



# Financial language for public administration in the Smart City context

Roadshow: Build Your Financial Capacity

1<sup>st</sup> WEBINAR 11<sup>th</sup> of January 2024

Scalable Cities Secretariat  
GNE Finance



EUROPEAN COMMISSION

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European Climate, Infrastructure and Environment Executive Agency (CINEA)  
Established by the European Commission

Contact: Christof Marx  
Email: [christof.marx@ec.europa.eu](mailto:christof.marx@ec.europa.eu)

European Commission  
B-1049 Brussels

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# 1. Introduction

By harnessing digital technology, data analytics, and connectivity, [cities](#) can optimize resource use, enhance energy efficiency, reduce emissions, and foster sustainable practices. Smart infrastructure, from energy-efficient buildings to efficient transportation networks, enables local administrations to meet their green goals. Moreover, these initiatives often attract private and public investments, which financial skills can facilitate. Through a Smart City, local governments can leverage data-driven decision-making, innovative financing models, and public-private partnerships to align with EU sustainability objectives and drive economic growth, making their financial acumen essential in transforming cities into sustainable, green hubs of the future and wholeheartedly commit to [the path towards a climate-neutral Europe by 2050](#).

Local administrations are crucial for the success of the [European Union Sustainable Finance Disclosure Regulation \(EU SFDR\)](#), the [EU Taxonomy](#), and the [New Green Deal](#) due to their role in implementing green initiatives at the city and regional levels. They require financial skills to secure funds, manage budgets, attract investments, ensure compliance, foster innovation, and drive local economic growth in alignment with the [EU's sustainability objectives](#). Local governments are the bridge between [European sustainability policies](#) and tangible projects, making their financial expertise vital for translating these initiatives into actionable, green solutions that benefit both the community and the environment.

## What are Scalable Cities?

[Scalable Cities](#) is a community of communities. Since 2014, a total of 20 European projects have been funded in which lighthouse cities and fellow cities have committed to developing innovative projects to achieve climate neutrality. The key idea has been to develop innovative energy solutions and business models that can be scaled up and replicated across Europe and lead to measurable results. In this sense, public administrations have been invited to take an active part in the energy transition by taking a proactive role in both designing innovative services and addressing the local market.



Scalable Cities has a Secretariat that supports all these Smart Cities communities to collect and document all the knowledge and experiences developed, as well as to provide support through different services.



**Some of the technical solutions** developed by the cities that are part of Scalable Cities are the following:

- Computing and cognitive solutions, providing applications or services enabling behavioural changes for citizens.
- Data-Driven business models enable cities or operators to manage energy efficiency better.
- Deployment of charging infrastructure for electric vehicles.
- District heating.
- Electric/hybrid public vehicle purchases.
- Energy management (district/blocks/ buildings/Demand/response) using technologies such as AI, microgrid, blockchain or others.
- Energy storage.
- Frugal solutions: it is an approach that involves using ingenuity to innovate most simply and effectively possible using the least amount of resources.
- Industrial heat production.
- Infrastructure physical and digital.
- Mobility stations.
- New buildings.
- New public transport infrastructures.
- Park & ride facilities.
- Positive Energy Blocks or Positive Energy Districts.
- Private buildings retrofitting.
- Public buildings retrofitting.
- Public lighting.
- Renewable energy production.
- Renewable energy thermal production.
- Vehicle Sharing Platforms (carpooling, sharing).
- Bundling services, please specify which sectors are involved (bundling services means grouping a set of actions in a coherent and global business model. E.g. combining retrofitting with renewables and EV charging stations).
- Others.

## **What is the Roadshow: Build your financial capacity?**

The Roadshow is a service offered by the Scalable Cities Secretariat to support cities in the field of financial design of projects such as those mentioned above (business model, financial schemes and everything that unfolds from it). With this objective, a series of activities will be carried out through which basic and advanced information on finance will be acquired, to have resources with which to think and design economically sustainable and scalable urban projects to achieve climate neutrality.

This document responds to the content of the first webinar: "*Financial language for public administration in the Smart City context*".



If you are reading this is because you are going to attend the first webinar, so ...

Welcome on board!

This webinar will be interactive and will promote reflection on the needs and role of public administration.



**SCALABLE CITIES  
ROADSHOW**

**FINANCIAL LANGUAGE FOR PUBLIC  
ADMINISTRATION IN SMART CITY PROJECTS**

WEBINAR  
11 JANUARY 2024, 10:00 - 12:00 CET

**AGENDA**

**10:00h - 10:10h**  
Introduction to Scalable Cities and Smart City projects  
with Paula Ferrando, GNE Finance.

**10:10h - 10:20h**  
Brief presentation and assessment of general financial  
knowledge.

**10:20h - 11:00h**  
Explanation of financial concepts and bankable solutions  
with Giovanni Lazzeri GNE Finance.

**11:00h - 11:30h**  
Joint discussion and Q&A.

**11:30h - 11:45h**  
Introduction to the EUCityFacility project: financial tools  
and approach for cities with Valentina Cabal, GNE Finance.

