

response). This would be reviewed when we are undertaking secondary data scoping and analysis. If the population is sufficiently large for sampling (c.200 organisations+), we would explore if any project / funding / recipient characteristics would be underrepresented by a simple random sampling approach, and whether we need to introduce strata to manage this. Through focusing the survey on gathering evidence for the impact and economic evaluations, it is also hoped that where grant recipients have undertaken multiple projects, all projects be covered in the survey.

A questionnaire will be developed for agreement with BEIS. It would investigate attitudes, understanding, awareness and behaviours around decarbonisation of public sector sites, as well as asking for detail around the projects implemented using scheme funding. It would also explore any early outcomes from the funded project(s). We are proposing the surveys take place in September / October each year, six months after the projects are intended to conclude. If projects run as planned this should be sufficient to see early outcomes of the projects, whilst also better ensuring respondents still have a good recall of how the scheme supported them and its contribution to the project.

Although we would retain questions from Phase 1 where they align with this focus, we still propose to pilot the questionnaire with a sample of ~10 participants prior to fieldwork to confirm length and test the comprehensibility of any new questions. Our proposed approach to data capture would be to administer the telephone surveys in – IdSurvey - which has the added benefit of supporting online completion of questions where respondents do not wish to participate in / have insufficient time for a telephone survey.

Based on our experience from PSDS Phase 1, we will use a mix of email and telephone engagement to recruit respondents. We do not think the offer of monetary incentives will support engagement with the survey (there are also policy barriers to acceptance of incentives in the public sector); we will employ a full range of soft incentives e.g. offering flexibility in when the survey is conducted and a relatively long data collection period.

Following completion of fieldwork, the dataset will be relabelled and recoded. Respondent identifiers will be removed⁴. Prior to analysis, we will explore whether weighting is required to correct for any differential selection probabilities. A full analysis plan will be specified alongside the research tools, in line with the requirements of the impact and economic evaluation plans. We envisage descriptive analysis overall, by scheme (funding and / or LCSF), participant type and scale of funding (using a categorical variable) and reporting these with statistical certainty (i.e. including confidence intervals). We will consider small sizes when selecting appropriate tests to compare sub-groups (e.g. two sample t-test when comparing means) and to calculate confidence intervals (e.g. using the t-distribution for calculating confidence around a mean, which takes into account sample size).

Winning Moves' quality assurance procedures are registered to ISO 20252 and we are an MRS Company Partner. Adherence means senior team members will listen to a minimum of 5% of surveys calls for quality control as well as the first calls for each researcher post-training. All survey responses will be manually sense-checked. Given the relatively small population and heterogeneity of the sample, we are anticipating outliers. Permission for re-contact will be sought on survey conclusion and call-backs made to check outliers. We will use call-backs/ email follow-up where key or substantive data are missing. In the event missing data cannot be addressed, we do not intend to use imputation techniques (again due to the heterogeneity of the sample).

⁴ Each respondent would have a unique record number so could be matched back to contact data (and other identifiers) if required i.e. if we wanted to follow-up certain respondents in later studies. Winning Moves would retain this in line with an agreed security plan.

Surveys with multi-year projects: We have resourced for a survey of c.15-30 recipients of funding for multi-year projects in FY25/26. Our approach for this survey will be the same as set out for single-year projects above, with the following exceptions:

- Due to the population and sample size, there will not be a full pilot, however, we will reflect on how the survey is working after the first 2 or 3 interviews.
- We are conscious that, through their involvement in case studies, at least half of respondents will already have made a substantial contribution to the evaluation. For these respondents, we will review their qualitative transcripts and pre-populate questions where possible, using the survey time to confirm / fill in data gaps. As such, the survey length should be 20-25 minutes for this group, and 35-40 minutes for those have not been elsewhere engaged in the evaluation.
- We agree with the ITT that due to the anticipated base sizes for multi-year projects being very low, analysis of this group may be limited to descriptive statistics.

Non-participants survey: We have resourced for c.150 quantitative telephone surveys with eligible non-participants. Our experience of PSEELs is that it is challenging to design a survey of eligible non-applicants of this scale in a meaningful way if the purpose of the survey is to compare attitudes, understanding, awareness and behaviours around decarbonisation of public sector sites. This is partly due to the size of the non-participant population compared to the participant population (tens of thousands vs. <1000), the heterogeneity of that population (a university campus has a different portfolio of decarbonisation opportunities compared to a primary school) and response bias (we will inevitably engage with public sector organisations more interested in decarbonisation in any random sample approach). Local authorities in particular are difficult to sample, as grant recipients can implement projects in any of their building stock (from leisure centres to offices), so it is difficult to determine the scope of what should be discussed with non-participants. The risk is that the survey generates some observable comparisons between participants and non-participants, but that because they are subject to a whole suite of limitations, they are not that useful to BEIS. In consultation with BEIS, options we will explore through secondary data scoping and analysis are: a) sampling from unsuccessful applicants; and / or b) restricting the population of eligible non-applicants to certain types of organisations where a meaningful comparison is feasible e.g. higher education. The survey will be framed to potential respondents as informing the design and delivery of future policy for decarbonisation of the public sector, including further use of PSDS. By the time of the survey, there may be further policy drivers or external factors that we can use to encourage participation (e.g. the current challenges around energy costs would be a useful driver for a survey taking place across this heating season). Our approach for this survey will then be the same as set out for single-year projects above, including survey length.

Quasi-experimental Impact Analysis (QEA) of Carbon Impacts (stage 2) – led by UCL

The ITT suggests the use of DiD as a QEA method. DiD compares the changes in the outcome of interest (e.g., energy consumption) over time between the treated and control groups. It is based on the parallel trend assumption (i.e. the outcome of interest would have evolved similarly for both the treated and control groups in the absence of the scheme) which is not likely to hold in many non-experimental settings (Abadie and Cattaneo, 2018).

However, there are challenges with the implementation of DiD as a method in this setting:

- There is no obvious control group. We would explore the use of unsuccessful applicants who are likely to be comparable to successful applicants e.g. they all have interest in energy efficiency and/or decarbonisation issues. However, we expect the population of unsuccessful applicants to be relatively small, making the selection of specific units challenging. In addition, selected units may be affected by similar/previous schemes, including Phase 1 of the PSDS.
- The available sample size is likely to be small for subgroup analysis across the dimensions which may affect the impact of PSDS; dimensions such as 1) Fuel type, 2)

The technology being installed, 3) Type of organisation, 4) Type of support e.g. the impact of PSDS could be higher in those projects which have benefited from LCSF support. This is because the LCSF can contribute to the effective design and successful delivery of the project in addition to increasing the likelihood of the PSDS application being successful and 5) Type of project (Phase 3). Multiyear projects may lead to better installation quality and thus may lead to higher impacts than single year projects. This is because the multi-year projects will give the grant recipients more time to plan and undertake other pre-installation activities before the actual installation.

Taking account of these factors implies a considerable reduction in the sample size available for QEA, as analysis will need to be implemented in subgroups of the recipients rather than the whole population. As an example, only 7 out of the 219 energy efficiency and heat decarbonisation projects funded under phase 3a are multiyear projects.

As for the evaluation of PSEELs and the evaluation of Phase 1 of the PSDS, we intend to first explore the use of synthetic control methodologies (SCMs) to assess the impact of the PSDS Phases 2 and 3 on energy consumption and CO₂ emissions, while using the simpler difference-in-difference (DiD) as a fall-back methodology if we encounter hurdles when implementing the SCMs. SCMs are more suited to small samples. As already mentioned, the impact of the PSDS is expected to vary by type of project, type of support, organisation, technology, and fuel (among other characteristics). Subject to scoping and data availability, a separate QEA for these different subgroups will be conducted to assess the heterogeneous impacts of the PSDS. To assess the contribution of the LCSF to the PSDS-relevant outcomes, we aim to implement the QEA separately for the group of public sector organisations affected by PSDS, and the group of those affected by both PSDS and LCSF.

In scoping the QEA, we will consider the following methodological options and data sources:

Straight SCM: The SCM originally proposed by Abadie and Gardeazabal (2003) and Abadie, Diamond, and Hainmueller (2010) uses a data-driven approach to creating a synthetic control group by building the weighted average of non-treated units (e.g. eligible applicants and non-applicants who did not receive funding from the scheme) to best reproduce characteristics of the treated unit (i.e., scheme participants) before they were supported by the scheme. The differences in the outcomes of interest between the treated and the synthesised control group after the implementation of the scheme is then used to assess the impact of the scheme.

SCM Extensions: The SCM is a methodology typically used to assess policy impact at the 'macro' level, i.e. using aggregated data normally grouped based on the unit affected by the policy such as a geographical area. However, more recently, SCM has been applied at a more micro level, to multiple treatment units and different treatment dates. We will explore the feasibility of using the generalised synthetic control method (GCSM) (Xu, 2017) which generalises the original SCM to cases of multiple treated units and/or variable treatment periods and thus amenable to different sample sizes and treatment dates. Due to population size, the GCSM is likely to be useful for the PSDS phase 2 carbon impact evaluation and the heterogeneous effects of the PSDS phase 3 carbon impact evaluation. We will also explore the use of other SCMs such as the recently developed augmented synthetic control method (ASCM) (Ben-Michael et al., 2021) which can be used in situations where the resulting synthetic control does not perfectly reproduce the trajectory of the outcome of interest for the treated units in the pre-treatment period.

