottish Government and a number of different Local Authorities, without a central point of reference.

However, it is noted that there are several potential risks associated with this model regarding some key areas of delivery, notably that the counterfactual scenario is likely to perform poorly in two roles which are key for meeting the required assumptions to realise the benefits of the programme:

- Role 5: Provide a central EES focal point and coordination service; and
- Role 8: Facilitate access to project funding and finance.

A key aspect of assessing NDM options is whether they can be used to mitigate the risk associated with these roles.

### 9.5.3 Performance of similar delivery bodies

Two potential models that represent the next steps of development beyond the counterfactual are: i) the creation of specialist EES Directorate, accountable for delivery of the overarching programme; and ii) the use of a wide spread partnership with Local Authorities. A recent example of a model combining both features is the delivery body working on the rollout of Broadband as part of the UK Universal Service Commitment.

This body is very similar in structure to that of Option 3 combined with Option 4, the establishment of a new Directorate alongside Local Authorities. Crucially, this body has shown that these models can work well performing similar roles to the 10 Roles that are envisioned as part of EES, particularly in Roles 5 and 8 which are identified as lacking within the counterfactual.

Broadband Delivery UK (BDUK)<sup>47</sup>, a specific directorate which sits within the Department for Culture, Media and Sport, is working to facilitate the roll-out of next generation access (NGA) infrastructure to support the delivery of superfast broadband speeds across the UK. BDUK is primarily aimed at stimulating private sector investment, and has been tasked with managing the national level, locally lead delivery of the NGA roll-out.

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<sup>45</sup> Based on data taken from Scotland [Energy Efficiency Database 2016](#), Figure 2c.

<sup>46</sup> Based on data taken from Scotland [Greenhouse Gas Emissions 2016](#), Full Revisions Tables.

<sup>47</sup> [Broadband Delivery UK](#).

BDUK is responsible for the development and management of the overall approach to the delivery. It acts as the conduit for the central fund, development of national approaches to sourcing, and providing support and guidance to local bodies.

The programme of work from BDUK was delivered in partnership with Local Authorities and the devolved administrations (DAs)<sup>48</sup>, in acknowledgement that delivery would need to address locally specific issues. Conversely to the counterfactual, this model has relied on a central point of reference while working on the ground with Local Authorities to enable delivery. BDUK's roles have included:

- Development of a national procurement framework (the Broadband Delivery Framework) to provide local bodies with a panel of potential suppliers capable of delivering the design, build and operation of a local broadband project.
- The National Procurement role would be performed by Scottish Procurement working with officials in the directorate.
- Delivery of compliance reviews of tendering process and contractual terms.
- Established processes to ensure that projects are compliant with the requirements of the Decision and the Broadband Guidelines.
- Delivered guidance documents and industry information events to contractor support delivery.

Overall as part of an economic review<sup>49</sup> into the schemes effectiveness, there has been early indications that this model has delivered successfully, particularly relating to key areas of the programme risks which should be mitigated to realise the benefits of delivery. As outlined within the economic review, these included:

- Scheme delivery under BDUK leading to significantly greater investment, in broadband and extension of coverage in rural areas in the UK than would otherwise have occurred;
- BDUK is on track to deliver its Phase One and Phase Two objectives regarding superfast broadband coverage with a material impact on the number of premises receiving coverage; and
- Value for money protected, BDUK's value-for-money safeguards are sufficiently robust to ensure that the supplier is paid only for costs incurred under clearly defined criteria.

One issue initially faced was the existence of incentives for suppliers to overspend, due to information asymmetry between BDUK and the programme cost base. This is a problem which could potentially arise under any procurement undertaken by Local Authorities and the Scottish Government with supplier's delivering EES measures, particularly under a decentralised mechanism such as the counterfactual. However, over time, BDUK as a central body developed learning to evolve the contractual mechanisms to drive cost efficiency.

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<sup>48</sup> BDUK: [Evaluation of the Economic Impact and Public Value of the Superfast Broadband Programme.](#)

<sup>49</sup> Oxera: [The UK's National Broadband Scheme.](#)

In summary, BDUKs structure has been assessed by Oxera as being successful in delivering many aspects expected of EES. Therefore, there is significant scope for the potential realisation of programme benefits under more centralized models considered for EES.

## 10 Outline financial case

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### 10.1 Key points

In this chapter, cost drivers are identified based on the set of assumptions and expectations around the requirements to deliver the roles outlined in Chapter 7. This chapter then looks at the potential uncertainty around the delivery of EES due to factors such as the early stage of development and the timescale.

Although based on assumptions, costs will not be significantly different across differing options, it is expected that some costs will differ based on the models for review. These are summarised below. The remainder of the chapter then looks at routes to funding, potential alternatives and the risks which could influence scheme funding, followed by any other areas for consideration.

Broadly, the individual cost drivers of the proposed different sets of options are fairly well understood. At this stage, the scale of these costs is harder to estimate, however broadly, significant variation across the different models is not expected. Nevertheless, there are some general observations which can be made at this stage.

Namely, models that are close to government are cheaper to set up and run as they involve no new external structures. However, more arm's length models, have higher set up and operation costs. If new bodies are operated outside of the Civil Service, there may be more scope for driving operational efficiencies in delivery.

This means that the Executive Agency and the Non-Ministerial office, have a weaker financial case, because these options would require the establishment of a new structure within the Civil Service.

### 10.2 Introduction

The outline financial case looks at the potential set up and operating costs required to meet the EES objective, and explores the fundamental financial principles of the project.

Due to the limited information available, the project's early stage of development, and the uncertainty around potential scope, it has not been possible to estimate the actual costs for each model at this point in time. However it is possible to consider at a high level the potential differences between models regarding the financial viability of the NDM over time.

The financial viability of the proposed set of options over the course of the potential lifecycle, the 7 models have looked to be reviewed:

- Steering Group & Scottish Government delivery;
- Scottish Government Local Collaborative Structure;
- Creation of EES Directorate;
- Executive Agency;

- Non-Ministerial Office;
- Executive NDPB; and
- Public Corporation.

Within a financial outline case, it is not expected that granular estimates of cost should be included, rather the potential differences between models regarding the financial viability of the NDM over time have been illustrated.

The financial case:

- Comments on precedent for the scale of these potential costs and provides an illustrative example of their potential size;
- Compares at a high level the differences between models and their financial performance over time;
- Assesses possible routes for funding, the potential risks and uncertainties to this funding over time, and any material differentials between options in terms of funding flexibility;
- Provides an outline view of the potential impacts of any proposals on future Scottish Government budgets; and
- Outlines areas for further consideration.

### 10.2.1 Assumptions

Any reform will have a set of costs in order to fulfil the required roles, therefore the potential drivers of costs which could be incurred based on a set of high level assumptions have been outlined. These include:

- The required funding regardless of approach is made available from the Scottish Government.
- All roles will be fulfilled to the specification outlined within Chapter 4.

### 10.3 Cost drivers

Based on this set of assumptions and the expectations around the potential requirements to deliver the roles set out above, expected primary cost drivers have been outlined in Table 15 below.

Table 15: A summary of the primary cost drivers

Cost driver	Overview
<b>Set-up</b>	<ul style="list-style-type: none"> <li>– Regulatory, legal and process costs required to establish any new underlying body’s themselves.</li> <li>– Recruitment costs due to the hiring of staff in preparation for the establishment of the body.</li> <li>– Contractual procurement costs, dependent on what type of NDM is put in place.</li> </ul>
<b>Staff</b>	<ul style="list-style-type: none"> <li>– Main operational driver as these are applicable to all roles.</li> <li>– Requirement for capacity support and provision of experts will require significant staff outlay to reach all Local Authorities.</li> <li>– Expertise will be required in order to help with LHEES development and implementation of the associated low carbon heat and energy efficiency projects, such as the potential to hire a specific technical expertise to set and monitor quality assurance.</li> <li>– Enforcement and monitoring functions at any kind of national level will require sufficient workforce which may result in a high cost due to the headcount required.</li> <li>– Specialists in the fields of legal, technical and expert advice will be required on schemes for certain roles.</li> <li>– Ongoing general and administrative costs, and expected staff costs for the running of any functions.</li> </ul>
<b>Facilities</b>	<ul style="list-style-type: none"> <li>– Proposals will require suitable facilities to operate.</li> <li>– Potential for the requirement of regional offices due to the geographical split of the work required across the country.</li> <li>– Offices will therefore require the installation and/or maintenance of systems such as air conditioning, lighting and heating.</li> </ul>
<b>Systems</b>	<ul style="list-style-type: none"> <li>– Internal IT and infrastructure systems.</li> <li>– Bespoke IT process infrastructure, particularly when dealing with the gathering of datasets whereby crucial and sensitive household and public data could be required for the delivery of specific roles.</li> <li>– Use of PCS, a tool used by public sector bodies at a local, sectoral or national level to advertise the supply chain which will require specific investments.</li> </ul>

<p><b>Outlay services</b></p>	<ul style="list-style-type: none"> <li>– Specific costings would be required to undertake internal or external marketing activities.</li> <li>– In the case that an in-house marketing team is chosen, an appropriate budget would be required to ensure that costs are controlled.</li> </ul>
<p><b>Return</b></p>	<ul style="list-style-type: none"> <li>– Some delivery models with private shareholders may require an equity return on top of day-to-day administrative and operational costs.</li> <li>– These returns would be to account for the delivery at risk of equity capital. This return could be expected to be low as these organisations would be working with only limited commercial risk due to significant proportions of funding likely coming from Scottish Government.</li> </ul>

### 10.3.1 Uncertainty and illustrative examples

Major projects typically have long timescales and substantial uncertainty at the early stages of development. EES is no different with significant uncertainty around the roles, funding, potential commercialisation and timescales for delivery.

EES is a 20 year project with targets across the 2030s and 2040s, costs have therefore not been estimated at a granular level at this stage. It might be expected, however, that these will be sizeable across the course of EES.

While it may be expected that in any one year, no individual option will offer significantly differing costs, over the course of the programme, cumulative differences could be more significant.

Chapter 9 already outlines how the costs of operating the ECO scheme amount to over £175m on an annual basis, around 11% of the programme expenditure. Similar capital intensive programs have had significant delivery costs, such as the smart meter rollout, which requires energy suppliers to offer a smart meter to every home in England, Scotland and Wales by 2020. In their 2016 cost benefit analysis, the department for Business, Energy & Industrial Strategy (BEIS) outlined that the legal and operational costs relating to the set-up of the smart meter roll-out across both the energy industry and Government has total present value costs over the appraisal period of approximately £258m.<sup>50</sup>

## 10.4 Routes to funding

The expected routes which are fit for funding the different models outlined in Chapter 7 have been considered. Given the nature of the Roles being performed, the core assumption made is that all of the models would receive funding from Scottish Government and therefore other than for a Public Corporation, no other source of operating funding is likely to be appropriate.

At this stage, the scale of funding for the Programme is not directly known, however it has been outlined above that administrative costs and set up of any new architecture costs will be expected to be in the low percentage regions of any overall scheme funding.

Potentially, some models could raise funding from commercialised activities, such as assurance roles undertaken on participating bodies, from licensing regimes or from charging for advice and support to Local Authorities and other parties. The Scottish Government's ambition to establish a public publicly owned commercial but not-for-profit energy company by March 2021,<sup>51</sup> may provide a model for how that would be possible.

## 10.5 Risks and uncertainty

An assessment has been made that there are potential risks and uncertainties which could influence scheme or model funding. If the funding is government based, there will

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<sup>50</sup> BEIS: [Smart Meter Rollout Cost-Benefit Analysis](#).

<sup>51</sup> Scottish Government: [Public Energy Company](#).

primarily be political uncertainty which could delay spending and investment until this uncertainty is resolved.

There could also be potential budgetary constraints for the Scottish Government, however this will be seen as low risk. The scale of the project over time is variable and the delivery requirements are unclear at this stage, which can also create uncertainty.

In addition, there are risks associated with scheme implementation funding to ensure suitable financial arrangements are in place to install the required measures across EES. At this stage, it is not obvious whether any model can address these issues.

## 10.6 Areas for further consideration

This financial case will require additional consideration of several factors at further stages of any assessment process. These are expected to contain:

- **Government Funding:** Further work into identifying the scale of Scottish Government funding which is available for the delivery of any new architecture.
- **Other funding models:** Assessments of the potential for additional funding models, including the potential for commercial funding from licencing regimes or from other commercial activities.
- **Budgetary impact:** Assessments into the different budgetary impacts which might be expected on the Scottish Government balance sheets from the use of different models.

