



Department for  
Energy Security  
& Net Zero

# Evaluation of Phase 3 of the Public Sector Decarbonisation Scheme

Technical Method Annex for the 2023 interim  
process evaluation report

October 2023



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# Contents

Overview	4
1: Background	5
1.1: The Public Sector Decarbonisation Scheme (PSDS)	5
1.2: LCSF	5
1.3: Scheme timeline	6
1.4: Eligibility	7
1.5: PSDS scheme design and rule changes	7
2: Theory of Change	10
2.1: Assumptions	13
3: The evaluation of the PSDS and LCSF	19
3.1: Overview and aims	19
3.3: Timeline	37
3.4: Evaluation team	38
4: Stage 1 process evaluation activity	39
4.1: Primary research / interviews (conducted March - May 2023)	39
4.2: Limitations / caveats	42
4.3: Analysis	43
5: Research instruments	45
5.1: Theory of change workshop	45
5.2: Process evaluation workshops	46
5.3: Topic guides for qualitative interviews	51

# Overview

*The Department for Energy Security and Net Zero ('the Department') has commissioned a process, impact and economic evaluation of Phases 2 and 3 of the Public Sector Decarbonisation Scheme (PSDS) and the Low Carbon Skills Fund (LCSF). The evaluation comprises multiple stages of data collection and analysis across multiple years.*

*This report is the technical annex outlining the methodology for the stage one process evaluation that took place in 2022/23. There is an accompanying interim process evaluation report detailing the findings from the evaluation so far.*

# 1: Background

## 1.1: The Public Sector Decarbonisation Scheme

The Public Sector Decarbonisation Scheme (PSDS) provides grants for public sector bodies to fund heat decarbonisation and energy efficiency measures. The PSDS supports delivery of the UK's ambitious goal to become net zero by 2050 and the Net Zero Strategy goal to reduce direct emissions from public sector buildings by at least 50 percent by 2032, and by 75 percent by 2037, compared to a 2017 baseline. The scheme will reduce carbon emissions from the public sector, contributing to meeting Carbon Budgets 4, 5 and 6. The scheme is managed by the Department for Energy Security and Net Zero ('the Department') and is delivered by the Department's non-departmental public body, Salix Finance Ltd ('Salix').

Phases 1 and 2 of the scheme provided £1.075 billion in grants over the financial years 2020/21 and 2021/22. Phase 3 of the PSDS is providing £1.425 billion of grant funding over the financial years 2022/23 to 2024/25, with a budget of £475 million for each financial year.

Phase 3 funding<sup>1</sup> is being allocated through multiple application windows, of which Phase 3a is the first and the focus of this evaluation report. Phase 3a launched in October 2021 and will provide funding over the financial years 2022/23 to 2024/25. The second Phase 3 application window, Phase 3b, opened and closed to applications in October 2022. The third Phase 3 application window, Phase 3c was announced in July 2023 and is expected to open in autumn 2023.

## 1.2: LCSF

The Low Carbon Skills Fund (LCSF) is a companion policy to the PSDS, also run by Salix Finance, and provides grants for public sector bodies to access skills and expertise to unlock heat decarbonisation on their estate.

Phase 2 of the LCSF<sup>2</sup> focused funding on the development or updating of heat decarbonisation plans, enabling organisations to think strategically and to improve their ability to respond to funding opportunities. The scheme made available £15m of grant funding and ringfenced £3.5m for schools and academies, funding 218 projects in total. Phase 3 of the LCSF<sup>3</sup> retained the focus on supporting the development and improvement of heat decarbonisation plans and allocated a further £14.5 million.

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<sup>1</sup> Detailed information can be found at the following: <https://www.gov.uk/government/publications/public-sector-decarbonisation-scheme-phase-3>

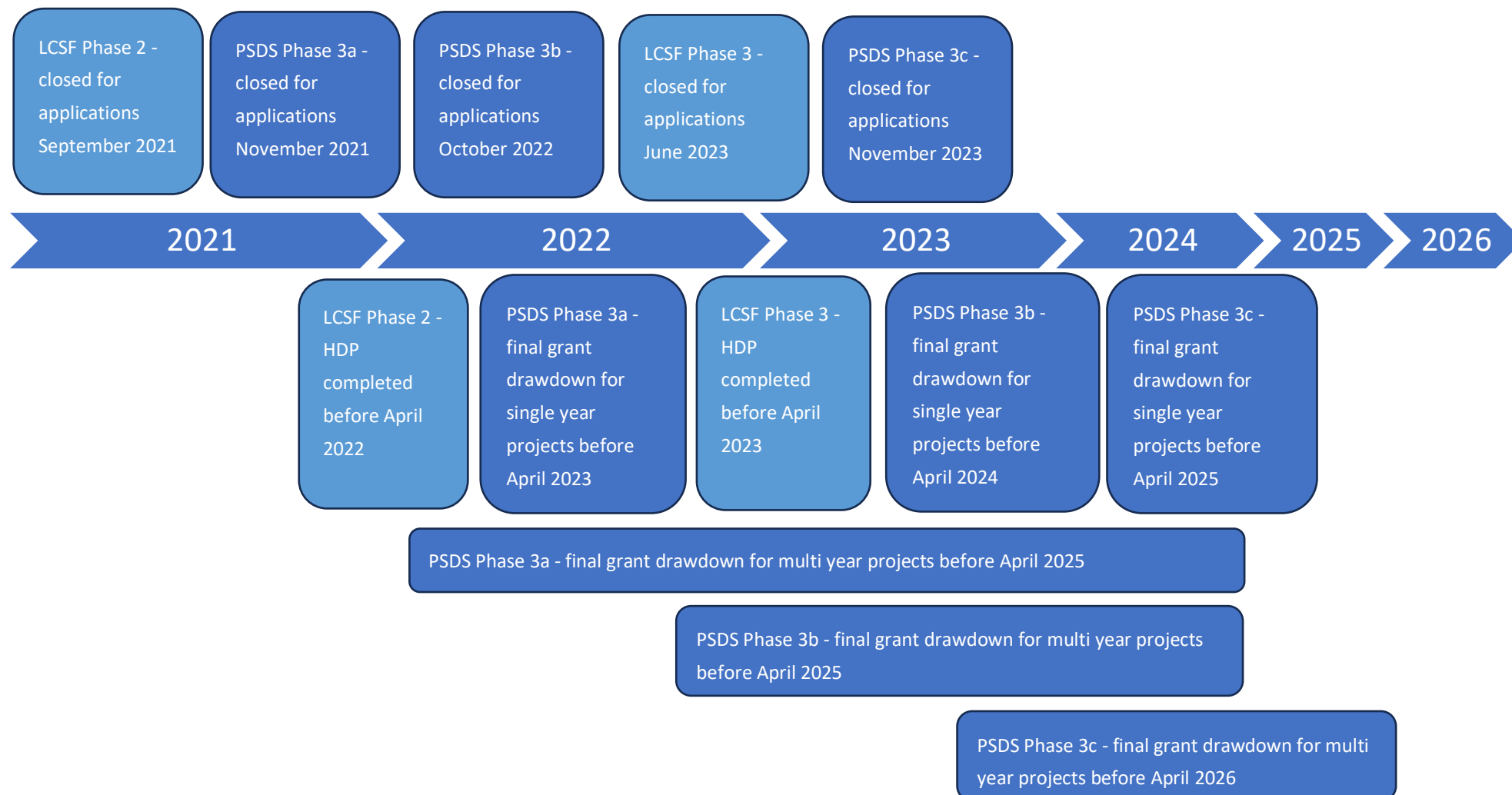
<sup>2</sup> Detailed information can be found at the following: <https://www.gov.uk/government/publications/public-sector-low-carbon-skills-fund-phase-2>

<sup>3</sup> Detailed information can be found at the following: <https://www.gov.uk/government/publications/public-sector-low-carbon-skills-fund-phase-3>

## 1.3: Scheme timeline

The following diagram shows a timeline of PSDS Phase 3 and LCSF Phase 2 and 3 funding application and delivery deadlines.

**Figure 1 Timeline of PSDS Phase 3 and LCSF Phase 2 and 3 funding application**



## 1.4: Eligibility

Phase 3a was open to public sector bodies that are contracting authorities in England, as defined in the Public Contracts Regulations 2015. This covers central government departments and their non-departmental public bodies, the NHS, schools (including maintained schools and academies), emergency services, further and higher education and local authorities. Central government departments operating in areas of reserved policy (i.e., not devolved to Scottish or Welsh Governments or the Northern Ireland Executive) were also eligible to apply for funding for estates located anywhere within the UK.

To support the focus on heat decarbonisation, applicants were required to focus on replacing end-of-life fossil fuel heating systems with low carbon heating systems such as heat pumps and connections to low carbon heat networks. All applicants were required to include at least one measure to decarbonise part of or all the heating on a site. Applicants were also required to take a whole building approach to decarbonising their buildings, looking at the overall energy usage and combining energy efficiency measures with the most appropriate low carbon heating measures. This serves to reduce the size and cost of the heating system required by lowering the heat and energy requirements of the building and helps to counteract increases in running costs from the new system.

LCSF Phases 2 and 3 were open to the same public sector bodies where such bodies lacked skilled personnel needed to complete a heat decarbonisation plan. Applications for funding to either produce an entire plan or expand an existing plan were eligible for funding.

