

# Phase 3 Public Sector Decarbonisation Scheme (PSDS) Guidance

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## 1 Phase 3 Public Sector Decarbonisation Scheme (PSDS)

### **BEIS note regarding confirmation of funding available for Phase 3 Public Sector Decarbonisation Scheme**

Phase 3 of the Public Sector Decarbonisation Scheme (PSDS) opens for applications on Wednesday 6<sup>th</sup> October 2021. The scheme guidance was published four weeks prior to this on Wednesday 8<sup>th</sup> September 2021. The Application Portal will be closed four weeks later at 2pm on Wednesday 3<sup>rd</sup> November 2021. Applications will be assessed in the order they are received by Salix Finance.

Applications should be for projects incurring costs no earlier than Friday 1<sup>st</sup> April 2022, and no later than:

- Friday 31<sup>st</sup> March 2023 for single year projects,
- Sunday 31<sup>st</sup> March 2024 two year projects, and
- Monday 31<sup>st</sup> March 2025 for three year projects.

The total amount of funding available for Phase 3 PSDS will not be confirmed until after this year's Spending Review. Therefore, there is no guarantee of any funding until the outcome of the Spending Review is confirmed, and applications are submitted at the risk of the Applicant. Applications will be assessed, and funding awarded to eligible projects, in the order in which applications are received. Grant offers will only be made after the total funding for the Phase 3 PSDS is confirmed. We do not expect to be able to inform Applicants if they have been successful until 2022.

### **Introduction**

In 2019, the UK Government set out one of the world's most ambitious carbon emissions targets: to achieve net zero greenhouse gas emissions across the whole UK by 2050. To meet our Net Zero goal, we urgently need to address the carbon emissions produced in heating our public buildings. We use energy for heating and cooling, lighting, hot water, and other energy-using products. And while the electricity that powers our lighting and appliances is decarbonising fast, the majority of buildings still rely on burning fossil fuels for heating, hot water and catering. There are around 30 million buildings in the UK which in total are responsible for around 30% of our national emissions. The vast majority of these emissions result from heating: 75% of buildings emissions and about 22% of all UK emissions. The Phase 3 Public Sector Decarbonisation Scheme (PSDS) has been launched to provide support and funding to those organisations which are ready to take that step to a low carbon future.

The Department for Business, Energy and Industrial Strategy (BEIS) has initiated the Phase 3 Public Sector Decarbonisation Scheme (referred to in this document as "**the Phase 3 PSDS**"). The Phase 3 PSDS will endeavour to provide grant funding to projects that focus on heat decarbonisation and will be delivered by Salix Finance. Applicants are able to submit separate applications for separate projects or combine several projects in a single application. The new features of this scheme compared to Phase 2 of the Public Sector Decarbonisation Scheme (referred to in this document as "the Phase 2 PSDS") are set out in Section 3 of this document.

Phase 3 PSDS follows the successful £1bn Public Sector Decarbonisation Scheme (Phase 1 PSDS) which was launched in September 2020 and Phase 2 PSDS which was launched in March 2021, both supporting projects around the country. Phase 3 PSDS will closely mirror Phase 2 PSDS with its sharpened focus on heat decarbonisation and emphasis on heating within buildings, with all applications being built around the replacement of fossil fuel heating plant at the end of its working life with low carbon alternatives. Grant funding will be provided to cover the costs of decarbonising the heat within a building, over and above the costs of replacing the existing fossil fuel heating system on a like for like basis, (these will be referred to as the "marginal cost" of a project in this document). There is no maximum value cap on the amount of funding per application.

The priority for Phase 3 PSDS is to provide funding for decarbonisation projects where the heating systems are at the end of their working lives and there is imminent need for replacement, therefore the majority of the 2022/23 grant funding has been set aside for projects that need to take place between Friday 1<sup>st</sup> April 2022 and Friday 31 March 2023. A smaller proportion of the 2022/23 grant funding has been set aside to specifically support decarbonisation projects involving heating systems that are expected to reach the end of their working lives in 2023/24 or 2024/25 and where the work needs to start in 2022/23. Once the total Phase 3 PSDS budget is confirmed, 85% of the 2022/23 budget will be allocated to the "single year projects" where the heating system

has reached the end of its working life, and the remaining 15% will be allocated to the first year of “multi-year projects” which must start in 2022/23 and end in either 2023/24 or 2024/25. Organisations must clearly state whether they intend to apply for a single year project or a multi-year project at the application stage. It will not be possible to convert a single year project into a multi-year project once the application has been submitted. More details of multi-year projects are covered in Section 6.7.

In summary, Phase 3 PSDS will be available for the installation of low-carbon heating measures, alongside heat reduction and energy efficiency measures, as part of a ‘whole building’ approach within public sector buildings, including central government departments and arm’s length bodies in England. For central government departments where their roles are reserved (i.e., not devolved to the Governments of Scotland, Wales and Northern Ireland), funding may be used for estates located anywhere within the UK. To reconfirm the majority of the funding (85%) for Phase 3 PSDS is made available over the first year.

## **Key aims of Phase 3**

Phase 3 PSDS will take a similar approach to that of Phase 2. The key aim is to enable the public sector to be at the forefront of decarbonising buildings in the UK and create exemplar projects that pave the way to help the UK Government to reach Net Zero by 2050.

The Clean Growth Strategy identifies cutting direct carbon emissions in public sector buildings as playing an important role in achieving carbon budget targets.

For much of the public sector, their direct carbon emissions (previously referred to as non-traded carbon) are those created on-site from burning fossil fuels for heating, which is why transitioning to low carbon heating forms a strong focus for the Phase 3 PSDS.

## **2 Introduction to Phase 3**

The objective of the Phase 3 PSDS is to support the transition to low carbon heating in public sector buildings, in addition to improving energy efficiency. It aims to achieve this by providing funding to replace end-of-life fossil fuel systems (such as gas boilers) with low carbon heat sources as a requirement and bundled with energy efficiency measures to facilitate a ‘whole building’ approach to heat decarbonisation.

One difference to note for the Phase 3 scheme is the reference to direct carbon emissions. In previous phases direct carbon emissions have been referred to as non-traded carbon savings. Please see glossary for full definition.

The full eligibility criteria for the Phase 3 PSDS are listed in Section 6, but an overview of the requirements for projects are as follows:

- Applicants must be a public sector organisation.
- Applicants must be using a fossil-fuelled heating system.
- The heating system in question should be coming to the end of its useful life.
- The heating system must be replaced by a low carbon alternative.
- A ‘whole building’ approach must be taken to decarbonisation where the building should be made as energy efficient as is practical before the low carbon heating is installed.
- The projects must be completed within the timescales stated, either Friday 31st March 2023 for single year project or 31st March 2024/2025 for multi-year projects.
- Applicants must contribute a proportion of their own funding towards the project. As a minimum this proportion is equivalent to the full costs of replacing their existing heating system on a like-for-like basis.

If these requirements can be met, then an application can be built around applying for grant funding which meets the full eligibility criteria. Applicants must include, as part of their application, at least one measure that decarbonises part, or all, of the heating within a building. Where multiple sites are being applied for within the same application (for example where a multi-academy trust is applying for funding for several academies in one application) there must be at least one measure that decarbonises part, or all, of the heating per site.

