



Llywodraeth Cymru
Welsh Government

salix

DIGARBON

Decarbonisation Fund for Tertiary Education in Wales

Guidance Notes

May 24



Table of Contents

1	Digarbon – Decarbonisation Fund for Tertiary Education in Wales.....	4
1.1	Introduction	4
2	Application eligibility	4
2.1	Who can apply?	4
2.2	Shaping your application.....	4
2.3	Eligible buildings	5
2.4	Eligible costs	5
3	Technical eligibility.....	6
3.1	Eligible technologies	6
3.2	Technical criteria	8
4	Responsibilities and competence	8
5	The application process	9
5.1	Announcement and windows.....	9
5.2	Submitting your application	9
5.3	Assessment process.....	10
5.4	Outcome	11
5.5	Awarding funding	11
6	Successful applicants	12
6.1	Reporting requirements	12
6.2	Changes to the project	13
7	Payment and repayment of the loan	13
7.2	Drawing down the loan.....	13
7.3	Loan interest rates and details.....	13
7.4	Repaying the loan	13
7.5	Post-completion monitoring and reporting	14
8	Support and advice.....	14
	Appendix 1 – Eligible technologies list.....	15
	Appendix 2 – Examples of required supporting technical information	17
	Appendix 3 – Glossary.....	19
	Revision control.....	20

1 DIGARBON – Decarbonisation Fund for Tertiary Education in Wales

1.1 Introduction

Digarbon provides £20m of loan funding for further and higher education institutions in Wales to support the implementation of heat decarbonisation, energy efficiency, renewable, and electric vehicle and electric vehicle charging infrastructure measures.

Funding for the scheme has been provided by Welsh Government to help the public sector meet its ambition to be net zero by 2030, and the national target set by the UK government to achieve net zero greenhouse gas emissions across the UK by 2050.

The scheme aligns closely with the Heat Strategy for Wales by implementing low carbon heat solutions, enhancing energy efficiency and reducing heat demand, whilst increasing renewable energy capacity. The scheme is intended to be utilised holistically with other funding from the Welsh Government available to Higher and Further Education institutions for example, the Wales Funding Programme, also delivered by Salix.

A fixed interest rate at the current government borrowing rate of 2.05% will be applied on the loan. The rate will not change during the loan term. The full loan including all interest must be fully repaid to Salix by 31 October 2048.

2 Application eligibility

2.1 Who can apply?

Digarbon is available to institutions of further and higher education in Wales only. The organisation must be a public sector body as defined in the [Public Contracts Regulations 2015](#). Those that apply are referred to in this document as 'the applicant'.

Applicants must also be receiving greater than 80% of income from educational activities of which commercial and spin-out enterprises are not included.

Sector caps

A 'soft' sector cap will be applied when allocating funding of which 25% of the available funding will be allocated to the Further Education Sector, with 75% allocated to the Higher Education Sector. These sector caps are 'soft' and should there be insufficient successful applications to fully allocate funding to a sector, funding will be allocated to the other sector.

2.2 Shaping your application

Application number, size, and scope

The minimum application value is £250,000. There is no maximum application size.

Only one application is allowed per institution. To ensure the best use of funds available, Salix on behalf of Welsh Government, reserves the right to part fund applications, or to allocate parts of your application to the Wales Funding Programme. Please see section 5.5. for more information.

Multiple measures and buildings can be included in one application provided that the application remains compliant.

Completion timescales

Applicants will have until 31 March 2028 to deliver the project from the date the agreement is signed.

2.3 Eligible buildings

Only existing non-domestic buildings owned by eligible Welsh further and higher education institutions can be included in the application. Buildings on long-term leases with at least 10 years remaining can be included. Applicants that have a long-term lease arrangement for a building from another public sector body (e.g. local government) in which the lease contract allows the cost savings through improved energy efficiency to be passed to the eligible public body are eligible to apply.

Buildings under PPI/PFI contracts are only eligible if the energy efficiency savings are passed to the eligible public body applying for the loan. Applicants must be able to evidence that this has been clearly negotiated with the partners to the agreement and has been agreed with Salix prior to submission of the application.

Salix acknowledges that many buildings owned by universities and colleges include listed buildings and buildings of merit. Applications must ensure that listed building requirements are met and consider potential adverse effects on the external appearance and performance of the original structures, for instance by causing condensation and damp.

2.4 Eligible costs

Applicants can apply for funding to cover a project detailed design through to completion activities such as commissioning.

Eligible costs include:

- project identification and design development (specific to the project being applied for, and dated 12 months from loan agreement),
- procurement,
- purchase of equipment and materials,
- build, installation, construction, and commissioning,
- project management (external),
- enabling and ancillary works,
- DNO fees.