**11:45h - 11:55h**  
Questions and comments on the EUCityFacility project.

**11:55h - 12:00h**  
Final remarks.  
For more information contact: [p.ferrando@gnefinance.com](mailto:p.ferrando@gnefinance.com)



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## 2. Process for designing a project with a high potential for bankability.

Designing a project with high potential for bankability involves a systematic process to ensure that the project is not only feasible and well-planned but also attractive to potential investors or financial institutions.

There is no single process, but some steps can help make the project more financially successful. Normally we start thinking about the technical solution and here it is proposed to start from a limited set of objectives to understand the market, the risks and the definition of the financial model. Once this is clear, work on the technical solution, although in many cases it must be developed in parallel to identify the investment costs and also the cash flows.

### What is a bankable project?

A **"bankable project"** refers to a project that is considered financially viable and attractive to potential investors, including banks and other financial institutions. In essence, a bankable project is likely to secure funding or financing because it demonstrates a high level of feasibility, profitability, and overall soundness. The term is commonly used in the context of infrastructure projects, real estate developments, and other large-scale initiatives.

In the context of Smart Cities energy efficiency projects, due to their ambition and scale, as well as their development in the medium and long term in the urban environment, it is necessary to think about them from the point of view of their bankability.

In this sense, we propose here eight axes on which to begin to think about and develop a project of these characteristics:

<b>Financial Viability</b>	<ul style="list-style-type: none"> <li>- The project should have a well-thought-out financial plan with realistic projections.</li> <li>- Investors and lenders will look for evidence that the project can generate sufficient cash flows to cover operational costs and service any debt.</li> </ul>
<b>Risk Mitigation</b>	<ul style="list-style-type: none"> <li>- A bankable project addresses and mitigates potential risks effectively. This includes identifying and managing technical, market, regulatory, and operational risks.</li> </ul>
<b>Market Demand</b>	<ul style="list-style-type: none"> <li>- There should be a clear and demonstrated demand for the product or service that the project offers.</li> <li>- Market research is crucial to understanding the needs and preferences of the target audience</li> </ul>
<b>Robust Business Plan</b>	<ul style="list-style-type: none"> <li>- The project should have a well-structured and comprehensive business plan that outlines its goals, strategies, and financial expectations.</li> <li>- The business plan should highlight the project's competitive advantages and value proposition.</li> </ul>
<b>Compliance with Regulations</b>	<ul style="list-style-type: none"> <li>- A bankable project adheres to all relevant laws, regulations, and environmental standards.</li> <li>- Legal and regulatory compliance is essential for securing financing and avoiding potential legal challenges.</li> </ul>
<b>Experienced Management Team</b>	<ul style="list-style-type: none"> <li>- Investors and lenders often look for a capable and experienced management team that can successfully execute the project.</li> <li>- The team's track record and expertise contribute to the overall bankability of the project.</li> </ul>



<b>Realistic Cost Estimates</b>	- Accurate and realistic cost estimates are crucial. Investors want assurance that the project can be completed within budget.
<b>Clear Project Structure</b>	- The project should have a clear and well-defined structure, including financing arrangements, ownership, and governance.
<b>Social and Environmental Responsibility</b>	- Increasingly, investors are looking for projects that demonstrate social and environmental responsibility. - Projects that consider and address the social and environmental impact are often viewed more favourably.
<b>Transparent Documentation</b>	- All relevant project documentation should be transparent and easily accessible. This includes financial models, legal agreements, and permits.

## Proposed Design process for a bankable project:

In the dynamic landscape of urban development, the evolution towards smart cities represents a pivotal paradigm shift, integrating cutting-edge technologies to enhance the efficiency, sustainability, and quality of life for citizens. As we embark on the design process of a smart city project, it becomes imperative to underscore the critical role that financial considerations play in shaping the success and viability of such endeavours. The seamless integration of smart technologies requires a meticulous approach to project planning and execution, with a keen focus on financial aspects to ensure long-term sustainability and resilience.

