

Financing Green Ambitions - Full report



This guide looks at some of these sources of funding, as well as green loans, community municipal bonds and more and how they might apply to different types of projects.

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Executive Summary

1.1 Background

Access to finance is key to the delivery of a comprehensive response to the climate emergency. This was clearly recognised by local authorities participating in the LGA climate survey in March 2020.

Since the introduction of the prudential borrowing code in 2003, the Public Works Loan Board (PWLB) has been a mainstay of local authority capital programmes.. In October 2019, the Government announced a review ‘Public Works Loan Board: future lending terms’ aimed at finding proportionate and equitable ways of preventing local authorities from using PWLB loans to buy commercial assets primarily for yield. The review was followed in March 2020 with a consultation, the outcome of which, together with revised lending terms **was published on 26 November 2020**. A key change introduced requires local authorities looking to assess PWLB to demonstrate that their borrowing supports service delivery, housing, regeneration or preventative action. The announcement of the review in October 2019 was accompanied by a 1% increase in lending rates which was reversed on publication of the consultation outcome.

1.2 Central Government

In bringing forward the Green Finance Strategy (GFS) Government has recognised two key objectives:

- to align private sector financial flows with clean environmentally sustainable and resilient growth, supported by Government action
- to strengthen the competitiveness of the UK financial sector.

There are three strategic pillars to the strategy to support these objectives:

- Greening finance – which centres on ensuring climate and environmental factors are integrated into mainstream financial decision making;
- Financing green – where the focus is on accelerating finance for clean and resilient growth and improving access to finance for green investment
- Capturing the opportunity – which aims to cement the UK's position as a global leader for green finance and ensure the UK is at the forefront of green financial innovation, data and analytics.

Whilst the GFS is not focused on local authority investment, it signals a clear view from Government that the UK's net zero emissions target will not be met without tapping into the significant private sector funding available.

1.3 Measurement and Verification

Green finance refers to the financing of new and existing public and private investments with sustainability objectives. Sustainability objectives include renewable energy and zero carbon energy generation and distribution, energy conservation measures, climate adaptation works, migration of activities away from fossil fuel sources, conservation and sustainable agriculture.

Green finance can take many different forms, including green bonds, green loans, a green revolving credit facility, green hire purchase, green lease and asset loans, green grants and mechanisms to create market certainty.

A key feature of green finance is the need to be able to verify that the project has produced the environmental benefits set out in its original business case. The measurement and verification process can take a number of forms, but all should be clear, transparent and auditable. For some schemes there are national or international accreditations that would be a key part of demonstrating environmental benefit. Where these schemes are not available there is a need to develop clear and auditable measures.

1.4 Equity and Grant Funding

There are many potential sources of grant funding, and some local authorities have access to equity funding from reserves.

Green grants cover areas as diverse as flood adaptation work, afforestation and the installation of electric vehicle charging facilities. Green grants are being used by the Government as part of the response to the recession resulting from the COVID-19 pandemic, with significant sums currently on offer for building energy efficiency schemes.

1.5 Debt Funding

'Green Finance' is often used to refer to debt funding. In addition to PWLB funding, local authorities are starting to see the emergence of new funding sources which can compete with PWLB, in particular Community Investment Bonds.

When considering debt funding local authorities should consider a number of factors as set out in Table 1 below.

Table 1: Characteristics of debt funding sources

Form of Debt	Cost of Borrowing	Borrowing amount	Security	Proposed Due Diligence	Comments
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Form of Debt	Cost of Borrowing	Borrowing amount	Security	Proposed Due Diligence	Comments
Public Works Loan Board	Depends on lending term. 25 Year Annuity Rate (as at 01/12/20) 1.56 per cent	100 per cent	Lending against revenues of the local authority	<p>Extensive board and council member approval process for project.</p> <p>The PWLB application process is currently deliberately permissive, but requires submission of a three year capital plan and s151 officer sign off that borrowing does not include projects primarily for yield.</p>	Lending to be primarily yield and support local authority objective service such as housing, regeneration and prevention action.
Green Lenders	Most expensive form of lending at rates equivalent to private sector projects	Typically, up to around 80 per cent of a steady state project	Lending against the project assets	Extensive technical, financial and legal due diligence undertaken by green lender.	Use of green lenders to be specified both the authority and the project. Most likely applicable to joint venture more commercial projects

Form of Debt	Cost of Borrowing	Borrowing amount	Security	Proposed Due Diligence	Comments
Crowdfunding/Community Municipal Bond (CMB)	Potential to provide capital on terms which are equal or better than PWLB – see comment	Potential for 100 per cent, although local authority CMBs above £1m not yet tested	Securing funding against the local authority credit rating, unlike PWLB this may require a credit rating.	Extensive board and council member approval process for projects. Process that emulates the ease of use of PWLB	Example include V Berkshire Swindon Councils
Salix	Interest free loan	100 per cent no-maximum loan value but amount dependent upon payback period	Lending against the local authority	Compliance tool and business case to assist in application. Responsibility and competence requirements placed on local authority.	Assurance process project d

PWLB, CMBs and Salix all have a strong role to play in the financing of local authorities' green projects. Private sector green finance is generally more expensive and more restrictive than these instruments which are only available in the public sector. Unless there are significant market developments it is unlikely that private sector debt will be an attractive alternative for most public sector projects.

1.6 Conclusions

Green finance is ultimately about the funding of sustainable projects, regardless of the source of the finance. It is important that, whatever the source of finance, local authority 'green' projects are able to provide transparent and reliable verification of the non-financial benefits.

Local authorities are well placed to access cheap debt finance, both through Public Works Loan Board and through the emerging Community Municipal Bond (CMB) market (see West Berkshire Council example in section 5.4). Financial terms for PWLB and CMBs are likely to be similar going forward, with CMBs providing the opportunity to connect local people to projects in their area, but are unlikely to raise all the funding necessary for larger projects. CMBs and PWLB can be blended to support projects where both local connection and larger funding packages are required.

Other than where partnership working with the private sector is envisaged, there is rarely a need for local authorities to engage with the more complex and expensive private sector green finance.

The Government has a range of support mechanisms in place including grants and price support mechanisms to some sectors. It is likely that this will be supplemented during the course of the current Government's term of office with other measures, particularly in the run up to COP26. On 18 November 2020 the Government published its **Ten Point Plan for a Green Industrial Revolution**, including announcements of further funding for hydrogen projects, nuclear energy, electric vehicles and charging infrastructure, building energy efficiency and maritime decarbonisation. Further announcements were made in the **Spending Review 2020** and **National Infrastructure Strategy** on the creation of a UK-wide bank. It will support infrastructure projects to help meet Government's objectives on economic growth, levelling up and transitioning to net zero and, will be able to lend to local and mayoral authorities.

On 9 November the Chancellor of the Exchequer announced in the House of Commons that the UK will issue its first sovereign green bonds in 2021 as part of the Government's Covid-19 stimulus planning. Whilst these developments are of interest, they may not replace PWLB and CMBs as the preferred funding route for local authority owned projects.

1.7 Recommendations

Local authorities looking to invest in green projects should consider the following:

1. How will the sustainable benefits be measured and verified?
2. Is there a source of grant funding available for the activity? These change from time to time, so it is important to keep up to date.
3. Recent grant funding for energy efficiency projects may be repeated in subsequent years. In order to access funds it may be necessary to move quickly, so preparing schemes in advance is an advantage when looking to secure grants. Local authorities

should also consider using existing energy performance framework agreements to ensure speed of delivery, certainty of benefits and compliance with procurement law.

4. Access to alternative routes for funding have an administrative burden which needs to be considered as part of the funding decision.

5. Local authorities have access to both grant funding and cheap finance, providing a competitive advantage over the private sector where there is competition for assets (such as in the purchase of renewable energy generation capacity).

6. Where local authorities are offering finance into joint venture projects the implications of state aid need to be fully factored in.

Introduction to Green Finance

In March 2020, the Local Government Association (LGA) undertook a survey in relation to the climate emergency. Although the survey had to be suspended due to the impact of the coronavirus pandemic response, the results from the 89 councils that had completed the survey by then showed that lack of funding was the single largest barrier to delivery.

Over the last two years, around 75 per cent of local authorities have declared a climate emergency, with many of these also committing to becoming 'net-zero' emitters of greenhouse gases. Meeting these commitments will require both significant investment into low-carbon infrastructure and the decarbonisation of heat. Even if global greenhouse gas emissions are contained to 2°C above pre-industrial levels, the UK will experience a significant increase in temperature, more frequent extreme weather events and rising sea levels. Measures to adapt to a warmer climate will be far reaching and will require significant investment.

In publishing a **Green Finance Strategy**, the Government has recognised the need for a comprehensive approach to greening financial systems, mobilising finance for clean and resilient growth, and capturing the resulting opportunities for UK firms. Meanwhile the measures taken by local authorities in support of the response to the COVID-19 pandemic have strained local authority budgets. Green finance will be a key focus of both the recovery and renewal programme following the COVID-19 pandemic, and to the future deployment of green infrastructure projects.

This guidance has been produced to provide practical advice on how local authorities can access and utilise green finance to meet economic recovery goals and climate emergency ambitions, drawing on examples both from the United Kingdom and international case studies. In authoring this guidance our focus has been on the mobilisation of green projects and we have therefore looked at wider financial

measures as well as the various forms of green debt finance available. We have considered both the projects a local authority might directly fund, but also those it may wish to support or stimulate within its geographic area.

2.1 What is Green Finance?

Green finance refers to the financing of new and existing public and private investments with sustainability objectives. Sustainability objectives include renewable energy and zero carbon energy generation and distribution, energy conservation measures, climate adaptation works, migration of activities away from fossil fuel sources, conservation and sustainable agriculture. Green finance can take many different forms, including green bonds, green loans, a green revolving credit facility, green hire purchase, green lease and asset loans, green grants and mechanisms to create market certainty.

Green financial instruments are very similar to traditional 'brown' finance in that they are defined more by the specific purposes that they can be used for, rather than by any differences in how they operate. The key distinction for green finance is how it can be demonstrated that the investment is producing the environmental benefits it set out to deliver and some products may have penalties linked to failure to verify such.

