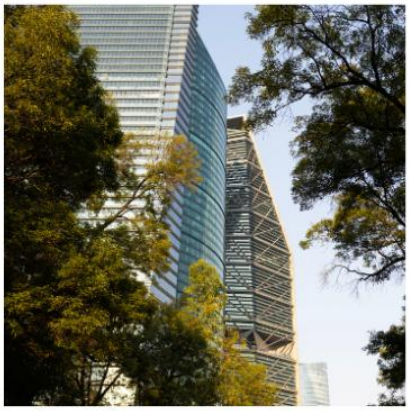
PROSPECT





Learning Handbook on Soft Loans

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About the project

PROSPECT aims to strengthen the capacity of local and regional authorities (LRAs) across Europe to implement sustainable energy and climate actions by reducing reliance on public funding and increasing the use of innovative financing schemes (e.g., one-stop-shops, energy agencies, energy communities). The project offers a peer-to-peer Capacity Building Programme (CBP) tailored to the needs and time constraints of LRAs, available in multiple languages and structured in adaptable learning modules. Through large-scale outreach, including very small and remote LRAs, PROSPECT CUBE acts as an entry point to EU programmes and financing opportunities for authorities with limited experience in the field.

PROSPECT CUBE builds upon two successful Horizon 2020 initiatives: PROSPECT (2017–2020) and PROSPECT+ (2022–2025).

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Table of Contents

Contents

1. Introduction 5

1.1. Purpose of this handbook 5

1.2. Target audience 6

1.3. How to use this handbook 6

2. Understanding soft loans 7

2.1. How soft loans work in practice? 7

2.2. Arrangements, loan types and characteristics 9

2.2.1. Arrangements 9

2.2.2. Loan types 16

2.2.3. Key characteristics 18

2.3. Why soft loans matter? Benefits and added value for LRAs 20

2.4. Sector-wide application: When and where soft loans can be used? 22

2.5. Main stakeholders involved 24

3. Setting up a soft loan scheme: A quick step-by-step guide 26

3.1. Step-by-step roadmap for soft loan implementation 27

3.2. Soft loans checklist – Key questions for successful setup 32

4. Critical conditions influencing soft loan schemes 33

4.1. Drivers and success factors 33

4.2. Barriers and limitations 34

4.3. Key risk dimensions 35

4.4. Synthesis of critical conditions affecting implementation 36

5. Summary of key takeaways 38

List of Figures

Figure 1. Typical operational structure of a soft loan scheme 7

Figure 2. integrated or blended operational structure of a soft loan scheme 8

Figure 3. Direct public lending model applied in Riga, Latvia 9

Figure 4. Intermediated commercial lending applied in Frederikshavn, Denmark 11

Figure 5. ESCO-led/EPC model applied in Stuttgart, Germany 13

Figure 6. Indicative decision-support matrix guiding the selection of soft loan operational arrangements 16

Figure 7. Roadmap for soft loan implementation: key steps for LRAs 26

List of Tables

Table 1. Overview of the main soft loan types and their typical applications in sustainable energy investments 17

Table 2. Cross-cutting characteristics of soft loan schemes and their implications for LRAs 18

Table 3. Indicative comparison between soft loans and conventional commercial lending 19

Table 4. Indicative overview of soft loan applications across sectors and type of investment 22

Table 5. Functional roles of supply-side and management stakeholders 24

Table 6. Functional roles of demand-side and executing stakeholders 25

Table 7. Summary of critical conditions influencing soft loans schemes 36

List of abbreviations

Abbreviation	Description
EBRD	European Bank for Reconstruction and Development
EE	Energy Efficiency
EPC	Energy Performance Contracting
EU	European Union
EV	Electric Vehicle
HVAC	Heating, Ventilation, and Air Conditioning.
IFI	International Financial Institution
JESSICA	Joint European Support for Sustainable Investment in City Areas
LRA	Local and Regional Authority
M&V	Monitoring and Verification
NbS	Nature-based Solutions
OBR	On-bill repayment
OSS	One-Stop Shop
PV	Photovoltaic
REA	Riga Energy Agency
RES	Renewable Energy Sources
RNP	Residential Non-Profit organisation (within the REA/JESSICA model)
RPB	Residential Private Building (applied (within the REA/JESSICA model)
SECAP	Sustainable Energy and Climate Action Plan
SME	Small and Medium-sized Enterprise
TPF	Third-Party Financing

1. Introduction

Local and regional authorities (LRAs) are increasingly expected to accelerate the transition towards climate-neutral and energy-efficient territories. However, despite growing political ambition and a strong pipeline of potential projects, many sustainable energy investments still face significant implementation barriers, particularly related to access to affordable financing. High upfront costs, long payback periods, and limited borrowing capacity often discourage households, businesses, and other local actors from undertaking energy renovation or clean energy projects.

In this context, soft loans have emerged as an important financial instrument for supporting the implementation of sustainable energy and climate actions. By offering financing under more favourable conditions than standard commercial loans - such as reduced interest rates, longer repayment periods, or simplified access conditions - soft loan schemes improve affordability and help beneficiaries undertake investments that might otherwise be financially inaccessible.

For LRAs, soft loans can support the large-scale deployment of energy efficiency (EE) and renewable energy (RES) investments while complementing existing grants, subsidies, and technical assistance programmes. When properly designed, they can help stimulate local renovation markets, mobilise additional investment, and contribute to the achievement of local climate and energy objectives in a financially sustainable way.

1.1. Purpose of this handbook

This handbook aims to support LRAs in understanding, designing, and implementing soft loan schemes as part of broader local financing strategies for sustainable energy and climate action. It introduces the core principles and operational logic of soft loans, explains how these instruments can be structured and combined with complementary support mechanisms, and outlines their role in overcoming financing barriers for energy-related investments.

Building on experience from previous PROSPECT initiatives and lessons learned across different local and regional contexts, the handbook provides both conceptual explanations and practical guidance to support informed decision-making. In doing so, it seeks to help LRAs assess the suitability of soft loans, identify appropriate operational models, and adapt proven approaches to their local needs and institutional capacities.

1.2. Target audience

This handbook is intended for a broad range of stakeholders involved in, or contributing to, the planning, financing, coordination, and implementation of sustainable energy investments, including:

- Local and regional decision-makers, responsible for defining strategic priorities and supporting the integration of financing instruments into local climate and energy policies.
- Financial and administrative departments, involved in evaluating funding structures, budget implications, and regulatory compliance.
- Technical and energy professionals, engaged in identifying, preparing, and assessing energy efficiency and renewable energy projects.
- Legal, procurement, and contractual advisors, supporting the development of financing arrangements and ensuring compliance with applicable frameworks and procedures.
- Energy agencies, One-Stop-Shops (OSSs), and advisory organisations, providing technical support, guidance, and facilitation services to project beneficiaries.
- Financial institutions and funding bodies, interested in developing or participating in concessional financing schemes for clean energy and EE projects.

The handbook may also be relevant for ESCOs, project developers, and other advisory organisations or stakeholders involved in the delivery of local energy transition initiatives.

1.3. How to use this handbook

This handbook is designed as a modular learning and reference tool, enabling users to engage with its content according to their role, experience, and stage of project development. It provides a structured progression from understanding the fundamentals of soft loan schemes to exploring how such instruments can be designed, implemented, and adapted in practice. Accordingly, it combines conceptual explanations with practical guidance, drawing on lessons learned from previous PROSPECT initiatives and broader European experience. Particular emphasis is placed on translating financial concepts into practical implementation approaches relevant for LRAs, with a focus on scalability, affordability, and the mobilisation of investment for local energy transition objectives.

The handbook may be read sequentially for a comprehensive overview, while individual sections can also be used independently, allowing readers to focus on the topics most relevant to their specific needs, priorities, and local context.

2. Understanding soft loans

Soft loans are concessional financing instruments designed to support investments that generate environmental, social, or economic benefits by providing financing under more favourable conditions than conventional commercial lending. In the context of sustainable energy and climate action, they are widely used to facilitate EE and RES investments, particularly for building renovation or large-scale infrastructure projects (OECD, 2025; Todeschi et al., 2025).

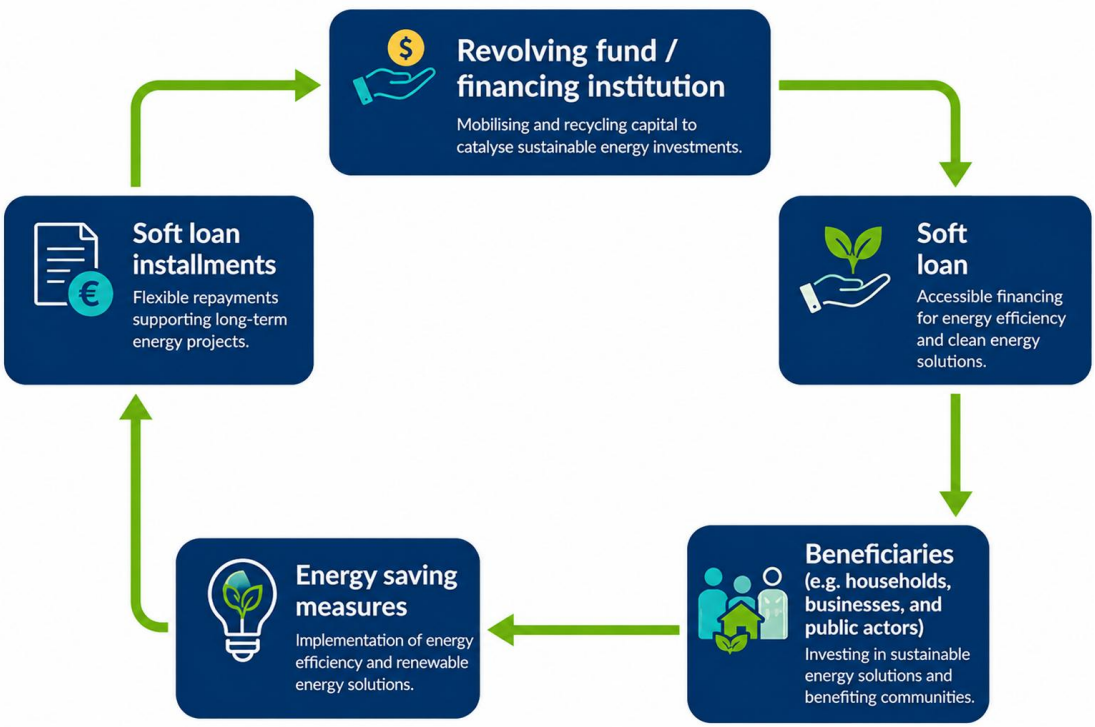


Figure 1. Typical operational structure of a soft loan scheme (Source: Adapted from Cicmanova et al., 2014)

