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Property Assessed Clean Energy (PACE) Finance

CEEB Feasibility Study

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1a. Enabling Legislation

Enabling Legislation authorises PACE financing in a specific jurisdiction.

In the US, it creates the legal definition of a PACE Special Assessment and describes the minimum role that local governments must play to implement a PACE scheme. More prescriptive legislation supports standardisation of PACE schemes and can include:

1. **Definition and treatment of Special Assessments:** Seniority; statutory treatment if Assessment is not paid; non-acceleration of Assessment in a change of ownership or foreclosure scenario.
2. **Authorisation for government actors (central or local) to**: Set-up Special Assessment districts where local govt can levy an Assessment on participating properties; levy Assessments; enforce Assessment Liens; assign Assessment Liens; issue bonds; collect fees to pay for programme costs; engage a third-party to manage programme.
3. **Mortgage lender consent requirement:** Decision on whether existing mortgage lender consent to PACE financing is required prior to Assessment being levied.
4. **Underwriting or qualifying guidelines:** Disclosure of and/or target metrics of financial ratios; decision on the need for mortgage lender consent.
5. **General categories of improvements**: Eligible building types and retrofit project types.
6. **Programme capitalisation:** Specify if PACE financing is provided via private third-parties, public bonds, both or other.
7. **Guidelines on energy audits, energy savings projections and verification**: Standard methodologies; quality assurance and control of retrofit projects.

See further details on the UK landscape of property taxes in Appendix B.

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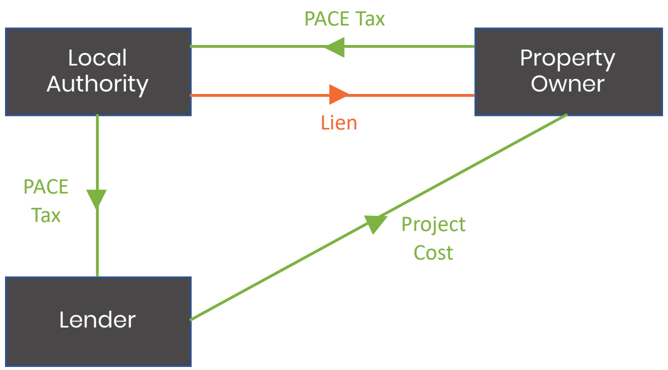
2. Administrative Structure

The scheme's **administrative structure** dictates who can and will be responsible for different aspects of the scheme administration. Enabling legislation determines the structure and level of standardisation.

In the US, the trend is towards a more standardised structure to reduce knowledge barriers with home owners, contractors and capital providers. Scheme administration can be managed by a government agency, local government, a quasi-government agency (e.g. a Green Bank), private entities or non-profit organisations. Two common structures include:

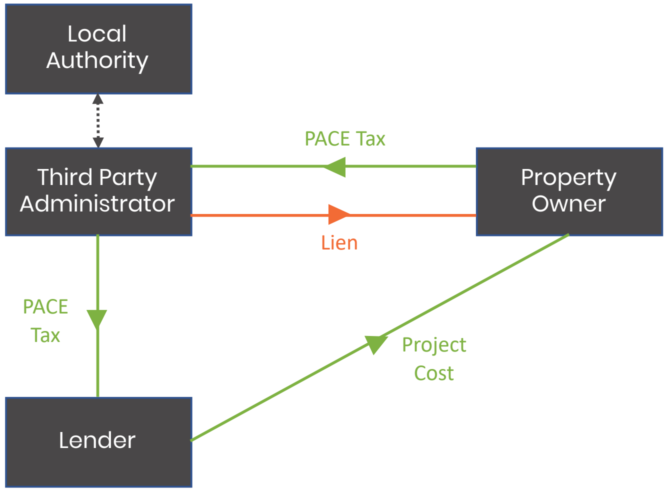
Local Government Administered



Local government is responsible for servicing the PACE loans:

- Establish and manage process/application flow
- Secure lien against the property
- Bill, collect and remit payments to the lender
- Maintain payment records and account balances
- M&C and reporting

Third Party Administered



Third party administrator is responsible for servicing the PACE loans on behalf of the local authority:

- Establish and manage process/application flow
- Secure lien against the property
- Bill, collect and remit payments to the lender
- Maintain payment records and account balances
- M&C and reporting

See further details on third-party administrators in Appendix C.