Grant funding will be provided for the marginal cost of the decarbonisation project. Marginal costs are those in addition to the business-as-usual costs for replacing the existing fossil fuel heating system on a like-for-like basis. Evidence must be provided for the full costs of replacing the existing heating system including the costs for all associated plant including pumps, boiler controls, pipework insulation, domestic hot water systems, valves, expansion vessels, etc. that would have to be replaced as part of renewing the heating system. The grant funding covers the total cost of any energy efficiency measures bundled with the new low carbon heating measure, for example the grant will cover the full cost of replacing single glazing windows with double glazing, and the cost of replacing them on a like for like basis does not need to be included when calculating the marginal cost.

The low carbon heating solution should wherever possible be complemented with other measures that will reduce the level of heat demand such as building fabric insulation and windows. Additional measures to reduce high electrical load can also be considered, but only carbon savings from the measures related to direct onsite emissions will count toward carbon compliance criteria. Please see our Carbon Cost Threshold section for more details see Section 6.8. Applicants are encouraged to include measures that help them manage their ongoing energy consumption through smart monitoring technologies such as smart metering.

Applicants are encouraged to take a 'whole building' approach to decarbonising their heating. This is where all the factors that contribute to a building's energy consumption are considered together to identify the most cost-effective way to achieve the objective. For example, investment in improving the insulation levels of the building fabric will reduce the overall size of the low carbon heating plant required, as well as save on fuel bills. Also, investment in reducing the peak electricity consumption, such as through installation of more energy efficient lighting, can reduce the need to upgrade a building's electrical infrastructure to accommodate the installation of a heat pump, (See Appendix 1 for examples of eligible technologies). Applications will be assessed against how effectively the total energy use of a building has been considered when selecting measures to be installed to decarbonise it.

Furthermore, upgrading traditional metering to smart meters will further support a 'whole building' approach. Smart meters are replacing traditional gas and electricity meters as part of an essential infrastructure upgrade for Great Britain. Smart meters play a critical role in modernising the way we all use energy, including heat. The half-hourly consumption and price data recorded by smart meters unlocks new approaches to managing heat demand. Innovative products such as smart 'time of use' tariffs reward consumers for using energy away from peak times and enable technologies such as smart appliances to be cost-effectively integrated with renewable and low-carbon energy sources, as well as allow energy suppliers to accurately bill their customers.

The benefits include energy management through better data insight, which supports potential consumption savings and helps with carbon emissions reporting. Accurate billing also helps consumers with cost savings and budgeting.

Single year projects must be in a position to complete by Friday 31<sup>st</sup> March, 2023. Two-year multi-year projects must be in a position to complete by Sunday 31<sup>st</sup> March, 2024 and three year multi-year projects by Monday 31<sup>st</sup> March 2025. Funding is not available for projects that cannot deliver to this timeframe, and projects which do not complete before these completion dates will be liable for any project costs incurred after this date.

### **3 What is new in Phase 3**

There are some new elements to Phase 3 which Applicants should note.

Firstly, there is no funding cap on the value of grant an Applicant can apply for. However, whilst there is no cap Applicants must ensure they have the resource and supply chains as well as all the internal resources required to deliver the project by the agreed dates. This must be demonstrated clearly within the application. Clients will be expected to make a reasonable judgement on contingency spread across multiple elements of the delivery scheme. In addition, applicants must demonstrate how they will procure the contract(s) required to deliver their projects.

Secondly, a proportion of the funding has been made available to cover more complex projects where boilers are expected to come to the end of their working lives in the next two or three years, and where the work to prepare the buildings for low carbon heating needs to start in the financial year 2022/23. For example, buildings may require significant upgrades to their fabric or electrical infrastructure before low carbon heating can be installed. All applications for multi-year funds must state the amount of funding requested in each year, and

grant funding will not be able to be transferred between years once the annual amounts have been agreed in the Grant Offer Letter. Applicants will need to provide evidence of spend in each financial year.

Thirdly, previous phases referred to “non-traded” carbon emissions, these are now being referred to as direct carbon emissions. These are the carbon emissions resulting from fuel being combusted either directly on an organisation’s site, or in the case of district heating, in the district heating plantroom.

Finally, the application window will be open for a longer period for Phase 3 PSDS, giving Applicants an opportunity to put in strong and robust applications that are well evidenced.

## 4 Support and advice

The Salix website has an area dedicated to the new Phase 3 PSDS, please refer to this webpage for the most up to date information regarding key dates, [here](#).

In addition to delivering the first two phases of the PSDS, Salix has extensive experience in supporting the public sector and since its formation in 2004 up to March 2021 has helped more than 3,100 clients commit to 19,700 projects valued at £1,072million. These projects are forecast to save over 895,000 tonnes of CO<sub>2</sub>e annually.

In September 2020, working alongside the Department for Business, Energy and Industrial Strategy (BEIS) Salix launched the ambitious £1bn Phase 1 PSDS. Phase 1 of the Public Sector Low Carbon Skills Fund (LCSF) was also launched, and Salix is currently delivering these schemes.

Earlier this year in March, Salix delivered Phase 2 PSDS followed by Phase 2 LCSF in July. Both of these schemes, now closed to applications, are progressing following rigorous assessment.

Overall, this extensive work over the years represents strong carbon savings.

Salix has specialised programme teams for different areas of the public sector, as well as an in-house technical team. In order to help clients navigate their application and delivery journey, Salix runs a number of webinars throughout the year. Salix will also hold key events when a new scheme is announced. Please view our website for details about relevant webinars, [here](#).

All Phase 3 PSDS enquiries should be sent by email to [phase3psdsgrants@salixfinance.co.uk](mailto:phase3psdsgrants@salixfinance.co.uk) Salix seeks to reply to all emails within three working days.

## 5 Key dates for submitting applications

There are important dates for all eligible bodies to be aware of in order to meet the deadlines for submitting applications. If awarded funding, all agreed deadlines must be met. Applications will only be considered subject to available funds.

Phase 3 PSDS will be announced on **Wednesday 8<sup>th</sup> September, 2021 at 2pm** along with full scheme guidance material. During the remainder of September, a full set of marketing and promotional events will be scheduled to take potential Applicants through the scheme.

The Phase 3 PSDS Application Form will be available on **Wednesday 15<sup>th</sup> September, 2021 at 2pm**.

The Phase 3 PSDS Application Portal will be available and accepting applications from **Wednesday 6<sup>th</sup> October, 2021 at 2pm** and will be closed four weeks later on **Wednesday 3<sup>rd</sup> November 2021 at 2pm**.

Once the Application Portal opens, Salix will receive applications and firstly check they are fully completed and of the required quality as stated in the Guidance Notes. This means all applications must have approval from the Authorising Official of the relevant organisation, supporting documentation must be attached and all mandatory questions answered.

Applicants that do not pass the completeness and quality checks will be asked to resubmit again via the Phase 3 PSDS Application Portal. If an application is resubmitted, it joins the application process at the time of the resubmission.

We do not expect to be able to inform Applicants if they have been successful until 2022.