Capital costs incurred prior to the agreement date between Salix and the applicant will not be eligible for funding. [Contact us](#) for any queries on cost eligibility.

Subsidy control rules

In some instances, public sector organisations can operate as enterprises as defined in Section 7(1) of the [Subsidy Control Act 2022](#). All public sector organisations classed as 'economic actors' under the UK-EU Trade and Cooperation Agreement must ensure compliance with the subsidy control rules. A public sector organisation will be an enterprise if it is engaged in economic activity by offering goods or services on a market.

Applicants will be required to declare any economic activity within their application, including its value within the total project award. Any subsidies will need to comply with the Trade and Cooperation Agreement (TCA) Article 366 principles and transparency requirements as necessary. If, in respect of any economic activity, the applicant has received less than £315,000 Minimal Financial Assistance (MFA) over a period of three fiscal years, the loan would not be covered by the subsidy control rules. Applicants below this limit will need to complete a Minimal Financial Assistance (MFA) declaration, which will be set out in the loan agreement.

Further information on the [subsidy control regime](#) is available, including information on enterprises in the context

of public powers referenced [Statutory Guidance for the UK Subsidy Control Scheme](#).

Additionality criteria

Projects are also required to meet the criteria of being 'additional' meaning:

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

3 Technical eligibility

3.1 Eligible technologies

The primary purpose of the scheme is to implement low carbon heat solutions and reduce heat demand; therefore, all applications to the scheme must include at least one of the following:

- The installation of a low carbon heating system, or
- The installation of building fabric in preparation for a low carbon heating system, or
- The installation and upgrade of heat distribution systems and emitters, in preparation for a specified low carbon heating system.

In addition to the above low carbon heating measures, the scheme also supports the following measures to enhance energy efficiency and increase renewable energy capacity:

- Energy efficiency measures
- Renewable energy
- Electric vehicles and electric vehicles charging infrastructure
- Eligible enabling works for the above measures.

Applicants must evidence in their application how the implementation of these measures contributes to either the heat decarbonisation of their estate or contributes towards net zero strategy.

A full list of eligible technologies can be found in Appendix 1.

Whole building and fabric first approach

Digarbon focuses on the installation of low carbon heating. Applicants are expected to apply the following principles when designing projects to implement an efficient and cost-effective low carbon heating system:

- Apply a 'whole building' approach comprising energy conservation measures and others which reduce the heat or electrical demand, considering all factors that contribute to a building's energy consumption.
- Apply a 'fabric first' approach to improving thermal performance by prioritising improvements to the building fabric to the level appropriate for all buildings listed in the application form. Expected measures to be considered include cavity wall insulation, loft insulation, and glazing.

Supporting commentary and evidence will be required to demonstrate that applicants have taken a 'whole building' approach in planning how to decarbonise their buildings, demonstrating that they have minimised the energy use on site to ensure that the heating plant installed is no larger than it needs to be.

Where the above improvements are omitted from the application, applicants must sufficiently demonstrate (e.g., feasibility study or cost evidence) that they have been considered and are not reasonably viable, including but not

limited to where applicants have already implemented an optimal level of insulation in the building(s) included in the application.

Low carbon heating technologies

Applicants are expected to provide a technically sound justification for the proposed low carbon heating system and demonstrate how they have followed best practice design principles. For certain technologies and heating system configurations, applicants are to include bespoke information where relevant to the proposed low carbon heating system.

Applicants should describe how the heating system type (*standalone* or *cascading*) is feasible for the building. In a cascade system, evidence should be provided to show that the proposed arrangements are the most appropriate solution for that building to achieve certain flow temperatures/operating characteristics.

Air-to-air heat pumps are eligible providing:

- A detailed feasibility study and/or options appraisal show that alternative technologies are not viable.
- The building is currently air conditioned and both heating & cooling systems are being replaced by the air-to-air heat pump.
- The predominant use of the technology is for heating.

Applicants can apply for funding for *biomass boilers* and must demonstrate they will be operated in such a way as to be sustainable, as well as mitigating potential undesired effects on air quality. Applicants will need to demonstrate why biomass is more suitable than other low carbon alternatives, for example, where there is not appropriate infrastructure in place to support a heat pump.

Innovative heat solutions; e.g., ground source heat pumps, may in cases be more expensive to implement but can be more efficient than other solutions. For ground source heat pump projects, applicants should provide a ground survey on the source system design and feasibility study on the heat pump specifications and efficiency.