Unlike grants, which provide non-repayable support, soft loans rely on repayment mechanisms that allow financial resources to revolve over time and support multiple investment cycles. Through below-market interest rates, longer repayment periods, grace periods, or simplified access conditions, they lower financial barriers for public actors, businesses and households undertaking sustainable energy investments (Cicmanova, 2014; Cicmanova et al., 2017).

2.1. How soft loans work in practice?

In practice, soft loan schemes rely on structured partnerships where commercial banks, international financial institutions, and independent technical support or verification bodies collaborate to enhance the affordability of large-scale energy retrofits across both public and private sectors through concessional lending. Within this ecosystem, LRAs play a dual role; they can act directly as final beneficiaries (borrower) when implementing sustainable investments on public assets, or serve as strategic market enablers -

functioning as coordinators, facilitators, or co-financiers - to support private sector projects. In this enabling capacity, LRAs anchor the schemes by deploying complementary risk-mitigation and delivery mechanisms, such as public loan guarantees, utility-integrated on-bill repayment, or Energy Performance Contracting (EPC) backed by specialised Energy Service Companies (ESCOs) (Todeschi et al., 2025).

The process generally begins with the identification and preparation of eligible projects, and is structurally supported by specialised actors who offer continuous technical guidance to LRAs and other beneficiaries. In practical terms, their overarching support includes assisting with financing applications, conducting energy audits, or carrying out implementation verification procedures to ensure the quality and eligibility of investments (Cicmanova et al., 2017).

Upon verification, participating banks extend loans under concessional terms that improve affordability and repayment capacity for the beneficiaries, whereas in more integrated or blended financing structures, additional support is offered through dedicated European banks and funds, such as the European Investment Bank (EIB), the European Bank for Reconstruction and Development (EBRD), the European Energy Efficiency Fund (EEEF), or the European Regional Development Fund/Cohesion Fund (ERDF/CF). Within these structures, particularly when loan components are blended with grants, funding is often linked to project implementation milestones or performance outcomes, further reducing investment costs and increasing the leverage effect of public funding (Nath et al., 2025).

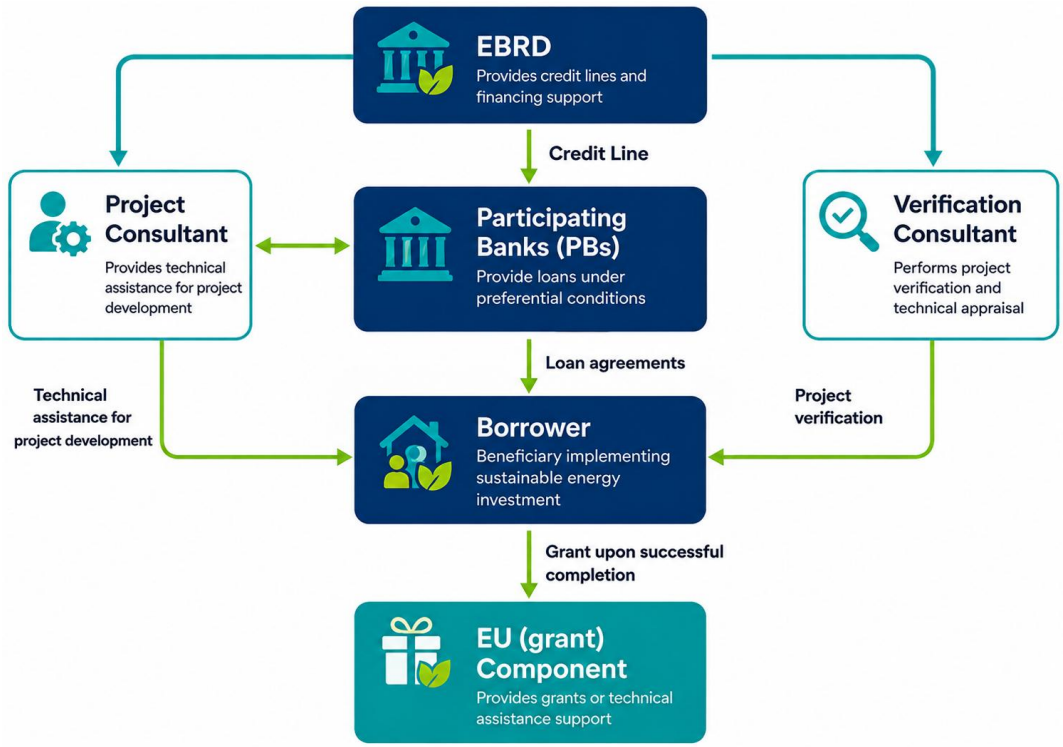


Figure 2. Integrated or blended operational structure of a soft loan scheme (Source: Adapted from Gallerand et al, 2022)

2.2. Arrangements, loan types and characteristics

Soft loans are primarily issued by governments, public institutions, and multilateral financial organisations, which provide financing under preferential conditions to reduce borrowing costs for sustainable energy investments. However, depending on the source of capital, institutional setup, target beneficiaries, and policy objectives pursued, their governance structures, operational modes, and delivery mechanisms may vary significantly. Together, these dimensions shape how soft loan schemes are implemented, scaled, and adapted to different local contexts and investment needs (EU CoM, 2022).

2.2.1. Arrangements

Institutional arrangements define the administrative and financial routing mechanisms used by public authorities to channel concessional capital to final borrowers. In local climate action strategies, these configurations fall into three primary delivery setups: (i) Direct public lending (Centralised setup), (ii) Intermediated commercial lending (Decentralised setup) and (iii)Tripartite/ESCO-led arrangements.

2.2.1.1. Direct public lending (Centralised setup)

Under this arrangement, an LRA or a dedicated public revolving fund bypasses commercial financial intermediaries to issue loans directly to the final beneficiary (Cicmanova et al., 2017; Wishlade et al., 2017).

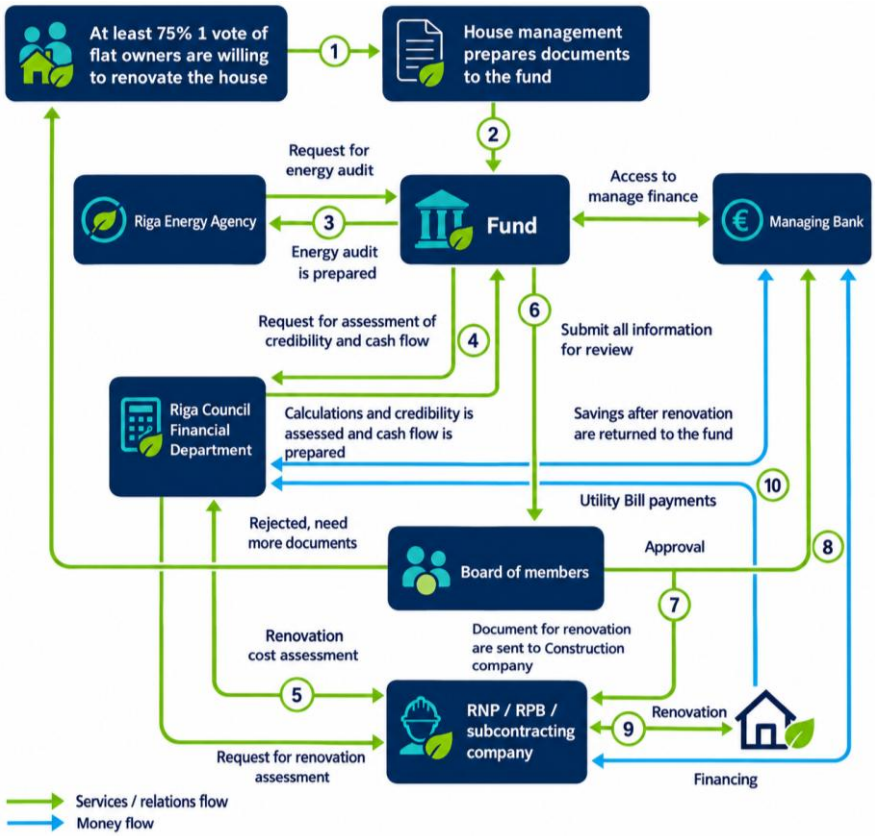


Figure 3. Direct public lending model applied in Riga, Latvia (Source: Adapted from Cicmanova et al., 2017)

Conditions

- Public capital or dedicated revolving funding mechanisms are available to support the scheme.
- LRAs or public entities have sufficient institutional and administrative capacity to manage loan origination, financial administration, and repayment monitoring.
- Clear eligibility criteria and governance structures are established for project selection and financing allocation.
- Adequate technical assistance exists to support beneficiaries throughout project implementation.
- A stable pipeline of investment-ready projects exists within the target territory or sector.