Chapters 4 and 5 of this guidance set out a brief description of green finance options that are available to local authorities. It is possible to use traditional 'brown' finance for green projects - local authorities in particular should be mindful of specific requirements to audit or certify green benefits or any penalties that apply in the event that this is not achieved.

2.2 UK Government Green Finance Strategy

On 2 July 2019, HM Treasury and the Department for Business, Energy and Industrial Strategy (BEIS) published the Green Finance Strategy, which establishes Government's direction on financial markets intervention against the backdrop of the UK's statutory commitment to reduce greenhouse gas emissions to net-zero by 2050. The Green Finance Strategy has two key objectives:

- to align private sector financial flows with clean environmentally sustainable and resilient growth, supported by Government action
- to strengthen the competitiveness of the UK financial sector.

There are three strategic pillars to the strategy to support these objectives:

- **Greening finance** – which centres on ensuring climate and environmental factors are integrated into mainstream financial decision making;
- **Financing green** – where the focus is on accelerating finance for clean and resilient growth and improving access to finance for green investment
- **Capturing the opportunity** – which aims to cement the UK's position as a global leader for green finance and ensure the UK is at the forefront of green financial innovation, data and analytics.

Of interest to local authorities is the financing green strand of the strategy which seeks to mobilise and accelerate private capital flows into clean growth and environmental sectors to support the delivery of the UK's carbon targets. The Government recognises that public sector funding alone will be insufficient in delivering the transition to environmentally sustainable growth, and as such is focused on mobilising private finance and removing associated market barriers.

Underlying principles

Finance is fundamentally a combination of equity and debt, i.e. money you own and money you borrow.

3.1 Risk and Finance

There is a direct relationship between risk and the cost and availability of debt finance; this applies to green finance as it does to any other form of finance.

The more that risks can be reduced, the lower the rate of interest that will apply and the easier it will be to obtain debt finance. The blend between equity and debt is usually driven by a combination of the risks associated with the project and the covenant strength of the borrowing party. The higher the risk the greater the proportion of equity likely to be required.

Some projects may not be fundable for debt and equity as the associated risks are deemed to be too high. The examples below set out why this might occur and various instruments that have been employed by the Government to avoid market failure:

1. An initiative is new or emerging and there is not a tried and tested delivery model. An example of this would be the introduction of wireless charging for **electric taxis**. As this has not been done in the UK before, the Office for Low Emission Vehicles (OLEV) has intervened to provide some grant funding for a pilot project to prove the concept and support more widespread rollout.

2. Financial returns are insufficiently certain. An example of this would be large scale renewable energy generation where the Government has put in place the **Contracts for Difference (CfD)** mechanism to provide price certainty (without providing subsidy).

3. The market is not sufficiently developed or there is no guaranteed route to market. An example of this would be small scale renewable energy generation where the Government has put in place the **Smart Export Guarantee scheme**. This provides a guaranteed route to market for small scale renewable energy projects, without providing either price certainty or subsidy.

3.2 Evolution of project risks

Total risks within a project reduce and evolve as it progresses from concept through feasibility to procurement and construction and onto steady state operation. Different types of finance will be applicable to different stages of the project. The cost of finance and the terms of finance can be subject to change at each phase. It is common to change the finance in commercial projects once they become operational. An example of this is the refinancing of PFI projects. Figure 1 on page 12 shows this in more detail.

All private sector finance will follow these principles; however some public sector finance, such as the Public Works Loan Board (PWLb) is based on the statutory position of the local authority, as opposed to the risks associated with any particular project or programme.

An understanding of private sector financing mechanisms is important where the local authority is acting as a partner or guarantor in a scheme. Where this is the case the local authority should check carefully whether such arrangement is permissible under the state aid provisions in operation at the time.

1. Concept and feasibility

- Risk of project failure is high during the concept and feasibility phase
- Lending risk is too high and funds are not available for this phase
- Equity based funding (risk capital) is required

2. Procurement and construction

- Post approval of the Outline Business Case (OBC) project risks are well documented and certainty improves
- Finance can be available for the construction phases of projects, but as inherent risks remain until commissioning the costs of finance are high and are not available for all types of project.

3. Steady state operation

- Risk is significantly reduced
- Longer term (cheaper) finance can be introduced

3.3 Transaction structures

A local authority may need to consider potential transaction structures for a number of reasons. These are likely to include:

- the need or desire to put a project at arm's length to the local authority by virtue of it involving commercial trading activity
- the local authority working in partnership (either formal or by other arrangement) with external parties – which may be public or private sector
- the local authority extending support to a third-party scheme through the inclusion of assets, finance or funding.

Aside from specific requirements of individual parties to a project, the overall transaction structures are largely shaped by risk and tax factors and will need to be considered on a project specific basis.

In partnership projects, the local authority, with its access to capital finance, can decide on what funding role it wishes to play at each stage, dependent on the risks and opportunities. If the project involves partners alongside the local authority, then limited liability partnerships have become the favoured vehicle because of their tax transparency with each party's share of profit being assessed for tax as part of their respective corporation tax position. For local authorities, it means their share of profit is not reduced for tax as they are not liable for corporation tax.

3.4 Differences between public and private sector financing

3.4.1 Private Sector Financing

Typically, private sector financing will be a combination of debt and equity, with the debt being layered according to the level of risk as follows:

- Senior debt – up to around 80 per cent of a steady state project may be fundable through senior debt. Interest rates are generally very low, and this is a long-term investment often by a pension fund or similar. Risks must be very low to attract senior debt finance
- Junior debt – also sometimes referred to as mezzanine finance. This can be used to reduce the amount of equity required to fund a steady state project. Junior debt has a second call on resources in the event of project failure (behind the senior debt) and the interest rate is higher to reflect the higher level of risk

- Construction finance – private sector finance during a construction phase is generally significantly more expensive than either senior or junior debt. Typically interest rates are four or five times higher to reflect the greater project risk prior to completion and commissioning
- Project development finance – this is specialist and often not available in isolation, it is more often found when accompanied by a project development service. Where development finance is available, the interest charged is generally very high and based around a share of the overall value of the asset created. The risk profile for project development finance is similar to that of equity
- Equity – almost all projects will require a degree of equity funding. As the project progresses through the development phases and certainty increases, the proportion of equity required falls from 100 per cent initially to as low as 5 per cent on some heavily geared projects. Equity always takes the highest level of risk and consequently expects the highest rate of financial return.

Private sector funding is generally project specific and looks to secure lending against the project assets. It is common for private sector projects to refinance once they have achieved steady state. This enables senior debt to be drawn in and equity released for other projects. The ratio of debt to equity is known as gearing and can produce significantly higher returns for the equity investment.

For example, if a £10m investment produces an overall return of 8 per cent then an equity investor would receive an annual return of £800,000. If however, the project was geared at 80 per cent with debt funding at 4 per cent then the equity investor's cash investment would only be £2m and the annual return would be £480,000 after paying interest – representing a return of around 24 per cent whilst also releasing £8m to invest in new projects.

3.4.2 Public Sector debt funding

Typically, local authorities take a different approach to borrowing and will use their overall standing and covenant strength to borrow and fund a programme of activity. The borrowing is secured against the authority rather than against specific projects

- This approach usually provides cheaper overall finance with fewer hurdles to draw down funding than private sector alternatives. Long term interest rates available to local authorities are similar to senior finance rates.
The relatively low interest rates and ease of securing the lending mean that there need to be specific reasons why a local authority project would want to consider private sector debt funding.

3.5 Measurement and Verification

A key feature of green finance is the need to be able to verify to project stakeholders that the project has produced the environmental benefits set out in its original business case.

The measurement and verification process can take a number of forms, but all should be clear, transparent and auditable. For some schemes there are national or international accreditations that would be a key part of demonstrating environmental benefit.

3.5.1 Recognised Verification Standards

Recognised verification standards vary from time to time and it is important to check at the point of committing to a project what the current standards for that type of project are. Recognised schemes provide some form of auditable and widely accepted methodology to provide a high degree of confidence to investors and customers that the scheme delivers the green benefits it promises.

Some currently recognised verification standards in the UK which would be applicable to green finance include:

1. Renewable Energy Generation of Origin (REGO) certificates. REGOs are provided by the Office of Gas and Electricity Markets (OFGEM) and provide certainty that electricity has been generated from renewable sources. These are useful for the generator in relation to verification, they can become more problematic for a consumer as the scheme allows the REGOs to be traded independently of the electricity units supplied.
2. The Woodland Carbon Code (WCC) is the UK's voluntary carbon standard for woodland creation projects. It provides reassurance about the carbon savings that woodland projects may realistically achieve through the issue of Woodland Carbon Units (WCU). WCUs can also be sold as part of an offsetting scheme to generate additional income.
3. National Cycle Network accreditation through **Sustrans**.

3.5.2 Other forms of verification

Where there is no accredited verification scheme there are often still clear and straightforward means of verification. Examples would include:

1. Changes in units of fuel consumed (e.g. kWh of electricity, or litres of diesel). This would need a baseline to work from and ongoing measurement and verification post implementation. Integrating Measurement and Verification (M&V) into an Energy

Performance Contract (EPC) brings standardisation and transparency, and certainty to the project outcome. It is increasingly recognised as a way of boosting stakeholder confidence in energy efficiency projects, particularly where services are funded through the financial value of the savings achieved. For example the Re:fit Framework (see section 5.8.2) suggests the use of International Performance Measurement and Verification Protocol (IPMVP) to verify the savings achieved by Energy Services Companies (ESCOs).

2. Changes to waste and recycling rates in an area measured in tonnes collected. Verification can be bespoke to a project – but needs to be Specific, Measurable, Achievable, Realistic, and Timely (SMART) and aligned to the original purpose of the project. Verification reporting should always be public.

Equity

4.1 Forms of Equity

Reserves are the most commonly cited form of equity for local authorities, and grant funding can also be considered as a source of equity for some projects.

Grant funding has some of the characteristics of green debt, especially in relation to the measurement and verification of outcomes. In pure lending terms it may not require security over the project assets or other financial recourse in the event of project failure and no interest payments are due. Grants often have a ‘clawback’ clause which recovers grant funding in the event that the project or scheme is discontinued or deviates from its original purpose to the extent that it would be unable to deliver the benefits originally envisaged. The clawback is similar to the financial recourse provisions of debt funding but applied in more specific circumstances. The interaction between any recourse and clawback provisions on a project need to be carefully thought through.