DiD Extensions: In addition, we will scope out the possibility of using the recently developed Synthetic DiD estimator (SDiD) (Arkhangelsky, 2021) which combines the advantages of the SCM and the DiD. Like the SCM, the SDiD reweights and matches pre-treatment trends to weaken the reliance on identifiable control groups. Like the DiD, it considers time-invariant differences and allows for valid large-panel inference. However, the SDiD, just like the SCMs, requires a sufficient long pre-treatment period to ensure that weights used to synthesise the control units are robust. Extending the pre-treatment period

backward might bring a material reduction in the number of units used in the analysis. In those cases, a semi-parametric DiD (Abadie 2005, Cefalu et al. 2020) might be useful, as this approach requires a relatively short pre-treatment period while being able to facilitate the meeting of the parallel trend assumption required by the standard DiD approach.

Supply chain analysis (stage 2) – led by UCL

The extent to which a QEA can be conducted is dependent on being able to collate a sample of sufficient size, and on the availability of a control group. We will explore the possibility of using firms in sectors not affected by the scheme as the control group in the scoping stage. The QEA is more likely to be feasible for installing firms, where it might be easier to identify a sizeable number of firms which have benefited from the business volume generated by the PSDS. In the case of the wider supply chain, we expect the number of identified firms benefiting from PSDS to be smaller, therefore making the use of QEA challenging.

When sample size overly limits the robustness of a QEA, we will conduct a descriptive analysis of the change in economic variables of interest retrieved from the IDBR/ABS (e.g. turnover, purchases of goods and services) before and after the implementation of the schemes. The main limitation of this approach is that one cannot attribute the observed growth in the variables solely to the schemes, because there are other factors that can affect the growth of these variables which cannot be considered in the descriptive analysis.

As a mitigation strategy, we will explore combining the impact of the PSDS on jobs in the installing firms (if a QEA turns out to be feasible) and employment multipliers⁵ for installation activities to estimate the impact of PSDS on employment in the wider supply chain. This approach has the advantage of not requiring personal data for actors in wider supply chain.

Cost benefit analysis (stage 2) – led by UCL

Subject to scoping, we aim to implement a Cost-benefit analysis (CBA) by quantifying impacts arising from PSDS phases 2 and 3 and attributing monetary values to them. CBA will provide an assessment of value for money (VfM), based on the comparison between monetisable costs and benefits.

The CBA will draw on other workstreams; not only the QEA and the analysis of survey data, but also insights from the qualitative research (which will be particularly useful for the incorporation of co-benefits in the economic evaluation). The benefits to be included will depend on findings from the outcome evaluation, but as a minimum we will include CO₂ savings along with savings in energy and bills.

The CBA will be implemented for both the scheme as a whole, and separately for different participants, i.e. for the participants involved only in the PSDS, and for those involved in both PSDS and LCSF. In addition, for PSDS Phase 3, we aim to conduct the CBA separately for the multi-year and single projects. This is because the carbon benefits delivered by the multi-year projects are expected to be delayed.

As the scheme outcomes will continue over a longer period than that of the evaluation, the CBA will assess both cost effectiveness of the scheme to date and projected cost effectiveness over a longer fixed period. The persistence of impacts (e.g. over 10-20 years), will need to be defined at the scoping stage in agreement with BEIS, and could be based on the estimated lifespan of the specific energy efficiency treatments/ technologies employed. Implementation of the CBA across different technologies and measures will enable a specific exploration of the implementation of measures to decarbonize heating. We will follow Green Book (HM Treasury, 2022) guidance and use standard values for carbon prices, electricity,

⁵ The employment multiplier provides an indication of the impact of an activity/industry on direct, indirect, and induced jobs in an economy. There are two types of employment multipliers. Type I is the ratio of direct and indirect employment changes to direct employment change, while Type II is the ratio of direct, indirect, and induced employment changes to direct employment change.

and fossil fuel carbon emissions factors, long run variable costs of energy supply, air quality and damage costs. We will also use guidance for quantifying and monetising impacts for which no market values exist.

8. Synthesis and deliverables (stages 1 and 2) – led by WM

We will use an analysis framework to collate and co-ordinate the findings from the different data sets and analysis described above; this will also enable cross-referencing of findings. We will draw on all the evidence to identify lessons learned, and to draw out implications for decarbonising the public sector building stock more generally. We have resourced for internal workshops to work through the synthesis.

Requested outputs	Timing	Description	QA leads
Process Evaluation plan	Dec 22	Approach for process evaluation – to be revisited at the outset of Stage 2 and used as the basis for final technical method report. 20-30 pages. Would also provide a 5 – 10 slide summary of the plan.	Project Director (PD)
Light touch review of LCSF (internal)	Feb 23	Covering findings of interest relevant to Phase 2 of the LCSF. 5-15 pages.	PD
Impact and economic scoping report (internal)	Mar 23	Covering outcomes / recommendations of impact scoping work (we suggest this is separate to the interim report as the content is different in nature. The interim report will subsequently be shorter). 20-30 pages. Will be accompanied by a slide summarising findings (10-15 slides).	PD and UCL Professor
Impact and economic evaluation plan	May 23	Approach for impact and economic evaluation – to be revisited at the outset of Stage 2 and used as the basis for final technical method report. 20-30 pages. Would also provide a 5 – 10 slide summary.	PD and UCL Professor
Interim reports	May 23 Mar 24	Covering process and impact findings from work to date. 50-60 pages along with a technical annex, detailing the methodology for the contributing work. The March 2024 report will also include data tables. Both reports will be accompanied by a slide deck providing a project update and summarising findings from the research (15-30 slides, not including technical annexes).	PD and CAG Partner
Impact and economic interim report (internal)	Feb 25	Internal note outlining the Phase 2 impact and cost-effectiveness analysis. 15 – 20 pages.	PD and UCL Professor
Interim report (internal)	Mar 25	Covering findings of interest in FY24/25. 5-15 pages.	PD
Case studies and synthesis (internal)	Mar 25	15 write-ups (for internal use) and a separate (non-disclosive) findings report.	PD
Interim insights (internal)	Mar 23 Jan 24 Nov 24 Nov 25	5 – 10 slides that that can be understood without being formally 'presented' covering early and emerging findings from fieldwork activities. We would discuss with BEIS where the fifth insight report may be usefully scheduled.	PD
Final evaluation report	Mar 26	Covering impact, process and economic evaluation and all research questions. 60 – 80 pages, Will include separate annexes covering 1) the methodology; 2) the quantitative surveys (including data tables); 3) the QEA and 4) the CBA. Will be accompanied by a slide deck summarising findings from the evaluation (25-30 slides)	PD and CAG Partner
Final presentations to BEIS	Mar 26	Presentation of synthesised findings. To maximise engagement, the preference would be to deliver this face to face. However, fully expect hybrid presentations to be 'the norm' by this time.	PD
Raw data from surveys	Mar 26	Fully disclosive data from surveys in a format to be agreed along with tools for survey analysis.	PD

Dissemination: We would look to support BEIS in disseminating the work through 1) developing infographics to accompany each interim report and the final report to communicate key findings in an easily digestible form and 2) the short slide packs to accompany each report (we would also include the evaluation plans) that can be understood without being formally 'presented'. We would also be happy to run up to three webinars / talk at events attended by wider policy makers and implementers without cost.