## 1.5: PSDS scheme design and rule changes

Eligible measures could fall into four categories:

- It was compulsory to include a low carbon heating measure that reduces direct carbon emissions, such as heat pumps, electric heating or district heating.
- Other measures that reduce direct carbon emissions could be included, such as solar thermal, building fabric upgrades, piping insulation, mechanical ventilation, and heat recovery.
- Measures that reduce indirect carbon emissions (typically through electricity savings) such as solar PV, LED lighting and energy efficient ventilation were also eligible.
- Finally, measures that do not save carbon directly, but enable the installation of measures that do, such as electrical infrastructure upgrades, metering (which also may encourage changes in energy use behaviour), and energy storage could also be included.

It should be noted that whilst inclusion of measures from the second, third and fourth groups was optional, applicants were encouraged to consider them as part of taking a 'whole building' approach to decarbonisation.

Funding was provided for the marginal costs of installing a low carbon heating system (i.e., the additional costs on top of the business-as-usual costs of replacing the existing fossil fuel heating system on a like-for-like basis).

Funding was available for both single-year and multi-year projects. Regardless of the project timeframe, Phase 3a grant recipients were required to at least commence project delivery in the financial year 2022/23; some commenced in the financial year 2021/22.

The key changes in PSDS design, rules and delivery subsequent to Phase 1 were as follows:

From Phase 2 onwards:

- Reduction of the Carbon Cost Threshold (CCT)<sup>4</sup> from £500/tCO<sub>2</sub> in Phase 1 to £325/tCO<sub>2</sub> in Phases 2 and 3.
- A greater emphasis upon funding and installation of heat decarbonisation rather than energy efficiency measures, albeit with an expectation of applicants evidencing ‘fabric first’<sup>5</sup> approaches to buildings. This included energy efficiency measures being ineligible for funding if the building they were to be installed in was not served by a low carbon heating system.

From Phase 3a onwards:

- A separate allocation of funding for ‘multi-year’ projects; funding was set aside for larger and more complex projects where the heating system was expected to come to the end of its working life in 2023/24 or 2024/25 and / or where building fabric measures need to be completed in advance..
- Removal of the maximum funding caps, i.e. the amount that could be awarded per project. However, these were only in place for Phase 2 of the PSDS as this was a much smaller allocation of funding; they were not in place in Phase 1
- A requirement for each building included in applications to include a low carbon heating measure.
- The new low carbon heating system had to be sized to ensure that the heating and Domestic Hot Water (DHW) required for the building was satisfied without being oversized.
- Further in-depth checks of the proposed measures to verify they meet the specific needs of the building, including a requirement to provide an assessment of how the building energy demand is reduced.

For Phase 3b, the scheme was modified further:

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<sup>4</sup> A calculation of the cost per tonne of direct carbon saved for the measures being installed through the funded project.

<sup>5</sup> In this context, a ‘fabric first’ approach involves maximising the energy performance of a building through measures that reduce its energy consumption (e.g. insulation), before considering the use of technology / installations that decarbonise the energy used (but don’t necessarily reduce it).



- A minimum 12% applicant contribution to total project costs, or the full like-for-like cost of replacing their fossil fuel heating system if this is greater than 12% of the project costs.
- Introduction of planning year applications, whereby grant recipients could plan for project delivery during the first financial year and all spend would then take place in the second financial year.
- Introduction of sector soft caps, determined by a sector's share of the total public sector carbon emissions, to ensure that funding is distributed fairly across the different sectors.
- A maximum proportion of grant value that could be claimed for energy efficiency measures to ensure a focus on heat decarbonisation. The maximum proportion was set at 58% of total grant costs within each application.
- It would not support hybrid heating systems where new fossil fuel boilers were being installed as part of the project. In addition, new boilers funded by the contribution from the applicant specifically excluded a project from being eligible.

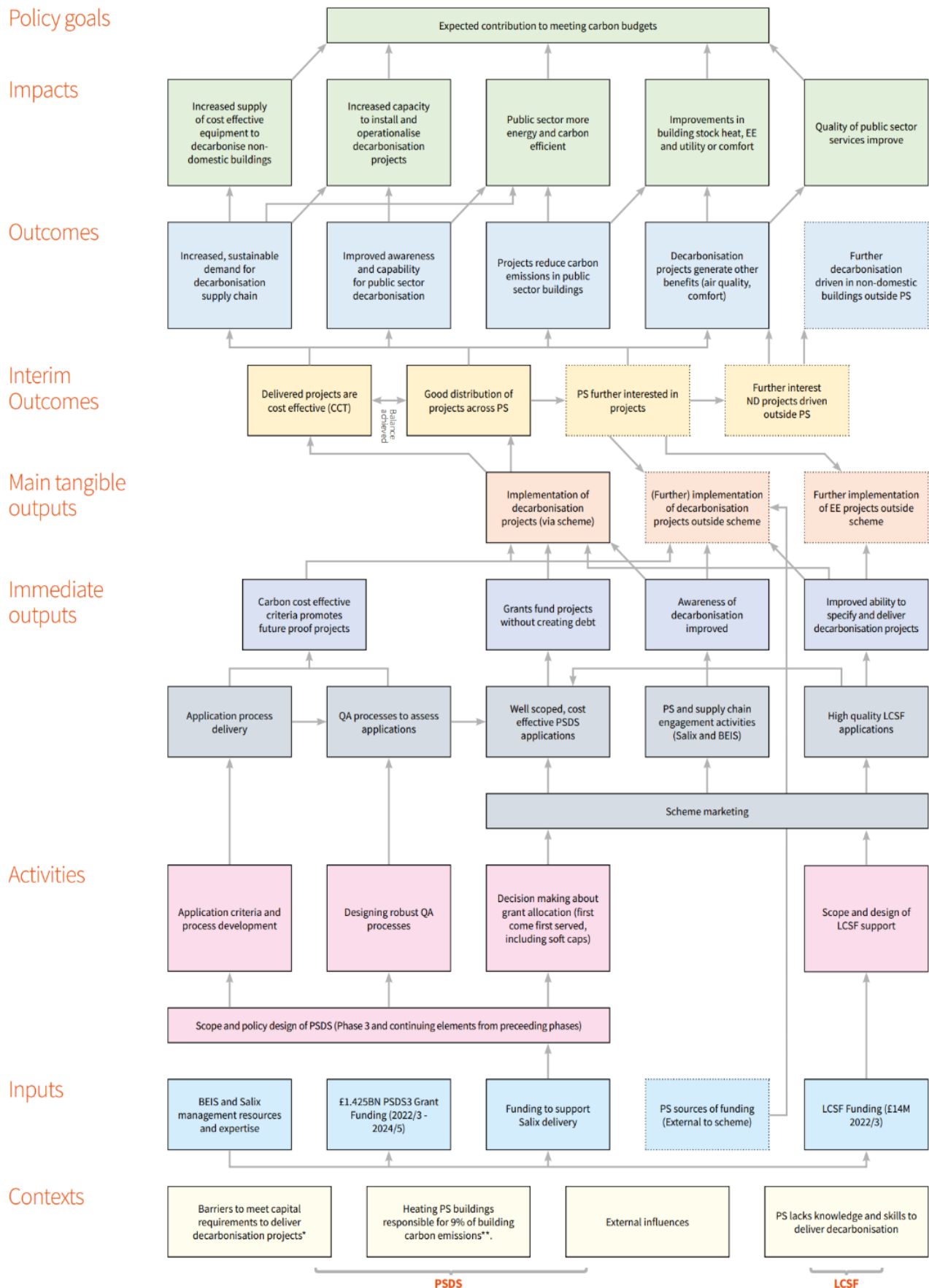
Phase 3b and 3c will be covered in subsequent stages of the evaluation.

## 2: Theory of Change

A detailed Theory of Change (ToC) was developed as part of the earlier evaluation of PSDS and LCSF Phase 1. This ToC describes how the schemes are intended to work and the assumptions underlying this. This ToC has been refined for the current evaluation following review of documentation provided by the Department and two workshops held in December 2022 - one with the Department and the other with representatives from Salix. The discussion guide for this workshop is included along with the other qualitative topic guides in Chapter 5. The key questions were:

- How does scheme design and delivery (including recent changes) influence well-scoped, cost-effective applications for grant funding?
- What external factors influence PSDS and LCSF take up, and what kind of influence are they likely to have?
- What are the desired outcomes and impacts? What needs to happen for these to be achieved at the desired scale?

**Figure 2 Theory of Change (ToC) – Public Sector Decarbonisation Fund (PSDS and Low Carbon Skills Fund (LCSF)**



## Key

□ Solid lines between boxes represent elements directly influenced by the scheme.

▤ Dotted lines represent additional elements, likely to be indirectly influenced by the scheme.

## Terms

LCSF = Low Carbon Skills Fund

PSDS = Public Sector Decarbonisation Fund

CCT = Carbon cost threshold (set at £325/tCO<sub>2</sub>e at time of delivery).

QA = Quality assurance.

PS = Public sector.

EE = Energy Efficiency

ND = Non-domestic

\* Heat decarbonisation measures are generally more expensive to install and to run than fossil fuel alternatives. Furthermore, many public sector bodies are facing specific barriers to taking on loans to support capital projects.

\*\* BEIS (2021) 'Final UK Greenhouse gas emissions national statistics: 1990 to 2019'  
<https://www.gov.uk/government/statistics/final-uk-greenhouse-gas-emissions-national-statistics-1990-to-2019>.

## 2.1: Assumptions

Theory of change assumptions include necessary conditions for change that need to exist in order for change to occur. There are several assumptions underlying each stage of the ToC, which are presented in the table below. These include descriptions of potential issues or challenges underlying the assumptions, which could impede delivery of the scheme and its desired outputs, outcomes and impacts.