Advantages

- LRAs or public entities retain strong control over financing conditions, eligibility criteria, and policy targeting, supporting strategic territorial priorities and local market development.
- Financing conditions can be closely aligned with local climate, social, or energy policy objectives.
- The arrangement can facilitate access to financing for vulnerable or underserved beneficiary groups that may face difficulties accessing commercial loans.
- Repaid capital can be reinvested into future projects, improving the long-term sustainability and leverage effect of public funding.

Limitations

- Establishing and managing the scheme requires substantial institutional capacity and specialised expertise, with LRAs or public entities assuming a significant share of administrative, financial, and default risk responsibilities.
- The availability of public capital may limit the overall scale and replication potential of the scheme.
- Loan administration, monitoring, and repayment management may generate significant operational costs for LRAs or public entities.
- Public lending structures may face legal, regulatory, or state-aid constraints depending on the national context.

Focus Box 1: Key considerations on the direct public lending set up

Direct public lending arrangements provide LRAs and public entities with stronger control over eligibility criteria, policy targeting, and financing conditions, particularly when addressing socio-economic or environmental priorities. At the same time, they require significant internal administrative and financial capacity to manage loan origination, credit assessments, repayment monitoring, and default risks.

2.2.1.2. Intermediated commercial lending (Decentralised setup)

Under this arrangement, public authorities or international financial institutions (IFIs) channel wholesale funding or dedicated credit lines through participating commercial banks, which subsequently manage retail lending activities, including credit assessments, loan disbursement, and repayment collection (ESMAP, 2014; EU CoM, 2022).

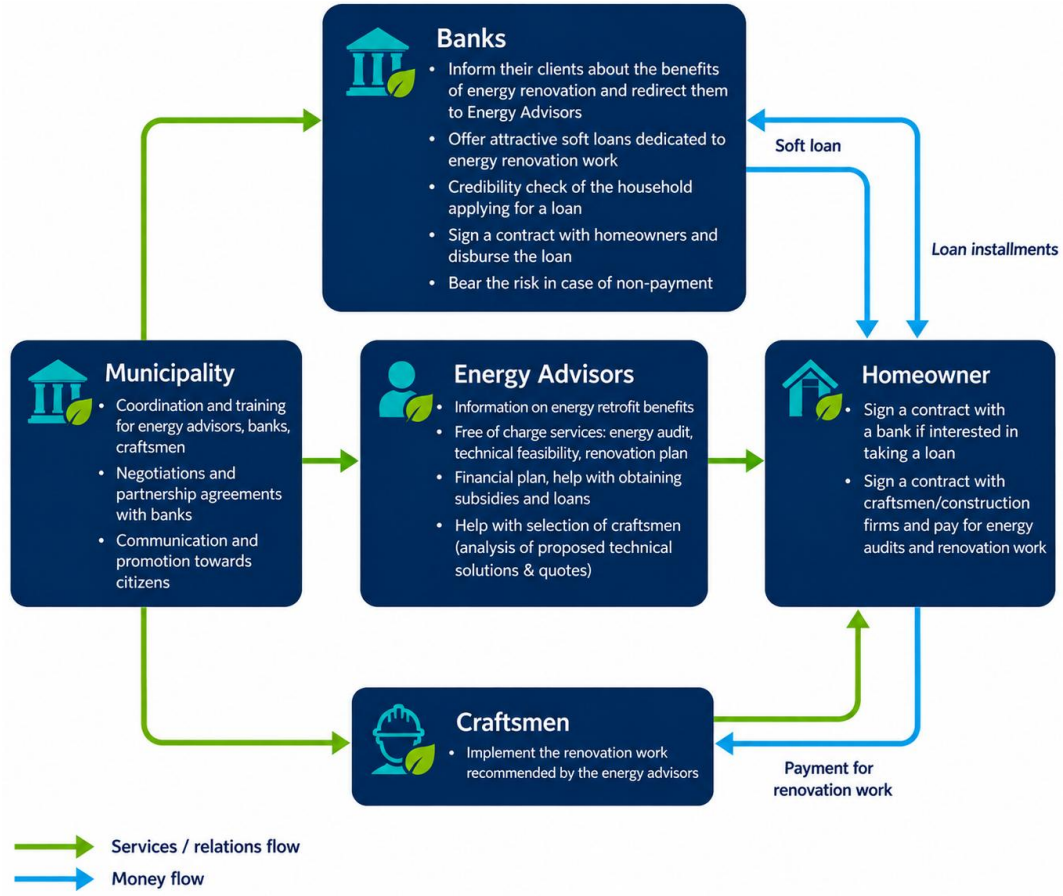


Figure 4. Intermediated commercial lending applied in Frederikshavn, Denmark (Source: Adapted from Cicmanova et al., 2017)

Conditions

- Commercial banks are willing to participate in the scheme and provide concessional financing conditions to final beneficiaries.
- LRAs or public authorities establish clear cooperation frameworks and risk-sharing arrangements with the participating financial institutions.
- Adequate technical assistance is available to support beneficiaries during project preparation and financing application processes.
- A sufficient pipeline of financially viable and investment-ready projects exists within the target territory or sector.
- Stable regulatory and financial conditions support long-term lending activities.

Advantages

- LRAs can mobilise private sector capital while limiting the direct use of public financial resources.
- Participating banks undertake creditworthiness assessments and assume a significant share of repayment and default risk.
- Existing banking infrastructure and customer networks facilitate large-scale market deployment.
- Loan administration and financial management responsibilities remain primarily with financial institutions, reducing the administrative burden for LRAs.
- The arrangement supports market-based financing mechanisms without significantly disrupting existing financial markets.

Limitations

- Financial institutions ultimately determine borrower eligibility and financing conditions based on their internal risk assessment procedures.
- Vulnerable or low-income beneficiaries may face difficulties accessing financing or obtaining favourable loan conditions.
- Conventional banking assessments may not fully account for future energy savings and long-term operational cost reductions.
- Risk management costs, administrative fees, and financing margins may increase the overall borrowing cost for beneficiaries.
- The effectiveness of the arrangement depends heavily on the willingness and engagement of participating financial institutions.

Focus Box 2: Key considerations on the intermediated commercial lending set up

By relying on existing banking infrastructure and customer networks, intermediated commercial ending setup allows soft loan schemes to scale up market reach while limiting the direct financial exposure of LRAs and public entities to repayment and default risks. At the same time, it reduces their control or influence over borrowers' eligibility and financing conditions compared to direct public lending model.

2.2.1.3. Third-party and ESCO-led arrangements

Under this arrangement, EPC is integrated directly into the financing structure, linking concessional lending with the implementation of EE measures. Accordingly, concessional capital is typically channelled to an ESCO, which undertakes the renovation works and assumes responsibility for delivering guaranteed energy savings. Loan repayment is subsequently supported through the achieved energy cost reductions, helping reduce technical and performance risks for the final beneficiary (Cicmanova et al., 2017; SECCA, 2025).



Figure 5. ESCO-led/EPC model applied in Stuttgart, Germany (Source: Adapted from Cicmanova et al., 2017)

Conditions

- A sufficiently mature ESCO market exists with organisations capable of delivering EPC-based projects.
- Clear contractual and regulatory frameworks support EPC and long-term repayment structures.
- Reliable methodologies are available for measuring and verifying energy savings.
- Beneficiaries possess adequate technical and legal capacity to negotiate and monitor EPC contracts.
- Projects generate predictable energy savings to support long-term repayment mechanisms.

Advantages

- Technical, operational, and performance risks are partially transferred to the ESCO.
- Energy savings generated by the project can support loan repayment and improve project bankability.
- Beneficiaries can implement large-scale renovations without substantial upfront capital expenditure.
- The integrated structure combines financing, implementation, and performance guarantees within a single delivery model.
- EPC arrangements can improve project accountability through performance-based contracting.

Limitations

- EPC structures may involve complex contractual arrangements and lengthy procurement procedures.
- The success of the scheme depends heavily on the technical and financial capacity of the ESCO market.
- Measurement and verification (M&V) may generate additional administrative and transaction costs.
- Smaller projects may face difficulties achieving sufficient scale to justify EPC implementation.
- Long-term contractual commitments may reduce flexibility for beneficiaries or public authorities.

Focus Box 3: Key considerations on the third-party and ESCO-led set up

Third-party and ESCO-led arrangements are particularly relevant for LRAs lacking the upfront capital, technical expertise, or internal capacity required to independently implement complex EE projects. By integrating financing, technical delivery, and performance guarantees within a single contractual structure, these arrangements can reduce technical and performance risks while improving investment confidence and project delivery. At the same time their successful implementation depends on robust contractual frameworks, reliable savings verification methodologies, and a mature ESCO market.

2.2.1.4. Synthesis and strategic selection framework

The choice of a soft loan operational arrangement is not a one-size-fits-all decision; rather, it requires a strategic alignment across four interrelated dimensions: local market conditions, institutional and administrative capacities, availability of public resources, and the level of technical support necessary to de-risk and deliver the targeted investments.

