

Phase 3b Public Sector Decarbonisation Scheme (PSDS) Guidance

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Contents

1	Phase 3b Public Sector Decarbonisation Scheme (PSDS)	3
2	What is new in Phase 3b	3
3	Key dates for submitting applications	5
4	Eligibility criteria	5
	4.1 Who can apply?	5
	4.2 Project criteria	6
	4.3 'Whole building' approach to decarbonising heating	7
	4.4 Additionality criteria	10
	4.5 Maximum grant value	10
	4.6 Technologies included:	10
	4.7 Technologies excluded:	10
	4.8 Multi-year applications	11
	4.9 Eligible grant value	11
	4.10 Lifetime of direct carbon saving measures.....	13
	4.11 Heating system at the end of its useful life.....	13
	4.12 Like-for-like cost.....	13
	4.13 Low carbon heating system sizing.....	14
	4.14 Heat emitters	14
	4.15 Electrical infrastructure.....	14
	4.16 Replacement of calorifiers.....	14
	4.17 Heating system resilience requirement	15
	4.18 Air-to-air heat pumps.....	15
	4.19 Connect to existing district heating	15
5	Responsibilities and competence	15
6	The online application processes	17
	6.1 Registration	17
	6.2 Submitting the online application in the Phase 3b PSDS Application Portal	17
	6.3 Application authorisation	18
7	Assessment and award of funding	19
	7.1 Assessment process.....	19
	7.2 Issuing a Grant Offer Letter	19
8	Delivery of the project	20
	8.1 Managing delivery: Progress updates to Salix.....	20
	8.2 Payment of the grant	20
	8.3 Post completion monitoring and reporting.....	21
	8.4 Evaluation	21
9	Audit	22
10	Support and advice	22
	Appendix 1 – Examples of eligible technologies	23
	Glossary.....	25

1 Phase 3b Public Sector Decarbonisation Scheme (PSDS)

The Public Sector Decarbonisation Scheme provides grants for public sector bodies to fund heat decarbonisation and energy efficiency measures.

Phase 3 of the Public Sector Decarbonisation Scheme was announced in 2021, and the first phase of PSDS Phase 3 is Phase 3a which closed to new applications in November 2021. These projects are currently being delivered.

These Guidance Notes cover PSDS Phase 3b and refer to the new PSDS Phase 3b application window. As we begin this new phase of the Public Sector Decarbonisation Scheme, the emphasis remains on providing grant funding for projects that focus on the decarbonisation of heat.

The Department for Business, Energy and Industrial Strategy (BEIS) initiated the PSDS funding to help meet the UK Government's ambitious carbon emissions targets. In 2019, the UK Government set out targets to achieve Net Zero greenhouse gas emissions across the whole UK by 2050.

The majority of buildings in the public sector still rely on burning fossil fuels for heating, hot water and catering. The PSDS therefore places a focus on the decarbonisation of heat within the public sector whilst taking a 'whole building' approach. Phase 3b PSDS builds on Phase 3a, with refinements implemented to respond to stakeholder feedback regarding the proportion of funding made available for financing projects that deliver over more than one financial year. Other changes sharpen the scheme's focus on cost effective decarbonisation of heat and the overall achievement of carbon emission savings.

The scheme, delivered by Salix Finance, gives Applicants the opportunity to submit separate applications for separate projects or combine several projects in a single application for a single year fund allocation or a multi-year fund allocation. The new features of Phase 3b are set out in Section 2 of this guidance document.

There are two application types:

- Single year applications are required to complete their projects by 31 March, 2024.
- Multi-year applications are for projects which will take more than one financial year to deliver and are required to complete by 31 March 2025. The intention is also to allow Applicants to apply for funding at the Phase 3b application window for projects with spend in 2024/25 only, using 2023/24 as a planning year.

Phase 3b will allocate up to £635m of funding to public sector organisations, to be spent in financial years 2023/24 and 2024/25. This is split by financial year, with up to £402m to be allocated for 2023/24 and up to £233m to be allocated for 2024/25.

On application, organisations must state whether they intend to apply for a single year project or a multi-year project. 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 4.8.

2 What is new in Phase 3b

Sector soft caps

One significant new feature in PSDS Phase 3b is the piloting of sector soft caps to ensure the funding is allocated fairly across the public sector according to the distribution of carbon emissions across sub-sectors of the public sector.