All Applicants awarded funding for single year projects, must complete all projects by Friday **31<sup>st</sup> March 2023**. Applicants successful for multi-year projects must complete by Sunday **31<sup>st</sup> March 2024** or Monday **31<sup>st</sup> March 2025** and will require evidence of spend in each financial year funding is provided for.

## 6 Eligibility criteria

### 6.1 Who can apply?

**Those who are eligible to apply for the Phase 3 PSDS are referred to in this document as “the Eligible Body” or “the Applicant”:**

- Central government departments and their arm’s length bodies (set out in Public Bodies as published by the Cabinet Office, see [here](#)). For central government departments where their roles are reserved (i.e., not devolved Governments of Scotland, Wales and Northern Ireland), funding may be used for estates located anywhere within the UK
- Emergency services
- Institutions of further and higher education
- Local authorities
- Schools within the state education system, including maintained schools, academies, Multi-Academy Trusts and free schools
- Nursery schools maintained by a local authority
- NHS Trusts and Foundation Trusts

**Exclusions:** Public Corporations are not eligible. Registered charities are also not eligible, unless they are also non-departmental public bodies as defined by the Cabinet Office. Private sector organisations are not eligible for any funding through the scheme.

Social housing is not eligible to apply for the Phase 3 PSDS.

All public sector organisations classed as “[economic actors](#)” under the UK EU Trade and Cooperation Agreement must cooperate with Salix to help ensure compliance with the subsidy control rules.

### 6.2 Project criteria

Eligible organisations can apply for grant funding for projects which meet the compliance criteria below:

1. Applicants must have and be using a fossil-fuelled heating system
2. The heating system in question should be coming to the end of its useful life. See the definition in Section 6.10.
3. Applications must include a measure to contribute to decarbonise the heating with a low carbon heating system.
4. Applicants can include energy efficiency measures and other enabling works, such as smart metering, where they support a ‘whole building’ approach to decarbonisation.
5. The funding provided to save a tonne of direct carbon (tCO<sub>2</sub>e) over the lifetime of the project must be no more than £325 (the Carbon Cost Threshold (CCT)), which is automatically calculated by the Support Tool in the Grant Application Form.
6. Phase 3 PSDS is primarily for capital works, however external consultancy and management fees may be included. Existing employee costs or any costs previously incurred may not be included.
7. Reasonable enabling and ancillary works may be included in the application, provided they are directly linked to the core technologies being installed, and these will be reviewed for value for money.
8. Individual applications can be to any value and there is not an upper cap. However as previously referenced applicants must demonstrate that they can deliver within the funding timescales.
9. Eligible bodies must either own the building that the funding is being used to upgrade or have a long-term lease arrangement where the tenancy agreement places the responsibility for operation and maintenance of the building services on the eligible body.
10. Single year projects must be in a position to complete by Friday **31<sup>st</sup> March 2023**. Multi-year projects must be in a position to complete by Sunday **31<sup>st</sup> March 2024** or Monday **31<sup>st</sup> March 2025**. Funding is not available for projects that cannot deliver to this timeframe.

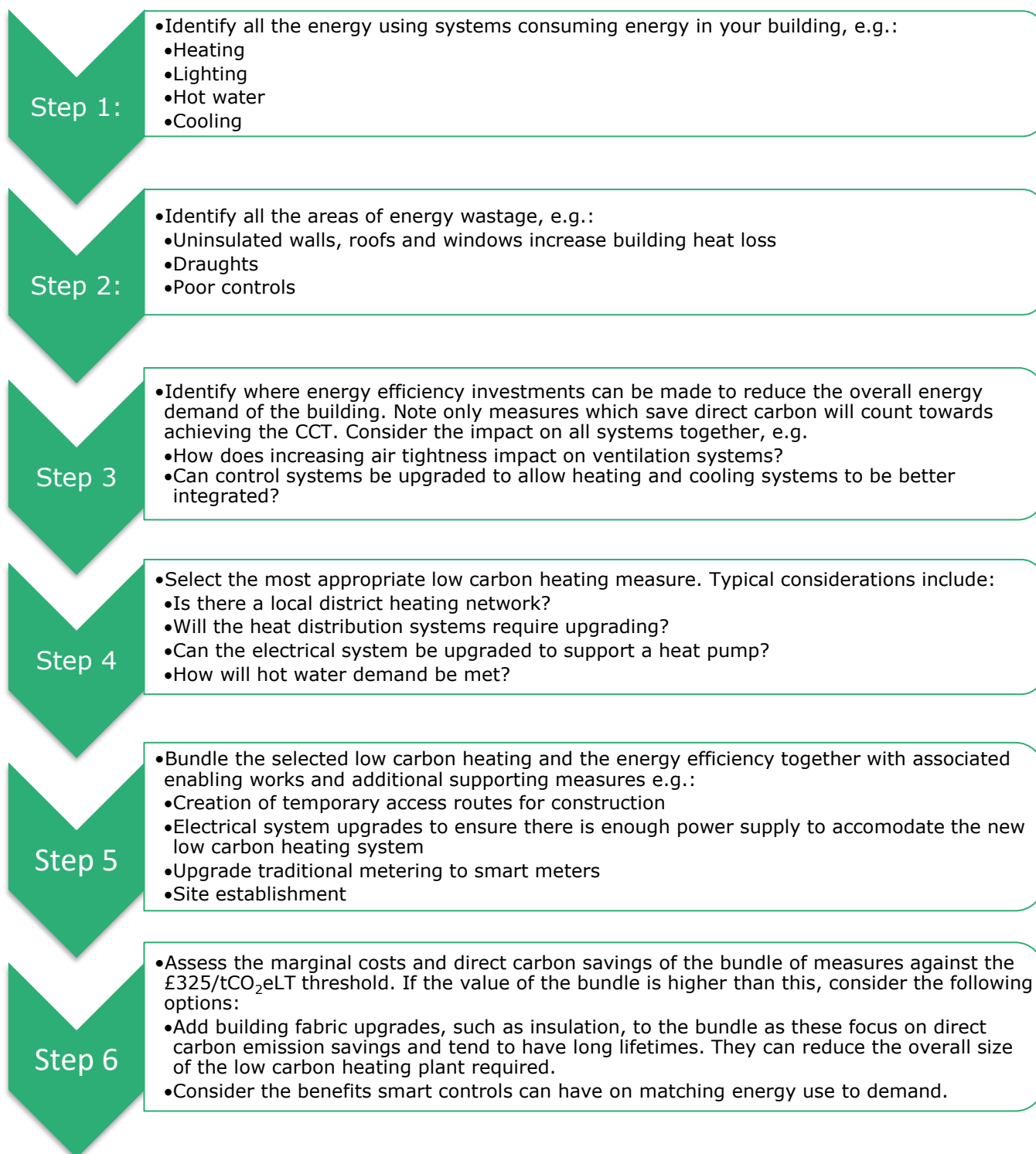


Eligible measures are split into four distinct areas and a list can be found in **Appendix 1**.

<b>Measure Definitions</b>	
Low carbon heating measures that save direct carbon	Low carbon heating systems that include the following measures: Air Source Heat Pump, Water Source Heat Pump, Ground Source Heat Pump, Electric Heating and Hot Water, Solar Thermal and Connect to Existing District Heating.
Other measures that save direct carbon	Measures that directly contribute to saving direct carbon for example building fabric upgrades, piping insulation and mechanical ventilation heat recovery.
Measures that save indirect carbon	Measures that only save indirect carbon (typically electricity savings) such as Solar PV, LED lighting and energy efficient ventilation.
Enabling measures	Measures that do not save carbon but enable the installation of measures that do. This can include measures such as electrical infrastructure upgrades, metering, energy storage, etc.

