



Climate City Contract

2030 Climate-Neutrality Investment Plan

2030 Climate-Neutrality Investment Plan of Riga State City



RĪGA

2030 Climate-Neutrality Investment Plan



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Abbreviations

Abbreviations and Acronyms	Definition
RES	Renewable energy sources
ALTUM	AS 'Attīstības finanšu institūcija Altum'
RRF	Recovery and Resilience Facility





AS	Joint-Stock Company
CSDD	State Joint-Stock Company (VAS) 'Ceļu satiksmes drošības direkcija' ('Road
0022	Traffic Safety Directorate')
DHS	District heating system
MoE	Ministry of Economics
EMS	Energy management system
EU	European Union
ESCO	Energy services company
EV	Electric vehicle
ETS	EU Trading System
MoF	Ministry of Finance
SECAP	Sustainable Energy and Climate Action Plan
IPCC	
	Intergovernmental Panel on Climate Change
kg/t/ktCO ₂ e	Mass units of greenhouse gas emissions expressed as carbon dioxide
Macc	equivalent (kilogram, tonne, or kilotonne)
MoCE	Ministry of Climate and Energy
LED	Light-emitting diode
LR	Republic of Latvia
CoM	Cabinet of Ministers
NECP2030	National Energy and Climate Plan for 2021–2030
NGO	Non-governmental organisation
MWGMIS	Municipal waste generation and management information system
PV	Solar photovoltaic panels/cells
VAT	Value-added tax
REEF	Riga Energy Efficiency Fund
Riga Metropolitan	Riga Metropolitan Area
Area	
RNP	LLC 'Rīgas namu pārvaldnieks'
Riga Planning Region	Riga Planning Region
RTU	Riga Technical University
GHG	Greenhouse gases: carbon dioxide (CO ₂), methane (CH ₄), monovalent
	nitrous oxide (N ₂ O), hydrofluorocarbons (HFC), perfluorocarbons (PFC),
	sulphur hexafluoride (SF ₆)
LLC	Limited liability company
MoT	Ministry of Transport
CHP	Combined heat and power plant
	ipality units and institutions
RNRC	Riga Neighbourhood Residents Centre
RCC	Riga City Council
HEC	Housing and Environment Committee of the Riga City Council
RDA	Riga Digital Agency
REA	Riga Energy Agency
RSCM	Riga State City Municipality
PSMD	Public Space and Mobility Department of the Riga State City Municipality
FD	Finance Department of the Riga State City Municipality
PD	Property Department of the Riga State City Municipality
ECSD	Education, Culture, and Sports Department of the Riga State City
- - -	Municipality
WD	Welfare Department of the Riga State City Municipality
HED	Housing and Environment Department of the Riga State City Municipality
CDD	Urban Development Department of the Riga State City Municipality
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1 Part A — Current State of Climate Investment

1.1 Module IP-A1: Existing Climate Action Funding and Financing

A-1.1: Description

Climate action is one of the priorities outlined in Riga's Strategy for Sustainable Development 2030, which permeates the actions and projects funded through the Investment Plan of the Development Programme 2022-2027. The total estimated investment in Riga's projects planned through 2027 amounts to EUR 2.5 billion, with EUR 0.8 billion allocated specifically to the mobility sector.

Following recommendations from the State Audit Office, Riga began in 2023 to trace how its budget aligns with the 17 UN Sustainable Development Goals. According to the latest status report, the largest portion of budgetary spending was associated with "Sustainable Cities and Communities" (EUR 528 million) and "Industry, Innovation, and Infrastructure" (EUR 340 million)¹.

The operation of organizations funded by the municipality, as well as Riga's investment projects, play a key role in financing climate action. However, the scope of actions and interventions outlined in the Action Plan of Riga's Climate City Contract necessarily involves funding from other levels of government, the commercial sector, and citizens. Additional important instruments for financing climate action include the sustainable development strategies of utility companies and Latvia's National Energy and Climate Plan 2030.

Riga's annual budget

Riga's budget is prepared on an annual basis and approved by the City Council. Investment in Riga State City Municipality (RSCM) has been increasing since 2019, with more than EUR 200 million planned for urban development in 2024².

The balance sheet value of RSCM's fixed assets at the end of 2023 stood at EUR 2,451.8 million, reflecting an increase of EUR 34.8 million over the year³. The total assets of the municipality, including other asset positions in the balance sheet, amounted to EUR 3,603.5 million at the end of 2023. Additionally, RSCM's long-term ownership in associated and affiliated companies was valued at EUR 791.9 million as of the end of 2023.

In 2023, the total income of RSCM's main budget reached EUR 1,285.4 million—an increase of EUR 123.8 million (10.9%) compared to 2022, and EUR 47.9 million above the updated plan. Municipal budget income from personal income tax in 2023 amounted to EUR 797.6 million, an increase of EUR 92.9 million (13.2%) compared to 2022. The personal income tax income plan was exceeded by EUR 45.7 million (6.1%) due to wage growth.

Riga's expenses in 2023 amounted to EUR 1,316.7 million, with 36% allocated to funding education and 24% to economic activities. The city budget for 2024 prioritizes ambitious investments in education, urban environment projects, transport infrastructure, increased social assistance, improvements in internal security, and better access to housing for local residents.

In the annual breakdown of Riga's city budget by key sectors, climate-neutrality is not reported as a separate category but is instead integrated into specific activities and projects. These include public transport connection points at railway stations, new cycling infrastructure, large infrastructure projects, renovations of educational and health facilities to improve energy efficiency, and the environmental fund. Due to differences in reporting categories, the exact amount of climate investment proportional to GHG reduction is currently not calculated.

However, Table 1 summarizes the budget allocated to environmental protection, the management of housing and public spaces, as well as economic activities (including the provision of public transportation services). Environmental protection covers activities such as nature conservation and air quality monitoring. The management of housing and public spaces includes waste management, maintenance of green areas, the provision of communal services, and other related activities. Economic activities primarily correspond to public transportation services and investments in new infrastructure projects.

¹ Source: https://www.sus.lv/sites/default/files/media/faili/3_gadu_parskats.pdf

² Source: https://www.riga.lv/lv/jaunums/rigas-budzets-2024-gada-vesturiski-lielakas-investicijas-izglitiba-transporta-un-pilsetvides-infrastruktura

^{3 2023} RSCM Public Report https://www.riga.lv/lv/publiskais-parskats





Over the last five years, the share of these sectors in Riga's budget has ranged between 27% and 30%. Additionally, energy efficiency projects are integrated into the health and education sectors, but their contributions are not reflected in this table.

Based on data from the 2023–2025 RSCM Investment Plan, Table 2 summarizes the existing (ongoing) and planned energy- and climate-related RSCM investment projects⁴. The investment projects are categorized into main categories and subcategories, aligned with the tasks outlined in the investment plan to support the goals of Riga's Development Programme 2022–2027.

Riga's Climate Programme

In 2022, Riga launched a new investment programme dedicated to climate action. Continuous improvements in Riga's energy management systems have resulted in savings proportional to reduced energy consumption. Of the EUR 10 million saved through energy efficiency measures and smart management, approximately EUR 4 million was allocated to Riga's Climate Programme, which is overseen by the Riga Energy Agency.

In recent years, this funding has been used for the replacement of indoor lights, streetlights, and other energy efficiency initiatives. A project to install solar PV systems in public schools is currently under development, with an estimated budget of EUR 2.5 million.

Table 1: Historical Municipal Budget and Budget for Climate Actions

Budget Data	2019	2020	2021	2022	2023
Municipal Budget (€ million)	972	956	960.2	1 112.1	1 316.7
Municipal Budget for Environmental Protection (€ million)	3.2	3.6	8.3	5.1	5.9
Municipal Budget for Management of Housing and Public Spaces (€ million)	29.4	43.8	34.4	30.8	58.9
Municipal Budget for Economic Activities (€ million)	257.3	212	229.2	259.3	318.7
% of Municipal Budget for Actions & Projects Related to Climate Policy (%)	30%	27%	28%	27%	29%

Table 2: Finance Sources by Field of Actions 2023-2025

		Current budget, EUR			
Fields of Action	Sector Subsection (based on the priorities and targets defined in the 2023–2025 RSCM Investment Plan)	Projects in the implementa tion phase, EUR	Planned investment projects, EUR	% of total investment	
	Task 1.1 'Make public transport the backbone of mobility in Riga'	219178220	365317583	53.89%	
	Task 1.2 'Implement a mobility hierarchy'	14664127	27324923	3.87%	
Transportation	Task 1.3 'Develop mobility in a balanced way'	26817225	14383250	3.80%	
	Task 1.4 'Work towards convenient and safe mobility for the development of a diverse outdoor public space'		1250000	0.12%	

⁴ The current version of the investment plan is available at https://www.rdpad.lv/strategija/attistibas-programma-2022-2027/ricibas-plans-un-investiciju-plans/

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		Current budget, EUR			
Fields of Action	Sector Subsection (based on the priorities and targets defined in the 2023–2025 RSCM Investment Plan)	Projects in the implementa tion phase, EUR	Planned investment projects, EUR	% of total investment	
	Task 8.1 'Integrate international multimodal transport hubs into the structure of the city'		1000000	0.09%	
	Task 2.7 'Create an urban environment that is safe for the city's residents and guests'	9694186	5015886	1.36%	
	Task 4.7 'Ensure the accessibility of education institution infrastructure'	72500000	4200000	7.07%	
	Task 5.1 'Design and implement a well- developed housing programme based on the principles of equality in Riga'	2395000		0.22%	
	Task 5.2 'Ensure access to affordable housing for different groups of the public'	210000		0.02%	
	Task 5.3 'Promote the comprehensive renovation of housing stock and the improvement of living spaces'	4837447	27400000	2.97%	
	Task 6.1 'Improve municipal services, including the continued implementation of online services'	4393500		0.41%	
Built Environment	Task 6.2 'Improve the work, cooperation, and coordination of municipal institutions, and companies'	182114		0.02%	
	Task 6.3 'Make the operations of the municipality more efficient by improving the skills and working conditions of its staff'	29623920	333500	2.76%	
	Task 6.5 'Promote uniform communication, information, and data availability'	1045000	3000000	0.37%	
	Task 6.6 'Promote the participation of local residents and the NGOs in decision-making and in municipal functions'		173780	0.02%	
	Task 7.8 'Promote access to healthcare and improve the healthcare and social services infrastructure'	5541064	15882000	1.98%	
	Task 8.3 'Strengthen the city's collaboration ecosystems and support innovative business initiatives'	2,202,200		0.20%	
Energy Systems	Task 3.6 'Mitigate climate change'	4,736,448	43473031	4.44%	
	Task 2.1 'Develop neighbourhood centres, promoting the functional diversity of the public outdoor space'	5,299,324		0.49%	
Green Infrastructure and Nature Based	Task 2.2 'Preserve, improve, and sustainably manage green infrastructure in Riga'	1,235,640	28416393	2.73%	
Solutions	Task 3.1 'Improve the environmental quality and climate change impact monitoring and public information system'	281,159	390000	0.06%	
	Task 3.3 'Reduce the risks of flooding and coastal erosion'	3,378,950	32638625	3.32%	





		Current budget, EUR			
Fields of Action	Sector Subsection (based on the priorities and targets defined in the 2023–2025 RSCM Investment Plan)	Projects in the implementa tion phase, EUR	Planned investment projects, EUR	% of total investment	
	Task 3.4 'Provide local residents with high- quality and affordable municipal utility services'	18,589,047	66827900	7.87%	
Waste and Circular Economy	Task 3.5 'Ensure the development of environmentally-friendly waste management'	484,764	2835000	0.31%	
TOTAL		427,289,334	657,381,871		

1.2 Module IP-A2: Strategic Funding and Financing Evaluation

A-2.1: Description

Riga's investments and budget priorities are planned in line with the RSCM Strategy and Development Programme⁵. Funding for actions and projects listed in Riga's current SECAP is secured on a yearly basis. The municipality follows a formal procedure to collect proposals and decide on budget allocation, taking into account sector-specific indicators.

Although the implementation of Riga's SECAP is already integrated into the city's budget planning, the Climate City Contract stipulates more ambitious goals that must be achieved at a faster pace. In addition to mainstreaming climate action as a horizontal priority across all sectors, Riga will place greater emphasis on climate budgeting and governance. This process will be managed by the city's executive director in cooperation with the Department of Finance and the Department of Urban Development. The Riga Energy Agency will provide methodological support, drawing on results from several EU-funded projects.