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3a. Capitalisation Mechanism

There are three important aspects of **PACE scheme capitalisation**: 1) the funding mechanism, 2) the capital provider and 3) the funding process. Decisions include whether capital should be raised via the debt capital markets or private-sector financial institutions.

1. Funding Mechanisms

Direct Funding: Majority of US PACE schemes finance retrofit projects with direct funding from financial institutions.

Debt Capital Markets: Commonly viewed as a viable option once sufficient PACE assets have been originates (+£500m) to warrant higher transaction costs.

2. Capital Providers

Financial institutions – Banks, building societies, etc.

Government – Via bonds issuances, grants, or working with alternative quasi-government capital providers (e.g. Green Banks).

Speciality PACE lenders - Increasingly popularity in the US.

3. Funding Process

Assessment Liens are typically recorded before the retrofit project occurs, in order to reduce the lender's risk.

As PACE Assessments are linked to a property:

a) Can the existing property tax systems be used to collect PACE repayments?
b) Can lenders collect PACE repayments directly from home owners?
c) Should a new system be developed?

3b. Capitalisation Mechanism

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Further considerations include whether credit enhancements should be included, how to engage with utility programmes, and whether negative reactions from the financial community could be mitigated if incumbent mortgage lenders have the right to consent to PACE financing.

Open vs Closed Market

Open

- Multiple capital providers
- Increased competition can generate favourable terms for home owners
- Greater awareness

Closed

- Single capital provider
- Less competition can limit consumer uptake and awareness

Interaction with Market Participants

Mortgage Lenders – Greater buy-in by incumbent mortgage lenders is there is the option to consent or veto the PACE financing

Utilities – Partnership opportunity on existing energy efficiency initiatives (e.g. ECO funding, EPC assessments)

Credit Enhancements

Structural or government-backed credit enhancements can generate favourable terms for home owners. Options include:

- Debt Service Reserves (covers late payments)
- Loan Loss Reserves (covers % of losses in default event).

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4a. Financial Structure

The **financial structure of a PACE scheme** vs the Green Deal finance is summarised below:

Category	PACE (On-tax finance)	Green Deal (On-bill finance)
Repayment Structure	• Repayments collected by Local Authority via an additional charge on existing property tax (e.g. Council Tax or Business Rates)	• Repayments collected via additional line item in energy bills
Pricing	• TBD based on credit risk of UK tax payments • 4.5% in Arkansas H.E.L.P. scheme	• c.7%-10% in Green Deal
Term	• +20 years	• 10-25 years
Security	• Secured debt • Lien on the property, transferable to new homeowner • TBD seniority based on analysis of UK landscape	• Unsecured debt • Liability lies with current electricity bill payer at the property
Borrowing Limits	• Fund up to 100% of hard and soft costs • US schemes can limit borrowing up to 1x the anticipated cost savings, while other scheme allow case-by-case waivers	• "Golden Rule" limited household borrowing to pre-determined amounts that were cost neutral vs anticipated saving • Often resulted in a funding gap for up-front cost
Lender	• Banks and specialist lenders (see Capitalisation Mechanisms section)	• Green Deal Finance Company

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4b. Financial Structure

One important consideration is the **affordability and credit risk** associated with PACE finance:

Credit Risk (Portfolio Level)	Savings-to-Income Ratio (SIR)	Loan-to-value (LTV)
What are the arrears and default rates on Council Taxes and energy bills? How do the risk metrics vary across different demographics?	**What**: The estimated savings over the life of the PACE finance divided by the amount funded through the loan. **General rule**: SIR > 1 provides a lender greater assurance that a borrower will realize a positive cash flow under the terms of the project and can service the debt at presumably no net cost or impact to normal cash flow from operations. **Waiver:** A lender may still finance a project with a SIR <1, if a reasonable rationale is provided for funding a project with SIR < 1. Parties must demonstrate they have carefully evaluated and fully understand the risks of allowing a SIR < 1, and address the interests of tenants and future property owners.	**What**: The ratio of the amount of the PACE loan to the assessed value of the property. **General rule**: LTV < 20% is typically used as the maximum threshold in US PACE schemes. **Waiver**: A property owner and lender may request a waiver to exceed the 20% cap. The justification for the exception must be reasonable, clearly understood by all parties, and address the interests of tenants and future property owners.

4c. Financial Structure

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Another important consideration is the **seniority and recourse route** for PACE finance:

Security & Seniority	Recourse in a distressed situation
Assumption: The local government will secure a lien against the land that: 1. Exists from the date on which the notice is recorded and until the assessment, interest and any penalty are paid in full; 2. Has the same priority status as a lien for any other ad valorem tax; 3. Runs with the land (the unpaid portion transfers to a new owner upon sale); and 4. Is not eliminated by foreclosure of a property tax lien. **Assumption**: The PACE lien ranks pari passu (or subordinated to) first charge mortgages. **Assumption**: Liability is transferable to subsequent homeowners. **Consideration**: How does the transferability of a PACE liability impact on property values?	**Assumption**: Only the delinquent and owed assessments may be collected; assessments not yet due stay with the land and are to be paid when they become due (i.e. the entire loan does not accelerate if payments are delinquent). **Consideration**: What bodies and mechanisms are required to support homeowners with distressed repayments?

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5. Contractual Agreements

There are two main **types of contractual agreement**:

1. A written contract between the local PACE scheme and the property owner is required to impose a PACE Assessment on a property to repay the owner's financing of a PACE project. This contract (Owner Contract) is the key document that creates the property assessment and the senior lien.
    - Note: If the PACE scheme provides public financing (bonds), the Owner Contract must be a contract to finance the qualified project through assessments with a senior lien.

2. If financing is provided by a third-party lender, the local PACE scheme must also enter into a written contract with the lender (Lender Contract) to service the debt on the PACE scheme through assessments.

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6. Costs & Fees

Scheme sponsors (typically local governments) are responsible for determining **how to fund the set-up and on-going operations of a PACE scheme**. Whilst the set-up costs are generally funded via government grants or corporate sponsorship, an appropriate fee model should be developed to cover the cost of on-going operations.

Set-Up Costs

Sources: Government grants, corporate sponsorship, utility ratepayer funds, or foundation grants.

Support: A 'One Nation-Wide Administrator' model could deliver support to local govts seeking to set-up a PACE scheme, thus generating cost efficiencies.

Case Study: Existing US programmes estimate set-up costs of $0.25m-$0.50m.

On-going Operations: Activities

Administrative Processes: Includes application approvals, technical and financial underwriting, standard compliance, document development and updating, marketing, customer service and IT.
Local Government or third-party

Funding: Including servicing PACE Assessments (e.g. billing, collection) and recording liens.
Local tax office, third-party, or lender

Quality Assurance: Ensures that contractors complete quality work.

On-going Operations: Fee models

Fees are required to cover the costs of on-going operations.

