NET ZERO CITIES
SGA2-NZC

Climate Investment Plan Compatibility with a Comprehensive List of Different Private Sources of Capital

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Abbreviations and acronyms

Abbreviation / Acronym	Description
CapEx	Capital Expenditure
CAP or AP	Climate Action Plan
Capital Hub	Climate City Capital Hub
CFS	City Finance Specialist
CIP	Climate Investment Plan
EBRD	European Bank for Reconstruction and Development
EIB	European Investment Bank
Mission	EU's '100 Climate-Neutral and Smart Cities by 2030' Mission
NPV	Net Present Value
NZC	NetZeroCities
PPA	Power Purchase Agreement
PV	Solar Photovoltaic
SPV	Special Purpose Vehicle

Summary

Cities participating in the EU's '100 Climate-Neutral and Smart Cities by 2030' Mission (Mission Cities) are required to develop a Climate Investment Plan (CIP) to complement their Climate Action Plan (CAP). The CIP, an innovative newly structured city-wide strategic climate investment planning document, is designed to achieve three key objectives: i) identify the costs associated with a city's pathway to net zero, ii) identify the gap between these costs and the existing funds available to the city for financing climate actions; and iii) begin to identify ways to access and secure additional capital to ensure climate initiatives can be implemented within the planned timeframe.

As of early June 2025, 92 Mission Cities had submitted a CIP, with approvals received from the European Commission and the European Investment Bank.

This report analyses these CIPs and presents key findings, including an assessment of the total funding gap that must be closed to achieve climate neutrality across the Mission Cities. It also outlines the various categories of actors involved in financing the transition and, where notable or appropriate, provides sector-specific insights.

The analysis findings underscore that, while municipal authorities have an important role to play in funding and facilitating climate action, they cannot meet the investment requirements alone. Bridging the

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significant funding gap will necessitate the mobilisation of private capital from a variety of sources, including citizens, corporates, and financial institutions, including multilateral development banks and philanthropic organisations.

To that end, the report examines the participation of the various private actor groups, including the types of capital they can deploy and any particular climate actions or projects that align closely with their mandates. For example, citizens typically engage by choosing to invest in assets they will individually own (e.g. property, vehicles) and by shifting their behaviour in favour of lower carbon and green alternatives.

The findings also demonstrate that financial institutions, through the structuring of innovative financial mechanisms and instruments, can underpin the ability of citizens, corporations, and even municipally owned entities to make the necessary financial commitments to ensure i) alignment with a city's CIP, and ii) that its net zero goals can be achieved.

The report also identifies the broad categories of projects included in the CIPs and assesses their degree of alignment with specific financial instruments or products, such as green bonds and climate-focused funds. There are a large number of existing and emerging financial mechanisms that are well suited to support the actions and portfolios of projects outlined in the CIPs, offering clear pathways to secure and mobilise capital for climate transitions. There is significant potential in exploring the use of CAPs and CIPs as the basis for developing new thematic bonds, and for creating special purpose vehicles and city funds to leverage the pipeline of projects established through the development and iteration of the CIPs.

1. Introduction

There are 112 cities (100 located in the EU and 12 locating in affiliated nations) participating in the EU's '100 Climate-Neutral and Smart Cities by 2030' Mission. All of these cities are required to develop a Climate Investment Plan (CIP) to complement their Climate Action Plan (CAP) and Climate commitment documents. Covering aspects of due diligence, financial assessment, and strategic project planning, the CIP is an innovative strategic investment document that requires municipal officials to outline the historic and current budget allocated to climate-related activities in the city, provide cost estimates for the climate actions included in its CAP, identify the funding gap between these estimated costs and existing available funding in the city, and, finally, develop a strategy for securing the additional financing needed to close this gap.

As of June 2025, 92 Mission Cities had developed a CIP that have now been it approved by both the European Commission and the European Investment Bank (EIB). Leveraging a subset of these CIPs (specifically, those that utilised the Net Zero Planner model that was developed through *NZC WP7* and *SGA-NZC WP1*), it has been possible to extrapolate some estimates around the total funding required to achieve climate neutrality across the 100 EU-located Mission Cities, as well as the potential funding gap and the split of public and private funds that will be necessary to finance the transition.

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The analysis indicates that there is a **total incremental investment requirement (or Capital Expenditure – CapEx) of €307bn.** With an estimated **€30bn of funding available from municipal fund,** a **funding gap of €277bn exists over the next five years for the 100 EU-located Mission Cities to reach climate neutrality by 2030**.