To meet the ambitions of the Action Plan and secure funding, the municipality will actively engage with the government and involve other stakeholders whose plans and policies significantly impact GHG emissions. Riga's progress toward climate neutrality is essential for achieving national targets. As a result, the city will continue to benefit from synergies with public funding programmes outlined in the National Energy and Climate Plan. Nevertheless, a significant funding gap of 40% will remain (see Part B for explanation).

Income

Detailed information about the income, expenses, and capital expenditures in the RSCM budget is published in the annual accounts⁶. For its 2024 budget, RSCM planned an income of EUR 1354 million, EUR 162 million more than the previous year. The increase in income is mainly due to a projected increase of EUR 75 million in personal income tax income, based on the macroeconomic forecasts of the Ministry of Finance. The municipality's budget also receives more income from the national budget, mainly due to a EUR 47 million increase in teacher salaries and EUR 23.5 million as assistance for the construction of the Kundzinsala flyover.

The main share of the income in the RSCM budget is taken up by main budget income. In accordance with the legislation and the RCC binding regulations, RSCM administers the real estate tax. Main budget income mostly consists of:

- tax income, incl. personal income tax & real estate tax on land, buildings, structures, and residences.
- non-taxable income, incl. state and municipal fees; payments for the use of the municipality's capital, & other income (fines and penalties, sale of property, etc.).

RSCM also receives income through donations and gifts.

Expenses

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⁵ A detailed description of the projects and target indicators is available in the RSCM 2024–2027 investment plan https://www.rdpad.lv/strategija/attistibas-programma-2022-2027/ricibas-plans-un-investiciju-plans/

⁶ The RSCM Public Report is available at https://www.riga.lv/lv/publiskais-parskats





The total budget spending for 2024 was planned at EUR 1,545 million, EUR 141 million more than last year. As inflation has stabilised, the expenses trend has slowed. Expenses are also negatively affected by the uneven development of EU planning documents and, accordingly, the implementation schedules of these projects, as well as by the amount of financial resources available to the municipality. In 2024, the contribution of RSCM to municipal financing equalisation fund increases by EUR 8 million (6%), reaching EUR 133 million.

The total amount of Riga's long-term **debt** has decreased from EUR 571.5 million in 2019 to EUR 546.2 million in 2023. Moreover, the share of debt compared to the RSCM budget expenditure has decreased significantly: from 59% in 2019 to 41% in 2023. The annual share of debt payments (base sum and interest rates) constitutes about 10% of the municipal budget expenditure. According to Standard & Poor credit ratings, Riga's grade was A/Stable/A-2⁷.

	2019	2020	2021	2022	2023
RSCM budget expenditure, total	972.0	956.0	960.2	1112.1	1316.6
RSCM debt obligations (end of year), including:	571.5	563.7	562.3	550.4	546.2
State loans	219.9	250.9	292.8	321.6	362.6
European Investment Bank (EIB) loans	0	0	0	0	0
European Bank for Reconstruction and Development (EBRD) loans	0	0	0	0	0
Other loans (commercial banks)	351.6	312.8	269.5	228.8	183.6
Debt obligations, % of total RSCM budget expenditure	59%	59%	59%	49%	41%

The economic profile of Riga in English is available at https://www.liveriga.com/en/invest/business-environment

Table 3: List of Income Sources for the RSCM

Income Category, 2023	RSCM income, million euros	% of RSCM budget
Income from property taxes	117.2	9.1%
Income from permits, licences, etc. issued by the municipality (building permits)	0.4	
Income from trade turnover, excise duties, and other taxes (trade fees)	0.5	0.0
Income from personal income tax	797.6	62.1%
Grants and subsidies — national budget transfers without EU funds	234.4	18.2%
Deposits	4.1	0.08%

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⁷ Source: RSCM Public Report 2024





Table 4: List of Capital Sources for the RSCM

Туре	Size Range, EUR million	Level	Description
Government loans	68.3	Public	State Treasury loans
EU funds	63.5	Public	Structural fund co-financing in the form of grants
National funds	-	Public	-
Municipal budget (total income, incl. EU funds)	1285.3	Public	Income from local resident taxes, etc. (see description above)
Loans from private and development banks	553	Complex	Amount of debt in 2023

1.3 Module IP-A3: Barriers to Climate Investment

A-3.1: Description

To achieve Riga's ambitious GHG emission reduction targets, the municipality must make effective decisions and act swiftly. Given the broad scope of policies and the many priorities of local governments, the major barrier to climate action is the lack of time. Current decision-making processes and funding mechanisms are more suited to gradual development than to the radical changes needed to address issues involving multiple stakeholders.

Despite resource constraints, Riga views stronger climate action as an opportunity to enhance governance and make communication more effective and engaging. When planning activities that involve other stakeholders, Riga considers national-level assessments of framework conditions and the readiness of actors to contribute economically to climate change mitigation.

Based on the 24 May 2023 European Commission working document SWD (2023) 614 final 'Recommendation for a COUNCIL RECOMMENDATION on the 2023 National Reform Programme of Latvia and delivering a Council opinion on the Stability Programme of Latvia⁸, Latvia has made various improvements in the fields of energy and climate, but there are still many challenges at the national level that affect RSCM and the achievement of its climate-neutrality target.

As mentioned in the document, the Latvian government has eliminated some of the restrictions that affected the development of wind power plants, but Latvia still needs to take measures to make its electricity and heating energy production greener. The power grid must also be developed further to maximise the share of RES energy and create communities.

The European Commission's operating document also lists the following obstacles:

- Latvia has low long-term credit level growth, which is explained by a number of structural problems. SME in Latvia find it harder to get loans than those in other Eurozone countries. According to the banking sector, the main obstacles are their high credit risk and the prevalence of merchants operating in the grey economy. However, surveys of businesses point to other obstacles to lending: cumbersome paperwork, strict loan collateral requirements, and high loan costs. Latvian borrowers pay some of the highest interest rates in the Eurozone. The banking sector explains that this is due to the high costs associated with low loan recovery rates, while the Bank of Latvia points at the possibility that the high interest rates could be due to a lack of competition in the banking sector. The recent increase in interest rates has widened the spread between credit and deposit rates of Latvian banks, with the latter having barely changed. This development is likely to further raise concerns about the lack of competition in the Latvian banking sector.
- Latvia ranks third in the EU in terms of its share of financially constrained companies and is first in the EU in the share of companies (30%) that report having invested too little in the last three years. Factors explaining Latvia's poor access to financing include consistently high interest rates, high loan collateral costs, and a company loan deficit that has shrunk by 20% over the past six years.
- Although the acceleration of the green transition has become more visible since Russia invaded Ukraine, only 15% of SME indicate that they have a clear strategy to reduce their carbon footprint and become climate-neutral. 63% of SME do not offer environmentally-friendly products or services (compared to the EU average of 54%).

⁸ Source: https://economy-finance.ec.europa.eu/system/files/2023-05/LV_SWD_2023_614_en.pdf





In order for Latvian municipalities, including RSCM, to fully provide the investments necessary to the achieve climate-neutrality targets and motivate Riga's businesses and service providers to do the same, various obstacles must be removed, from structural and policy barriers to economic and financial ones. Many of the challenges listed in the table below could be addressed by RSCM with support by the national government (line ministries), which sets various national policies and assistance mechanisms.

Table 5: Barriers to Climate Investment

Financial Barriers to achieving Climate- Neutrality	Typology of Barrier	Description	Sector and stakeholders involved
Initial capital expenditure	Structural barriers	Insufficient or outdated infrastructure that needs structural improvements and makes the initial investment more expensive: for example, municipal and multi-apartment residential buildings need structural improvements to enable their thermal insulation. The water management infrastructure is also in poor technical condition.	Sectors: energy production, public transport, municipal infrastructure, energy efficiency in buildings Stakeholders: communities, businesses willing to invest in RES equipment, building owners, 'Rīgas satiksme' Solutions: Collaboration with national stakeholders to design effective financial instruments and lending policies. Active participation in public funding programmes. Cooperation with banks to access affordable loans.
Initial capital expenditure	Structural barriers	Limited access to technology or limited capacity to adapt it to the needs of Riga.	Sectors: energy production (fossil fuels) Stakeholders: heating supply operators Solutions: Participation in innovation projects; joint electrification strategy promoted by national-level stakeholders.
Initial capital expenditure	Policy barriers	Lack of a clear, predictable and sustainable regulatory framework to motivate investors to invest in climate-related projects. Limited options for the municipality to raise funding from external sources, such as the European Investment Bank.	Sectors: energy production, energy efficiency of buildings Stakeholders: communities, businesses willing to invest in RES equipment, energy efficiency project developers, municipal departments, line ministries Solutions: Coordination among different institutions and policy levels. Implementation of the National energy and climate plan.
Initial capital expenditure	Policy barriers	Time and resource-consuming permit and approval processes that protract the implementation of projects	Sectors: transport and mobility (e.g., electric charging stations), renovation of multi-apartment residential buildings, etc. Stakeholders: CDD, line ministries, building managers, charging station and other project developers Solutions: Policy dialogues for simplified and transparent procedures and procurements,





Financial Barriers to achieving Climate- Neutrality	Typology of Barrier	Description	Sector and stakeholders involved
			agreement on technological standards.
Initial capital expenditure	Economic barriers	If climate-neutral solutions are more expensive and not competitive compared to conventional solutions, the challenge is to ensure that decision-makers make a decision in favour of more environmentally friendly solutions.	Sectors: transport and mobility, energy efficiency of buildings, energy production, waste management and circular economy, etc. Stakeholders: investors, project developers, politicians, implementers, building owners, etc. Solutions: Estimate full values of co-benefits and environmental costs, long-term planning
Market barriers	Economic barriers	Limited demand and low awareness limit the creation and development of sustainable businesses.	Sectors: electricity generation, transport and mobility Stakeholders: local residents, businesses, service providers, project developers Solutions: Adoption of EU-level initiatives in sustainability reporting and due diligence. Media work and network building.
Access to financing	Financial barrier	Limited access to financial markets or sources of financing can hamper climate investment.	Sectors: all sectors Stakeholders: municipality, Ministry of Finance, banks, other lenders Solutions: Integration of specific investment priorities in sectoral and regional policies. Advocacy work in national and EU- institutions.
Lack of appropriate and properly- scaled financial instruments	Financial barrier	Lack of access to financial instruments limits the scalability of projects such as the renovation of multi-apartment residential buildings, etc.	Sectors: energy efficiency projects in various sectors Stakeholders: ministries, project developers, financiers Solutions: Preparation of standardized solutions that reduce administrative and planning costs; focus on citizen initiatives and local cooperation.
Budget constraints	Fiscal barrier	Cities often face budget constraints that make it difficult to allocate sufficient funding to climate projects.	Sectors: all Stakeholders: municipality, local residents, businesses, etc. Solutions: Elaboration of climate budgeting in the municipality; strengthened cooperation with the private sector.





2 Part B — Investment Pathways towards Climate-Neutrality by 2030

2.1 Module IP-B1: Cost Scenarios for Climate-Neutrality

B-1.1: Description

The Climate City Contract Action Plan outlines **31 fields of action with total costs estimated at EUR 2.8 billion**, excluding the waste management and adaptation sectors. The costs for each action were estimated in collaboration with key stakeholders by evaluating which technologies and projects would be feasible for achieving specific GHG emissions reduction targets in their respective sectors. A large portion of these actions is rooted in existing development programmes and investment plans, with cost estimates inherited from related calculations.

Due to the much higher GHG reduction ambitions compared to existing policies, the costs for complementary activities were estimated by the Riga Energy Agency based on assumptions about price intervals for services and technologies.

Three key plans served as references for Riga's cost scenarios:

- 1. The National Energy and Climate Plan 2021–2030 (NECP) (updated in 2024)
- 2. The Investment Plan for Riga's Development Programme 2021–2027
- 3. Communication with utility companies, based on their mid-term strategies

The NECP incorporates targets and measures for the entire country, with estimated total costs of EUR 14.7 billion. Of this, the proposed share of public funding is 40% (EUR 5.88 billion). Considering that Riga accounts for approximately one-quarter of Latvia's total GHG emissions, and that certain sectors—such as waste management, land use, climate change adaptation, and industrial processes—require further elaboration, Riga's cost estimate of approximately EUR 3 billion appears to be proportionate.