How sector soft caps work

1. Applications will be allocated on a first-come-first-served basis until a sector cap is reached.
2. Upon the point a sector cap is reached, funding allocation for that sector will be paused until all applications for other sectors have been allocated up to their own sector cap.
3. The amount of funding available under each sector cap is determined by the estimated share of public sector direct emissions from that sector. The proposed sector caps are below:

- a. Education - includes but is not limited to state primary schools, state secondary schools and universities and Local Authorities applying on behalf of schools only.
- b. Health - includes but is not limited to hospitals and health centres.
- c. Other - includes but is not limited to emergency services, clubs and community centres, law courts and prisons, Ministry of Defence buildings, museums and theatres. Applications which are mixed (e.g. a Local Authority application which covers a school and a leisure centre) will fall under the 'other' sector cap.

Confirmation of the proportion of funding available per sector cap will be published when the application window opens, or earlier if possible.

4. If insufficient good quality demand for any sector cap means that some funding remains unallocated, applications which were initially paused will then be revisited to allocate the remaining funding on a first-come-first-serve basis to these projects, irrespective of their sector.

As well as piloting sector soft caps, there are other key new elements to PSDS Phase 3b. These changes will allow more projects to deliver the installation of carbon reduction measures across two financial years – giving more flexibility to Applicants. These new elements are also designed to strengthen the scheme's focus on decarbonisation within a 'whole building' approach (see Section 4.3 for more details) which will improve carbon savings both for individual projects and for the scheme as a whole, whilst still ensuring access to the scheme.

Multi-year applications

- Phase 3b increases the funding pot for multi-year applications spending in both 2023/24 and 2024/25 and makes up to £233m in FY 2024/25 available. See Section 4.8 for more detail.

Planning year

- Applicants can also apply for funding at the Phase 3b application window for projects with spend in 2024/25 only, using 2023/24 as a planning year. This is with the aim to allow applicants to have longer to plan their projects with the certainty of committed funding.

Applicant contribution

- Applicants are expected to contribute funding equivalent to the like-for-like costs of replacing their fossil fuel heating system. For Phase 3b, this cost is set at a minimum of 12% of total project costs. Applicants are still required to evidence these costs in all cases, including where the like-for-like costs would come in at less than 12%, in which case, Applicants are still expected to contribute the 12% minimum. Applicants with like-for-like fossil fuel replacement equipment costs over 12% are expected to contribute their full like-for-like replacement costs. For example, if the like-for-like replacement cost comes out at 15% of an Applicant's total project costs, then Applicants must contribute the 15%.

'Whole building' approach

- The 'whole building' approach criteria will be applied only to the buildings where the proposed low carbon heating measures are heating that part of a building, meaning that PSDS grant funding cannot be used to fund energy efficiency measures in buildings not served by the proposed low-carbon heating installation. For example, a hospital building will not be eligible to apply for insulation in Block 'A' where the low carbon heating measure is only heating Block 'B'.

Energy efficiency cap

- To sharpen the scheme's focus on heat decarbonisation, there is a maximum proportion of the grant value that can be claimed for energy efficiency. This maximum proportion will be set at 58% of total grant costs within each application.

Hybrid heating systems

- Phase 3b PSDS will not support hybrid heating systems where new fossil fuel boilers are being installed as part of the project. In addition, new boilers funded by the contribution from the Applicant will specifically exclude a project from being eligible. The project is expected to meet the heat demand provided by the end-of-life system being replaced. For example, if the fossil fuel heating system being replaced previously met the heat demand for the whole of Building A, then the new low carbon heating system, alongside the efficiency measures installed, should also meet the heat demand for the whole of Building A. In buildings with multiple fossil fuel heating sources, applicants are not required to replace all units.