Table 16: Summary of financial case assessment

No	Option name	Affordability of set up costs	Affordability of operations	Ability to drive efficiency in operations	Ability to maintain and generate surpluses for reinvestment in programme delivery
1	<b>Steering Group &amp; Scottish Government delivery</b>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- No new structure created.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- No new structure, so additional operational costs will be minimal.</li> <li>- Indicative range of operational costs discussed within financial case.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Constraints around Civil Servants' salary and pension</li> <li>- Less ability to reduce overheads e.g. rent as staff located in central Government offices.</li> <li>- Steering Group structure has no delivery levers, and lacks ready access to economies of scale.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- No specific budgetary arrangements around a Steering Group that would allow it to maintain surpluses.</li> <li>- Dependent on spending cycle.</li> <li>- Budgetary surpluses would arise in underlying teams and would not be retainable.</li> </ul>
2	<b>Scottish Government Local Collaborative Structure</b>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- No new structure created.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- No new structure, so additional operational costs will be minimal.</li> <li>- However, collaborative arrangements will likely require increased costs but unlikely to be material in Programme terms.</li> <li>- Indicative range of operational costs discussed within financial case.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Constraints around Civil Servants' salary and pension</li> <li>- Less ability to reduce overheads e.g. rent as staff located in central Government offices.</li> <li>- Steering Group structure has no delivery levers, and lacks ready access to economies of scale.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- No specific budgetary arrangements around a Steering Group that would allow it to maintain surpluses.</li> <li>- Dependent on spending cycle.</li> <li>- Budgetary surpluses would arise in underlying teams and would not be retainable.</li> </ul>

				- However best practices could be shared across different bodies.	
3	<b>Creation of EES Directorate</b>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- No new external structure created.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- No new external structure, so additional operational costs will be minimal.</li> <li>- This structure may also require collaborative arrangements to maximise effectiveness.</li> <li>- Indicative range of operational costs discussed within financial case.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Constraints around Civil Servants' salary and pension</li> <li>- Less ability to reduce overheads e.g. rent as staff located in central Government offices.</li> <li>- Steering Group structure has no delivery levers, and lacks ready access to economies of scale.</li> <li>- However best practices could be shared across different bodies.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- No specific budgetary arrangements around a Steering Group that would allow it to maintain surpluses</li> <li>- Dependent on spending cycle</li> <li>- Budgetary surpluses would arise in underlying teams and would not be retainable</li> </ul>
4	<b>Executive Agency</b>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- New arm's length entity created requiring resource planning, discrete systems and processes.</li> <li>- Staff are still Civil Servants, meaning staff have to be found, not recruited.</li> <li>- Unlikely to require</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Additional costs associated with operation of new entity.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Constraints around Civil Servants' salary and pension.</li> <li>- Management focus and ability to drive efficiency is constrained by the status of the body.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Executive Agencies cannot retain surpluses to carry forward outside the cycle.</li> </ul>

		<p>legislation, and no corporate vehicle created.</p> <ul style="list-style-type: none"> <li>- Indicative range of operational costs discussed within financial case.</li> </ul>			
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Table 16 (cont): Summary of financial case assessment

No	Option name	Affordability of set up costs	Affordability of operations	Ability to drive efficiency in operations	Ability to maintain and generate surpluses for reinvestment in programme delivery
5	<b>Non-Ministerial Office</b>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- New arm’s length entity created requiring resource planning, discrete systems and processes.</li> <li>- Staff are still Civil Servants, meaning staff have to be found, not recruited.</li> <li>- Potential for more extended set up time and cost due to need for legislation and parliamentary approval.</li> <li>- Indicative range of operational costs discussed within financial case.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Additional costs associated with operation of new entity.</li> <li>- Likely to have additional operating costs associated with status as separate legal entity e.g. different audit costs.</li> <li>- A higher level of financial self-sufficiency will be required, which may involve additional operating costs.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Constraints around Civil Servants' salary and pension.</li> <li>- Management focus and ability to drive efficiency is constrained by the status of the body.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Non-Ministerial Office cannot retain surpluses to carry forward outside the cycle.</li> </ul>
6	<b>Executive NDPB</b>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Discrete legal entity with</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Likely to have additional</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- No longer employing civil</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Non-Ministerial Office</li> </ul>

		<p>higher threshold requirement for bespoke systems and processes.</p> <ul style="list-style-type: none"> <li>- Need to recruit staff as no longer Civil Servants.</li> <li>- Needs separate back office or arrangements to provide it.</li> <li>- Timelines for set up carry extended cost risk.</li> <li>- Indicative range of operational costs discussed within financial case.</li> </ul>	<p>operating costs associated with status as separate legal entity e.g. different audit costs.</p> <ul style="list-style-type: none"> <li>- A higher level of financial self-sufficiency will be required, which may involve additional operating costs.</li> </ul>	<p>servants, so scope for savings.</p> <ul style="list-style-type: none"> <li>- Independence from civil service creates more flexibility in cost base and potentially a more commercial culture.</li> <li>- Hiring on commercial terms means reward can be more tightly linked to financial performance and efficiency.</li> </ul>	<p>cannot retain surpluses to carry forward outside the cycle.</p>
7	Public Corporation	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Discrete legal entity with higher threshold requirement for bespoke systems and processes.</li> <li>- Need to recruit staff as no longer Civil Servants.</li> <li>- Needs separate back office or arrangements to provide it.</li> <li>- Timelines for set up carry extended cost risk.</li> <li>- Indicative range of operational costs discussed within financial case.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Likely to have additional operating costs associated with status as separate legal entity e.g. different audit costs.</li> <li>- A higher level of financial self-sufficiency will be required, which may involve additional operating costs.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- No longer employing civil servants, so scope for savings.</li> <li>- Independence from civil service creates more flexibility in cost base and potentially a more commercial culture.</li> <li>- Hiring on commercial terms means reward can be more tightly linked to financial performance and efficiency.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Able to retain surpluses.</li> <li>- Potential to access loans from Government</li> </ul>

## 11 Outline commercial case

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### 11.1 Key points

This chapter outlines key considerations for a new NDM from a commercial perspective, in particular issues around commercial feasibility, procurement and contracting. In particular, this chapter:

- Provides a broad overview of how the different commercial structures for the considered options are expected to function;
- Summarises how the considered options are expected to differ in a contractual and commercial basis; and
- Discusses a range of considerations that must be explored and taken to a greater level of detail at the appropriate later stage when developing a more detailed operating model and developing the framework for any new body.

In general, the further the delivery body is from Scottish Government, the more formal contractual arrangements will need to be and the more extensive the governance arrangements will need to be in order to ensure clear allocation of responsibility. Other key points include:

- New bodies outside of the Civil Service tend to perform better on the commercial case, the NDPB and Public Corporate both offer some flexibility around delivery, charging and incentivisation of performance. While also clearly defining and allocating risk and responsibility through contracts with government.
- Those bodies which are closer to government are more flexible when it comes to taking on additional responsibilities, such as new functions outside of the 10 Roles. This flexibility could allow for models to subsume existing areas of energy policy currently being delivered outside of EES, simplifying an already complicated landscape.
- A Public Corporation will require over 50% of revenue to come from commercial sources. It is doubtful whether such significant commercial revenue schemes would be feasible in the context of EES delivery.
- The New EES Directorate and Executive agency can provide good flexibility, allocation of risk and performance incentives. It is not clear the extent to which these models could charge for services.
- Steering group models, although well placed to remain flexible in delivery, lack accountability due to their decentralised structure i.e. drawing members from different directorates.
- While the NMOs has clear frameworks to define accountability, this body's ability to remain flexible is constrained, due to the time requirement to provide parliamentary approval for changes in function.

## 11.2 Commercial overview

### 11.2.1 Working assumptions

In order to develop this outline commercial case, the following working assumptions have been made:

- Under any new arrangement, all of the Roles identified in Part 1 of this Strategic Outline Case will be carried out, under all delivery body options.
- The new delivery architecture will have a time-limited life determined by the final delivery date of the EES programme in 2040.

### 11.2.2 Commercial structures

The new delivery architecture will create a mechanism to deliver a Government scheme. Commercial feasibility will therefore largely be driven by the funding received from central Government, rather than commercial revenue streams. As noted previously, there may be commercial revenue streams that emerge as the EES programme develops e.g. in relation to charges for advisory and support services, accreditation of suppliers, collection of fines for non-compliant properties.

The commercial significance of these are not assessed at this stage of the business case - this will need to be considered in the next iteration. If the new delivery body is able to charge for services, a public corporation structure becomes attractive as it allows revenue to be reinvested in delivery. The ability of bodies that are close to Scottish Government (such as Steering Groups) to charge for commercial services is likely to be very limited/non-existent.

The different options identified provide different constitutional options for EES delivery, but under all options the activities undertaken will be the same. This implies that there will not be significant differences in the commercial feasibility of different delivery options.

The activities (and hence commercial structures) of the delivery body are likely to change over time. In the early years of the scheme, the emphasis will be on incentivising households and businesses to install energy efficiency measures, with financial support provided by Scottish Government. In the later phases of the programme, it is likely that there will be a shift towards enforcement, in order to ensure that households and businesses who do not respond to financial incentives install the necessary measures.

This may lead to significant changes to the focus of any delivery body over time. It could also in principle create the possibility of turning on a specific regulatory function later in the Programme, but unless this is expected to have an enduring role beyond the end of the programme, the view is that it is likely to be better to develop options that allow for the regulatory function to sit alongside other Roles, subject to any appropriate ring-fencing, as discussed in Section 11.2.6 below.

### 11.2.3 Key contractual issues

The delivery body's principal contractual relationships will be with<sup>52</sup>:

- **Central Government:** this will define the delivery responsibilities for the new body under the EES programme, and the terms and conditions under which it carries out this role.
- **Delivery partners:** this will define the terms of the relationship between the delivery body and its partners e.g. Local Authorities, parts of the supply chain, and the responsibilities of each for delivering the EES programme.

The nature and complexity of these contractual relationships will depend on the extent to which the delivery body is at arm's length from Scottish Government, and the degree of responsibility for EES delivery which it takes on.

In models where the delivery body is closer to Scottish Government e.g. Steering Group, creation of new directorate, there will be less or no need for a 'thick contract' between Scottish Government and the delivery body, and the working relationship will instead be defined through a framework document or Terms of Reference (ToR).

Conversely, where a delivery body is at arm's length from Scottish Government, a 'thicker' contractual arrangement/framework will be required. However, a more arm's length body may be able to take on a wider range of roles under one roof, lessening the need for additional contracts with a range of supporting delivery partners.

Under models where the delivery body is close to Scottish Government, there may be some responsibilities which it is inappropriate for the delivery body to take on e.g. a regulatory/enforcement role. This would create the need for additional contractual arrangements with the delivery partner with responsibility for these additional roles.

As previously noted, the nature of EES delivery is likely to change over the course of the programme, with a general shift from incentivisation to enforcement. The contractual framework will therefore need to be flexible enough to adapt to this changing delivery role. This flexibility can be provided relatively easily in models that are closer to Scottish Government, as decisions on new roles are made through discussions within Scottish Government, followed by changes to framework documents/Terms of Reference.

### 11.2.4 Identification and allocation of risk

It is too early to assess the risks of delivery across the different options, or draw up a comprehensive risk register for the implementation of a new delivery body. However, there are some general observations that can be made at this stage:

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<sup>52</sup> The delivery body may also contract directly with supply chain participants, and with households and businesses (to define the terms on which financial assistance is provided). The extent and nature of these contractual relationships will need to be examined in the next iteration of the commercial case.

- Under Steering Group models, there is the potential for conflict between the ToR/framework for the new group and the existing governance documents of Scottish Government directorates. This creates the potential for lack of clear allocation of risk and responsibility;
- For more decentralised models e.g. where Local Authorities or other delivery partners have responsibility for a significant part of delivery, or which involve a number of different Scottish Government directorates, it might be harder to allocate risk; and
- For more arm's length arrangements, 'thicker' contractual arrangements will be required, as well as a clear framework for establishing accountability.

### 11.2.5 Personnel and procurement

The extent of procurement activity required to set up the new delivery body will depend on the extent to which it is arm's length from Scottish Government, and will vary materially across the identified options. Models where the delivery body sits closer to Scottish Government will involve less new procurement, while those at arm's length will require the provision of e.g. new premises, IT and staff contracts, Scottish Government guidance on the creation of new public sector bodies covers all of this in detail of course, but for the purposes of this SOC the general thrust only is noted.<sup>53</sup>

The extent of personnel implications will again depend on how separate the delivery body is from Scottish Government. If a new body is set up outside the Civil Service, with staff previously in Government roles, there are potentially Transfer of Undertakings (Protection of Employment) (TUPE) implications. Notwithstanding this, arm's length bodies outside the Civil Service will have greater flexibility to offer specific performance-based incentives for their staff.

### 11.2.6 Regulatory functions

The delivery body may be required to take on roles that are explicitly regulatory (over and above supporting and assisting existing trade bodies and regulators). In particular the delivery body may be called upon to administer accreditation schemes, or take enforcement action against suppliers who cause detriment for property owners, or property owners who fail to install energy efficiency measures by the required date.

As noted above, under models where the delivery body is close to Scottish Government, it may be inappropriate for the delivery body to take on an extensive regulatory/enforcement role. Under all models, to avoid conflicts of interest, it will be important to ensure an appropriate degree of separation of regulatory function with related commercial activity. This will obviously be of particular significance if a Public Corporation model is pursued following further evaluation of the potential for enduring relevant commercial income generation.

These factors imply that there may be a need for some regulatory functions to be undertaken by a third party, or for some degree of ring-fencing within the delivery body.

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<sup>53</sup> Scottish Government: Guidance on Establishment of New Public Bodies.

This need should be considered in a future iteration of the Commercial Case, and separation options identified and evaluated.