Riga's Investment plan is updated yearly for a period of three years (2024-2026). The total costs of the current plan are about EUR 2.5 billion. The share of the climate and environment component of this three-year plan constitutes 18.6% or EUR 376 million. However, many infrastructure, mobility and building renovation projects that are listed in other budget priorities contribute to emission reduction. Thus, the total share of investments related to climate and energy targets are at least 30%.

EU funds within the Cohesion programme and Recovery and Resilience Facility currently constitute the largest share of additional public funding. Life, Interreg and Horizon programmes significantly contribute to developing Riga's climate-neutrality policies, innovation and pilots. According to Latvia's national contact point, Riga Energy Agency is the leader in acquiring funding for climate and energy projects in the Horizon programme. The success rate of project proposals has increased after Riga had joined the Mission cities programme.

The total amount of money available for the Greener Europe priority from the Cohesion programme 2021-2027 is EUR 1.089 billion. In addition, the Recovery and Resilience Facility has allocated EUR 676 million for climate action and EUR 135 million for transformation of the energy systems. A large part of this funding is related to projects implemented in Riga; due to ongoing calls and several programmes in the planning stage it is not yet possible to estimate the total EU funding invested in Riga's climate action. The discussions about the funding priorities for the post-2027 planning period are at an early stage.

In the baseline scenario, the total costs of the action fields significantly exceed the investments planned for the public sector. The investment gap is estimated at a minimum of 40%, or approximately EUR 1.12 billion. While public investment in infrastructure is projected to exceed EUR 2 billion during this period, the implementation of these projects does not sufficiently contribute to the emission reduction ambitions outlined in the action plan. The cost structure varies across sectors in terms of the proportion of public and private investments, bank loans, and contributions from stakeholders.

In municipal infrastructure, the most capital-intensive projects will focus on the modernization of street lighting and the renovation of public buildings. Street lighting projects will be financed through public-private partnership (PPP) contracts, with total costs not exceeding the current expenses for electricity, which are already covered by the municipal budget. The renovation of public buildings, including the integration of renewable energy technologies, will be financed directly by the municipality.





In this sector, the projects planned through 2027 already account for the estimated costs. As a result, the municipality has ensured that the decarbonization of its own infrastructure does not face significant funding constraints.

The table below summarises the expected investments for each field of action. Planned investments for the identified fields of action in the waste management and circular economy sectors, as well as for the CO_2 sequestration and GHG mitigation measures within the forestry sector, will be included in 2–3 years as part of the revision of the action plan and investment plan.

The costs of the activities are assumed separately for each field of action. The Capex costs are estimated for all types of stakeholders, while the OPEX costs are explicitly calculated only for the municipality and its entities.

Table 6: Sector Costing

Fields of Action	Action / Indicator	Implementation Costs/Capex	Operational Costs	Direct impacts (Emission reductions)*	Indirect impacts (co- benefits)*
	P1: Continuous improvements in the energy management system		2,450,000 (continuous funding from the municipal budget - 350,000 per year)	Energy savings: 15,939 MWh; CO ₂ reduction: 2311 tCO ₂	Cost savings used for investments in energy efficient buildings. Improved property management and data exchange among municipal institutions.
	P2: 100% renewable heating energy share in municipal buildings	2,475,000 (investment period 5 years)	25,000 (admin costs)	RES: 150,006 MWh; CO ₂ reduction: 21,751 tCO ₂	Replacement of outdated heating installations; improved indoor climate.
	P3: 100% renewable electricity share in municipal buildings	9,465,000 (investment period 7 years)	35,000 (admin costs)	RES: 327,298 MWh; CO ₂ reduction: 35,675 tCO ₂	Smarter and renovated buildings with better indoor climate.
Municipal Infrastructure	P4: Development of a plan for the renovation of municipal buildings until 2030 and consistent renovation of buildings	P4: Development of a plan for the renovation of municipal buildings until 2030 and consistent renovation of	Energy savings: 19,000 MWh; CO ₂ reduction: 5016 tCO ₂	Improved access to high-quality public spaces for Riga's citizens.	
	P5: Upgrading of street lighting	90,000,000 (investment period 6 years)	Not calculated	Energy savings: 13,328 MWh; CO ₂ reduction: 1788 tCO ₂	Improved street safety and design.
	P6: Achieve a 100% renewable electricity share for street-lights, traffic lights, and clocks in 2030		616,000 (electricity costs)	RES: 17,445 MWh; CO ₂ reduction: 1901 tCO ₂	Improved public infrastructure and street design.
	P7: Creation of a data records system for the municipal vehicle fleet and improvements in the efficiency of vehicle use		91,000 (development and maintenance costs 7 years)	Energy savings: 963 MWh; CO ₂ reduction: 253 tCO ₂	Cost savings and coordination of vehicle procurements and usage. Precise data for GHG inventories.





Fields of Action	Action / Indicator	Implementation Costs/Capex	Operational Costs	Direct impacts (Emission reductions)*	Indirect impacts (co- benefits)*
	P8: Promotion of the use of public transport for work among employees of the municipal government		170,000 (2 years)	Energy savings: 690 MWh; CO ₂ reduction: 181 tCO ₂	Awareness raising, public engagement in climate-neutral mobility practices.
	P9: Transition to zero-emission vehicles in companies, municipal institutions	600,000 (investment period 6 years)	not calculated	Energy savings: 823 MWh; RES: 12,000 MWh; CO ₂ reduction: 3402 tCO ₂	Efficient car fleet, common standards for all municipal institutions.
	P10: Energy efficiency and RES use in wastewater treatment plants	39,000,000 (investment period 7 years)	Not calculated	CO ₂ reduction: 2780 tCO ₂ e	Compliance with EU regulations; higher environmental quality standards.
	E1: Promotion of zero-emission technologies and RES in district heating	75,000,000 (investment period 7 years)	Not calculated	RES: 768,855 MWh; CO ₂ reduction: 121,180 tCO ₂	Replacement of gas boilers. Innovation in the district heating sector.
	E2: Achieve new client connections to DHS		2,100,000 (7 years)		Reduced number of individual solutions; reduced air pollution; creation of a heating supply zone map.
From	E3: Increases in the efficiency of heat generation and management, and digitisation of the heating system	8,000,000 (investment period 7 years)	Not calculated	Energy savings: 5000 MWh; CO ₂ reduction: 1320 tCO ₂	Cost savings, improved work conditions.
Energy Production	E4: Gradual transition to the 4 th generation heating supply system	240,000 (investment period 7 years)	Not calculated	Energy savings: 650 MWh; CO ₂ reduction: 172 tCO ₂	Cooperation with real estate developers, synergies with innovation projects.
	E5: Implementation of innovative pilot projects	10,300,000 (investment period 7 years)	Not calculated	Counted in E1	Strengthened cooperation with international partners, learning and demonstration projects.
	E6: Promote electrification, use of RES in decentralised heating, or connection to DHS	134,000,000 (investment period 5 years)	Not calculated	RES: 364,506 MWh; CO ₂ reduction: 86,199 tCO ₂	Industrial energy efficiency; complex urban planning solutions.





Fields of Action	Action / Indicator	Implementation Costs/Capex	Operational Costs	Direct impacts (Emission reductions)*	Indirect impacts (co- benefits)*
	E7: Promote the use of RES in the generation of electricity for Riga's needs	470, 000,000 (investment period 7 years)	Not calculated	RES: 1,446,931 MWh; CO ₂ reduction: 157,716 tCO ₂	Integration of RES generation in urban systems; sustainable land-use.
			1	ı	
	Dz1: Improvement of the availability of information and data about the energy efficiency of multiapartment residential buildings		700,000 (7 years)		More efficiency data exchange for financial planning; transparent communication with stakeholders.
	Dz2: Revision of laws and regulations to increase the rate of multi-apartment residential building renovation in Riga		700,000 (7 years)	Energy savings: 2246 MWh; CO ₂ reduction: 593 tCO ₂	Improved urban governance, speed- up of standardised processes.
Apartment Buildings	Dz3: Involvement of local residents in the renovation of multiapartment residential buildings	318,000,000 (investment period 7 years)	Not calculated	Energy savings: 133,505 MWh; CO ₂ reduction: 19,358 tCO ₂	Increased quality of residential environment and urban spaces.
	Dz4: Establishment of the Riga Energy Efficiency Fund	29,000,000 (investment period 5 years)	Not calculated	Counted in Dz3	Ability to scale up the renovation of buildings.
	Dz5: Research and implementation of new standardised solutions for the renovation of buildings, reducing building renovation costs		1,200,000 (investment period 6 years)	RES: 2500 MWh; CO ₂ reduction: 273 tCO ₂	Cost savings; adoption of circular economy principles; shorter project cycles.
	T1: Urban planning			Energy	Quality of public
Transportation	aimed at creating a city where local residents and guests are less dependent on private cars	42,000,000 (investment period 7 years)	Not calculated	savings: 518,000 MWh; CO ₂ reduction: 126,840 tCO ₂	spaces; redesigned street networks.
and Mobility	T2: Measures to promote distance working and increase the availability of online services		840,000 (investment period 3 years)	Counted in T1	Time planning and networking; reduced impact on traffic flow.





Fields of Action	Action / Indicator	Implementation Costs/Capex	Operational Costs	Direct impacts (Emission reductions)*	Indirect impacts (co- benefits)*
	T3: Promotion of an active lifestyle and cycling	420,000,000 (investment period 7 years)	Not calculated	Energy savings: 288,400 MWh; CO ₂ reduction: 77,000 tCO ₂	Focus on lifestyle changes and soft mobility.
	T4: Increase the share of public transport in everyday passenger trips	1,036,000,000 (investment period 7 years)	Not calculated 112,000 (4 years)	Energy savings: 519,960 MWh; CO ₂ reduction: 138,880 tCO ₂	More comfortable trips in public transportation; cost savings; better connected neighbourhoods.
	T5: Restrictions on private transport			Energy savings: 280,000 MWh; CO ₂ reduction: 72,800 tCO ₂	Additional income for municipal climate action. Better planned public spaces.
	T6: Other measures to reduce car use	28,000,000 (investment period 3 years)	Not calculated	Energy savings: 212,400 MWh; CO ₂ reduction: 85,680 tCO ₂	
	T7: Promotion of electrification in private transport and provision of services	1,500,000 (private companies; investment period 7 years)	Not calculated	Energy savings: 101,000 MWh; RES 14,200 MWh; CO ₂ reduction: 24,000 tCO ₂	Upgrade of electricity grids. Balanced development in all neighbourhoods.
	T8: Gradual transition to clean technology in vehicles that enable municipal functions	3,000,000 (investment period 5 years)	Not calculated	RES: 80,000 MWh; CO ₂ reduction: 28,200 tCO ₂	Improved air quality and working conditions.
	T9: Collection of mobility data and monitoring of measures implemented		3,000,000 (investment period 4 years)		Capacity building within municipality to develop digital solutions. Data for GHG inventories, climate budgeting and transport modelling.





Table 7: Capital Intensive Projects

Fields of Action	Action / Indicator				
		Capex (€m)	Opex (€m)	Cost Effectivenes s (EUR/tCO ₂ e)	Investment (Split by Sources or Stakeholders)
Municipal	P4 Renovation of	60 €m	Not calculated	11 962 EUR/tCO2e	100% Municipality, incl. EU funds
Infrastructure	Public Buildings	plan for public be of zero emission goal is to renove gathered from v	ouildings that will n technologies ar ate ten larger bui various sources:	increase their end quality of the illidings per year. in addition to yea	orehensive renovation hergy efficiency, adoption andoor environment. The The funding will be allocation of the sohesion programme and

Fields of Action	Action / Indicator				
		Capex (€m)	Opex (€m)	Cost Effectiveness (EUR/tCO ₂ e)	Investment (Split by Sources or Stakeholders)
Municipal	P5 Upgrading of	90 €m costs 50 336 included in EUR/tCO ₂ e	100 % Municipality		
Infrastructure	street lightning	replacement of infrastructure partnership. To 2030). The fullower than the will result in result in result in result.	of outdated lamp . The project will The total costs w Inding will be pro e yearly expense educed total cos afety. The terms	s with LED and ins be implemented a ill reach EUR 160 vided from the mu as for electricity, the ts, new infrastructu	etlights will include stalling additional is long-term public-private million (EUR 90 million until nicipal budget – it will be us this modernisation project ure and improved street private partnership will be

Fields of Action	Action / Indicator					
		Capex (€m)	Opex (€m)	Cost Effectiveness (EUR/tCO ₂ e)	Investment (Split by Sources or Stakeholders)	
Municipal Infrastructure	' RESuse in	39 €m	Not calculated	14 029 EUR/tCO₂e	100% municipal company's budget, including grant from the state financial institution or a bank loan.	
	treatment plants					





company's income and state-managed financial instruments for improvement of industrial energy efficiency.