1. **Identify Project Objectives:**
  - Clearly define the goals and objectives of the project.
  - Identify the target market and understand the needs it aims to address.
2. **Market Research and Feasibility Analysis:**
  - Conduct thorough market research to understand the demand, competition, and market trends.
  - Assess the feasibility of the project by considering technical, economic, legal, operational, and scheduling factors.
3. **Risk Assessment:**
  - Identify and evaluate potential risks associated with the project.
  - Develop risk mitigation strategies to address and minimize identified risks.
4. **Financial Modelling:**
  - Develop detailed financial models that project costs, revenues, and cash flows over the project's life.
  - Include sensitivity analysis to assess the impact of various factors on financial outcomes.
5. **Regulatory Compliance:**
  - Ensure that the project complies with all relevant local, regional, and national regulations.
  - Understand the permitting and approval processes necessary for the project.
6. **Project Design and Engineering:**
  - Develop a detailed project design, including engineering plans and specifications.
  - Collaborate with experienced engineers and architects to ensure the feasibility and efficiency of the design.
7. **Cost Estimation:**
  - Develop a comprehensive and accurate cost estimate for the entire project.
  - Include contingencies for potential cost overruns.
8. **Financing Structure:**
  - Determine the most suitable financing structure for the project (e.g., debt, equity, public-private partnerships).
  - Explore potential sources of funding, including banks, investors, government grants, or development funds.
9. **Create a Robust Business Plan:**





- Develop a well-structured business plan that clearly outlines the project's value proposition, market potential, and financial viability.
  - Highlight the unique selling points and competitive advantages of the project.
10. **Engage Stakeholders:**
- Build relationships with key stakeholders, including potential investors, lenders, and community representatives.
  - Address concerns and gather support from relevant parties.
11. **Due Diligence:**
- Conduct thorough due diligence on all aspects of the project.
  - Provide transparency and access to relevant information for potential investors or lenders.
12. **Environmental and Social Impact Assessment:**
- Assess and mitigate the environmental and social impact of the project.
  - Ensure compliance with environmental and social standards.
13. **Legal Documentation:**
- Prepare all necessary legal documentation, including contracts, permits, and agreements.
  - Seek legal advice to ensure compliance and minimize legal risks.
14. **Present to Investors or Lenders:**
- Create a compelling presentation for potential investors or lenders, outlining the project's benefits, risks, and financial projections.
  - Address questions and concerns from the financial perspective.
15. **Negotiate and Close Deals:**
- Engage in negotiations with investors or lenders.
  - Finalize agreements and secure funding for the project.
16. **Implementation and Monitoring:**
- Implement the project according to the plan.
  - Establish a robust monitoring and evaluation system to track progress and make adjustments as needed.

As we navigate through the subsequent stages of due diligence, environmental and social impact assessments, legal documentation, and engagement with investors or lenders, each step underscores the intrinsic link between financial considerations and the overall success of the smart city project. The implementation and monitoring phase then becomes the culmination of meticulous planning, where financial prudence continues to play a central role in ensuring the sustained growth and prosperity of the city.

## Key financial data

The following table presents a comprehensive overview of the financial and Environmental, Social, and Governance (ESG) metrics associated with the proposed smart city project. By delineating key information across various categories, this table serves as a strategic tool for stakeholders to assess the viability, financial details, and sustainable impact of the project. The chronological framework, from the initiation of the business model to the project's termination, establishes a clear timeline for analysis, while the investment period provides insights into the expected duration of capital deployment.

The Revenues & Costs section offers a snapshot of the anticipated financial landscape, detailing expected total revenues and costs in millions of Euros. Meanwhile, the Investment Required and Funding segments outline the financial framework, encompassing total investment, funding sources such as own funds, public subsidies, equity, and debt. Crucially, the Funding Explanation provides additional context on the rationale behind the chosen funding structure.

Financial Data and Key Performance Indicators (KPIs) shed light on the project's financial health, encompassing metrics such as Weighted Average Cost of Capital (WACC), equity investors' targeted yield, distribution of equity, and dividends pay-out. Additionally, the table incorporates essential



financial KPIs, including the Project Internal Rate of Return (IRR), Simple Payback Period, and Net Present Value (NPV) in millions of Euros.

Recognizing the imperative of sustainability, the ESG KPIs section quantifies the project's environmental and social impact. Metrics such as energy savings, renewable energy production, avoided CO2 emissions, and job creation provide a holistic understanding of the smart city project's contribution to a sustainable and resilient urban future.

This integrated table encapsulates a wealth of information crucial for informed decision-making, offering a comprehensive view of the project's financial structure, performance expectations, and its commitment to environmental and social responsibility.