**Table 1 Assumptions underlying the ToC**

ToC level	Assumption	Description of possible issues / challenges to the assumption
Policy goals / impacts	Estimated carbon savings are delivered	A concern is that due to scheme and delivery challenges, projects do not deliver at the scale required to meet estimated carbon savings (or projects do not deliver as much carbon savings as expected by the scheme).
Policy goals / impacts	Additional benefits are delivered (e.g. reduced energy demand, more comfortable buildings etc.)	Additional benefits are of secondary importance to the scheme but can be key priorities for public sector bodies applying to the scheme. If projects do not deliver these benefits, the scheme will likely suffer in terms of its legitimacy and attractiveness to the public sector.
Policy goals / impacts	Strong supply chain requires both equipment (e.g. heat pumps availability) and installation capacity (e.g. qualified installers)	Measuring strengthened supply chain requires understanding 1) increased supply of cost-effective decarbonisation equipment and 2) installation and operationalisation skills and capacity.
Policy goals / impacts	Measures perform as expected	There are risks that measures do not perform (technical performance) as expected, which would limit carbon emissions reductions and other benefits.

ToC level	Assumption	Description
Policy goals / impacts	Measures are operated as expected, thereby delivering decarbonisation potential	Some measures, such as heat pumps, are susceptible to poor performance if they are not managed and operated as expected in practice - e.g. by facilities managers. This is distinct from technical performance of measures.
Outputs / interim outcomes	A 'whole buildings' approach is achieved, thereby delivering decarbonisation goals effectively	Carbon cost thresholds and other project eligibility criteria result in impactful and cost effective projects). There is a risk that scheme design elements (e.g. funding delivery windows) may mitigate the extent to which this is achieved. The precise definition of a whole building approach and means by which this is measured is subject to further scoping within evaluation planning.
Outputs / interim outcomes	Measures are correctly installed	Installers may not implement measures correctly, which would limit scheme described outcomes and public sector benefits.
Outputs / interim outcomes	Sufficient suppliers with skills needed to deliver projects	There are concerns that the supply chain (both for PSDS and LCSF) is not sufficiently able to deliver projects at pace and scale required. Uneven project timescales, costs of accessing certain skills, and other project constraints, as well as limited future funding, may confound supply chain ability to respond.
Outputs / interim outcomes	Sufficient equipment (e.g. heat pumps) and materials (e.g. energy efficiency measures or ancillary materials) at appropriate scales available	Sufficiently sized heat pumps (and their ancillary equipment) may be in short supply (and have inflated costs) which can slow or stop delivery. Factors might include wider inflation / cost of living challenges.

ToC level	Assumption	Description
Outputs / interim outcomes	Applicant organisations have skills and resources to manage project delivery	LCSF, or other sources of support, currently have limited scope to support skills and resource requirements within public sector bodies, which are known to be important to enable sufficient and timely project scoping and delivery.
Outputs / interim outcomes	Measures are installed in a timely manner	If project delivery slips, funding timing constraints will have a significant detrimental effect on achieving desired outcomes (e.g. projects drop out).
Outputs / interim outcomes	Successful project delivery supports further decarbonisation actions	PSDS scheme delivery builds further interest and appetite for decarbonisation (and energy demand reduction) amongst public sector bodies.
Activities / outputs	Scheme supports organisations delivering decarbonisation projects via other routes	LCSF funding can allow an organisation to put together a well-scoped and appropriate project and bid for PSDS funding accordingly but does not directly affect project delivery beyond this. As such, LCSF may directly support PSDS take up (in the short or longer term) or support decarbonisation action outside of the scheme. There is a possible concern that PSDS could constrain activity outside of the scheme due to its scale (and lack of potential alternative funding routes).
Activities / outputs	Project application QA supports robust applications that deliver intended outcomes	Beyond standard application QA processes, Salix is observing considerable 'optimism bias' amongst applications, which means applicants need further handholding and interventions to support the deliverability of projects on time and to budget.

ToC level	Assumption	Description
Activities / outputs	Carbon Cost Threshold supports cost effective whole building approach applications	The CCT has been held at £325/tC across all projects. There is interest to understand whether this effectively supports whole building approach and cost-effective decarbonisation, or whether further developments could improve this.
Activities / outputs	Applicant organisations have access to skills and resources to identify, develop and procure projects	For some applicants the feasibility of delivering heat decarbonisation in practice (e.g. planning work, exploring consequential works, such as DNO implications) often does not become fully evident until grant funding is allocated, which appears to have significant influence on projects abandoning. Better understanding what is needed, for different types of applicant organisations, to mitigate drop out for these reasons would be helpful. LCSF is designed as an enabler for PSDS, however it is not a pre-requisite to PSDS projects, especially for those with sufficient technical capabilities to progress projects.
Activities / outputs	Budgetary 'soft caps' help support equitable distribution of funding across public sector	There is a tension between the economic efficiency of the scheme and its equitable delivery across the scheme and an appropriate balance needs to be struck between them.
Activities / outputs	Access to multi-year funding increases demand as having more than one year to deliver makes more retrofit projects feasible.	This is the intent of making multi-year funding available, however the assumption may not bear out in practice, for example there is anecdotal evidence that the public sector may be reluctant to take on multi-year funding as there are additional risks associated with these for them (e.g. committing to spending their own funding across financial years).



ToC level	Assumption	Description
Activities / outputs	Multi-year projects increases number and/or scale of projects. This may affect take-up / allocation of single year projects.	Ability to commit multi-years has freed up to a certain extent post-pandemic. Multi-year should enabled less rushed and lower risk project delivery. However, the extent of these benefits may be affected by constraints on grant per financial year within multi-year allocations. The Department controlled multi-year take up in Phase 3a (15% cap for the first financial year), which has been changed for Phase 3b (with no cap on the proportion allocated to single, planning and multi-year projects across 2023/4 and 2024/5), the effects of which will be useful to understand.
Activities / outputs	Budget is sufficient to mobilise decarbonisation projects at the scale required to deliver estimated carbon savings	<p>Budget secured was what was achieved from business case application and is similar in scale to Phase 1 PSDS (Approx &lt;=£500m per annum). Analysis of Public Sector decarbonisation potential suggests that for realisation of 2032 and 2037 targets, larger scale funds will be needed<sup>6</sup>.</p> <p>Furthermore, observed funding application carbon reduction benefits are below the scale range of that assumed by the Department in their modelling, which is a concern and insights to better understand why that is occurring would be beneficial.</p>
Activities / outputs	Funding is allocated in a manner which supports delivery of policy goals	Funding is allocated on a 'first come first served' basis <sup>7</sup> . This means applications meet policy objectives (via eligibility criteria) and enables funding to be allocated at pace.

<sup>6</sup> Wain, P (2022) The cost of decarbonising UK public sector buildings is estimated to be £25-30bn, government figures show. BBC News article, 5<sup>th</sup> November 2022. <https://www.bbc.co.uk/news/uk-politics-63514562>

<sup>7</sup> This approach to the PSDS to date has been as follows: applications were reviewed in the order they were received. Assuming they were eligible / compliant, the applicant was offered funding (though not necessarily the amount requested in the application). If there were queries / concerns on the project arising from the review, these were raised with the applicant organisation and either resolved, or the application was abandoned / rejected. This process continued, with reviews commencing in the order of applications received, until the funding for that Phase was allocated.

ToC level	Assumption	Description
Contexts / inputs	Pre-release of scheme and application guidance helps support high quality, timely applications	Both the timing and content of application guidance is likely to enable better planning and timely development of high-quality applications.
Contexts / inputs	Eligible organisations are sufficiently aware of the scheme and what they need to do to apply	There is high demand for PSDS funding, which suggests good awareness in public sector. However, take up varies across sectors (and geographies, e.g. regions) and it is less clear how well known the scheme is amongst some sub-sectors (e.g. schools, smaller public sector bodies) and in some geographies.
Contexts / inputs	Applicant organisations are able and willing to apply for the schemes	There may be other barriers to applying which influence some public sector bodies' appetite for applying for the scheme. This covers both the desirability of the scheme, as well as their capacity to be able to apply.
Contexts / inputs	Applicant organisations are motivated to install decarbonisation measures	High demand (influenced likely by PSDS and other influences <sup>8</sup> ) suggests motivation is there. PSDS funding may amplify decarbonisation activity by enabling leverage of other funding, which could otherwise be used for other purposes. Conversely, PSDS may negatively influence demand as public sector may put projects on hold to wait for future PSDS rounds (e.g. as opposed to exploring other funding routes).

<sup>8</sup> Such as Public Sector Net Zero Commitments.

## 3: The evaluation of the PSDS and LCSF

### 3.1: Overview and aims

The Department is conducting monitoring and evaluation concurrent with delivery of Phase 3 of the PSDS, covering both this and Phase 2. A consortium - comprising Winning Moves Ltd., CAG Consultants, and UCL – is conducting a process, impact and economic evaluation of the scheme. The evaluation will comprise multiple further stages of data collection and analysis with an increasing focus on impact.

The main purpose of the evaluation is to determine the extent to which PSDS has enabled public sector decarbonisation, and the commensurate impact on carbon emissions, as well as any impacts on the supply chain and skills. For LCSF, the evaluation is considering the scheme role in supporting the development of heat decarbonisation plans, its role in addressing capacity and capability constraints and how well, or otherwise, it has worked together with PSDS.