Heat networks

Connection to an existing district heat network is eligible. Upgrading an existing district heat network owned by the public sector body, and extensions to existing campus heat networks to connect further buildings is also eligible.

Creation of a new district heat network that is localised to the applicant's buildings and/or campus is eligible.

If desired, the application can be used in conjunction with other funding sources for heat network development.

Fossil fuel technologies

The installation of new fossil fuel heating plants, such as oil/gas boilers, and gas combined heat and power, is not eligible under this scheme. New fossil fuel boilers and technologies funded by the contribution from the applicant, or works considered outside the application scope, will also specifically exclude a project from being eligible.

Where installing low carbon heat measures, the retention of existing systems is only eligible providing the system is retained for extreme circumstances for the purpose of providing standby, backup, and top up of heating during peak demand conditions. The rationale behind retention of existing systems must be clearly explained in the application. In this case, applications must demonstrate that the existing heating solution is optimised to achieve the maximum carbon benefit through the system's control philosophy.

Energy efficiency and enabling measures only

Applications formed of energy efficiency and enabling measures only, listed under 'Other measures' in Appendix 1 may be redirected to the [Wales Funding Programme](#) providing it complies with scheme criteria. See [Awarding funding](#) for further information.

Electric vehicles and electric vehicles charging infrastructure

Eligible technologies include both battery electric vehicles (BEVs) and hydrogen fuel cell electric vehicles (FCEVs). It does not include hybrid electric vehicles (HEVs), eFuel, HVO, Hydrogen ICE and other internal combustion engine (ICE) fuels.

Electric vehicle only

Applications consisting of only electric vehicles and/or electric vehicle charging infrastructure are not eligible. These applications must be combined with other measures.

New electric vehicles

Applications for new electric vehicles that do not involve the replacement of a current fossil-fuel powered vehicle must submit a fleet transition plan.

3.2 Technical criteria

Carbon cost metric

A carbon cost metric will be used to review the benefits over the project lifetime which is automatically calculated by the Salix support tool in the application form. The carbon cost metric will appraise the value for money of the proposed project. While there is no threshold requirement for a project to be considered eligible, projects that are considered to have effective value for money will achieve a carbon cost below £550 tCO₂e.

Salix understands that in certain circumstances a carbon cost of £550 tCO₂e or below may not be viable. Typical circumstances could be (but are not limited to):

- Reduced operational hours of buildings.
- Rural location of buildings increasing the cost of contractors and/or material.
- Certain buildings requiring enhanced or bespoke measures to support the transition to a heat pump solution.
- Innovative measures that may be more efficient than typical solutions.

Please note that where an application exceeds £550 tCO₂e, applicants must also share a clear and detailed reasoning explaining why this is. Salix reserves the right to determine what constitutes reasonable flexibility on the carbon cost metric to maintain effective use of available funds.

Projected carbon savings from applications for new electric vehicles and EVCI that do not involve the replacement of a fossil-fuel powered vehicle are not factored into the carbon cost metric.

Project payback

There is no technical payback requirement for projects, but applicants must be able to demonstrate a robust repayment plan of the loan and be able to evidence at application how they intend to payback the requested loan value, plus interest, no later than 31 October 2048. For more information, see [Repaying the loan](#).

4 Responsibilities and competence

Salix assumes that the applicant and their partner(s) are competent and fully responsible for the projects to be funded. The public sector applicant must ensure that accountability for the application, project delivery, and governance are held by the Authorising Official and main contact and that this is not transferred to contractors. It is the public sector applicant's responsibility to ensure they, and their partners, are delivering in line with the loan agreement, including but not limited to:

- Completion of the application form adheres to the requirements set out in the Guidance tab and data is not pasted into cells.

- The application is prepared in a site-specific manner, with data inputs and site details reflecting the unique nature of each application; and the application is supported by bespoke option appraisals reflecting the specific characteristics of each site.
- An accurate establishment of costs and how calculated estimated savings were sought.
- Reasonable project sequencing and due care in the selection of capital projects has been taken to ensure no double counting of carbon savings when considering multiple projects on the same site.
- Selection of suitable supplier(s) follows the applicant's procurement procedure and that they assess and mitigate the risk of fraud in the procurement, supply chain, and implementation of projects.
- Available resources and capacity to manage the project delivery and reporting on project progress.
- Provision of all invoices and completion certificates (where appropriate) in relation to the services carried out on the project(s) as they may be required for audit of the project(s).
- Completion of post project completion activities including verification of savings and satisfaction surveys.

5 The application process

5.1 Announcement and windows

Digarbon was announced in April 2024. The Guidance Notes were published in May 2024. The application form will be published in June 2024.

There will be one window for applications opening in July and closing in August 2024.