### 6.3 'Whole building' approach to decarbonising a building

The vast majority of our public sector buildings are reliant on fossil-fuel heating systems, and many of these are coming to the end of their working lives. This is why the Phase 3 PSDS narrowly focuses on low carbon heating. We are urging Applicants to take a 'whole building' approach to the way they look at their building and the energy it consumes. Here is our step-by-step guide on how you can take a successful 'whole building' approach for your project.



Good applications will need to satisfy the scheme criteria that the current heating system is coming to its end-of-life.

Supporting commentary and evidence will be required to demonstrate that Applicants have taken a 'whole building' approach in planning how to decarbonise their buildings/estates, as outlined in Section 2. Applicants will need to justify why their proposed bundle of measures was selected over other decarbonisation measures. They will also need to demonstrate how they have minimised the energy use on site to ensure that the heating plant installed is no larger than it needs to be.

## **6.4 Additionality criteria**

Projects are also required to meet the criteria of being 'additional.' The criteria that are used to assess whether a project is 'additional' are listed below:

- The measures concerned are not required to be installed by law (including building or health and safety legislation).
- Please note that for measures that go beyond what is required by law, grant funding can be sought for the increased cost, for example, in a new-build project.
- The measures are not being installed with a view to commercial gain (other than the reduction of costs through increased energy efficiency).
- The installation of the measures concerned has not begun.
- Funding for the project has not been agreed via another source; and
- In Salix's reasonable opinion, the project would not take place without the grant.

## **6.5 Maximum grant value**

There is no cap on the grant amount which can be awarded to Phase 3 PSDS Applicants for projects that reduce direct emissions. However, Applicants will be expected to ensure that they have the resource, supply chains and internal support required to deliver their project to deadline. Evidence must be supplied to prove a project will be delivered.

When applying, Applicants may wish to submit separate applications for separate projects or combine several projects in a single application, grouping their projects together.

Applicants can also use their own funds, in addition to the like-for-like costs, to top up a project which they wish to complete.

## **6.6 Technologies included, and technologies specifically excluded**

As we progress to Phase 3 PSDS from Phase 2 PSDS, no new technologies have been added for the latest scheme.

The Phase 3 PSDS will still allow Applicants to bid for funding for biomass boilers. However, Applicants must demonstrate they will be operated in such a way as to be sustainable, as well as mitigating unwanted effects on air quality. They will show:

- Applicants are expected to illustrate why biomass is more suitable than other low-carbon alternatives, for example, where there is not appropriate infrastructure in place to support a heat pump.
- Applicants will explain how they intend to mitigate any potential impacts on air quality particularly on other people in the local area. Applications are not expected for biomass boilers in heavily built-up areas.
- Applicants who receive funding for biomass boilers are requested to obtain their biomass fuel from

sustainable sources. The Biomass Suppliers List, which can be found [here](#), lists suppliers who have demonstrated that their wood fuel meets the sustainability criteria of the Renewable Heat Incentive scheme.

- Applicants are expected to demonstrate how they intend to maintain their boilers to ensure the performance over the lifetime of the plant. Note the Microgeneration Certification Scheme has recently published a new [Standard](#) for the maintenance of biomass boilers.

Onshore wind measures are also specifically allowed under this scheme.

Technologies specifically excluded:

As the Phase 3 PSDS is strongly focused on decarbonisation, technologies reliant on the use of fossil fuels are specifically excluded from the scheme. This includes measures such as gas replacement boilers, combined hybrid heat pumps and combined heat and power technologies that run at least partially on fossil fuels. Phase 3 PSDS can be used for a separate hybrid heat pump system but only for the heat pump element and not the fossil fuel technology.

## 6.7 Multi-year applications

Whilst the primary focus of the Phase 3 PSDS is to support projects where the existing fossil fuel heating system has reached the end of its working life and needs to be replaced in the next financial year, 15% of the 2022/23 Phase 3 funding has been set aside to pay for larger and more complex projects where the heating system is expected to come to the end of its working life in 2023/24 or 2024/25 and where the work required to prepare for their installation takes more than one year.

Organisations must clearly state which proportion of funding they are applying for, whether it is for multi-year or single-year projects. This should be stated at the application stage. Single year projects that do not manage to complete on time cannot be converted into multi-year projects retrospectively.

Multi-year applications are welcome for projects that are anticipated to take up to three years to complete. All projects must start in 2022/23 and there must be clearly defined elements of the project installed in each year funding is requested for. Applications must include details of the total costs anticipated to be incurred each year, and once agreed via the grant offer letter, funding cannot be moved between years.

The following table provides an example of how funding could be applied for in a multi-year project.

Year	Measures installed	Funding requested
2022/23	Roof insulation Wall insulation Electrical infrastructure upgrades	£500,000
2023/24	Electrical infrastructure upgrades Lighting upgrades Window replacements	£1,200,000
2024/25	Window replacements Low carbon heating replacement	£3,000,000
<b>TOTAL</b>		<b>£4,700,000</b>

The information in the table above will be requested in the Application Portal.

All multi-year projects must meet the same eligibility criteria as single year projects. The requirement to meet the Carbon Cost Threshold of £325/tCO<sub>2</sub>e lifetime applies to the multi-year project as a whole, and not to individual years of funding, e.g., the cost per tonne of direct carbon saved for measures installed in 2022/23 can be higher than the CCT as long as this is balanced out by a suitable amount of high carbon saving measures installed in later years.

Applications for multi-year or single year projects starting after 2022/23 will not be accepted at this stage. They will be eligible for future phases.

## 6.8 Carbon Cost Threshold

To ensure projects deliver emissions savings in a cost-effective manner, funding will be granted up to a maximum Carbon Cost Threshold (CCT) of £325 per tonne of direct carbon emissions saved over a project's lifetime.

Applications exceeding £325 tCO<sub>2</sub>eLT can be submitted. However, funding will only be provided up to this threshold, and Applicants must find other sources of funding for all costs over this.

The new methodology and data set used to inform the £325 tCO<sub>2</sub>eLT CCT reflects the focus and design of the scheme, accounting for direct emissions savings only and funding the marginal (rather than full) cost of low-carbon heating. The £325 tCO<sub>2</sub>eLT CCT is therefore not directly comparable to the cost to save a tonne of carbon set for the Phase 1 PSDS (£500 tCO<sub>2</sub>eLT). For most public sector organisations, direct emissions primarily arise from burning fossil fuels such as natural gas on site.

By excluding indirect emissions savings from the cost/tonne of carbon emissions saved calculation (emissions primarily arising from grid electricity use), Applicants are encouraged to take up measures that maximise direct emissions savings as this will drive down a project's £/direct carbon savings. Nonetheless, Applicants are still actively encouraged to include measures that reduce indirect carbon emissions, as well as other enabling measures to facilitate a 'whole building' approach to heat decarbonisation. The £325 tCO<sub>2</sub>eLT limit is designed to give Applicants flexibility to create bundles tailored to the needs of their estates.