Potential fee models, either used alone or in combination, include:

- Upfront fee as % of financed amount
- Annual fee as % of outstanding balance
- Additional margin on interest rate
- Flat fee

7a. Governance, Ops & QA

The key principles for **good governance** include:

Transparency	• User-friendly • Outcome-driven • Open and accessible
Accountability	• Responsibilities of the participants are clear • Incentivise the right behaviour
Proportionality	• Risk-based • Action is proportionate to the benefit • Fair to all participants
Consistency	• Common rules, policies, practices and processes • Implemented impartially and objectively
Responsiveness	• Facilitate willingness to change • Anticipate needs • Promote innovation
Effectiveness and Efficiency	• Value for money • Effective decision-making process • Encourages and supports participation
Sustainability	• Allow for sustainable growth • Provide flexibility for future requirements

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7b. Governance, Ops & QA

Key areas for consideration on **governance, operations and quality assurance** include:

Governance	Operations	Quality Assurance
Oversight and Authority	Product Considerations	Standards & Certifications
Role of BEIS	Type of Finance product	Certifications/Accreditations
Role of Local Authorities	Leading organisation	Applicable Standards
Role of Other regulators (Ofgem/ FCA etc)	Applicable regulation	Warrantees and Insurance
Delivery Body	Customer Journey	Insurance backed guarantees
Central scheme delivery body?	Advice and Information	Minimum warrantee requirements
Third party delivery partners?	Point of Sale	Independent Audits and Satisfactions surveys
Key industry roles	Coordination of works	Scheme-wide third party audits
Financiers	Customer Interfaces	Mystery shoppers
Delivery partners	Redress Mechanism	Customer follow-up surveys
Industry Bodies	Supply Chain processes	
Scheme rules and design	Assessment Process	
Approval process	Installation Process	
Change Process	Assurance process	
Supply Chain Roles	Technology	
Assessment Process	Record keeping	
Installation Process	Data sharing (i.e. disclosure)	
Assurance process	Interfaces with industry systems	
	Delivery Platforms	

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Appendix

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A. Lessons Learned (US PACE)

Standardisation

- Standardisation of programmes covering large areas unlocks economies of scale

Administration Costs

- PACE schemes were designed in a way that no taxpayer money is required to support the ongoing administration of the programme

Mortgage Lender Consent

- Mortgage provider must provide consent for the PACE loan. Question: Is the scenario similar with Australian PACE?

Capitalisation Mechanism

- US schemes recommend the use of third-party lenders to finance PACE loans, to avoid risk to the local governments.

Installer Selection

- Customer selects contractor. Question: Should the UK version use a certified installer?

Third Party Reviewer

- Independent 'Third Party Reviewer' verifies that installations are properly installed and functioning as intended.

B. Property Taxes (UK)

Type	Owner / Regulator	Details	PACE Applicability
Business Rates	Local Authority	• Business rates are charged on them majority of non-domestic properties, including shops, offices, pubs, warehouses, factories and guest houses. • Handled slightly differently in Scotland and Northern Ireland. • Local authority sends a business rates bill in February or March each year, for upcoming tax year. • Business rates are calculated based on the property's 'rateable value', multiplied by the government-prescribed multiplier.	• Commercial property PACE repayments could be collected as additional charge in business rates payments.
Council Tax	Local Authority	• Paid by the resident in a home (if over 18). • Paid by i) homeowners in owner-occupier tenures, and ii) tenants in rented dwellings. • Determined by council tax 'band', determined depending on postcode, house type and number of residents. A full council tax bill is based on at least 2 adults living in a home. • Several exemptions exist. • Payment is split into 10 monthly payments. Councils may sometimes opt to charge over 12 months instead of 10.	• Domestic property PACE repayments could be collected as additional charge in council tax bill.

C. Third-Party Administrators

A local government can choose to administer the scheme in-house using local government resources, or **acquire the assistance of a third-party administrator** for all, or part, of the administrative duties.

Third-party administrators can be another governmental body, private sector entities, or a collaboration of several entities. PACE enabling legislation gives a local government authority to hire and set the compensation of a scheme administrator.

The administrator can be responsible for the following;

- The scheme application and process flow from application receipt to closing, including recording the lien (see diagram on right),
- Maintain payment records and account balances, and otherwise interfacing between the local government, the third-party lender and the property owners.