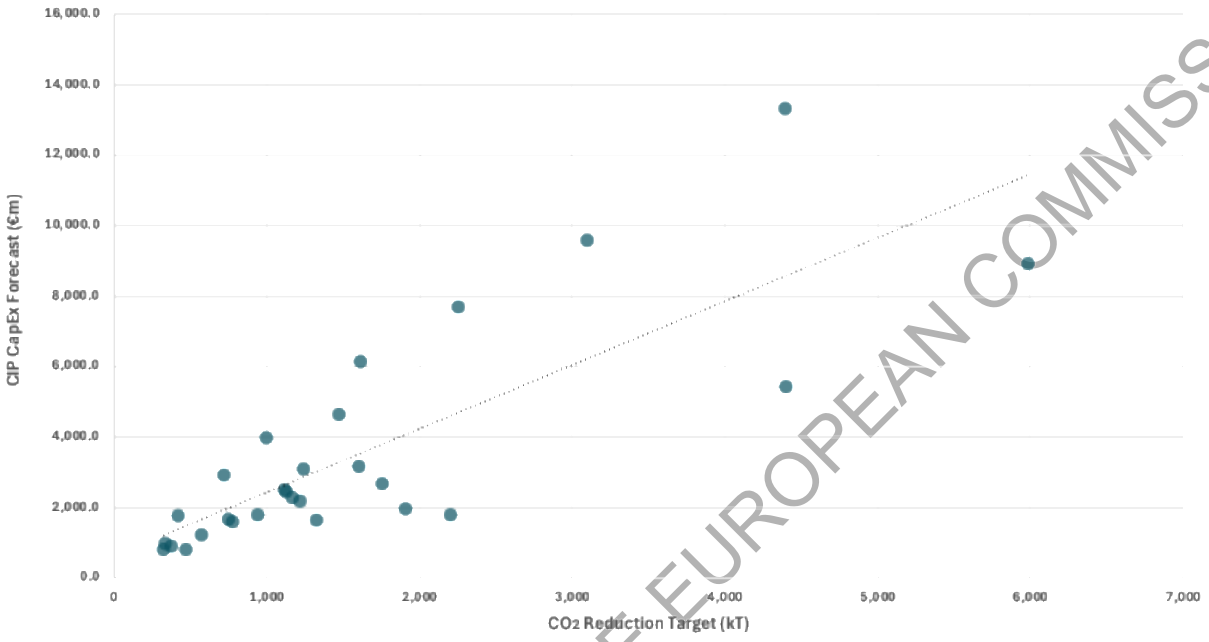

Fig 1. City CapEx vs CO_2 Reduction Target

The estimated €307bn of additional capital expenditure (CapEx) required is a pathway to cities meeting their Net Zero targets and would unlock ongoing savings and direct and indirect benefits, as discussed in further detail below.

To ensure consistency in the methodology used to derive the overall funding gap, the analysis focussed on twenty eight of the CIPs which have been validated by the European Commission and which all leveraged the output and forecasts of the NZC Economic Model (*Net Zero Planner*) and its methodology to calculate estimated costs and savings. Further details on the methodology can be found in the associated paper here. The average across the 28-city sample implies that for every €1.00 of CapEx required for net zero projects, slightly more than €1.00 could be saved on recurring operational costs. By extrapolating that savings rate across the 100-city portfolio, approximately €308bn in direct savings would be achieved by the €307bn investment through 2030, a total net saving of €1bn. In addition, the savings ratio looks more optimal when looking beyond the 2030 target and extrapolating potential savings through to 2050. The highest savings rate (€2.90 per €1.00 of CapEx) is in the transport sector, where traditional fuels are replaced with cheaper sustainable alternatives and maintenance costs are reduced, but operational cost savings are also evident in energy and built environment.

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The net positions of cities are further enhanced by quantifiable indirect economic benefits, or co-benefits, such as improved air quality and enhanced physical health that result from investment in decarbonisation initiatives. Based on the 25 CIPs, out of 28 using the same methodology, that included co-benefits estimates aligned with the NZC Economic Model (*Net Zero Planner*), each €1.00 of CapEx would deliver an estimated €1.28 in co-benefits in net present-day value. This is a conservative estimate as cities do not include carbon credits or quantify additional aspects such as the value of time saved on journeys in cities, industry development, and job creation. Inclusion of these types of positive gains would further increase the forecast benefits of upfront investment. Accounting for both direct and indirect benefits, the implementation of CIPs by cities with an incremental investment of €307bn could unlock at least €394bn total benefits. This represents a minimum net benefit of €87bn for EU-located Mission Cities. Differently stated, this upfront CapEx could generate at least €1,500 in net benefits per citizen across these cities.