### How the cost per tonne should be calculated for applications:

$$\text{£325 tCO}_2\text{eLT} \geq \frac{[(\text{£})\text{Full capital cost of bundle}] - \left[ \begin{array}{l} (\text{£}) \text{ like for like replacement of existing heating system} \\ + \text{ any top up funding provided} \end{array} \right]}{\text{Total direct carbon emissions saved over the lifetime of the project (tCO}_2\text{eLT)}}$$

### Calculating the full capital cost of a bundle

Salix's Application Form will automatically calculate the cost per tonne of an application as Applicants add the details of measures they wish to apply for. The methodology and its sequencing used in the Application Form has been set out below and will be helpful for Applicants in determining the appropriate bundle for a particular site.

The cost of low carbon heating affected by heat efficiency measures:

- The full costs of heat energy efficiency measures should be calculated before calculating the cost of the low carbon heating source. This is because installation of heat energy efficiency measures (e.g., insulation) reduces the overall heat demand of a building and therefore reduces the size (and hence cost) of the heating plant required, as well as [the need for any electrical upgrades in the case of a heat pump.
- As outlined in section 5.3 as part of a whole building approach, Applicants are encouraged to maximise heat energy efficiency before installing a low carbon heating source as this is often both more affordable and more effective than installing a low carbon heating source on its own.

The cost of required low carbon heating source in a bundle:

- The cost of a low carbon heating source should be calculated on the marginal capital cost of installing a low carbon heating source vs. a fossil fuel heating replacement. The business-as-usual costs for the like-for-like replacement of the existing fossil fuel plant do not have to be based on actual quotes for the replacement work and can be based on costs obtained from other similar projects, or from reasonable cost estimates from sources such as a quantity surveyor.

The cost of electricity saving energy efficiency in a bundle:

- Electrical saving energy efficiency helps to mitigate the impact of any increase in operating costs resulting from electrification of heat. Applicants will only be eligible for the full funding cost of measures which save electricity, such as LED lighting, if this is also 'bundled' with a low carbon heating source.

The cost of enabling and ancillary works in a bundle:

- The costs of reasonable enabling and ancillary works may be included in the bundle, provided they are directly linked to the core measures being installed, and these will be reviewed for value for money.

### **Calculating the direct carbon emissions savings of a bundle**

Total direct carbon emissions savings over the lifetime of a project:

- Direct carbon emissions savings should be calculated based on the lifetime of each direct carbon emissions saving measure. See Section 5.8, Lifetime of direct carbon emission saving measures.
- Direct carbon savings from a low carbon heating measure should be calculated after heat energy efficiency measures have reduced overall direct carbon emissions first, to ensure savings are not double counted.

It is recognised that while replacing fossil fuel heating systems with low carbon heating is assumed to decarbonise the heat within a building, the building itself still may not be fully decarbonised as there may be instances where residual direct emissions from fossil fuels may occur due to catering and other activities.

## **6.9 Lifetime of direct carbon saving measures**

The lifetime of low carbon heating measures and heat saving efficiency measures used to calculate the Carbon Cost Threshold are provided in Appendix 1, 'examples of eligible technologies', please refer also to persistence factor.

### **6.10 Heating system at the end of its useful life**

Applicants can refer to their latest plant service report to determine if their heating plant is at the end of its working life. If this is not available, then they can also consult the manufacturer's product information or industry guidance such as CIBSE Guide M to understand if their heating system is considered to be at the end of its useful life. In the case where the system has reached the end of its useful life sooner than is typically expected, the Applicant has to set out the rationale and provide evidence to show why they believe this is the case. This evidence will form an important part of supporting information.

### **6.11 Like-for-like cost**

As a minimum all Applicants are required to contribute the like-for-like costs of the project themselves in addition to any PSDS grant funding provided. The like-for-like cost is defined as all the costs incurred should the existing heating system be replaced with a typical fossil fuel heating system of the same type and size. In most cases this will be equivalent to the costs of replacing your system with a conventional boiler.

The cost for a like-for-like replacement of the existing fossil fuel system should include the cost of auxiliary works including but not limited to:

- new controls
- pumps
- expansion vessels
- pipework and insulation
- the cost of removing the end-of-life heating system
- the cost for installing the conventional heating system
- commissioning work

Where grant funding is being requested for the replacement of fossil fuelled domestic hot water systems with low carbon alternatives, the like-for-like replacement costs of these system must also be contributed by the Applicant.

### **6.12 Low carbon Heating System Sizing**

The new low carbon heating system must be sized to ensure that the heating and Domestic Hot Water (DHW) required for the building is satisfied without being oversized. As Applicants are expected to reduce the heat demand within a building as far as practical before installing the new low carbon heating measure, it is not

expected that the size new heating system in terms of peak heat output will be larger than the fossil fuel heater they are replacing. Applications for low carbon heating plant with a higher peak heat output than the plant they are replacing will be rejected unless a clear, technically sound justification is provided.

To size the new low carbon heating system, the peak heat loss of the building needs to be calculated. For example, this can be done by:

- Measuring all the fabric and ventilation/infiltration heat losses for the coldest day of the year based on geographic location.
- Estimating air change rates that can be used for ventilation rate.
- Accounting areas of the walls, floors, roof, windows and doors and their U values.

If the new low carbon heating measure is also providing DHW, this needs to be considered when its size is calculated. Details need to be provided on how you propose to meet your DHW demand.

If you are planning to use another method to provide your DHW then please provide details of this installation and the same level of supporting information as for you proposed heating system. Please specify what procedures are in place in the design of the DHW system to combat Legionella.

### **6.13 Heat emitters**

The lower flow temperatures of heat pumps may require larger heat emitters than tradition boiler systems to allow the heating system to provide the set point temperature in the building if the building fabric and air tightness is not improved.

Where the proposed flow temperatures are lower than those stated:

- A survey of existing heat emitters needs to be completed for any systems proposing lower flow temperatures than the existing system.
- A survey needs to be completed to see whether existing heat emitters are large enough for the proposed flow temperature.

### **6.14 Electrical infrastructure**

Applicants should ensure buildings have the correct electrical infrastructure for the measures they wish to apply for. Applicants may or may not need to contact the DNO regarding connection of their proposed system to the local electricity network if additional electrical capacity is required to accommodate the new low carbon measure.

### **6.15 Replacement of calorifiers**

Within sites where a central plant room feeds multiple buildings, the local interfaces that connect to the heat network (such as plate heat exchangers and calorifiers) can be counted as the buildings heating plant for the purpose of meeting the scheme criteria. For example, once a local calorifier or heat exchanger that is connected to a central plant room reaches the end of its working life (as defined in section 5.9), it can be replaced with a low carbon alternative such as a heat pump and therefore it will be eligible for grant funding, even if the main heating plant in the central plant room is still relatively new.

### **6.16 Heating system resilience requirement**

Certain sectors will require back up heating systems which are fed from a separate fuel type to the main system. For example, an NHS trust may have existing gas fired boilers and a backup oil fired system. PSDS funding cannot be used to pay for the installation of any fossil fuel based heating plant, even to meet N+1 redundancy requirements. While the Applicant still needs to remove their primary heat solution as part of the overall project, the existing backup fossil fuel heating plant can be retained for use with a new PSDS funded low carbon heat source.