<b>GENERAL INFORMATION</b>	<i>Business model/solution start year</i>		<i>Yr.</i>
	<i>Revenues and Operating Costs Start Year</i>		<i>Yr.</i>
	<i>Project Termination Year</i>		<i>Yr.</i>
	<i>Investment Period</i>		<i>[Min. – Max.] Yrs.</i>
<b>REVENUES &amp; COSTS</b>	<i>Expected total revenues</i>		<i>EUR Million</i>
	<i>Expected total costs</i>		<i>EUR Million</i>
<b>INVESTMENT REQUIRED</b>	<i>Total Investment Required</i>		<i>EUR Million</i>
<b>FUNDING</b>	<i>Own funds</i>		<i>EUR Million</i> <i>%</i>
	<i>Additional Public Funding / Subsidies</i>		<i>EUR Million</i> <i>%</i>
	<i>Equity</i>		<i>EUR Million</i> <i>%</i>
	<i>Debt</i>	<i>Amount</i>	<i>EUR Million</i> <i>%</i>
		<i>Debt Maturity</i>	<i>[Min. – Max.] Yrs.</i>
	<i>Funding Explanation</i>	<i>xxx.</i>	
	<b>FINANCIAL DATA</b>	<i>WACC</i>	
<i>Equity Investors targeted yield</i>		<i>%</i>	
<i>Equity Distribution from Year</i>		<i>Yr.</i>	
<i>Dividends Pay Out</i>		<i>%</i>	
<i>Effective Tax Rate</i>		<i>%</i>	
<b>FINANCIAL KPIs</b>	<i>Project Internal Rate of Return (IRR)</i>		<i>%</i>
	<i>Simple Payback Period</i>		<i>Yrs.</i>
	<i>Net Present Value (NPV)</i>		<i>EUR Million</i>
<b>ESG KPIs</b>	<i>Energy Savings</i>		<i>GWh/y</i> <i>EUR Million</i>
	<i>Renewable Energy Production</i>		<i>GWh/y</i>
	<i>Avoided CO2 emissions</i>		<i>tCO2eq/y</i>
	<i>Job creation</i>		<i>xxx</i>

Table: Key Financial Metrics for Project Bankability Assessment



A short definition of these concepts utilized within the table, is set out in Annex I – Glossary.

Having detailed financial and sustainability data at the outset of a smart city project is essential for informed decision-making and strategic planning. This information, encompassing revenues, costs, funding sources, and environmental impact, allows project leaders to assess financial viability, set clear expectations, optimize resource allocation, and address potential risks early on. It also demonstrates the project's commitment to social and environmental responsibility, enhancing its reputation and attractiveness to investors. Overall, such comprehensive data in the initial phase establishes a strong foundation for the project's success and sustainability.



### 3. Financial Mapping approach

By the Financial Mapping approach, we refer to a **way of classifying and ordering the different sources of financing** that currently exist at the European level, bearing in mind that within each country there may be other specific sources created by national or regional governments as well as by local financial institutions. We believe it is important to understand the nature of these sources as each will have a different implication for the project. This distinction has been made from a financial point of view, whether they are **non-redeemable, redeemable, and adaptable**, as this will condition how the business model of the project is defined and designed, its temporality and impact.

#### Classification of the sources

This classification is the starting point for identifying the different financing options:

<b>Non-Redeemable</b>	<ul style="list-style-type: none"> <li>- When referring to grants or donations, “non-redeemable” implies that the <b>funds provided do not need to be repaid by the recipient.</b></li> <li>- Grants or donations are typically given with the understanding that they are a form of financial assistance rather than a loan, and there is no contractual obligation for the recipient to return the funds.</li> <li>- However, the non-redeemable nature of the funding doesn’t mean it comes without conditions. Usually, there are specific terms, objectives, and a timeframe associated with the use of the funds.</li> <li>- Recipients of non-redeemable grants or donations are often required to justify the use of the funds according to the agreed-upon terms. This may involve demonstrating that the funds were used for the intended purposes, meeting specified objectives, and adhering to the agreed-upon timeline.</li> <li>- The level of scrutiny and flexibility in justifying the use of funds can vary depending on the organization providing the grant or donation. Some organizations may have strict reporting requirements, while others may be more flexible.</li> </ul>
<b>Redeemable</b>	<ul style="list-style-type: none"> <li>- In the financial context, “redeemable” typically refers to financial instruments, such as bonds or loans, <b>that have a contractual obligation for repayment by the borrowing entity.</b></li> <li>- Redeemable financial instruments have a specified maturity date, at which point the borrowing entity is obligated to repay the principal amount to the lenders or bondholders.</li> <li>- The redemption may involve a lump-sum payment of the principal or periodic payments over the life of the instrument.</li> <li>- The terms and conditions of redemption are outlined in the financial agreement or bond indenture and are agreed upon at the time of issuance.</li> <li>- The redeemable nature of financial instruments distinguishes them from non-redeemable instruments, such as grants or donations, where there is no contractual obligation to repay the funds.</li> </ul>
<b>Adaptable</b>	<ul style="list-style-type: none"> <li>- In the financial market, “adaptable” implies <b>flexibility in the terms and conditions of financial instruments</b>, allowing for adjustments based on specific circumstances or conditions.</li> <li>- Crowdfunding is a prime example where the entity seeking investment can set its own conditions for backers, offering flexibility in the structure of the investment, potential returns, or other terms.</li> <li>- European funds, depending on the nature of the project or program, may exhibit adaptability in terms of whether the funds provided are redeemable or non-redeemable. This adaptability is often influenced by the goals and requirements of the specific call or program.</li> </ul>