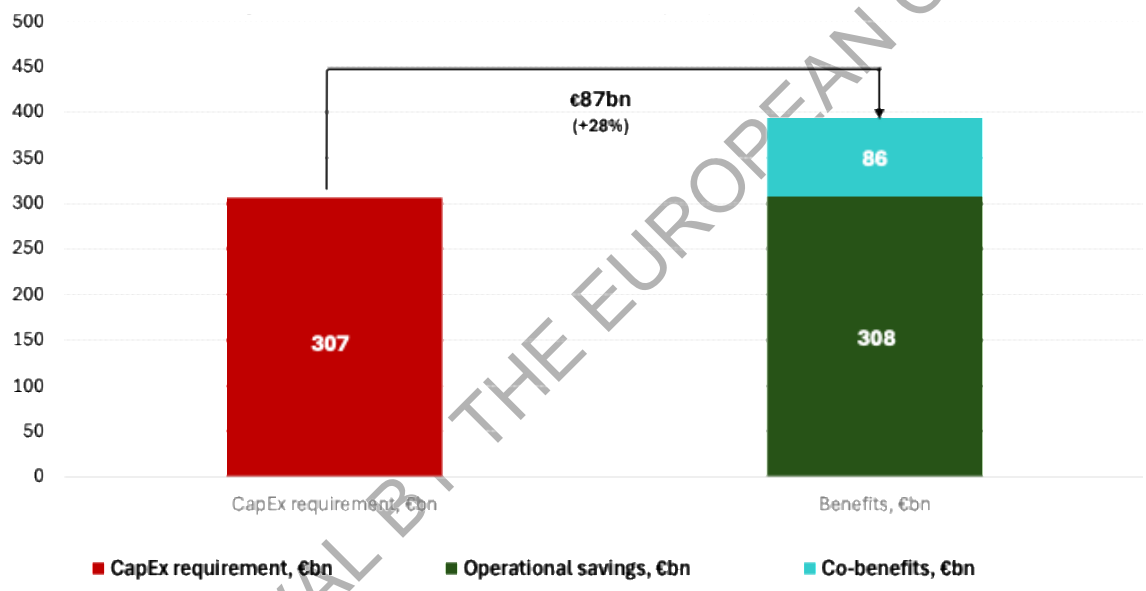

Fig 2. Associated Benefits in Relation to CapEx (€bn)

Sector-Level Analysis

Given the different mandates and responsibilities of municipalities across Europe, data at the sector and subsector level is less streamlined and more complex across the cities, though this has been made simpler by using the output of the NZC Economic Model. Notably, data for waste, nature-based solutions, and 'smart city' concepts is limited, which inclusion will only enhance the outputs of the analysis.

Transport

The average forecast CapEx for transport projects per city is €0.7bn, a figure which includes the electrification of bus fleets, electric vehicle (EV) charging infrastructure for publicly owned and private EVs, and the introduction of new cycling and pedestrian infrastructure. This sector also includes the electrification of freight vehicles and the optimisation of logistics that are crucial to the development of a cleaner freight subsector. Twenty three of the 28 CIPs specifically outlined electrification plans for city bus

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fleets, and a combined €5.0bn has been earmarked across the twenty three cities for the uptake of EVs and associated charging infrastructure.

Built Environment

The average forecast CapEx for built environment projects is €1.8bn, though forecasts in this sector vary widely, with estimates ranging from €0.3bn to €7.2bn. Planned activity includes the retrofitting of municipal, residential, and, in some cases, commercial buildings, as well as the development of new energy-efficient buildings and the installation of energy-efficient lighting and appliances (e.g., LED lights and electric ovens).

Energy and Electrification

The average forecast CapEx for energy and electrification projects is €1.0bn. The most common projects identified relate to clean energy solutions for heating systems and the development of electric grids, but, in some cases, cities have documented ambitious plans for renewable energy projects or carbon capture storage plants. Twenty three of the 28 CIPs identified targeted actions for decarbonising heating, at an average cost of €638m per city.

Waste and Water

The identification of costs for waste and water is limited in some CIPs. Based on the available data, the average forecast CapEx for the waste sector is €0.1bn. However, if the average is limited to those cities that have explicitly allocated capital to the waste sector, the per-city average rises to €0.2bn. Typically, capital targeting this sector has been allocated to wastewater treatment and recycling projects, although one city has identified extensive plans for circularity projects and several others have considered piloting small-scale circularity projects (albeit with these discussions in their infancy at this stage).

Greening and Nature-Based Solutions

As with waste, cost forecasts for localised greening and the introduction of nature-based solutions are only present for a subset of cities. However, there is a notable uptick in CapEx associated with greening, nature-based solutions, and urban regeneration in CIPs submitted in Window 3 (March 2024) and Window 4 (September 2024), with some cities outlining ambitious new developments.

Municipal vs Non-Municipal Funding Requirements

As already stated in the report, an estimated €277bn in incremental investment capital (about 90% of the €307bn needed) will be required for Mission cities to reach Net Zero by 2023, from private actors, including citizens, corporations, and private finance providers. Municipal financing will focus on the built environment and transport sectors, but even in these sectors non-municipal public funding, both in the form of private repaybale and philanthropic capital, will need to play the primary role in closing the funding gap. There is a wide variety of potential sources of non-municipal capital, ranging from grant funding and loans from the EIB to investments by infrastructure, pension, and insurance funds. These various sources are discussed in detail in the following chapters.