## 7 Responsibilities and competence

Salix assumes that the Applicant and/or the partner(s) they are working with are competent and fully responsible for the projects to be funded. This may include, but is by no means limited to:

- Project identification and development
- Establishment of firm costs and calculated estimated savings
- Reasonable project sequencing and due care to ensure no double counting of savings when considering multiple projects on the same site
- Selection of suitable supplier(s) following the Applicant's procurement procedure
- Project delivery including project management
- Reporting on project progress
- Post project completion activities including any verification of savings

The public sector Applicant is responsible for ensuring that all contractors involved in the provision of services in relation to the proposed project(s) hold and maintain appropriate professional indemnity insurance to cover all the services to be carried out and that copies of the relevant certificates are obtained.

Public sector Applicants must also ensure that all professional consultants and/or contractors provide invoices, receipted invoices, and completion certificates (where appropriate) in relation to the services carried out on the project(s) as they may be required for audit of the project(s).

During the duration and on completion of the project, Salix will be engaging Applicants with client surveys because this will help Salix continually improve its services. It is a requirement of the scheme that these surveys sent via email are completed by the Applicant to the required deadline.



## 8 The online application process

The Phase 3 PSDS Application Portal will open on Wednesday **6th October, 2021**. Private organisations can support the preparation of the Application Form if required, but the online application must be submitted by the eligible body directly and not by any external consultant or contractor.

### 8.1 Registration

- Visit the Phase 3 PSDS webpage at: [https://www.salixfinance.co.uk/P3\\_PSDS](https://www.salixfinance.co.uk/P3_PSDS)
- If you are a new client, register here: <https://www.salixfinance.co.uk/user/register>
- If you are an existing client, please log in here: <https://www.salixfinance.co.uk/user/login>

### 8.2 Submitting the online application in the Phase 3 PSDS Application Portal

When the Application Portal opens on Wednesday **6th October 2021** visit our Phase 3 PSDS webpage and click the link "Salix Grant Application".

This will take Applicants to the Grant Scheme Application Portal.

The Application Portal includes a progress bar showing completion of the steps. At any point you can save your application and continue later.

The Application Portal asks for contact details of the eligible body, a main contact, and an Authorising Official at the eligible organisation.

The Application Portal will also ask Applicants to upload their completed Phase 3 PSDS Application Form and any supporting information.

Supporting information provides further detail and backs up assumptions used in the Phase 3 PSDS Application Form. The following list provides examples of the types of reasonable evidence accepted for scheme criteria. Applicants are encouraged to consider what the most appropriate evidence to provide is based on the specific circumstances of their buildings. Examples include:

#### **Applicants must have and be using a fossil-fuelled heating system:**

- Energy consumption data for the last three years such as energy bills, Display Energy Certificate (DEC), Energy Performance Certificate (EPC) and energy benchmark estimated appropriate to the building type

#### **Heating system must be coming to the end of its useful life:**

- Condition survey and/or forward works plan
- Asset Register or Life Cycle Register
- Commissioning test certificate
- Service records recording boiler efficiency
- Photographic evidence

#### **Incremental upfront cost of installing a low carbon heat source:**

- Evidence of costs for the full conventional fossil fuel plant replacement including all associated works.
- Evidence of costs for the new low carbon heating solution

#### **Applications must include a measure to contribute to decarbonise the heating with a low carbon heating system:**

- Supporting calculations which explain the kilowatt hour savings figures provided (e.g., energy saving models, heat loss calculation and heat pump size calculation)
- Technology specifications (e.g., product brochure)
- Design specification (e.g., of flow/return temperatures for the existing fossil fuel heating plant)
- O&M manuals and heating system schematic for the existing fossil fuel heating plant

#### **Applicants can include energy efficiency measures and other enabling works where they support a whole building approach to decarbonisation:**

- Energy audit report or feasibility study
- Summary of the process you went through to pick the measures in your application, demonstrating why a

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chosen approach to decarbonisation is preferable to other options available

**Evidence that all costs are necessary:**

- Details of supply and installation costs for each measure and any associated enabling works. Specific consideration may need to be given to the electrical infrastructure and any new additional demands that may be required.

**Biomass:**

- Reasonable evidence for Biomass is covered in Section. 5.6.

**Project management:**

- Project delivery plan (Gantt chart or similar)
- Risk register

Once Applicants are satisfied that all sections of the Application Portal are complete, click submit.

### **8.3 Application authorisation**

Upon submission, an automatic email will be sent to the named Authorising Official at the eligible body, or lead Applicant for a group application. This email will request authorisation for Salix to begin assessing the application and requires a response via email by the Authorising Official before Salix can proceed.

Please ensure the Authorising Official is available to respond to this email so that your application is not delayed.

## 9 Assessment and award of funding

### 9.1 Assessment process

Applications will be assessed by our in-house technical team as well as external technical consultants, who provide added independent assurance that the project is deliverable, and any savings are reasonably achievable. A sufficient level of detail provided on the Phase 3 PSDS Application Form, and the quality of supporting information uploaded will assist with the assessment process.

Applications assessed will have technical and due diligence checks in line with the size and scope of their project.

Projects will be marked on the three key areas below:

- **Technical case** which will cover areas including the technical feasibility, future resilience, energy/carbon savings calculations and energy monitoring plan.
- **Financial case** which will cover areas including breakdown of project costs, operating and maintenance costs and evidence of firm pricing.
- **Project governance** which will cover areas including project risks and mitigations, project implementation/schedule, previous experience, procurement and deliverability within the grant funding time window.

If there are any questions or further information required, then the Applicant will be contacted to request this. It will not be possible to progress the application further until the requested information is provided and agreed by Salix. If applications are considered poor in terms of quality or supporting evidence, then Salix exercises the right to reject the application without completing full due diligence.

The assessed Phase 3 PSDS Application Form will be shared with the Applicant. This includes feedback for useful learning points.

If an application does not fully meet the criteria to be 100% funded by this grant scheme (excluding the mandatory client contribution), Salix will discuss with the Applicant what other funding options may be available.

### 9.2 Issuing a Grant Offer Letter

Following successful assessment, confirmation of the grant funding will be sent to Applicants by Salix in a Grant Offer Letter via email. A copy of this letter must be signed by the public body's Authorising Official and returned to Salix within ten working days. This will happen once Grant funding becomes available.

The Grant Offer Letter outlines the terms and conditions of receiving the grant value allotted to the Phase 3 PSDS approved project. It also includes the grant start and end dates and several schedules which will be used as a template for monitoring and reporting during the grant period, further information can be found in Section 10 of this document.

As stated at the start of this document, Phase 3 grant funding will only be provided for works incurred from Thursday 1<sup>st</sup> April 2022. No works that have been started before this date can be claimed for in retrospect. However, organisations are free to make preparations for work to commence before 1st April, but they cannot claim any grant funding for these preparations. And, as Applicants are contributing like-for-like costs, if these funds can be accessed, expenditure against these costs can be made before 1<sup>st</sup> April 2022.

If Salix considers that an application does not meet the scheme criteria, Salix will contact the Applicant to discuss their project.