5.2 Submitting your application

Only eligible applicants are permitted to submit applications through the online portal, though external parties can provide support in preparation of the application form and supporting documents. Should the application be submitted by an external party, Salix reserves the right to reject the application.

Applicants must ensure applications are complete to the best of their knowledge at the time of submission and are encouraged to review the terms and conditions of the scheme prior to submission of their application.

The application portal

Visit the Digarbon webpage to create an account or log in to your existing account.

Application form and supporting documents

The application form along with supporting documents should be uploaded and submitted through the portal. The information and documents submitted must be specific to the project being applied for. Multiple buildings, measures and/or projects can be included in one application provided that the application is compliant with the scheme criteria.

Applicants should consider the most appropriate evidence to provide based on the measures being applied for and specific circumstance of their buildings.

Applicants should provide indicative cost evidence for all the measures included in the scope of the project, quotations, cost breakdown and applicant financial contingency (funded through applicant contribution) allocated to the project. This should also include a consideration of operational costs.

The following documents and supporting documents are essential for a complete application:

- The Digarbon application form
- Cost evidence (breakdown and quotations, CAPEX)

- Energy saving calculations (unlocked Excel spreadsheet or energy modelling with commentary)
- Building energy figures (meter data, historic bills or DEC)
- Options appraisal report
- Feasibility study
- Risk register
- Project programme
- Loan amortisation schedule
- Authorising Official Declaration
- Counter Fraud Authorisation

Depending on the technical scope of the application, certain technologies and heating system designs may require additional documentation, where applicable:

- Schematics of the existing and proposed heating system
- Survey of the current heat distribution system
- Peak heat loss calculations to show that the proposed heating system has been sized correctly
- Electric vehicle transition plan
- Evidence of existing electrical capacity
- Evidence of the heated area (m²)
- Heat Decarbonisation Plan

A list of additional supporting technical information can be found in Appendix 2.

Providing authorisation

Applicants must assign a Main Contact, Finance Contact, and Authorising Official at point of application that maintain accountability for the application, project delivery, and sponsorship of the project. The Authorising Official will be required to provide written confirmation of their approval at application submission.

5.3 Assessment process

Salix ensures a fair approach to allocating funding – all applications will be assessed and scored based on quality. As applications undergo the assessment process, applicants may be contacted for clarification on their application. Applicants should ensure the main contact, or someone within the organisation is available to deal with any queries during this period.

Applications will progress through two stages of assessment:

- | | | |
|-----------|---------------------------|--|
| • Stage 1 | Initial quality check | <i>Ensure eligibility and completeness.</i> |
| • Stage 2 | Full technical assessment | <i>Applications and supporting documents are reviewed and scored against the criteria.</i> |

Applications will undergo initial delivery-based quality checks for eligibility and completeness before being progressed to technical assessment. Salix aims to confirm whether applications have failed or progressed to stage two within two weeks of submission.

The technical review will be conducted by Salix Energy and Carbon Technical team and an external technical assessor who will provide added independent assurance that the project is deliverable, and the expected savings are reasonably achievable. Salix's Energy and Carbon technical team and contractors aim to complete assessments between 6-8 weeks. The complexity of the project may increase timescales. Applicants should endeavour to respond to any clarification during the assessment process within three working days. Delays to responses may result in the failure of the assessment.

Failure to provide all essential documentation, listed above, will result in the failure of the application. Applicants

will not be able to provide additional supporting information after submission to ensure fairness and determine the quality of submissions from the outset.

To ensure funding is allocated to applications with the strongest evidence-based support, each application will be measured, scored, and ranked against the following five criteria:

Criteria	Weighting	What we're looking for
Strategic Assessment	15%	<i>Information related to the design stage of the project, such as project details, how the project will meet strategic objectives and future plans to decarbonise the building(s).</i>
Technical Feasibility	30%	<i>Demonstrate that the proposed technologies have been appropriately identified, sized and designed. This process should follow whole building approach and fabric first principles.</i>
Financial Costs	20%	<i>Indicative cost evidence for all the measures included in the scope of the project, including a consideration of operational costs.</i>
Project Delivery	20%	<i>Details of the project programme and plans in place to manage aspects in the delivery of the project.</i>
Social Contribution	15%	<i>Contribution to the Well-Being of Future Generations Act and additional economic, social, and environmental benefits (e.g. job creation, competitiveness, welfare, biodiversity).</i>

Salix encourages high-quality, comprehensive, unambiguous responses that demonstrate a thorough understanding of the requirement and how it will be met in full.