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2. Non-Municipal Actors

Having established that around 90% of the incremental capital required will need to come from the private sector, the following section examines the alignment between CIP project types and various private actors.

Citizens

As a group, citizens are significant contributors to urban emissions through their ownership and use of private combustion engine vehicles and homes that rely on high-emission power generation and heating infrastructure. While citizens cannot be expected to take on the full upfront costs of addressing these issues, behavioural patterns can be altered through use of financial incentives so to generate a shift towards the adoption of cleaner, more sustainable alternatives.

Although the public will not directly fund investment in cleaner transportation, they will contribute indirectly through behavioural changes and revenue raised through fare payments (congestion charges) and capital redistribution. Achieving a large-scale shift to public transport as the preferred mode of travel is essential to reach the critical mass required for long-term investment viability in the sector. Although these investments may not be directly funded by citizens, they will rely on changes in public behaviour — particularly through fare payments — to generate the necessary revenue. Achieving a significant shift toward public transport is essential to reach critical mass and ensure that these investments are viable. While it is down to various public funding bodies and even private capital to finance new public transport infrastructure, their viability as investments rely on modal shifts that demonstrate a clear economic benefit for the investment and, as such, citizens have an important role to play in shifting their behaviour. In addition to these indirect investments, individuals will need to invest capital through the purchase or leasing of personal electric and hybrid vehicles. While not an immediate upfront cost, it is expected that EU, national and, in some cases, local policy will support the transition towards EVs, and this can be further encouraged by providing access to incentives and subsidy schemes to support (where necessary) the additional costs associated with purchasing an EV over a traditional one (e.g., a reduction in road tax or congestion zone charges for electric / hybrid vehicles).

Citizens will also be required to engage in the refurbishment and retrofitting of privately owned homes to ensure energy efficiency. This will involve low-cost, non-invasive adaptations such as shifting to electric appliances and more efficient LED lighting, through to high-cost, invasive redevelopments such as the installation of thermal-efficient doors and windows, roof and wall insulation, and greener heating and energy solutions such as heat pumps and rooftop solar photovoltaic (PV) – potentially as part of a local or district-based initiative. As with the transport-related investments discussed above, these are not necessarily immediate costs, but ones that will require planning and investment over time, and that could be encouraged through subsidies, incentives, and policy support provided by national, regional, and local governments to drive early action.

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These types of 'citizen-reliant' investments are a prominent part of the CIPs of all cities and constitute a significant proportion of upfront CapEx requirements through to 2030. Such investments are highly compatible with citizen-led financing structures, with the EU's upcoming ban on the sale of combustion engine vehicles by 2035, and the implementation of stringent energy efficiency standards that must be met for new property developments (and, in many countries, for the private rental properties) serving as a major driver for action.

Alongside these factors, significant opportunity exists to use subsidies and incentives to further encourage and accelerate the speed of transition. Cities should give serious consideration to deploying such levers as a priority, including by involving private corporations (e.g., encouraging local banks to offer 'green loans' and 'green mortgages'), as well as through the establishment facilitating services such as 'one-stop-shops' to support citizens with retrofitting, and financing or providing EV charging infrastructure in public places.

Municipally Owned Companies

Another theme that cuts across the CIPs is the role of municipally owned companies (MOCs), which are entities either partly or fully controlled by the local government. Their formation and operation differ significantly by country, but they are particularly prominent in Northern Europe (notably, Finland, Sweden, Denmark, and Germany). It should be noted that while MOCs may be considered as non municipal actors' in the provision of capital, this categorisation must be qualified by the degree of autonomy and private ownership each MOC has, which can differ significantly based on national context.

The amount of detail the different CIPs provide on the investment needed from MOCs varies significantly depending on the local government's level of ownership or influence over each company. As such, it is difficult to develop a holistic understanding of the total capital required from this group across all Mission Cities. However, given the roles and remits of MOCs cover emitting assets in strategic sectors that range from public transport and waste to energy generation and district heating, it is important that such companies are prepped and empowered to invest in greener technologies and solutions.

In some CIPs, shifting to greener forms of energy generation, public transport, and even improved waste management are all included as necessary investments for achieving city-wide net zero goals. While the involvement of MOCs varies across CIPs, in cities where they are given a prominent role they will be required to cover the upfront and operational costs of a range of climate projects. In many cases, MOCs have already established relationships with the relevant municipal transition team to discuss these projects and the related investment required in relation to the targets established in the city's CIP and CAP. In some instances, MOCs have their own decarbonisation goals and are already exploring possible financing structures. Given these factors, projects and initiatives identified for development by MOCs in cities' CIPs will likely reflect a close alignment with the priorities of MOCs as providers of investment capital.