Winning Moves is a research and evaluation consultancy specialising in the evaluation of government policy and practice. We have 25 years of experience of evaluating energy policies in both the non-domestic and domestic sectors and have conducted evaluations for a wide range of clients including BEIS and Defra. Winning Moves will be the lead contractor for the work, with responsibility for project management, the overall evaluation and analysis plan (and the Theory of Change to inform this), the quantitative surveys, qualitative research with participants and overall evidence synthesis and dissemination. Winning Moves will be supported by the following organisations in order to undertake and complete the project:

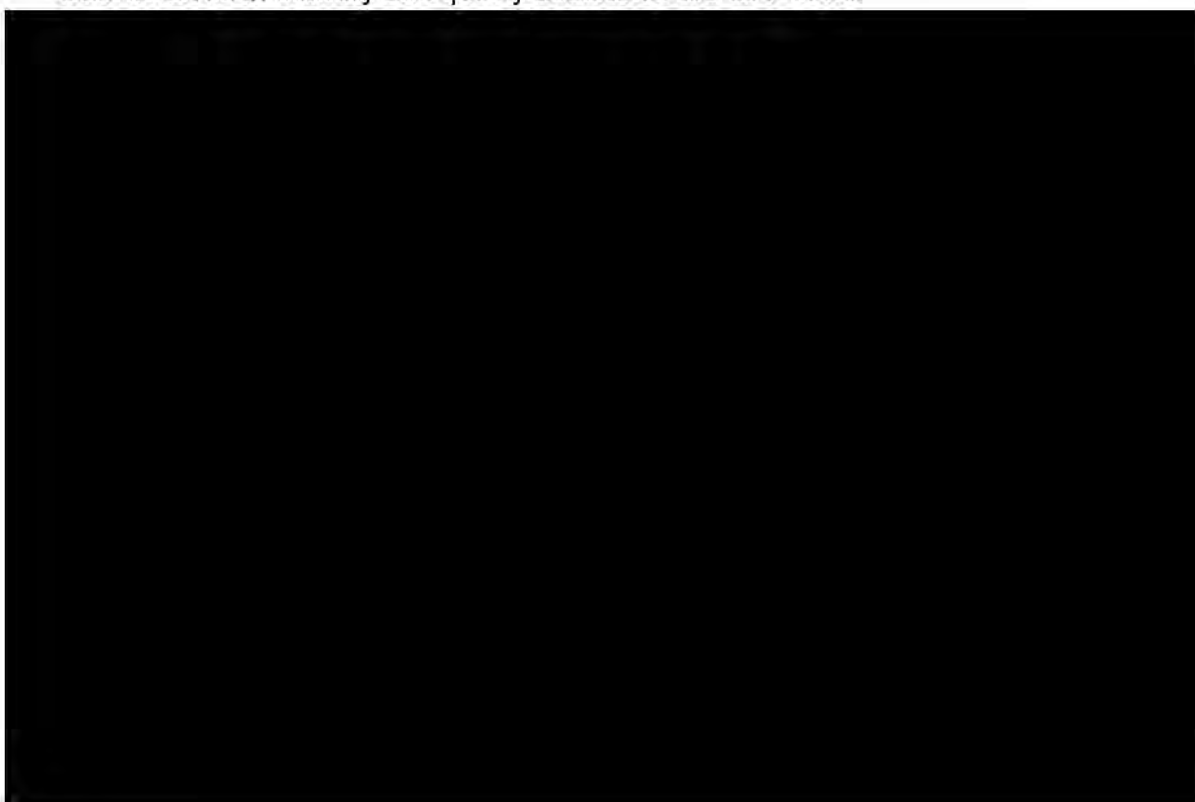
- **CAG Consultants** who also bring sector-leading expertise in energy evaluation theory, design and practice. CAG will be responsible for design, delivery and analysis of qualitative interviews; particularly with multi-year projects and the supply chain.
- The **UCL Energy Institute** who bring unrivalled skills and experience in designing and delivering quasi-experimental methods for impact evaluation, using secondary and primary data, linked from various quantitative datasets. They will lead the quasi-experimental analysis (QEA) and cost-benefit analysis (CBA), working with Winning Moves to scope the impact and economic evaluations.

Our proven delivery experience as a consortium (which extends back to 2016 and the evaluation of the Public Sector Energy Efficiency Loan Scheme, PSEELs) and particular familiarity with PSDS (our organisations are currently delivering the evaluation of Phase 1 of the PSDS) means we:

- Understand the operational and policy environment
- Can operationalise quickly to deliver the outputs in Stage 1
- Can build on a good, working relationship with relevant staff at BEIS
- Have a significant head start on scoping the economic and impact evaluations from the thinking and implementation in Phase 1
- Can navigate the challenges of conducting fieldwork with scheme beneficiaries.

These de-risk delivery for BEIS in a dynamic time for energy policy (and by association, evaluation of energy policy).

Staff involved in delivery and quality assurance are as follows:



With the exception of [REDACTED], all staff are replicating and / or expanding on roles they are currently delivering on the evaluation of Phase 1 of the PSDS:

[REDACTED] (Director of Research and Evaluation, Winning Moves)

[REDACTED] is currently directing the evaluation of Phase 1 of the PSDS having fulfilled the same role on the PSEELs evaluation. [REDACTED] wider track record of leading large, multi-disciplinary teams to evaluate energy policy and programmes for BEIS includes directing the evaluation of the Retrofit Supply Chain Demonstrator Scheme, the evaluation of Smart Systems and Heat Phase 2 (on behalf of the Energy Systems Catapult) and the evaluation of the Boosting Access for SMEs to energy efficiency (BASEE) competition.

[REDACTED] (Associate, Winning Moves) [REDACTED] brings excellent research and evaluation expertise through delivering key roles on the evaluation of the PSEELs Evaluation, Evaluation of the Carbon Reduction Commitment (CRC) and Electricity Demand Reduction pilots for BEIS following an evaluation role at the Energy Saving Trust. He is concluding his PhD at UCL involving theory development relating to the non-domestic sector. This includes further developing the Middle-Out Perspective (MOP) to catalyse low carbon changes in offices and schools.

[REDACTED] (Principal Consultant, Winning Moves) has exceptional understanding of PSDS through leading the evaluation of Phase 1 (incorporating research into Phase 2). This builds on a strong track record of leading process and impact evaluations of energy policies for BEIS. He was lead consultant on the BEIS Retrofit Supply Chain Demonstrator Scheme Evaluation and the BASEE Evaluation. He has a particularly good understanding of the drivers / barriers to delivery of energy efficiency and heat decarbonisation from previous work for BEIS, the Energy Systems Catapult and the Energy Saving Trust.

[REDACTED] (Consultant, Winning Moves) brings excellent understanding of PSDS, having field managed the quantitative participant surveys that formed part of the evaluation of Phase 1; [REDACTED] has also undertaken a large number of the quantitative interviews with both participants and installers. She designed, conducted and analysed a substantial number of qualitative interviews with beneficiaries, installers and the wider supply chain as part of the evaluation of the Retrofit Supply Chain Demonstrator Scheme.

[REDACTED] (Analyst, Winning Moves) analysed the quantitative surveys on Phase 1 of the PSDS. This contributes to an excellent understanding of BEIS' expectations of the outputs of quantitative research, also generated through supporting analysis of the quantitative surveys for the evaluation of the Renewable Heat Incentive (RHI). He has also analysed quantitative survey data collected for DLUHC and DIT.

[REDACTED] (Senior Research Executive, Winning Moves) has considerable experience of in-depth qualitative research with the public sector on energy use / decarbonisation. She is conducting interviews with recipients of Phase 2 of PSDS to inform case studies, and conducted qualitative interviews in the evaluation of Transitional Arrangements for BEIS, as well as the Non-Domestic Building Survey (which included a programme of primary research to understand energy use in non-domestic buildings).

[REDACTED] (Field Manager, Winning Moves) recently delivered the field management role on the Non-Domestic Building Survey for BEIS and in research exploring use of renewable measures for Energy Saving Trust. [REDACTED] will manage a team of Winning Moves researchers to deliver the quantitative surveys. Our researchers are all graduate calibre, and thoroughly trained in both good telephone techniques and the specifics of the project prior to fieldwork. We have retained some of the research team who undertook interviews on evaluation of Phase 1 of the PSDS, who would be used here.

[REDACTED] (Project Manager, Winning Moves) is currently the project and resources manager for the evaluation of Phase 1 of the PSDS, co-ordinating the team and providing a key point of contact for BEIS. This follows project management roles co-ordinating Winning Moves' input into the evaluation of the Climate Change Agreements (CCA) and the Peer Network Programme (both for BEIS), as well as wider experience of project managing multi-year, multi-stakeholder projects delivered by consortia for DCMS and Welsh Government.

[REDACTED] (CAG Partner) is a highly experienced energy researcher

and policy analyst with expertise in conducting social research on behalf of Government. As well as designing, delivering and analysing a substantial number of qualitative interviews for the evaluation of Phase 1 of the PSDS, and the PSEELs evaluation, he brings relevant knowledge and experience as a result of roles in the evaluations of the RHI, the CRC, the CCA scheme, the BEIS Hydrogen Pipes and Burners project and the Evaluation of the Industrial Fuel Switching and Hydrogen Supply Innovation Programmes.

██████████ (CAG Partner) ██████████ has excellent domain expertise, having designed, delivered and analysed numerous qualitative interviews for the evaluation of Phase 1 of the PSDS, and the PSEELs. Wider than this, she has been involved in a wide range of projects supporting the public sector (particularly local authorities and schools) on carbon reduction initiatives.

██████████ (CAG Partner) ██████████ is a highly experienced evaluator and social researcher with significant experience of working on theory-based evaluation for BEIS including leading the evaluation of the RHI, evaluation of the second CCAs scheme and evaluation of the CRC energy efficiency scheme. She brings considerable understanding of BEIS' expectations with regards to the quality of evaluation work.

██████████ (Professor of Energy and Environmental Economics, UCL Institute for Sustainable Resources) ██████████ designed and delivered the QEA for the PSEELs evaluation (which involved piloting an innovative synthetic control method) and is leading the QEA and economic evaluation analysis of PSDS phase 1 and the GHGVS scheme. He also led the scoping work for the future evaluation of the UK ETS. He currently leads the scoping of the methodological framework (impact and economic) for the future evaluation of the UK Green Economic Stimulus schemes (GHGVS, LAD and SHDF(D)), Energy Innovation / Net Zero Innovation Portfolio and the EBSS.