## Preliminary identification of potential funding sources

The graphic outlines potential funding sources for energy transition projects within the context of Smart Cities, categorized into non-redeemable, redeemable (equity, debt and adaptable), and adaptable financing options. These funding sources play a crucial role in supporting initiatives that drive sustainable and innovative solutions for urban energy challenges. The diverse array of financial instruments reflects the complex nature of Smart City projects, which often require a mix of public and private support.



In our exploration of funding sources for Smart City energy transition projects, we will concentrate on the "Redeemable" category. This category is particularly crucial as it involves designing projects with an economic vision that not only ensures the return of funds but also secures the long-term sustainability of the initiatives. Within the realm of "Redeemable," we'll delve into equity, debt, and adaptable financing options to create a holistic understanding of how these sources contribute to the economic viability and sustainability of Smart City energy projects.

As evident from the categorization, European Funds play an important role as they span across all three financing categories. Given their significance, we have scheduled a dedicated webinar within the Roadshow to provide an in-depth exploration and detailed explanation of each European Fund. This specialized session aims to offer a comprehensive understanding of these funds and how they contribute to Smart City energy projects<sup>1</sup>.

<sup>1</sup>For the detailed explanation of the European grants a webinar is scheduled on 15/05/2024 "Exploring European programmes: Empowering smart city project with financial support".



<b>Redeemable: Equity</b>	<b>Brief Explanation</b>
Traditional Equity	Traditional equity financing involves raising funds by selling ownership stakes in the project to individual or institutional investors. Investors become partial owners and, in return, may receive a share of profits and have a say in decision-making.
Impact Investments (Transition Energy funds)	Impact investments focus on generating positive social and environmental impacts alongside financial returns. Transition energy funds specifically target projects contributing to the shift towards sustainable energy sources. Investors seek not only financial gains but also measurable positive outcomes in terms of environmental sustainability and community well-being.
Tax Equity Investment	Tax equity investment involves attracting funds by offering investors tax credits. In the context of Smart City energy projects, investors receive tax benefits, making it an attractive incentive to participate. This approach leverages the tax code to encourage private investment in projects that align with broader societal goals.
<b>Redeemable: Debt</b>	<b>Brief Explanation</b>
Concessional Debt	Concessional debt involves providing loans with favourable terms, such as lower interest rates or longer repayment periods. In the context of Smart City energy projects, concessional debt aims to make financing more accessible and affordable, facilitating the implementation of sustainable initiatives.
Non-Concessional Debt	Non-concessional debt includes various traditional and innovative loan structures. This encompasses standard loans, capital market debt (Green Bonds), financial leasing, operational renting, and instalment purchases. These debt instruments provide financial support for Smart City energy projects with varying terms and conditions.
<b>Redeemable: Adaptable</b>	<b>Brief Explanation</b>
Public-Private Partnerships (PPP)	PPPs involve collaboration between public and private entities to develop and implement projects. In the context of Smart City energy initiatives, PPPs bring together public resources, expertise, and private investments. This adaptable model allows for flexible structuring of agreements to meet the unique needs of each project.
European Funds (EEEF, JT M, InvestEU)	European funds, such as the European Energy Efficiency Fund (EEEF), Just Transition Mechanism (JT M), and InvestEU, provide financial support at the European level. These funds aim to drive sustainability, innovation, and economic development in Smart Cities, offering adaptable financing options.
EIB Group	The European Investment Bank (EIB) Group comprises the European Investment Bank and its subsidiaries. It plays a crucial role in supporting sustainable energy projects by providing loans, guarantees, and technical assistance.
Private Finance	Private finance involves attracting investments from private sources, such as corporations or high-net-worth individuals. This funding source provides flexibility in structuring financing agreements, allowing for tailored solutions to meet the specific needs of Smart City energy projects.
Revolving Funds	Revolving funds are financial mechanisms where repaid funds are reinvested in new projects. In the context of Smart City energy initiatives, revolving funds provide a sustainable source of capital, ensuring continuous support for new projects as older ones generate returns.
Investment Funds	Investment funds are pooled funds managed by professionals to finance energy projects in Smart Cities. Investors contribute capital, and the fund managers make strategic investment decisions to maximize returns while supporting the development of sustainable energy solutions.
Mezzanine Finance	Mezzanine finance combines elements of debt and equity financing. It typically involves loans with equity-like features, such as the option to convert debt into equity and/or debt service subordination clauses compared to standard senior debt. Mezzanine finance provides a middle ground between traditional debt and equity instruments, offering flexibility in capital structure.