4.2 Equity and Associated sources of funds

4.2.1 Definition and application

Equity represents ownership in a project and the level of ownership adopted by a local authority will be determined by a number of factors including the investment choices available. Conventionally, equity may be offered to raise funds but if the local authority holds the role of project originator, it would not need to share equity solely for those purposes given its ability to access capital. It may, however, wish to share equity as part of managing risk e.g. the local authority may seek a development partner with expertise and experience that it cannot source internally. Furthermore, it may need to share equity with partners by virtue of circumstance in order for the project to proceed

e.g. for a renewable energy project the local authority may not own the land on which the project is sited or hold the grid connection offer. Our separate guidance (Renewable Energy Good Practice guidance for the LGA) discusses these issues in more detail.

4.2.2 Potential Sources of Equity

Local authority reserves are the main source of local authority equity for projects, although some authorities have also developed Section 106 planning policy (s106) policy which has allowed them to collect funds from developers for green projects, and this is a further potential source of equity funding. Funds generated from this source will require spending within five years of collecting and must be used in compliance with the s106 policy.

The Government is currently consulting on wide ranging changes to the planning powers and infrastructure funding. This may result in significant changes to s106 contributions, or even its abolition. Any replacement is likely to be with a single, centrally calculated infrastructure charge from which local authorities will need to make all necessary infrastructure provisions to support the development.

Other forms of equity contribution might include use of resources without recharge, or the contribution of land or other assets to a project. Where land assets are involved there will be a need to demonstrate that the project provides best value.

When grant funding is available this can supplement or replace a direct equity contribution.

4.3 Sources of Grant Funding

Post European Union (EU) Exit the Government is likely to be the source of most grant funding available to UK local authorities. The Government typically offers grant funding in one of the following situations:

1. There is a need to prove concept and build investor confidence. This may be for research work or project pilots etc.
2. There is a need to stimulate a particular section of the market, in particular where there is market failure or market change is desirable, but not happening quickly enough.
3. To provide economic stimulus through the direct procurement of goods or services, but where the Government is unable to procure them directly.

Where grants are provided this is generally for a specific period and they are then closed or withdrawn. Examples of green grants currently available are set out in the sections below. These are not exhaustive, and it is important that a local authority looks for current grant funding when developing a scheme. There have also been further funding announcements in 'The Ten Point Plan for a Green Industrial Revolution' and whilst the specifics of how these funds can be accessed is not yet clear, the following additional funding was identified:

1. £200 million to create two carbon capture clusters
2. £500 million for hydrogen projects
3. £525 million for new large and smaller-scale nuclear plants
4. £1.3 billion for electric vehicle charging infrastructure
5. £582 million support for the purchase of ultra-low emission vehicles

4.3.1 Heat Networks

The Government is committed to achieving net-zero greenhouse gas emissions by 2050. Meeting this legal commitment will require virtually all heat in buildings to be decarbonised, and heat in industry to be reduced to close to zero carbon emissions. Presently, heat is responsible for a third of the UK's greenhouse gas emissions. As such, heat networks are a crucial aspect of the path towards decarbonising heat. In the right circumstances, heat networks can reduce bills, support local regeneration and can be a cost-effective way of reducing carbon emissions from heating.

There is already a growing heat network market in the UK which is supported by Government commitment. This is through the Heat Network Investment Project (HNIP) of up to £320m and the work of the Heat Network Delivery Unit (HNDU), supporting local authorities and project developers in the early phases of scheme development.

Heat Networks Delivery Unit

The Heat Networks Delivery Unit (HNDU) was established as part of the Government's decarbonisation strategy. The Unit provides funding and specialist guidance to local authorities who are developing heat network projects, supporting them through a number of project development stages. All local authorities in England and Wales can apply for support. Since its inception in 2013, HNDU has awarded support to over 250 schemes across over 150 local authorities in England and Wales, including £23m of grant funding.

HNDU grant funding can provide up to 67 per cent of the estimated eligible external costs of heat network development studies (where 'eligible external costs' means the money paid by the local authority to third parties to deliver the heat network

development stages). The local authority will need to demonstrate in their application that it has secured at least 33 per cent in match funding. HNDU grant funding can also provide up to 100 per cent of the cost of estimated externally procured project management support.

Since its inception, HNDU has run 9 funding rounds. The round 10 funding opened for applications on 1 May 2020 and will close on 31 December 2020. **Round 10 applications are batched into 8 waves.**

Heat Networks Investment Project (HNIP)

In tandem with HNDU, the **Government is investing up to £320m through HNIP** to support the commercialisation and construction of heat networks across England and Wales. This provision is through capital grants and loans.

To date, HNIP has announced up to £40m of funding for seven projects in the first two rounds of the scheme. The HNIP delivery partner (Triple Point Heat Networks Investment) has a dedicated investor relations team that engages with the investor community and broadens the reach of heat networks investment by raising third party finance for projects applying to HNIP.

4.3.2 One Public Estate – 8th Round

The One Public Estate (OPE) programme is an established national programme delivered in partnership between the Office of Government Property in the Cabinet Office, the LGA and the Ministry of Housing, Communities and Local Government (MHCLG). Their joint aim is to bring public sector bodies together, to create better places by using public assets more efficiently, creating service and financial benefits for partners and releasing land for housing and development.

The eighth round of funding is now open for applications with £10m OPE revenue grants for public sector land and property projects, including £2m of sustainable grant funding available. Proposals must describe how the project supports the delivery of major service transformation, release of land for housing and/or economic growth priorities across the partnership area. Submissions must also describe how the project contributes to both strategic Government priorities including net zero carbon and economic recovery. For more information, please visit **One Public Estate and Land Release Fund prospectus**.

4.3.3 Governments £1bn Public Sector Decarbonisation Scheme

BEIS launched the Public Sector Decarbonisation Scheme on 30 September 2020 which will be delivered by Salix Finance. The Scheme will allocate £1bn of grant funding for capital energy efficiency and heat decarbonisation projects within public sector non-domestic buildings including Government departments and arm's length bodies in England with the aim of delivering the following objectives:

- delivering stimulus to the energy efficiency and heat decarbonisation sectors, supporting jobs
- delivering significant carbon savings within the public sector.

The purpose of the grant scheme is to help make eligible buildings more energy efficient and install low carbon heating measures, for example, insulation, glazing, heating controls, and heat pumps (eligible technologies are split into 4 different categories). The cost to save a tonne of carbon (CO₂e) over the lifetime of the project must be no more than £500, which is automatically calculated by the support tool in the grant application form.

The scheme allows public sector bodies to apply for a grant to finance up to 100 per cent of the costs of capital energy-saving projects that meet the scheme criteria. The closing date for applications is dependent on the type of eligible organisation and varies between 9 November 2020 and 11 January 2021. Projects should aim to be completed by 31 March 2021. Projects with an early completion date will be prioritised and joint applications can be made. There is no minimum or maximum grant value.

The online application includes: project description, cost breakdown, expected carbon savings, and how the proposal meets the scheme criteria. Full guidance and details of how to apply are available on the **Salix website**.

Local Partnerships and the Greater London Authority own and run the **Re:fit 4 Framework** which is a procurement initiative for public bodies wishing to implement energy efficiency measures and local energy generation projects on their assets (see section 4.8.2). Current Re:fit Framework users can use the opportunity to review existing project briefs and develop projects eligible for BEIS grant funding, particularly projects that were previously discounted (such as insulation and glazing) because of long pay back periods (25 years plus). Local Partnerships can also support councils' preparation for grant applications in this respect.

These grants and the Green Homes Grants have been offered as part of a COVID-19 economic stimulus package. The 2019 Conservative Party manifesto committed to a large sum of public funding for energy efficiency in buildings than has currently been announced (£9bn as opposed to the £3bn announced to date). A further £1bn has been announced for next year in the Ten Point Plan for Green Industrial Revolution. It is possible that further iterations of this funding may become available in future years.

4.3.4 Public Sector Low Carbon Skills Fund

The Public Sector Low Carbon Skills Fund is also available alongside the Public Sector Decarbonisation Scheme. This will provide grants to help all eligible public sector bodies to source specialist and expert advice to identify and develop energy efficiency and low carbon heat upgrade projects for non-domestic buildings, before preparing robust and effective applications to the £1bn Public Sector Decarbonisation Scheme.

The allocation of this fund will be based on need. Eligible public sector bodies that do not have the capabilities and resources required to submit an effective and robust application for the Public Sector Decarbonisation Scheme will be prioritised.

The dates for making an application are:

- Project development support for Government: 30 October 2020
- Project development support for wider public sector bodies: 04 December 2020

Full guidance and details of how to apply are available on the Salix website.

4.3.5 ECO Flex Grants

Energy Company Obligation (ECO) is a Government energy efficiency scheme to help reduce carbon emissions and tackle fuel poverty. The aim of the scheme is to install energy efficiency measures in properties that are currently energy inefficient which in turn reduce households' fuel bills. ECO provides qualifying residents the opportunity for potential improvements such as a new central heating system, upgrades to the existing heating system and/or insulation measures. Under the ECO Scheme Flexible Eligibility arrangement, local authorities are permitted to identify and designate households as eligible under the Affordable Warmth Scheme. Further details of how to apply are available of the **OFGEM website**.

4.3.6 The Green Homes Grant

The Green Homes Grant (GHG) is part of a £2bn green package intended to upgrade homes, reduce carbon emissions and create jobs after the effects of the COVID-19 pandemic on the economy. The scheme which was launched on 30 September 2020 provides homeowners and private landlords with vouchers of up to £5,000 to install energy saving home improvements.