██████████ (Research Associate in Econometric Modelling for Energy and the Environment, UCL Institute for Sustainable Resources). Currently working alongside ██████████ on several evaluations of BEIS funded policies; implementing the impact and economic assessment for evaluation of Phase 1 of the PSDS, scoping the impact and economic analysis for the Cross-Cutting evaluation of GHGVS, LAD and SHDF(D) and scoping the counterfactual impact analysis approach for the Energy Innovation / Net Zero Innovation Portfolio. She supported Paolo in the econometric impact analysis of the CCA and the impact and economic evaluation of the GHGVS.

██████████ (Research Fellow in Econometric Modelling for Energy and the Environment, UCL Institute for Sustainable Resources). ██████████ is currently working on both the scoping and the implementation of the econometric analysis and economic evaluation for evaluation of Phase 1 of the PSDS. He is also involved in the carbon impacts assessment and CBA of the GHGVS, and the scoping of the methodological framework for the future evaluation of the UK Green Economic Stimulus schemes (GHGVS, LAD and SHDF(D)) and the EBSS.

Designing and undertaking relevant primary and secondary data collection

- **Evaluation of the Boosting Access for SMEs to Energy Efficiency (BASEE) competition (BEIS, 2020 – present).** Winning Moves is leading this theory-based evaluation in partnership with CAG; the evaluation is assessing the process and impact of the competition, seeking to identify and test approaches to addressing uptake of energy efficiency measures amongst SMEs. The evaluation has involved developing case studies of supported organisations.
- **Evaluation of the reformed Renewable Heat Incentive (BEIS, 2016-present).** CAG, in partnership with Winning Moves, is leading this large-scale, multi-year, complex, theory-based evaluation. CAG is delivering qualitative interviews with RHI participants, whilst Winning Moves are undertaking surveys with participants which include schools, universities and hospitals. UCL are delivering a QEA of scheme benefits.
- **Evaluation of Local Supply Chain Demonstrators for Supporting Retrofit (BEIS, 2019 -2021).** Winning Moves, in partnership with CAG, led this theory-based evaluation

to build the evidence base for interventions on the retrofit supply chain and produce a valuable set of learnings for increasing the rates of energy efficiency improvements in the able to pay market. This involved qualitative interviews with a sample of installers as well as qualitative interviews with wider stakeholders.

Designing and undertaking relevant analysis

- **Evaluation of the Green Homes Grant (GHG) Vouchers scheme (BEIS, 2020-present).** UCL designed and conducted the interim cost-benefit analysis (CBA) to initially assess cost-effectiveness and value for money of the GHG Vouchers scheme. The analysis was based on guidance from the Green Book, complemented by insights from impact assessments and academic literature. This involved assessment of benefits and costs of GHGVS measures, for consideration in the CBA which was conducted from both societal and individual (household) level perspective.
- **Evaluation of the Climate Change Agreements scheme (BEIS, 2018-2020).** UCL designed and led the QEA assessing the micro-econometric impact of the second phase of the CCAs scheme on fuel (electricity and gas) consumption; energy efficiency, measured by fuel (electricity and gas) intensity in relation to turnover and competitiveness, measured by turnover. This involved devising, coding and implementing an address matching algorithm tying the IDBR and electricity meter data to the CCA scheme participant data.
- **Evaluation of the domestic Private Rented Sector Minimum Energy Efficiency Standard Regulations (BEIS, 2020).** UCL designed and delivered QEA to assess the impact of the regulations. This involved devising, coding and implementing an address matching algorithm to combine EPC ratings with exemptions of the PRS MEES.

Delivery of high quality synthesis, reporting and communication of policy research.

The above examples all provide evidence of this, with many having been published. In addition, outputs from the following have been published:

- **Evaluation of the Smart Systems and Heat Phase 2 (SSH2) Programme (Energy Systems Catapult, 2017 – 2019).** SSH2 was a complex, multi-faceted innovation programme evaluating examples of potential new service offerings in terms of low-carbon heating. Winning Moves undertook this evaluation on behalf of ESC.
- **Evaluation of CRC Energy Efficiency Scheme, Phase 1 (DECC, 2014-2015)** CAG, in partnership with Winning Moves, led a mixed-methods, theory-based evaluation of Phase 1 of the CRC Energy Efficiency Scheme for DECC. There were separate reports for each work element as well as a synthesis at both the interim and final stages.

Consortium members have included the proposed resource commitments in their respective business plans. Maintaining our ability to deliver these skills and expertise involves:

- **Ensuring continuity in the team.** Winning Moves have excellent staff engagement and low attrition rates; most of our consultants have worked for us for over 10 years. CAG is constituted as an employee owned co-operative, which contributes to low staff turnover and has enabled the organisation to develop and retain a high level of expertise in energy evaluations. UCL have a good level of repeat business due to their delivery reliability. Our collaborative approach, and the involvement of multiple individuals from each partner, provides a high degree of resilience as it ensures that there is a pool of substitutes who can provide cover in the unexpected absence of core team members.
- **Keeping up-to-date with innovations and advancements.** Winning Moves are an MRS Company Partner and convenors of the Midlands Evaluation Network. CAG are corporate members of the UK Evaluation Society whilst individual Partners hold membership of bodies such as the MRS, Energy Evaluation Europe and SRA. The team at the UCL Energy Institute are at the forefront of policy and industry discussion in the non-domestic retrofit and building optimisation markets.

Our understanding of the PSDS and LCSF

BEIS estimates that public sector buildings are responsible for 9% of carbon emissions from UK buildings¹. It is necessary to reduce this figure, as part of the decarbonisation of the wider economy, to meet Net Zero targets. In the Heat and Buildings Strategy (2021)², the government has set a target to reduce direct emissions from public sector buildings by 75% (against a 2017 baseline) by the end of carbon budget 6. As noted in the Clean Growth Strategy (2017)³ and the more recent Heat in Buildings Strategy (2021), the decarbonisation of the public sector also provides an opportunity for the government, and other key bodies such as local authorities and the NHS, to demonstrate leadership to other sectors. The move to decarbonisation additionally helps in providing greater energy security. Supporting activity in this area helps to build the low carbon supply chain and demonstrate government commitment to the Net Zero agenda, thereby increasing business confidence and encouraging investment in jobs and skills.

Phase 1 of the public sector decarbonisation scheme (PSDS) was launched in the financial year 2020/21. This version of the scheme provided 100% grants to public sector organisations to undertake capital investments in energy efficiency and heat decarbonisation projects within public sector non-domestic buildings. Whilst focused on England, funding could also be used to install measures in central government properties in Wales, Scotland and Northern Ireland, where their role is not devolved. The Phase 1 scheme, and its successors, has been run by Salix Finance, and built on the legacy and learning of the Public Sector Energy Efficiency Loan Scheme (PSEELS). In total, Phase 1 of the PSDS provided approximately £1 billion in grants and formed part of the then Chancellor's [Plan for Jobs](#), which aimed to support the UK's recovery from COVID-19. Specifically, the scheme aimed to support up to 30,000 jobs in the low carbon and energy efficiency sector, whilst reducing carbon emissions from the public sector. Grants were awarded to 343 organisations, for 461 projects.

Phase 2 of the PSDS was a smaller scheme, with £75million being provided in the financial year 2021/22. This version of the scheme had a stronger focus on heat decarbonisation, this issue being recognised as a key challenge area in relation to the attainment of carbon reduction targets. It also encouraged a 'whole building' and 'bundling'⁴ approach to decarbonisation. In total, grants were awarded to 49 organisations, for 54 projects.

The latest iteration of the PSDS, Phase 3, is providing £1.425 billion in support over the financial years 2022-23 to 2024-25. Phase 3 of the PSDS supports the aim (cited above) of reducing emissions from public sector buildings by 75% by 2037. Phase 3 of the PSDS continues to focus on heat decarbonisation and the whole building and bundling approach, but has the replacement of heating systems (with low carbon alternatives) at the end of their working life as a priority. Phase 3 funding is being disbursed via two funding rounds, the first of these, Phase 3a, has now closed. As of July 2022, £555.7 million had been awarded to 161 organisations for 219 projects. Phase 3b is expected to open in October 2022.

Phase 3 is open to the same range of bodies as its predecessor schemes but, informed by feedback from scheme participants and other key stakeholders, features a number of important differences to Phases 1 and 2. The most notable of these are the use of multi-

¹ BEIS (2020), Final UK greenhouse gas emissions national statistics: 1990 to 2018. Available at <https://www.gov.uk/government/statistics/final-uk-greenhouse-gas-emissions-national-statistics-1990-to-2018> [Accessed on the 10.1.21]

² BEIS (2021) Heat and Buildings Strategy. Available at <https://www.gov.uk/government/publications/heat-and-buildings-strategy> [Accessed on the 28.9.22].