Private Corporations

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Across many of the Mission Cities, corporations are both significant consumers of energy and producers of emissions, particularly sectors such as logistics, manufacturing, commercial real estate, and data services amongst others. Not all cities were able to provide granular investment requirements from corporations in their CIP, due primarily to limited public access to private investment planning. However, several cities did identify key emissions-heavy sectors and the corresponding corporate actors that must play a proactive role in the transition, and a larger number of other cities have committed to doing so in future iteration of their plans.

Corporate actors are particularly important in projects that involve commercial building retrofits and energy efficiency upgrades, electrification of logistics fleets, installation of private EV charging infrastructure, and energy procurement decisions – especially those related to sourcing green electricity or establishing private power purchase agreements (PPAs). For almost all cities, these types of investments are foundational both in terms of required CapEx and in emissions reduction potential. In many cities, the retrofitting of commercial buildings – ranging from offices to warehouses to retail space – represents a significant portion of the required emission reductions. In this context, corporations are expected to finance both capital upgrades and operational adjustments to bring buildings into line with new environmental standards, and to reduce reliance on high-emissions heating and cooling systems.

Additionally, for large employers within cities, there is growing recognition of the need for them to support more sustainable employee commuting behaviours, either through the provision of green mobility alternatives, or by investing in shared commuting solutions. A small subset of CIPs included such schemes as potential developments for reducing transport emissions within the city, and some already exist. In addition, a few cities provided examples of corporate contributions to district-level decarbonisation through partnership arrangements on district heating networks or the development of shared energy infrastructure on industrial estates in their CIP – in some cases linked to energy sector MOCs. Such projects are ambitious and innovative but are generally built on an alignment of priorities wherein the private corporations will themselves benefit from the new solution and/or the impact on emissions reduction.

Interestingly, several CIPs note that a growing number of corporations are independently developing their own net zero targets and actively opening up dialogues with the municipality and its transition team. Where corporate decarbonisation goals align with those of their respective cities, there is an opportunity to blend public and private ambition to deliver coordinated investments. Cities are therefore encouraged to work proactively in this space – for instance, through stakeholder advisory groups or by adopting green procurement strategies – to help ensure corporate investment flows are directed in a manner that complements, supports, and amplifies municipal priorities and investments. In this regard, cities could also consider tools such as green tax incentives, public-private partnerships, and innovation funding competitions to stimulate corporate capital allocation to CIP decarbonisation projects.

Financial Institutions

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Private sector financial institutions are critical private actors in the acceleration of climate investment across Mission Cities. Whilst citizens, MOCs, and private corporations all have roles to play, their investments will typically require support from or the involvement of financial institutions. Thus, while financial institutions might not directly own or operate most of the emitting assets within a city, their ability to mobilise capital and offer tailored financing solutions makes them indispensable to closing the funding gap identified across the CIPs.

Commercial and investment banks, pension funds, insurers, and asset managers all have distinct roles to play in providing debt, equity, guarantees, insurance, leasing, and blended finance to projects with varying risk-return profiles. Several CIPs explicitly refer to the importance of leveraging financial products such as green bonds, sustainability-linked loans, climate funds, risk-mitigation tools, and concessional financing arrangements to facilitate the implementation of high-CapEx but high-impact climate projects.

The analysis conducted for this report makes it clear that financial institutions are already considered a necessary actor in the fulfilment of a city's CAP and CIP. Yet, in reality, their centrality to the process is likely to be even more significant than is outlined in these plans. Particularly for investments in renewable energy and clean transport infrastructure, and in supporting the various investments of citizens and private corporations, financial institutions can enable access to affordable capital through specialised instruments or credit enhancement mechanisms.

Financial institutions have a key role to play in advancing city-level or regionally backed green investment platforms or climate funds. These vehicles can support the aggregation of smaller-scale projects into bundled bankable portfolios that are likely to attract greater interest from institutional investors. Given their expertise, financial institutions are strongly placed to serve not just as 'providers of capital' but as co-creators and managers of such vehicles, providing support with developing investment pipelines and risk-sharing structures across sector-specific and multi-sector opportunities.

Another area in which financial institutions could collaborate with municipal authorities as co-creators is on the designing of innovative financial instruments for on-bill financing for retrofits, energy performance contracts, or revolving loan funds targeted at small and medium-size enterprises and residential retrofitting projects. Through early-stage consultation and co-development with financial institutions, cities can help ensure new funding mechanisms align with market expectations.

Finally, financial institutions are increasingly the subject of sustainability-linked requirements through frameworks such as the EU Taxonomy and the Sustainable Finance Disclosures Regulation. These regulations are incentivising financial institutions to seek out bankable, climate-aligned investment opportunities. By providing clear and credible project pipelines, cities can position themselves as attractive investment destinations and facilitate the mobilisation of climate finance at scale.

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Given the leading role that private financial institutions will need to play in facilitating Mission Cities' climate initiatives and ambitions, the following section of this report examines a range of financial mechanisms and how they align with the types of projects presented in CIPs.