In practice, local market maturity and internal administrative capacity dictate whether an LRA should lean toward centralised or decentralised financing structures. Centralised, direct public lending structures allow LRAs to retain maximum control over financing conditions, eligibility thresholds, and policy targeting, ensuring investments directly support local climate and social priorities. However, these models demand significant internal capacity to independently absorb credit origination burdens, ongoing monitoring requirements, and default risks. By contrast, decentralised, intermediated commercial lending setups smoothly leverage existing commercial banking infrastructure and mature retail financial networks. This allows LRAs to rapidly scale up territorial investment volume while transferring the vast majority of day-to-day financial administration and repayment risk management over to participating financial institutions (Cicmanova et al., 2017; ESMAP, 2014; EU CoM, 2022; Wishlade et al., 2017).

In parallel, the availability of public resources shapes how aggressively an LRA can generate budgetary leverage. While direct public lending frameworks remain inherently restricted by the hard ceiling of municipal budgets or finite public fund allocations, blended financing models can combine limited public funds with commercial capital or international financing flows. This strategic pooling mobilises additional private capital and broadens programme reach by deploying public resources as risk-sharing guarantee mechanisms, interest-rate subsidies, or technical assistance components rather than upfront capital grants (Barjasic et al., 2025; fi-compass, 2026; Gavas & Pleeck, 2024; OECD, 2025; Todeschi et al., 2025).

Finally, the technical complexity and performance risks associated with the targeted energy interventions dictate the structural configuration of the delivery pipeline. Standardised, lower-risk interventions - such as basic single-asset technology upgrades - can be financed effectively through conventional lending mechanisms. Conversely, complex building renovations or deep infrastructure overhauls benefit heavily from third-party or ESCO-led arrangements that integrate EPC. Within these structures, the technical implementation and performance risks are contractually shifted onto specialised third-party operators, while the underlying loan repayment mechanism is structurally insulated by being legally tied to verified energy savings generated by the project (Cicmanova et al., 2017; EU CoM, 2022; SECCA, 2025).

To navigate these variables, Figure 6 provides a simplified decision-making tool for LRAs guiding them in identifying the operational arrangement most closely aligned with their local context, institutional maturity, and implementation priorities.

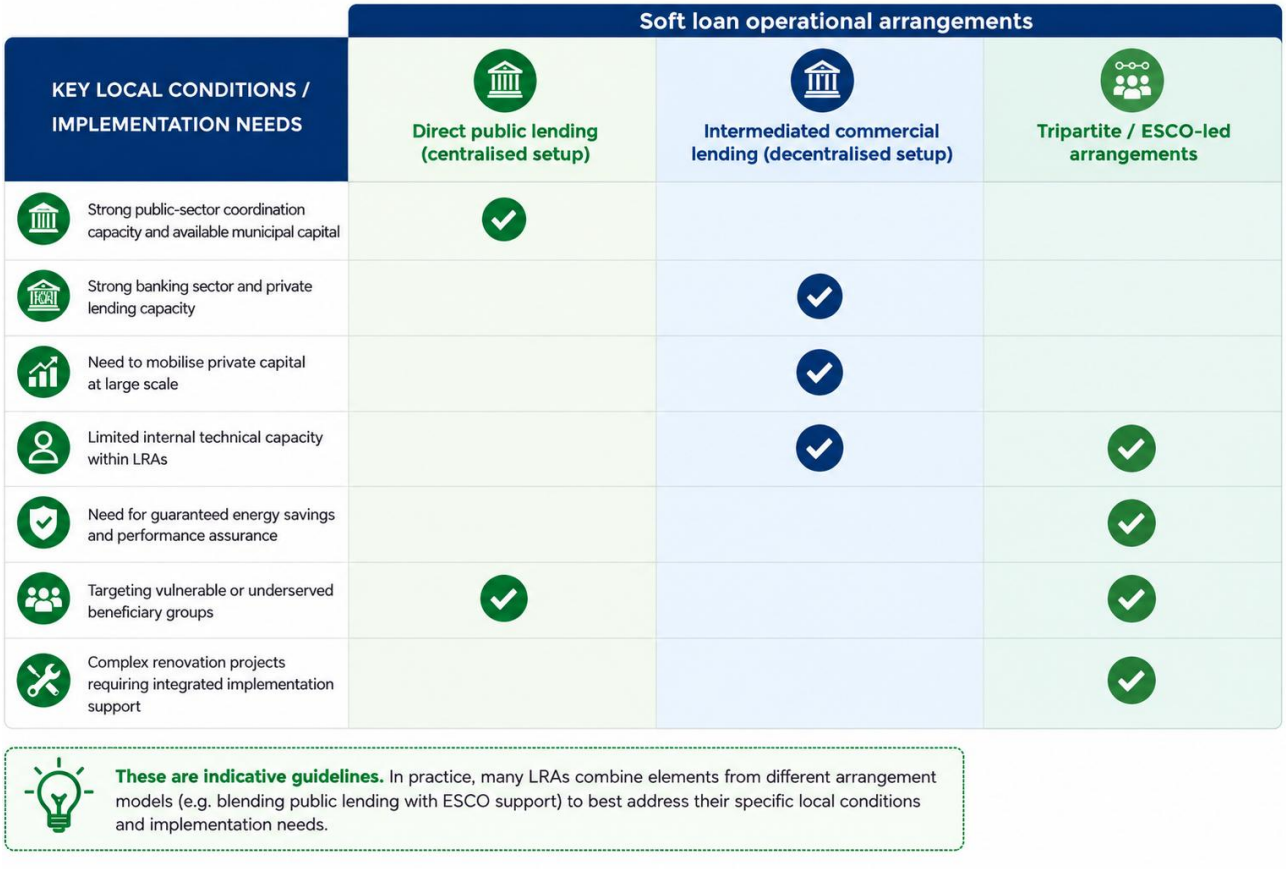


Figure 6. Indicative decision-support matrix guiding the selection of soft loan operational arrangements (Adapted from: Cicmanova et al., 2017 / AI-enhanced)

2.2.2. Loan types

Soft loans can take different forms depending on how concessional capital is structured, repaid, and combined with complementary financing mechanisms. While traditional variations primarily reduce borrowing costs through subsidised or near-zero interest rates and extended repayment periods, more advanced financing structures utilise dedicated credit lines from IFIs to channel capital through local commercial banking systems (Chervalier, 2019; ESMAP, 2014; EU Covenant of Mayors for Climate & Energy (EU CoM), 2022; Fritz & Raza, 2014). In parallel, modern policy frameworks combine soft loans with grant components, revolving mechanisms, or utility-based on-bill repayment schemes in order to expand programme reach, support vulnerable groups, reduce default risks, and improve long-term financial sustainability (Cicmanova et al., 2017; Enerinvest, 2021; European Commission, 2026; fi-compass, 2026).

Together, these configurations improve affordability, reduce private investment risks, and facilitate the large-scale deployment of sustainable energy investments across both public and private sectors. Ultimately, each one's suitability depends on the overall financing structure, the nature and scale of the targeted investments, and the strategic priorities pursued by the implementing authority.

Table 1. Overview of the main soft loan types and their typical applications in sustainable energy investments

Loan type	Main feature	Typical application
Subsidised-interest loans	Public funds or financial institutions reduce interest rates below prevailing market conditions, often combined with extended repayment or grace periods.	Residential renovation programmes and public building retrofits
Zero- (or near-zero) interest loans	Financing is provided with minimal or no interest charges to maximise affordability and support investment uptake among households or vulnerable groups.	Household energy efficiency investments and energy poverty alleviation schemes
Revolving soft loans	Repaid capital is reinvested into new projects through revolving financing structures, enabling successive investment cycles and improving long-term financial sustainability.	Municipal renovation programmes and public revolving funds
Blended loan-grant instruments	Soft loans are combined with grants, guarantees, or performance-based incentives in order to reduce upfront investment costs and improve project viability. In some cases, grant components are disbursed following the verification of targeted energy savings.	Large-scale renovation programmes and EU-supported financing schemes
Credit-line-supported loans	Commercial banks provide concessional loans backed by dedicated financing lines from international or promotional financial institutions.	Bank-led sustainable energy financing programmes
On-bill repayment (OBR) loans	Loan repayments are collected through utility bills, linking repayment obligations directly to energy consumption and achieved savings, while reducing default risks.	Residential energy retrofits and utility-led renovation schemes
Targeted soft loans	Financing specifically designed for priority sectors, technologies, or vulnerable beneficiary groups based on defined policy objectives or socio-economic criteria.	Energy poverty programmes, small and medium-sized enterprises (SMEs), social housing, or RES deployment schemes

2.2.3. Key characteristics

Beyond their institutional structures, soft loans share a set of defining financial and operational characteristics that distinguish them from conventional commercial debt. These core features are designed to lower financial barriers and enhance the affordability of sustainable energy investments. Furthermore, depending on the scheme's layout, they often integrate complementary de-risking mechanisms to improve project viability and maximise the leverage of public funds (Cicmanova et al., 2017; EU CoM, 2022; Leeburn, 2026; OECD, 2025; Todeschi et al., 2025) .