³ HMG (2017) The Clean Growth Strategy: Leading the way to a low carbon future. Available at https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/700496/clean-growth-strategy-correction-april-2018.pdf [Accessed on the 10.1.21]

⁴ Combination of measures that collectively fall below the required carbon cost threshold

year settlements (alongside the single financial year route) and there being no cap on the value of an individual project. PSDS 3 also places an emphasis on the need for applicants to contribute 'like for like' costs of the projects, in addition to any PSDS grant funding. Salix define the 'like for like' costs as being those that would have been naturally incurred should the heating system have been replaced with a like for like replacement.

The low carbon skills fund (LCSF) is a companion policy to the PSDS, also run by Salix Finance, intended to address skills and capacity gaps within the public sector. Phase 1 of the LCSF was launched shortly before Phase 1 of the PSDS and was intended to assist would be applicants to that scheme. £32 million of LCSF was used by eligible bodies to fund project development, project delivery and heat decarbonisation plan support. Phase 2 of the LCSF provided £15million in support, but its use was restricted to the development or updating of heat decarbonisation plans, their development being seen as enabling organisations to think strategically, whilst improving ability to respond to funding opportunities. This version of the scheme reserved £3.5 million for schools and academies, it is understood that this was informed by stakeholder feedback which identified this sector as requiring targeted assistance.

Demand for the LCSF (and the PSDS) has been strong; the most recent phase of the LCSF, Phase 3, opened in June 2022 and closed a day later, as the scheme was oversubscribed. The LCSF Phase 3 is similar in value to Phase 2 (£14 million) and retains the focus on supporting the development of improvement of heat decarbonisation plans.

Our understanding of BEIS requirements

BEIS require a robust evaluation of the PSDS in order to determine the extent to which it enabled public sector decarbonisation, and its impact on carbon emissions, as well as any impacts on the supply chain. The scope of the evaluation includes consideration of the role of the LCSF 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 the PSDS.

The ITT requires that we undertake a process, impact and economic evaluation of Phase 3 of the PSDS and LCSF schemes. Additionally, it is expected that the winning contractor will undertake a lighter touch impact and cost effectiveness analysis of Phase 2 of the PSDS, and some light touch qualitative research to review Phase 2 of the LCSF. Phase 1 of the PSDS and LCSF are the subject of a separate evaluation which also includes some limited, case study based, work on PSDS Phase 2 - some synthesis of the Phase 2 work may be required as part of the wider Phase 3 evaluation work package.

The aims of the Phase 3 PSDS element of the evaluation are to assess the extent to which the PSDS has effectively enabled the delivery of energy efficiency and low carbon heat measures in public sector organisations; the impact of the scheme on carbon savings; the cost-effectiveness of the scheme; and understand whether and how the scheme has contributed towards its objectives.

Aims for evaluation of Phase 3 of the LCSF are to assess the extent to which the LCSF has effectively supported the development and delivery of PSDS projects through the development of heat decarbonisation plans; understand the resourcing and skills gaps the scheme has addressed and whether it was successful in addressing them; and understand how PSDS and LCSF work together to deliver scheme objectives.

For Phase 2 of the PSDS the evaluation aims to: assess the impact of the scheme on carbon savings; and assess the cost effectiveness of the scheme. For Phase 2 of the LCSF the aims of the evaluation are to: understand whether the scheme enable and/or supported

decarbonisation measures in the public sector; and understand wider lessons about the scheme design and policy.

Our understanding of the policy area

For the purposes of this evaluation we have brought together a highly experienced consortium who have worked together on multiple BEIS evaluations, including the evaluation of Phase 1 of the PSDS and LCSF and the evaluation of the Public Sector Energy Efficiency Loan Scheme ([PSEELS](#)). The specific team we are putting forward for the evaluation of Phase 3 of the PSDS and LCSF involves the same group of individuals that were involved in the delivery of the Phase 1 evaluation and the evaluation of PSEELs. In addition to methodological expertise, this team brings a lengthy track record of working on the low carbon, now Net Zero, agenda within the public sector and are highly familiar with the policy context and with the operational environment. We also have extensive experience of engaging with the low carbon supply chain. Additionally, UCL bring significant experience of working with the National Energy Efficiency Data-Framework (ND-NEED) datasets, and understanding of how these can be used in impact evaluations.

The Committee on Climate Change's (CCC) recent progress report⁵ notes the need for 'immediate' action to drive more near-term progress on heat and we are conscious that a key policy driver for the PSDS and LCSF schemes is heat decarbonisation. Our consortium brings extensive experience in, and understanding of, this issue. Current and recent, relevant work delivered, or being delivered, by our consortium (by which we mean involving two or more consortium members) includes Evaluation of the Green Heat Networks Fund (recently started), Evaluation of the reformed [Renewable Heat Incentive](#) (RHI) scheme and Evaluation of the [Heat Networks Delivery Unit](#) (HNDU). Outside of our consortium work, each member of the consortia is actively engaged in the development of low carbon policy and practice:

Winning Moves – the Winning Moves' team will be led by [REDACTED] and [REDACTED] who have both been involved in formative research for BEIS, providing an evidence base from which decarbonisation policies can be designed. They were part of a team researching the potential for Energy Ratings for non-domestic buildings (including in the public sector) and have worked on the Non-Domestic Building Survey, work to characterise energy use in the non-domestic sector. As such they have a strong grounding in the opportunities for, and barriers to achieving, decarbonisation in non-domestic buildings. Our wider portfolio in the low carbon space includes non-domestic research for Welsh Government, the Energy Systems Catapult, the Energy Saving Trust, the Waste and Resources Action Programme and Zero Waste Scotland.

CAG Consultants CAG's input will be led by [REDACTED], with support from [REDACTED]. In addition to the work listed above, [REDACTED] has helped BEIS develop a theory of change for the Heat Network Market Transformation programme, authored a white paper on the potential of [mine energy](#) as a low carbon heat source, co-authored a study on international [heat networks market frameworks review](#), led a hydrogen for heating review, and contributed to multiple local authority green economy and low carbon plans and strategies. Prior to joining CAG, Bill led a twin track regional programme of work, focused on local authorities, which aimed to a) stimulate and support collaborative approaches to sustainable procurement; b) stimulate and support low carbon plans and initiatives. [REDACTED] has delivered multiple projects for bodies such as the Local Government Association, Citizens Advice and UK Power Networks. These have included projects looking at how heating systems and controls are commissioned by social housing providers, supply chain challenges in housing retrofit, and

⁵ Committee on Climate Change (2020) Reducing UK emissions: Progress Report to Parliament. Available at <https://www.theccc.org.uk/publication/reducing-uk-emissions-2020-progress-report-to-parliament/> [Accessed on the 10.1.21]

the development of carbon reduction guidance for local authorities. Currently [REDACTED] divides her time between working on CAG projects and supporting local authorities through Ashden's Sustainable Towns and Cities programme.

UCL – UCL bring knowledge of the wider £3.05bn package of Green Economic Stimulus schemes that seek to support the installation of low carbon measures. The team proposed for this evaluation work on the evaluation of the Green Homes Grant Voucher Scheme (GHGVS). They also work scoping the impact and economic evaluation for the GHGVS and the associated building decarbonisation schemes delivered through local authorities - the Green Homes Grant Local Authority Delivery Scheme (which they are also involved in evaluating separately) and the Social Housing Decarbonisation Fund Demonstrator.

Our understanding of the working environment

The evaluation will operate within in a complex and fast-moving working environment which will create both methodological and practical challenges:

- The external environment is currently highly unstable. Multiple factors are impacting on variables such as energy costs and, the cost and availability of installers and equipment (e.g. heat pumps). These matters could have profound implications for the way in which the PSDS, in particular, will impact on the public sector marketplace. As such, it will be critical that the evaluation identifies and accounts for such affects in order to determine their impact on the operation and effectiveness of the schemes. This will start in the development of the ToC, which will include work to map the potential policy influences on the audiences for the schemes, as well as the external factors that could impact their decarbonisation ambitions and behaviours. The potential effects of these policies / factors will be explored in the primary research and considered in the methodology for the QEA; specific characteristics of applicant types, their exposure to underlying background factors (including COVID-19) and interaction with decarbonisation policies will be considered in the construction of the counterfactual.
- Our experience of evaluating Phase 1 of the PSDS/LCSF included the need to re-organise the scheduling of evaluation work-packages to accommodate slippages and extensions in the delivery of the main scheme (PSDS). We note that the Phase 3 PSDS includes measures designed to avoid, or at least reduce the risk of, slippage in project delivery. However, we are able to offer a responsive and agile approach to the delivery of the evaluation should circumstance require this.
- The need for evaluations to generate policy insights over the course of their delivery has become more acute. Currently there can be a considerable delay between a research phase and the production of a final report; this can reduce the opportunity for learning to inform policy makers. To address this, we propose to provide insight reports in the form of short slide decks, setting out key findings. These would be developed in advance of more formal reporting. A number of internal reports are also proposed.