3. Financial Instruments & Mechanisms

Financial mechanisms are the conduits through which capital from both public and private sources flows to the projects outlined in the CIPs. These structures are particularly crucial in helping cities overcome the complexity of aligning long-term decarbonisation needs with short-term financial constraints. While adoption rates and diversity of mechanisms considered varies across Mission Cities due to variations in institutional capacity and market maturity, several instruments have emerged as important tools for structuring and scaling climate finance in urban contexts.

Green Bonds

Green bonds are one of the most widely recognised tools for financing climate action projects and infrastructure and have been explicitly referenced in several CIPs as a high-potential instrument. These fixed-income securities can earmark proceeds exclusively for projects with positive environmental outcomes (e.g., renewable energy installations, low-carbon transport systems), or can tie favourable rates to emissions reduction targets that incentivise the city and private actors to take certain actions. By tying the use of funds to pre-approved 'green' objectives or activities, green bonds offer investors a transparent and credible way to support the climate transition, while providing issuers with capital – potentially at a lower cost compared with conventional bonds.

A number of Mission Cities, particularly those in Northern and Western Europe, have already successfully issued green bonds and associated thematic debt instruments, including Paris' Climate Bonds, and the Sustainability-linked Bonds of Helsingborg and Zagreb. These issuances have involved robust governance frameworks, third-party verification (e.g., second party opinions), and ongoing reporting obligations that provide the transparency and accountability needed to support investor confidence and market access. However, not all cities are currently in a position to enter the capital markets directly. Smaller municipalities or those with lower credit ratings could find it difficult to issue a green bond on their own due to limited project scale, high transaction costs, and/or legal constraints. In such cases, aggregation mechanisms such as pooled bond issuance platforms and EIB facilities are being explored and developed to allow multiple cities to jointly access the capital markets under a shared green framework. Moving forward, greater technical assistance, capacity building, and the development of standardised methodologies will be essential for scaling green bond issuance across the full cohort of Mission Cities, and could be tied to some degree to the actions and portfolios outlined within the CIPs, with the monitoring frameworks, KPIs and outlined use of proceeds potentially serving as a starting point for green bond frameworks.

City Funds

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City-level climate or sustainability funds (city funds) are another mechanism that is gaining traction, particularly among cities that wish to retain control over project prioritisation while catalysing investment flows. Often capitalised through municipal budgets, EU structural funds, or international grants, city funds can be structured to co-finance or de-risk smaller-scale, high-impact projects that may not attract traditional investors. Their flexibility enables cities to fund initiatives that sit at the edge of commercial viability – such as energy retrofits in social housing, pilot projects in nature-based solutions or climate adaptation, or early-stage feasibility studies for clean mobility corridors.

Several Mission Cities have chosen to establish such funds. In some instances, replicating the model of Stuttgart, these will be structured where repayments from one project can be reinvested into other projects on revolving basis, thereby creating a sustainable pool of capital. In other cases, for example in Mannheim, cities are considering using their city fund to provide a 'first-loss' or concessional layer in a blended finance structure to crowd in additional private investment. In some of the analysed CIPs, cities have expressed the intention to operate their city fund as a grant-making entity, offering seed capital or top-up financing to fill funding gaps not covered by EU or national programmes.

In each case, the design of the city fund is highly context-specific and strongly informed by local governance capacity, available fiscal space, and the regulatory environment.

One innovative application highlighted in several CIPs is the use of a city fund to support citizen-led investment – for example, by offering zero or low-interest loans for home retrofits, or co-financing rooftop solar installations for cooperatives and housing associations. While still an exploratory concept at this stage, this idea has considerable potential and offers interesting ideas for collaboration. For example, a city fund could partner with local financial institutions to manage loan origination and repayment, thereby leveraging the expertise and networks of the private sector while ensuring public oversight.

While city funds may be modest in size compared to national or EU-level instruments, their strategic alignment with city-level priorities and their ability to address local market failures make them a powerful tool for advancing the decarbonisation strategies of Mission Cities, and ensuring full alignment and compatibility with the types of projects arising from CIPs.

Commercial Loans

As discussed in the previous section, private corporations have a significant role to play in Mission Cities achieving their climate neutrality goals. Traditional commercial lending remains an important financial instrument for many types of climate investments linked to such corporations, particularly investments in projects that will deliver clear cost savings, have revenue potential, or involve tangible collateral. This includes investments in energy performance contracting, electrification of vehicle fleets, clean logistics, building refurbishments, and on-site renewable energy installations. Within the CIPs, commercial loans are most frequently referenced in relation to financing the needs of MOCs, but this could easily be extended to include private entities more broadly, with several CIPs highlighting a greater role for commercial loans as an avenue to explore in future iterations of the plan.