## 10 Delivery of the project

### 10.1 Managing Delivery: Progress updates to Salix

Within the Phase 3 Grant Offer Letter, Applicants are provided with further details regarding delivery requirements and audit requirements.

The Grant Offer Letter sets out how regular contact with Salix will be maintained and what is required from the successful Applicant during this contact. This will include; scheduled meetings, monthly monitoring reports with updates to risk registers, project programmes and payment profiles.

The regular meetings with clients who have larger projects may include a senior manager from the Salix team.

Salix aims to facilitate the successful delivery of all approved projects by efficiently administering the scheme. The Company will offer practical support and guidance based on the knowledge acquired from previous projects and from working with a wide range of agencies.

It is important to note that a sample of projects will be audited by Salix Finance. While successful Phase 3 Applicants will be notified anytime from November onwards and will receive a Grant Offer Letter in early 2022, no payments can be made until Friday **1<sup>st</sup> April 2022**.

Experience from previous PSDS schemes has shown that those clients that start early and have a clear project plan from the beginning have a higher chance of successfully delivering projects. The Applicant's Salix delivery lead will seek to arrange a call with you in February or March to discuss the project plan. Key areas to consider are:

- Planning permissions required, and the timetable to achieve these
- Key milestones, and risks to successful delivery
- Supply chain management and lead times for key equipment and materials
- Internal governance and approval process
- Payment forecast (when the Applicant will expect to be requesting payments from Salix)
- Distribution Network Operator (DNO) plan and potential works required.

All successful Applicants are required to provide Salix with brief monthly written updates on the achievement of key milestones during the delivery of the project, and to raise any delays or significant changes to cost/scope/staff. These will commence from early April, with the detailed requirements in the Grant Offer Letter. This, together with monthly calls between the Applicant and Salix contact will be the key mechanism for tracking progress towards project completion. This will help manage payments, risk identification and management. In this way Salix can highlight and resolve issue early, sharing good practice a celebrating key milestones.

### 10.2 Payment of the grant

Successful Applicants will be issued with a Grant Offer Letter following project assessment.

In that document, Applicants are asked to give the grant start date and grant end dates. During this period of time Applicants will be able to claim payments during the delivery and following completion of their project(s). Please note that payments are only made directly to eligible bodies and will be processed on a monthly basis.

The payments, made on a monthly cycle will be subject to meeting agreed milestones and the required level of evidence (including invoices) being provided.

The grant will be accessible from the grant start date (not before Friday **1<sup>st</sup> April 2022**) and is available to be requested until the grant end date. The grant will be provided in instalments in the amounts and at the times set out in the Project Programme, subject to the following requirements:

- Salix must receive a completed payment request accompanied by the supporting documentation to evidence the amount being claimed before any claim for payment can be processed
- The claim for expenditure must be signed by an Authorising Official from the Eligible Body.

- Full conditions will be set out in the Terms and Conditions accompanying the Grant Offer Letter.

Where a lead Applicant has submitted a joint application for a group of eligible public bodies, payments can be made to individual eligible bodies following the same process as outlined in the paragraph above.

In the event of any projected overspend by the successful Applicant in its delivery of the project outside the sums set out in the Project Programme within the Grant Offer Letter, the amount of such overspend shall be met by the recipient from its own funds. It is essential that all successful Applicants inform Salix immediately if there are any significant changes to the costs of the project.

When a project is on a projected overspend track, the Applicant must raise this immediately with Salix, which will arrange to discuss how this situation is being risk managed. That discussion will include how the Applicant can use its own funding to complete the project. Salix will also discuss if the Applicant needs to reduce the project scope in order to remain within the funding available. This would be to ensure that the remaining grant is sufficient to meet the remaining costs required for the delivery of the project. Salix is not authorised to agree additional funding.

Applicants may only claim reimbursement of the costs actually spent on the costs included in their application. In the event that these amount to less than the total grant awarded, the balance may not be claimed.

Your project must be complete by the date specified in the Grant Offer letter. No payments can be made after this date.

Please note that for multiyear projects, the total payments in each financial year will be capped at the total estimated by the recipient in their application. As an example, if a recipient has forecast £1M in year 1 (FY 2022/23), and 3M in year 2 (FY 2023/24) then the maximum payments that the recipient can receive in year 1 is £1m and £3M in-year 2. Any in-year overspend shall be met by the recipient from its own funds.

### **10.3 Post Completion Monitoring and Reporting**

For monitoring purposes, as well as the monthly updates, Applicants will also be required to provide monitoring data for three years post-installation to inform whether measures achieved the expected outcomes.

Once the project is completed, the recipient will be asked to provide an annual monitoring report for the next three years to tell us whether the funded measures are achieving the expected outcomes. Recipients will also report when they have made the retention payments to their contractors, if this arrangement is in the contract.

### **10.4 Evaluation**

It is the intention of BEIS to conduct an evaluation of this scheme. As such, Salix will ask for permissions to share recipients' information with BEIS and those engaged in performing an evaluation of the scheme, for the purposes that recipients be contacted to invite their participation.

## 11 Audit

Salix is responsible for taking reasonable steps to monitor grant recipients' use of funding awarded, including the delivery of the projects for which this funding was approved. This will include audits which in some cases, will be undertaken, both during the delivery of projects and post project completion or at end of the project only. Each audit will comprise a financial audit of the project and in some cases an onsite review of the project delivery.

Each grant recipient will be required to engage with the audit process within the stated timescales to ensure the audit can be completed on time, which will minimise disruption to ongoing activities within their organisation. The grant recipient is responsible for ensuring that they provide evidence to demonstrate that the public funds granted under this scheme have been used for the purposes for which they were awarded. This requirement will also extend to any other public sector bodies which are beneficiaries under this grant, in which case, the main grant recipient will need to ensure that each organisation complies with the terms of the grant. The grant recipient will also be required to demonstrate that they have followed applicable government regulations, their organisation's policies and procedures, and have effectively managed the risks related to funding, grant claims, procurement of contractors/consultants, payments, and project delivery.

They will need to demonstrate that due diligence checks have been carried out for any contractors and subcontractors used on the projects, that they hold appropriate insurance cover for the goods and services provided under the contract and that evidence of this is retained. They will also need to provide evidence of the grant income and expenditure being fully accounted for in the accounting system. Each grant recipient will be required to provide the relevant supporting documentation for any expenditure covered with grant funding. This will include but will not be limited to contract documents, invoices, delivery notes, insurance certificates, evidence of due diligence checks, conflicts of interest registers/declarations, completion certificates etc. This requirement will also extend to any subcontractors used on the grant insofar as the evidence is required to demonstrate how the grant was used. In cases where a site visit is not undertaken, they may also be required to provide a live video walk-through of project work onsite and/or photographs of project site(s) prior to, during and the completed project.

All grant recipients must maintain all income and expenditure records related to the grant, and the project for a period of at least six years following the grant end date. Salix has the right to review the grant recipient's accounts and records that relate to the project and the grant, and has the right to take copies of such accounts, records or any other related supporting documentation.

## Appendix 1 – Examples of eligible technologies

The following list includes examples of eligible technologies for the Phase 3 PSDS this list will be also found in the Application Form. If you plan to include technologies that do not appear on this list in your application, please discuss with Salix prior to submission.