### 11.3 Areas for further consideration

Future iterations of the commercial case should consider:

- How regulatory functions sit within the delivery body, i.e. is there any need to ring-fence from commercial functions, or allocate to a separate body; regulatory aspects would sit alongside anybody].
- Extent to which delivery body can fund its activities from charging: if charging revenues are significant, and it is deemed appropriate for the delivery body to reinvest these revenues, a more arm's length, commercial model might perform best.
- The ease of which different delivery mechanisms could take on and subsume additional functions outside of the 10 Roles, to potentially allow for simplification within the existing landscape.

Table 17: A summary of commercial case assessment

No	Option name	Clarity of allocation of risk and responsibility	Flexibility around taking on potential additional roles	Flexibility to charge for services	Flexibility to set terms and conditions for staff and reward delivery	Ability to mandate and hold to account for specific performance
1	Steering Group & Scottish Government delivery	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Primary Terms of Reference applied to Steering Group: this is Non-contractual.</li> <li>- Potential for conflict between TOR of SG and Governance Documents &amp; Objectives of relevant directorates.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Decisions on new roles are a matter of discussion within organisation and amendment of Steering Group Terms of Reference.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Steering Group has no power or leverage to charge for services.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- No scope for sharp specific performance based incentives.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Potential low levels of accountability for specific steering group role.</li> </ul>
2	Scottish Government Local Collaborative Structure	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Primary Terms of Reference applied to Steering Group this is Non-contractual.</li> <li>- Potential for conflict between ToR of SG and Governance Documents &amp; Objectives of relevant directorates.</li> <li>- Increased complexity allocating risk and responsibility when working with a number of different Local Authorities and supporting bodies.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Decisions on new roles are a matter of discussion within organisation and amendment of Terms of Reference.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Steering Group has no power or leverage to charge for services.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- No scope for sharp specific performance based incentives.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Potential low levels of accountability for specific steering group role.</li> </ul>
3	Creation of EES Directorate	<p><b>Medium</b></p> <p>Clear framework around establishing accountability while in addition the Body will have standalone staff and purpose allowing clear identification of responsibility - However as with a standalone directorate requires no legislative basis and can be created and abolished, therefore limited ability to perform at arm's length - limited independence.</p>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Decisions on new roles are a matter of discussion within organisation and amendment of framework documents.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Unclear whether able to charge for commercial revenues.</li> </ul>	<p><b>Medium</b>- Limited scope for sharp specific performance based incentives.</p>	<p><b>Medium</b>- Potential low levels of accountability for specific role.</p>
4	Executive Agency	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Clear framework around establishing accountability while in addition the Body will have standalone staff and purpose allowing clear identification of responsibility</li> <li>- However as with a standalone directorate requires no legislative</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Decisions on new roles are a matter of discussion within organisation and amendment of framework documents.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Unclear whether able to charge for commercial revenues.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Limited scope for sharp specific performance based incentives.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Potential low levels of accountability for specific role.</li> </ul>

No	Option name	Clarity of allocation of risk and responsibility	Flexibility around taking on potential additional roles	Flexibility to charge for services	Flexibility to set terms and conditions for staff and reward delivery	Ability to mandate and hold to account for specific performance
		basis and can be created and abolished, therefore limited ability to perform at arm's length - limited independence.				
5	<b>Non-Ministerial Office</b>	<b>Higher</b> - Clear framework around establishing accountability and independence from direct Directorate/Ministerial control while in addition the Body will have standalone staff and purpose allowing clear identification of responsibility.	<b>Lower</b> - Except to extent to which specific responsibilities may be delegated by ministers, changes to functions are likely to require additional time to process due to the required parliamentary approval.	<b>Lower</b> - Unclear whether able to charge for commercial revenues.	<b>Medium</b> - Limited scope for sharp specific performance based incentives.	<b>Medium</b> - Potential low levels of accountability for specific role.
6	<b>Executive NDPB</b>	<b>Higher</b> - Clear framework around establishing accountability while in addition the Body will have standalone staff and purpose allowing clear identification of responsibility.	<b>Medium</b> - Ministers can specify amendments through e.g. powers to amend business plans and budgets. - However, there is potential for conflict between Directors' fiduciary duties to company and requests for changes.	<b>Medium</b> - Reliant on the extent to which an NDPB can charge for commercial activities e.g. through sector levies.	<b>Higher</b> - Flexibility to offer specific performance based incentives.	<b>Higher</b> - High levels of accountability for specific roles as set out within framework.
7	<b>Public Corporation</b>	<b>Higher</b> - Clear framework around establishing accountability while in addition the Body will have standalone staff and purpose allowing clear identification of responsibility.	<b>Medium</b> - Ministers can specify amendments through e.g. powers to amend business plans and budgets. - However, there is potential for conflict between Directors' fiduciary duties to company and requests for changes.	<b>Higher</b> - By definition, Public Corporations are required to generate at least 50% of costs through commercial revenues.	<b>Higher</b> - Flexibility to offer specific performance based incentives.	<b>Higher</b> - High levels of accountability for specific roles as set out within framework.

## 12 Outline management case

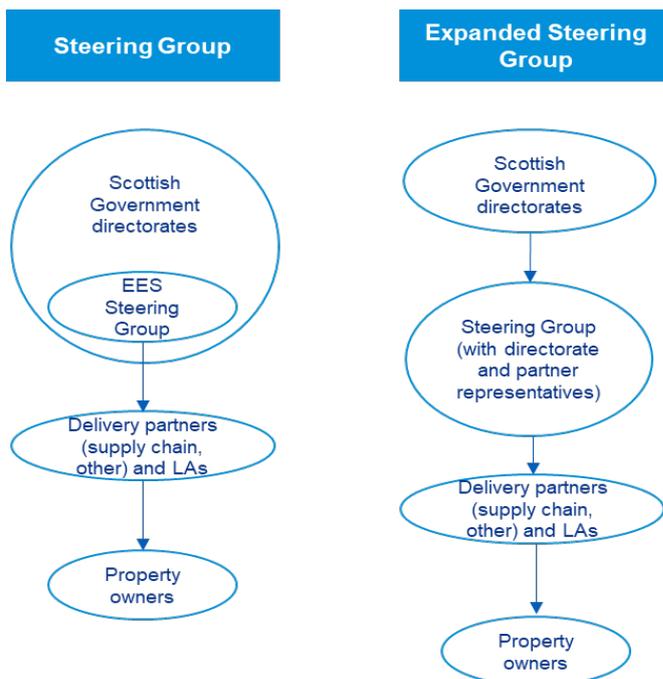
### 12.1 Key points

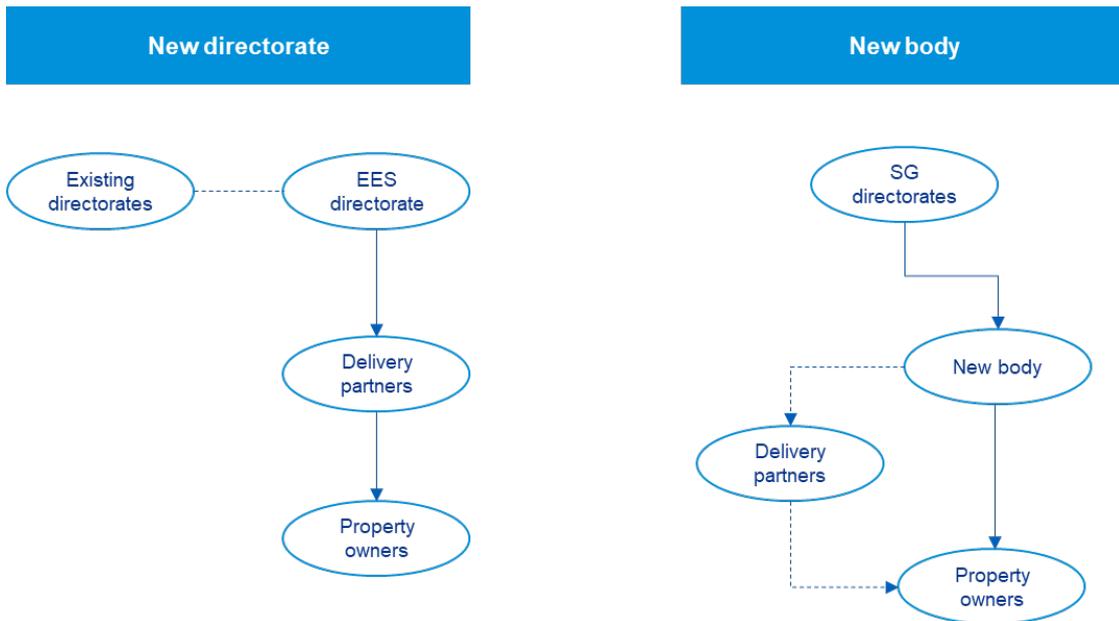
This chapter provides an initial outline of the management case for the shortlisted options. It focuses on the deliverability of the options, and key aspects of how the delivery body will be managed going forward, in particular the degree of freedom the body will have to deliver the aims of the EES programme.

- With delivery models that are further from Scottish Government, it will be important that they are set up in such a way that Scottish Government retains the required degree of control over strategic direction.
- In terms of deliverability, more arm’s length models will take longer to implement due to the need for legislation. However, given the length of the EES programme this does not preclude any options.
- The best performers are NDPB, Public Corporation and the new directorate. NDPB and Public Corporation score strongly across all areas of the commercial case. The new Directorate and Executive Agency also perform well, although these may be constrained in its ability to offer long term commitments, due to its dependence on the political cycle. Steering group models perform less strongly, due to a lack of a defined framework to allocate management responsibilities.

### 12.2 Management structure

The shortlisted options present several variations of management structure. These are summarised in the chart below:





In order to provide effective management of the EES programme, these structures must provide:

- Accountability on the roles and functions which have to be delivered;
- Effective interface with the supply chain and property owners and occupiers; and
- Adequate governmental or parliamentary oversight, and the ability to intervene and change priorities.

None of the models above prevent the conditions being fulfilled. However, for some models where the delivery is close to Scottish Government (Steering Group models) arrangements will be more informal, with the involvement of multiple directorates and delivery partners, which creates scope for a less clear governance model.

For arm’s length models, it will be important to ensure that the Scottish Government retains the control it needs to make changes to programme delivery (while recognising the benefits of giving the management of the body the freedom to deliver EES as they see fit).

Relevant staff should attend the Scottish Government’s internal joint network group which covers all bodies being established, as this a good forum for information gathering on previous learnings.

### 12.3 Project deliverability

Models that are closer to Scottish Government (Steering Groups, creation of a new directorate) will be easier to set up than more arm’s length bodies. However, care would still need to be taken to create a model that allocated responsibilities between the various stakeholders (different directorates and partners such as Local Authorities).

If a decision was taken to create a new public body, Scottish Government guidelines recommend that it should have at least 3 operational years. Given that the EES programme will run until 2040, a new delivery body would meet this condition.

For options that involve the creation of a new public body through legislation e.g. Public Corporation, Executive NDPB, there is likely to be a significant time lag (of up to 3 years) before the new body is fully operational. Given that:

- Clarity around many of the roles a new delivery body would provide are subject to further policy decisions; and
- Transitional governance arrangements could be put in place while the administrative/legislative process for setting up a new body was followed.<sup>54</sup>

## 12.4 Areas for further consideration

Given that the management case is currently at an early stage, more work will be required to develop it more fully in future iterations of the business case, in particular:

- Identification of clear delivery dates and milestones for the creation of the delivery body, including legislative timetable;
- Proposed programme management approach for creation of delivery body;
- Plans for post implementation evaluation arrangements; and
- Contingency planning, and approach to management.

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<sup>54</sup> Scottish Government: [Scottish Public Finance Module](#).