Table 2. Cross-cutting characteristics of soft loan schemes and their implications for LRAs

Characteristics	Description	Implications for LRAs
Concessional financing conditions	Financing is provided under favourable terms, including subsidised interest rates, extended repayment periods, or grace periods.	Improves affordability of sustainable energy investments and facilitates project implementation for public and private beneficiaries.
Improved access to finance	Reduced borrowing costs facilitate access to financing for beneficiaries with limited creditworthiness.	Supports the mobilisation of investments among households, SMEs, vulnerable groups, and public authorities.
Revolving financing potential	Depending on the scheme's structure, repaid capital can be reinvested into new projects through revolving financing mechanisms.	Enhances the long-term sustainability and leverage effect of public financial resources.
Blended financing capability	Depending on the scheme's design, soft loans can be combined with grants, guarantees, technical assistance, or performance-based incentives.	Allows LRAs to reduce investment risks, improve project viability, and maximise the impact of limited public resources.
Scalability and market mobilisation	Soft loans can mobilise private capital and support large-scale deployment of EE and RES investments.	Facilitates the expansion of territorial renovation programmes and broader market uptake.
Policy-targeted implementation	Financing conditions and eligibility criteria can be tailored to specific policy priorities or beneficiary groups.	Enables LRAs to address energy poverty, social inclusion, climate neutrality, or strategic local development priorities.
Risk mitigation potential	Complementary mechanisms such as guarantees, EPC structures, or OBR schemes can reduce repayment and performance risks.	Improves investment confidence and supports the financing of more complex or innovative projects.
Technical assistance integration	Soft loan schemes are often supported by advisory services, energy audits, project aggregation, or OSS structures.	Strengthens project preparation capacity and facilitates beneficiary participation, particularly in smaller municipalities or complex renovation programmes.
Governance and monitoring requirements	Effective implementation requires clear eligibility criteria, financial oversight, and performance monitoring systems.	Demands sufficient institutional capacity for scheme coordination, monitoring, and long-term financial management.

The value of these cross-cutting characteristics becomes evident when compared against conventional lending mechanisms. While both approaches provide repayable capital, they operate under fundamentally different financing logics, with conventional commercial lending primarily evaluating investments based on market-rate profitability and borrower creditworthiness. Soft loan schemes on the other strategically relax these constraints by treating environmental and social additionality as a core return on investment. In this way, they help bridge the viability gap of sustainable energy investments that may otherwise struggle to attract conventional financing (Leeburn, 2026; Todeschi et al., 2025).

Table 3 highlights the underlying operational, structural, and risk-bearing parameters that differentiate the two financing approaches.

Table 3. Indicative comparison between soft loans and conventional commercial lending

Dimension	Soft loans	Conventional commercial loans
Financing conditions	Concessional lending terms with below-market interest rates	Market-based interest rates and standard repayment conditions
Primary objective	Policy-driven additionality focused on maximising energy savings, climate benefits, and territorial impact	Commercial profitability focused on risk-adjusted financial returns
Underwriting & credit focus	Project-oriented oriented assessment integrating projected (future) energy savings, technical feasibility and implementation performance	Balance-sheet-based evaluation focused primarily on historical cash flows, credit scores, and financial ratios
Capital provenance	Public budgets channelled through IFIs, promotional banks, or specialised climate and sustainability fund	Private capital sourced through retail deposits, commercial financial markets, and private investors
Collateral & security requirements	Flexible or alternative security structures, often supported through complementary risk-sharing mechanisms, such as public guarantees, EPC arrangements, or utility-based repayment structures (e.g. OBR)	Conventional collateral requirements based on mortgages, liens, or corporate and individual guarantees
Risk tolerance & allocation	Higher structural risk tolerance, with risks partially shared among public authorities, IFIs, financial institutions, and technical operators (depending on the operational arrangements)	Lower structural risk tolerance, with financial and performance risks borne primarily by the borrower
Product integration	Financing is often integrated with technical assistance, OSSs, energy audits, or other support mechanisms (depending on scheme's design)	Financing operates as a standalone market product, with technical support remaining external to the loan structure

2.3. Why soft loans matter? Benefits and added value for LRAs

For many LRAs, soft loans represent a strategic financing instrument enabling them to move beyond the limitations of traditional grant-based funding and fragmented project implementation. By providing financing under concessional conditions, they help unlock investments that may otherwise remain financially inaccessible under conventional market conditions, particularly in the context of energy renovation and climate-neutral infrastructure projects. At the same time, their structural adaptability makes them particularly valuable for scaling up local energy transition efforts while preserving the long-term sustainability of municipal financial resources (Barjasic et al., 2025; ESMAP, 2014; Todeschi et al., 2025).

In particular, the main benefits and added value of soft loan schemes are realised across three key dimensions: (i) fiscal optimisation, (ii) strategic policy alignment, and (iii) ecosystem scalability.

I. Fiscal optimisation and capital multiplication (financial dimension). Soft loan schemes allow LRAs to move beyond exhaustible grant funding toward more sustainable investment structures capable of multiplying public resources and mobilising additional private capital. Key benefits include:

- Budgetary leverage and capital recycling. Unlike static grants, soft loans can operate through revolving structures where repaid capital is reinvested into successive investment cycles, improving the long-term sustainability and efficiency of municipal financial resources.
- Co-investment and private market mobilisation. Rather than fully financing projects through public budgets, LRAs can strategically use limited public resources as interest subsidies or de-risking mechanisms. This enables the combination of public support with commercial and international institutional capital, increasing overall territorial investment capacity.
- Project bankability and structural de-risking. By combining soft loans with public guarantees, blended financing structures, or EPC frameworks, LRAs can reduce perceived investment risks and improve the bankability of complex or fragmented renovation projects, facilitating broader market participation.

II. Strategic policy alignment and social inclusivity (socio-political dimension). Soft loan schemes enable LRAs to channel concessional funding precisely where market gaps exist, ensuring financial terms directly advance municipal decarbonisation and broader social goals. Key benefits include:

- Targeted energy poverty alleviation. Flexible eligibility criteria, subsidised financing conditions, or zero-interest structures can improve access to financing for underserved or low-income households, social housing projects, and vulnerable communities, supporting more socially inclusive energy transition pathways.

- Territorial climate integration. Due to their operational versatility, soft loans can support a wide range of sustainable energy investments - from rooftop PVs to deep building renovation measures - enabling LRAs to translate high-level policy objectives and Sustainable Energy and Climate Action Plan (SECAP) priorities into concrete and scalable local implementation actions.

III. Ecosystem maturity and scalable deployment (operational dimension). Beyond their financial function, soft loan schemes can strengthen local implementation ecosystems and support the transition from isolated interventions toward large-scale renovation and investment programmes. Key benefits include:

- Aggregated portfolio scaling. By standardising financing conditions and implementation approaches, soft loans facilitate the aggregation of multiple small-scale projects into larger renovation programmes across residential, public, and tertiary building sectors.
- Institutional capacity and ecosystem strengthening. Implementing soft loan schemes fosters long-term, cross-sector networks among LRAs, local commercial banks, specialised structures such as ESCOs and OSSs, leaving behind a permanent, mature local implementation ecosystem capable of supporting sustainable energy investment pipelines.

Focus Box 4: When and where soft loans adds value?

Soft loans become particularly valuable when strong local climate ambitions collide with limited financial capacity, fragmented investment pipelines, or restricted access to conventional financing. Their added value lies not only in reducing borrowing costs, but in transforming projects that would otherwise remain delayed, scaled down, or financially unviable into implementable investment opportunities.

In practice, they are especially effective when:

- upfront investment costs are too high for households, SMEs, or public authorities;
- long payback periods discourage conventional commercial lending;
- municipalities seek to scale up renovation programmes beyond the limits of grant funding;
- vulnerable or underserved groups require more accessible financing conditions;
- public resources need to be strategically leveraged to mobilise additional private capital or
- complex projects require blended financing, technical assistance, or performance-based delivery models.

By bridging the gap between public policy objectives and market realities, soft loans enable LRAs to accelerate territorial energy transition pathways while building more resilient and investment-ready local financing ecosystems.

2.4. Sector-wide application: When and where soft loans can be used?

While soft loans are traditionally anchored in building energy upgrades, their structural flexibility allows LRAs to deploy concessional capital across a broader matrix of territorial sectors and long-term sustainability goals. By adjusting interest rates, loan maturities, and repayment parameters, public authorities can tailor these schemes to address specific sectoral barriers, such as prohibitive upfront capital demands, prolonged payback horizons, and private credit constraints (OECD, 2025; Todeschi et al., 2025). Crucially, this adaptability has expanded the scope of soft loans beyond standard emission-reduction retrofits into regional climate resilience, establishing them as viable debt instruments for structuring complex, revenue-generating climate adaptation and Nature-based Solutions (NbS) (Barjasic et al., 2025; EEA, 2017).

Depending on the scale and technical complexity of the targeted intervention, soft loans can function either as standalone mechanisms or as core components of integrated blended-finance structures.

Table 4 provides a systematic mapping of soft loan structures across primary sector applications and municipal investment streams.

Table 4. Indicative overview of soft loan applications across sectors and type of investment

Sector	Indicative applications and typical soft loan structures
Public buildings	Supporting: EE renovations and RES integration in schools, hospitals, administrative buildings, heating, ventilation, and air conditioning (HVAC) systems, and rooftop PVs
	• Typical structures: Direct public lending, revolving funds, or EPC-supported soft loans • Implications for LRAs: Enables large-scale renovation of municipal assets while reducing upfront public expenditure
Residential sector	Supporting: Housing renovation programmes, including insulation, heat pumps, rooftop solar, and energy poverty interventions
	• Typical structures: Intermediated lending, blended models, or OBR schemes • Implications for LRAs: Facilitates citizen participation and inclusive energy transition programmes
Commercial & SMEs	Supporting: EE and small-scale RES upgrades in commercial and industrial facilities
	• Typical structures: Credit-line-supported loans or blended schemes • Implications for LRAs: Enhances local economic activity while reducing emissions from private sector operations
Public infrastructure	Supporting: Sustainable upgrades in municipal infrastructure, including street lighting, smart systems, and public facilities.
	• Typical structures: Revolving soft loans, EPC-supported structures, or blended models • Implications for LRAs: Enables scalable infrastructure modernisation and operational cost savings

Sustainable mobility	Supporting: Fleet electrification, electric vehicle (EV) charging infrastructure, cycling infrastructure, and shared mobility systems.
	• Typical structures: Blended models or credit-line-supported financing • Implications for LRAs: Advances transport decarbonisation and long-term mobility transition strategies
District energy & large infrastructure	Supporting: District heating and cooling systems, energy communities, and integrated energy infrastructure
	• Typical structures: IFI-supported loans, revolving infrastructure funds, or blended models • Implications for LRAs: Facilitates implementation of complex infrastructure projects with high investment needs
Cross-sectoral projects	Supporting: Aggregated EE and RES investments across sectors and beneficiary groups
	• Typical structures: Portfolio-based soft loans, revolving schemes, or integrated financing programmes • Implications for LRAs: Enables coordinated territorial investment strategies and programme-based implementation

Focus Box 5: Climate adaptation and resilience - Expanding the concessional horizon

The inclusion of climate adaptation and NbS represents the latest evolution in the deployment of territorial soft loans. Historically, concessional debt has primarily favoured EE investments, where energy savings provide an immediate and measurable financial return capable of supporting loan repayments. However, as local ecosystems face increasingly complex climate disruptions, LRAs are progressively utilising soft loans to finance resilience infrastructure (EEA, 2017).