Improvements could include insulating a home to reduce its energy use or installing low-carbon heating to lower the amount of carbon dioxide produced in a home. The voucher must be used to install at least one primary measure:

Insulation

- solid wall insulation (internal or external)
- cavity wall insulation
- under-floor insulation (solid floor, suspended floor)
- loft insulation
- flat roof insulation
- pitched roof insulation
- room in roof insulation
- insulating a park home

Low carbon heat

- air source heat pump
- ground source heat pump
- solar thermal (liquid filled flat plate or evacuated tube collector)
- biomass boiler
- hybrid heat pump

As long as one primary measure is installed, the voucher can be used to help cover the cost of secondary measures which include windows and doors and heating controls and insulation. All installations funded by a (GHG) must be carried out by a Government Accredited installer for that particular product. Vouchers must be redeemed, and improvements completed by 31 March 2021. (**Full details of eligibility criteria and how to apply, including a link to search for accredited installers**).

Up until 1 September 2020, local authorities in England could submit bids for funding (under the Green Homes Grant Local Authority Delivery scheme) to improve the energy efficiency of the homes of low-income households in their areas.

4.3.7 Tree planting

Urban Tree Challenge Fund (UTCf) was developed in response to HM Treasury releasing £10m in the 2018 Autumn Budget announcement for planting trees in urban areas in England. It has provided funding to support the planting an establishment of large and small trees in urban and per-urban areas in England. Both rounds 1 and 2 have now closed for bids but It is likely to come back for another round as it has been hugely popular.

4.3.8 Woodland creation funding and grants

There are various sources of funding available for woodland creation in the UK, which are summarised below. Further information can also be found at **Responding to the climate emergency with new trees and woodlands**.

Woodland Creation Planning Grant (WCPG)

The Woodland Creation Planning Grant (WCPG) provides funding to help cover the costs of producing a UK Forestry Standard (UKFS) compliant woodland creation design plan, which can support applications to other funding sources for woodland creation, such as the Woodland Carbon Fund (see below).

This grant contributes to the costs of gathering and analysing information needed to make sure that any proposal for productive multi-purpose woodland (over 10 hectares) considers impacts on biodiversity, landscape, water, the historic environment and local stakeholders. The grant scheme operates in two stages, which in total will provide £150 per hectare, and up to £30,000 per project.

Woodland Carbon Fund

The Woodland Carbon Fund (WCF) supports the planting of productive, multi-purpose woodlands to store carbon. It also provides opportunities to work in partnership on landscape scale projects to open up public access to woodland and increase environmental benefits.

The scheme offers landowners and local authorities capital funding to help with the cost of planting trees, protection items (such as tree guards, fencing and gates), and the creation of forest roads or other infrastructure for access or maintenance.

As with the WCPG, applications are subject to a minimum size requirement of 10 hectares. Applicants can choose from two different funding rates:

- The 'standard' planting rate (for most proposals) which covers 80 per cent of the capital costs for establishment, capped at £6,800 per hectare; or
- The 'priority places' planting rate (for proposals close to certain urban areas that offer public pedestrian access), which covers 100 per cent of the above costs, capped at £8,500 per hectare.

After the woodland is established, applicants can also receive £1,000 per hectare in Year 5. At the time of writing the WCF is open to new applications until March 2021.

Woodland Carbon Code (WCC)

The **Woodland Carbon Code** is the national standard for verifying and validating carbon savings from afforestation projects in the UK. Accredited schemes have the opportunity to sell 'carbon credits' which represent CO2 savings generated by the new woodland. This can provide an additional source of revenue if, for example, a project is not cost-effective with WCF funding.

Woodland Carbon Guarantee (WCaG)

In November 2019 the Government announced a new £50 million scheme, the Woodland Carbon Guarantee, aimed at promoting afforestation, whereby the Government would agree to purchase WCC carbon credits from a participant at an agreed price set by auction. Instead of a grant or loan towards the cost of woodland creation or maintenance, this scheme offers WCC participants a guaranteed income over a 35-year period, although they may choose instead to sell carbon credits on the open market.

Countryside Stewardship Woodland Creation Grant

Like the WCF, the **Countryside Stewardship Woodland Creation Grant** is intended to help fund capital works associated with woodland creation. It provides a one-off payment for trees and associated protection items. Successful applicants have two years in which to purchase and install these items. After the final capital claim is paid, applicants can apply for an additional 'Woodland Management Grant' which helps to cover the cost of ongoing maintenance of trees after they have been planted, at £200 per hectare per year for 10 years.

At the time of writing the Countryside Stewardship scheme only offers funding for projects that are agreed and signed prior to 31 December 2020.

4.3.9 Green vehicle related funding

The **Workplace Charging Scheme (WCS)** is a voucher-based scheme that provides support towards the up-front costs of the purchase and installation of electric vehicle charge-points, for eligible businesses, charities and public sector organisations.

Local Authorities can also apply for funding to help with the costs of procurement and installation of on-street charging points for residential use. The Office for Low Emission Vehicles (OLEV) has allocated £20m of funding for 2020-21. Local authorities are able to receive a grant to part fund (75 per cent) of the capital costs. OLEV will provide up to £6,500 per chargepoint installation, and each project should not exceed more than £100,000 in OLEV funding (**more information**).

The Department for Environment Food & Rural Affairs (DEFRA) **Air Quality Grant Programme** provides funding to eligible local authorities to help improve air quality. It is focused on air quality issues (such as NOx and particulates) and supports a wide range of initiatives such as establishing low emissions zones, retrofitting fleets with low emission technologies and traffic measures. It has also funded electric vehicle chargepoint infrastructure.

4.3.10 Active travel and cycles lanes

Some sources of green funding, which flow from the Government's 2018 Clean Air Strategy, are as follows:

- The **Bus Services Act 2017** (PDF), which includes a range of measures to improve bus services through franchising and better partnership working. Local authorities and bus operators are encouraged to agree a package of improvements to introduce bus priority measures to reduce idling and journey times, or to introduce Ultra Low Emission Vehicles (ULEVs) along key routes. £48m was allocated to the Ultra-Low Emission Bus Scheme for local authorities and bus operators to purchase ultra-low emission buses and supporting infrastructure. Winning local authorities and bus operators for the final round of funding (2020/21) have already been announced
- The **Cycling and Walking Investment Strategy** (PDF) published in 2017 identifies £1.2bn of funding to be invested in cycling and walking from 2016 to 2021. This has already included £101m made available through the Cycle City Ambition programme to improve cycling infrastructure in eight cities, and £80m to support local projects to improve safety and encourage cycling
- In February 2020 the Government pledged £5bn over the next five years to improve bus and cycling services in England. £2bn of the funding has been allocated to cycling and walking to create new bike lanes, and to enable local authorities to make significant changes to road layouts to give more space to cyclists and pedestrians. Part of the remaining funding will go towards new priority routes for buses and 4,000 zero carbon buses in England and Wales. In September 2020 the Government outlined that it remained committed to a national bus strategy which it is aiming to publish by the end of the 2020 calendar year
- Local Enterprise Partnerships. The Government will have invested £12bn in the Local Growth Fund (LGF) by the end of the programme in March 2021. Local Enterprise Partnerships working in conjunction local authorities and businesses, were able to use the fund for local transport infrastructure improvements, prioritised according to local needs. As a member of the EU, the UK received structural funding worth about £2.1bn per year. Now that the UK has left the EU, this funding will cease. In order to replace it, the Government has pledged to set up a Shared

Prosperity Fund. The Government is still to publish its consultation on the fund. Similarly, it is not yet known if there will be a successor scheme to the LGF

- The £1.7bn Transforming Cities Fund provides investment on public transport and cycling and walking infrastructure in some of England's largest cities, aimed at reducing congestion and increasing productivity. Please note that this funding has now all been allocated.

The national planning system and greenspace mapping are examples of further programmes which benefit cycling and walking infrastructure and will directly result in increases to cycling and walking activity. The Healthy New Towns programme, supported by NHS England and Public Health England, was launched on 1 July 2015.

The Community Infrastructure Levy (CIL) allows local authorities in England and Wales to raise funds from developers undertaking new building projects in their area in order to help provide vital infrastructure, based on local priorities. The levy can be used to fund a wide range of infrastructure, including transport, parks and green spaces, cultural and sports facilities. The levy is a set charge on relevant new developments based on the amount of gross internal floor space. The Government's current **Planning White Paper** proposes the merger of CIL and s106 systems for securing developer infrastructure contributions.

The Cycle to Work Scheme is a tax-efficient, salary-sacrifice employee benefit, introduced in the 1999 Finance Act, which provides a way of encouraging more adults to take up cycling. Employers are able to loan cycles and safety equipment to employees up to the value of £1,000. At the end of the loan, an employer can offer the cycle for sale to the employee, but at the full market value. Electric vehicle salary sacrifice schemes also exist which enable an employee pay for an electric car each month using their gross salary. It's the same as other salary sacrifice schemes, such as childcare, cycle to work schemes or pension contributions.

4.3.11 Flood defence

Lead local flood authorities (unitary authorities or county councils) have the lead operational role in managing the risk of flooding from surface water and groundwater. In areas with no district council, they also have the lead role in managing flood risk from 'ordinary watercourses', for example any watercourse that isn't a main river.

A flood risk management authority can apply for grant-in-aid (GiA) to fund Flood and Coastal Erosion Risk Management (FCERM) projects. A highway authority or water authority can only apply for a GiA for projects to reduce flood risk which are outside its normal area of responsibility. More information can be found on the **gov.uk website**, alongside the **documents to apply**. Further details on funding arrangements can be found on the **LGA website**.

4.3.12 Peat/habitats improvements

The UK Peatland Strategy identifies a target for 2 million hectares of peatland to be in good condition, under restoration, or sustainably managed by 2040. In the March 2020 budget, the Government announced a £640m Nature for Climate Fund to plant more than 40 million trees and restore 35,000 hectares of peatland in England.

The fund is to be used to dramatically increase the rates of tree-planting in England along with funding more research into the most appropriate species to plant across the country, a scaling up of the nursery sector to grow saplings, establishing new partnerships with landowners, and increased planting rates on sites. As part of the budget the Government also announced a Nature Recovery Network Fund of £25m to support habitats and species action in nature recovery areas.

A policy paper published by the Government on 19 August 2020 (**Environment Bill – environmental targets**) outlines that the Government is still developing its plans to deploy the fund over the current parliament. The Nature Recovery Network Fund is also being established and will be supported by measures in the Environment Bill.

4.4 European funding

At the time of writing there are still some EU funding streams available, but these will be short lived and end with the termination of the EU Exit transition period. These funds have not therefore been included in the scope of this guidance.