Grant start date

- In order to provide grant recipients with as much time as possible to complete their projects once the grant has been agreed, grant recipients will be able to start work on their project as soon as they have signed and returned their grant offer letter. This includes works in FY 22/23. No grant funding can be claimed for work undertaken before the grant offer letter is accepted by the grant recipient.
- Salix and BEIS are able to do this because we are forecasting that some phase 3a projects will have abandoned or descoped which will create underspend in financial year 2022/23. Salix can then make this available for Phase 3b grant recipients to make an early start. However, if there is insufficient underspend from Phase 3a to cover the costs incurred from this early start for Phase 3b, grant recipients need to be prepared to meet all or part of any costs incurred from their planned contribution to funding the project. The costs covered by the grant in financial year 2022/23 will have to comply with the terms and conditions of the Phase 3b grant and will need to have been claimed by the end of April 2023.
- Applicants that have the flexibility in their projects to start earlier than 1 April 2023 should make this clear as part of their application.

3 Key dates for submitting applications

Announcement: Phase 3b PSDS announced in **August** along with full scheme guidance material.

Application Form: The Phase 3b PSDS Application Form is available to download and complete. When applying, Applicants may wish to submit separate applications for separate projects or combine several projects in a single application, grouping their projects together.

Application Portal: The Phase 3b PSDS Application Portal expected to be opened in **September 2022** and will be closed when sufficient applications have been submitted to meet the budget available for Phase 3b. Applications will only be considered subject to available funds.

Receiving applications: Once the Application Portal opens, Salix will check applications are fully completed and are of the required quality, as stated in the Guidance Notes. All applications must have approval from the Authorising Official for the relevant organisation, include supporting documentation, and mandatory questions must be answered.

Outcome: We expect to be able to inform Applicants if they have been successful by the end of January 2023.

Project completions: All Applicants awarded funding for single year projects must complete all projects by Sunday 31 March 2024. Applicants successful for multi-year projects must complete by Monday 31 March 2025. Evidence of spend in each financial year will be required.

4 Eligibility criteria

4.1 Who can apply?

Public sector bodies that are contracting authorities in England as defined in the [Public Contracts Regulations 2015](#) are eligible to apply for Phase 3b of the PSDS. Those that apply are referred to in this document as “the Applicant”. This includes:

- 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 and private sector organisations are not eligible. Registered charities are also not eligible, unless they are also non-departmental public bodies as defined by the Cabinet Office.

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

Subsidy Control Rules

In some instances public sector organisations can operate as “[economic actors](#)” as defined in the UK EU Trade and Cooperation Agreement (TCA). If, in connection with the delivery of Phase 3b PSDS grant/activities, Applicants are undertaking economic activity, Applicants must cooperate with Salix to ensure compliance with the subsidy control rules. A public sector organisation will be an ‘economic actor’ if it is engaged in an economic activity by offering goods or services on a market (see Article 363(1)(a) and (b) TCA).

Applicants will be required to declare any economic activity within their application, including its value within the total project award. Any subsidies will need to comply with the TCA Article 366 principles and transparency requirements as necessary. If, in respect of any economic activity, the Applicant has received less than 325,000 Special Drawing Rights over a period of three fiscal years, the grant would not be subject to these subsidy control rules. Applicants below this limit will need to complete a Small Amounts of Funding Exemption¹ declaration.

4.2 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 4.11.
3. Applications must include a measure to contribute to decarbonising the heating with a low carbon heating source in each building included in the application. This new low carbon heating system, alongside the energy efficiency measures installed, must meet the heat demand of the original end of life fossil fuel heating system.
4. Applicants can include energy efficiency measures and other enabling works where they reduce the heat or electrical demand of the building being heated by the proposed low carbon heating measure. Energy efficiency measures funded through the PSDS will be capped at 58% of the grant value.
5. The funding provided to save a tonne of direct carbon (tCO₂e) 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. Just as for Phase 3a, Phase 3b is primarily for capital works, however external consultancy and management fees may be included. Existing employee costs or any costs previously incurred cannot 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. Applicants 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 Applicant.
10. Applicants must contribute the cost for a like-for-like replacement at a minimum of 12% of the total project costs - like-for-like costs over 12% should still be contributed by the Applicant in full.
11. Single year projects must be complete by Sunday 31 March 2024. Multi-year projects must be complete by Monday 31 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.

The low carbon heating technology solutions should, wherever possible, be complemented with other measures that will reduce the level of heat demand, such as building fabric insulation, windows and heat recovery systems.

¹ <https://www.gov.uk/government/publications/complying-with-the-uks-international-obligations-on-subsidy-control-guidance-for-public-authorities/technical-guidance-on-the-uks-international-subsidy-control-commitments#section-5>.