A key practical issue will be securing access (for interview and survey purposes) to at least some groups, most notably those in the private sector. From our work on the Phase 1 PSDS evaluation and other BEIS evaluations (e.g. the reformed RHI) we know that members of these groups are often involved in the delivery of projects supported by other policy interventions, a number of which are, or shortly will be, under evaluation. At least some of the same individuals are also regularly involved in responding to BEIS consultations and all are under considerable time stress at present, with unprecedented demands on their time owing to the high levels of demand for low carbon goods and services. These factors have contributed to a certain level of interviewee fatigue and/or a reluctance to engage with evaluation research. It is therefore anticipated that it will require a combination of methodological creativity, flexibility and additional resource to ensure that we get the levels of desired engagement.

PROJ1.4 PROJECT PLAN AND TIMESCALES

Project Management Structure: Winning Moves will be the lead contractor for the consortium and will provide the dedicated Project Director and Project Manager, as well as the overarching quality assurance function. [REDACTED] will act as overall Project Manager and will be the principal point of contact with BEIS's nominated Project Manager. [REDACTED] will have overall responsibility for day-to-day operational activity, progress reporting and budget and risk management. [REDACTED] will act as overall Project Director and will be responsible for overall Quality Assurance; reviewing each document in terms of fit for purpose. CAG and UCL will be formally sub-contracted to Winning Moves for the duration of this contract and will be subject to a set of binding terms and conditions; [REDACTED] will act as Project Manager for CAG and [REDACTED] for UCL. These cover issues such as quality assurance, data protection and dispute resolution. Winning Moves have previous experience of working with these partners and have tried and tested systems for ensuring that project teams are cohesive and interactive, well-coordinated and able to meet the required quality standard to timetable and budget.

Detailed timetable: We have prepared a project Gantt for the evaluation attached to this report. There are a number of considerations we would like to highlight on the timetable:

- The timetable assumes that projects funded by PSDS proceed as planned, timings will be reviewed / discussed if this is not the delivery reality.
- The conclusion of the work in March 2026 is challenging due to the availability of ND-NEED data dictating the scheduling of the QEA and CBA analysis, which need to be sequential and feed into final synthesis. We may need to consider finalisation of the final report in April and May 2026.

Keeping project on track: The following process would be used to ensure the project stays on track to deliver these key milestones to the agreed deadline. Specifically, [REDACTED], as Project Manager will be responsible for monitoring the project to ensure it is delivered in terms of quality, timeliness and planned resource. This involves:

- Using Project Manager (project management software) to plan resource requirements and track progress for the Winning Moves team
- Leading fortnightly meetings with the Project Managers from the consortium (and other key members as appropriate) to monitor progress and forthcoming delivery plans. Recording actions and following up as needed.
- Regularly reviewing the project Gantt and risk register and keeping this up to date
- Ensuring all aspects of the project delivery are in line with our QA procedures

Any changes or issues that could affect the consortium's ability to deliver would be communicated to BEIS as part of regular progress reporting with a description of the issue and suggested actions to address the issue or rectify it. We would expect a similar level of disclosure from BEIS, as it is most likely that issues outside the control of either the consortium or the direct BEIS delivery team are those that affect delivery e.g. data availability, accommodating annual leave from someone who is commenting.

Progress Reporting: Although the ITT suggests weekly progress reports and progress meetings with BEIS, our recommended approach to progress reporting for this project would be as follows:

- Sadia would provide weekly progress reports. We would suggest that this takes the form of updating the project Gantt and risk register and a note accompanying the Gantt (but in the same spreadsheet) to capture progress.

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- A bi-weekly virtual catch up with BEIS, [REDACTED] and other members of the team to discuss updates from the preceding two weeks, actions planned for the next two weeks, including input required from BEIS. [REDACTED] would minute key decisions and actions from these meetings and share them with BEIS following the meetings (also in the same spreadsheet as the Gantt chart). Although there is a lot of activity expected for this evaluation, as the timetable appears to be less challenging than for the evaluation of PSDS Phase 1, bi-weekly meetings appear to be more proportional. We can still accommodate weekly meetings if preferred.
 - Additional conversations/ meetings would be arranged in advance with BEIS where required, for example, to discuss reporting expectations, feedback on an output etc.
- We propose to discuss the use of Sharepoint for shared documents, allowing BEIS the ability to comment on document in Sharepoint.

Managing working relationship with BEIS, including communication with BEIS: We feel that through the evaluation of Phase 1 of the PSDS (and other contracts), the team have developed a friendly and productive working relationship with BEIS characterised by:

- **A spirit of flexibility.** We recognise that research is a dynamic process and it is not always possible to determine exactly how different aspects of the project will progress, or when and how projects will be affected by external circumstances. We will endeavour, wherever possible, to adapt our approach to what we are learning or in response to changing client requirements and external circumstances.
- **Responsiveness.** As project manager, [REDACTED] will be available by phone or e-mail during normal office hours and will endeavour to provide a response to all queries within one working day. If [REDACTED], as lead project manager was unavailable, [REDACTED] who is a qualified substitute has been nominated in advance and would step in to cover all project queries and continue to drive progress. As Project Director, [REDACTED] would be available if required as well.
- **Open communication.** We keep clients informed of progress and any emerging issues and risks that could affect the outcomes and expectation of the project.

Tools and processes to mitigate risk: A risk log will be 'owned' and maintained by the Project Manager ([REDACTED]) and be updated as risks are identified. The table attached to this response provides the key risks we have identified for this project and our proposed response in preparing this bid. We propose to review this at the inception meeting and make any amends as required. Project risks would be reported within the regular progress update unless deemed to pose a serious threat, in which case they would be communicated to the BEIS project manager immediately.

Approach to Quality Assurance: The process for reviewing outputs is set-out below:



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All outputs will be reviewed by [REDACTED] (Winning Moves) as Director. [REDACTED] (CAG) will undertake an additional review of all outputs where the intention is to publish. Although [REDACTED] will QA all analysis / written content for the QEA and CBA – additional QA of the outcomes of the scoping work and final outputs of

the CBA will be undertaken by [REDACTED] (an economist at CAG) and by [REDACTED] at UCL with respect to the QEA. [REDACTED] is a Professor of Economics with expertise in causal inference.

Appendix: Project Gantt & Risk Register

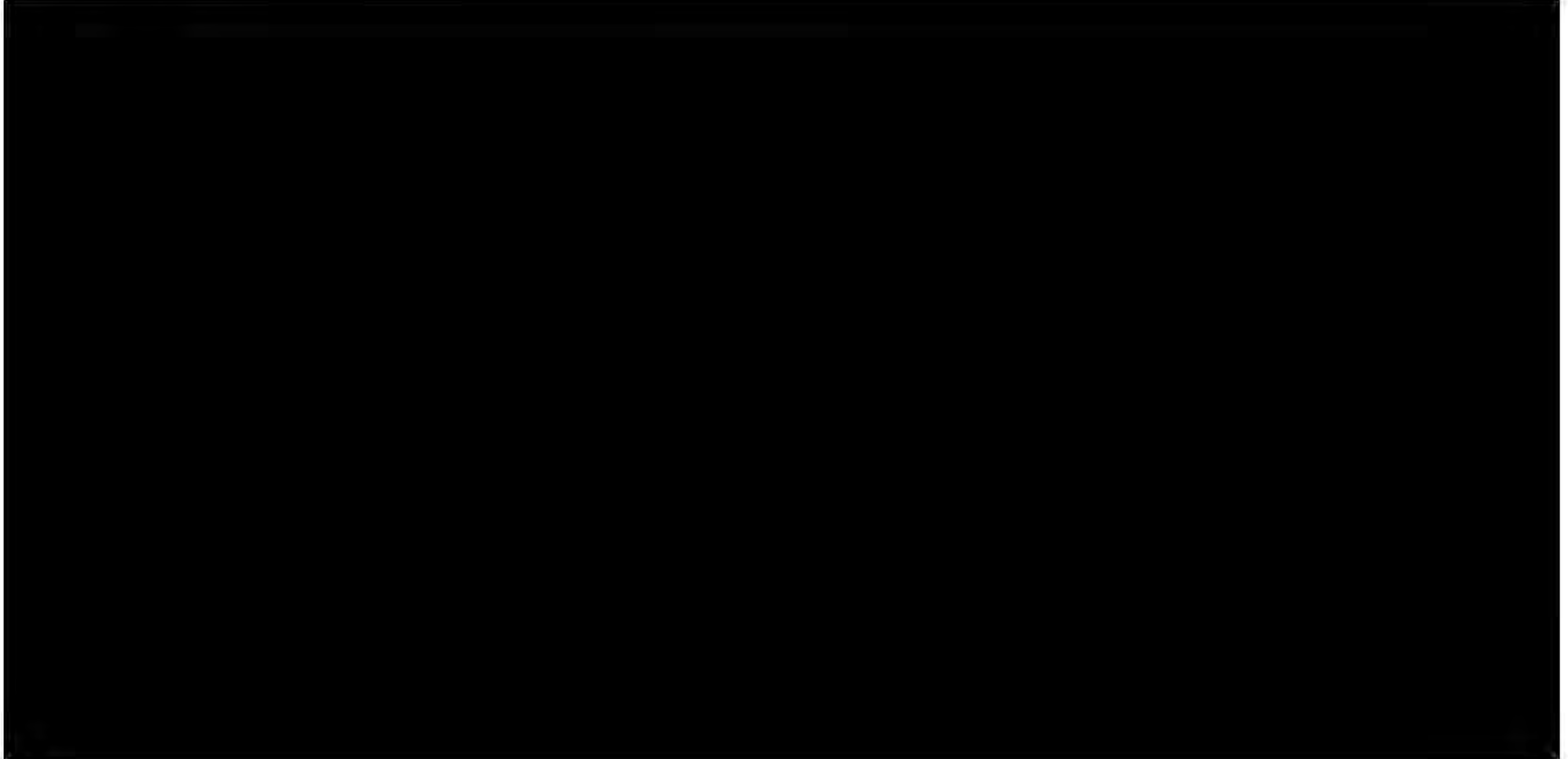
Project Gantt and
Risk Register

Order Schedule 5 (Pricing Details)