Debt

5.1 Forms of Debt

Debt funding comes in many forms and from a wide range of providers. However, it can be split into forms which are secured against a particular asset and forms which are secured against the activities of the local authority.

Securing funding (usually either Public Works Loan Board or a municipal bond) against the local authority reduces the level of overall lending risk and therefore provides access to lower rates of interest.

There are further market interventions which can be used to reduce risk and therefore reduce interest rates and increase the availability of debt. These generally take the form of providing surety for a debt or guaranteeing the availability and value of income streams.

Local authorities are able to access debt in a variety of different forms. The selection of one form of debt over another will be specific to both the local authority and the project.

5.2 Public Works Loan Board

The Public Works Loan Board (PWLB) is one of the main lenders to local authorities and accounts for around two thirds of local authority debt. Since the introduction of prudential borrowing, the PWLB has normally offered the lowest rate of interest available to local authorities and is provided on a more flexible basis than most private sector funding. Lending is structured around the statutory provision of the local authority as opposed to specific projects. PWLB borrowing is automatically secured on the revenues of the local authority rather than by reference to specific project revenues, assets or collateral. This enables lower interest rates and entails significantly less external due diligence on individual projects than other forms of borrowing.

The Government published new lending terms for PWLB on 26 November 2020, primarily aimed at introducing proportionate and equitable ways to stop local authorities investing in commercial assets primarily for yield.

The new lending terms introduce specific requirements:

1. Submission of a high-level description of capital spending and financing plans for the following three years, including their expected use of PWLB.
2. The s151 officer to confirm that there is no intention to buy investment assets primarily for yield during the next three years as part of that submission and when applying for a new loan.
3. Lending to be for the purposes of service delivery, housing, regeneration or preventative action. The Government has issued guidance rather than developing strict definitions in recognition of the complexity of the sector.

PWLB was used by Warrington Council in the acquisition of two solar farms in Yorkshire as set out in Case Study 1 below.

Case study 1 - Warrington Borough Council

Carbon accounting practice does not allow local authorities to buy a 'green tariff' electricity and claim the carbon benefits, instead the grid supplied intensity rate applies. If, however a local authority generates its own renewable electricity from a

directly owned or identified source then it is possible to account for the carbon savings, provided additionality (i.e. new provision) can be demonstrated. Most local authorities are large users of electricity and in 2018 councils collectively spent over £863m with the big six energy companies.

As energy is one of the largest controllable overheads in council buildings, many councils have looked at offsetting the retail cost of electricity and to generate income through energy generation. One such example is that of Warrington Borough Council which acquired two solar farms to 'sleeve' the power back to themselves, and in doing so benefit from price certainty on their wholesale electricity costs.

The first, a hybrid solar farm consists of a 34.7MWp solar farm plus a 27MW battery storage facility. The project is located near York and completed construction in December 2019 by the Council's contractor Gridserve. The second, a 25.7MWp solar farm in Hull was completed in spring 2020 (also by Gridserve). Both projects were developed subsidy free with electricity from the York solar farm being sold on the open market whilst the Hull site supplies all the Council's own energy needs.

The Council has put a contract in place with Gridserve to operate and maintain both projects over their lifetimes. The Council funded this through a PWLB loan, with loan payments being supported by a Power Purchase Agreement (PPA) where the Council signed a long-term agreement to buy the electricity generated by the Hull solar park to power its own operations. This secured a revenue stream for the project to get financed, without the need for a Government subsidy, and guarantees zero carbon electricity is being used by the Council.

5.3 Municipal Bond Agency

UK local authorities have the power to issue bonds (an IOU that can be traded on the financial markets) but it is not currently a common activity due to the cost, time and fees involved relative to the cost and flexibility offered by the PWLB. Any authority wishing to issue a bond would need to have a large enough borrowing requirement to support the costs and administration involved. Typically, this would include securing a credit rating and appointing an agency to handle the underwriting and sale of the bonds. A small number of authorities have obtained credit agency ratings, which would allow them to borrow on the open market.

The Municipal Bond Agency was established by the local authority sector to provide easier access to the bond market and provide an alternative debt finance source to the PWLB that lay outside the direct control of Government with regards to interest rate charges.

5.4 Community Municipal Bonds

Crowdfunding is a process by which people provide money to projects, companies or organisations via a website or platform. Depending on the nature of the financial arrangement, people receive a return that is either financial (investment-based) or non-financial (donation-based).

A Community Municipal Bond structure is a new model of public sector crowdfunding, which offers the potential of providing low cost capital for local authorities while also delivering socially and environmentally positive outcomes. This structuring provides local authorities with the ability to raise money more locally for green projects and provides a direct connection between their communities and new green infrastructure. Increasingly the rates and terms for community lending are close to those offered by PWLB.

West Berkshire Council was the first local authority in England to launch a Community Municipal Investment (CMI) bond (see case study below). More recently (August 2020) Warrington Borough Council launched a CMI bond (via ethical investment platform Abundance Investment) to raise £1m to help finance the construction of a solar farm near Cirencester and its co-located battery storage facility (a 24MW hybrid project). The bond has a five-year term and will pay investors 1.2% per year, on a twice-yearly basis. The minimum investment was just £5. Warrington Borough Council is one of only a few UK councils to have a credit rating from Moody's (international rating agency). The bond raise closed after reaching its £1m target, attracting over 500 investors from across the UK, with an average investment of almost £2,000 each.

Both the West Berkshire Council and Warrington Borough Council CMIs were issued by the council corporate body and administered by Abundance Investment, with resident and general public investors purchasing the bonds. Section 6 also includes a case study highlighting other Warrington Borough Council renewable energy investments.

Abundance Investment is particularly active in this sector and has indicated through research that CMIs have the potential to unlock a multi-billion market of retail investment money that could be directed into local authority funding via the Community Municipal Bond approach. Furthermore the research outlined that investment-based crowdfunding had the potential to provide capital on terms which are similar to or better than the PWLB and through a process that emulates the ease of use of PWLB, while also offering the potential to deliver significant wider benefits to local communities. More information can be found [here](#).

Case Study 2 – West Berkshire Council – Community Municipal Bond

UK's first local authority green bond

West Berkshire Council has looked to tackle the climate emergency by investing in its first Community Municipal Investment (CMIs). The Council unanimously declared a climate emergency in July 2019 and approved an environment strategy to take action. The Council offered residents and community groups an opportunity to invest directly with them to help build a greener future for the district.

The Council was seeking to raise £1 million to fund new rooftop solar power on Council-owned buildings around West Berkshire and to help deliver its ambitious target of making the district carbon neutral by 2030. The sites included:

- A storage building at Greenham Common, an important open space for local people
- The Council's own HQ at Market Street in Newbury
- The Phoenix Resource Centre in Newbury, which provides services for adults with learning disabilities, physical disabilities, frailty and dementia
- Schools in Aldermaston and Burghfield Common
- Willink Leisure Centre at Burghfield Common

About the Community Municipal Investment

Individuals both in and outside of West Berkshire were able to invest from as little as £5 to support specific projects that align with the Council's declaration of a climate emergency. The investment is a Community Municipal Investment (CMI) which is a UK first. A CMI is a bond or loan mechanism issued by a council directly to the public. The bond was issued in partnership with the online crowdfunding platform Abundance Investment, which is regulated by the Financial Conduct Authority. CMIs can be used to supplement, diversify or replace sources of borrowing to fund specific infrastructure projects, or to refinance existing debt.

The investment offered returns of 1.2 per cent per year over a 5-year term, with capital returned in instalments across the investment term. Interest and capital repayments can be withdrawn or reinvested into new investments. Investors can look to sell their investment if an exit is required before the full-term length. The CMI successfully closed reaching its £1m target five days ahead of the proposed deadline. The CMI attracted 640 investors who each invested an average of around £1,500. Just over a fifth of investors were West Berkshire residents.

About Abundance

Abundance Investment works with businesses, Government and financial services to facilitate investment in green and social infrastructure and connect private investors with innovative projects and companies. Abundance Investment is a founding member

of the UK Crowdfunding Association (UKCFA) and has pioneered the development of public sector investment crowdfunding within the UK.

5.5 UK Sovereign Green Bond Update

Green bonds are one of the fastest-growing areas in the Environmental, Social and Governance (ESG) investing industry. Green bonds provide a tangible and measurable way to address climate change by leveraging the power of private sector investment. They are used by countries and companies to finance environmental projects such as renewable energy or better public transport.

Poland became the first sovereign nation to issue a green bond in December 2016. In the past year, an increasing number of states have started issuing sovereign green bonds.

The Netherlands (see case study below), Sweden and Germany are amongst the most recent nations to do so.

Germany issued its first green bond on 2 September 2020. The 10-year bond (EUR 6.5 billion) was more than five times oversubscribed by investors, who placed over EUR 33 billion in orders. The proceeds have been earmarked to go towards sectors including transport, energy and agriculture. The green bonds are “twin bonds”, issued alongside conventional federal bonds with a similar maturity and rate of return. They include a unique feature where investors will be able to swap the green bonds for an otherwise identical conventional bond, to help mitigate any liquidity concerns. The EU has plans to create up to 225 billion euros of green debt, with Germany planning a second green bond issue before the end of the 2020 calendar year.

The 2018 report to Government by the Green Finance Taskforce (**Accelerating Green Finance**) recommended (Recommendation 23) that the Government issue a Sovereign Green Bond. This should be of the order of the French sovereign green bond programme, which has raised EUR 9.697 billion, and be considered as one of the measures of a comprehensive UK Green Capital Raising Plan. On 9 November the Chancellor of the Exchequer announced in the House of Commons that the UK will issue its first sovereign green bonds in 2021 as part of the Governments Covid-19 stimulus planning.

The UK is the host of the next round of United Nations climate change talks (known as COP26) in November 2021. The energy minister (Kwasi Kwarteng MP) who is also responsible for the Governments green finance strategy has indicated in recent webinars and conferences that the Government continues to monitor the case for the introduction of new debt financial instruments and it is hoped there would be movement on green gilts before COP26. It is understood that the former Bank of

England governor (Mark Carney) who is advising the Government on climate finance is also supportive of green gilts. It is likely that any green gilt issuance will have to be part of a wider fiscal policy in terms of raising money in the markets.