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. These measures can only be installed where they reduce the heat or electrical demand of the building being heated by the proposed low carbon heating measure. For more details see Section 4.3.

The Salix Phase 3b Application Form will calculate the eligible grant value under these new criteria and can be downloaded from the Salix website [here](#).

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.

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

Measure Definitions	
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.

4.3 'Whole building' approach to decarbonising heating

Most of our public sector buildings are reliant on fossil-fuel heating systems. Many of these are coming to the end of their working lives. Therefore, Phase 3b PSDS narrowly focuses on low carbon heating. Applicants must take a 'whole building' approach to prepare their Phase 3b application for a low carbon heating system.

Heat pump solutions and other low temperature heating systems will achieve the best performance at lower flow temperatures. These lower flow temperatures will generally be between 35-55 °C rather than the 70-80 °C for a traditional oil/gas boiler. We want to see Applicants lowering flow temperatures as much as possible to get the best performance out of the new low carbon heating systems.

Low temperature systems only work in sites that are well insulated and have correctly sized heat emitters and pipework.

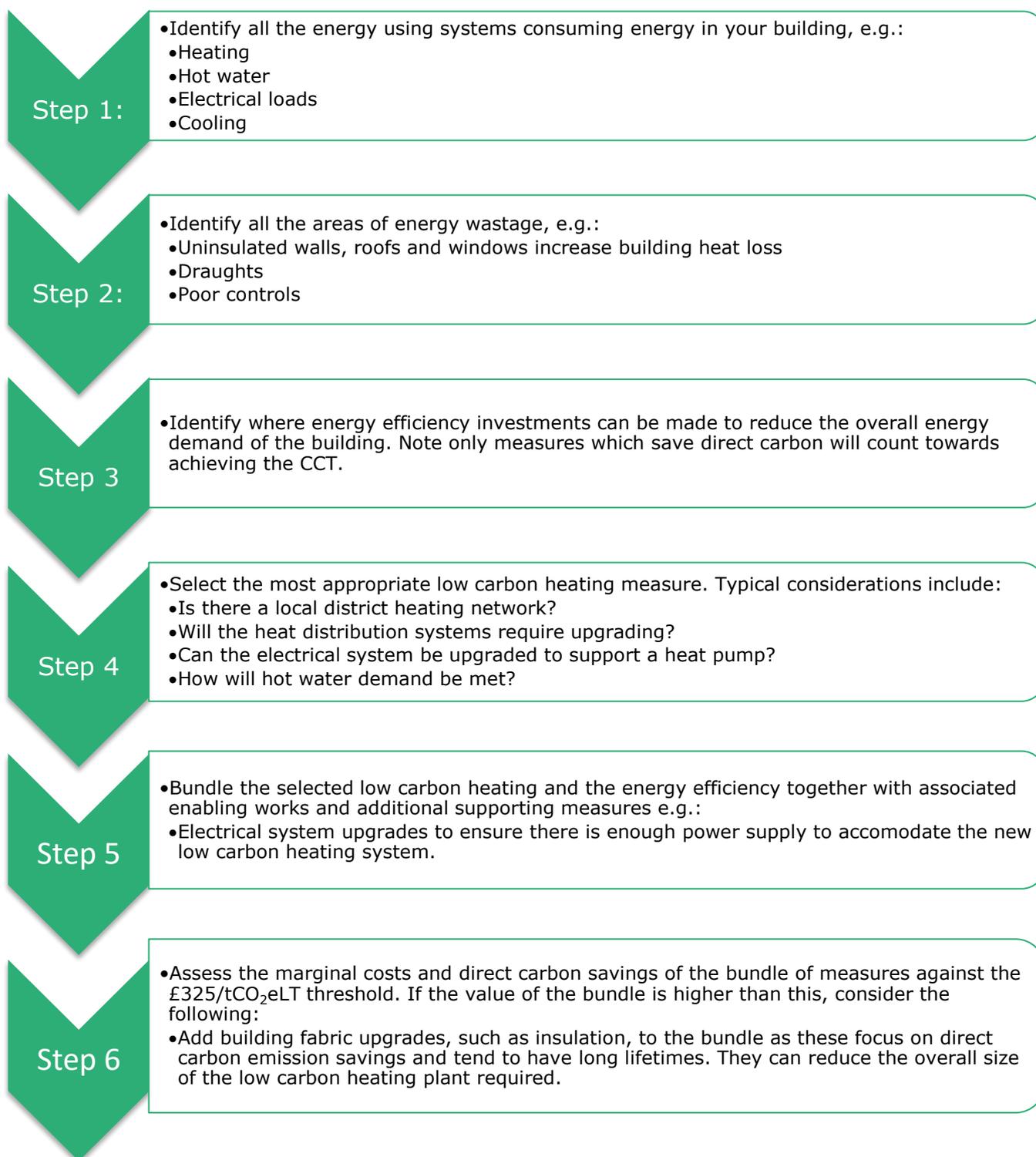
To meet the 'whole building' approach criteria, Applicants must show that they have done everything possible to lower flow temperatures as much as possible for heat pump systems.