## Technical Solutions – Funding Matrix

The following dashboard presents a detailed breakdown of the main technical solutions outlined in the Introduction. This breakdown is categorized by (i) the type of funding sources, (ii) cash flow generation, and (iii) the respective funding tools applicable to each solution.

Technical solutions	Type of funding sources	Cash flow generation	Funding
<b>1) Deployment of charging infrastructure for electric vehicles</b>	Redeemable non-redeemable Adaptable	Medium-High	Government grants Loans / Bonds Community Bonds
<b>2) District heating &amp; cooling (DHC) projects &amp; renewable energy production</b>		Medium-High	Municipal Funds Project Finance EPC-ESCo- ERDF grants Developer contributions Prj development supports (ELENA, EEEF <sup>2</sup> )
<b>3) Electric / hybrid public vehicle purchases</b>	Redeemable non-redeemable	No	Municipal Funds Loans / Bonds Leasing / Renting
<b>4) Infrastructure physical and digital</b>	Redeemable non-redeemable Adaptable	Medium-High	Municipal Funds / Grants Project Finance Loans / Bonds
<b>5) Mobility stations 6) Park &amp; ride facilities</b>		Medium-High	Congestion Charge / HGV taxes <sup>3</sup> Municipal Bonds
<b>7) Public lighting</b>	Redeemable non-redeemable	No or Medium--Low	Municipal Funds Project Finance <sup>4</sup> Loans / Bonds EPC
<b>8) Vehicle sharing platforms</b>	Redeemable non-redeemable	Medium-High	Municipal Funds Loans / Bonds Leasing / Renting
<b>9) Private buildings retrofitting</b>	Redeemable non-redeemable	No	Municipal Grants Individual Funds & Bank Loans
<b>10) Public buildings retrofitting</b>	Redeemable non-redeemable	No or Medium--Low	Municipal Funds Loans / Bonds

<sup>2</sup> ELENA (European Local Energy Assistance) is an EIB tool providing financial support to many sectors: Sustainable energy, transport and residential.

<https://www.eib.org/en/products/advisory-services/elena/index.htm>

European Energy Efficiency Fund (EEEF) has a technical assistance component. ELENA funding is used to supply technical expertise to project owners, and funding to pay necessary legal and similar costs. EEEF is useful for projects, which are not part of a large enough portfolio to meet ELENA eligibility requirements.

<https://www.eeef.lu/home.html>

<sup>3</sup> A congestion tax or charge is a mobility management strategy that surcharges users of public services as a result of excess demand (i.e. the peak/off-peak tariffs in London tube). A congestion charge for transportation can include higher peak charges for use of public transport or road pricing to reduce congestion by discouraging the use of private cars. It is also a finance mechanism used to raise resources to fund eco-mobility initiatives.

Most European countries have implemented or are in the process of implementing some form of truck (heavy goods vehicle, or HGV) charging scheme, where all hauliers from any country pay for using the roads, either by time or distance.

<sup>4</sup> Due to absence of intrinsic revenues generation, the cash flows refer to the Municipality payments obligation in exchange of lighting services provided by the special-purpose vehicle owning the infrastructure.



## 4. Key players in the financing landscape

### Classification and role of key financial players

Financial Entity	Definition	Role in Financing Energy Transition Projects
<b>Commercial Banks</b>	For-profit financial institutions offering banking services to individuals and businesses.	Provide financing to energy transition projects through loans and credit lines, basing their participation on the financial viability of the project.
<b>European Investment Bank (EIB) European Investment Fund (EIF)</b>	EU financial institutions aiming to foster sustainable economic development with loans, guarantees & direct investments.	Offers loans and guarantees to energy transition projects contributing to sustainability and emissions reduction goals within the EU.
<b>Supranational Financial Institutions</b>	Financial organizations operating globally or regionally.	Can provide financial support and technical advice to energy transition projects in various regions; examples include the World Bank and the IMF.
<b>Development Institutions</b>	Financial institutions supporting economic and sustainable development.	Provide financial and technical support to energy transition projects, contributing to sustainable development in the areas they operate, such as the European Bank for Reconstruction and Development (EBRD).
<b>EU Funds and Programs</b>	EU-implemented programs and funds.	Fund energy transition projects through specific programs like Horizon 2020, the European Fund for Strategic Investments (EFSI), and other EU structural funds.
<b>National Development Banks</b>	Government-backed financial institutions.	Play a significant role in providing financing and technical support to energy transition projects within their jurisdictions, working in collaboration with the public administration.
<b>Ethical and Sustainable Financing Entities</b>	Entities promoting ethical and sustainable banking.	Participate in financing energy transition projects aligned with their ethical values and sustainability principles, supporting initiatives that have a positive impact on society and the environment.
<b>Institutional Investors</b>	Entities such as pension funds and insurance companies.	Invest in energy transition projects as part of their portfolios, providing financing through direct investments or participation in infrastructure funds.
<b>Development Agencies</b>	Government and regional bodies dedicated to economic and sustainable development.	Offer financing and technical support to specific projects promoting energy transition, working closely with the public administration to achieve sustainable development goals.