Green finance is also expected to be raised at COP26 and is already been discussed in relation to the economic recovery from the COVID-19 pandemic.

Case Study 3 below sets out how a Sovereign Green Bond has worked in the Netherlands.

Case Study 3 – Dutch Sovereign Green Bond

The Dutch Treasury State Agency (DTSA) issued a bond on 21 May 2019. The auction to purchase the bond reached over EUR 1 billion in just over 90 minutes, even though DTSA was looking for funding of just under EUR 6 billion. The bond will ‘mature’ (pay back) in 2040.

The proceeds will go to onshore solar electricity generation facilities; offshore wind energy; water infrastructure (engineered infrastructure for flood defence and water distribution; nature-based water infrastructure including flood defence); low carbon buildings (residential property energy efficiency upgrades) and low carbon land (public) transport infrastructure. What is interesting about this mix is that it includes projects with direct financial returns (e.g. energy), financial savings (e.g. efficiency gains) and public benefit returns (flood defence). It is also a mix of low carbon, engineering and nature-based solutions. This packaging of different projects with different returns is an important selling point for a bond.

The Netherlands was the first EU nation to issue a Certified Sovereign Green Bond. Below is a summary of the use of proceeds:

- Solar energy
- Onshore solar electricity generation facilities
- Marine renewable energy
- Offshore wind energy
- Water infrastructure
- Engineered water infrastructure
- Flood defence
- Water distribution
- Nature-based water infrastructure including flood defence
- Low carbon buildings

- Residential property energy efficiency upgrades
- Low carbon land transportation
- Public passenger transport infrastructure

5.6 Green Investment Bank Update

The energy minister (Kwasi Kwarteng MP) has presented at a number of green finance webinars/conferences, most notably the Westminster Forum webinar – “Next steps for green finance in the UK”. During the conference, the Minister outlined that the Government is still discussing plans to create a green investment bank to promote the country’s move to eliminate greenhouse gas emissions by 2050.

Action to support a Net Zero Development Bank has also been made through **a new report** from the London School of Economics and University of Leeds, produced in association with the All-Party Parliamentary Group (APPG) on Sustainable Finance, UK100 and HSBC. The report assesses how UK policymakers can engage the financial sector to make good on the UK’s 2050 net-zero target and their commitment to ‘levelling up’ regional economies, in the context of COVID-19 and Brexit.

A key recommendation of the report is the creation of a UK National Investment Bank with an explicit sustainability mandate, which could be called the Net Zero Development Bank. More broadly, the report authors and supporters would like to see ministers make a strategic commitment to a just transition, including plans for mobilising public and private sector finance to deliver place-based projects which tackle both environmental and social challenges.

Further announcements were made in the **Spending Review 2020** and **National Infrastructure Strategy** on the creation of a National Infrastructure Bank. It will support infrastructure projects to help meet Government’s objectives on economic growth, levelling up and transitioning to net zero and, will be able to lend to local and mayoral authorities. The bank is set to be launched in spring 2021 and will replace the UK’s participation in the European Infrastructure Bank following the country’s departure from the European Union.

5.7 Green Lenders

5.7.1 Green Investment Group (GIG)

In 2012 the UK Green Investment Bank plc (GIB) was launched by the Government. It was the first institution of its type in the world – a publicly funded bank designed to mobilise private finance into the green energy sector. Between 2012 and 2017, the

GIB helped to finance more than £12bn of UK green infrastructure projects. In 2017, Macquarie acquired GIB from the UK Government and combined with Macquarie Capital's renewables team to create one of the world's largest teams of specialist green infrastructure developers and investors, the Green Investment Group (GIG).

GIG's mission is to accelerate the green transition and primarily supports energy efficiency, waste and bioenergy, offshore wind and onshore wind projects. GIG uses innovative financial products to deploy new renewable technologies that have led to new and innovative ways of financing green projects and technologies. Another example of GIG activity is the Green Loan programme, designed for local authorities to increase the installation of LED technology in the UK streetlighting market as well as help councils reduce their streetlight energy bills. The loan finances capital expenditure for LEDs and central management systems for smart LED systems. It offers local authorities a low fixed-rate financial arrangement over a period of up to 20 years with a sculpted loan repayment option. The 2020 Progress Report highlights that GIG has provided climate financial advisory services to local government organisations including Hertfordshire County Council.

5.7.2 Other debt providers

There are a range of other debt providers specialising in green finance from whom local authorities could borrow money if considered prudent and value for money to do so. The Capital Financing Requirement (CFR) of a local authority is the amount of capital expenditure that needs to be financed through either external borrowing or internal cash balances. Typically, local authorities take a corporate portfolio approach to borrowing with reference to the overall CFR rather than a project level approach. As such, any new borrowings are entered into having taken account of interest rate projections and the maturity profile of the existing portfolio. However, circumstances may warrant project level borrowing, particularly within an incorporated joint venture partnership or where wider social objectives are being sought.

5.8 Government supported debt financing and lending support mechanisms

5.8.1 Salix

Salix Finance Ltd provides Government funding to the public sector to improve energy efficiency, reduce carbon emissions and lower energy bills. Salix is a non-departmental public body, owned wholly by the Government. Salix is funded by BEIS, the Department for Education, the Welsh Government and the Scottish Government. Salix is able to fund energy efficiency projects across local authority estates, with over 100 energy efficiency technologies supported, including boilers, combined heat and power plant, insulation, LED and lighting upgrades. The funding is provided via an interest-free loan which is paid back through the predicted savings on energy usage.

Eligible parts of estates include:

- car parks
- communal areas of social housing
- council offices and operational buildings, such as depots and warehouses
- external building lighting, floodlighting and spot lighting
- libraries, leisure and sports centres
- museums, galleries and theatres
- parks and playgrounds
- public transport shelter and footpath lighting
- street lighting, traffic lighting, bollards and street furniture.

To be eligible for funding in England, projects must comply with the following criteria:

- the loan is usually repaid from energy savings within a 5-year period (projects exceeding this will repay more per annum than the energy savings or can be part funded by the authority using other funding sources)
- the cost of CO₂e must be less than £191 per tonne over the lifetime of the project. Salix can part fund projects which do not fully meet these criteria.

Salix offers two types of funding in England: Recycling Funds and the Salix Energy Efficiency Loan Scheme (SEELS) which are summarised below:

Salix Energy Efficiency Loans

- one-off, interest-free loans to support project costs
- project compliance calculated based on estimated savings (projects can be part funded by other local authority funding if they exceed criteria)
- loan paid back through estimated savings on energy bills.

Recycling Funds

- match funded by Salix and the Public Sector Body (PSB)
- ring-fenced, self-sustaining fund held by the PSB
- accumulated savings reinvested in future projects.

As of 31 March 2020, Salix had funded 18,780 projects with an investment of £971m, delivering annual financial savings of £203m. There are also more than 80 case study examples showcasing how different energy efficient technologies have been funded by Salix, which can be found on the Salix website. Case Study 4, below, provides a typical example of how Salix can work in conjunction with energy performance contracting to deliver energy efficiency measures.

Application guidance notes, which also includes information on assurance can be found **here**. PSBs are requested to update Salix regularly on achievement of key milestones during the delivery of the project. Once projects reach completion, the PSB will be asked to submit to Salix a signed and authorised Completion Certificate for the final costs of the works. This should be supported with documentation evidencing costs to a reasonable level of the full amount.

Case Study 4 – Calderdale Council’s Re:fit Programme with Salix finance

Calderdale Council delivers its services from over 300 buildings and, like all local authorities, is under increasing pressure to reduce its costs. In 2017 the Council took steps to cut carbon emissions from its buildings through implementing a Re:fit programme, delivered across two phases.

The council, supported by Local Partnerships, ran a mini-competition with SSE Contracting Ltd appointed as the contracting partner to deliver the energy efficiency measures. The council initially focused on improving the energy efficiency of fourteen of its long term holding buildings including Halifax Town Hall, several leisure centres, a stadium, a theatre, a crematorium, a residential facility, day centres and general accommodation, which all offered viable opportunities to proceed with energy efficiency investments.

Phase 1 delivered in 2017 included upgrading LED lighting, replacing inefficient boilers, improving control of heating systems and installing electricity-generating solar panels on roofs. This first phase was fully funded by Salix, blended with PWLB borrowing to keep the Salix repayment to 5 years. The first phase of works allowed the Council to make energy savings of £156,000 a year and an 843-tonne annual reduction in carbon dioxide emissions.

The second phase delivered in 2018/19 achieved further reductions of £113,000 and 328 tonnes of CO₂ annually. This involve investment in energy-saving measures at another 14 Council buildings including Bankfield Museum, Shibden Hall, Hebden Bridge Library, Mixenden Outdoor Centre and Todmorden Market.

5.8.2 Renewable electricity generation support mechanisms

In order to encourage further deployment of renewable electricity generation the Government has provided two mechanisms to assist with the funding of renewable energy generation projects. These are both instruments which address potential

market failure, as opposed to sources of finance. These instruments are of interest as they support investor confidence and therefore access to debt finance.

Contracts for Difference (CfD)

The Contracts for Difference (CfD) scheme is the Government's main mechanism for supporting new, large scale, low carbon electricity generation projects in the UK. On 24 November 2020 the Government announced that there will be a 'pot 1' allocation of up to 12 GW in the CfD auction due to take place in late 2021. Under the CfD generators agree a fixed price for each unit of electricity generated through an auction process. Where the market price exceeds the price agreed in the auction (strike price) the generator pays money back to the Government, if the wholesale price is lower than the strike price then the Government makes up the difference. The purpose of CfD is to provide price certainty without significant subsidy in order to support investor confidence.

Obtaining a CfD is based on a competitive bidding process and there are no guarantees that any particular scheme will be successful. Pricing is generally at or below the current wholesale electricity price. Eligible technologies include onshore wind (>5MW), solar photovoltaic (PV) (>5MW), energy from waste with CHP, hydro (>5MW and <50MW), landfill gas, sewage gas. The scheme sets a cap on for the auction process with bids being accepted from the lowest first until the cap is reached. All schemes are then set at the price paid for the last scheme to be accepted before the cap is reached (i.e. all schemes regardless of their bid level receive the highest accepted price).