Table 18: A summary of management case assessment

No	Option name	Degree of government control	Ability to build and preserve organisational knowledge	Ability establish enduring commitments, independent of political cycle	Responsiveness to changing circumstances	Delegated management freedom in delivering purpose	Ease of transition to new model	Clarity of governance model
1	<b>Steering Group &amp; Scottish Government delivery</b>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Staffed by Civil Servants.</li> <li>- Delivery resources directly under control of SG directorates.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Frequent rotation of staff.</li> <li>- Risk of expertise diluted within individual directorates.</li> <li>- Potentially reduced ability to identify and access relevant experience</li> <li>- Reliant on underlying directorates to maintain knowledge.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Lack of formal entity to act as counterparty.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Lack of formal framework potentially enables agile response.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Steering Group model lacks direct leverage over delivery.</li> <li>- Dependent on individual directorates.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Requires no new formal organisational framework, but does require cross directorate collaboration.</li> <li>- Absence of new formal structures should facilitate a rapid transition.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Informal arrangement.</li> <li>- Direct involvement of multiple directorates.</li> <li>- Lack of formal powers.</li> </ul>
2	<b>Scottish Government Local Collaborative Structure</b>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Staffed by Civil Servants.</li> <li>- Delivery resources directly under control of SG directorates.</li> <li>- However number of parties involved further away from government control.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Frequent rotation of staff.</li> <li>- Risk of expertise diluted within individual directorates.</li> <li>- Potentially reduced ability to identify and access relevant experience.</li> <li>- Reliant on underlying directorates to maintain knowledge.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Lack of formal entity to act as counterparty.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Lack of formal framework potentially enables agile response.</li> <li>- Agile due to number of smaller organisations working on the ground.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Non centralised model lacks direct leverage over delivery.</li> <li>- Dependent on individual directorates.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Requires no new formal organisational framework, but does require cross directorate collaboration.</li> <li>- Absence of new formal structures should facilitate a rapid transition.</li> <li>- However does require clear framework to transition significant number of new parties into governing role.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Informal arrangement.</li> <li>- Direct involvement of multiple directorates and Local Authorities and other bodies.</li> <li>- Lack of formal powers.</li> </ul>
3	<b>Creation of EES Directorate</b>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Staffed by Civil Servants.</li> <li>- Delivery resources directly under control of SG directorates.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Frequent rotation of staff, as these remain civil servants.</li> <li>- Single organisation has its own records management system and library of expertise.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Lack of legally separate entity to act as counterparty.</li> <li>- Ministerial direction can amend focus at short notice.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Framework document may be amended by Ministers at any time.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Directly answerable to Ministers.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Fairly simple to create new directorate by reorganisation, however existing functions have to be able to continue.</li> <li>- However need to ensure there are clear distinctions between roles and responsibilities between multiple directorates.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Clear definition of roles, responsibilities and accountability.</li> </ul>

No	Option name	Degree of government control	Ability to build and preserve organisational knowledge	Ability establish enduring commitments, independent of political cycle	Responsiveness to changing circumstances	Delegated management freedom in delivering purpose	Ease of transition to new model	Clarity of governance model
4	<b>Executive Agency</b>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Staffed by Civil Servants</li> <li>- Clearly designated units of a central government department, administratively distinct, but remaining legally part of it.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Frequent rotation of staff, as these remain civil servants- Single organisation has its own records management system and library of expertise.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Lack of legally separate entity to act as counterparty- Ministerial direction can amend focus at short notice.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Framework document may be amended by Ministers at any time.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Directly answerable to Ministers- Framework may be amended at short notice.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Does not require statute for set up, but does require agreement between directorates regarding allocation of staff and resources, and creation of structure.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Clear definition of roles, responsibilities and accountability.</li> </ul>
5	<b>Non-Ministerial Office</b>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Staffed by Civil Servants.</li> <li>- Headed by office holder in Scottish Administration.</li> <li>- Not part of Scottish Government but accountable to parliament likely through Minister for Energy or Housing.</li> <li>- Funded through Scottish Consolidated Fund rather than through Ministerial portfolios.</li> <li>- Managed by statutory Board.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Ability to maintain expertise may be better as staff not linked to particular directorates.</li> <li>- Single organisation has its own records management system and library of expertise.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Accountable to Parliament rather than individual Minister.</li> <li>- Powers and duties set out in statute, but boards appointed by Ministers.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- NMOs are accountable to and funded by Parliament, and therefore requires parliamentary approval for amendments to purpose.</li> <li>- Not subject to direction of Ministers in execution of statutory functions.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Primary accountability to Parliament rather than Ministers.</li> <li>- However, significant scrutiny remains through e.g. ministerial approval of plans and budgets.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Likely to be time-consuming and complex to create because of need for parliamentary approval.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Clear definition of roles, responsibilities and accountability.</li> </ul>
6	<b>Executive NDPB</b>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Not civil servants.</li> <li>- Not part of Scottish Government but accountable through KPIs.</li> <li>- Separate legal identity (statute or company limited by guarantee).</li> <li>- Operate under strategic framework set by Minister, who oversee corporate and business plans and set direction of travel.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- As the employer of its staff who are not civil servants, the NDPB has greater scope to create, sustain and develop expertise.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Powers and duties set out in statute, but boards appointed by Ministers.</li> <li>- Ministers set the strategic framework for the body.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Functions are generally set out in statute rather than a framework document, and as such may be more difficult to vary significantly at short notice.</li> <li>- If set up as corporate entity, Directors have duty of care to corporate entity. This may make it harder to reach agreement on changing role.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Delegated responsibility for day to day operations subject to Ministers' strategic oversight.</li> <li>- Ministers agree corporate at business plans.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Likely to require powers under statute to be agreed.</li> <li>- Separate legal entity needs to be created.</li> <li>- Ministers may be able to sponsor without wider parliamentary approval.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Clear definition of roles, responsibilities and accountability.</li> </ul>

No	Option name	Degree of government control	Ability to build and preserve organisational knowledge	Ability establish enduring commitments, independent of political cycle	Responsiveness to changing circumstances	Delegated management freedom in delivering purpose	Ease of transition to new model	Clarity of governance model
7	Public Corporation	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Not civil servants.</li> <li>- Not part of Scottish Government but Board appointed by ministers.</li> <li>- Established by statute or under Companies Act.</li> <li>- Strategic framework set by Ministers.</li> <li>- Focus on commercial activities.</li> <li>- Ministers still have power to direct.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- As the employer of its staff who are not civil servants, the NDPB has greater scope to create, sustain and develop expertise.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Powers and duties set out in statute, but boards appointed by Ministers.</li> <li>- Ministers set the strategic framework for the body.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Functions are generally set out in statute rather than a framework document, and as such may be more difficult to vary significantly at short notice.</li> <li>- If set up as corporate entity, Directors have duty of care to corporate entity. This may make it harder to reach agreement on changing role.</li> </ul>	<p><b>Medium</b></p> <ul style="list-style-type: none"> <li>- Delegated responsibility for day to day operations subject to Ministers' strategic oversight.</li> <li>- Ministers agree corporate at business plans.</li> </ul>	<p><b>Lower</b></p> <ul style="list-style-type: none"> <li>- Likely to require powers under statute to be agreed</li> <li>- Separate legal entity needs to be created.</li> <li>- Ministers may be able to sponsor without wider parliamentary approval.</li> <li>- Potential requirement for enabling legislation plus creation and registration of company.</li> </ul>	<p><b>Higher</b></p> <ul style="list-style-type: none"> <li>- Clear definition of roles, responsibilities and accountability.</li> </ul>

## Annex 1 – Option assessment against roles

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### Steering Group

A steering group could provide high level advice and review of frameworks, however there is limited to no resource available for specific 'go-to' advice or monitoring of standard roles, and there would also be no scope for it to provide a central EES focal point.

A national-scale marketing and education service role would be limited, with high level strategy and timetables being set. Similarly, capacity, support and expert advice could be provided to Local Authorities, however this would be at a high level and limited to an advisory role with little scope to set standards or provide capacity support in technical or legal roles.

There is potential for a steering group to review existing legislation and provide recommendations to reform, but there is minimal resource to provide monitoring or enforcement activity. Although there is also a lack of resource to develop a monitoring framework against EES targets, high level advice can be provided to Local Authorities on monitoring and data gathering.

There is resource to deliver progress reports on an interim basis, but there is no consistent infrastructure to gather and collate the information required. There is potential to maintain an overview of funding availability and allocations, but a steering group would not be able to facilitate funding or provide national level assistance to attract private investors.

Supply chain development support could be periodically provided, however there is limited ability to present training opportunities or use PCS. There is also little scope for ready access route to direct capacity and/or expertise in IT and data access infrastructure.

### Steering Group & Scottish Government delivery

Regular advice could be provided from either steering groups or specific functions within Scottish Government in order to fulfil some parts of Role 1, and capacity support could be provided by individual components of Scottish Government delivery, however there is a lack of specialist technical resource to provide specific guidance on all aspects of EES.

Due to the multiple directorates and departments, it will be challenging to establish a clear brand and provide national-scale marketing. It is unclear whether central government would be able to provide consumers with effective protection due to a lack of specific technical expertise and it is therefore considered that Role 3 may not be best suited to a steering group and Scottish Government.

Scottish Government does not have a track record of recruiting enforcement specialists in order to enforce national-level regulation and support local-level enforcement, and it is likely that there is also a lack of readily accessible expertise in data infrastructure. There is, however, the ability for Scottish Government to provide a clear lead to supply chain players and catalyse change.

There is no obvious route to facilitation of different sources of funding and project finance, but it is expected that Scottish Government would be able to provide a funding overview role where they look to analyse the costs and barriers to deliver, and provide advice to funding schemes.

### **Scottish Government Local Collaborative Structure**

A Scottish Government Local Collaborative Structure could provide advice at regular intervals from either steering groups or specific functions within Scottish Government. LHEES, standards, review, feedback and approval could be delegated to individual components of Scottish Government, but there is limited technical resource. It is unlikely that a local collaborative structure could enforce national level regulation and support local-level enforcement as regulatory functions do not sit well within government departments and central Government does not have a track record of recruiting enforcement specialists.

Although there is a lack of ability to facilitate the project finance and funding, there is the ability to provide a funding overview role, whereby the body or a department of the Scottish Government looked to analyse the cost and barriers to deliver. Role 3 may not be suited to a local collaborative structure as there is a lack of specific technical expertise and it is unclear whether government would be able to provide consumers with effective protection. Although there is a likely lack of capability and expertise in IT and data infrastructure, there is a maximised ability to share public available data.

For role 4, progress reports and the creation and delivery of Monitoring Framework is likely to sit within the Office of Chief Economist or DECC. Roles 6 and 9 may also be better suited to other options due to the multiple directorates. Establishing a clear brand will be difficult because of this, and the ability to provide a clear lead to supply chain players will also be more challenging with the capabilities split across multiple teams.

### **Steering Group & Development of new directorate**

The creation of an EES Directorate could provide support to Local Authorities from either steering groups or specific functions within Scottish Government. Subject to resourcing, capacity supported could also be provided by individual components of Scottish Government delivery.

There is the potential to hire specific technical experts to set and monitor quality assurance, but it is unclear whether central government would be able to provide consumers with effective protection. A clear central brand could be established and could be well placed for specialist marketing support, with the capability to have the support in-house. In regards to Role 5, a central EES focal point, a new directorate should be able to provide this.

Regulatory functions do not sit particularly well within government departments and so the creation of an EES Directorate will unlikely be able to enforce national-level regulation and support local-level enforcement. There is the ability to provide a funding overview role and to provide advice to funding schemes across the programme, but there is a lack of ability to facilitate project finance and funding as it is difficult to see how multiple directorates could facilitate other sources of funding.

Progress reports and the creation of the Monitoring Framework is likely to sit within the Office of Chief Economist or DECC. Although there is a likely lack of capacity and expertise in IT and data access infrastructure, the ability to share public available data is maximised. Role 9 would be a good suit, as the creation of an EES Directorate could also provide a clear lead to supply chain players and/or catalyse change more easily with capabilities split within single teams.

### **Amendments of existing bodies within Scottish Government control**

An advice role to Local Authorities would be well suited to external bodies involved in similar roles to Local Authorities. External organisations could potentially supply additional support to Local Authorities but this would likely be limited to expert advice roles as there are significant resource requirements for smaller organisations.

An existing body within Scottish Government control can provide high level advice and review of quality assurance frameworks, but is unlikely to have the resource to create this from scratch. There is scope to manage delivery of branding, marketing and communication on a national level with support from DSHJ, however there is a lack of central brand. Role 5 may not be best suited to bodies within Scottish Government control, as it is hard to align a number of different external bodies around an external central point.

There is more ready scope to build and develop data infrastructure but at significant scale to current roles. Existing bodies inside of Scottish Government control have the ability to provide a funding overview role, but this is limited by the size of the organisations taking on significant roles.

There is some scope to manage financial aspects, but there is limited scope for some of these organisations to provide national level assistance to attract private investors. Resource is lacking to provide any monitoring or enforcement activity, but there is the potential to review existing legislation and provide recommendations to reform.

There could be a lack of infrastructure support to allow IT and data gathering systems if the entire process is kept within Scottish Government departments, so a report progress role may not be best suited to existing bodies within Scottish Government control.

### **Amendments of existing bodies outside Scottish Government control**

A central focal point role may not be best suited to existing bodies outside of Scottish Government's control as it is harder to align a number of bodies around one central point, and it is outside of direct government control.

There is scope to provide a national scale marketing, communication and education service with support from DSHJ, with individual marketing projects being delivered through external existing organisations, but there is a lack of central brand. High level advice of quality assurance frameworks could be provided, however it may be difficult to have sufficient resource to create from scratch.

Monitoring roles could be amended into functions of SEPA but go-to supplier advice would require additional resource within ZWS providing support to suppliers. External organisations could provide support to Local Authorities but this would likely be limited to

expert advice roles, and there could potentially be a lack of specific technical expertise in a small number of organisations.

There are potential risks of relying on organisations outside of Scottish Government control to collect and manage data from specific Local Authorities, and there is a significant breadth of organisations to leverage their own internal data architecture. Certain organisations have guidance and an information role is a good fit, but the scale of support required is likely to dwarf the current capability.

An overview of funding role could be suited to existing bodies outside of Scottish Government control, where costs and barriers to deliver are analysed. Resources could be injected but this is a less obvious fit.

There is an increased risk from delegating funding with no direct route of control to the Scottish Government, but there is good scope to manage financial aspects within one of these organisations, such as Ofgem.

There is a lack of resource in Role 2 in order to provide any enforcement or monitoring activity, but there is potential to review existing legislation and provide recommendations. There is some scope to build data infrastructure, however, those further away from Government have less access to Government public data.