Fields of Action	Action / Indicator				
	Capex (€m)	Opex (€m)	Cost Effectiveness (EUR/tCO ₂ e)	Investment (Split by Sources or Stakeholders)	
Energy	E1 Promotion of zero-emission technologies	75 € m	Not calculated	619 EUR/tCO₂e	30% municipal company; 20% sate-owned energy company, incl. 50% EU funds
production	and RES in district heating	energy compa natural gas for replacing sma waste heat re be invested in plants owned	any Latvenergo or district heating aller boiler house use or biomass or electrification a by Latvenergo.	will implement proj . About EUR 45 m es and cogeneratio technologies. The nd modernisation of Since these measi	property and Latvia's national ects to minimize the use of illion will be invested illion will be invested in plants with zero emission, remaining EUR 30 million will of Riga's thermoelectric ures are crucial for reaching provided by EU grants.

Fields of Action	Action / Indicator					
E6 Promote	Capex (€m)	Opex (€m)	Cost Effectiveness (EUR/tCO₂e)	Investment (Split by Sources or Stakeholders)		
Energy production	electrification, use of RES in decentralised	134 €m	Not calculated	1555 EUR/tCO₂e	40% private funding; 30% public, including EU funds; 30% loans, guarantees or other financial instruments	
	connection to DHS	Project Description : The goal of this activity is to replace the fossil fuel us in industrial, commercial and residential sectors. Thus, the total sum consist of funding for many individual projects managed by various stakeholders (companies, property owners, public entities). The municipality will contribut to the planning and coordination of these measures.				

Fields of Action	Action / Indicator					
E7 Promote the use of RES in	Capex (€m)	Opex (€m)	Cost Effectiveness (EUR/tCO ₂ e)	Investment (Split by Sources or Stakeholders)		
Energy production	-	300 €m	Not calculated	3024 EUR/tCO2e	100% Green Loan from European Investment Bank	
	(the project of Riga's forestry company)	Project Description: Riga's forestry company will build large-scale solar PV in degraded peat extraction areas; the project will combine RES generation with complex nature restoration measures. The total installed capacity by Riga Forests will be 300 MW.				





Fields of Action	Action / Indicator					
	Dz3: Involvement of residents in the renovation of multi-apartment residential	Capex (€m)	Opex (€m)	Cost Effectiveness (EUR/tCO ₂ e)	Investment (Split by Sources or Stakeholders)	
Multi- apartment buildings		318 € m	Not calculated	16 427 EUR/tCO₂e	50% private funds (incl. bank loans), 50% public co- funding	
	buildings	Project Description: Riga's goal is to renovate at least 2000 multi-apartm by 2030. This activity comprises funding for about 500 multistorey buildings that could be fully renovated with EU co-funding.				

Fields of Action	Action / Indicator					
	T1 Urban planning aimed at creating a city	Capex (€m)	Opex (€m)	Cost Effectiveness (EUR/tCO ₂ e)	Investment (Split by Sources or Stakeholders)	
Mobility	where local residents and	42 €m	Not calculated	331 EUR/tCO2e	20% municipality, 80% EU funding	
	guests are less dependent on private cars		ans of public tran	pment of mobility hubs connecting train station insportation at 15 locations in Riga's		

Fields of Action	Action / Indicator						
		Capex (€m)	Opex (€m)	Cost Effectiveness (EUR/tCO ₂ e)	Investment (Split by Sources or Stakeholders)		
Mobility	T3 Cycling infrastructure	47 €m Not 5455 55% Municipality, 45% calculated EUR/tCO₂e National Funds					
				oment of cycling roa an municipalities.	ads within the city and		

Fields of Action	Action / Indicator				
	T3	Capex (€m)	Opex (€m)	Cost Effectiveness (EUR/tCO₂e)	Investment (Split by Sources or Stakeholders)
Mobility	Infrastructure for urban outdoor life	86 € m	Not calculated	5455 EUR/tCO2e	100% Municipality
			r ription: Planning grounds, sports		t of public places for outdoor

Fields of Action	Action / Indicator				
Mobility	T4 Public transportation	Capex (€m)	Opex (€m)	Cost Effectiveness (EUR/tCO₂e)	Investment (Split by Sources or Stakeholders)





193 € m	Not calculated	7460 EUR/tCO₂e	100% Municipal transport company, incl. EU co- funding
Project Desc trams.	eription: Acquisit	ion of new electric	buses, trolleybuses and

Fields of Action	Action / Indicator				
		Capex (€m)	Opex (€m)	Cost Effectiveness (EUR/tCO₂e)	Investment (Split by Sources or Stakeholders)
Mobility	T4 Public transportation	100 € m	Not calculated	7460 EUR/tCO₂e	100% Municipal transport company, incl. EU co- funding
		Project Desc	ription: Recons	truction of tram line	es.

2.2 Module IP-B2: Capital Planning for Climate-Neutrality

Description

In the section above, we outlined the current plans and calculated the investment gap. However, the Investment Plan is a dynamic document that is revised annually. The priorities of the Development Programme support ambitious climate action, and Riga's aim is to allocate additional budget income to climate action while ensuring that all climate investments are tracked in a transparent and structured manner.

In addition to the ongoing implementation of national-level funding schemes such as the Cohesion Programme and the Recovery and Resilience Facility, Riga will benefit from funding derived from Latvia's participation in the EU's Emissions Trading System—specifically through the Modernisation Fund and the Climate Change Financial Instrument. These two funds will support the electrification of transport, the renovation of public buildings, and various projects focused on smart city and zero-emission technologies.

Latvia's National energy and climate plan 2021-2030 outlines the sectoral measures and broadly indicates the funding needs and sources. Since the climate city contract raises Riga's climate ambition, there is an explicit need for additional policies and funding strategies not yet identified in the national and regional level strategies. Moreover, a comprehensive capital planning necessarily includes public and private stakeholders that are outside the direct influence and funding decisions of Riga's municipality. On the one hand, the diversity of parties enlarges the scope and potential of investments in climate action. On the other hand, the city has limited power to influence capital allocation and must rely on contributions from other stakeholders to achieve substantial reduction of GHG emissions.

The funding for the implementation of the action plan will be obtained from various funding sources:

- Municipal budget for short-term and medium-term measures
- Private funds (companies, organisations, citizens) for long-term projects related to building and infrastructure renovation projects
- EU funds for the renewables transition and other long-term energy efficiency measures, as well as sustainable transport solutions and modernisation of water management
- Other public funding, including the State budget and co-financing
- Other financial instruments and lending institutions

The most relevant sources of funding are also listed on the website of the Covenant of Mayors.





Table 8: Capital Planning by Stakeholder

Estimated capital demand	Comments on calculation	Sector
EUR 205 million (7% of total GHG emissions reduction)	The decarbonisation of municipal infrastructure will be financed by measures included in Riga's development programme. EUR 39 million will be contributed by the municipal water company, carrying out substantial energy efficiency and solar PV projects. The funding corresponding to most CCC actions is listed within the development programme, however, the total amount may increase due to higher construction costs and more comprehensive projects.	Municipal infrastructure
EUR 707 million (37% of total GHG emissions reduction)	Investments in decarbonisation of the energy production will rely on the energy companies and private actors (consumers in the building and commercial sectors). In the heating sector, the main actor is the municipal district heating company whose investment plans are closely aligned with Riga's climate policy goals. The estimated funding gap in this sector is about 35%. Possibly, the planned private investment in solar electricity generation within the city will decrease due to further development in the electricity market. In contrast, the investment in electrification of heating will likely exceed the current estimates.	Energy Production
EUR 350 million (2% of total GHG emissions reduction)	The largest part of investment will be provided by the property owners via housing associations and loans. The EUR 318 million is the estimated amount that could be financed with 40-50% public confounding and other financial instruments supported by the government. Additionally, the municipality will fund several enabling activities and establish a new fund for financing renovation projects (at least 32 million in total). Although there remains uncertainty regarding the full amount of private investment, Riga's public investments in housing renovation are covered in its development programme. Currently, the funding gap is estimated at 40% due to variable private investment and limited national funds.	Apartment Buildings
EUR 1 534 million (54% of total GHG emissions reduction)	The largest investment (about EUR 1 billion) will be managed by the municipality. At least EUR 500 million will be necessary for the transportation companies. To meet the ambition, Riga's development programme will incorporate additional resources for improving the cycling infrastructure and public transport. The current funding gap is at least 40%. The investment needs for replacement of fossil fuel cars with electric ones in the private sector have not been evaluated yet.	Transportation and Mobility

No	Action / Indicator	Citizens (million €)	Private Sector (m. €)	Municipali ty (m. €)	Transport Operators (m. €)	Utility Providers (m. €)	Total (m. €)
P	Municipal infrastructure and facilities						
	Total (P)	-	-	166	-	39	205
P1	Continuous improvements in the energy management system.	-	-	2.45	-	-	2.45
P2	100% renewable heat energy share in municipal buildings.	-	-	2.5	-	-	2.5





No	Action / Indicator	Citizens (million €)	Private Sector (m. €)	Municipali ty (m. €)	Transport Operators (m. €)	Utility Providers (m. €)	Total (m. €)
P3	100% renewable electricity share in municipal buildings.	-	-	9.5	-	-	9.5
P4	Development of a plan for the renovation of municipal buildings until 2030 and consistent renovation of buildings.	-	-	60	-	-	60
P5	Upgrading of street lighting.	-	-	90	-	-	90
P6	Achieve a 100% renewable electricity share for streetlights, traffic lights, and clocks in 2030.	-	-	0.616	-	-	0.616
P7	Creation of a data records system for the municipal vehicle fleet and improvements in the efficiency of vehicle use.	-	-	0.091	-	-	0.091
P8	Promotion of the use of public transport for work among employees of the Riga municipal government.	-	-	0.170	-	-	0.170
P9	Transition to zero- emission vehicles in companies, municipal institutions.	-	-	0.6	-	-	0.6
P10	Energy efficiency and RES use in wastewater treatment plants.	-	-	-	-	39	39
E	Energy production						
	Total (E)	-	311	2	-	393	707
E1	Promotion of zero- emission technologies and RES in district heating.	-	-	-	-	75	75
E2	Ensure the connection of new clients to DHS of Riga.	-	-	2.1	-	-	2.1
E3	Increases in the efficiency of heat generation and management, and digitisation of the heating system.	-	-	-	-	8	8





No	Action / Indicator	Citizens (million €)	Private Sector (m. €)	Municipali ty (m. €)	Transport Operators (m. €)	Utility Providers (m. €)	Total (m. €)
E4	Gradual transition to the 4th generation heating supply system.	-	-	-	-	0.24	0.24
E5	Implementation of innovative pilot projects.	-	-	0.3	-	10	10.3
E6	Promote electrification, use of RES in decentralised heating, or connection to DHS.	-	134	-	-	-	134
E7	Promote the use of RES in the generation of electricity for Riga's needs.	-	177	-	-	300	477
Dz	Multi- apartment residential buildings						
	Total (Dz)	318		32			350
Dz1	Improvement of the availability of information and data about the energy efficiency of multiapartment residential buildings.	-	-	0.7	-	-	0.7
Dz2	Revision of laws and regulations to increase the rate of multiapartment residential building renovation in Riga.	-	-	0.7	-	-	0.7
Dz3	Involvement of local residents in the renovation of multi-apartment residential buildings.	318	-	-	-	-	318
Dz4	Establishment of the Riga Energy Efficiency Fund (REEF).	-	-	29	-	-	29
Dz5	Research and implementation of new standardised solutions for the renovation of buildings, reducing building renovation costs.	-	-	1.2	-	-	1.2
T	Transport						
				1002	33	500	1534
T1	Urban planning aimed at creating a city where local residents	-	-	42	-	-	42