## 5. From public solutions to the private market

### Mindset to financial market approach

The notion of shifting the "Mindset to financial market approach" emphasizes a transition from traditional public funding to a more diversified and financially sustainable approach. It highlights the importance of financial viability involving the private sector which requires a meticulous planning and modelling, an effective risk management and an accurate reporting for a successful engagement with the private market.

#### **Projects financial viability (capacity to attract stakeholders' interest):**

Emphasizes the importance of projects having strong financial viability to attract the interest of stakeholders, summarizing key concepts discussed in section 2 (Proposed Design process for a bankable project). This underscores the need for projects to be financially sustainable and appealing to investors and donors in the private market.

#### **Not relying only on public sources**

Advocates for a shift away from exclusive dependence on public funding sources, encouraging projects to explore diverse financial channels. By diversifying funding sources, projects can enhance financial resilience and leverage the innovative solutions and resources offered by the private market.

#### **Careful programming and modelling**

Highlights the significance of meticulous planning and modelling in project development. This suggests that a thoughtful and well-structured program, coupled with accurate financial modelling, is crucial for success. Careful consideration of project details, budgeting, and financial forecasting contributes to a robust foundation for engaging with the private market.

#### **Risk management & reporting**

Stresses the importance of effective risk management when transitioning from public solutions to the private market. This involves proactive risk assessment, mitigation strategies, and transparent reporting mechanisms. By managing risks and maintaining clear reporting practices, projects can raise investors' and stakeholders' confidence, fostering a conducive environment for private market participation.

### Public role

#### **Project sponsor**

Within the transition from public solutions to the private market, the public administration takes on a pivotal role as the project sponsor. This entity, often a government department or agency, spearheads the project's initiation, oversees its implementation, and provides strategic direction. Acting as the driving force, the public administration ensures alignment with governmental objectives, fostering collaboration and maintaining the project's vision throughout its lifecycle.

#### **Deployment of non-redeemable funds (grants and similar)**



In the transition towards the private market, the public administration actively engages in deploying non-redeemable funds, such as grants, aiming to ensure the necessary financial support for initiating and advancing projects. This form of economic support, granted without the expectation of direct repayment, plays a fundamental role in endorsing initiatives aligned with overarching policy goals, fostering innovation, and contributing to sustainable development. Another role that the administration can play is to act as a de-risking tool by providing public funds as collateral, enabling the private market to invest with greater confidence. In this capacity, the administration serves to mitigate risks and enhance the attractiveness of private sector investments.

### **Ensure project stability and clear legal / operating framework**

As part of the transition process, the public administration plays a important role in ensuring the stability of projects. This involves establishing a robust legal and operating framework, defining roles, responsibilities, and governance structures. The public sector, through its regulatory and administrative functions, ensures compliance with laws and regulations. This, in turn, mitigates risks and provides a stable environment conducive to attracting private investments and fostering collaborations within the evolving private market landscape.

## **Benefits**

While public administrations maintain a non-profit mentality in the development of energy transition projects, they actively seek to generate income for implementation, maintenance, and ongoing optimization. The outlined benefits include the optimization of funding sources, the broadening of project viability through a mix of public and private collaboration, and the achievement of straightforward project execution leading to both economic and social-environmental gains.

### **Funding sources optimization**

Public administrations, driven by a non-profit mentality, often prioritize social and environmental impacts in project development. Despite this focus, there is a recognition that projects need financial sustainability. By optimizing funding sources, administrations can strike a balance between securing necessary resources and maintaining a commitment to public welfare. This optimization involves identifying a mix of public and private funding streams, ensuring a stable financial foundation while allowing for impactful, socially conscious initiatives.

### **Broaden projects viability (combination of public and private sources)**

Public administrations can enhance project viability by embracing a combination of public and private funding sources. While maintaining a commitment to non-profit goals, integrating private sector involvement introduces economic efficiencies and expertise. This combination broadens the scope of projects, making them more economically viable and scalable. It leverages the strengths of both sectors, ensuring that urban infrastructure projects can achieve their social and environmental objectives while tapping into the economic benefits of private collaboration.