Where Applicants are proposing high temperature heat pump systems without any improvement to building fabric or reduction of flow temperature, Applicants need to evidence that this is the only option for this site and that a fabric first approach is not possible. If this evidence is not provided, then the 'whole building' approach

requirement will not be fulfilled, and the application will be deemed as incomplete.

A 'whole building' approach for the low carbon heating system	
How low can flow temperature go with existing infrastructure	<ul style="list-style-type: none"> • Review the building fabric and level of insulation and building heat demand • Review existing emitter sizing • What is the lowest flow temperature that could be achieved in existing building? • What plant equipment would be most suitable for the lowest achievable flow temperature? • What is the energy strategy for the proposed plant?
How much would it cost to drop flow temperature to 35-55 °C	<ul style="list-style-type: none"> • How could the building fabric be improved and how much would it cost? What is the new Heat demand? • How much would it cost to replace undersized emitters? • What is the lowest flow temperature that could be achieved? • What plant equipment would be most suitable for the lowest achievable flow temperature? • What is the energy strategy for the proposed plant?

Our step-by-step guide on how Applicants can take a successful 'whole building' approach for their project.



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 4.3. Applicants will need to justify why their proposed bundle of measures was selected over other decarbonisation measures. Applicants 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.

4.4 Additionality criteria

Projects are also required to meet the criteria of being 'additional.' See additionality criteria 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.
- 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 which is to be supplied by the PSDS (not including the Applicant contribution) has not been agreed via another source; and
- In Salix's reasonable opinion, the project would not take place without the grant.

4.5 Maximum grant value

There is no cap on the grant amount which can be awarded to Phase 3b PSDS Applicants for projects that reduce direct carbon emissions.

4.6 Technologies included:

As we progress to Phase 3b PSDS from Phase 3a PSDS, Low Carbon Heating Measures – specifically for electric heating – have been split out into more specific types. Please see Appendix 1.

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

- 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.
- 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.
- That they will 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.
- 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.

4.7 Technologies excluded:

As the Phase 3b PSDS is strongly focused on decarbonisation, technologies reliant on the use of fossil fuels are specifically excluded from the scheme. Regardless of an Applicant's financial contribution, no fossil fuel technology can be implemented, and the scheme criteria must apply. 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. New boilers funded by the contribution from the Applicant will also specifically exclude a project from being eligible.

For information on maintaining backup boilers for resilience, see Section 4.17.

4.8 Multi-year applications

Whilst the primary focus of the Phase 3a 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, Phase 3b intends to increase the proportion of funding available for multi-year projects. This change is designed to support projects where the heating system is expected to come to the end of its working life in 2024/25 and where the work required to prepare for their installation takes more than one year.

All applications will be allocated on a first come first serve basis until a sector cap is reached, regardless of whether the project is single year or multi-year. Once a sector cap is reached, funding allocation for both single and multi-year applications from that sector will be paused until all applications for other sectors have been allocated up to their own sector caps. 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.

All multi-year projects must meet the same eligibility criteria as single year projects. The requirement to meet the Carbon Cost Threshold of £325/tCO₂e 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 2023/24 can be higher than the CCT as long as this is balanced out by a suitable amount of high carbon saving measures installed in 2024/25.

Planning year applications

Applications are also welcome for projects that are anticipated to take up to two years to complete. This is designed to help Applicants plan ahead. Please select 'Planning Year' option in the Application Form.