Project Type	Work Type	Saves direct carbon	Saves indirect carbon	Lifetime
Low carbon heating	Air source heat pump (air to water)	X		20.00
	Air source heat pump (air to air)	X		20.00
	Water source heat pump	X		25.00
	Ground source heat pump	X		25.00
	Connect to existing district heating	X		30.00
	Heating - electric heating	X		10.00
	Hot water - electric point of use heaters	X		12.00
	Solar thermal	X		25.00
	Biomass	X		20.00
Project Type	Work Type	Saves direct carbon	Saves indirect carbon	Persistence Factor
Building energy management systems	BEMS - not remotely managed	X	X	6.84
	BEMS - remotely managed	X	X	8.42
Cooling	Cooling - control system		X	6.84
	Cooling - plant replacement/upgrade		X	8.21
	Energy efficient chillers		X	14.44
	Free cooling		X	13.68
	Replacement of air conditioning with evaporative cooling		X	13.68
Energy from waste	Anaerobic digestion	X	X	15.20
	Incineration	X	X	15.20
Heating	Heat recovery	X		10.83
	Heating - discrete controls	X		6.84
	Heating - distribution pipework improvements	X		15.20
	Heating - zone control valves	X		11.88
	Plate heat exchanger	X		28.50
	Steam trap replacements	X		15.20
	Thermal stores	X		18.00
Hot water	Flow restrictors	X		14.00
	Hot Water - distribution improvements	X		18.00
	Hot Water - efficient taps	X		11.00
Insulation - building fabric	Cavity wall insulation	X		30.00
	Double glazing with metal or plastic frames	X		28.00
	Dry wall lining	X		30.00
	Floor insulation - suspended timber floor	X		27.00
	Floor insulation - solid floor or other type	X		30.00
	Loft insulation	X		27.00
	Roof insulation	X		30.00
	Secondary glazing	X		7.92

Project Type	Work Type	Saves direct carbon	Saves indirect carbon	Persistence Factor
Insulation - draught proofing	Insulation - draught proofing	X		29.25
Insulation - other	Automatic speed doors	X		8.45
	Automatic/revolving doors	X		8.45
	Draught lobby (external)	X		29.25
	Draught lobby (internal)	X		29.25
	Radiator reflective foil (external walls)	X		8.00
Insulation - pipework	Heating pipework insulation (external)	X		9.00
	Heating pipework insulation (internal)	X		22.50
LED lighting	LED - new fitting		X	25.00
	LED - same fitting		X	13.00
Lighting controls	Lighting - discrete controls		X	8.89
	Lighting control system centralised		X	10.26
Motor controls	Fixed speed motor controls	X	X	11.40
	Motors - flat belt drives	X	X	11.40
	Variable speed drives	X	X	10.26
Motor replacement	Motors - high efficiency		X	15.00
Renewable energy	Small hydropower		X	22.80
	Solar PV		X	22.50
	Wind turbine		X	17.60
Time switches	Time switches	X	X	6.84
Transformers	Low loss		X	30.00
	Transformer tapping change		X	30.00
Ventilation	Fans - air handling unit		X	23.75
	Fans - high efficiency		X	14.25
	Phase change material		X	23.75
	Ultrasonic humidifiers		X	7.22
	Ventilation - distribution		X	30.00
	Ventilation - presence controls		X	6.84



## Glossary

**Bundling** is the process of identifying the most cost-effective measures to decarbonise the heating within a building and packaging them up into a single application.

**Carbon Cost Threshold (CCT)** set at £325 is the maximum cost per tonne of direct carbon saved over the lifetime of the measured funded. Any project costs over and above this threshold will not be eligible for grant funding under the Phase 2 Grant Scheme.

**District heating** is where heating for several buildings in a local area is provided from an external plant room or rooms. The heating is typically transmitted to each building via a network of highly insulated underground hot water or steam pipes. It is also known as heat networks or teleheating. The heat is often obtained from a cogeneration plant burning fossil fuels or biomass, but heat-only boiler stations, geothermal heating, heat pumps and central solar heating are also used, as well as heat waste from nuclear power electricity generation.

**Lifetime of measures** Applicants should refer to manufacturer's guidance or industry standard references, such as CIBSE Guide M to help them understand how to assess whether their system is coming to the end of its useful life. This may mean heavily used heating plants are replaced earlier than those receiving less wear and tear and evidence will be required.

**Low Carbon heating** is one where little or no carbon is emitted to provide the heating. Electric heat pumps are considered to be low carbon heating, and whilst there can be carbon emissions associated with the electricity used to power them, these emissions will reduce over time to zero as the power grid decarbonises. This includes the following measures: Air Source Heat Pump, Water Source Heat Pump, Ground Source Heat Pump, Electric Heating and Connect to Existing District Heating.

**Marginal costs** are those in addition to the business-as-usual costs for replacing the existing fossil fuel heating system on a like for like basis.

**Direct carbon** means carbon emissions that are emitted either directly within an organisation's site boundary from combustion of fossil fuel, or where district heat networks are used are emitted from combustion of fossil fuel in a district heating plant room. For most public sector organisations this will primarily be fossil fuels (gas, oil and coal) which are combusted on site. (Previously referred to in Phase 2 as non-traded carbon.)

**Indirect carbon** means carbon emissions from power generated off site by another organisation. For the vast majority of public sector organisations this will primarily be carbon emissions arising from grid electricity use. (Previously referred to in Phase 2 as traded carbon.)

**Persistence factor methodology:** Persistence factors are the anticipated lifetime of an energy efficiency technology used to calculate lifetime savings. The persistence factor is used in the calculation of cost to save a tonne of CO<sub>2</sub>e over the lifetime of an application (£/tCO<sub>2</sub>eLT). The Persistence Factors for individual technologies employed by Salix are based on, and are consistent with, those derived by the Carbon Trust.

**'Whole building' approach** is where all the factors that contribute to a building's energy consumption are considered together to identify the most cost-effective way to achieve the objective. For example, investment in improving the insulation levels of the building fabric will reduce the overall size of low carbon heating plant required, as well as save on fuel bills. Also, investment in reducing the peak electricity consumption, such as through installation of LED lighting, can reduce the need to upgrade a building's electrical infrastructure to accommodate the installation of a heat pump.

Guidance version	Revision made	Date
Final .1	<ul style="list-style-type: none"> <li>Section 1, page 3, Introduction – Date amendment. In section 1, introduction, an inaccurate date was initially printed, see below. The correct final date should read 2024/25. <i>"Once the total Phase 3 PSDS budget is confirmed, 85% of the 2022/23 budget will be allocated to the "single year projects" where the heating system has reached the end of its working life, and the remaining 15% will be allocated to the first year of "multi-year projects" which must start in 2022/23 and end in either 2023/24 or <del>2023</del>2024/25"</i></li> </ul>	15/09/21
	<ul style="list-style-type: none"> <li>Section 3, page 5, What is new in Phase 3. The word 'application' was replaced with 'project' to clarify the sentence. <i>"However, whilst there is no cap Applicants must ensure they have the resource and supply chains as well as all the internal resources required to deliver the <del>application</del> project by the agreed dates."</i></li> </ul>	