Even where CfDs are available it is likely there will be pre-qualification requirements which will include land ownership, a valid grid connection and planning consent. The application process and calculating the value to bid in the auction are complex and therefore specialist advice should be sought before CfD income is considered in any business case.

Smart Export Guarantee Scheme

On 1 January 2020, the Government introduced the Smart Export Guarantee (SEG) scheme, which will enable anaerobic digestion, hydro, micro-combined heat and power (with an electrical capacity of 50kW or less), onshore wind, and solar photovoltaic exporters with up to 5MW capacity to receive payment for exported electricity. The SEG scheme replaces the Feed in Tariff (FiT) scheme that closed in Q1 2019. The purpose of the scheme is to guarantee a market for small scale renewable energy generation projects which export power directly to the grid.

Under the SEG scheme, all licenced energy suppliers with 150,000 or more customers must provide at least one Smart Export Guarantee tariff. The Government has set out that in order to provide space for the small-scale export market to develop, there will not be any specified minimum tariff rate, other than that a supplier must provide payment greater than zero at all times of export. The SEG licensees therefore decide how they want their SEG export tariff to work in terms of its rate, type and length. Storage is also eligible to receive export payments, although suppliers will be able to exclude 'brown' electricity from those payments and require the generator to put metering in place that isolates 'green' exports.

Under the scheme, exported power must be metered, with a meter capable of reporting exports on a half-hourly basis, and meters must also be registered for settlement – though the SEG design is flexible and does not necessarily require half-hourly readings.

For PV, wind and micro-CHP installations up to 50kW, generators will be asked to demonstrate that their installation and installer are suitably certified. Ofgem have indicated that an installation certificate such as a Microgeneration Certification Scheme (MCS) certificate (or equivalent) is sufficient to demonstrate this. For all other installations, generators will be asked to demonstrate that the installation is suitably certified. The Government does not plan to require a central register of SEG installations.

Full details of the Ofgem SEG guidance (PDF)

5.9 Contractually guaranteed returns

In addition to Government backed schemes which guarantee returns or provide additional support to investor confidence there are also market schemes which guarantee returns and transfer contractual risk to a third party. These mechanisms do not directly provide debt finance but can support easy access to finance as the third party is in effect providing a surety to the debt provider. Examples of this would be Energy Performance Contracts or the Re:fit framework.

5.9.1 Energy Performance Contracting (EPC)

A priority for a local authority looking to fulfil its environmental pledges is to tackle energy demand and carbon emissions across the estate. If not already doing so, councils could consider using an Energy Performance Contracting (EPC) framework, which offers a tangible first step towards a green recovery.

Energy performance contracting has become a common approach for organisations to retrofit existing buildings with energy-saving and energy-generation measures that improve the energy performance of buildings, thereby reducing carbon emissions and achieving substantial annual cost savings. These savings are guaranteed by the contractor who designs and implements Energy Conservation Measures (ECM) and guarantees the level of energy savings, thus offering a secured financial saving over the period of the agreement.

This savings stream is used to support borrowing as the basis to fund the cost of improvements and services from the provider. Once the costs have been repaid, the public sector buyer (Contracting Authority) would be able to keep the full savings generated from the improvements and may also be able to gain financial benefits from the start.

5.9.2 Re:fit

The Re:fit EPC framework is a procurement initiative, jointly owned by the Greater London Authority and Local Partnerships. It enables public bodies to implement and accelerate energy efficiency measures and local energy generation of their assets, buildings and land. It helps improve the energy performance of local authority assets and, as a result, guarantees substantial annual cost savings and the reduction of carbon emissions (see Calderdale Council case study in section 6).

Programmes supported by the Re:fit framework, such as upgrading LED lighting and replacing boilers, represent quick wins for local authorities embarking on the pathway to net-zero. For organisations that have already made progress, there is an opportunity to implement deeper retrofit measures such as fabric improvements and the decarbonisation of heat.

The fourth Re:fit framework, Re:fit 4, was launched at the end of April 2020. The Framework has been developed for use with heat networks and other larger-scale renewable energy projects in mind, to specifically help authorities develop and deliver key climate response activities. Crucially, the use of an EPC Framework such as Re:fit provides local authorities with a means to grapple with longer-term solutions to more difficult challenges such as the decarbonisation of transport, and adaption.

5.10 Advantages/disadvantages of the forms of debt

Table 2 below summarises the key advantages/disadvantages of the forms of debt considered in this chapter that are available to local authorities.

Table 2: Characteristics of debt and other instruments

Form of debt	Cost of borrowing	Borrowing amount	Security	Proposed due diligence	Comments
Public Works Loan Board	Depends on lending term. 25 Year Annuity Rate (as at 08/10/20) 2.56 per cent	100 per cent	Lending against revenues of the local authority	Extensive board and council member approval process for project. The PWLB application process is currently deliberately permissive. If the finance director of the applicant authority can confirm that they are acting in line with statute and can afford to repay the loan from their revenues, the PWLB will issue the loan within two working days.	Lending cannot be primarily for yield and must support local authority objectives in service delivery, housing, regeneration or preventative action, and will require submission of a three year capital plan, together with s151 officer confirmation that lending primarily for yield is not included.
Green Lenders	Most expensive form of lending at rates equivalent to private sector projects	Typically, up to around 80 per cent of a steady state project	Lending against the project assets	Extensive technical, financial and legal due diligence undertaken by green lender.	Use of green lenders likely to be specific to both the local authority and the project.

Form of debt	Cost of borrowing	Borrowing amount	Security	Proposed due diligence	Comments
Crowdfunding/ Community Municipal Bond	Potential to provide capital on terms which are equal to or better than PWLB – see comment	Potential for 100 per cent, although local authority CMLs above £1m not yet tested	Securing funding against the local authority credit rating	Extensive board and council member approval process for projects. Process that emulates the ease of use of PWLB	West Berkshire Council and Warrington Borough Council have both issued CMLs at £1m - investment offers returns of 1.2 per cent per year. Swindon Borough Council raised £4.2m through the UKs first local authority solar bonds which provides confidence that higher value bonds can be achieved. Sovereign green bonds issued in 2020 all oversubscribed.
Salix	Interest free loan	100 per cent no-maximum loan value but amount dependent upon payback period	Lending against the local authority	Compliance tool and business case to assist in application. Responsibility and competence requirements placed on local authority.	Assurance/audit process post project delivery

Form of debt	Cost of borrowing	Borrowing amount	Security	Proposed due diligence	Comments
Renewable electricity generation support mechanisms					Addresses potential market failure, as opposed to sources of finance. Support investor confidence and therefore access to and price of debt finance.
Energy Performance Contracting	Depends on payback period. Salix – interest free loan, PWLB loan rate if part funded.	100 per cent	Lending against the local authority	High Level Appraisal and Investment Grade Proposal. Framework owner benchmarking and assurance throughout procurement process.	Performance Guarantee in place with delivery contractor. Shortfall payments to the local authority in the event of any contractor underperformance.

Financing green projects

6.1 What is a green project?

Green projects deliver environmental benefits and address the causes and impacts of climate change. In order to tackle climate change, we need to do the following:

- use less resources
- stop burning fossil fuels at the point of use and use electricity (or potentially hydrogen) instead
- generate all electricity from renewable sources, balancing services and smart grids
- sequester any remaining greenhouse gas emissions from the atmosphere
- make adaptations necessary to deal with the inevitable consequences of climate change.

Any projects which contribute towards these aims is potentially 'green'. Some of these projects will have recognised verification schemes, whereas for others measurement and verification may be more difficult.

The sections below explore a range of green projects, together with their potential funding routes available to a local authority. The examples are not exhaustive but designed to provide an understanding of the types of green funding likely to be available.

6.2 Who is the funding for?

Of the English local authorities who have declared climate emergencies, a number have done so on an area wide basis. The project examples below include some area wide initiatives where it may not be appropriate for the local authority to act as the financially accountable body, but where they may want to stimulate action by others.

There may also be occasions where the local authority specifically wants to co-fund with others or encourage community investment. Community investment is not necessarily 'green' and should not be confused with green finance, although many community investment projects historically have green credentials.

6.3 Projects to use less resources

Using less resources involves many traditional projects – such as building energy efficiency but could also include projects which reduce the need to travel or which contribute to reduced waste either through recycling or through more efficient use of materials initially.

6.3.1 Building Energy Efficiency (owned estate)

Table 3 below sets out key parameters for building energy efficiency projects.

Table 3: Building energy efficiency projects key parameters

Project Type	Tried and tested	Financial Return	Verification	Likely Finance Source	Comments
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Project Type	Tried and tested	Financial Return	Verification	Likely Finance Source	Comments
Local authority buildings energy efficiency	Yes	Yes	Yes – through energy bills	£1bn Government grants available. SALIX finance for projects with payback <5 years PWLB for remainder	Suitable for Energy Performance Contracting

6.3.2 Building Energy Efficiency (area wide)

Table 4 below sets out key parameters for building energy efficiency projects on building stock which is not owned by the local authority.

Table 4: Building energy efficiency projects (area wide emissions) key parameters

Project Type	Tried and tested	Financial Return	Verification	Likely Finance Source	Comments
Area wide building energy efficiency on private sector buildings	Yes	Yes	Yes – through energy bills or Energy Performance Certificates or Display Energy Certificates	£2bn Government grants available for private residential buildings. Private sector equity and debt for the remainder	Suitable for Energy Performance Contracting. Potential to provide a revolving door loan fund using s106 contributions.

6.3.3 Waste Management Projects

Table 5 below sets out key parameters for waste management projects. These are projects where the local authority is likely to have some direct involvement.

Table 5: Waste projects key parameters

Project Type	Tried and tested	Financial Return	Verification	Likely Finance Source	Comments
Increase in recycling – investments in low capex (<£20m) infrastructure	Yes	Yes – dependent on targeted material	Monitoring of waste through DEFRA system	PWLB, private sector equity. Potential grant funding from DEFRA (TBD) post 2023	Will be required as part of Recycling and Waste Solution policies by 2035
Separation of food wastes for anaerobic digestion	Yes	Location specific	Monitoring of waste through DEFRA system	PWLB, private sector equity. Potential grant funding from DEFRA (TBD) post 2023	Due to become mandatory requirement under the Environment Bill

6.3.4 Digital infrastructure

Digital infrastructure relates to 5G and fibre broadband projects. These may qualify as green investments as they support the digital economy. The digital economy reduces the need for travel through measures such as increased homeworking and remote GP appointments. Table below sets out the key parameters for digital infrastructure projects.