#### **Process evaluation**

The process evaluation aims to understand how the scheme develops from the initial setup through to the final delivery of projects, determining what happens during the scheme implementation, how the scheme design and administration have supported delivery of the PSDS aims and what worked more (or less) well and why. It will address three high-level questions (HLQs):<sup>1</sup>

- HLQ 1: How effective is the application process and scheme delivery for Phase 3 of the PSDS, and Phases 2 and 3 of the LCSF?
- HLQ 2: How have the changes from Phases 1 and 2 of the PSDS (and any further changes between Phase 3 subphases) affected the delivery of the scheme and responses to it?
- HLQ 3: What are the wider lessons for the scheme and for energy policy for the public sector?

These three questions were the focus of the interim process evaluation report to which this technical annex is linked.

#### **Outcome and impact evaluation**

The outcome and impact evaluation will assess the extent to which the scheme's benefits have been achieved and will address the following three high-level questions:

- HLQ 4: How have the PSDS and LCSF contributed to understanding, awareness, perceptions and behaviours of decarbonisation in the public sector?
- HLQ 5: How have the schemes affected the low carbon supply chain?
- HLQ 6: What benefits have been achieved by the schemes for the public sector (carbon and energy savings, air quality impacts etc.)?

### **Economic evaluation**

The economic evaluation will aim to monetise the outcomes of the scheme and address the following high-level questions:

- HLQ 7: To what extent did the schemes deliver energy efficiency and low carbon heat installations which represented good value for money?

The original evaluation questions set out in the specification were reviewed by the contracted evaluation team. Some proposed revisions were then discussed and agreed with the Department with the aims of minimising duplication, clarifying wording (and therefore the intended insight), and ensuring there were no gaps.

Across the evaluation, four key data sources will be used; scheme application and monitoring data and relevant documentation, information from programme team and policy representatives, data from qualitative and quantitative interviews with a range of stakeholders, and wider external data sources such as ND-NEED.

These data sources were selected with the aim of (a) minimising duplication of effort – and respondent burden – where data may already be held; (b) ensuring that interviews / primary data collection are focused on questions that the scheme data cannot fully answer; (c) ensuring coverage of questions from a range of (potentially differing) perspectives.

The following table shows the evaluation questions that will be answered by the various elements of the evaluation<sup>9</sup>.

**Table 2 Full set of evaluation questions**

Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative surveys of grant recipients
<b>HLQ1: How effective is the application process and scheme delivery for Phase 3 of the PSDS and Phases 2 and 3 of LCSF?</b>				
<b>Overall</b>				
1.1 Have the schemes activities (application, assessment and monitoring) been implemented as intended? If not, how and why?	Yes	Yes	Yes	
1.2 How effective has Salix delivery been throughout the scheme – application stage, ongoing monitoring, and communications throughout?	Yes	Yes	Yes	

<sup>9</sup> Quasi-Experimental Analysis (QEA) is planned to be delivered in later stages of the evaluation to address impact and economic evaluation questions.

Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative survey of grant recipients
1.3 For each of PSDS and LCSF: Were there any trends - including in comparison to previous phases - in the profile of applications: (a) the types of organisations applying for the scheme; (b) the types of organisations that received funding; (c) the buildings and measures / measure mixes in applications; (d) the projects that received funding; (e) the costs of projects and the values of funding applied for (vs internal funding). What seem to be the reasons for major differences between Phases?	Yes	Yes	Yes	
1.4 Are there trends in the type and mix of measures being applied for by different types of organisation?	Yes	Yes	Yes	
<b>Scheme promotion</b>				
1.5 How effectively was the scheme promoted to eligible organisations (particularly those new to PSDS) in terms of (a) raising awareness; (b) explaining scheme rules and eligibility; (c) explaining the application and project delivery process; (d) encouraging applications. How did this vary across organisation profiles?	Yes	Yes	Yes	

Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative survey of grant recipients
<b>Application process</b>				
1.6 What were applicants' experiences of the application process to receive a grant (e.g. guidance provided, level of burden in applying, the process of submitting the application)?			Yes	
1.7 What motivated public sector organisations to apply to the scheme? And on what basis did they opt for single or multiple year projects / applications?			Yes	
1.8 Were there any particular barriers to / reservations about applying? Were these overcome and if so, how? Why have some organisations not applied to the scheme and how does this vary across sectors?	Yes		Yes	

Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative survey of grant recipients
<p>1.9 What was the rationale for the projects that organisations applied for? How, and to what extent, were the following factors an influence on project design (including the sizing of heating systems)?</p> <ul style="list-style-type: none"> <li>- Applicant organisation priorities?</li> <li>- PSDS rules / criteria (including eligibility and timing)? [See HLQ2]</li> <li>- The capacity (skills and resources) of the supply chain?</li> <li>- The capacity (skills and resources) of the applicant organisation?</li> <li>- Other external factors (e.g. energy prices)?</li> </ul> <p>Were there projects that organisations considered and rejected and why?</p>	Yes	Yes	Yes	



Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative survey of grant recipients
1.10 How did PSDS applicants approach the sizing of new heating systems?		Yes	Yes	
1.11 How has LCSF been used to support the development of PSDS applications? How has it enabled cost-effective projects to come forward?	Yes	Yes	Yes	Yes

Funding awards				
1.12 How have the parameters for grant award allocation (first come first served, including soft caps) affected which organisations and which projects get funded?	Yes	Yes		
1.13 What percentage of PSDS applications are applying as multi-year projects and of these how many are being approved? Are there any differences in the value of applications for multi-year projects compared to single-year projects (for the first financial year of each sub-phase)? If so, why?	Yes			

Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative survey of grant recipients
<b>Scheme/ project delivery</b>				
<p>1.14 To what extent were projects delivered as planned / applied for? To what extent have the following factors affected project delivery:</p> <ul style="list-style-type: none"> <li>- Supply chain capacity (skills and resources)?</li> <li>- Price rises?</li> <li>- Challenges on the site / in buildings?</li> <li>- Challenges within the grant recipient organisation (e.g. resources and decision making)?</li> <li>- Other external factors (e.g. weather, planning permission)?</li> </ul>	Yes	Yes	Yes	Yes
<p>1.15 Are there any barriers/challenges experienced by organisations in delivering quality projects? If so, what are they and how do they differ by organisation type?</p>		Yes	Yes	Yes

Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative survey of grant recipients
1.16 What were grant recipients' experiences of project delivery/the installation process? How did it affect building accessibility and functionality for service users?		Yes	Yes	Yes
1.17 What risks to project delivery were considered in the application process and during project delivery and how were they managed and / or mitigated? How were these risks identified? To what extent did expectations of risk match delivery experience?		Yes	Yes	
1.18 How has LCSF been used to aid the delivery of projects funded by PSDS (including the sizing of new heating systems)? How effectively has it addressed skills gaps?	Yes	Yes	Yes	Yes
1.19 How has LCSF been used to support the development of heat decarbonisation plans? What were the respective roles of the organisations and consultants in generating the plan?	Yes	Yes	Yes	Yes

Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative survey of grant recipients
<b>Wider decarbonisation activities</b>				
1.20 How, if at all, have applicants to PSDS who did not receive funding addressed their planned decarbonisation strategies?			Yes	
1.21 How, if at all, have applicants to the LCSF who did not receive PSDS funding addressed their planned decarbonisation strategies?			Yes	
<b>HLQ2: How have the changes from Phases 1 and 2 of the PSDS (and any further changes between Phase 3 subphases) affected the delivery of the scheme and responses to it?</b>				
2.1 How has the change from previous phases (Phase 1) in threshold for cost per tonne of carbon saved affected and shaped project applications? How have applicants approached the threshold for cost per tonne of carbon (in terms of building / measure selection and monetary contribution to projects) and how has it been received by Phase 3 grant recipients?	Yes	Yes	Yes	

Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative survey of grant recipients
2.2 How did applicants view the inclusion of technologies that were not previously eligible under Phase 1 of the scheme (including biomass and onshore wind)? What was the take-up of these technologies under Phase 3 of the PSDS?	Yes	Yes	Yes	
2.3 To what extent, and how, have grant recipients used bundling?	Yes	Yes	Yes	
2.4 How has the 'whole building' approach shaped applications?	Yes	Yes	Yes	
2.5 How has the inclusion of multi-year projects and planning years affected delivery? What are the experiences of multi-year grant recipients and how do they differ from single-year grant recipients?	Yes	Yes	Yes	
2.6 How has Salix changed its processes to adapt to changes in eligibility requirements and scheme design?		Yes	Yes	

Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative survey of grant recipients
2.7 How have conversations with Salix about the deliverability of projects been received and how have they affected actual deliverability and project timings?		Yes	Yes	
<b>HLQ3: What are the wider lessons for the scheme and for energy policy for the public sector?</b>				
3.1 Were there any unexpected considerations around installing measures in sites, and if so, what were they?		Yes	Yes	Yes
3.2 What did participants learn through the process of developing a heat decarbonisation plan? Was any of this learning unexpected?			Yes	
3.3 Are there any ways in which the PSDS / LCSF can better support decarbonisation of the public sector?	Yes	Yes	Yes	Yes
3.4 What further support is needed to progress decarbonisation of the public sector?		Yes	Yes	Yes

Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative survey of grant recipients
3.5 What learning can the Department apply to future public sector and wider energy policy development and scheme design?		Yes	Yes	Yes
3.6 How does the PSDS and LCSF fit within the wider policy landscape? Are there any interactions with any Department for Energy Security and Net Zero policies or other government funding available to public sector organisations?		Yes	Yes	Yes
<b>HLQ4: How have the PSDS and LCSF contributed to understanding, awareness, perceptions and behaviours of decarbonisation in the public sector?</b>				
4.1 Have the schemes facilitated any additional, unfunded decarbonisation activities and/or led to further decarbonisation ambitions? If so, how?			Yes	
4.2 To what extent do applicants understand decarbonisation? What have been the changes to understanding, awareness, perceptions and aspirations around decarbonisation? How has this been influenced by the schemes? How does it differ across grant recipient sectors (e.g. schools, NHS Trusts)?		Yes	Yes	

Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative survey of grant recipients
4.3 What assumptions are public sector organisations making about PSDS funding in the future? How is this affecting their future planning for use of PSDS and decarbonisation?			Yes	
<b>HLQ5: How have the schemes affected the low carbon supply chain?</b>				
5.1 How has the low carbon supply chain (for both PSDS and LCSF) responded to the schemes? How is it developing and adapting to meet demands?		Yes		
5.2 Are there any barriers/challenges experienced by the low carbon contractors/installers in delivering projects funded by the schemes (e.g. capability, capacity, process issues, supply chain issues, etc)? If so, what are they?			Yes	
5.3 What are installers' experiences of implementation of decarbonisation projects via the scheme?			Yes	



Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative survey of grant recipients
<b>HLQ6: What benefits have been achieved by the schemes for the public sector (carbon and energy savings, etc.)?</b>				
<b>PSDS Phase 3</b>				
6.1 What benefits have been achieved by the schemes (carbon and energy savings, air quality etc.)?	Yes	Yes	Yes	Yes
6.2 How have changes (e.g. inclusion of multi-year projects, all new policy levers) from previous phases of the scheme (including changes within Phase 3 subphases) affected outcomes and impacts (such as carbon savings)?	Yes	Yes	Yes	
6.3 To what extent are the impacts (e.g. carbon savings) of the scheme additional to what would have happened in its absence?	Yes		Yes	Yes
6.4 Have there been any unforeseen impacts (positive and/or negative)?	Yes	Yes	Yes	Yes

Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative survey of grant recipients
6.5 Are the public sector taking a leadership role in decarbonisation of buildings? What is the influence of the schemes on this?		Yes	Yes	Yes
<b>PSDS Phase 2</b>				
6.6 What benefits have been achieved by the scheme (carbon and energy savings, etc.)?	Yes	Yes	Yes	Yes
6.7 To what extent are the impacts (e.g. carbon savings) of Phase 2 additional to what would have happened in its absence?	Yes		Yes	Yes
<b>HLQ7: To what extent did the schemes deliver energy efficiency and low carbon heat installations which represented good value for money?</b>				
7.1 What are the monetisable benefits of PSDS and LCSF? On energy costs in particular, what price changes have participants seen in the last twelve months?	Yes		Yes	Yes

Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative survey of grant recipients
7.2 How cost-effective is the scheme (for participants, society and government)?	Yes	Yes	Yes	
7.3 What is the average cost of installing specific technologies / measures in sites? How does this vary by measure or organisation type?	Yes		Yes	
7.4 What costs are incurred by the different actors involved in the scheme (i.e. costs to government, applicants, installers or society) and how much are the costs?	Yes	Yes	Yes	Yes
7.5 How and why have project costs changed over time: (a) since PSDS Phase 1; (b) from application to delivery? To what extent has PSDS influenced price and cost changes?	Yes		Yes	
7.6 Have there been any co-benefits of the scheme (i.e. building comfort, air quality, improved quality of public services, culture of decarbonisation, increased capacity and capability)?			Yes	Yes
7.7 How did value for money vary across projects (i.e. organisations, technologies used, geographical regions)?	Yes		Yes	

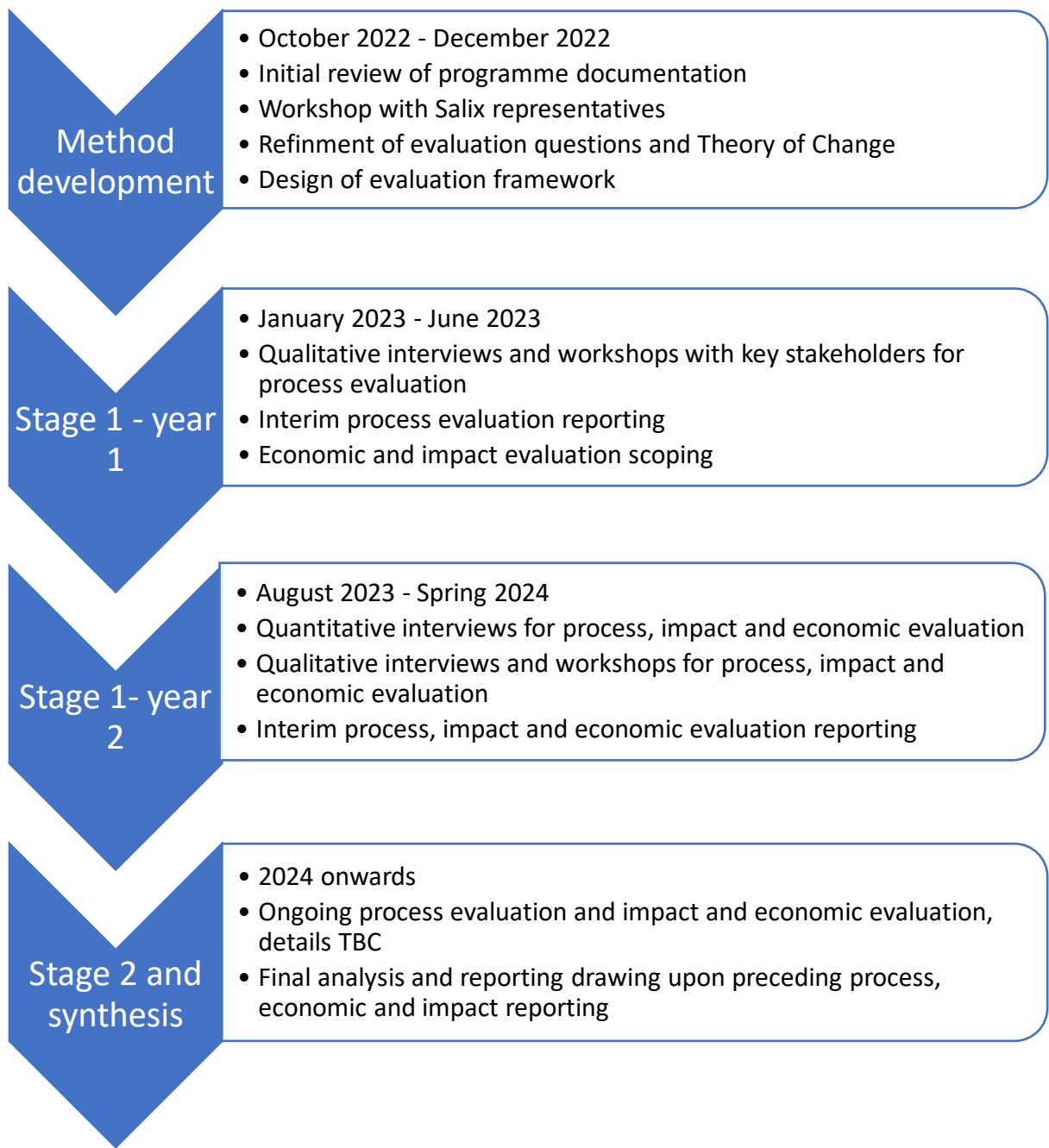
Evaluation questions	Data review	Qualitative interviews and workshops with programme team / policy reps	Qualitative interviews with applicants, recipients and contractors	Quantitative survey of grant recipients
7.8 How has the nature of multi-year projects influenced value for money?	Yes		Yes	
7.9 What is the difference in value for money between Phases (including subphases) of the scheme? If there are differences, what is the reason for them?	Yes	Yes	Yes	
7.10 What are the key factors in delivering value for money through the PSDS scheme?	Yes	Yes	Yes	

### 3.3: Timeline

The evaluation is being undertaken in two stages and combines a process evaluation and an impact and economic evaluation. Stage 1 is predominantly a process evaluation and will run from October 2022 through to March 2024. Stage 2 will combine an impact and economic evaluation with an ongoing process evaluation from 2024 onwards.

The following chart summarises the broad stages and timings of the evaluation:

**Table 3 Evaluation timeline**



This report is the technical methodology annex that accompanies the Stage 1, process focused, interim report published in x 2024.

## 3.4: Evaluation team

The evaluation team comprises three organisations; their roles are as follows:

**Figure 3 Evaluation team and roles**

CAG	Winning Moves	UCL
<ul style="list-style-type: none"> <li>• Responsible for design, delivery and analysis of qualitative interviews; particularly with multi-year projects and the supply chain.</li> </ul>	<ul style="list-style-type: none"> <li>• The lead contractor, with responsibility for project management, the Theory of Change, the overall evaluation and analysis plan, quantitative surveys, qualitative research with participants and overall evidence synthesis and dissemination.</li> </ul>	<ul style="list-style-type: none"> <li>• Responsible for the quasi-experimental analysis (QEA) and cost-benefit analysis (CBA), working with Winning Moves to scope the impact and economic evaluations</li> </ul>

## 4: Stage 1 process evaluation activity

Stage 1 of the evaluation covers Phases 3a and 3b of the PSDS and Phases 2 and 3 of the LCSF. Stage 1 comprises two 'waves', the first of which was predominantly process focused and took place between January and June 2023. The individual elements that contributed to Stage 1 Wave 1 are documented below.