5.4 Outcome

Applications will be ranked, and funding allocated according to the score achieved during the assessment process. To be eligible for funding, applications must achieve a minimum score of 65% across the application. Applications which do not meet the minimum requirements will not be considered for funding.

Applications that progress through the assessment will be asked to attend a 'deliverability call'. The call will be held between a member of the Salix team, the main contact, Authorising Official, and contractor(s) (if applicable) to discuss the project and ensure the requirements of the funding are understood.

Loan conditions

All loans will be issued with conditions to ensure projects meet the funding purpose and criteria. These will be listed in the loan agreement, each with a resolution date that loan recipients are required to meet.

Feedback

Feedback will be provided to all applicants on an application's areas for improvement.

5.5 Awarding funding

To ensure the best use of available funds in meeting the purpose of Digarbon, Salix, on behalf of the Welsh Government, reserves the right to part fund applications. Salix will strive to minimise the impact this will have on your application to Digarbon, however, should any changes occur, this will be mutually agreed between Salix and the applicant prior to issuing a loan agreement.

Wales Funding Programme

To ensure Digarbon funding is available to as many applicants as possible, Salix on behalf of the Welsh Government, reserves the right to allocate loan funding from the Wales Funding Programme (WFP) to measures that comply with the Wales Funding Programme criteria.

The Wales Funding Programme is a scheme administered by Salix on behalf of the Welsh Government to support the delivery of energy-saving projects. Eligible projects under the scheme must meet a carbon cost cap of £350 tCO₂e and a 10-year payback criteria. A successful application to Digarbon may have measures that are eligible for the WFP and therefore, to further the reach of Digarbon funding Salix may choose to fund part of your application via the WFP. Salix will strive to minimise the impact this will have on your application to Digarbon, however, should any changes occur, this will be mutually agreed between Salix and the applicant prior to issuing a loan agreement. Measures funded via the WFP will be required to repay within a 10-year period and will be subject to the same 2.05% interest charge.

Issuing a loan agreement

Confirmation of funding will be provided to successful applicants via issuance of a loan agreement through DocuSign. A copy of this agreement must be signed by the applicant's Authorising Official within ten working days. Salix reserves the right to withdraw applications if the loan agreement is not returned within this timeframe.

The loan agreement outlines the terms and conditions of the scheme and schedules related to the ongoing monitoring of the project, calculation of interest and repayment of the interest and loan.

Agreeing the repayment model

Applicants are required to submit their proposed repayment model using the loan amortisation schedule embedded in the application form. Salix will review this repayment model in the interest of effective use of public funding.

When developing your proposed repayment model, Salix asks that applicants consider the following:

- All outstanding loans (capital and accrued interest), must be repaid to Salix by 31 October 2048.
- Annual capital repayments are deemed 'reasonable' based on the expected financial savings and/or, the institution's ability to repay.
- Salix reserves the right to allocate funding, subject to compliancy, from the Wales Funding Programme. This means that the repayment model proposed on application may change. Salix will work with the successful loan recipient to agree a revised repayment model prior to issuing the loan agreement.

Application details may be shared with the relevant arm's length body responsible for tertiary education funding to facilitate successful project approval and delivery. Higher Education Institutions should note that this funding falls within the scope of the borrowing approval requirements of the Higher Education Funding Council for Wales (HEFCW) and its successor, the Commission for Tertiary Education and Research (CTER). Salix encourages relevant applicants to engage with these bodies during the application process given the short time frame for approval following notification of a successful bid.

6 Successful applicants

Salix aims to facilitate the successful delivery of all approved projects through practical support and guidance based on the knowledge acquired from previous projects and from working with a wide range of agencies.

All loan recipients will have a dedicated Salix relationship manager to assist with queries and support the project. Larger and/or riskier projects may also have a Salix senior manager as a sponsor.

6.1 Reporting requirements

Loan recipients are required to maintain regular contact with Salix throughout project delivery. This will include

scheduled meetings and a quarterly monitoring report with updates to risk registers, project programmes, and project governance shared with the assigned Salix relationship manager.

The report should cover key work that took place within that period, focus for the next period, dates by which key milestones will be achieved, expected changes to the project programme, cost and/or scope, risks, and mitigation measures. The reporting template and timeline will be shared by Salix once the loan agreement has been signed.

Monitoring reports should be submitted by applicants to their assigned Salix relationship manager in the first month of each fiscal quarter covering activities for the previous fiscal quarter. Reporting dates will be shared by Salix once the loan agreement has been signed.

By mutual agreement, the applicant and associated sites may be visited by a government body such as Salix Finance or the Welsh Government Energy Service at any point during project delivery.