### **Executive Agency**

An Executive Agency has the ability to provide national-scale marketing by establishing a clear central brand, as well as being able to leverage private sector expertise. Specialist support could be well placed, but it is unlikely that there will be capability in-house. It is expected that Role 5 will be well suited to an executive agency as there is a strong central focal point and co-ordinator for all EES services.

There is potential for quality assurance to be provided through specific technical expertise, but there is still direct government control over regulatory and quality assurance guidelines. Advice could be provided to Local Authorities at regular intervals, but there is not enough specialist resource available in order to provide specific guidance on all aspects of EES.

An Executive Agency would likely be able to provide a funding overview role and provide advice to funding schemes, but there is a lack of ability to facilitate project finance and funding.

A single body can provide a clear lead to support supply chain development and expansion, and there is additional scope to undertake large IT infrastructure delivery projects, although there could be potential reliance on third party suppliers. Progress reports and the creation of a Monitoring Framework is likely to sit within the specific function of an Executive Agency, and there is the potential to recruit enforcement specialists which would suit the descriptions of Roles 4 and 2.

### **Non-Ministerial Office**

A Non-Ministerial office would be expected to achieve the requirements of Role 5 as there is a strong central focal point and EES coordination service. Similarly, national-scale

marketing could be provided as a clear central brand could be established, as well as the ability to leverage private sector expertise.

There is potential for quality assurance technical expertise, but there is a lack of direct government control over these guidelines. Regular support and expert advice could be provided to Local Authorities, and reviews, feedback and approval could be delegated to individual components but there is likely to be limited scope to assemble extensive technical resource.

As with an Executive Agency, a Non-Ministerial office could monitor progress against EES targets at a national level with a strong central point of contact, and provide a clear lead to supply chain players due to being a single body. Role 7 could also be well suited, but there is less ability to facilitate access to project funding and finance as the main lever would be through grant funding.

The scale of resource required to deliver national-level regulation and support local-level enforcement could be prohibited, but there is potential to recruit enforcement specialists in order to achieve Role 2. There could be scope to undertake infrastructure delivery projects, but this may require third party suppliers.

### **Executive NDPB**

An Executive NDPB has the ability to provide capacity, support and expert advice to Local Authorities and the potential to acquire specialist technical resource to provide specific guidance on all aspects of the project. A strong central focal point is expected to be provided, as well as a national-scale marketing, communication and education service as there is the ability to establish a clear central brand. There is also the potential to recruit specialists to enforce regulation and support local level enforcement. Based on the above, the four crucial roles as mentioned earlier in this chapter would be well suited to an executive NDPB.

A single body could provide a clear lead to supply chain players so it is expected that the supply chain development and expansion would be supported, and there is also scope to provide more training and signalling to the supply chain. There is potential ability to facilitate project finance providing that the right specialists are recruited, as well as being able to maintain an overview of the funding availability and allocations.

Enforcement specialists could be recruited, but the scale of resource required could be prohibited, and this could lead to a further separated government control over the regulatory and enforcement function. Role 4 (monitoring and reporting progress) is likely to be suited to an Executive NDPB as there is a strong central point of contact and co-ordinator.

### **Public Corporation**

A public corporation could be well placed to provide a national-scale marketing communication and education service with specialist support, with a clear brand and the potential to have capability in-house.

There is a strong central focal point and a coordination could be provided for all EES services. There is potential for specific quality assurance expertise but this could lead to a

potential conflict of interest due to commercial activities. Role 1, advice and support, could be provided to Local Authorities by a public corporation at regular intervals, and there is potential to acquire specialist technical resource to provide specific guidance.

There is the ability for a public corporation to maintain an overview of funding availability and allocations, as well as facilitating access to project funding if the right specialists are recruited. Additional scope could be provided for large data infrastructure delivery projects to be undertaken, and there is also scope to provide more training to supply chain development and expansion.

Enforcement specialists could potentially be recruited to enforce national-level regulation and support local-level enforcement, but a conflict of interest could arise due to commercial activities. A public corporation has a strong central point of contact and co-ordinator, which will enable progress to be monitored and reported against EES targets at a national level, whilst providing support to local-level monitoring and reporting.

Table 18: The long list of options

No	Option name	Role 1: Provide capacity, support and expert advice to Local Authorities	Role 2: Enforce national-level regulation and support local-level enforcement	Role 3: Provide clear quality assurance guidelines and effective, consistent customer protection processes	Role 4: Monitor and report progress against EES targets at a national level and support local-level monitoring and reporting	Role 5: Provide a central EES focal point and coordination service	Role 6: Provide a national-scale marketing, communication and education service	Role 7: Maintain an overview of funding availability and allocations	Role 8: Facilitate access to project funding and finance	Role 9: Support supply chain development and expansion	Role 10: Data Infrastructure
1	<b>Steering Group</b>	<ul style="list-style-type: none"> <li>- Advice could be provided at regular intervals but at a high level and limited to an advisory role.</li> <li>- Lack resource to provide specific guidance on all aspects of EES or support in delivery.</li> <li>- Very little scope for capacity support in technical, commercial or legal role.</li> <li>- Very little scope to set standards, review, provide feedback, and ultimately approve (or make recommendations for approval of) all LHEESs.</li> </ul>	<ul style="list-style-type: none"> <li>- Lacks resource to provide any monitoring or enforcement activity.</li> <li>- Potential to review existing legislation and provide recommendations to reform.</li> </ul>	<ul style="list-style-type: none"> <li>- Can provide high level advice and review of frameworks but unlikely to have resource to create from scratch.</li> <li>- Limited resource available for specific go to advice role for suppliers.</li> <li>- No resource to carry out monitoring or spot checks on standards.</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of resource to develop monitoring framework or methodology.</li> <li>- Limited to high level advice and guidance role for Local Authorities on monitoring and data gathering.</li> <li>- Some resource to deliver progress reports on an interim basis, but no consistent infrastructure to gather and collate the information required.</li> </ul>	<ul style="list-style-type: none"> <li>- Cannot provide a single central reference point but involves multiple directorates and/or capability groups within directorates.</li> </ul>	<ul style="list-style-type: none"> <li>- No scope for the actual delivery of any campaigns.</li> <li>- Role would be limited setting high level strategy and timetables.</li> </ul>	<ul style="list-style-type: none"> <li>- Potentially able to provide a funding overview role, whereby the body looked to analyse the costs and barriers to deliver, and provide advice to funding schemes across the programme.</li> </ul>	<ul style="list-style-type: none"> <li>- No scope to facilitate funding, manage cash flows or provide national level assistance to attract private investors.</li> </ul>	<ul style="list-style-type: none"> <li>- Could periodically work to facilitate conversations between consumers and supply chains.</li> <li>- Limited ability to use PCS EES portals or provide training opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>- No direct capacity and expertise in IT and data access infrastructure.</li> </ul>
2	<b>Steering Group &amp; Scottish Government delivery</b>	<ul style="list-style-type: none"> <li>- Advice could be provided at regular intervals from either steering groups or specific functions within Scottish Government.</li> <li>- Lack specialist technical resource to provide specific guidance on all aspects of EES.</li> </ul>	<ul style="list-style-type: none"> <li>- Regulatory functions do not sit well within government departments.</li> <li>- Scale of resource required to deliver effectively could</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of specific technical expertise to set and monitor quality assurance.</li> <li>- Unclear whether central</li> </ul>	<ul style="list-style-type: none"> <li>- Progress reports and the creation and delivery of Monitoring Framework likely to sit within the Office of Chief</li> </ul>	<ul style="list-style-type: none"> <li>- Cannot provide a single central reference point but involves multiple directorates and/or capability</li> </ul>	<ul style="list-style-type: none"> <li>- Establishing clear central brand will be difficult with multiple departments</li> </ul>	<ul style="list-style-type: none"> <li>- Able to provide a funding overview role, whereby the body or a department of the SG looked to analyse the</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of ability to facilitate project finance and funding, main lever available would be grant funding, difficult to see</li> </ul>	<ul style="list-style-type: none"> <li>- Ability to provide a clear lead to supply chain players and/or catalyse change in supply change would be more difficult with</li> </ul>	<ul style="list-style-type: none"> <li>- Likely lack of capacity and expertise in IT and data access infrastructure.</li> </ul>

		- Capacity support provided by individual components of Scottish Government delivery. - LHEES, Standards, review, feedback, and approval could be delegated to individual components of SG but limited technical resource.	be prohibited for government department. - Central Government does not have track record of recruiting enforcement specialists.	government would be able to provide consumers with effective protection.	Economist or DECC.	groups within directorates.	and directorates.	costs and barriers to deliver, and provide advice to funding schemes across the programme.	how multiple departments and directorates to facilitate other sources of funding.	capabilities split across multiple teams.	
3	<b>Scottish Government Local Collaborative Structure</b>	- Advice could be provided at regular intervals from either steering groups or specific functions within Scottish Government. - Potential improved ability to hire specialist technical resource to provide specific guidance on all aspects of EES. - Capacity support subject to resourcing could provide by individual components of Scottish Government delivery. - LHEES, Standards, review, feedback, and approval could be delegated to individual components of SG but limited technical resource. - However increased involvement in the programme from Local Authorities increases ability to work effectively.	- Regulatory functions do not sit well within government departments. - Scale of resource required to deliver effectively could be prohibited for government department. - Central Government does not have track record of recruiting enforcement specialists. - However increased proximity to working with Local Authorities increases ability to deliver local level enforcement.	- Potential for hiring of specific technical expertise to set and monitor quality assurance. - Unclear whether central government would be able to provide consumers with effective protection.	- Progress reports and the creation and delivery of Monitoring Framework likely to sit within the Office of Chief Economist or DECC. - Improved due to close proximity to local level delivery.	- Cannot provide a single central reference point but involves multiple directorates and/or capability groups within directorates.	- Establishing clear central brand will be difficult with multiple departments, directorates and Local Authorities.	- Able to provide a funding overview role, whereby the body or a department of the SG looked to analyse the costs and barriers to deliver, and provide advice to funding schemes across the programme.	- Lack of ability to facilitate project finance and funding, main lever available would be grant funding, difficult to see how multiple departments and directorates to facilitate other sources of funding.	- Ability to provide a clear lead to supply chain players and/or catalyse change in supply change would be more difficult with capabilities split across multiple teams, however in close proximity to local level partners.	- Likely lack of capacity and expertise in IT and data access infrastructure. - Ability to share public available data is maximised.

Table 18: The long list of options (cont.)

Option name	Role 1: Provide capacity, support and expert advice to Local Authorities	Role 2: Enforce national-level regulation and support local-	Role 3: Provide clear quality assurance guidelines and effective,	Role 4: Monitor and report progress against EES targets at a national level and	Role 5: Provide a central EES focal point and	Role 6: Provide a national-scale marketing, communication	Role 7: Maintain an overview of funding	Role 8: Facilitate access to project funding and finance	Role 9: Support supply chain development and expansion	Role 10: Data Infrastructure
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		level enforcement	consistent customer protection processes	support local-level monitoring and reporting	coordination service	and education service	availability and allocations				
4	<b>Creation of EES Directorate</b>	<ul style="list-style-type: none"> <li>- Advice could be provided at regular intervals from either steering groups or specific functions within Scottish Government.</li> <li>- Potential improved ability to hire specialist technical resource to provide specific guidance on all aspects of EES.</li> <li>- Capacity support subject to resourcing could provide by individual components of Scottish Government delivery.</li> <li>- LHEES, Standards, review, feedback, and approval could be delegated to individual components of SG but limited technical resource.</li> </ul>	<ul style="list-style-type: none"> <li>- Regulatory functions do not sit well within government departments.</li> <li>- Scale of resource required to deliver effectively could be prohibited for government department.</li> <li>- Central Government does not have track record of recruiting enforcement specialists.</li> </ul>	<ul style="list-style-type: none"> <li>- Potential for hiring of specific technical expertise to set and monitor quality assurance.</li> <li>- Unclear whether central government would be able to provide consumers with effective protection.</li> </ul>	<ul style="list-style-type: none"> <li>- Progress reports and the creation and delivery of Monitoring Framework likely to sit within the Office of Chief Economist or DECC.</li> </ul>	<ul style="list-style-type: none"> <li>- Can provide single central reference point.</li> </ul>	<ul style="list-style-type: none"> <li>- Able to establish clear central brand.</li> <li>- Could be well placed for specialist support, potential to have capability in house.</li> </ul>	<ul style="list-style-type: none"> <li>- Able to provide a funding overview role, whereby the body or a department of the SG looked to analyse the costs and barriers to deliver, and provide advice to funding schemes across the programme.</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of ability to facilitate project finance and funding, main lever available would be grant funding, difficult to see how multiple departments and directorates to facilitate other sources of funding.</li> </ul>	<ul style="list-style-type: none"> <li>- Ability to provide a clear lead to supply chain players and/or catalyse change in supply change easier with capabilities split within single teams.</li> </ul>	<ul style="list-style-type: none"> <li>- Likely lack of capacity and expertise in IT and data access infrastructure.</li> <li>- Ability to share public available data is maximised.</li> </ul>
5	<b>Bodies outside of Scottish Government control</b>	<ul style="list-style-type: none"> <li>- Advice role well suited to external bodies involved in similar roles to Local Authorities.</li> <li>- External organisations could potentially supply additional support to Local Authorities but would likely be limited to expert advice roles as significant resource requirements for smaller organisations.</li> <li>- Potentially a lack of specific technical, legal or commercial expertise in small number of organisations.</li> </ul>	<ul style="list-style-type: none"> <li>- Lacks resource to provide any monitoring or enforcement activity.</li> <li>- Potential to review existing legislation and provide recommendations to reform.</li> </ul>	<ul style="list-style-type: none"> <li>- Can provide high level advice and review of frameworks but unlikely to have resource to create from scratch.</li> <li>- Go to supplier advice would require additional resource within ZWS providing support to suppliers.</li> <li>- Monitoring roles could be amended into functions of</li> </ul>	<ul style="list-style-type: none"> <li>- Potential risks of relying on organisations outside Scottish Government control to collect and manage data from specific Local Authorities.</li> <li>- Significant breadth of potential organisations to take on creation and running of monitoring framework, able to leverage their own internal data architecture and</li> </ul>	<ul style="list-style-type: none"> <li>- Hard to align a number of different external bodies around an external central point.</li> <li>- Hard for external non-governmental body to maintain overview of a large number of Local Authorities.</li> <li>- Outside of direct</li> </ul>	<ul style="list-style-type: none"> <li>- Scope to manage delivery of Branding Marketing and Communication on a national level with support from DSHJ.</li> <li>- Individual marketing projects could be delivered through external existing organisations or responsibility</li> </ul>	<ul style="list-style-type: none"> <li>- Able to provide a funding overview role, whereby the body looked to analyse the costs and barriers to deliver, and provide advice to funding schemes across the programme.</li> <li>- Limited by size of organisations taking on significant role requiring significant</li> </ul>	<ul style="list-style-type: none"> <li>- Increased risk from delegating funding access to body with no direct route of control to the Scottish Government.</li> <li>- Good scope to manage financial aspects within one of these organisations such as Ofgem.</li> <li>- Significant scope for some of these organisations to provide national</li> </ul>	<ul style="list-style-type: none"> <li>- Certain organisations have guidance and information role is a good fit.</li> <li>- Scale of support required likely to dwarf current capability.</li> <li>- Could potentially provide.</li> </ul>	<ul style="list-style-type: none"> <li>- More ready scope to build and develop data infrastructure but at significant scale to current roles.</li> </ul>