The key question areas explored for this Stage 1 interim report, and the Evaluation Questions they pertain to, were as follows:

- The effectiveness of the delivery of Phase 3a of the PSDS<sup>10</sup>, including the launch and application process, award process, monitoring, and Salix management overall [EQs 1.1, 1.2, 1.5, 1.6, 1.8, 2.6, 2.7, 3.5].
- Why organisations applied for funding i.e. the importance of PSDS to the project and what would have happened in its absence [EQs 1.7, 1.8, 1.20, 6.3].
- How applicants formulated projects, including measure and building selection, consideration of – and preparation for – risks to delivery, and approaches to procurement [EQs 1.4, 1.9, 1.10, 1.11, 1.17, 2.1, 2.2, 2.3, 2.4, 2.5, 2.7]
- How LCSF supported the development of organisations' HDPs, and informed applications to PSDS [EQs 1.11, 1.19, 1.21, 3.2, 3.3].
- Grant recipient experiences of the delivery of funded projects, including challenges encountered (both expected and unforeseen), mitigations of those challenges, and success factors [EQs 1.14, 1.15, 1.16, 1.17, 1.18].
- Stakeholder views on – and evidence of the effects of – changes to PSDS rules between Phase 1 and Phase 3 [EQs 1.3, 1.9, 2.1, 2.2, 2.3, 2.4, 2.5, 2.6, 2.7].
- Wider lessons for the scheme and for energy policy for the public sector [EQs 3.1, 3.2, 3.3, 3.4, 3.5, 3.6].

### 4.1: Primary research / interviews (conducted March - May 2023)

A key element of Stage 1 of the evaluation was qualitative primary research – in depth interviews and workshops with a number of respondent groups.

#### **Mode**

All interviews and workshops were conducted as Microsoft Teams calls; the exception was the initial workshop with Department representatives, which was conducted in-person at the Department offices, though attendees could join remotely.

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<sup>10</sup> And, where relevant, for Phase 2 of the LCSF.

Qualitative interviews utilised topic guides comprising key questions and further probes, sometimes depending on respondent answers. Topic guides were also produced for workshops, but these comprised fewer and broader questions to allow for more discussion and multiple contributions.

## **Sampling**

All applicant and contractor contact details were provided by the Department. In order to select a sample for interview, the following data sources were reviewed and analysed:

- The database of applications submitted for Phase 3a funding.
- The database of awards of Phase 3a funding.
- The Salix project progress / monitoring database (reporting project status as of the end of March 2023).
- PSDS and LCSF guidance documents, application forms and funding summaries.

The sample – for both public sector organisations and project delivery contractors – was then selected and recruited to achieve a range of respondent profiles across sectors, regions and project values.

For eligible non-applicants, analysis of applicant databases across all PSDS Phases enabled the evaluation team to identify – through comparison to publicly available lists of organisations in the different sectors - organisations that had never applied to PSDS.

Sample sizes for the various respondent groups were proposed and agreed with the Department. Within the overall context of the evaluation budget, sample sizes were designed to ensure, within each group, a spread of organisational and (if relevant) project profiles, balanced with consideration of the number and importance of the evaluation questions each group was expected to address<sup>11</sup>.

## **Recruitment and respondent roles**

For grant recipients, contractors and unsuccessful applicants, the named 'lead contact' in the Department / Salix databases was recruited directly; this usually comprised an initial email setting out the purpose of the interview, with follow up telephone calls if there was no response. Within larger public sector organisations, respondents tended to be a specialist energy manager (or similar). Within smaller organisations, respondents tended to be in a more general management or director role.

Eligible non-applicants were usually recruited by telephone; as there was usually no clear individual contact for these organisations, recruiters asked (in the first instance at least) to

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<sup>11</sup> For example, the population of non-participants (unsuccessful applicants and eligible non-applicants) or contractors is larger than the grant recipient population. However, the latter group would be expected to provide insight on a much larger number of the EQs, and the relative sampling of these groups across the evaluation reflects that.



speak to someone in the sort of roles found for lead contacts. In some cases, once the full purpose of the call was explained, the originally nominated person recommended a colleague.

The following table shows the sample interviewed:

**Table 4 Sample interviewed**

Respondent type	Number interviewed	Overview
Projects leads in organisations that were awarded funding in PSDS Phase 3a.	41	These explored their experiences of project design, applications and delivery. Interviews covered 26 that received <i>only</i> PSDS phase 3a, and 15 that also received LCSF Phase 2 funding.
Organisations that applied to Phase 3a but were not awarded funding.	28	These explored their experiences of the application process and award decision, as well as their views on the main changes to PSDS since Phase 1. To inform assessment of attribution to PSDS, interviews also explored what decarbonisation activity this (unfunded) group have undertaken in the same time period as Phase 3a delivery.
Public sector organisations that are eligible to apply for PSDS funding but had not done so at the time.	10	These explored their awareness and perceptions of PSDS, and specifically the reasons they have not applied for funding. Again, to inform assessment of attribution to PSDS, interviews also explored what decarbonisation activity this (unfunded) group have undertaken in the same time period as Phase 3a delivery.
Contractors working on PSDS Phase 3a funded projects, across a range of roles, projects and organisation sizes.	10	These explored their experiences of project delivery, in particular risk management, challenges encountered and mitigation strategies.
Contractors delivering LCSF Phase 3 funded work.	11	These explored the value of the work and the effect on public sector skills, knowledge

		and capacity to pursue future decarbonisation projects.
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In addition, the following focus groups and workshops were held with grant recipients, delivery contractors, third party technical assessors and representatives from Salix and DESNZ:

- Two focus groups / workshops (attended by 14 organisations in total) were conducted with grant recipients to explore more overarching questions around PSDS rules and policy to support decarbonisation.
- A focus group / workshop was conducted with 4 PSDS contractors exploring overarching sector challenges – supply, capacity, skills – and changes to PSDS rules.
- A workshop with representatives of the Department for Energy Security and Net Zero (including programme management and wider policy teams), exploring views on the applicant profile, the effect of PSDS rule changes, delivery of the scheme, and how PSDS and LCSF could further support decarbonisation.
- A workshop with third party technical assessors exploring views on applicant profile, the effect of PSDS rule changes, the strengths and weaknesses of applications, how applicants are managing risk and how PSDS and LCSF could further support decarbonisation.

## 4.2: Limitations / caveats

There were a number of limitations to this stage of the evaluation; these, and their implications for the evaluation findings and interpretations, are discussed below.

### Scope

There were three particular parameters to the scope of interim process evaluation findings. The first was the focus of the evaluation in Stage 1 Wave 1 upon (a) Phase 3a delivery; (b) the process evaluation questions. As described in Section 3.3, later stages of the evaluation will generate findings pertaining to Phases 3b and 3c, and the impact and economic evaluation questions.

The second limitation in the scope of report findings was the groups and responses it covered. Due to changes in the composition and timing, the report does not include views from wider supply chain representatives (providing overarching perspectives of PSDS impact on particular sectors). These will be included in reporting later in the evaluation.

The third limitation to scope arose due to the timing of Stage 1 Wave 1. At the time of interviews, many Phase 3a funded projects had yet to be completed. This meant certain

questions (e.g. on post-installation quality) could only be answered by proportions of the respondent sample. Such questions will be re-visited in later stages of the evaluation.

### **Statistical significance**

Databases of Phase 3a applicants and awards have been shared with the evaluation consortium and analysed by the team to generate high-level insights on participant profiles, experiences and delivery.

However, the majority of data underpinning this report has been obtained from a sample of qualitative interviews and discursive workshops (as described in section 4.1). Whilst these have generated numerous and varied insights on the questions explored in them, they are not intended to provide statistically robust results or percentages on key questions. Again, it is anticipated that these will be generated by quantitative surveys conducted in later stages of the evaluation.

It is therefore not possible to draw representative conclusions from the interviews (particularly applicant and non-applicant groups) conducted in this first stage of the evaluation.

### **Recall**

The time between respondents' experience of some parts of the PSDS process (around 18 months between Phase 3a applications) and this round of evaluation interviews meant it was difficult for some respondents to recall details of these elements.

Linked to this, where organisations were also involved in Phase 3b of the PSDS, some respondents struggled to disaggregate their Phase 3a experiences. Interviewers sought to mitigate this through clear description of Phase 3a projects and asking respondents to report their experiences in relation to those projects. Whilst conflation on some issues is possible, it is unlikely to have had a substantive impact on findings reported.

### **Respondent role and knowledge**

Some respondents, whilst still being the recognised 'project lead' for their organisations, were either not closely involved, or not involved at all, in particular elements of the process. There were therefore some areas these respondents could not provide informed opinions on, although they were encouraged to share any feedback from colleagues.

## **4.3: Analysis**

Quantitative scheme data was analysed, using frequencies and cross tabulations to understand more about the profile of organisations participating in the scheme and the nature of projects that received funding. The key statistics generated and included in the report were as follows:

- The breakdown of applicant organisational profile (in terms of sector) for Phase 3a, with comparison to the Phase 1 breakdown.

- The breakdown of levels of funding requested in Phase 3a applications, with comparison to the Phase 1 breakdown.
- The breakdown, for Phase 3a applications, of how far the amounts requested covered the proposed overall project costs.
- The breakdown of proximity to the £325/t CCT in Phase 3a applications.
- The breakdown of single vs. multi-year applications and awards.
- The breakdown of application submission dates and proximity to the opening of the Phase 3a application window.
- The breakdown of the funded project profile (in terms of values awarded and measures funded) for Phase 3a, with comparison to the Phase 1 breakdown.
- Analysis of application review outcomes and key issues / concerns arising.
- Analysis of the timescales within which successful applicants were informed of the outcome of their application.
- The breakdown of the progress of funded projects, based upon the percentage complete as of April 2023.
- Summary breakdown of overall project status in terms of completion, as well as the extent of any delays.
- Analysis of the reasons for funded projects being abandoned.