Table 6: Digital infrastructure projects key parameters

Project Type	Tried and tested	Financial Return	Verification	Likely Financial Source	Comments
Projects to support the roll out of 5G and fibre broadband	Yes	No	Delivery of infrastructure, numbers connected and speeds of connectivity	Largely private sector equity and debt. DCMS grant support may be available for areas which are not financially viable and 5G Create which has offered £ 30m to develop new 5G capabilities.	Generally the local authority is not the direct provider

6.4 Electrification and Hydrogen Projects

Projects which support a migration from the direct burning of fossil fuels at the point of use are key to achieving net zero. Projects to tackle heating and transport of paramount importance and Table 7 below sets out the key parameters for these types of projects. Note that where it is intended to replace gas or oil boilers in buildings with heat pumps or electric boilers the parameters would be the same as the building energy efficiency measures set out in Tables 3 and 4 above.

Table 7: Electrification and hydrogen projects

Project Type	Tried and tested	Financial Return	Verification	Likely Finance Source	Comments
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Project Type	Tried and tested	Financial Return	Verification	Likely Finance Source	Comments
Electric vehicle charging infrastructure	Yes	Yes	Yes – through number of charge points installed	<p>Office of Low Emission Vehicle (OLEV) workplace charging grant for staff and depots. should also promote too local business.</p> <p>On street residential chargepoint scheme</p> <p>Require new developments to have chargepoints via SPD.</p>	<p>Think of chargepoints as providing a service to residents, visitors, taxis and business not a source of income. Focus should be on cost neutral service provision via well managed concession agreement.</p> <p>OLEV grants can be accessed by local businesses</p> <p>Procurement guide (PDF)</p>

Project Type	Tried and tested	Financial Return	Verification	Likely Finance Source	Comments
Small and medium vehicle replacements with EVs	Yes	Yes	Yes - through mileage emissions calculations	Green vehicle finance (lease or hire purchase) or PWLB/public sector equity finance Plug in car and van grant available.	<p>Understanding duty cycle and overnight charging is critical to success.</p> <p>Significant cost savings for cars and vans over lifetime. Ensure all purchase decisions made are on the Total Cost of Ownership and with the zero emission default option.</p> <p>For further information visit Genex</p>
Large vehicle replacements with low emissions vehicles	No	No, not at this stage	Yes – through mileages emissions calculations	<p>Few vehicle finance options available, so PWLB most likely option.</p> <p>As the market matures it is likely that lease and hire purchase options will become available.</p>	<p>Review fleet and assess benefits of biomethane in short term and identify procurement timetable for replacing heavy vehicles (RCVs, Gritters etc) as new technologies mature.</p>

Project Type	Tried and tested	Financial Return	Verification	Likely Finance Source	Comments
Physical measures to improve cycling and walking e.g. new cycleways, widening pavements, junction improvements, cycle storage etc	Yes	No	Yes – through vehicle surveys. Verification quality through the Active Travel England scheme and through Sustrans National Cycle Network	£2bn grants through Active Travel England. PWLB and highways budgets. Further funds could be raised through s106 contributions.	
Hydrogen and hydrogen infrastructure projects	No	No	Project specific	Grant funding for pilot schemes and potentially for initial infrastructure roll out.	Hydrogen projects are likely to become viable and fundable in the mid-term once the concepts have been proven and the cost of technology falls.
Schemes to encourage staff to cycle or invest in EVs	Yes	No	Through business and commuting mileage by vehicle type	Octopus finance (private sector debt) are the main provider in the EV space	Salary sacrifice schemes providing tax efficient options for staff.

6.5 Renewable electricity generation, balancing services and smart grids

Renewable electricity generation, balancing services and smart grids are relatively mature technologies, however the income streams are largely merchant and as a consequence funders consider the project risks as high without some form of price certainty.

Table 8 sets out the key parameters for renewable electricity generation, balancing services and smart grids.

Table 8: Renewable electricity generation, balancing services and smart grids

Project Type	Tried and tested	Financial Return	Verification	Likely Finance Source	Comments
Renewable energy generation (freestanding). Note building integrated systems as per tables 2 and 3.	Yes	Yes	Yes - REGO certificates	Most public sector schemes to date are PWLB as project returns unlikely to meet SALIX requirements. Private sector debt and community funding are also possible.	Some schemes may be suitable for Energy Performance Contracting. CfD and PPA agreements may be used to provide price certainty and investor confidence. SEG provides route to market for smaller schemes.

6.6 Carbon Sequestration Projects

Carbon sequestration projects range from various forms of mechanical carbon capture and storage to the restoration of peat bogs and kelp beds to growing trees. All forms of green and blue infrastructure development and enhancement are likely to qualify as green projects.

Table below sets out a sample forestry project.

Table 9: Sample carbon sequestration through tree planting project

Project Type	Tried and Tested	Financial Return	Verification	Likely Finance Source	Comments
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Project Type	Tried and Tested	Financial Return	Verification	Likely Finance Source	Comments
Planting of new woodland	Yes	Sometimes - dependent upon the type of woodland planted (i.e. whether commercial forestry is included).	Woodland Carbon Units	Grant funding is available for tree planting and early years' maintenance. Residual funding will depend on whether commercial forestry is included.	Commercial forestry produces financial returns. Broadleaf forestry is less likely to, although biodiversity enhancement opportunities are greater.

6.7 Preparing for the effects of climate change

Adaptation projects are part of the suite of green projects; however they rarely have a direct financial return for the local authority. Returns are generally seen by cost avoidance in the local community and the insurance sector.

Government provides financial support to local authorities to deliver climate adaptation projects, with bids being submitted on a competitive basis. These change on a regular basis and up to date guidance can be found on the LGA website.

Adaptation projects do not show verification criteria in the same way as some mitigation projects – but there will be a clear need to articulate the benefits of any scheme in order to qualify for grant funding.

Conclusions and recommendations

7.1 Conclusions

There is much talk of 'green finance', but ultimately it is about the supply and funding of sustainable projects, regardless of the source of the finance. It is important that whatever the source of finance, that local authority 'green' projects are able to provide transparent and reliable verification of the non-financial benefits.

Local authorities are well placed to access debt finance at extremely competitive rates, through various channels including conventional sources such as the Public Works Loan Board and emerging sources such as the Community Municipal Bond (CMB) market. The cost distinction at project level between conventional debt sources and CMBs is likely to be minimal going forward. CMBs provide the opportunity to connect local people to projects in their area, but are unlikely to raise all the funding necessary for larger projects. CMBs and council debt sourced from the likes of the PWLB can be blended to support projects where both local connection and larger funding packages are required.

Other than where partnership working with the private sector is envisaged there is rarely a need for local authorities to engage with the more complex and expensive private sector green finance.

The Government has a range of support mechanisms in place including grants and price support mechanisms to some sectors. It is likely that this will be supplemented during the course of the current Government's term of office with other measures, particularly in the run up to COP26. These could include green sovereign bonds or the creation of a green investment bank. Whilst these potential developments are of interest, they may not replace PWLB and CMBs as the preferred funding route for local authority owned projects.

7.2 Recommendations

Local authorities looking to invest in green projects should consider the following:

1. How will the sustainable benefits be measured and verified?
2. Is there a source of grant funding available for the activity? These change from time to time so it is important to keep up to date.
3. Recent grant funding for energy efficiency projects may be repeated in subsequent years. In order to access funds, it may be necessary to move quickly, so preparing schemes in advance is an advantage when looking to secure grants. Local authorities should also consider using existing energy performance framework agreements to ensure speed of delivery, certainty of benefits and compliance with procurement law.
4. Access to alternative routes for funding have an administrative burden which needs to be considered as part of the funding decision.
5. Local authorities have good access to both free and cheap finance, providing a competitive advantage over the private sector where there is competition for assets (such as in the purchase of renewable energy generation capacity).

6. Where local authorities are offering finance into joint venture projects the implications of state aid need to be fully factored in.

Glossary of Terms

Any engagement in green finance will involve a degree of technical language and common terms. It is not necessary to have a detailed technical vocabulary, however an understanding of some of the basic terms and concepts will aid understanding in the subsequent sections of this document.

BEIS	Department for Business, Energy and Industrial Strategy
CfD	Contract for Difference – current large-scale subsidy regime
DECC	Department of Energy and Climate Change (fore runner to BEIS for as the ministry for energy)
EPC	Engineering, procurement, construction contractors
EUR	Euro (European currency)
FiT	Feed in Tariff – previous subsidy regime
GBP	Pounds sterling (UK currency)
Green Lending	Lending money, by providing loans or purchasing bonds, in line with environmental principals
Green Bonds	A bond is a type of loan where investors buy debt from a bond issuer. Green bonds use the money raised for green activities, such as renewable energy projects.
GW/GWh	Gigawatt or Gigawatt hour. Measurement of electricity equivalent to 1,000 MW or MWh
KW/KWh	Kilowatt or kilowatt hour. Standard measurement of electricity (used on electricity bills)
MCS	Microgeneration Certification Scheme
MW/MWh	Megawatt or megawatt hour. Measurement of electricity equivalent to 1,000 kW or kWh
OFGEM	Electricity industry regulator

PPA	Power Purchase Agreement – contract for the buying and selling of electricity
PV	Photovoltaic i.e. turning light energy into electricity
Re:fit	National Energy Performance Contract framework – owned by Local Partnerships and the GLA
REGO	Renewable Energy Guarantees of Origin – scheme administered by OFGEM to provide transparency to customer about the source of their electricity
RO	Renewable Obligation – previous subsidy regime
ROC	Renewable Obligations Certificates issued under the RO
SEG	Smart Export Guarantee Scheme

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18 Smith Square, Westminster, London SW1P 3HZ

info@local.gov.uk | 020 7664 3000

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