No	Action / Indicator	Citizens (million €)	Private Sector (m. €)	Municipali ty (m. €)	Transport Operators (m. €)	Utility Providers (m. €)	Total (m. €)
	and guests are less dependent on private cars.						
T2	Measures to promote distance working and increase the availability of online services.	-	-	0.84	-	-	0.84
Т3	Promotion of active lifestyle and cycling.	-	-	420	-	-	420
T4	Increase the share of public transport in everyday passenger trips.	-		536	-	500	1036
T5	Restrictions on private transport.	-	-	0.112	-	-	0.112
T6	Other measures to reduce car use.	-	-	-	28	-	28
Т7	Promotion of electrification in private transport and provision of services.	-	-	-	1.5	-	1.5
Т8	Gradual transition to clean technology in vehicles that enable municipal functions.	-	-	-	3	-	3
Т9	Collection of mobility data and monitoring of measures implemented.	-	-	3	-	-	3
А	Waste management and circular economy						
	The costs will be estimated in the next iteration						
ZM	Forestry and CO2 sequestration						
	The costs will be estimated in the next iteration						
	Total						





Table 9: Capital Planning

Field of Action	Action / Indicator	Cost to Municipality (m. €)	Funding source	Cost to Other (m. €)	% of Costs Covered
P	Municipal infrastructure and facilities				
P1	Continuous improvements in the energy management system.	2.45	Municipal budget	-	100%
P2	100% renewable heat energy share in municipal buildings.	2.5	Municipal budget, incl. EU funds	-	50%
P3	100% renewable electricity share in municipal buildings.	9.5	Municipal budget, incl. EU funds	-	100%
P4	Development of a plan for the renovation of municipal buildings until 2030 and consistent renovation of buildings.	60	Municipal budget, incl. EU funds	-	100%
P5	Upgrading of street lighting.	90	Municipal budget	-	100%
P6	Achieve a 100% renewable electricity share for streetlights, traffic lights, and clocks in 2030.	0.616	Municipal budget	-	100%
P7	Creation of a data records system for the municipal vehicle fleet and improvements in the efficiency of vehicle use.	0.091	Municipal budget, EU R&D projects	-	100%
P8	Promotion of the use of public transport for work among employees of the Riga municipal government.	0.17	Municipal budget	-	0%
P9	Transition to zero-emission vehicles in companies, municipal institutions.	0.6	Municipal budget, Modernisation fund	-	100%
P10	Energy efficiency and RES use in wastewater treatment plants.	-	The budget of Riga's water management company, energy efficiency funds for enterprises, loans	39	100%
E	Energy production				
E1	Promotion of zero-emission technologies and RES in district heating.		Riga's district heating company's budget and the state-owned energy company Latvenergo	75	30%
E2	Ensure the connection of new clients to DHS of Riga.	2.1	Municipality and Riga's district heating company's budget		50%
E3	Increases in the efficiency of heat generation and management, and digitisation of the heating system.		Riga's district heating company's budget	8	50%





Field of Action	Action / Indicator	Cost to Municipality (m. €)	Funding source	Cost to Other (m. €)	% of Costs Covered
E4	Gradual transition to the 4th generation heating supply system.	-	The budget of Riga's district heating companies and real estate developers	0.24	100%
E5	Implementation of innovative pilot projects.	0.3	Riga's R&D projects and Riga's forestry company	10	100%
E6	Promote electrification, use of RES in decentralised heating, or connection to DHS.	-	Real estate owners (commercial and public sector) – own budget, loans, EU funds for energy efficiency	134	40%
E7	Promote the use of RES in the generation of electricity for Riga's needs.	-	The budget of Riga's forestry company and investment from other enterprises	477	80%
Dz	Multi-apartment residential buildings				
Dz1	Improvement of the availability of information and data about the energy efficiency of multiapartment residential buildings.	0.7	Municipal budget and the budget of the district heating companies	-	100%
Dz2	Revision of laws and regulations to increase the rate of multi-apartment residential building renovation in Riga.	0.7	Municipal budget	-	100%
Dz3	Involvement of local residents in the renovation of multi-apartment residential buildings.		Investment from homeowners' associations, public co-funding (municipal and EU programmes), bank loans	318	30%
Dz4	Establishment of the Riga Energy Efficiency Fund (REEF).	29	Municipal budget	-	100%
Dz5	Research and implementation of new standardised solutions for the renovation of buildings, reducing building renovation costs.	1.2	Municipal budget, EU-funded R&D projects	-	100%
Т	Transport				
T1	Urban planning aimed at creating a city where local residents and guests are less dependent on private cars.	42	Municipal budget, EU funds, loans	-	100%
Т2	Measures to promote distance working and increase the availability of online services.	0.84	Municipal budget	-	100%





Field of Action	Action / Indicator	Cost to Municipality (m. €)	Funding source	Cost to Other (m. €)	% of Costs Covered
Т3	Promotion of active lifestyle and cycling.	420	Municipal and EU- funded projects	-	40%
T4	Increase the share of public transport in everyday passenger trips.	transport in everyday budget, incl. EU		500	40%
T5	Restrictions on private 0.112 Municipal budget transport use.		-	100%	
Т6	Other measures to reduce car use.	-	- Riga Free Port and companies purchasing EVs		100%
Т7	Promotion of electrification in private transport and provision of services.	-	Energy companies developing EV charging points	1.5	100%
Т8	Gradual transition to clean technology in vehicles that enable municipal functions.	-	Service providers and public funding for decarbonisation of heavy-duty vehicles	3	100%
Т9	Collection of mobility data and monitoring of measures implemented.	3	Municipal budget	-	100%
А	Waste management and circular economy				
	The costs will be estimated in the next iteration				
ZM	Forestry and CO2 sequestration				
	The costs will be estimated in the next iteration				

2.3 Module IP-B3: Economic and Financial Indicators for Monitoring, Evaluation and Learning

B-3.1: Description

Riga has not yet developed and implemented a clear procedure for climate budget planning in order to achieve climate-neutrality by 2030. The municipality's investment plan already includes a number of actions that will have a positive impact on the RSCM climate-neutrality targets. In order to identify the true scale and impact of these actions, and to be able to track future municipal climate investments, municipalities need to adopt an effective and consistent approach in climate project budget planning and the inclusion of these projects in the municipality's budget. There is no single approach across European municipalities, but a number of European municipalities have tried different solutions (for more on this see the *Energy Cities* study *'Climate-mainstreaming municipal budgets*⁹). In order to find the most appropriate approach for RSCM, it is necessary to organise initial discussions between the Executive Director Office, REA, and FD and then plan the implementation and adaptation of these activities.

⁹ Available here: https://energy-cities.eu/publication/climate-mainstreaming-municipal-budgets/





The table below shows the indicators for a qualitative assessment of the current situation and progress in relation to the general targets of the action plan and the targets of each of its fields of action, for which one must implement and maintain a database.





Table 10: Economic Indicators by Sector

B-3.1: Impact pa	athways								
Outcome/ area affected	Measure	No	Indicator	Indicator Baseline	Ind	Indicator Unit			
				2020	2025	2027	2030		
		P I 1.	CO ₂ emissions reductions from energy consumption by municipal infrastructure	-	10,205	20,411	34,019	tCO ₂	
		P12.	CO ₂ emissions produced by municipal infrastructure, as a share of total energy consumption	34,018	20,411	10,205	0	tCO ₂ /year	
		P13.	CO ₂ emissions by municipal buildings, as a share of total heat consumption	24,062	14,437	7219	0	tCO ₂ /year	
		P14.	CO ₂ emissions by municipal buildings, as a share of total power consumption	3629	2177	1089	0	tCO ₂ /year	
		P15.	CO ₂ emissions produced by the consumption of electricity by street lighting	2710	1626	813	0	tCO ₂ /year	
Reduction of		P16.	CO ₂ emissions from municipal transport	3,618	2,170	1,085	0	tCO ₂ /year	
CO ₂ emissions from municipal		P17.	Municipal building heating energy consumption, by energy source	165,945	↓	\	133,669	MWh/year	
infrastructure		P18.	Specific heating energy consumption in municipal buildings	144	↓	↓	↓	kWh/m² per year	
	P1: Continuous	P19.	Specific heating energy consumption with connection to the heating system in municipal buildings	164	+	↓	→	kWh/m² per year	
	improvements in energy management	P I 10.	Municipal building electric power consumption, by energy source	33,298	↓	↓	30,634	MWh/year	
	energy management	P I 11.	Specific electric power consumption in municipal buildings	31.6 — educational institutions 56.1 — office buildings	↓	ļ	ļ	kWh/m² per year	
		P I 12.	Water consumption in municipal buildings	N.d.		↓	1	m³/year	





B-3.1: Impact pa	athways							
Outcome/ area	Measure	No	Indicator	Indicator Baseline	Ind	licator Tar	Indicator Unit	
				2020	2025	2027	2030	
	P2: 100% renewable heating energy share in municipal buildings	P I 13.	Number and capacity of RES systems installed to produce heat for municipal infrastructure	N.d.	1	1	1	number and MW
		P I 14.	Annual amount of heat energy produced from renewables in municipal institutions	N.d.	1	1	1	MWh/year
		P I 15.	Share of heat energy produced from renewables per year	N.d.	↑	↑	100%	%
		-	See indicators P I 7 to P I 9.					
		P I 16.	Number and capacity of RES systems installed to produce electricity for municipal infrastructure	N.d.	1	1	1	number and MW
	P3: 100% renewable electricity share in	P I 17.	Annual amount of electric power produced from renewables in municipal institutions	N.d.	1	1	1	MWh/year
	municipal buildings	P I 18.	Amount of RES electricity procured in municipal infrastructure	N.d.	1	1	1	MWh/year
		P I 19.	Annual share of RES electricity generated/procured	N.d.	1	1	100%	%
		-	See indicators P I 10, P I 11.					
	P4: Development of a plan for the	P I 20.	Number of buildings with valid energy certificates	N.d.	1	1	100%	quantity
	renovation of municipal buildings	P I 21.	Number of municipal buildings renovated	N.d.	1	↑	100%	quantity
	until 2030 and consistent renovation of the buildings P5: Upgrading of	-	See indicators P I 7 to P I 11.					
		P I 22.	Electricity consumption for street lighting	27,756	↓	\downarrow	11,921	MWh/year
	street lighting	P I 23.	Specific energy consumption for street lighting	597	↓	↓	↓	kWh/light





B-3.1: Impact pa	athways							
Outcome/ area affected	Measure	No	Indicator	Indicator Baseline	Ind	licator Tar	Indicator Unit	
				2020	2025	2027	2030	
		P I 24.	Number of lights replaced	11.1%	1	50%	100%	quantity
		P I 25.	Number of lights installed	11.1% LED, 88.8% sodium, 0.1% mercury	-	-	-	quantity
	P6: Achieve a 100% renewable electricity share for street lights, traffic lights, and clocks in 2030	-	See indicator P I 22.					
	P7: Creation of a data records system	P I 26.	Number of vehicles by vehicle type and fuel consumption (cars, light and heavy goods vehicles, other) and fuel type (including alternative fuels)	697/ 13,711	1	1	-12,248	number and litres or kWh per year
Reduction of		P I 27.	Specific fuel consumption of municipal vehicles	N.d.	↓	↓	↓	l/100 km
CO ₂ emissions from municipal		P I 28.	Share of electricity in municipal transport fuel consumption	0.5%	1	1	1	%
infrastructure	for the municipal	P I 29.	Average age of municipal vehicles	N.d.	\downarrow	↓	↓	years
	vehicle fleet and improvements in the	P I 30.	Annual vehicle mileage	N.d.	↓	↓	↓	km
	efficiency of vehicle use	P I 31.	Number of zero-emission vehicles purchased	10	1	1	100%	quantity
		P I 32.	Number of electric vehicle charging stations near municipal buildings	N.d.	1	1	1	quantity
		P I 33.	Share of municipal employees by mode of transport use (walking, cycling, public transport, private vehicle, etc.)	N.d.	-	-	-	%
Reduction of CO ₂ emissions from municipal	P8: Promotion of the use of public transport for work	P I 34.	Number of work trips by car	N.d.	↓	↓	↓	km
infrastructure	among employees of	-	See indicator P I 34					