				SEPA. - Significantly scale up based on current organisation.	experience in similar roles such as Scottish Housing Regulator .	government control.	delegated out. - However lack of central brand.	scaling. - Resource could be injected but less obvious fit.	level assistance to attract private investors.		
6	<b>Bodies outside of Scottish Government control</b>	<ul style="list-style-type: none"> <li>- Advice role well suited to external bodies involved in similar roles to Local Authorities.</li> <li>- External organisations could potentially supply additional support to Local Authorities but would likely be limited to expert advice roles as significant resource requirements for smaller organisations.</li> <li>- Potentially a lack of specific technical, legal or commercial expertise in small number of organisations.</li> </ul>	<ul style="list-style-type: none"> <li>- Lacks resource to provide any monitoring or enforcement activity.</li> <li>- Potential to review existing legislation and provide recommendations to reform.</li> </ul>	<ul style="list-style-type: none"> <li>- Can provide high level advice and review of frameworks but unlikely to have resource to create from scratch.</li> <li>- Go to supplier advice would require additional resource within ZWS providing support to suppliers.</li> <li>- Monitoring roles could be amended into functions of SEPA.</li> <li>- Significantly scale up based on current organisation.</li> </ul>	<ul style="list-style-type: none"> <li>- Potential risks of relying on organisations outside Scottish Government control to collect and manage data from specific Local Authorities.</li> <li>- Significant breadth of potential organisations to take on creation and running of monitoring framework, able to leverage their own internal data architecture and experience in similar roles such as Scottish Housing Regulator.</li> </ul>	<ul style="list-style-type: none"> <li>- Hard to align a number of different external bodies around an external central point.</li> <li>- Hard for external non-governmental body to maintain overview of a large number of Local Authorities.</li> <li>- Outside of direct government control.</li> </ul>	<ul style="list-style-type: none"> <li>- Scope to manage delivery of Branding Marketing and Communication on a national level with support from DSHJ.</li> <li>- Individual marketing projects could be delivered through external existing organisations or responsibility delegated out.</li> <li>- However lack of central brand.</li> </ul>	<ul style="list-style-type: none"> <li>- Able to provide a funding overview role, whereby the body looked to analyse the costs and barriers to deliver, and provide advice to funding schemes across the programme.</li> <li>- Limited by size of organisations taking on significant role requiring significant scaling.</li> <li>- Resource could be injected but less obvious fit.</li> </ul>	<ul style="list-style-type: none"> <li>- Increased risk from delegating funding access to body with no direct route of control to the Scottish Government.</li> <li>- Good scope to manage financial aspects within one of these organisations such as Ofgem.</li> <li>- Significant scope for some of these organisations to provide national level assistance to attract private investors.</li> </ul>	<ul style="list-style-type: none"> <li>- Certain organisations have guidance and information role is a good fit.</li> <li>- Scale of support required likely to dwarf current capability.</li> <li>- Could potentially provide.</li> </ul>	<ul style="list-style-type: none"> <li>- More ready scope to build and develop data infrastructure but at significant scale to current roles.</li> </ul>

Table 18: The long list of options (cont.)

No	Option name	Role 1: Provide capacity, support and expert advice to Local Authorities	Role 2: Enforce national-level regulation and support local-level enforcement	Role 3: Provide clear quality assurance guidelines and effective, consistent customer protection processes	Role 4: Monitor and report progress against EES targets at a national level and support local-level monitoring and reporting	Role 5: Provide a central EES focal point and coordination service	Role 6: Provide a national-scale marketing, communication and education service	Role 7: Maintain an overview of funding availability and allocations	Role 8: Facilitate access to project funding and finance	Role 9: Support supply chain development and expansion	Role 10: Data Infrastructure
7	<b>Executive Agency</b>	<ul style="list-style-type: none"> <li>- Advice could be provided at regular intervals.</li> <li>- Lack specialist technical resource to provide specific guidance on all aspects of EES</li> <li>- Capacity support provided by individual components.</li> <li>- LHEES, Standards, review, feedback, and approval could be delegated to individual components but limited technical resource</li> <li>- Single focal point for local authority support.</li> </ul>	<ul style="list-style-type: none"> <li>- Scale of resource required to deliver effectively could be no prohibited.</li> <li>- Potential for recruiting enforcement specialists.</li> <li>- Still direct government control over regulatory and enforcement function.</li> </ul>	<ul style="list-style-type: none"> <li>- Potential for specific technical expertise.</li> <li>- However still direct government control over regulatory and quality assurance guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>- Progress reports and the creation and delivery of Monitoring Framework likely to sit within the specific function of Executive Agency.</li> <li>- Strong central point of contact and co-ordinator.</li> </ul>	<ul style="list-style-type: none"> <li>- Strong central focal point and co-ordinator for all EES services.</li> </ul>	<ul style="list-style-type: none"> <li>- Able to establish clear central brand</li> <li>- Delivery has more ability to leverage private sector expertise.</li> <li>- Executive agency could be well placed for specialist support, but unlikely to have capability in house.</li> </ul>	<ul style="list-style-type: none"> <li>- Able to provide a funding overview role, whereby the body looked to analyse the costs and barriers to deliver, and provide advice to funding schemes across the programme.</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of ability to facilitate project finance and funding, main lever available would be grant funding, however central point to co-ordinate funding overview role.</li> </ul>	<ul style="list-style-type: none"> <li>- Single body can provide a clear lead to supply chain players.</li> </ul>	<ul style="list-style-type: none"> <li>- Additional scope to undertake large IT infrastructure delivery projects.</li> <li>- Potentially reliant on third party suppliers for capability.</li> </ul>
8	<b>Non-Ministerial Office</b>	<ul style="list-style-type: none"> <li>- Advice could be provided at regular intervals.</li> <li>- Lack specialist technical resource to provide specific guidance on all aspects of EES</li> <li>- Capacity support provided by individual components.</li> <li>- LHEES, Standards, review, feedback, and approval could be delegated to individual components but limited technical resource</li> <li>- Single focal point for local authority support.</li> </ul>	<ul style="list-style-type: none"> <li>- Scale of resource required to deliver effectively could be no prohibited.</li> <li>- Potential for recruiting enforcement specialists.</li> <li>- Further separated government control over regulatory and</li> </ul>	<ul style="list-style-type: none"> <li>- Potential for specific technical expertise.</li> <li>- Lack of direct government control over regulatory and quality assurance guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>- Progress reports and the creation and delivery of Monitoring Framework likely to sit within the specific function.</li> <li>- Strong central point of contact and co-ordinator.</li> </ul>	<ul style="list-style-type: none"> <li>- Strong central focal point and co-ordinator for all EES services.</li> </ul>	<ul style="list-style-type: none"> <li>- Able to establish clear central brand</li> <li>- Delivery has more ability to leverage private sector expertise.</li> <li>- Could be well placed for specialist support, but unlikely to have capability in house.</li> </ul>	<ul style="list-style-type: none"> <li>- Able to provide a funding overview role, whereby the body looked to analyse the costs and barriers to deliver, and provide advice to funding schemes across the programme.</li> </ul>	<ul style="list-style-type: none"> <li>- Lack of ability to facilitate project finance and funding, main lever available would be grant funding, however central point to co-ordinate funding overview role.</li> </ul>	<ul style="list-style-type: none"> <li>- Single body can provide a clear lead to supply chain players.</li> </ul>	<ul style="list-style-type: none"> <li>- Additional scope to undertake large IT infrastructure delivery projects.</li> <li>- Potentially reliant on third party suppliers for capability.</li> </ul>

			enforcement function.								
9	<b>Executive NDPB</b>	<ul style="list-style-type: none"> <li>- Advice could be provided at regular intervals.</li> <li>- Potential to acquire specialist technical resource to provide specific guidance on all aspects of EES.</li> <li>- Capacity support provided by individual components of Scottish Government delivery</li> <li>- LHEES, Standards, review, feedback, and approval could be delegated to individual components.</li> <li>- Single focal point for local authority support.</li> </ul>	<ul style="list-style-type: none"> <li>- Scale of resource required to deliver effectively could be no prohibited.</li> <li>- Potential for recruiting enforcement specialists.</li> <li>- Further separated government control over regulatory and enforcement function.</li> </ul>	<ul style="list-style-type: none"> <li>- Potential for specific technical expertise.</li> <li>- Lack of direct government control over regulatory and quality assurance guidelines.</li> </ul>	<ul style="list-style-type: none"> <li>- Progress reports and the creation and delivery of Monitoring Framework likely to sit within the specific function of Executive Agency.</li> <li>- Strong central point of contact and co-ordinator.</li> </ul>	<ul style="list-style-type: none"> <li>- Strong central focal point and co-ordinator for all EES services.</li> </ul>	<ul style="list-style-type: none"> <li>- Able to establish clear central brand</li> <li>- Delivery has more ability to leverage private sector expertise.</li> <li>- Could be well placed for specialist support, potential to have capability in house.</li> </ul>	<ul style="list-style-type: none"> <li>- Able to provide a funding overview role, whereby the body looked to analyse the costs and barriers to deliver, and provide advice to funding schemes across the programme.</li> </ul>	<ul style="list-style-type: none"> <li>- Potential of ability to facilitate project finance and funding provided the right specialists would be recruited.</li> </ul>	<ul style="list-style-type: none"> <li>- Single body can provide a clear lead to supply chain players.</li> <li>- Scope to provide more training and signalling to supply chain.</li> </ul>	<ul style="list-style-type: none"> <li>- Additional scope to undertake large IT infrastructure delivery projects</li> </ul>
10	<b>Public Corporation</b>	<ul style="list-style-type: none"> <li>- Advice could be provided at regular intervals.</li> <li>- Potential to acquire specialist technical resource to provide specific guidance on all aspects of EES.</li> <li>- Capacity support provided by individual components of Scottish Government delivery.</li> <li>- LHEES, Standards, review, feedback, and approval could be delegated to individual components.</li> <li>- Single focal point for local authority support.</li> </ul>	<ul style="list-style-type: none"> <li>- Scale of resource required to deliver effectively could be no prohibited.</li> <li>- Potential for recruiting enforcement specialists.</li> <li>- Further separated government control over regulatory and enforcement function.</li> <li>- However potential conflict of interest could</li> </ul>	<ul style="list-style-type: none"> <li>- Potential for specific technical expertise.</li> <li>- Lack of direct government control over regulatory and quality assurance guidelines.</li> <li>- However potential conflict of interest could arise due to commercial activities.</li> </ul>	<ul style="list-style-type: none"> <li>- Progress reports and the creation and delivery of Monitoring Framework likely to sit within the specific function of Executive Agency.</li> <li>- Strong central point of contact and co-ordinator.</li> </ul>	<ul style="list-style-type: none"> <li>- Strong central focal point and co-ordinator for all EES services.</li> </ul>	<ul style="list-style-type: none"> <li>- Able to establish clear central brand.</li> <li>- Delivery has more ability to leverage private sector expertise.</li> <li>- Could be well placed for specialist support, potential to have capability in house.</li> </ul>	<ul style="list-style-type: none"> <li>- Able to provide a funding overview role, whereby the body looked to analyse the costs and barriers to deliver, and provide advice to funding schemes across the programme.</li> </ul>	<ul style="list-style-type: none"> <li>- Potential of ability to facilitate project finance and funding provided the right specialists would be recruited.</li> </ul>	<ul style="list-style-type: none"> <li>- Single body can provide a clear lead to supply chain players.</li> <li>- Scope to provide more training and signalling to supply chain.</li> </ul>	<ul style="list-style-type: none"> <li>- Additional scope to undertake large IT infrastructure delivery projects.</li> </ul>

			arise due to commercial activities.								
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## Annex 2 – Detailed analysis of business need

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### Business need by sector

#### Domestic Sector

The EES target for domestic buildings is for all Scottish homes to reach EPC C or above by 2040. 61% (1.58 million) of homes did not meet this standard in 2016. This means that 1.58 million domestic buildings need to be improved. This equates to c.66,000 buildings per year, sustained over a 24-year period. Of the buildings that do not reach the target, 72% are currently EPC D, with 38% EPC E or below<sup>14</sup>. This illustrates the significant challenge in the number of homes and the scale of improvements required to meet the EES targets for this sector.