6.2 Changes to the project

During project design and delivery, should a successful loan recipient want or need to make changes to the project, loan recipients must inform Salix at the earliest opportunity to ensure continued compliance to the scheme criteria. A change request procedure shall be followed requiring the submission of an updated application form and supporting documents to ensure the Digarbon criteria continue to be met.

Due to the scheme's funding mechanism, Salix is unable to guarantee requests to increase or decrease loan value. We will endeavour to review these on a case-by-case basis.

7 Payment and repayment of the loan

7.2 Drawing down the loan

Once the loan agreement has been signed by Salix and the loan recipient, the loan funds will be issued as one upfront payment. This drawdown date will be agreed between Salix and the loan recipient in the loan agreement.

7.3 Loan interest rates and details

A fixed interest rate at the current government borrowing rate of 2.05% will be applied on the loan. The rate will not change during the loan term.

The loan is unsecured and must be fully repaid by 31 October 2048.

7.4 Repaying the loan

The repayment of the interest accrued and capital funds on the loan will be made separately. The repayment schedule will be set out in the loan amortisation schedule of the loan agreement, this will be based on the amortisation schedule submitted by applicants and accepted by Salix at application stage.

Interest and capital repayments

Interest will begin accruing from the loan drawdown date. Repayments on the interest will commence in the 2024-2025 financial year. Interest will be collected annually thereafter.

Repayments on the capital will begin after the project has completed and will be collected annually. The completion date and subsequent repayments on the capital will be set out in the loan amortisation schedule.

Early repayments

To make an early repayment, loan recipients must inform Salix no later than three months prior to the next collection date. There are no fees to make an early repayment.

7.5 Post-completion monitoring and reporting

For monitoring purposes, and scheme evaluation, all successful applicants will be required, as per the loan terms and conditions, to submit an annual Welsh Net Zero report to Welsh Government as part of the [Welsh Public Sector Net Zero reporting](#). The first submission of the annual net zero report is required for financial year emissions 2024/25, this must be submitted to Welsh Government by autumn 2025.

8 Support and advice

Refer to the Salix website for the most up to date information regarding key dates and how to apply.

Salix has teams that have specialised knowledge of different areas of the public sector, as well as an in-house Energy and Carbon Technical team. For any enquiries, [contact us](#).

The [Welsh Government Energy Service](#) offers technical, commercial and procurement advice and support for public sector organisations in Wales in progressing their energy and carbon reduction projects.

Appendix 1 – Eligible technologies list

Project Type	Work Type	Lifetime of Measure
Low carbon heating, building fabric and heat distribution systems and emitters		
Low carbon heating	Air source heat pump (air to water)	20
	Air source heat pump (air to air)	20
	Water source heat pump	25
	Ground source heat pump	25
	Connect to existing district heating	30
	Connect to onsite heat network	30
	Hot water - electric point of use heaters	12
	Solar thermal	25
	Biomass	20
	Electric boiler	20
	Electric heater	10
	Electric radiant panel heater	20
Building fabric improvements	Cavity wall insulation	28
	External wall insulation	30
	Double glazing with metal or plastic frames	30
	Dry wall lining	27
	Loft insulation	27
	Floor insulation - suspended timber floor	30
	Floor insulation - solid floor or other type	30
	Roof insulation	7.92
	Secondary glazing	29.25
	Insulation - draught proofing	8.45
	Automatic speed doors	8.45
	Automatic/revolving doors	29.25
	Draught lobby (external)	29.25
	Draught lobby (internal)	8
	Radiator reflective foil (external walls)	9
	Heating pipework insulation (external)	22.5
	Heating pipework insulation (internal)	22.8
Heat distribution and emitter upgrades	Heat recovery	10.83
	Heating - discrete controls	6.84
	Heating - distribution pipework improvements	15.2
	Heating - zone control valves	11.88
	Plate heat exchanger	28.5
	Steam trap replacements	15.2
	Thermal stores	18
Hot water	Flow restrictors	14
	Hot water - distribution improvements	18
	Hot water – efficient showers	8
	Hot water - efficient taps	11
Other measures		
Renewables	Small hydropower	22.5
	Solar PV	17.6
	Wind turbine	15.2
Energy from Waste	Anaerobic digestion	15.2