The effectiveness of these emerging schemes depends on structuring soft loans around alternative, long-term value streams, including local environmental tariffs, avoided damage cost savings, or blended public-private resilience funds. By deploying soft loans for adaptation purposes, LRAs can transform critical climate resilience projects from upfront municipal cost centres into structured, bankable investments that strengthen the long-term protection of territorial assets and communities (Barjasic, et al., 2025).

2.5. Main stakeholders involved

Unlike traditional grant-based mechanisms that operate through a linear, one-way disbursement of funds, soft loan schemes rely on a coordinated, multi-stakeholder ecosystem. Within it, concessional capital is channelled, managed, de-risked, and repaid through an interconnected network of institutional, financial, and market actors, who - depending on the delivery model - contribute across four functional pillars:

(i) capital provenance,
(ii) financial intermediation,
(iii) technical aggregation, and
(iv) project execution.

To map the soft loan ecosystem clearly, participating actors can be broadly grouped into two categories:

- Supply-side and management actors, including the institutions responsible for structuring, capitalising, underwriting, and administering the scheme.
- Demand-side and execution actors, including the targeted end-beneficiaries, project promoters, and market operators utilising the concessional capital to implement physical investments.

On the supply side, soft loan frameworks are designed and capitalised through structural collaborations between public authorities, IFIs, and commercial financial intermediaries. These entities collectively manage risk allocation, establish underwriting criteria, and ensure that capital deployment aligns with territorial climate mandates (Bullier & Milin, 2024; fi-compass, 2026). Their respective roles are outlined in Table 5.

Table 5. Functional roles of supply-side and management stakeholders

Actor	Primary role	Contribution to scheme design
Public authorities (including LRAs)	• Strategic coordination • Policy anchor	• Allocate public budgets to fund interest subsidies, grace periods or first-loss equity tranches • Align eligibility criteria with local SECAPs • Build investor confidence and reduce perceived risks
EU financial institutions and IFIs	• Macro-capital provenance • Technical support	• Provide long-term, low-cost credit lines to national or regional promotional banks • Leverage institutional capital and EU structural funds through blended finance • Fund technical assistance facilities to build local administrative capacity
Commercial banks and financial intermediaries	• Retail distribution • Credit administration	• Act as the primary retail interface, using existing banking networks to reach end-beneficiaries • Assess creditworthiness and standardise loan underwriting • Manage loan servicing, repayments and default risks

Specialised funds or delivery structures (OSSs, EE Funds)	• Portfolio aggregation • Scheme facilitation	• Manage the operational mechanism of revolving financing structures and dedicated green credit facilities • Function as OSSs to streamline the application process for fragmented market segments • Aggregate small projects into portfolios to reduce transaction costs
Technical support organisations and advisors	• Risk verification • Quality assurance	• Conduct independent energy audits and baseline technical project assessments • Assist under-capacitated beneficiaries with investment planning and application compliance • Support M&V of post implementation energy savings

On the demand side, soft loans cater to an array of public, private, and collective actors who drive territorial sustainable energy transitions. Across these groups, concessional financing is used either to upgrade their own assets directly or through market-based models where financing is combined with third-party implementation and performance guarantees (Cicmanova et al., 2017; EU CoM, 2022; Todeschi et al., 2025). The respective operational use of soft loans within demand-side stakeholders is outlined in Table 6.

Table 6. Functional roles of demand-side and executing stakeholders

Actor	Core financial driver	Operational utilisation of soft loans
LRAs	• Public asset modernisation • Fiscal space protection	• Utilise concessional financing to implement large-scale retrofits of municipal buildings and sustainable infrastructure projects • Deploys capital to reduce immediate pressure on municipal budgets
Private businesses and SMEs	• Operational cost reduction • Industrial modernisation	• Access long-term capital to deploy clean energy technologies or execute deep EE retrofits • Facilitate access to financing despite collateral or creditworthiness constraints
ESCOs	• Performance-based revenue generation	• Leverage soft loans within third-party financing (TPF) structures to back EPCs • Use concessional debt to guarantee energy savings for public or private clients without absorbing prohibitive market-rate capital costs
Households and citizens	• Residential optimisation • Vulnerability mitigation	• Secure affordable, low-interest capital for residential EE and RES investments • Improve access to financing for low-income households and vulnerable groups
Energy communities and collective entities	• Aggregated generation • Local energy autonomy	• Utilise collective soft loans structures to finance community-owned RES systems or shared heating networks • Aggregate local financing demand through co-operative or collective investment structures

3. Setting up a soft loan scheme: A quick step-by-step guide

Setting up a soft loan scheme requires more than defining attractive lending conditions. For LRAs, it involves translating high-level policy objectives into a structured financing mechanism capable of mobilising capital, engaging financial institutions and commercial intermediaries, supporting beneficiaries, and cultivating a continuous pipeline of investment-ready projects.

Unlike traditional non-repayable grant mechanisms, soft loan schemes require rigorous upfront preparation, transparent governance frameworks, and sustained administrative capacity to ensure that concessional capital is efficiently channelled, recovered, and reinvested.

In practice, this operationalisation process is gradual and iterative; before market launch, LRAs must systematically assess the local investment gap, secure institutional buy-in, define target eligibility criteria, and formalise delivery partnerships - a process that may require one to two years of preparation before capital disbursement and several additional cycles before long-term impacts can be fully monitored (Cicmanova et al., 2017).



Figure 7. Roadmap for soft loan implementation: key steps for LRAs
(Source: Author's own elaboration / AI-enhanced)

3.1. Step-by-step roadmap for soft loan implementation

To facilitate the transition from strategic planning to operational deployment, the following section presents a practical seven-step roadmap covering the main phases involved in establishing and managing a soft loan scheme. Rather than a fixed implementation sequence, the roadmap should be understood as an adaptable framework that can be adjusted to different territorial priorities, governance arrangements, financing ecosystems, and levels of market maturity.

Step 1 – Explore opportunities and meet basic requirements

This first step focuses on assessing whether the local context is sufficiently mature - institutionally, financially, and politically - to support the deployment of a soft loan scheme. Before designing the financing structure itself, LRAs need to determine whether concessional lending can effectively address existing market barriers and support the implementation of local climate and energy priorities.

Key actions in this step typically include:

- identifying priority sectors and investment areas (e.g. public buildings, residential renovation, SMEs, RES, sustainable infrastructure),
- defining the target beneficiaries (e.g. households, SMEs, public entities, energy communities),
- assessing the local financing gap and the barriers limiting access to conventional financing,
- mapping existing financing instruments and evaluating complementarities with grants, guarantees, or technical assistance schemes,
- assessing institutional readiness, including governance capacity, political support, and internal administrative resources,
- engaging financial institutions, supporting structures (e.g. OSSs), and technical actors (e.g. ESCOs) to evaluate market interest and delivery potential,
- ensuring alignment with broader territorial climate and energy strategies (e.g. SECAPs).

When assessing opportunities, particular attention should be directed towards sectors where strong investment potential exists, but viable projects remain locked out of conventional financing channels - rather than areas already sustained through extensive grant support.

Common pitfalls to avoid:

- Designing the scheme without a realistic assessment of local administrative and market capacity
- Failing to engage financial intermediaries and delivery partners early in the design process

Step 2 – Define the financing model and delivery structure

Once the preliminary conditions have been assessed, LRAs need to define how the scheme will operate in practice. This includes selecting the most appropriate operational arrangement, determining the role of financial intermediaries, and identifying the financial mechanisms required to support implementation.

Key actions in this step typically include:

- selecting the operational arrangement and defining the role of key financial and implementation actors, including commercial banks, IFIs, enablers (e.g. OSSs,) ESCOs, and specialised funds,
- assessing opportunities and determining whether the scheme will operate as a standalone instrument or within a blended financing structure combining soft loans with guarantees, grants, or technical assistance mechanisms,
- defining preliminary financing conditions (e.g. interest rates, repayment periods, grace periods),

The selected financing structure should remain sufficiently flexible to adapt to local market conditions, target groups, and the scale of the planned investment pipeline.

Common pitfalls to avoid:

- Selecting financing structures or lending conditions that exceed local institutional capacity or compromise the long-term financial sustainability of the scheme
- Failing to clearly define stakeholder roles and responsibilities early in the design process

Step 3 – Secure funding sources and capitalisation

This step focuses on identifying and securing the financial resources required to capitalise the scheme and sustain long-term lending operations. Depending on the selected model, capital may originate from public or private budgets, revolving funds, or blended public-private financing structures.