This is to allow Applicants to apply for funding at the Phase 3b application window for projects with spend in 2024/25 only, using 2023/24 as a planning year with no grant spending.

- Applicants can apply for funding in 2024/25 only (with no grant spend in 2023/24), indicating this in the Application Form.
- Applicants for 2024/25 funding only are subject to all eligibility criteria except for proving that they have their own like-for-like funding at the point at which they apply. This allows Applicants additional time to secure the expected like-for-like contribution.
- Applicants are assessed in the same first come first served order as all other applications, up to the point when all funding available for 2024/25 has been allocated.
- Applicants will have until 16 June 2023 to secure the necessary funding to meet the eligibility criteria for the scheme and provide evidence of this funding to Salix.

4.9 Eligible grant value

The eligible grant value is calculated by applying the following steps to the total project value.

- a) Applicants are required to contribute the like-for-like costs, at a minimum of 12% of the total project value. This is defined as all the costs incurred should the existing heating system be replaced with a typical fossil fuel heating system of the required type and size.
- b) Energy efficiency & enabling measure costs up to 58% of total grant value are eligible costs, if energy efficiency measures have a total value greater than 58% of total grant value then the Applicant must cover the costs in excess of 58% of total grant value.*
- c) The total Applicant contribution for all applications must be a minimum of 12% of total project value. If the like-for-like cost is less than 12% of the total project value, then the Applicant will need to provide further funding to bring the total Applicant contribution up to 12%. If the like-for-like cost is greater than 12%, the Applicant will need to contribute the full amount of this cost.
- d) The application must have a Carbon Cost Threshold (CCT) that does not exceed £325 t/CO₂eLT of direct carbon.

*Any costs associated with the low carbon heating technology such as DNO upgrades and enabling works will come under costs on low carbon heating. Other costs will come under energy efficiency costs.

In summary, an application should:

- a) have a CCT that does not exceed £325 t/CO₂e (direct),
- b) contribute at least 12% of total project cost,
- c) have energy efficiency costs that do not exceed 58% of total grant value, though voluntary contributions can be made to increase energy efficiency spend above this threshold, and
- d) have all energy efficiency measures directly serving buildings served by the low carbon heating element of the project, in support of the 'whole building' approach.

Applications exceeding £325 tCO₂eLT 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 methodology and data set used to inform the £325 tCO₂eLT CCT reflects the focus and design of the scheme, accounting for direct emissions savings only. 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 tCO₂eLT 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:

$$\text{£325 tCO}_2\text{eLT} \geq \frac{[(\text{£})\text{Full capital cost of bundle}] - [(\text{£})\text{Applicant contribution}]}{\text{Total direct carbon emissions saved over the lifetime of the project (tCO}_2\text{eLT)}}$$

Calculating the full capital cost of an application

Salix's Application Form will allow Applicants to automatically calculate the cost per tonne of an application as details of measures are added. 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 4.3 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. Note that once submitted, like-for-like costs are not subject to revision and the Applicant must confirm they have the funds to meet these costs.

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 4.10, 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.

4.10 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.

4.11 Heating system at the end of its useful life

Applicants can refer to their latest plant service report to determine if the heating plant is at the end of its working life. If this is not available, Applicants can consult the manufacturer's product information or industry guidance such as CIBSE Guide M to understand if their heating system is 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 must 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.

Applicants should provide additional evidence and commentary that their existing heating system is at the end of its useful life if the system is less than 10 years old, this could be due to poor design, high operation or other reasons which will all need to be evidenced.

4.12 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 required type and size. In most cases this will be equivalent to the costs of replacing your system with a conventional boiler.

The total Applicant contribution for all applications must be a minimum of 12% of total project value. If the like-for-like cost is less than 12% of the total project value, then the Applicant will need to provide further funding to bring the total Applicant contribution up to 12%.

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

- new controls
- pumps
- flue systems
- 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 systems must also be contributed by the Applicant. Applicants can contribute additional funding above the like-for-like contribution if they wish. This funding should still comply with all scheme criteria apart from the CCT and 58% cap set on grant funding that can be spent on energy efficiency and enabling measures not directly related to the low-carbon heating measure.

4.13 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 and that the heating requirements of the old end of life heat source are met. As Applicants are expected to reduce the heat demand within a building as far as practical and cost-effective before installing the new low carbon heating measure, it is not expected that the size of 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 refused 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 should be provided on how an Applicant proposes to meet the DHW demand.