Furthermore, the rate of progress required to meet the new EES targets may be difficult to prolong for the duration of the EES programme. This is particularly the case given that those households more willing to make improvements are likely to have already taken-up existing offers, with other households being increasingly hard to engage. As a result, a change in existing delivery strategies may be needed to ensure a sustained rate of progress.

However, both the current condition of the building stock (Figure 3) and EES targets (Table 2: Sector-specific EES targets and the proposals for achieving these targets) differ between tenures. As such, the scale of change required, and the strategic areas for change, differs between social rented, private rented and owner-occupied sectors. These are discussed in the subsequent sections.

#### Social rented sector

The social rented sector is subject to EES' most ambitious target, which is to maximise the number of socially rented homes at EPC B by 2032. This is because the current standard of socially rented homes, with 92% of buildings EPC D or above and 52% EPC C or above, far exceeds the current standard in the other domestic sectors (as shown in Figure 3). This suggests that existing levers and delivery strategies for social rented tenures have successfully engaged landlords and tenants to make improvements.

Progress within this sector has been driven by the SHQS (2004-2015) and EESSH (2014-2020) and will continue to be driven by EESSH2 from 2020 to 2032<sup>55</sup>. These levers have set out progressively rigorous minimum energy efficiency standards for social housing landlords to meet by given dates.

Progress towards these targets is monitored by the Social Housing Regulator (SHR), and social landlords are expected to submit data on compliance on an annual basis. The EES route map suggests that homes with an EPC rating lower than EPC D should not be let from 2025.

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<sup>55</sup> Scottish Government, 'Consultation on the Energy Efficiency Standard for Social Housing post-2020 (EESSH2)', May 2018.

To achieve EPC B, houses are likely to require installation of renewable, low-carbon energy systems in addition to energy efficiency improvements<sup>56</sup>. Whilst 52% of social rented buildings were EPC C+ in 2016, only 2% were EPC B+14. This indicates that the uptake of decarbonisation technologies needs to be increased through the EES Programme. Currently, most improvements under EESSH are funded by the social landlord's own resources. Additional incentives are likely to be needed to encourage landlords to go above and beyond the minimum required standards.

### Owner-occupied and private rented sectors

In contrast to social rented homes, the owner occupied and private rented sectors are further behind, with 34% and 37% rated EPC C+ in 2016, respectively. This implies that current delivery strategies for energy efficiency in these sectors have not stimulated sufficient action within these tenures.

Unlike the social rented sector, no minimum energy efficiency standards have been introduced to date and nothing is proposed until April 2020, when a minimum standard for private rented landlords will be introduced<sup>57</sup>. For owner-occupied tenures, progress will be monitored and the Government has proposed that mandatory action will be introduced if progress has been insufficient by 2030. For both of these sectors, a mechanism for monitoring, regulating and enforcing these minimum standards will need to be established.

Two-thirds of the domestic buildings that need to be improved are owner-occupied, and engaging owner occupiers to install energy efficiency measures will be vital to achieving the domestic EES target given that they account for 61% of the domestic building stock.

Owner-occupied homes are unique in that the people initiating building works and the people living in the house before, during and after the retrofitting process takes place are the same. A 2014 study<sup>58</sup> on what motivates owner occupiers to initiate retrofit works suggests that, in most instances, owner-occupiers do not have the specific technical knowledge or an interest in retrofitting. The study suggests that policy makers often view the problem as one of information deficit, and oversimplify the problem to address only technical and economic concerns.

The study argues, however, that to increase engagement there also needs to be an active participation of homeowners in the process and an understanding of what retrofit options are suitable on a unit-by-unit basis. This suggests there is a need to further align policy, strategies and support with an understanding of owner-occupier behaviours and provide bespoke advice that takes into account specific building and user characteristics.

The targets for private rented buildings are phased in line with the minimum standards that will be introduced from 2020. The first target is for all buildings to be EPC E+ by 2022. In 2016, this applied to 7% of private rented buildings. An increase in the minimum

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<sup>56</sup> Low Carbon Housing Retrofit, 'Transforming homes from G to A'.

<sup>57</sup> Scottish Government, 'Private rented housing energy efficiency and condition standards: consultation', April 2017.

<sup>58</sup> Kirsten Gram-Hanssen (2014), 'Retrofitting owner-occupied housing: remember the people', Building Research & Information, 42:4, 393-397.

standard to EPC D+ by 2025 will apply to a further 19% of buildings, with a total of 62% of private rented buildings needing to be improved to EPC C+ by 2030. This equates to an average of c.17,500 buildings per year.

To do this, targeted marketing and communication may be required to raise awareness of available schemes and incentivise landlords to implement home improvements to meet the standards ahead of the deadline. This is particularly important in rented housing as the effects of poor energy efficiency (e.g. higher energy bills) are more detrimental to tenants than landlords.

HES provides advice on how to improve the energy efficiency of buildings and it is important that there is clear communication with private rented landlords, including bespoke advice to make them aware of how to meet the long-term standard, not only the next standard. A holistic long-term approach will prevent the need for added disruption through multiple household visits and increase the likelihood of homes achieving the ultimate EES energy efficiency target. This will require successful coordination between landlords, organisations administering schemes and the supply chain.

### Fuel poor households

The EES objective to remove energy efficiency as a driver of fuel poverty by improving all fuel poor households to EPC C by 2030 and EPC B by 2040 will help support the delivery of the statutory Fuel Poverty Bill target to reduce the number of households in fuel poverty to less than 5%. However, as discussed in section 4.1.2, there are other factors that will contribute to the overall prevalence of fuel poverty. As a result, it is important that an EES monitoring framework is established which takes this into account, with a methodology capable of separating the driving factors from the numbers of fuel poor households. As such, there is a need for change in the current data collection and monitoring process.

In 2016, 649,000 households, split across all tenures, were in fuel poverty. Warmer Homes Scotland (WHS) is the Scottish Government's flagship scheme for addressing fuel poverty. It provides measures including insulation, heating and micro-generation systems to eligible households that are in or are at risk of fuel poverty. The Warmer Homes Scotland 2017 annual review provides an insight into the progress made by the scheme in 2016/17<sup>59</sup>. This shows that on average, 0.99 installations were made per 1,000 people nationally, equating to a total of c.5,350 installations made throughout the year. If this level of progress is maintained throughout the 20-year EES Programme, c.107,000 fuel-poor households will be engaged through this scheme, representing only 16% of fuel poor households. This suggests that there is a critical need for a significant escalation in the current scheme to meet the EES targets for fuel poor households.

In addition, the annual review provides a breakdown of the measures installed. Comparing the energy efficiency and micro-generation installations to the typical measures outlined in Figure 1, 95% of measures installed as part of the Warmer Homes Scotland scheme in 2016/17 correspond to the lowest two levels. In other words, most of the measures installed are those that are lower cost and create less disruption. Whilst this

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<sup>59</sup> Home Energy Efficiency Programmes for Scotland 2 – Warm Homes Scotland, 2017 Annual Review.

increases the SAP points, the improvements are often not sufficient to achieve the EES EPC targets.

Although WHS is a trusted service with high customer satisfaction that is making an important contribution in tackling fuel poverty, its impact is limited by the following constraints:

- One third of customers pull-out during the process, limiting the reach of the scheme;
- Budget constraints prevent the implementation of best practice solutions and result in incremental improvements. Whilst this increases SAP points, the improvements are often not sufficient to achieve EES targets; and
- Whilst an advertising campaign was implemented at the start of the scheme, new customers come largely from referrals and word of mouth. Whilst this proves that a successful customer service is provided it limits the outreach of the scheme and is a barrier to expansion.

HEEPS:ABS have also been successful in identifying those in fuel poverty and targeting resources at priority areas<sup>60</sup>. This is largely a result of being delivered at local authority level. This delivery method will be further informed through LHEES and expanded to incorporate self-funded households and businesses.

Therefore, whilst progress is being made to combat fuel poverty, an escalation in existing levers is required to overcome challenges and meet EES targets. Delivery and identification of households through Local Authorities has been successful but this may need to be supported by a national level marketing campaign to raise awareness of available funds for eligible households, alongside more flexible funding allocations to remove constraints and allow holistic household improvements to reach EPC targets.

## Non-domestic sector

Without an understanding of the baseline condition of the non-domestic building stock and clear, SMART<sup>61</sup> objectives, it is difficult to understand and appreciate fully the scale of change that is required within the non-domestic sector. EPC data is available for only 15% of non-domestic buildings, and this shows that 73% of the non-domestic building stock are EPC E or below. If this is representative of Scotland's non-domestic building estate then huge improvements are required across the sector.

The EES route map sets out the target for the public sector to continue to be at the vanguard of energy efficiency in Scotland. This is in line with the public sector's duty, under the Climate Change (Scotland) Act 2009, to contribute to meeting Scotland's climate change targets<sup>5</sup>.

To help public sector bodies achieve this there are several funding programmes available. Whilst uptake of funding and progress in energy efficiency improvements in Local

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<sup>60</sup> Scottish Government, 'Consultation on Scotland's Energy Efficiency Programme: Analysis of responses', November 2017.

<sup>61</sup> SMART targets are specific, measurable, agreed upon, realistic, and time-based.

Authorities and higher education institutions has been good, Scottish Government delegates at a workshop supporting this strategic outline business case for an NDM commented that other parts of the public sector such as the emergency services and NHS are lagging behind. In fact, within the phase 2 SEEP pilot programmes, North Lanarkshire were the only council to undertake an energy efficiency project in NHS buildings<sup>62</sup>. Uptake of these energy efficiency programmes needs to be rolled out across all areas of the public sector to ensure it achieves the EES targets in advance of the 2040 deadline.

It was also noted by delegates that there may be challenges and barriers for some public-sector buildings to act as anchor loads to district heating networks owing to rules based on preconceptions that need to be challenged<sup>63</sup>. A review of existing regulations that create barriers to progress would be useful to understand what ideally would and can be changed.

There is a wide range of financial incentives targeted at SMEs and communities. Delegates outlined, however, that uptake of these incentives is poor and more action needs to be stimulated. For larger commercial and industrial buildings, which may have the resources to self-fund improvements, levers are more focussed around encouraging innovation in low-carbon technology. The Energy Savings Opportunity Scheme (ESOS) does require larger commercial companies to understand and report on their energy consumption but there is no regulation to enforce action on the back of this. Moreover, industrial companies are subject to numerous energy and emissions related regulations but these focus on process related carbon emissions rather the efficiency of the buildings themselves.

As a result, enforcement across the non-domestic sector is required to stimulate action and ensure progress. A plan to introduce regulation for all non-domestic buildings has been proposed by Scottish Government and is currently being consulted on. Whilst this will address the need to stimulate action, there is also a requirement for effective enforcement of this regulation with penalties for non-compliance. This will be important in reaching the EES target for improving all non-domestic buildings to the 'greatest extent possible'.

There is a large number of organisations involved in administering levers and mechanisms supporting energy efficiency in the non-domestic sector (Figure 6). A central focal point and advisory service for consumers and the supply chain, with an overview of and signposting to all relevant schemes, could help increase uptake and awareness. This could expand on the service currently provided through Resource Efficient Scotland (RES), which focuses more towards SMEs.

## Supply chain

Creating a substantial and diverse market and supply chain for energy efficiency technologies and services, as well as creating 'up-skilling' opportunities and jobs for the

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<sup>62</sup> <https://news.gov.scot/news/gbp-4-4-million-announced-for-energy-efficiency-projects-across-scotland> [Accessed October 2018].

<sup>63</sup> Scottish Government, 'Energy Strategy – Scotland's Energy Efficiency Programme (SEEP) National Infrastructure Priority for Energy Efficiency', January 2017.

Scottish workforce, is central to achieving the wider EES objective of maximising economic and societal benefits. These opportunities can only be fully exploited if there is enough capacity within the supply chain to meet the demand that will be created through EES.