### **Straightforward projects execution (cost and time savings)**

By actively engaging in projects with a focus on straightforward execution, administrations can achieve both social and environmental impacts and economic benefits. Efficient project execution results in cost savings, ensuring an optimal use of resources. Time savings contribute to quicker project completion, allowing the public sector to promptly respond to urban challenges. Streamlined operations can generate cost savings freeing up resources that can be reinvested to enhance and maintain urban projects, fostering a cycle of continuous improvement.



## Annex 1 – Glossary

Concept	Definition	More information
Business model/solution start year	The year when the Project starts. On this year will start: - Project investments - Project funding sources [redeemable (Equity and Debt) and non-redeemable (Public funding / Subsidies)]	
Revenues and Operating Costs Start Year	The year when start: - Project revenues - Project operating costs	
Project Termination Year	The year in which the last investment in the project is fully amortized. On this year the project terminates and no more revenues/costs are present	
Expected total revenues	Total revenues generated throughout the entire life of the project	
Expected total costs	Total costs generated throughout the entire life of the project	
Investment Period	Is the number of years in which the investment tranches of the Project are executed	
Total Investment Required	Capital required (investments) needed to develop the project	<a href="#">Investopedia - CapEx</a>
Own funds	Is the Own Funds % of the project funding structure (capital injection) referred to the Total Investment Required funded by non-redeemable sources.	
Additional Public Funding / Subsidies	Is the additional Public Funding/Subsidies % of the project funding structure (capital injection) referred to the Total Investment Required funded by non-redeemable sources.	
Equity	It represents the Equity percentage of the remaining percentage not funded by non-redeemable funding sources. See the Project Funding Structure table to see an example of funding	<a href="#">Investopedia - Equity</a>
Debt	It represents the Debt percentage of the remaining percentage not funded by non-redeemable funding sources. See the Project Funding Structure table to see an example of funding. Debt maturity refers to the date on which a debt instrument or loan becomes due for repayment, including the principal amount and any accrued interest.	<a href="#">Investopedia - Debt</a>
Funding Explanation	The explanation of how the project will be financed based on the previously described items (Total investment required, Own funds, Public Funding/Subsidies, Equity, and Debt)	
WACC	WACC, or Weighted Average Cost of Capital, is a financial metric that represents the average cost of a company's debt and equity, weighted based on their respective proportions in the capital structure. It is a key indicator used to evaluate the cost of financing for a company and is often used in financial decision-making processes, such as project valuation and capital budgeting.	<a href="#">Investopedia - WACC</a>



Equity Investors targeted yield	Is the yield the private equity investors target on the Project	<a href="#">Investopedia - Cost of Equity</a>
Equity Distribution from Year	Is the year from which the equity can start to be distributed to shareholders	
Dividends Pay Out	In finance, 'pay out' typically refers to the percentage of a company's profits that is distributed to shareholders in the form of dividends. In other words, 'pay out' is the proportion of earnings paid to shareholders instead of being retained by the company for reinvestment or other purposes. This term is commonly used to analyse a company's dividend policy	<a href="#">Investopedia - Pay Out</a>
Project Internal Rate of Return (IRR)	The Project Internal Rate of Return (IRR) is a financial metric that represents the discount rate at which the net present value (NPV) of a project equals zero. It is used to assess the profitability of an investment, where a higher IRR indicates a more attractive opportunity.	<a href="#">Investopedia - IRR</a>
Simple Payback Period	The Simple Payback Period is a financial metric that measures the time it takes for an investment to recoup its initial cost through the generated cash inflows. It is a straightforward method for evaluating the breakeven point of an investment, where a shorter payback period indicates a quicker recovery of the initial investment.	<a href="#">Investopedia - Pay Back Period</a>
Net Present Value (NPV)	Net Present Value (NPV) is a financial metric that assesses the profitability of an investment by calculating the present value of its expected future cash inflows and outflows. It helps determine the project's value in today's terms, considering the time value of money. A positive NPV indicates that the investment is expected to generate value, while a negative NPV suggests the opposite.	<a href="#">Investopedia - NPV</a>
Energy Savings	Energy savings in a project refer to the reduction in energy use achieved through efficiency measures, leading to cost and resource savings.	
Renewable Energy Production	Renewable Energy Production in a project measures the amount of the energy generated from sustainable sources, promoting environmental responsibility.	
Avoided CO2 emissions	Avoided CO2 emissions in a project measures the amount of reduced carbon dioxide released into the atmosphere, often by using cleaner technologies or promoting energy efficiency.	
Job creation	Job creation in a project involves the generation of employment opportunities as a direct result of its implementation	