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Nevertheless, despite growing demand for sustainable finance, challenges persist. High interest rates, short repayment periods, and collateral requirements can inhibit or prevent the adoption of commercial loans, particularly for projects with long payback horizons or that involve significant technical or regulatory uncertainty. This is particularly true for initiatives involving deep retrofitting or green infrastructure, where benefits accrue over decades and returns may be difficult to monetise directly. To improve the applicability of commercial lending, cities could consider exploring the enhancement of facilities through public guarantees, tax incentives, or innovative structures involving the EIB. These tools could potentially make commercial loans more attractive by lowering risk for lenders and increasing affordability for borrowers. Additionally, sustainability-linked loans could be a viable pathway to providing lending at favourable rates whilst also ensuring commitment to climate-related goals and targets. These sorts of initiatives could also support citizens in their decarbonisation journeys through products such as green loans and mortgages for retrofit and rooftop PV, and incentivised financing schemes for new EVs. These products could be co-branded with the municipality or integrated into wider awareness campaigns to improve uptake and visibility.

While commercial loans are not the right fit for all project types, their scale, flexibility, and familiarity make them a key component of a diversified financing strategy. Ensuring that more projects are 'investment-ready' by providing strong business cases, data transparency, and clear revenue models will be crucial in expanding the role of commercial lenders in the climate transition, as will actions by municipalities to strengthen ties with the private sector.

Blended Finance

Blended finance is increasingly recognised as a powerful tool for unlocking private investment for climate projects that are perceived as too risky or complex for private sector actors to finance on a standalone basis. By strategically combining public or concessional capital with commercial funding, blended structures enable projects that would otherwise be unbankable to reach financial close. Blended finance is particularly relevant for early-stage initiatives or projects such as energy-sharing platforms and nature-based solutions where long development cycles, fragmented returns, and/or technical novelty often deter traditional investors.

Many of the CIP include statements of interest in developing or joining blended finance vehicles. Structures can take the form of specialised investment platforms, climate finance facilities, or thematic funds focused on areas such as retrofitting or mobility. The typical architecture involves a layering of capital, with concessional sources taking on a subordinate position (e.g., first loss capital) that improves the risk-return profile for commercial investors. In some cases, philanthropic funding or carbon credits can also be integrated into the stack to further reduce perceived risks and enhance impact. Blended structures are most effective when accompanied by robust project preparation, appropriate technical assistance, and credible monitoring frameworks. A number of Mission Cities have recently started working with the Capital Hub to build local capacity in structuring such instruments. The Hub also intends to support cities

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in aligning these financing ambitions with broader EU programmes (e.g., InvestEU, LIFE) to secure anchor capital that can be used to crowd in market-based investors.

A major advantage of blended finance is its adaptability across scales – with applicability for everything from community solar cooperatives to major infrastructure upgrades. However, successful deployment requires a high degree of financial and institutional maturity. The provision of capacity-building efforts, model templates, and matchmaking platforms are therefore essential to ensuring that all Mission Cities can effectively use blended finance structures to catalyse private sector involvement at scale.

Public-Private Partnerships

Already a well-established method for financing and delivering infrastructure projects, public-private partnerships (PPPs) are increasingly being adapted to support urban decarbonisation objectives. Under a PPP model, private sector actors are contracted to design, build, finance, operate, and/or maintain infrastructure assets over long time horizons, typically in return for availability payments, usage fees, or performance-linked revenues. In the context of the CIPs, PPPs are particularly relevant for large capital-intensive investments such as public transit systems, energy-from-waste facilities, smart streetlighting networks, and city-scale retrofitting programmes. PPPs can be structured in to leverage concessionary capital or commercial loans at competitive price.

Several Mission Cities have highlighted PPPs as a core component of their financing strategy, particularly in situations where a municipality's fiscal constraints limit its ability to make direct upfront investments. Well-designed PPPs can help cities shift capital costs off their balance sheets, leverage private sector innovation and efficiency, and ensure long-term service delivery standards. However, they require robust contractual frameworks, strong procurement processes, and the capacity to manage long-term relationships with private operators and other partners.

This legal and procedural complexity has meant that PPPs remain underutilised in many cities despite their noted strengths and advantages. The Capital Hub, and the NetZeroCities programme more broadly, could play a crucial and growing role in supporting cities with the establishment of PPPs, particularly in ensuring there is an appropriate share of risk and coherent governance models. With this guidance, cities could significantly advance their CIP goals by developing a pipeline of PPP-ready projects, supported by feasibility studies, legal templates, and model agreements.

Special Purpose Vehicles

A special purpose vehicle (SPV) is a separate legal entity that cities can establish specifically to manage and deliver a single project or programme, and that could operate independently from the city authorities. This separation allows cities to isolate financial risk, and to build partnerships with the private sector and design governance models that are better suited to project-specific requirements than traditional municipal structures.

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Within the context of CIPs, SPVs are particularly relevant where cities seek to aggregate a portfolio of similar projects – such as building retrofits across municipal facilities or rollouts of renewable energy systems – and deliver them under a unified structure. By consolidating multiple assets or workstreams under a single entity, cities can achieve economies of scale, streamline project management, and improve bankability from the perspective of investors and lenders.