There is currently a perception amongst some suppliers that the low carbon market in Scotland is stagnating or declining. Without confidence in future demand, the supply chain is unlikely expand its capacity to meet the demand envisaged and required to deliver the EES Programme<sup>64</sup>. Market uncertainty and flat demand for engineering SMEs in the UK has resulted in an increasing tendency for companies to operate within their own cash flows rather than expand their capacity<sup>65</sup>.

This suggests that there is a need for greater coordination between the supply chain and consumers to improve the understanding of future demand. This could be done through facilitating more interaction and dialogue between consumers and suppliers, and by instilling greater confidence in the longevity of the EES programme itself, to provide a clear signal about its intent and durability, and the long-term commitment to funding, outside political cycles.

In addition, time-constrained funding, in which money needs to be spent during the same financial year it is allocated, reduces the potential scale of the works, discourages innovation and results in piecemeal improvements rather than holistic, strategic investment. For example, the Heat Network Investment Project (HNIP) pilots identified challenging timescales as a key constraint affecting the quality of applications<sup>66</sup>. There is therefore a need, where possible, to change the structure of funding allocations, to support and encourage more innovative solutions over realistic timescales.

Through EES and LHEES, it is likely that most opportunities for the supply chain will be in the form of public sector contracts. In order to grow the supply chain and encourage competition in the market it is important that these opportunities are accessible to SMEs as well as larger suppliers.

As noted in section 4.5.1, there has been a perception amongst some of the supply chain that it is a waste of time for SMEs to apply for public procurement opportunities as they are only awarded to larger organisations. This is despite services offering advice and support to SMEs during the application process. In addition, a lack of awareness of public sector opportunities can exclude some of the supply chain, particularly smaller suppliers who have limited resource to actively search for new opportunities. In fact, less than half of suppliers surveyed had applied for publicly advertised opportunities during the previous 12 months.

However this perception might be changing, over 60% of responders to a recent Prior Information Notice (PIN) were SME's. Domestic small scale projects are likely to have the

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<sup>64</sup> Production & Manufacturing Research, 'Managing uncertainty through supply chain flexibility: reactive vs. proactive approaches', 2014.

<sup>65</sup> Institute of Export and International Trade, <https://www.export.org.uk/news/421534/UK-Engineering-SMEs-Report-Low-Confidence-and-Flat-Demand.htm>, [Accessed October 2018].

<sup>66</sup> Department for Business, Energy and Industrial Strategy, 'Heat Networks Investment Project Evaluation', February 2018.

capacity to deliver which would therefore encourage them to apply, the installation of a heat network for example is not a project which many smaller SME's would be able to deliver and therefore applications are reduced.

To build on this progress will require additional support for SMEs to encourage a cultural shift and increase SME applications for public sector contracts. This could be achieved with a coordinated overview of supply and demand in the market, alongside the use of PCS for advertising opportunities and a consistent procurement route to encourage smaller suppliers to apply. These initiatives would come alongside the existing initiatives already in place to support and encourage SMEs, Micro businesses and the 3rd sector to become active members of the supply chain, such as the ongoing work with the Carbon Trust

Furthermore, to enhance the position of the Scottish supply chain as market leaders it is critical that innovation is encouraged. However, there is also a perception amongst suppliers that, within competitive tenders, value for money is associated with lowest price. This results in a prevalence of standard, established measures and discourages innovation, with research suggesting that a firm facing financial constraints is 30% less likely to undertake innovation<sup>67</sup>. As a result, there is a need to educate and advise consumers on what constitutes value for money and how to evaluate tenders using an appropriate price-quality ratio. Transparency and communication on how tenders will be evaluated will encourage an appropriate level of innovation in the supply chain.

A potential growth area for the supply chain is district heating. The development and implementation of district heating systems requires agreement and collaboration between multiple stakeholders including Local Authorities, anchor loads, developers and suppliers. As such, there is also a need to facilitate this opportunity by promoting opportunities for collaboration, and enabling and mediating conversations between stakeholders. The Scottish Government are currently working on a project (Energy policy team and Procurement Scotland) to identify and implement collaborative procurement interventions for heat networks. Universities, colleges and NHSS all have an important role to play as well as Local Authorities, and this is where Scottish Government can support with flexible contract structures to allow and promote innovation.

## Business need by policy area

### Engagement

Increasing consumer engagement and customer 'pull' will be critical to success for EES and policy and delivery must be designed with home owners, private landlords and other building owners in mind: the customer journey is paramount<sup>12</sup>.

A key task for any new delivery mechanism will be to identify and coordinate actions to encourage domestic and non-domestic building owners to choose to upgrade their homes and buildings, and to find it easy to do so in ways that deliver substantial improvements in EPC targets and significant reductions in greenhouse gas emissions. For domestic and

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<sup>67</sup> Hajivassiliou, V., & Savignac, F., 'Financing constraints and a firm's decision and ability to innovate: Novel approaches to coherency conditions in dynamic LDV models', 2016.

non-domestic building owners to change their behaviours, it will be necessary for architects, engineers, builders, suppliers of construction materials, financial institutions, estate agents, Local Authorities, regional and national government and others to change theirs as well.

Homeowners, landlords and building owners do not form homogeneous groups. One size does not fit all. It will be necessary to develop specific actions appropriate to different 'archetypes', each of which has its own attitudes, motivations and behaviours, leading to different opportunities and barriers to retrofit<sup>68</sup>. The challenges of energy efficient retrofit are often imperfectly understood and it is important that they are widely discussed by all relevant stakeholders in order to ensure a full understanding of their complexity and interconnections. If the resolution of a wicked issue requires changes in the way people behave, these changes cannot readily be imposed on people. Behaviours are more conducive to change if issues are widely understood, discussed and owned by the people whose behaviour is being targeted for change.

### Protection and quality assurance

To support this customer pull, EES must be a trusted and well-respected brand, to boost confidence in the programme and increase investment. An important aspect of this is the delivery of high quality products and services, and ensuring that the quantity of improvements required are not achieved at the expense of customer protection and quality standards.

A review of consumer advice, protection, standards and enforcement in the UK energy efficiency and renewable energy market<sup>69</sup> suggests that the numerous schemes, brands and certification bodies operating in the sector give a confusing picture for both consumers and suppliers. It also highlights the serious consequences for consumers when the quality of work falls short and the variations in redress processes which, in some cases, are unclear and slow, and ultimately may not resolve the consumer's complaint.

In addition, whilst the majority of installations are carried out to a high quality and in a professional manner, with Warmworks, through Warmer Homes Scotland, achieving customer satisfaction scores of 98.5%. A proportion of retrofit improvements are inappropriate or of a poor quality. Under the ECO Programme, 1.5 million measures were installed between January 2013 and March 2015. 6.9% of installations were inspected and 9.9% of these did not meet installation standards and required additional work<sup>70</sup>. This may be caused by the lack of agreed standards and guidance on the impacts of retrofitting buildings, a disconnect between delivery teams and omissions in standards around quality levels for installation. Ultimately, this reduces consumer and market confidence.

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<sup>68</sup> Haines, H., Mitchell, V.(2014) A persona-based approach to domestic energy retrofit, Building Research & Information, 42:4, 462-476, DOI: 10.1080/09613218.2014.893161.

<sup>69</sup> Department for Business, Energy and Industrial Strategy & Department for Communities and Local Government, 'Each Home Counts', December 2016.

<sup>70</sup> Ofgem, 'Energy Companies Obligation (ECO) technical Monitoring Report', December 2015.

The Hab-Lab project<sup>71</sup> by John Gilbert Architects has identified large discrepancies between modelled and observed performance improvements following energy efficiency installations using the ECO scheme. Installation criteria focus on how cheaply the insulation value of the building fabric can be increased to a default standard, with no designer involvement or consideration for whole-house performance. As a result, more difficult areas such as thermal bridges and existing pipework are being left uninsulated, creating pathways for heat loss. In addition, there is generally no allowance made for fresh-air ventilation improvements which is increasing the potential for unintended consequences such as mould growth, asthma and other health issues.

A further issue highlighted by the Hab-Lab project is that funding is allocated based on the theoretical carbon offset rather than the actual cost of the works leading to difficult-to-treat building types being either ineligible for funding or receiving inappropriate interventions. A particular example is the use of cheap, plastic-based internal insulation in traditional buildings, which alters the moisture gradient in walls and floors, leading to a high risk of accelerated rot and decay and causing building deterioration.

Consequently, to ensure installation performance is of a high quality, and to ensure consistency in the delivery of projects and positive customer experience, a clear and transparent quality assurance framework is needed for the EES programme. Within this, the following changes are required:

- Greater clarity and guidance around the requirements that suppliers need to meet to work under the EES brand;
- Clearer guidance for consumers on what they should expect from suppliers;
- A more consistent and fair redress process for consumers with a single point of contact;
- An overarching standards guidance for all installation types and technologies that is updated in line with best practice, with clearer information on potential unintended consequences; and
- Increased supplier accountability through greater oversight and increased technical monitoring and auditing of installations and sanctions for poor performance.

This can be supported by building on existing advice services to provide bespoke, property-specific advice to consumers. This is needed to ensure that installations are appropriate and incorporate more strategic plans for whole-house improvements that treat the building as an energy system, rather than considering each part in isolation, and takes the specific occupants, site and local climate into account. This would reduce the potential for unintended consequences.

## Monitoring and data

The Scottish Housing Condition Survey provides a relevant baseline dataset for the domestic sector. There is currently no equivalent for the non-domestic sector and very

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<sup>71</sup> John Gilbert Architects, 'Mind The Gap', <http://www.johngilbert.co.uk/?p=1119>, [Accessed 12 October 2018].

little non-domestic energy data is available publicly. The Scottish Government has outlined proposals for a benchmarking system, although work is yet to be commissioned.

Progress in energy efficiency against energy consumption baselines will need to be monitored regularly throughout a programme energy efficiency to justify the spending of public money and to identify underperforming areas for prioritisation. Formal processes of monitoring and reporting would help targeted support and intervention, together with regulations enforcement where necessary.

EPCs provide an established mechanism for establishing energy efficiency in the domestic sector. There may be a need to increase the frequency of these assessments, however, to ensure an up-to-date, accurate dataset is available. This is particularly the case for owner occupied tenures where EPC assessments are only required at the point of construction or sale. As such, a monitoring and reporting framework is needed that is robust enough to assess progress across all tenures and is simple enough for reporting to happen on a regular basis. The responsibility for monitoring and reporting also needs to be designated.

Furthermore, the availability of relevant data for all stakeholders will be the foundation for delivery strategies, including LHEES and district heating systems. The resources available currently differs between Local Authorities<sup>72</sup>. This is also important for advice services, where property-specific data can help provide bespoke suggestions which are appropriate to the individual consumer.

Consequently, a system or body charged with cleaning, validating, maintaining and signposting to data for relevant stakeholder and users may improve the coordination, consistency and availability of appropriate data and allow gaps and variances to be identified and overcome.

## Local Authorities & LHEES

The primary delivery mechanism for the EES Programme will be LHEES, which it is proposed will be developed by Local Authorities and will lead to phased, costed delivery programmes. The Scottish Government has committed to funding pilot schemes in all Local Authorities by the end of the transition period in 2020. It has been proposed by Scottish Government that a statutory duty will then be introduced to require Local Authorities to develop an LHEES<sup>73</sup>. The successful delivery of these strategies is central to achieving the EES targets.

Developing comprehensive, bespoke LHEES programmes within Local Authorities will require resources and expertise. However, resources in Local Authorities are already stretched and the availability of relevant technical expertise varies between Local Authorities.

Moreover, there are several additional roles that Local Authorities could play as part of the Programme. For instance, it is possible that Local Authorities may be required to monitor and report on progress, enforce penalties for non-compliance with regulation,

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<sup>72</sup> The Accounts Commission, 'Local government in Scotland: Financial overview 2016/17', November 2017.

<sup>73</sup> Scottish Government, 'Consultation on Heat and Energy Efficiency Strategies, and Regulation of District Heating: Analysis of Responses', November 2017.

award district heating consent and concessions to developers, and continue to work with the supply chain to deliver ABS on the ground.

As a result, there is a need to support Local Authorities and increase their capacity to enable them to carry out any added roles arising from EES and successfully deliver their LHEES and associated low carbon heat and energy efficiency projects effectively. This capacity building includes both added resource and increased technical support.

LHEES will result in 32 separate strategies, each specific to the respective local authority. It is inevitable, however, that there will be cross-boundary issues where, for example, a district heating network in one authority's area could benefit from or be reliant upon being extended into the adjacent authority's area. Moreover, beyond cross-boundary technical integration, in order to maximise the efficiency and effectiveness of LHEES delivery, it is important that there is a coordination between Local Authorities, so that best practices and lessons learned are shared and collaboration is the rule, not the exception. This is particularly the case where opportunities arise for large schemes that encompass multiple Local Authorities. Whilst COSLA provides an executive level coordination, there needs to be a central, EES-specific focal point to support Local Authorities. This may also help to streamline the approach to large scale multi-tenure improvements by facilitating a larger-scale pilot scheme to test this out.

There is also a critical role for Local Authorities and other organisations that have a statutory planning role. Given the need to reduce space heating in buildings within EES, retrofitting insulation and in many cases, some form of external wall insulation has the potential to change the distinctive character of Scottish villages, towns and cities. There is a need to investigate the implications and solutions for this, which could lead to published national guidance that can be interpreted locally.



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