B-3.1: Impact pa	athways							
Outcome/ area affected	Measure	No	Indicator	Indicator Baseline	Ind	icator Tar	get	Indicator Unit
				2020	2025	2027	2030	
	the Riga municipal government							
	P9: Transition to zero-emission vehicles in companies, municipal institutions	ı	See indicators P I 26, P I 27, P I 29, P I 31, P I 32.					
Reduction of CO ₂ emissions from municipal infrastructure	P10: Energy efficiency and RES use in wastewater treatment plants	P I 35.	RES energy in wastewater treatment plants	26%	1	1	50%	% RES gross in-house consumption/y ear
		P I 36.	Amount of RES electricity purchased for wastewater treatment plants	0	1	1	>2000	MWh/year
		E I 1.	CO ₂ emissions reduction in the centralised energy production sector	-	40,482	80,964	122,672	tCO ₂
		E I 2.	CO ₂ emissions reduction in the decentralised energy production sector	-	28,446	56,891	86,199	tCO ₂
		E I 3.	CO ₂ emissions reductions in the electricity generation sector	-	52,046	104,093	157,716	tCO ₂
Reduction of		E I 4.	CO ₂ emissions from the centralised production of heating energy	375,558	335,076	294,594	252,886	tCO₂/year
CO ₂ emissions from energy		E I 5.	CO ₂ emissions from the decentralised production of heating energy	296,980	268,534	240,089	210,781	tCO₂/year
generation		E I 6.	CO ₂ emissions from electricity consumption	207,334	155,288	103,241	49,618	tCO₂/year
	E1: Promotion of zero-emission technologies and RES in district heating	E I 7.	Consumption of heat energy produced from renewables in low-capacity natural gas energy sources of AS 'Rīgas siltums', MWh/year	N.d.	1	1	1	MWh/year
		E I 8.	Number of projects implemented (number of connections for the use of	N.d.	1	↑	1	quantity





B-3.1: Impact pa	athways							
Outcome/ area affected	Measure	No	Indicator	Indicator Baseline	Inc	licator Tar	Indicator Unit	
				2020	2025	2027	2030	
			surplus heat, amount of heat energy transferred to DHS of Riga)					
	E2: Achieve the connection of new clients to DHS of Riga	E I 9.	Annual number of new clients connected to DHS of Riga and their consumption	N.d.	1	1	1	number and MWh/year
	E3: Increases in the efficiency of heat generation and management, and digitisation of the heating system	E I 10.	Efficiency factor of each energy source	99% on average	↑	1	1	%
		E I 11.	Digital solutions implemented; number and funding raised	N.d.	1	1	1	euros
	E4: Gradual transition to the 4 th	E I 12.	4 th generation heating system pipelines	N.d.	1	1	1	km
Reduction of	generation heating supply system	E I 13.	Reduced heating energy consumption in the 4 th generation heating system	N.d.	1	↑	1	MWh/year
CO ₂ emissions from energy	E5: Implementation of innovative	E I 14.	Funding raised to develop innovative solutions	N.d.	1	1	1	euros
generation	projects	E I 15.	Innovative solutions implemented in the city heating system	N.d.	1	1	1	quantity
	E6: Promote	E I 16.	Share of renewables in the manufacturing and service sector	47%	1	1	1	%
	electrification, use of RES in	E I 17.	Natural gas consumption, housing sector (households)	295,000	↓	↓	↓	MWh/year
	decentralised heating, or connection to DHS	E I 18.	Natural gas consumption, public sector (other users)	213,000	↓	↓	↓	MWh/year
	COMPECTION TO DITO		See indicators E I 9.					
	E7: Promote the use of RES in the generation of	E I 19.	Share of RES in the city's electricity generation mix	3	1	1	1	%
		E I 20.	Installed capacity and number of RES facilities	N.d.	1	1	1	MW, number





B-3.1: Impact pathways										
Outcome/ area	Measure	No	Indicator		Indicator Baseline	Ind	Indicator Unit			
					2020	2025	2027	2030		
	electricity for Riga's needs	E I 21.	RES electricity generated in the city		77,970	1	1	1	MWh/year	
		Dz I 1.	CO ₂ emissions reduction from the consumption of heating energy by multi-apartment residential buildings		-	6423	12,846	21,409	tCO ₂	
		Dz I 2.	CO ₂ emissions amount from the heating energy consumption in multi-apartment residential buildings		367,435	361,012	354,589	346,026	tCO ₂ /year	
	Ab1: Improvement of the availability of information and data about the energy efficiency of multi-	Dz I 3.	Number of multi-apartment residential buildings in the city and type of their heating		11,700	-	-	-	quantity	
		Dz I 4.	Heating energy consumption of multi- apartment residential buildings connected to DHS		2123	2081	2039	1983	GWh/year	
Reduction of CO ₂ emissions from multi-		Dz I 5.	Specific heating energy consumption of multi-apartment residential buildings connected to DHS		147	↓	↓	1	kWh/m² per year	
apartment residential		Dz I 6.	Number of multi-apartment buildings renovated per year		-	1	1	1	number/year	
buildings	apartment residential buildings	Dz I 7.	Number of nearly zero-energy buildings		-	1	1	1	quantity	
	700.001.1101.201.011.190	Dz I 8.	Reduction of heating energy consumption due to the renovation of buildings		-	1	1	1	MWh/year	
		Dz I 9.	Specific heating energy consumption in renovated buildings according to the project		-	-	-	-	kWh/m² per year	
	Ab2: Revision of laws and regulations to increase the rate of multi-apartment residential building renovation in Riga	-	See indicators Dz I 4 to Dz I 9.							





B-3.1: Impact pa	athways								
Outcome/ area affected	Measure	No	No Indicator	Indicator Baseline	Indicator Target			Indicator Unit	
					2020	2025	2027	2030	
	Ab3: Involvement of local residents in the renovation of multiapartment residential buildings	-	See indicators Dz I 4 to Dz I 9.						
	Ab4: Establishment of the Riga Energy Efficiency Fund	Dz I 10.	Number of people consulted Number of buildings/occupants consulted per year as part of REEF		-	-	-	-	quantity
		Dz I 11.	Number of multi-apartment residential buildings that received financing as part of REEF, per year		-	-	-	-	quantity
		Dz I 12.	Municipal support for the renovation of buildings		-	-	-	-	number and EUR
		Dz I 13.	Efficiency of the funding used		-	-	-	-	%
Reduction of CO ₂ emissions from multiapartment residential buildings	Ab5: Research and implementation of new standardised solutions for the renovation of buildings, reducing building renovation costs	-	See indicators Dz I 6, Dz I 8, Dz I 9.						
		T I 1.	CO ₂ emissions reductions for private vehicles		-	182,622	365,244	553,400	tCO ₂
		T12.	CO ₂ emissions from private vehicles		674,997	492,375	309,753	121,597	tCO₂/year
Reduction of CO ₂ emissions	T1: Urban planning	T I 3.	Number of digital solutions implemented		-	1	1	1	quantity
from the transport and	aimed at creating a city where local residents and guests are less dependent on private cars	T I 4.	Number of mobility points created		N.d.	1	1	1	quantity
mobility sector		T I 5.	Number and percentage (%) of electric vehicles providing services		N.d.	↑	1	1	number and %
		T I 6.	Number of new policy instruments implemented		N.d.	1	1	1	quantity





B-3.1: Impact pa	athways								
Outcome/ area	Measure	No	Indicator		Indicator Baseline	Inc	Indicator Unit		
					2020	2025	2027	2030	
		T I 7.	Improvements in pedestrian and cycle infrastructure		-	↑	1	1	km
		T18.	Number of shared-vehicle service providers and number of vehicles used		N.d.	↑	1	↑	quantity
	T2: Measures to promote distance	T19.	Number of municipal employees distance working		N.d.	1	1	1	number of people and % of employees
	working and increase the availability of online services	T I 10.	Share of residents of Riga and Riga suburbs distance working (based on mobility survey results)		N.d.	↑	↑	↑	%
		T I 11.	Number and floor area of work sharing spaces (m²) in Riga		N.d.	1	1	1	number and m ²
	T3: Promotion of an active lifestyle and cycling	T I 12.	Available pedestrian paths and cycling routes		68.2	↑	1	1	km
		T I 13.	Number of people cycling and walking		N.d.	1	1	1	number and % of total
Reduction of CO ₂ emissions	T4: Increase the share of public	T I 14.	Number of passengers transported by bus, tram, trolleybus, and train		LLC 'Rīgas satiksme' — 89.7 million	1	1	1	quantity
from the	transport in everyday passenger	T I 15.	Passenger-kilometres travelled	-	N.d.	1	1	1	p-km
transport and mobility sector	trips	T I 16.	Average speed of trams, trolleybuses, buses within routes		N.d.	1	1	1	km/h
		T I 17.	Share of public transport users		N.d.	1	1	↑	%
	T5: Restrictions on	T I 18.	Share of users of physically active modes of transportation		N.d.	1	1	1	%
	private transport	T I 19.	Share of car users		N.d.	\downarrow	\downarrow	↓	%
		T I 20.	Budget income from parking charges (fees)		N.d.		<u></u>		million euros/year





B-3.1: Impact pa	athways								
Outcome/ area	Measure		No Indicator		Indicator Baseline	Indicator Target		Indicator Unit	
					2020	2025	2027	2030	
		T I 21.	Budget use for sustainable mobility projects		N.d.	1	1	1	million euros/year
	T6: Other measures to reduce car use	T I 22.	New policy instruments developed and implemented		-	1	↑	1	quantity
	T7: Promotion of	T I 23.	Number of electric vehicles registered and in good technical order		3037	1	1	1	quantity
	electrification in private transport and	T I 24.	Number of electric vehicle charging stations (public, semi-public, private)		19	1	1	1	quantity
provision of services		T I 25.	Number of electric vehicle charging stations with integrated renewable electricity generation		N.d.	1	↑	↑	quantity
T8: Gradual transition to clean technology in	T I 26.	Number of vehicles with RES technologies used for municipal services		N.d.	1	1	1	quantity	
Reduction of CO ₂ emissions from the	vehicles that enable municipal functions	T I 27.	RES fuel consumption		0.5%	1	1	1	MWh/year
transport and mobility sector	T9: Collection of mobility data and monitoring of	T I 28.	Tools created or adapted		N.d.	1	↑	1	quantity
		T I 29.	Recording devices for collecting mobility data		N.d.	1	1	1	quantity
		A I 1.	Municipal waste generated in the city, by type of waste		298,372	↓	\	↓	t/year
Doducing of		A I 2.	Household waste generated in the city, per capita		480	↓	\	1	kg per capita, per year
Reducing of GHG emissions from the waste management sector	A I 3.	Share of sorted waste in total household waste amount		N.d.	1	1	1	%	
	A I 4.	Share of organic waste in unsorted household waste		N.d.	↓		↓	%	
000.01		A I 5.	Total amount of household waste landfilled		76,769; 45%	↓	↓	↓	tonnes/year and % of the total amount generated





B-3.1: Impact path	nways							
Outcome/ area Measure		No	No Indicator	Indicator Baseline	Indicator Target		Indicator Unit	
			2020	2025	2027	2030		
		A I 6.	Number of publicly accessible waste sorting sites	N.d.	1	1	1	quantity
		A I 7.	Publicly accessible exchange/donation points for personal items and food	N.d.	1	↑	1	quantity
Reducing of GHG emissions		ZM I 1.	GHG emissions from the forestry sector (within the territory of Riga and outside it)	40	1	\downarrow	↓	ktCO₂e/year
from the forestry	ZM I 2.	CO ₂ emissions from the forestry sector (within the territory of Riga and outside it)	321	1	1	1	ktCO ₂ /year	
		ZM I 3.	CO ₂ emissions accumulated (and potentially sequestered) by the forestry sector (within the territory of Riga and outside it)	4381	1	↑	1	ktCO ₂ /year
Reducing of GHG emissions		ZM I 4.	Changes in tree canopy cover or forest area	N.d.	1	1	1	m ² or ha
from the forestry sector and CO ₂ sequestration		ZM I 5.	Amount of green infrastructure by type (separately: amount of healthy green infrastructure areas)	N.d.	1	<u> </u>	1	m ² or ha
		ZM I 6.	Total share of bodies of water (separately: share of high-quality bodies of water)	N.d.	-	-	-	m² or %
		ZM I 7.	Heat island area changes	N.d.		\downarrow		m²





Table 11: Financial Indicators by Sector

Fields of Action	Indicator	Indicator Unit	
	Investment allocated in the municipal budget	EUR million per year, by action	
Transportation and Mobility	Public funding acquired	EUR million per year, total	
	GHG savings proportional to investment	EUR / tCO ₂ e, by project	
	Investment allocated in stakeholders' budget (district heating)	EUR million per year, by action	
Energy Production	Public funding acquired	EUR million per year, total	
	GHG savings proportional to investment	EUR / tCO ₂ e, by project	
	Investment allocated in the municipal budget	EUR million per year, by action	
Municipal Infrastructure	Cost savings from energy efficiency measures	EUR million per year	
	GHG savings proportional to investment	EUR / tCO ₂ e, by activity	
	Number of houses renovated and total costs	EUR million, number of projects	
Multi-Apartment Buildings	Public funding acquired	EUR million per year	
	GHG savings proportional to investment	EUR / tCO ₂ e, by project	

3 Part C – Enabling Financial Conditions for Climate-Neutrality by 2030

3.1 Module IP-C1: Climate Policies for Capital Formation and Deployment

C-1.1: Description

To ensure the successful implementation of the investment plan, it is necessary to allocate capital taking into account various sources of funding: public, including EU funds, municipal, and private. The main goal is to align the financial investments with the costs of achieving climate-neutrality by 2030. So far, RSCM has used municipal funds for its energy and climate projects, as well as EU fund co-financing and other national programmes, such as the Emissions Quota Trading Mechanism programmes.