	Incineration	15.2
Biomass	Biomass	20
Electric vehicles	Electric vehicles	N/A
	Electric vehicle charging infrastructure	N/A
Energy efficiency	BEMS - not remotely managed	6.84
	BEMS - remotely managed	8.42
	Fixed speed motor controls	11.4
	Motors - flat belt drives	11.4
	Variable speed drives	10.26
	Motors - high efficiency	15
	Time switches	6.84
	LED - new fitting	25
	LED - same fitting	13
	Lighting - discrete controls	8.89
	Lighting control system centralised	10.26
	Cooling - control system	6.84
	Cooling - plant replacement/upgrade	8.21
	Energy efficient chillers	14.44
	Free cooling	13.68
	Replacement of air conditioning with evaporative cooling	13.68
	Fans - air handling unit	23.75
	Fans - high efficiency	14.25
	Phase change material	23.75
	Ultrasonic humidifiers	7.22
	Ventilation - distribution	30
	Ventilation - presence controls	6.84
Low loss	30	
Transformer tapping change	30	
Enabling measures	Battery - in combination with renewable	N/A
	Battery - standalone	N/A
	Capacity improvements	N/A
	Electrical distribution	N/A
	Incoming electricity upgrade	N/A
	Meters - flow	N/A
	Meters - heat	N/A
	Meters - other	N/A
	Smart meters	N/A
	Upgrade electrically powered uninterruptible power supply	N/A

Appendix 2 – Examples of required supporting technical information

Scheme criteria	
'Whole building approach'	<ul style="list-style-type: none"> • Detail current building fabric for each building including the condition and age of building fabric elements. • U-values provided with methodology. • Feasibility study provided to identify which building fabric improvements and energy efficiency measures can be implemented. • For any fabric measures not included in the application, evidence should be provided to demonstrate that such measures have already been implemented to reduce energy wastage. • Peak heat loss calculations. • All data points completed in Step 2a Building Project Design of the Application Form. • If 'whole building' approach cannot be met, evidence (e.g., feasibility study or cost evidence) to demonstrate that they have been considered and are not reasonably viable, including but not limited to where applicants have already implemented an optimal level of insulation in the building(s) included in the application.
Low carbon heating system sizing	<ul style="list-style-type: none"> • Peak heat loss calculations. • Details should be provided on how DHW demand will be met. • All data points completed in Step 3b Heating System of the Application Form. The mandatory cells on this tab will flag red if incomplete.
Options appraisal	<ul style="list-style-type: none"> • Evidence that all available options have been explored for low carbon heating measures, building fabric improvements and energy efficiency measures. • Commentary on what measures are most suitable and why other measures were discounted. • This should include consideration of the cost of the initial system as well as operational and maintenance costs.
Application form and supporting evidence	
Energy saving calculations	<ul style="list-style-type: none"> • Unlocked Excel energy saving calculations showing methodology. • Baseline figures for fossil fuel consumption must be based on metered data, the previous year's energy bills and/or the latest DEC. • If modelling is used, commentary must be provided on the methodology. • Figures in supporting information should exactly match those in the application form.
System specific detail	<ul style="list-style-type: none"> • All data points completed in Step 2a Building Project Design and Step 3b Heating System in the application form. • Site surveys of current emitters, and evidence that they are correctly sized for the proposed system. If needed, evidence of methodology behind heat emitter selection. • Evidence on how the proposed heating system has been sized, accounting for whole building approach and existing/remaining heating systems. • Schematics of the existing and proposed heating system, detailing how the system will operate in the building. • If the proposed heating system configuration is hybrid or bivalent with an existing (non-end-of-life) fossil fuel plant, commentary should be provided that details how the operation of the low carbon heating system will be prioritised. • Details on proposed manufacturers of all measures and data sheets where