Qualitative data was analysed to understand key themes pertaining to the evaluation questions within respondent groups. Interviews were written up by those that conducted them, against the questions covered for that respondent group. They were then analysed by the report authors against both question area and the key sections agreed to be covered in the report (a detailed structure was agreed with the Department prior to drafting). There was also analysis of responses within respondent groups to detect any apparent differences by respondent (organisational or project) profile.

These analyses were synthesised to produce the interim process evaluation report.

## 5: Research instruments

This section of the annex outlines the topic guides used in the workshops and qualitative interviews conducted for the primary research. Each section includes the key questions used in the research. Numerous additional probing questions were used depending on the answers given.

Topic guides for the interviews and workshops were developed based upon the process evaluation questions set out in the table in Chapter 3. All research instruments were commented upon and signed off by the Department before use. They were not piloted, but were informed by the evaluation team's experiences of conducting interviews with broadly similar groups on similar topic areas for the evaluation of PSDS Phase 1.

### 5.1: Theory of change workshop

Key questions
<p><b>How does scheme design and delivery, including recent changes, influence well scoped, cost-effective applications for grant funding? Considering:</b></p> <ul style="list-style-type: none"> <li>• PSDS budget – scale and forward certainty</li> <li>• Grant allocation decision making</li> <li>• Decarbonisation focus (whole building approach) and carbon cost threshold influences</li> <li>• LCSF</li> <li>• Scheme marketing and communications</li> </ul>
<p><b>Understanding the context PSDS and LCSF are operating in and exploring external influences.</b></p> <ul style="list-style-type: none"> <li>• What external factors influence PSDS and LCSF take up, and what kind of influence are they likely to have?</li> </ul>
<p><b>Understanding desired outcomes and impacts.</b></p> <ul style="list-style-type: none"> <li>• What are the desired outcomes and impacts?</li> <li>• What needs to happen for these to be achieved at the desired scale?</li> </ul>

## 5.2: Process evaluation workshops

### 5.2.1: Department for Energy Security and Net Zero team

Key questions
<p><b>Profile of applicants and successful organisations and projects in the context of rule changes (both PSDS and LCSF)</b></p> <p>Observations on the profile of applicants and successful organisations and projects, trends from previous Phases, and views as to how the design and rules/eligibility criteria of Phase 3 (to date) and LCSF (generally - not just focused on LCSF Phase 2) may have influenced this.</p> <p>Explore colleagues' views on the key scheme rule changes, in particular, the effects these have had on (noting that this is about collecting their perspectives, acknowledging we are also getting feedback on this from elsewhere):</p> <ul style="list-style-type: none"> <li>a. Who applies</li> <li>b. With what projects</li> <li>c. Who / what project is awarded funding</li> </ul> <p>Whether the changes (individually and collectively) are viewed as broadly positive or negative</p>
<p><b>Views on scheme management</b></p> <p>Explore influences on how the scheme is managed on scheme take up and delivery over time.</p>
<p><b>Views on how, and to what extent, LCSF has supported projects and addressed skills gaps.</b></p> <p>Observations on the influence of LCSF on public sector bodies' skills and capacity to decarbonise.</p>
<p><b>Views on how PSDS/LCSF, as well as wider policy, could further support decarbonisation of the public sector.</b></p> <p>Observations on further necessary support for decarbonisation of the public sector, and lessons that can be applied to future public sector and Department energy policy and scheme design.</p>

## 5.2.2: Third Party Technical Assessors

Key questions
<p><b>Context</b></p> <ul style="list-style-type: none"> <li>• Name, company, type of work undertaken for Salix (number and type of projects reviewed etc).</li> <li>• Establish level of familiarity with previous phases of the PSDS.</li> </ul>
<p><b>Views on scheme design and how rules/eligibility criteria have influenced this</b></p> <ul style="list-style-type: none"> <li>• A number of changes were introduced for Phase 3a of the PSDS. What are your views of these changes?</li> <li>• In what ways do you think that these changes might have influenced (positively or negatively) the design of applications?</li> <li>• To what extent and how have successful applicants used bundling?</li> <li>• How well do applicants match technologies to building type?</li> </ul>
<p><b>Views on scheme applicants</b></p> <ul style="list-style-type: none"> <li>• Based on your experience, what characteristics (size, level of expertise, sector) do you associate with a 'typical' scheme applicant?</li> <li>• In what ways do you think that the design of Phase 3a is likely to have informed the profile of scheme applicants?</li> </ul>
<p><b>Views on risk management</b></p> <ul style="list-style-type: none"> <li>• What is your opinion of the general quality of risk management in Phase 3a applications?</li> <li>• What sort of risks were most commonly identified, and how did applicants propose to mitigate them?</li> <li>• How realistic are applicant expectations for project delivery?</li> </ul>
<p><b>Views on scheme applications</b></p> <ul style="list-style-type: none"> <li>• What are the most common weaknesses you see in scheme applications and what do you associate these with?</li> <li>• How realistic are cost estimates?</li> <li>• How realistic are applicants' schedules?</li> <li>• Has sufficient thought been given to project risk?</li> </ul>

- Are there any particular types of data that applicants struggle to provide?

### **Views on how PSDS/LCSF, as well as wider policy, could further support decarbonisation of the public sector**

In what ways do you think that the PSDS and LCSF, as well as wider policy, could be changed to better support decarbonisation of the public sector?

## 5.2.3: PSDS Phase 3a grant recipients

### **Key questions**

#### **Context**

- Role and responsibility of project leads
- PSDS experience
- PSDS Phase 3a project

#### **Views on scheme design and how rules/eligibility criteria have influenced this**

- Growing emphasis on funding heat decarbonisation measures, including requirement for each building to include a low carbon heating measure.
- Inclusion of previously ineligible measures e.g. biomass, onshore wind.
- CCT from £500/t in Phase 1 to £325/t in Phase 3a.
- The removal of a maximum cap in funding that could be awarded per project.
- The requirement for applicants to contribute like-for-like cost of replacing their fossil fuel heating system.
- Did anyone choose to contribute more than the mandatory like-for-like boiler replacement cost? If so, how and why?
- Provision for single and multi-year projects.

#### **How could PSDS further support decarbonisation?**

- What works well?
- What would you change and why?
- How does PSDS fit with wider decarbonisation programmes and policies?



- Beyond funding works, how could policy help in building capacity and capability within the public sector to design and deliver decarbonisation projects?

#### **Views on hypothetical adaptations and their effects**

- Competitive assessment rather than 'first come first served'. On what basis / metric(s) would allocation be decided?
- [If carbon] How would this influence the buildings and / or measures proposed?
- Access to loan funding (alongside grant funding). Would you take this up?

#### **Wider issues**

- Experience of producing heat decarbonisation plans and the value of these?
- Effect of energy costs on project costs, impacts, and reservations?

### 5.2.4: PSDS Phase 3a grant recipients who also received LCSF Phase 2

#### **Key questions**

##### **Profile of applicants and successful projects in context of rule changes (PSDS and LCSF)**

- Observations on profiles of applicants and successful organisations/projects
- Views on how scheme design and rules/eligibility criteria have influenced this

##### **Views on scheme management (PSDS and LCSF)**

- Views on management (by Salix) of the PSDS and LCSF application, award and monitoring stages of the scheme (including funding)
- Effectiveness of scheme guidance, including the evolution of guidance over time
- Timings of availability of guidance prior to funding availability (PSDS and LCSF guidance) and differences in perceived influence across sectors

##### **Views on how, and to what extent, LCSF has supported projects and addressed skills gaps**

- Observations on the influence of LCSF on public sector bodies' skills and capacity to decarbonise
- Perceived differences between large, experienced organisations (e.g. NHS, HE) and smaller less experienced ones

- Possible unintended consequences

**Views on how PSDS and LCSF (and wider policy) could further support public sector decarbonisation**

- What further support is needed to progress decarbonisation of the public sector?
- Are there any ways in which the PSDS / LCSF can better support decarbonisation of the public sector?
- What learning the Department can apply to future public sector and wider DESNZ energy policy development and scheme design

### 5.2.5: Contractors for PSDS Phase 3a and LCSF Phase 3

**Key questions**

**Profile of contractors**

- Type and size of projects worked on

**How does participation in PSDS improve the ability of public sector staff to deliver decarbonisation projects and programmes**

- In what ways
- To what extent
- Any variation by sector

**How could PSDS or LCSF be changed to improve their ability to:**

- Support the public sector in delivering building decarbonisation
- Support the supply chain to deliver decarbonisation in the public sector

**Views on how PSDS and LCSF (and wider policy) could further support public sector and the supply chain to deliver decarbonisation of the public sector**

## 5.3: Topic guides for qualitative interviews

### 5.3.1 PSDS Phase 3a grant recipients

Key questions
<b>Context</b>
<ul style="list-style-type: none"> <li>• Please can I confirm your job title and role?</li> <li>• What has been your personal involvement in: (a) The PSDS Phase 3a application(s), (b) The planning and implementation of the funded project(s)</li> <li>• And for context (if not already known) what has been your, and your organisation's, involvement in any earlier PSDS phases? (the application process and / or delivery of the projects?)</li> </ul>
<b>Application process</b>
<ul style="list-style-type: none"> <li>• What were your views on the application process?</li> <li>• What project(s) did you apply to PSDS Phase 3a with and why did you apply?</li> <li>• How did you decide upon the composition of your project in terms of (a) scale; (b) measure selection (including sizing of any heating systems); (c) choice of buildings?</li> <li>• How did you manage risk in your project design and planning at the application stage?</li> <li>• What are your views on how applications are assessed?</li> </ul>
<b>Views on LCSF</b>
<ul style="list-style-type: none"> <li>• We understand from the scheme data that you received Phase 2 LCSF funding. Could you briefly describe your experience of applying?</li> <li>• [Otherwise] Did you apply for LCSF Phase 2 funding?</li> <li>• We understand from the scheme data that you received Phase 2 LCSF funding. What did you use this for?</li> <li>• Did you receive LCSF funding in Phase 1 (2020)? If so, what did you use this for?</li> </ul>
<b>Project delivery</b>
<ul style="list-style-type: none"> <li>• Can you please clarify the stage the PSDS Phase 3a funded project(s) is at.</li> <li>• How far has the project aligned with the original application in terms of (a) timescales for completion; (b) the measures installed? (c) costs?</li> </ul>