Riga will develop new private-public partnership projects in the field of municipal infrastructure: the first one is being prepared for the modernisation of street lighting. The municipal investment in the long-term PPP will be





EUR 160 million, of which EUR 90 million will cover the funding until 2030. The costs of this PPP will not exceed current yearly costs of streetlight maintenance. This PPP will be launched in 2025.

Riga has established its first Climate funding programme to finance new projects that decarbonise the municipal infrastructure. The amount of funding (EUR 4 million in 2024) is proportional to energy savings documented in the energy management system.

In the field of transport and mobility, Riga plans to use the income from municipal parking places for investments in public transport. Riga is also carrying out a study about entry fees in the low-emission zone that could be implemented after 2027.

The implementation of the Action plan will require public funding supported by national-level policies, most of which are listed in the updated National energy and climate plan 2030:

- Modernisation fund- co-funding for e-vehicles and energy efficiency of buildings.
- Recovery and Resilience Facility approved projects for sustainable mobility and electrification; calls for building renovation.
- Cohesion programme forthcoming calls for building renovation, cycling infrastructure, RES generation, climate change adaptation.

The main targets and actions aimed at building and strengthening cooperation among different funding providers in Riga are listed below:

- Develop a comprehensive strategy for allocating capital to the fields of action defined in the action plan.
 This includes a careful assessment of priority areas and the distribution of resources between public
 and private sources, especially in the fields of action of the energy production sector, as well as the
 transport and multi-apartment residential building sectors.
- Carry out a detailed cost-benefit analysis for each identified field of action, taking into account the first
 measures already identified in the action plan, as well as other actions. This analysis will help make
 decisions on the allocation of capital, ensuring that the investments give maximum benefits towards
 climate-neutrality.
- Explore opportunities to be found in the fields of action identified and ways for how to foster partnerships between public and private entities. The building of cooperation can improve the financial capacity to implement climate initiatives and promote the involvement of the private sector in sustainable projects.
- Explore and implement innovative financial instruments and mechanisms to involve different sources of funding. This may include exploring green bonds, climate funds, or other sustainable financing models that meet the climate-neutrality goals of RSCM.

The table below lists the fields of the national climate policy that currently determine the targets in the relevant sectors. Only a few policy instruments provide for sustainable financial instruments to encourage further climate investment. In Latvia (and in Riga), most public sector investments are based on the availability of EU fund or national fund financing provided in the form of grants. Although Latvia has binding energy efficiency, RES, CO₂ emissions reduction, and other targets, there is no national-level vision for the sustainable financing of future climate action.

Table 12: List of Climate Policies to Enable Capital Deployment

Climate Policy	Description of the policy (sector, targeted audience, etc.)	Intended Outcome for Capital Formation	
Energy efficiency policy (Energy Efficiency Law, Law on the Energy Performance of Buildings, Long-Term Strategy for the Renovation of Buildings, National Energy and Climate Plan, etc.)	Various laws, regulations, and policy documents set targets and responsibilities and identify actions for the renovation of public and private buildings, and for the industrial sector.	Many energy efficiency measures in the private sector are already using private capital for energy-efficient technologies and multi-apartment residential building renovation projects, leading to lower energy consumption, lower operating costs, and more sustainable infrastructure. The rest of the financing is obtained from public sources.	
Renewable energy targets (Energy Law, National Energy and Climate Action Plan, etc.)	Latvia sets ambitious targets for the share of renewable energy in total energy consumption.	It encourages private and public investment in renewable energy projects, increasing capacity, reducing dependence on fossil	





		fuels and reducing GHG emissions overall.
Environmental taxes	CO ₂ tax for industrial companies and vehicles	Creates financial incentives for businesses to reduce their carbon footprint by encouraging investment in cleaner technologies and processes, and promoting the transition to a low-carbon economy.

3.2 Module IP-C2: Identification and Mitigation of Risks

C-2.1: Description

The table below lists the most significant potential risks for each of the fields of action identified, as well as the corresponding mitigation measures. A few of the risks identified are shared across sectors, including both the lack of funding and potential resistance of stakeholders to certain sustainable solutions due to low levels of awareness.

Waste management and circular economy risks are assessed through the Riga Circular Economy Action Plan. These will be included in the next version of this document, together with a detailed description of the planned investments.

In addition to project-level risks listed below, there are several city-level residual risks:

- 1 Time constraints. Despite the progress achieved via implementing Riga's SECAP, the active period until 2030 may be too short to meet the full ambition. The main reasons are complex governance structures, lengthy administrative processes and economic uncertainties.
- 2 Political support. The next election may result in a different coalition that changes Riga's course. Although the goals will remain set in the planning documents, weak political support will result in lower investments and slower pace of action.

Table 13: Climate Investment Plan Risk Framework

Fields of Action	Sectoral Project	Risks Identified	Description of Risk	Mitigation of Risk
	P1: Continuous improvements in the energy management system	Insufficient funding to maintain and improve the system	No funding planned in the municipal budget for the maintenance and expansion of the system Severity: Medium Likelihood: Low	Regular budget monitoring. Informing the management of benefits.
Municipal Infrastructure	P2: 100% renewable heating energy share in municipal buildings	Ability of heating energy suppliers to offer renewable heating energy solutions	Diversification of renewable heating energy sources Severity: Medium Likelihood: Medium	Monitoring of the implementation of the measure. Conclusion of contracts with heating energy suppliers that can meet the set requirements
	P3: 100% renewable electricity share in municipal buildings	Certificate costs	If the cost of the certificate increases, the municipality's budget for this action and goal increases with it Severity: Medium Likelihood: Low	Supervision of the implementation of the measure and compiling of costs from different electricity suppliers





Fields of Action	Sectoral Project	Risks Identified	Description of Risk	Mitigation of Risk
	P4: Development of a plan for the renovation of municipal buildings until 2030 and consistent renovation of the buildings	Unexpected technical issues during building renovation	Thorough building inspection and assessment Severity: Medium Likelihood: Low	Hiring of experienced contractors
	P5: Upgrading of street lighting	Objections to the conclusion of an energy efficiency service contract	No appropriate financing instrument selected Severity: High Likelihood: Low	Additional education work on the benefits and drawbacks of the chosen financial model
	P6: Achieve a 100% renewable electricity share for street lights, traffic lights, and clocks in 2030	Certificate costs	If the cost of the certificate increases, the municipality's budget for this action and goal increases with it Severity: Medium Likelihood: Low	Supervision of the implementation of the measure and compiling of costs from different electricity suppliers
	P7: Creation of a data records system for the municipal vehicle fleet and improvements in the efficiency of vehicle use	Data security and privacy concerns	Implementation of robust security measures Severity: Low Likelihood: Low	Compliance with data protection regulations
	P8: Promotion of the use of public transport for work among employees of the municipal government	Limited employee interest in using public transport	Employees not ready to use public transport instead of cars Severity: Low Likelihood: Low	Improvement of public transport services, creation of an incentive system
	P9: Transition to zero-emission vehicles in companies, municipal institutions	High initial costs	Exploration of financing options for the purchase of vehicles Severity: Medium Likelihood: Medium	Cooperation with financial institutions. Raising of external financing
	P10: Energy efficiency and RES use in wastewater treatment plants	High initial costs	The large upfront investments required for the development of RES infrastructure can create a financial burden and affect the overall performance of the project Severity: Medium Likelihood: Low	Before implementation, a thorough cost-benefit analysis must be carried out, exploring financing options, working with various financial institutions





Fields of Action	Sectoral Project	Risks Identified	Description of Risk	Mitigation of Risk
	E1: Promotion of zero-emission technologies and RES in district heating	Higher initial costs for infrastructure development	The large upfront investments required for the development of RES infrastructure can create a financial burden and affect the overall performance of the project Severity: High Likelihood: Medium	Before implementation, a thorough cost-benefit analysis must be carried out, exploring financing options, working with various financial institutions
	E2: Achieve new client connections to DHS	Technical challenges in setting up the connections	Integration of new clients into the existing DHS may be associated with technical barriers that can cause delays and increase implementation costs Severity: Medium Likelihood: Medium	Search for standardised solutions. Monitoring of measures. Establishment of a dedicated technical support team
Energy Generation	E3: Increases in the efficiency of heat generation and management, and digitisation of the heating system	Insufficient funding and lack of staff capacity	Digitisation and automation require additional resources, and staff capacity needs to be built up to implement new solutions Severity: Low Likelihood: Medium	Funding of the digitisation process must be supported (incentivised), and capacity building is necessary to build awareness among stakeholders and improve the digital skills of employees
	E4: Gradual transition to the 4th generation heating supply system	Incompatibility of client-side solutions	Building heating systems are not compatible with 4 th generation technical requirements Severity: Medium Likelihood: Medium	Cooperation with real estate developers, owners
	E5: Implementation of innovative projects	Limited public and stakeholder awareness of new technologies	Innovative pilot projects may face public scepticism and a lack of understanding, which will affect their successful completion. Severity: Low Likelihood: Low	Targeted communication campaigns must be developed, and all stakeholders must be engaged more. Partnerships must be built with local communities
	E6: Promote electrification, use of RES in decentralised heating, or connection to DHS	Limited interest among users of decentralised systems	Users of decentralised systems may show limited interest in the implementation of RES, hindering the implementation of this measure Severity: High Likelihood: Medium	Assistance or incentive programmes and partnerships must be developed. Broader and consistent marketing and information





Fields of Action	Sectoral Project	Risks Identified	Description of Risk	Mitigation of Risk
				campaigns must be conducted
	E7: Promote the use of RES in the generation of electricity for Riga's needs	Technical challenges of integrating RES electricity into the main grid	Integrating RES into the grid may face technical challenges and may require improved infrastructure, which could delay the implementation of the action	Potential solutions must be identified in conjunction with energy experts, grid operator, and technology providers
			Severity: Medium	
			Likelihood: Low	
	Dz1: Improvement of the availability of information and data about the energy efficiency of multi-apartment residential buildings	Limited availability of accurate and comprehensive data	Insufficient or unavailable energy performance data can impede effective decision-making and planning for the renovation of buildings Severity: Medium Likelihood: Low	Find additional options for accessing data. Elimination of the barriers identified, with the involvement of all stakeholders
Apartment	Dz2: Revision of laws and regulations to increase the rate of multi-apartment residential building renovation in Riga	No support for changes in laws and regulations	Resistance of stakeholders to changes in laws and regulations can slow down the renovation process and impede the achievement of energy efficiency targets Severity: Medium Likelihood: Low	Additional work and consultations with stakeholders. More targeted communication on all the potential benefits of changes in regulations
Buildings	Dz3: Involvement of local residents in the renovation of multi-apartment residential buildings	Low local resident interest or participation	Limited involvement and low interest among local residents can obstruct renovation Severity: High Likelihood: Medium	Develop additional community engagement and information programmes. Explore the possibility of setting obligations for the renovation of high energy class buildings
	Dz4: Establishment of the Riga Energy Efficiency Fund	Limited financial resources for setting up the fund	The energy efficiency fund may face challenges due to limited financial resources, which affect its ability to scale up the renovation of buildings in Riga Severity: Medium Likelihood: Low	Explore other financing models, including private funds