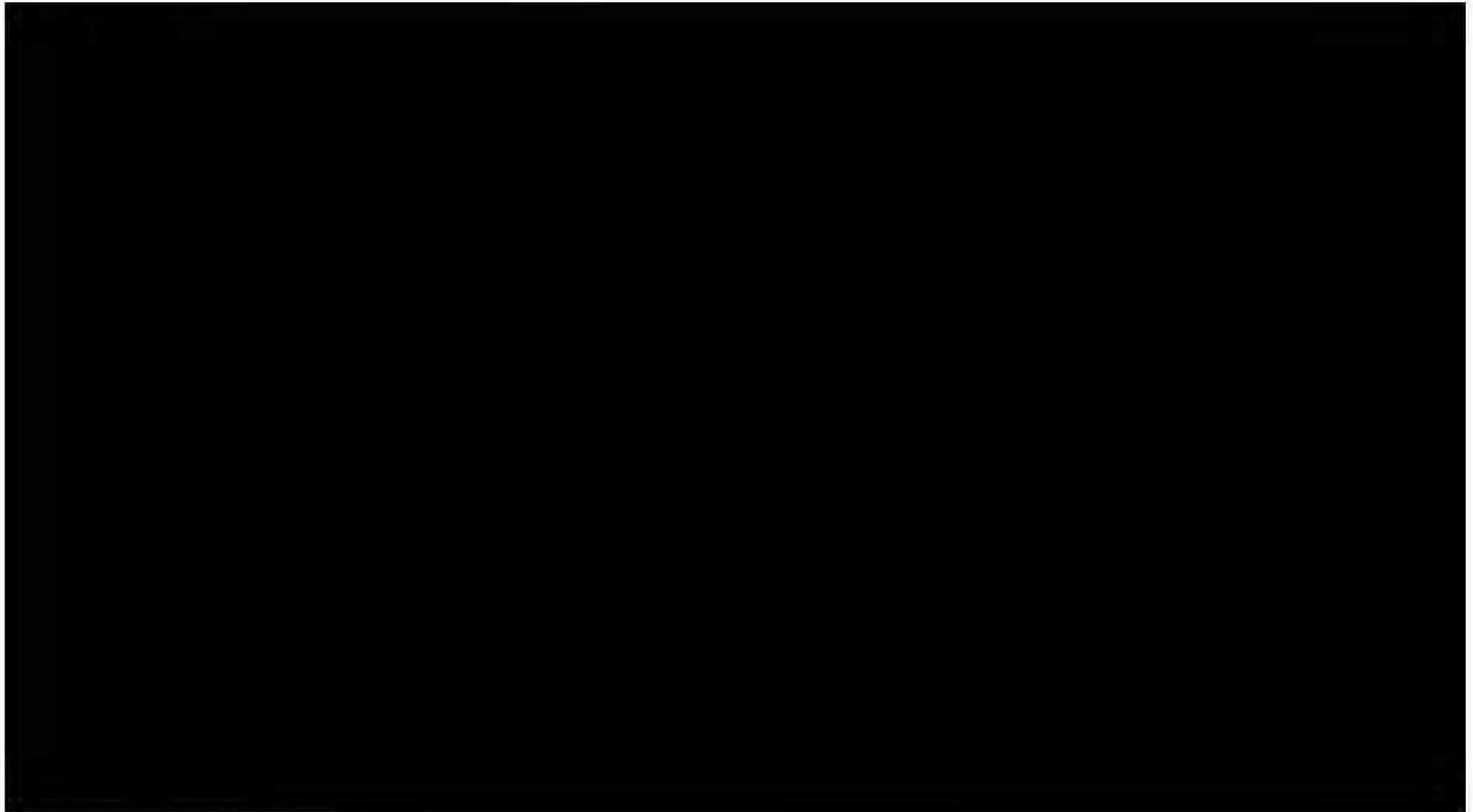
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Order Schedule 9 (Security)

Part A: Short Form Security Requirements

1. Definitions

1.1 In this Schedule, the following words shall have the following meanings and they shall supplement Joint Schedule 1 (Definitions):

"Breach of Security"

the occurrence of:

any unauthorised access to or use of the Deliverables, the Sites and/or any Information and Communication Technology ("ICT"), information or data (including the Confidential Information and the Government Data) used by the Buyer and/or the Supplier in connection with this Contract; and/or

the loss and/or unauthorised disclosure of any information or data (including the Confidential Information and the Government Data), including any copies of such information or data, used by the Buyer and/or the Supplier in connection with this Contract,

in either case as more particularly set out in the Security Policy where the Buyer has required compliance therewith in accordance with paragraph 2.2;

"Security Management Plan"

the Supplier's security management plan prepared pursuant to this Schedule, a draft of which has been provided by the Supplier to the Buyer and as updated from time to time;

2. Complying with security requirements and updates to them

2.1 The Buyer and the Supplier recognise that, where specified in DPS Schedule 4 (DPS Management), CCS shall have the right to enforce the Buyer's rights under this Schedule.

2.2 The Supplier shall comply with the requirements in this Schedule in respect of the Security Management Plan. Where specified by a Buyer that has undertaken a Further Competition it shall also comply with the Security Policy and shall ensure that the Security Management Plan produced by the Supplier fully complies with the Security Policy.

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2.3 Where the Security Policy applies the Buyer shall notify the Supplier of any changes or proposed changes to the Security Policy.

2.4 If the Supplier believes that a change or proposed change to the Security Policy will have a material and unavoidable cost implication to the provision of the Deliverables it may propose a Variation to the Buyer. In doing so, the Supplier must support its request by providing evidence of the cause of any increased costs and the steps that it has taken to mitigate those costs. Any change to the Charges shall be subject to the Variation Procedure.

2.5 Until and/or unless a change to the Charges is agreed by the Buyer pursuant to the Variation Procedure the Supplier shall continue to provide the Deliverables in accordance with its existing obligations.

3. Security Standards

3.1 The Supplier acknowledges that the Buyer places great emphasis on the reliability of the performance of the Deliverables, confidentiality, integrity and availability of information and consequently on security.

3.2 The Supplier shall be responsible for the effective performance of its security obligations and shall at all times provide a level of security which:

3.2.1 is in accordance with the Law and this Contract;

3.2.2 as a minimum demonstrates Good Industry Practice;

3.2.3 meets any specific security threats of immediate relevance to the Deliverables and/or the Government Data; and

3.2.4 where specified by the Buyer in accordance with paragraph 2.2 complies with the Security Policy and the ICT Policy.

3.3 The references to standards, guidance and policies contained or set out in Paragraph 3.2 shall be deemed to be references to such items as developed and updated and to any successor to or replacement for such standards, guidance and policies, as notified to the Supplier from time to time.

3.4 In the event of any inconsistency in the provisions of the above standards, guidance and policies, the Supplier should notify the Buyer's Representative of such inconsistency immediately upon becoming aware of the same, and the Buyer's Representative shall, as soon as practicable, advise the Supplier which provision the Supplier shall be required to comply with.

4. Security Management Plan

4.1 Introduction

4.1.1 The Supplier shall develop and maintain a Security Management Plan in accordance with this Schedule. The Supplier shall thereafter comply with its obligations set out in the Security Management Plan.