	available e.g., ASHP, heating emitters (if new).
Cost evidence	<ul style="list-style-type: none"> • Full cost breakdown in an Excel format to include details of supply and installation costs for each measure and any associated enabling works. Specific consideration may need to be given to the electrical infrastructure and any new additional demands that may be required. • CAPEX. • Quotations and invoices to support project costs.
Electrical connection	<ul style="list-style-type: none"> • Details of whether the local power distribution infrastructure can support the proposed electrified heating system. • Commentary on whether the Distribution Network Operator (DNO) has been engaged and the stage of engagement. If not, DNO engagement must be built into the project programme.
Heat networks	<ul style="list-style-type: none"> • If the application is for a heat network, bespoke carbon factor calculations must be provided. • Primary heat losses must be accounted for in calculations. • Applications for a district heat network must confirm that the specific component in this bid is not being funded through other sources.
Electric vehicles	<ul style="list-style-type: none"> • All applicable data points completed in Step 2b EV Proposal and Step 4 support tool in the application form. • Applications for new electric vehicles that do not involve the replacement of a current fossil-fuel powered vehicle must submit a fleet transition plan.
Complete site/building details	<ul style="list-style-type: none"> • All data points completed in Step 3a Building Details in the application form. The mandatory cells on this tab will flag red if incomplete. • Pre- and post-improvement peak heat loss figures in the application form must be supported by calculations. • Evidence of existing annual fossil fuel and electricity usage, e.g., metered data, the previous year's energy bills and/or the latest DEC. • Clear site drawings would be advantageous, demonstrating the layout of the proposed measures.
Existing system and proposed system data	<ul style="list-style-type: none"> • All data points completed in Step 3b Heating System of the application form. • Schematics of existing and proposed heating system. • Evidence of the efficiency of the existing heating plant as per section 4.10. • Evidence that the proposed system can operate efficiently at proposed flow and return temperatures.
Sequencing of energy savings	<ul style="list-style-type: none"> • Evidence that the low carbon heating system energy savings are based on figures post building fabric improvements and energy efficiency measures. This can be demonstrated in the energy saving calculations.
Fuel costs	<ul style="list-style-type: none"> • Evidence of current fuel cost (e.g., energy bills). • Commentary on proposed fuel cost and what this is based on.
Governance details	<ul style="list-style-type: none"> • All data points completed in Step 5 Project Governance of the application form. • Project governance evidence supplied e.g., organisation structure, project execution plan and previous internal and external experience commentary.
Risk register	<ul style="list-style-type: none"> • Detailed risk register highlighting and rating risks specific to the proposed project and proposed mitigation actions.
Project programme	<ul style="list-style-type: none"> • Detailed project programme with key milestones for each measure. • Appropriate contingency should be included. • Project programme should be updated as the project progresses.

Appendix 3 – Glossary

Authorising Official An individual from an eligible organisation in a position of authority to approve and sign official and legal documentation associated with the project. This may be a chief executive or financial officer, or another senior official. This individual should be identified and agreed upon before application and should be part of the project governance structure.

Carbon cost metric Refers to the instrument used to review the benefits over the project lifetime to appraise the value for money of the proposed project. This is automatically calculated by the Salix support tool in the application form. While there is no threshold requirement for a project to be considered eligible, projects that are considered to have effective value for money will achieve a carbon cost below £550 tCO₂e. Applicants are encouraged to submit an application with a carbon cost below this figure, though Salix understands that this figure may be exceeded in some specific circumstances, which should be outlined in the application form.

Counter Fraud Declaration A document signed by the Authorising Official confirming, on behalf of the public sector body, their commitment to statements detailed in the document.

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

Electric vehicle charging infrastructure (EVCI) Refers to the network of charging stations and supporting infrastructure/equipment used to enable the use of electric powered vehicles and to facilitate the charging of Electric Vehicles (EVs). Typical components to the charging infrastructure (e.g. charging stations) include the power source, transformer, charging supply equipment and distribution switchboard.

Heating plant The unit that generates thermal energy for use in space heating and/or hot water requirements for buildings, examples include boilers and Combined Heat and Power (CHP) units.

Loan agreement The legal contract between the public sector body (loan recipient) and the lender (Salix Finance) detailing the terms and conditions, and obligations of parties under the loan.

Loan amortisation schedule A record of scheduled payments split between the capital and interest repayments, detailing how the loan will be paid off over its lifetime.

Low carbon heating A heating system that emits little or no direct carbon. Electric heat pumps are the most common low carbon heating solution. They are often multiple times more efficient than a fossil fuel boiler and the indirect emissions associated with electricity use will reduce over time to zero as the power grid decarbonises.

Main contact An individual responsible from the public sector applicant for overseeing the project and fulfilling duties such as completing monthly monitoring reports, sharing payment evidence, and ensuring Salix is kept up to date during project delivery.

Persistence factor The lifetime of the energy efficiency technology averaged to factor in degradation. The persistence factors for individual technologies employed by Salix are based on those derived by the Carbon Trust. The persistence factor is used in the calculation of cost to save a tonne of CO₂e over the lifetime of an application for energy efficiency measures (£/tCO₂eLT).

Repayments (capital) A repayment on the loan that contributes to the repayment of the original amount.

Repayments (interest) A repayment on the loan to pay off the interest charges on the loan.

Subsidy ‘enterprise’ is defined in section 7 of the Subsidy Control Act 2022.

‘Whole building’ approach An approach to retrofit for decarbonisation that considers all the factors that contribute to a building’s energy consumption together to identify the most cost-effective solution. For example, investment in improving the insulation levels of the building fabric will reduce the size of low carbon heating plant required, improve thermal comfort and save on fuel bills. Investment in reducing the peak electricity consumption can reduce the need to upgrade a building’s electrical infrastructure to accommodate the installation of a heat pump.

Revision control

Version	Revision made	Date
V1.0	Creation.	April 2024