Key actions in this step typically include:

- assessing available public resources and identifying potential IFI, EU, commercial banking, or promotional financing opportunities to support capital mobilisation and delivery structures,
- defining capital allocation mechanisms, revolving structures, and risk-sharing requirements to ensure long-term financial sustainability.

Funding structures should be designed be designed not only to support initial deployment, but also to sustain long-term capital recycling and scheme scalability.

Common pitfalls to avoid:

- Relying exclusively on short-term public funding sources or underestimating long-term capital requirements and scheme sustainability
- Failing to establish adequate risk-sharing arrangements

Step 4 – Establish governance and implementation arrangements

Effective implementation requires clear governance structures, operational procedures, and stakeholder coordination mechanisms. This step establishes the institutional architecture required to manage, monitor, and deliver the scheme efficiently.

Key actions in this step typically include:

- defining the governance structure and decision-making responsibilities,
- establishing operational procedures for application, approval, disbursement, and repayment,
- assigning responsibilities among financial intermediaries and technical actors,
- setting up monitoring and reporting procedures,
- ensuring compliance with financial, procurement, and regulatory frameworks.

In complex multi-actor schemes, clear governance structures are critical to align financial, technical, and operational responsibilities across all delivery partners.

Common pitfalls to avoid:

- Fragmented governance arrangements and unclear institutional responsibilities
- Excessively complex administrative procedures discouraging participation
- Weak monitoring and reporting mechanisms

Step 5 – Build the project pipeline and market uptake

A successful soft loan scheme depends on the existence of a credible and scalable pipeline of eligible investments. At this stage, LRAs focus on stimulating market demand, supporting project preparation, and ensuring that target beneficiaries can access the scheme effectively.

Key actions in this step typically include:

- identifying and aggregating eligible projects,
- supporting energy audits and feasibility assessments,
- developing outreach and awareness campaigns,

- providing technical support to beneficiaries,
- facilitating project preparation and financing applications,
- promoting standardised and bankable investment approaches

Technical assistance and OSS-type structures can play a particularly important role in reducing administrative barriers and improving project maturity.

Common pitfalls to avoid:

- Launching the scheme without a sufficiently prepared investment pipeline
- Underestimating the importance of technical support and beneficiary guidance
- Overreliance on highly complex or unproven technologies

Step 6 – Launch and operate the scheme

This step operationalises the soft loan scheme and initiates the financing cycle. Efficient implementation procedures and transparent communication are essential to ensure smooth market uptake and long-term stakeholder confidence.

Key actions in this step typically include:

- launching application and communication procedures,
- conducting technical and financial project assessments,
- approving eligible investments and disbursing financing,
- coordinating implementation and technical verification,
- managing repayment flows and operational reporting.

At this stage, maintaining transparent procedures and efficient coordination between financial and technical actors is critical for building confidence among beneficiaries and market participants.

Common pitfalls to avoid:

- Complex application procedures creating unnecessary administrative burden
- Delays in project approval and financing disbursement
- Weak coordination between technical and financial stakeholders

Step 7 – Monitor results and improve the scheme

Continuous monitoring and evaluation are essential to ensure that the scheme remains financially sustainable, operationally effective, and aligned with evolving market and policy conditions.

Key actions in this step typically include:

- monitoring loan performance and repayment rates,
- evaluating energy savings and emissions reductions,
- assessing market uptake and leverage achieved,
- identifying operational bottlenecks and implementation barriers,
- adjusting financing conditions and eligibility criteria where necessary,
- reinvesting repaid capital into future investment cycles.

Over time, monitoring results can help LRAs improve scheme performance, strengthen market confidence, and progressively scale up territorial investment capacity.

Common pitfalls to avoid:

- Limited performance monitoring and feedback mechanisms
- Failure to adapt the scheme to changing market conditions
- Weak evaluation of long-term territorial impact

3.2. Soft loans checklist – Key questions for successful setup

The following checklist is intended as a practical reference tool to help LRAs evaluate their preparedness and support key decision-making during a soft loan scheme setup and implementation. It translates the main implementation stages into a series of practical questions to be considered throughout the process.

Step 1 – Exploring opportunities and meeting basic requirements

☐ Have the priority sectors, target beneficiaries, and main financing barriers been clearly identified?

☐ Has the local market, institutional, and administrative readiness to support the scheme been assessed?

☐ Have key financial institutions and delivery partners been engaged at an early stage?

Step 2 – Definition of the financing model and delivery structure

☐ Has the operational arrangement (e.g. direct, intermediated, revolving, EPC-supported) been selected?

☐ Are the roles of financial intermediaries, OSSs, ESCOs, and other implementation actors clearly defined?

☐ Have preliminary financing conditions and opportunities for blended financing been assessed?

Step 3 – Securing funding sources and capitalisation

☐ Have available public resources and potential IFI, EU, or commercial financing opportunities been identified?

☐ Have revolving structures, risk-sharing mechanisms, and long-term financial sustainability been assessed?

☐ Is the proposed funding structure capable of supporting both initial deployment and capital recycling?

Step 4 – Establishment of governance and implementation arrangements

☐ Are the governance roles, operational responsibilities, and coordination mechanisms clearly defined?

☐ Are the legal, standardisation, and risk-underwriting workflows for loan application, verification, asset security, and default recovery fully operationalised?

☐ Have M&V and technical compliance requirements been embedded into the programme documentation?

Step 5 – Building the project pipeline and market uptake

☐ Has an initial pipeline of investment-ready projects been technically identified and assessed?

☐ Are technical assistance, beneficiary guidance, and project preparation support mechanisms in place?

☐ Have targeted outreach and market activation strategies been deployed to stimulate demand?

Step 6 – Launching and operating the scheme

☐ Are the application appraisal, technical auditing and disbursement pipelines transparent, and standardised?

☐ Is coordination between financial administrators and technical actors functioning effectively?

Step 7 – Monitoring results and improving the scheme

☐ Are post-implementation M&V protocols practical and manageable for the final beneficiaries?

☐ Are the broader territorial socioeconomic and environmental impacts being regularly evaluated?

☐ Has a process for reviewing, adapting, and progressively improving the scheme been established?

4. Critical conditions influencing soft loan schemes

Soft loan schemes operate within complex financial, institutional, and market ecosystems, where their effectiveness depends on a broad set of enabling conditions shaping both capital deployment and long-term operational sustainability. Unlike traditional grants, concessional lending mechanisms require the continuous balancing of affordability, financial sustainability, institutional coordination, and market uptake. Their success therefore depends not only on the availability of capital, but also on the ability to structure attractive financing conditions, generate investment demand, mobilise intermediaries, and maintain revolving financing capacity over time (Bullier & Milin, 2024; Cicmanova et al., 2017; fi-compass, 2026; Fritz & Raza, 2014; Todeschi et al., 2025).

The main conditions influencing the implementation and long-term performance of a soft loan scheme are outlined hereunder.

4.1. Drivers and success factors

The effectiveness and scalability of soft loan schemes depend on several enabling conditions supporting both investment uptake and long-term financial sustainability. Key drivers and success factors include:

- Strong policy alignment with local climate, energy, and renovation priorities (e.g. SECAPs), ensuring political support and long-term institutional commitment.
- Clearly identified financing gaps, particularly where viable projects remain excluded from conventional lending due to high upfront costs, long payback periods, or affordability constraints.
- Availability of stable concessional capital sources, including public funds, IFIs, promotional banks, or revolving financing facilities supporting long-term deployment capacity.
- Well-calibrated financing conditions, balancing affordability for beneficiaries with the long-term sustainability of the financing structure.
- Integration of revolving mechanisms, enabling repaid capital to be reinvested into successive investment cycles and progressively scale territorial impact.
- Strong cooperation with financial intermediaries, ensuring that financing products remain operationally feasible and aligned with market conditions.
- Availability of technical assistance and project preparation support, helping beneficiaries transform fragmented or immature projects into investment-ready opportunities.
- Simple and accessible application procedures, reducing administrative burden and improving uptake among households, SMEs, and smaller municipalities.

- Integration with complementary instruments, including guarantees, grants, EPC structures, OSSs, or advisory services, strengthening project bankability and reducing financing risks.
- Continuous monitoring and adaptive management, allowing financing conditions and operational arrangements to evolve alongside changing market conditions and implementation experience.

4.2. Barriers and limitations

Despite their strong potential to accelerate sustainable energy investments, soft loan schemes face several structural and operational barriers that may limit their effectiveness and scalability. Key barriers and limitations include:

- Limited awareness and familiarity with concessional financing mechanisms, particularly among smaller beneficiaries and local financial actors accustomed to grant-based support.
- Insufficient availability of investment-ready projects, slowing financing uptake and capital deployment.
- Weak administrative and institutional capacity, especially among LRAs with limited experience in managing revolving or blended financing structures.
- Dependence on external capital sources, including IFIs or temporary public programmes, potentially affecting long-term continuity and financial stability.
- Administrative complexity and high transaction costs, particularly for smaller projects or fragmented residential markets.
- Limited attractiveness for commercial intermediaries, especially where financing volumes, risk-return expectations, or repayment horizons remain insufficiently aligned with market practices.
- Difficulties balancing concessionality and financial sustainability, particularly when interest rates are set too low to sustain revolving mechanisms over time.
- Fragmented coordination between financial, technical, and public actors, potentially creating implementation delays and operational inefficiencies.
- Regulatory and accounting constraints, including public debt treatment, procurement rules, or state aid considerations affecting scheme design and deployment.
- Perceived complexity compared to direct grant schemes, particularly during early market stages where repayable financing instruments remain less familiar.