4.2 Content of the Security Management Plan

4.2.1 The Security Management Plan shall:

- (a) comply with the principles of security set out in Paragraph 3 and any other provisions of this Contract relevant to security;
- (b) identify the necessary delegated organisational roles for those responsible for ensuring it is complied with by the Supplier;
- (c) detail the process for managing any security risks from Subcontractors and third parties authorised by the Buyer with access to the Deliverables, processes associated with the provision of the Deliverables, the Buyer Premises, the Sites and any ICT, Information and data (including the Buyer's Confidential Information and the Government Data) and any system that could directly or indirectly have an impact on that Information, data and/or the Deliverables;
- (d) be developed to protect all aspects of the Deliverables and all processes associated with the provision of the Deliverables, including the Buyer Premises, the Sites, and any ICT, Information and data (including the Buyer's Confidential Information and the Government Data) to the extent used by the Buyer or the Supplier in connection with this Contract or in connection with any system that could directly or indirectly have an impact on that Information, data and/or the Deliverables;
- (e) set out the security measures to be implemented and maintained by the Supplier in relation to all aspects of the Deliverables and all processes associated with the provision of the Goods and/or Services and shall at all times comply with and specify security measures and procedures which are sufficient to ensure that the Deliverables comply with the provisions of this Contract;
- (f) set out the plans for transitioning all security arrangements and responsibilities for the Supplier to meet the full obligations of the security requirements set out in this Contract and, where necessary in accordance with paragraph 2.2 the Security Policy; and
- (g) be written in plain English in language which is readily comprehensible to the staff of the Supplier and the Buyer engaged in the provision of the Deliverables and shall only reference documents which are in the possession of the Parties or whose location is otherwise specified in this Schedule.

4.3 Development of the Security Management Plan

4.3.1 Within twenty (20) Working Days after the Start Date and in accordance with Paragraph 4.4, the Supplier shall prepare and deliver to the Buyer for Approval a fully complete and up to date Security Management Plan which will be based on the draft Security Management Plan.

4.3.2 If the Security Management Plan submitted to the Buyer in accordance with Paragraph 4.3.1, or any subsequent revision to it in accordance with Paragraph 4.4, is Approved it will be adopted immediately and will replace the previous version of the Security Management Plan and thereafter operated and maintained in accordance with this Schedule. If the Security Management Plan is not Approved, the Supplier shall amend it within ten (10) Working Days of a notice of non-approval from the Buyer and re-submit to the Buyer for Approval. The Parties will use all reasonable endeavours to ensure that the approval process takes as little time as possible and in any event no longer than fifteen (15) Working Days from the date of its first submission to the Buyer. If the Buyer does not approve the Security Management Plan following its resubmission, the matter will be resolved in accordance with the Dispute Resolution Procedure.

4.3.3 The Buyer shall not unreasonably withhold or delay its decision to Approve or not the Security Management Plan pursuant to Paragraph 4.3.2. However a refusal by the Buyer to Approve the Security Management Plan on the grounds that it does not comply with the requirements set out in Paragraph 4.2 shall be deemed to be reasonable.

4.3.4 Approval by the Buyer of the Security Management Plan pursuant to Paragraph 4.3.2 or of any change to the Security Management Plan in accordance with Paragraph 4.4 shall not relieve the Supplier of its obligations under this Schedule.

4.4 Amendment of the Security Management Plan

4.4.1 The Security Management Plan shall be fully reviewed and updated by the Supplier at least annually to reflect:

- (a) emerging changes in Good Industry Practice;
- (b) any change or proposed change to the Deliverables and/or associated processes;
- (c) where necessary in accordance with paragraph 2.2, any change to the Security Policy;
- (d) any new perceived or changed security threats; and

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(e) any reasonable change in requirements requested by the Buyer.

4.4.2 The Supplier shall provide the Buyer with the results of such reviews as soon as reasonably practicable after their completion and amendment of the Security Management Plan at no additional cost to the Buyer. The results of the review shall include, without limitation:

(a) suggested improvements to the effectiveness of the Security Management Plan;

(b) updates to the risk assessments; and

(c) suggested improvements in measuring the effectiveness of controls.

4.4.3 Subject to Paragraph 4.4.4, any change or amendment which the Supplier proposes to make to the Security Management Plan (as a result of a review carried out in accordance with Paragraph 4.4.1, a request by the Buyer or otherwise) shall be subject to the Variation Procedure.

4.4.4 The Buyer may, acting reasonably, Approve and require changes or amendments to the Security Management Plan to be implemented on timescales faster than set out in the Variation Procedure but, without prejudice to their effectiveness, all such changes and amendments shall thereafter be subject to the Variation Procedure for the purposes of formalising and documenting the relevant change or amendment.

5. Security breach

5.1 Either Party shall notify the other in accordance with the agreed security incident management process (as detailed in the Security Management Plan) upon becoming aware of any Breach of Security or any potential or attempted Breach of Security.

5.2 Without prejudice to the security incident management process, upon becoming aware of any of the circumstances referred to in Paragraph 5.1, the Supplier shall:

5.2.1 immediately take all reasonable steps (which shall include any action or changes reasonably required by the Buyer) necessary to:

(a) minimise the extent of actual or potential harm caused by any Breach of Security;

(b) remedy such Breach of Security to the extent possible and protect the integrity of the Buyer and the provision of the Goods and/or Services to the extent

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within its control against any such Breach of Security or attempted Breach of Security;

(c) prevent an equivalent breach in the future exploiting the same cause failure; and

(d) as soon as reasonably practicable provide to the Buyer, where the Buyer so requests, full details (using the reporting mechanism defined by the Security Management Plan) of the Breach of Security or attempted Breach of Security, including a cause analysis where required by the Buyer.

5.3 In the event that any action is taken in response to a Breach of Security or potential or attempted Breach of Security that demonstrates non-compliance of the Security Management Plan with the Security Policy (where relevant in accordance with paragraph 2.2) or the requirements of this Schedule, then any required change to the Security Management Plan shall be at no cost to the Buyer.

Order Schedule 20 (Order Specification)

This Schedule sets out the characteristics of the Deliverables that the Supplier will be required to make to the Buyers under this Order Contract

1. Introduction

The UK needs to significantly reduce its direct carbon emissions to meet legally binding Carbon Budgets and to deliver on Net Zero by 2050. The public sector contributes two per cent of total UK emissions and is well positioned to provide leadership to other sectors and to demonstrate the UK's commitment to carbon reduction. Leadership from the public sector is also expected to catalyse further innovation in green technologies and generate new business and job opportunities. The Public Sector Decarbonisation Scheme (PSDS) supports the aim of reducing emissions from public sector buildings by 75% by 2037 (compared to a 2017 baseline) as set out in the Heat and Buildings Strategy¹ and the Net Zero Strategy in October 2021².

As part of the Chancellor's 'Plan for Jobs 2020' commitment³, Phase 1 of the PSDS made available £1 billion in grant funding to support the UK's economic recovery from Covid-19 through supporting up to 30,000 jobs in the low carbon and energy efficiency sectors⁴. Through Phase 1, grants were awarded to 343 public sector organisations for 461 heat decarbonisation and energy efficiency projects. Phase 2 of the PSDS made available £75m of grant funding for the financial year 2021/2022 and had a stronger focus on heat decarbonisation than Phase 1, supporting the public sector to take a 'whole building'⁵ and 'bundling'⁶ approach when decarbonising their estates. Through Phase 2, grants were awarded to 49 public sector organisations for 54 heat decarbonisation and energy efficiency projects.

Phase 3 of the PSDS succeeds both previous phases with the principal objective to reduce direct (non-traded) carbon emissions from public sector buildings. This phase is providing £1.425 billion of grant funding over the financial years 2022/23 to 2024/25. As with the previous phases, Salix Finance is the delivery partner for Phase 3 of the PSDS. The focus remains on the decarbonisation of heat to help the UK to meet its Carbon Budgets and Net Zero commitments through the implementation of decarbonisation measures in buildings across the public sector⁷ (although the scheme also funds energy efficiency measures alongside this). The scheme follows Phase 2 in focusing on a 'whole building' and 'bundling' approach. However, there are some key differences between Phases 2 and 3, including the amount of funding available and the use of multi-year settlements alongside the single year funding route. Another change between Phase 2 and 3 of the scheme is that for Phase 3, there is no maximum cap of funding per project, however applicants must ensure they have the necessary resources and suppliers in place required to deliver the project by the agreed dates. Between Phases 2 and 3, guidance has also been strengthened to

¹ <https://www.gov.uk/government/publications/heat-and-buildings-strategy>

² <https://www.gov.uk/government/publications/net-zero-strategy>

³ <https://www.gov.uk/government/publications/a-plan-for-jobs-documents/a-plan-for-jobs-2020>

⁴ <https://www.gov.uk/government/collections/public-sector-decarbonisation-scheme>

⁵ A 'whole building' approach has been required for applications to Phases 2 and 3 of the PSDS. This is where all the factors that contribute to a building's energy consumption are considered together to identify the most cost-effective route to decarbonising the building as a whole. For example, improving the building insulation will improve the energy efficiency of the building and reduce the size of the low carbon heating plant required.

⁶ When applicants apply to the PSDS, they 'bundle' together a combination of energy efficiency measures and heat decarbonisation measures. As long as these fall below the carbon cost threshold (CCT), it is up to the applicant what 'bundle' of measures they choose to make up their application.

⁷ https://www.salixfinance.co.uk/P3_PSDS