If Applicants are planning to use another method to provide the DHW they should provide details and specify what procedures are in place in the design of the DHW system to combat Legionella.

4.14 Heat emitters

The lower flow temperatures of heat pumps may require larger heat emitters than traditional 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.

4.15 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 Distribution Network Operator (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.

4.16 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 4.16), 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.

4.17 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/backup requirements. While the Applicant still needs to remove their primary heat solution as part of the project, the existing backup fossil fuel heating plant can be retained for use with a new PSDS funded low carbon heat source.

4.18 Air-to-air heat pumps

Air to air systems use refrigerant pipework to transfer heat from an external unit to an internal unit and then directly to the air inside the space being heated. Air to air systems can only be implemented through Phase 3b PSDS in two scenarios and eligibility will need to be assessed on a case-by-case basis.

Eligible scenarios are:

1. When it has been evidenced with an options appraisal and feasibility study that the air-to-air system is the only viable solution for that site and that other eligible low carbon heating solutions are not viable.
2. When replacing both heating and cooling systems.

4.19 Connect to existing district heating

New building connections to district heating networks are an eligible low carbon heating source for the individual building being connected. 'Connect to existing district heating' should be chosen in the application form for all buildings where a new connection to a district heat network will provide the building's heating. Energy efficiency measures can be installed in the newly connected building to meet the whole building approach.

Any improvements to a heat network that are not necessary for a new connection are only eligible when combined with a low carbon heating source that is not 'connect to existing district heating' to meet low carbon heat criteria. For example, a whole heat network de-steaming project will require a low carbon heat source to be installed in the network's energy centre to meet low carbon eligibility criteria. De-steaming of the rest of the system can be entered as 'pipework improvement' in the energy efficiency and enabling measures section of the support tool. Energy efficiency measures can be combined with the new low carbon heating source in any building connected to the network.

5 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 not 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 carbon 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 and on completion of the project, Salix will be engaging Applicants through surveys, which 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.

6 The online application process

Private organisations can support the preparation of the Application Form, but the online application must be submitted by the Applicant directly and not by any external consultant or contractor.

Applicants must ensure they have the right resources, supply chains and internal support to deliver a project and evidence must be provided to support this.

6.1 Registration

- Visit the Phase 3b PSDS webpage at: <https://www.salixfinance.co.uk/Phase3bPSDS>
- If you have not previously applied, please register here: <https://www.salixfinance.co.uk/user/register>
- If you are an existing grant recipient, please log in here: <https://www.salixfinance.co.uk/user/login>

6.2 Submitting the online application in the Phase 3b PSDS Application Portal

When the Application Portal opens, visit our Phase 3b 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 Applicants can save applications and continue later.

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

Applicants upload their completed Phase 3b PSDS Application Form and any supporting information.

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 provide the following information and are 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/ registered engineers report
- 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 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. 4.6.

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.

6.3 Application authorisation

Upon submission, an automatic email will be sent to the named Authorising Official at the eligible organisation, 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 so your application is not delayed.

7 Assessment and award of funding

7.1 Assessment process

Applications will be assessed by our Energy and Carbon team as well as external technical assessor, who provide added independent assurance that the project is deliverable, and any savings are reasonably achievable.

Applications assessed will have technical and due diligence checks in line with the size and scope of their project. Applications will be initially reviewed to meet the Phase 3b criteria. Applications will go on to have a full review including but not limited to:

- **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, 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. Further guidance on specific evidence for key criteria is set out in the table below.

Applicants are expected to return information and evidence to Salix to meet the queries within **two** working days. Where this is not met, applications will be unsuccessful.

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

7.2 Issuing a Grant Offer Letter

Following successful assessment, Applicants will be asked to provide a short summary of their project to publish on gov.uk. Once received, 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 fifteen 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 3b PSDS approved project. It 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 7.2 of this document.

As stated in Section 2 of this document, there may be flexibility for grant recipients in Phase 3b to claim for works as soon as they have signed and returned their Grant Offer Letter, rather than waiting until 1 April 2023. However, if there is insufficient underspend from Phase 3a to cover the costs incurred from this early start for Phase 3b, grant recipients wishing to start their projects earlier than 1 April 2023 would need to fund any works in 2022/23 themselves – this could be met through their like-for-like contributions to project costs. The costs covered by the grant or like-for-like applicant contributions in financial year 2022/23 will have to comply with the terms and conditions of the Phase 3b grant.