<ul style="list-style-type: none"> <li>• Can you please summarise your experience of delivering the project on site?</li> <li>• What is your perception of the skills and quality of the contractors delivering the project(s)?</li> <li>• Following installation of measures, have there been any technical issues to address? If so, have you overcome these and if so, how?</li> <li>• What has your experience been of liaising with Salix throughout delivery of the project?</li> </ul>
<b>Attribution</b>
<ul style="list-style-type: none"> <li>• I would like to understand the influence of the scheme on the measure(s) you funded. Without PSDS, to what extent would you have implemented the same measures in the same timescales?</li> <li>• Aside from providing the funding, has participating in the scheme been beneficial to the project in any other ways?</li> </ul>
<b>Wider lessons</b>
<ul style="list-style-type: none"> <li>• What are the key learnings from your experience of PSDS that the Department for Energy Security and Net Zero should consider in future energy policy development and scheme design?</li> <li>• What are your views on how PSDS/LCSF, as well as wider policy, could further support decarbonisation of the public sector?</li> </ul>

### 5.3.2 Unsuccessful applicants

<b>Key questions</b>
<b>Context</b>
<ul style="list-style-type: none"> <li>• What was your personal involvement in this project(s) and the PSDS/LCSF application?</li> <li>• Have you been involved in previous phases of the PSDS (whether delivering a funded scheme or just applying)?</li> </ul>
<b>Applying to the PSDS/LCSF</b>
<ul style="list-style-type: none"> <li>• How did you hear about PSDS Phase 3a?</li> </ul>

- What were your views on the application process?
- What project(s) did you apply to PSDS Phase 3a with and why did you apply?
- I would now like to run through some of the main changes to PSDS rules between Phase 3a and previous Phases of the scheme. For each, please could you tell me your overall views on this change (positive / negative) and why.
- How did you decide upon the composition of your project in terms of (a) scale; (b) measure selection (including sizing of any heating systems); (c) choice of buildings?
- How did you manage risk in your project design and planning at the application stage?
- As part of your participation in PSDS, your organisation will have produced a heat decarbonisation plan. Could you describe the experience of producing a heat decarbonisation plan, and what you have learnt through doing this?
- How was the communication process, in terms of being notified you had not been successful?

#### **LCSF Support**

- We understand from the scheme data that you received Phase 2 LCSF funding. Could you briefly describe your experience of applying?
- [Otherwise] Did you apply for LCSF Phase 2 funding?
- We understand from the scheme data that you received Phase 2 LCSF funding. What did you use this for?
- Did you receive LCSF funding in Phase 1 (2020)? If so, what did you use this for?

#### **Action taken outside of the scheme**

- Since learning that you had not been awarded PSDS Phase 3a funding, have you progressed any of the measures / project(s) that you were seeking funding for?
- Have you taken any other action on decarbonisation in the past 12 months? Can you please summarise your experience of delivering the project on site?
- Do you have any plans to carry out any decarbonisation initiatives in the near future (next 1-5 years)?

#### **Wider lessons**

- What are your views on how PSDS/LCSF, as well as wider policy, could further support decarbonisation of the public sector?

### 5.3.3 Eligible non applicants

Key questions
<b>Context</b>
<ul style="list-style-type: none"> <li>• What is your job title/role?</li> </ul>
<b>Awareness of PSDS</b>
<ul style="list-style-type: none"> <li>• Have you heard of the Public Sector Decarbonisation Scheme?</li> <li>• What is your understanding of your organisation's eligibility for the PSDS?</li> <li>• Have you been involved in other, similar programmes (PSEELS, HNDU, others?)</li> </ul>
<b>For those who were aware and that they were eligible</b>
<ul style="list-style-type: none"> <li>• Have you considered applying to the PSDS?</li> <li>• If yes, please can you tell us the extent to which you have explored the scheme? If no, why not?</li> <li>• Why have you decided not to apply?</li> <li>• I would now like to run through some of the main PSDS rules. For each, please could you tell me your overall views on this and how it might affect your likelihood of applying to the scheme in future.</li> <li>• What else might affect / increase the likelihood of your organisation applying to the scheme in future?</li> <li>• Would you apply for funding if there was a further round of PSDS?</li> </ul>
<b>LCSF Awareness</b>
<ul style="list-style-type: none"> <li>• Have you heard of the Low Carbon Skills Fund?</li> <li>• What is your understanding of your organisation's eligibility for the LCSF?</li> <li>• We understand from the scheme data that you received Phase 2 LCSF funding. Could you briefly describe your experience of applying?</li> <li>• [Otherwise] Have you ever applied for LCSF?</li> <li>• Have you considered applying to the LCSF?</li> <li>• If yes, please can you tell us the extent to which you explored the scheme? If now, why not?</li> </ul>

<ul style="list-style-type: none"> <li>Have you taken any other action on decarbonisation in the past 12 months? Can you please summarise your experience of delivering the project on site?</li> </ul>
<b>Action taken outside of the scheme</b>
<ul style="list-style-type: none"> <li>Have you taken any other action on decarbonisation in the past 12 months?</li> <li>Do you have any plans to carry out any decarbonisation initiatives in the near future (next 1-5 years)?</li> </ul>
<b>Wider lessons</b>
<ul style="list-style-type: none"> <li>What are your views on how PSDS/LCSF, as well as wider policy, could further support decarbonisation of the public sector?</li> </ul>

#### 5.3.4: PSDS Phase 3a Contractors

<b>Key questions</b>
<b>Context</b>
<ul style="list-style-type: none"> <li>To start with, could you please give me some details about your current role, for example your job title and how long have you been in post.</li> <li>What is your organisation's main area of work?</li> <li>How familiar are you with the Public Sector Decarbonisation Scheme (PSDS)? Do you know to what extent has your organisation been involved in conducting work funded by this scheme?</li> <li>In this interview, we are focussing on work that was funded through PSDS Phase 3; this funded work that would have commenced any time after autumn 2022. Have you been involved in delivering Phase 3 projects?</li> </ul>
<b>Views on the application process and scheme criteria</b>
<ul style="list-style-type: none"> <li>I would now like to run through some of the main changes to PSDS rules between the first Phase of the scheme in 2020, and Phase 3a. For each, please could you tell me your overall views on this change (positive / negative) and why.</li> </ul>
<b>Risk management and experience of project delivery</b>
<ul style="list-style-type: none"> <li>Please tell us about your approach to project risk management for PSDS 3 projects.</li> </ul>

<ul style="list-style-type: none"> <li>• How would you describe your experience of delivering the PSDS Phase 3 funded work? What went well / less well?</li> <li>• Is the installation complete? If YES, have you been involved in any post-installation activity?</li> </ul>
<b>Overall views</b>
<ul style="list-style-type: none"> <li>• Do you have any views about how PSDS, or the accompanying programme the Low Carbon Skills Fund, could be changed to improve your ability to support the public sector and the supply chain to deliver decarbonisation of the public sector?</li> <li>• Do you have any views about how wider government policy could further support the public sector and the supply chain to deliver decarbonisation of the public sector?</li> </ul>

### 5.3.5: LCSF Phase 3 Contractors

<b>Key questions</b>
<b>Context</b>
<ul style="list-style-type: none"> <li>• To start with, please can I confirm your job title and role?</li> <li>• What has been your personal involvement in the LCSF Phase 3 project(s)? And for context (if not already known) what has been your involvement in any earlier LCSF/PSDS phases?</li> <li>• What is your organisation's main area of work?</li> <li>• We understand that you have provided support on the delivery of one or more Phase 3 LCSF-funded projects (identify if possible), is that correct?</li> </ul>
<b>Impact on public sector capability and heat decarbonisation delivery</b>
<ul style="list-style-type: none"> <li>• The aim of the LCSF is to provide grants for public sector bodies to access skills and expertise to unlock heat decarbonisation on their estate. What do you feel were the main expertise and resource gaps that your involvement helped to fill?</li> <li>• Can you identify any other ways in which you feel that your involvement benefited your client(s)?</li> <li>• In what ways do you anticipate that the work you have undertaken has or will inform your clients' current/future work on heat decarbonisation?</li> </ul>



- (If work is directly linked to PSDS projects) Thinking specifically about PSDS, how do you expect your work to inform your clients' current/future work on PSDS projects?
- What are your clients' priorities in relation to their LCSF heat decarbonisation plans? For example, is their primary focus on maximising financial savings, carbon reduction, identification of priorities for action?

#### **Attribution**

- To what extent do you think your client(s) would have been able to progress the project(s) in your absence?
- Are you aware of any public sector organisations developing heat decarbonisation plans outside the LCSF?

#### **Wider issues**

- Do you have any views about how the LCSF (and if relevant the PSDS) could be changed to improve their ability to support the public sector and the supply chain to deliver decarbonisation of the public sector?

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