4.3. Key risk dimensions

Although soft loan schemes are designed to improve affordability and reduce financing barriers, they also introduce a range of financial, operational, and implementation risks that require careful management and continuous monitoring. Key risk dimensions include:

- Credit and repayment risk, arising from delayed repayments or borrower defaults affecting the revolving capacity and long-term sustainability of the scheme.
- Financial sustainability risk, linked to insufficient capital recycling, inadequate capitalisation, or poorly calibrated concessional financing conditions.
- Interest rate and refinancing risk, resulting from changes in borrowing costs, inflation, or external financing conditions affecting the long-term viability of concessional lending structures.
- Liquidity risk, emerging when repayment flows are insufficient to sustain future lending cycles or operational commitments.
- Operational and administrative risk, stemming from inefficient procedures, weak governance arrangements, or insufficient coordination among implementation actors.
- Implementation risk, associated with delays in project preparation, low market uptake, or insufficient beneficiary engagement.
- Performance risk, occurring when financed projects fail to deliver expected energy savings, operational improvements, or financial returns.
- Regulatory and compliance risk, linked to changes in public finance, procurement, accounting, or state aid frameworks affecting scheme implementation.
- Market distortion risk, potentially arising when concessional financing unintentionally crowds out commercially viable market solutions.
- Reputational risk, resulting from low uptake, operational failures, or poor financial performance undermining stakeholder confidence and long-term political support.

4.4. Synthesis of critical conditions affecting implementation

Table 7 provides a consolidated overview of the main conditions influencing the design and implementation of soft loan schemes, highlighting enabling factors, common barriers and risks, and indicative mitigation measures supporting effective deployment and long-term operational sustainability.

Table 7. Summary of critical conditions influencing soft loans schemes

Dimension	Key drivers/enabling factors	Common barriers/risks	Mitigation measures
Political & strategic alignment	• Strong alignment with SECAPs and local priorities • Long-term political commitment and institutional ownership	• Shifting political priorities • Weak strategic integration within local investment planning	• Formal integration into local climate and investment strategies • Multi-year implementation planning and political endorsement
Financial structure & concessionality	• Stable access to concessional capital • Well-calibrated financing conditions balancing affordability and sustainability	• Overdependence on temporary public funding • Unsustainable concessionality levels reducing revolving capacity	• Blended financing structures combining public and private capital • Periodic review of financing conditions and repayment structures
Capital recycling & revolving capacity	• Effective revolving mechanisms and repayment flows • Long-term reinvestment strategy	• Weak repayment performance • Insufficient capital recycling capacity	• Strong repayment monitoring systems • Conservative capital allocation and reserve planning
Market readiness & financing uptake	• Strong market demand for EE and RES investments • Engagement of commercial banks and intermediaries	• Low awareness of soft loan mechanisms • Limited participation from financial institutions or beneficiaries	• Early stakeholder engagement and market consultations • Communication campaigns and simplified financing products
Technical preparation & project pipeline	• Availability of technically mature and viable projects • Access to technical assistance and project preparation support	• Weak pipeline of investment-ready projects • Insufficient technical preparation and energy assessments	• Energy audits and feasibility studies • Technical assistance facilities and project aggregation mechanisms
Institutional & governance capacity	• Clear governance structures and stakeholder responsibilities • Strong administrative and coordination capacity	• Fragmented responsibilities and coordination failures • Limited administrative expertise	• Clearly defined governance and operational procedures • Capacity-building and external implementation support
Operational implementation	• Simple and transparent financing procedures • Efficient coordination between financial and technical actors	• Administrative complexity and high transaction costs • Delays in approvals and disbursement	• Standardised procedures and templates • Digitalisation and simplification of application processes

Risk management & financial sustainability	• Continuous monitoring of repayments and financial performance • Balanced risk-sharing arrangements	• Credit, liquidity, and refinancing risks • Weak financial sustainability of revolving structures	• Regular financial monitoring and adaptive management • Diversified funding and repayment structures
Regulatory & compliance environment	• Clear regulatory and accounting framework • Compatibility with public finance and state aid rules	• Regulatory uncertainty and complex compliance requirements • Unclear debt or accounting treatment	• • Early legal and financial due diligence • Alignment with applicable procurement and state aid frameworks
Long-term market transformation	• Integration with OSSs, EPCs, guarantees, and advisory mechanisms • Gradual maturation of local financing ecosystems	• Persistent dependence on grants or subsidies • Limited scalability and replication potential	• Combination with complementary financing instruments • Progressive scaling and standardisation of financing models

5. Summary of key takeaways

WHAT ARE SOFT LOANS ABOUT? Soft loans are concessional financing instruments designed to support sustainable energy and climate investments by providing financing under more favourable conditions than conventional commercial lending. Through subsidised interest rates, extended repayment periods, grace periods, or simplified access conditions, they improve affordability and enable investments that may otherwise remain financially inaccessible.

Unlike grants, soft loans rely on repayment and capital recycling mechanisms, allowing financial resources to revolve over time and support successive investment cycles. In doing so, they help LRAs move beyond one-off public funding approaches toward more sustainable financing ecosystems capable of mobilising additional private and institutional capital.

HOW ARE SOFT LOAN SCHEMES STRUCTURED IN PRACTICE? In practice, soft loan schemes are implemented through structured partnerships involving LRAs, financial institutions, IFIs, OSSs, ESCOs, and technical support organisations. Depending on the selected operational arrangement, LRAs may act either as direct beneficiaries implementing projects on public assets or as strategic coordinators facilitating financing deployment across local markets.

Three main operational arrangements are commonly used:

- Direct public lending (centralised setup), where LRAs or dedicated public funds issue concessional loans directly to beneficiaries, retaining stronger control over financing conditions and policy targeting.
- Intermediated commercial lending (decentralised setup), where public authorities or IFIs channel concessional financing through participating commercial banks responsible for retail lending and loan administration.
- Third-party or ESCO-led arrangements, where soft loans are integrated within EPC structures, combining financing, technical implementation, and performance guarantees.

These three configurations demonstrate the immense structural flexibility of soft loan schemes to adapt to different investment scales, governance models, and territorial conditions. The selection of the most appropriate operational framework depends on balancing local market maturity, institutional capacity, availability of public de-risking resources, and the technical complexity of the targeted investments.

WHAT ARE THE MAIN LOAN TYPES AND HOW ARE THEY APPLIED ACROSS SECTORS? Soft loan schemes can take different forms depending on how concessional capital is structured, repaid, and combined with complementary financing mechanisms. These variations influence financing affordability, repayment structures, implementation arrangements, and the overall scalability of sustainable energy investments.

Table 8. Summary of the main loan types and their application across sectors

Typology	Guarantee type	Core idea	Typical use for LRAs
Concessional financing structures	Subsidised-interest loans	Reduced interest rates and extended repayment conditions	Building renovation and RES deployment
	Zero- or near-zero-interest loans	Financing with minimal or no interest charges to maximise affordability	Residential EE investments and energy poverty programmes
	Revolving soft loans	Repaid capital is reinvested into future projects	Public revolving funds and long-term renovation programmes
Blended structures	Blended loan-grant instruments	Combination of concessional loans with grants, guarantees, or incentives	Large-scale renovation programmes
	Credit-line-supported loans	Commercial lending through IFI or promotional bank credit lines	Bank-led sustainable energy financing programmes
	OBR-based structures	Loan repayments linked to utility bills and energy savings	Residential EE programmes
Targeted financing approaches	Targeted soft loans	Financing tailored to specific beneficiaries or policy priorities	Energy poverty, social housing, SMEs, and RES deployment schemes

Soft loan typologies do not operate as mutually exclusive instruments; they are often combined within integrated financing structures, allowing LRAs to adapt concessional financing mechanisms to different sectors, investment scales, and territorial priorities. This blending capability transforms them from standard debt instruments into flexible policy tools, particularly relevant for supporting EE and RES investments across public buildings, housing renovation, municipal infrastructure, SMEs, and climate resilience projects. Increasingly, they are also being adapted to support climate adaptation and NbS programmes, enabling LRAs to finance resilience-oriented investments through long-term concessional mechanisms that safeguard territorial assets against compounding climate risks.

WHO SHOULD USE SOFT LOANS? Soft loans are particularly suitable for LRAs and public entities seeking to:

- scale up sustainable energy investments beyond the limitations of grant-based funding,
- improve access to affordable financing for households, SMEs, and vulnerable groups,
- mobilise private and institutional capital alongside public resources,
- support large-scale renovation and infrastructure programmes,
- address financing barriers linked to high upfront costs or long payback periods,
- strengthen local financing ecosystems and long-term investment capacity.

They are especially relevant in contexts where viable projects exist but conventional market financing remains inaccessible, insufficient, or financially unattractive.

WHEN ARE SOFT LOANS MOST EFFECTIVE? Soft loans are most effective when financing affordability - rather than project viability alone - represents the primary investment barrier.

Their impact is maximised when:

- strong investment demand exists but upfront costs remain prohibitive,
- projects generate measurable long-term savings capable of supporting repayment,
- financing conditions are carefully calibrated to balance affordability and financial sustainability,
- revolving mechanisms allow repaid capital to support successive investment cycles,
- technical assistance and project preparation support are available,
- concessional financing is integrated with complementary mechanisms such as guarantees, EPCs, grants, or OSSs,
- institutional and governance structures are sufficiently mature to support long-term implementation and monitoring.

Under these conditions, soft loans can act as strategic transition instruments, enabling LRAs to accelerate territorial decarbonisation while progressively building more resilient and investment-ready local financing ecosystems.

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