No grant funding can be claimed, and no like-for-like Applicant contribution can be used for work completed before the Grant Offer Letter is accepted by the grant recipient. However, organisations are free to prepare for work to commence before the Grant Offer Letter is accepted, but they cannot claim any grant funding for these preparations.

8 Delivery of the project

8.1 Managing delivery: Progress updates to Salix

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. All grant recipients will be allocated a dedicated Salix relationship manager to assist with queries and help support the project.

The regular meetings with grant recipients 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. See Section 9 for more detail.

While successful Phase 3b Applicants will be notified anytime from November onwards, no payment claims can be made by grant recipients, before the Grant Offer Letter has been signed. As detailed in Section 8.2, Salix cannot guarantee funding availability for claims in financial year 2022/23. All grant funding must be claimed before the grant end date.

Experience from previous PSDS phases has shown that those grant recipients that start early and have a clear project plan from the beginning have a higher chance of successfully delivering projects. The Applicant's Salix relationship manager will seek to arrange a call with the Applicant 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 monthly monitoring reports on the project risks and progress towards key milestones during the delivery of the project. The reporting template will be provided by relationship managers, with the first report due the first month after the Grant Offer Letter is signed and returned. The report should detail updates on the key work that took place that month, focus for the next month, dates key milestones will be achieved, expected changes to the project programme (cost and/or scope), risks and mitigation measures and the grant drawdown schedule. This, together with monthly meetings between the grant recipient and relationship manager will be the key mechanism for tracking progress and risks towards project completion and is a requirement of the grant funding.

8.2 Payment of the grant

During this period 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 organisations and will be processed on a monthly basis. There may be the option for grant recipients to claim funding ahead of the grant start date, after the grant offer letter has been signed. However, this option is not guaranteed.

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 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:

- An accurate forecast of the expected claim is submitted to Salix one month ahead of the claim in the monthly monitoring report.
- 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 organisation.
- 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 organisations 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 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. If these amount to less than the total grant awarded, the balance may not be claimed.

Projects should complete by the date specified in the Grant Offer Letter. No payments can be made after this date. Any costs incurred to complete the project after the grant end date must be met by alternative sources.

Please note that for multi-year 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 2023/24), and £3m in year 2 (FY 2024/25) 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.

8.3 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.

8.4 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.

See [here](#) for Privacy Notice.

9 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 taking audits of a sample of projects. In some cases, these 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.

If selected for audit 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 the 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.

Grant recipients 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, selected for audit, 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.

Applicant's Auditor or Head of Audit (grant recipient side) will be engaged during the delivery stage of the project.

10 Support and advice

Please refer to the Salix webpage for the most up to date information regarding key dates and how to apply, [here](#).

As well as having specialised teams with expert knowledge of the different areas of the public sector, as well as an in-house Energy and Carbon Technical team Salix runs a series of webinars giving people a chance to ask questions. Salix also produces videos supporting the announcement and the opening of the Application Portal. Please view our website for details about relevant webinars, [here](#).

All Phase 3b PSDS enquiries should be sent by email to phase3bpsdsgrants@salixfinance.co.uk, the Phase 3b team is on hand to answer all queries within three working days.

Appendix 1 – Examples of eligible technologies

The following list includes examples of eligible technologies for the Phase 3b 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
	Hot water - electric point of use heaters	X		12.00
	Solar thermal	X		25.00
	Biomass	X		20.00
	Electric boiler	X		20.00
	Electric radiant strip heater	X		10.00
Electric radiant panel heater	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 showers	X		8.00
	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

Authorising Official is an individual from an eligible organisation in a position of authority to approve and sign official and legal documentation associated with the PSDS project. For example, this may be a chief executive or financial officer, or another senior official from within the eligible organisation that has delegated authority to approve and sign official and legal requests that are linked to the organisations PSDS project. This individual should be identified and agreed upon before application and should be part of the project governance structure.

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 3 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 CO₂e over the lifetime of an application (£/tCO₂eLT). 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.