In some situations, it also allows municipalities to foster relationships with private entities and financial partners in ways that would otherwise be difficult to establish. Given this, SPVs are particularly effective when paired with other financial instruments. For example, an SPV can blend equity contributions from the municipality with debt financing from commercial banks or development finance institutions. It may also enter into performance-based contracts with service providers or establish revenue-sharing models with private partners.

Several Mission Cities are in the process of developing SPVs, particularly for initiatives involving district heating and renewable energy generation. However, the creation and operation of an SPV requires legal expertise, clear governance structures, and alignment between all stakeholders on roles, responsibilities, and risk allocation. Cities must also ensure strong transparency and accountability mechanisms are in place, particularly when public funds are involved or where the SPV will be operating across multiple administrative boundaries.

From a strategic perspective, SPVs can also act as long-term platforms for climate investment beyond the initial project. Cities could expand the remit of an SPV post-implementation to manage additional sustainability initiatives or reinvest surplus revenues into further decarbonisation efforts. This approach establishes the SPV as an institutional anchor for climate action, embedding additional and expanding climate finance capacity within the urban ecosystem over time.

Given the broad nature of potential use cases for SPVs, this vehicle aligns well with many projects that have been identified in the CIPs, and they can be structured to accommodate the needs and priorities of a range of partnering organisations including the public and private sector.

Short comparative analysis of the Instruments

Instrument	Pros	Cons
Green Bonds	• Transparent and credible for investors • Lower cost of capital possible • Suitable for large-scale, high-profile projects	• High transaction and setup costs • Limited access for smaller/low-rated cities • Requires strong governance and verification • Complex regulatory and technical

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City Funds	• Flexible and city-controlled • Suitable for small/high-impact or risky projects • Enables reinvestment (revolving funds)	• Depends on local fiscal and governance capacity • May require strong partnerships with financial institutions • Administrative burden for fund management and governance the set up
Commercial loans	• Scalable • Suitable for revenue-generating projects • Can leverage private sector participation • Quick deployment for investment-ready projects	• High interest rates and short repayment terms • Unsuitable for long-payback or uncertain-return projects • Requires strong business cases and collateral • May be unaffordable for low-income beneficiaries
Blended Finance	• Unlocks private capital for risky projects • Adaptable to different project sizes • Leverages concessional/philanthropic funds	• Requires financial and institutional maturity • Complex to structure and manage • Demands strong project preparation and technical support • Needs clear monitoring and governance
Public-Private Partnerships	• Access to private capital and innovation • Suitable for large infrastructure projects • Transfers risk off municipal balance sheets • Ensures long-term service delivery	• Complex legal and procurement processes • Underutilised due to capacity gaps in cities • Long-term contractual obligations • Needs strong governance and stakeholder management
Special Purpose Vehicles	• Isolates financial risk from city • Enables aggregation of small projects • Improves project bankability	• Requires legal and governance expertise • Needs inter-agency and stakeholder coordination • Public accountability risks if poorly managed

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4. Conclusion

The development and submission of CIPs by 92 Mission Cities represents a significant milestone in their collective effort to achieve climate neutrality by 2030. In quantifying the cost of decarbonisation, these innovative investment plans reveal a substantial funding gap. Crucially, the CIPs make clear that municipalities cannot bear the financial burden of the transition alone, and that the investment gap must be closed through a coordinated mobilisation of public and private capital. A diverse ecosystem of actors – including citizens, MOCs, private corporations, and financial institutions – must all contribute to financing the transition through targeted investment in sectors aligned with their roles, assets, and capacities.

The analysis presented in this report demonstrates that while different private actors are better suited to different types of projects and investment opportunities. Citizens will play a major role in household-level retrofitting and low-carbon mobility choices, while MOCs are well positioned to deliver large-scale infrastructure upgrades in sectors such as mobility, energy, and waste. Private corporations, particularly those in energy-intensive or real estate sectors, will be critical players in commercial retrofitting, fleet electrification, and the development of energy infrastructure. Financial institutions will underpin many of these investments, providing the financial products, structuring expertise, and risk-sharing instruments needed to make climate-aligned projects bankable and scalable.

To unlock the full potential of these actors, the effective deployment of the appropriate financial mechanisms for different types of projects and different stakeholder needs and priorities is essential. Green bonds, city climate funds, commercial loans, blended capital structures, PPPs, and SPVs, among others, offer cities a diverse range of options for channelling investment into priority projects. These instruments and structures can help cities overcome risk, attract external capital, and deliver climate impact at scale – but only if they are matched with strong governance, technical capacity, and long-term strategy. As Mission Cities move from project planning to implementation, the ability to design, structure, and deploy such instruments effectively will be key to their success in delivering on the EU's '100 Climate-Neutral and Smart Cities by 2030' vision.

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