Fields of Action	Sectoral Project	Risks Identified	Description of Risk	Mitigation of Risk
	Dz5: Research and implementation of new standardised solutions for the renovation of buildings, reducing building renovation costs	Technical efficiency of the new solution	The effectiveness and acceptance of new standardised solutions may be uncertain, leading to stakeholder hesitation and possible project failure Severity: Low Likelihood: Low	Eliminate barriers limiting efficiency. Involve experts in the field
	T	T	T	I
	T1: Urban planning aimed at creating a city where local residents and guests are less dependent on private cars	Resistance to change in the principles of urban planning on the path towards climateneutrality goals	Stakeholder resistance to changes in urban planning can obstruct the creation of a city that is less dependent on private motor vehicles Severity: Medium Likelihood: Medium	An urban planning assessment must be carried out. Local residents and stakeholders must be involved more in the decision-making process
	T2: Measures to promote distance working and increase the availability of online services	Limited implementation of distance working and online services	Low implementation of distance working and online services can impede the reduction of car dependency and increase traffic congestion Severity: Low Likelihood: Low	Awareness-raising campaigns on the benefits of distance working and online services must be developed. Cooperation with businesses to introduce distance working policies must be promoted
Transportation and Mobility	T3: Promotion of an active lifestyle and cycling	Cyclist safety concerns	Cyclist safety concerns can discourage people from an active lifestyle and the use of bicycles Severity: Medium Likelihood: Medium	Additional investment in cycling infrastructure and safety measures. Education campaigns on road safety
	T4: Increase the share of public transport in everyday passenger trips	Low number of passengers in public transport	Low number of passengers may be due to lack of service availability, lack of awareness, or due to perceived inconvenience. Severity: High Likelihood: Medium	Implement comprehensive public awareness campaigns. Creation of a loyalty programme to promote the use of green public transport.
	T5: Restrictions on private transport	Opposition to restrictions on private motor vehicles	Objections of the public and stakeholders to restrictions on private motor vehicles may obstruct the effective	Communicate the benefits of the restrictions. Involve the stakeholders in decision-making





Fields of Action	Sectoral Project	Risks Identified	Description of Risk	Mitigation of Risk
			implementation of this measure Severity: Medium Likelihood: Medium	
	T6: Other measures to reduce car use	Limited effectiveness of alternative measures	Alternative measures may be less effective than expected, creating problems in reducing car use Severity: Medium Likelihood: Medium	Try alternative measures and assess their effectiveness. Adapt strategies based on the results.
	T7: Promotion of electrification in private transport and provision of services	Limited interest in the deployment of renewable energy technologies	Low private sector interest in deploying renewable energy technologies in transport may impede progress Severity: Medium Likelihood: Low	Offer incentives for the implementation of renewable energy technologies. Increase the awareness of environmental and economic benefits.

3.3 Module IP-C3: Capacity Building and Stakeholder Engagement for Capital and Investment Planning

C-3.1: Description

Riga's aim is to increase its capacity for climate budgeting and investment planning. This process will be coordinated by the Executive Director to ensure effective connections between the Climate City Contract and Riga's Development Programme. Riga has started implementing several projects to create new tools for decision-making and consultations.

The projects that will be implemented by municipal companies correspond to their sustainable development strategies and accounting for GHG emission reductions is a significant part of sustainability reporting. Capacity building will take place in collaboration with the municipality and via participation in innovation projects.

The stakeholders involved in each sector are described below according to their interests and influence.

Municipal infrastructure:

In achieving Riga's climate-neutrality goals, various levels of engagement by all municipal institutions, departments, committees, and companies are needed. In assessing the influence, substantial engagement is needed from PD, whose activities include the management of buildings, planning and conducting the renovation of buildings, and delegating tasks to building managers. It is also important to provide feedback to municipal committees for political decision-making. The involvement of the Executive Director Office is necessary for coordinating and supervising the implementation of the measures included in the Riga climate contract at the level of institutions and companies. The main responsibility of the companies is to implement the tasks assigned to them. The main tasks of REA are to continuously conduct monitoring and data analysis, to prepare and publish information for making decisions on the implementation of measures and the raising of finance, the maintenance and expansion of the energy management system, and for raising the awareness of and commitment to climate goals in all the departments of the municipality. The action plan indicator data will be published on the REA website.

Energy production:

Endeavouring to achieve climate-neutrality in Riga, stakeholders in the energy production sector have and will play a key role in implementing the measures specified. Given the fact that the Riga metropolitan area is the





largest energy consumer in the country, achieving its targets is also crucial for achieving the climate targets of Latvia as a whole. Thus, the political and regulatory decisions pursued by the Ministry of Climate and Energy and further adopted by the national Parliament and/or the Cabinet of Ministers that are related to promoting the production of renewable energy, also play an important role in the development of Riga's energy sector. Investments by energy companies in innovative solutions also play an important role in decarbonising the energy sector. Citizens' initiatives and the development of energy communities can also boost the demand for the production of renewable energy. Effective engagement and cooperation of these various stakeholders is essential in building a sustainable and climate-neutral energy sector in Riga.

Apartment buildings:

A number of institutions are involved in the management and development of multi-apartment residential buildings in Riga. In conjunction with other municipal departments, REA has set up an energy efficiency centre and provides advice on the renovation procedure to local residents and participates in organising various campaigns and international projects. HED pursues a consistent housing policy for the city, helping to solve housing issues; it supervises the management of housing controlled by the municipality and manages non-privatised residential premises in the municipality. PD pursues the efficient use of the property and land plots owned and controlled the municipality, and arranges the co-financing for the renovation of buildings in Riga (atjauno.riga.lv). The ALTUM financial institution offers a number of assistance mechanisms for local residents to renovate their buildings. However, the involvement, competence, and capacity of other stakeholders, such as RNP and other building management companies, must be significantly increased to support local residents and provide advice to them in terms of options for the renovation of buildings, given the fact that the rate of renovation will increase in the future. There is also a need to promote action agreed and coordinated by all stakeholders. For the implementation of all fields of action in the multi-apartment residential buildings sector, the institutions responsible for the measure must involve other stakeholders in both the planning and implementation phases (HED, PD, REA, DD, etc.).

Transport and mobility:

The transport and mobility sector in Riga involves many stakeholders, from national and local policymakers to local residents and city's guests.

The table below lists the stakeholders of every sector, with an assessment of their:

- cooperation between the municipality and the stakeholder, i.e., the existing cooperation model and its effectiveness;
- impact the impact of the stakeholder on reducing emissions within the sector;
- interest the interest of the stakeholder in reducing emissions within the sector;
- level and type of involvement.

The following categories and their definitions are used to describe the level and type of involvement:

Level of involvement (L)	Type of involvement (T)
Reporting: Provision of information to stakeholders. One-way communication.	Communication: Sharing of information with stakeholders.
Consultation: Seeking information and feedback. Two-way communication.	Consultation: Seeking information, feedback, and recommendations.
Involvement: Active involvement of stakeholders in the decision-making process. Cooperation and joint decision-making.	Cooperation: Working together on projects and in decision-making.
Partnership: Collaborate on projects and initiatives. Shared responsibilities and benefits.	Empowerment: Empowerment of stakeholders by involving them in main processes.
·	Participation: Active participation in discussions and activities.
	Delegation: Assignment of specific tasks or responsibilities to the stakeholders.

Table 14: Stakeholder Engagement Mapping

Stakeholders involved	Involvement	Influence	Interest	Level and Type of Engagement	
Municipal Infrastructure					
REA	High	Medium	High	Level of involvement (L): consultation, involvement, partnership.	





Stakeholders involved	Involvement	Influence	Interest	Level and Type of Engagement
				Type of involvement (V): communication, consultation, cooperation, empowerment, participation
FD	High	Medium	Medium	L: consultation T: consultation, cooperation, participation
Executive Director Office	High	High	High	L: engagement T: delegation
PD	Medium	High	Medium	L: engagement T: cooperation, participation, empowerment
CDD	Low	Low	Medium	L: consultation, partnership T: cooperation, participation
Committees	High	High	Medium	L: partnership T: cooperation
ECSD	Medium	Medium	High	L: engagement T: communication, participation
Rīgas gaisma (PSMD)	High	Medium	Medium	L: engagement T: participation
Rīgas nami	Medium	Medium	Medium	L: engagement T: participation
AS 'Rīgas siltums'	Low	Medium	Low	L: engagement, partnership T: participation
Rīgas satiksme	Medium	Low	Medium	L: engagement T: participation
Rīgas ūdens	Medium	Low	Medium	L: engagement T: participation
Other companies	Medium	Low	Medium	L: engagement T: participation
Institutions	Medium	Low	Low	L: engagement T: participation
NGO ('Pilsēta cilvēkiem', neighbourhood associations, etc.)	Medium	Medium	High	L: consultation, engagement V: Collaboration
	1	Energy Prod	uction	
HEC	Medium	High	Medium	L: partnership T: cooperation
Executive Director Office	High	High	High	L: engagement T: delegation
REA	High	Low	High	L: consultation, engagement, partnership T: communication, consultation, cooperation, empowerment, participation
CDD	Medium	Medium	Medium	L: consultation, partnership T: cooperation, participation
AS 'Rīgas Siltums'	Medium	High	High	L: engagement, partnership T: participation
MoCE	Medium	High	Medium	L: partnership T: cooperation
MoE	Medium	High	Medium	L: partnership T: cooperation
AS Latvenergo (CHP 1 and CHP 2)	Medium	High	Medium	L: partnership T: cooperation
Other independent heat energy producers from which heat energy is purchased	Low	Medium	Medium	L: partnership T: cooperation





Stakeholders involved	Involvement	Influence	Interest	Level and Type of Engagement	
Households and other natural gas consumers	Low	Medium	Low	L: provision of information, advice T: communication, participation	
Communities	Low	Low	Medium	L: provision of information, advice T: communication, participation	
Electricity production	Medium	Medium	Medium	L: partnership, consultation T: cooperation, participation	
Companies	Low	Medium	Medium	L: provision of information, advice T: communication, participation	
NGO ('Zaļā brīvība', Environmental Advisory Council, Baltic Environmental Forum, etc.)	Medium	Medium	High	L: provision of information, advice T: communication, participation, cooperation	
	J	Apartment Bu	ildings		
REA	High	Medium	High	L: consultation, engagement, partnership T: communication, consultation, cooperation, empowerment, participation	
FD	Medium	Medium	Low	L: consultation T: consultation, cooperation, participation	
Executive Director Office	Medium	High	High	L: engagement T: delegation	
CDD	High	Low	Medium	L: consultation, partnership T: cooperation, participation	
RNP	Medium	High	Medium	L: engagement, partnership T: participation, cooperation	
Other building management companies	Medium	Medium	Medium	L: engagement, partnership T: participation, cooperation	
RCC HED	Medium	High	Medium	L: engagement T: cooperation, participation	
RCC PD	Medium	High	Medium	L: engagement T: cooperation, participation	
Local residents, local resident associations and communities	Low	Medium	Low	L: provision of information, advice T: communication, participation	
ALTUM	Medium	High	High	L: partnership T: cooperation	
AS 'Rīgas siltums'	Low	Medium	Low	L: engagement, partnership T: participation	
RNRC	Medium	Low	Medium	L: information, involvement T: communication, cooperation, participation	
NGO (neighbourhood associations, Zero Waste Latvija, etc.)	Medium	Medium	High	L: engagement, partnership T: participation, cooperation	
Transportation and Mobility					
МоТ	Medium	High	Medium	L: partnership T: cooperation	
Road Transport Administration	Medium	High	Medium	L: partnership T: cooperation	
Pasažieru vilciens	Medium	High	Medium	L: partnership T: cooperation	
Latvijas dzelzceļš	Medium	High	Medium	L: partnership T: cooperation	
CSDD	High	Low	Medium	L: partnership	





Stakeholders involved	Involvement	Influence	Interest	Level and Type of Engagement
				T: cooperation
Transport and Traffic Affairs Committee	Medium	High	Medium	L: partnership T: cooperation
Executive Director Office	Medium	High	High	L: engagement T: delegation
CDD	High	High	High	L: consultation, partnership, engagement T: cooperation, participation, communication, consultation
PSMD	Medium	High	Medium	L: consultation, partnership, engagement T: cooperation, participation, communication, consultation, delegation
Freeport of Riga	Medium	High	Low	L: partnership T: cooperation
REA	Low	Low	High	L: consultation T: communication, cooperation
Vehicle owners	Low	High	Low	L: provision of information, advice T: communication, participation
Fuel traders	Medium	Medium	Medium	L: partnership T: cooperation
Electric charging service providers	High	Medium	High	L: partnership T: cooperation
Transportation service providers	Medium	Medium	Medium	L: partnership T: cooperation
Cargo carriers	Low	Medium	Low	L: partnership T: cooperation
Real estate developers	Low	Low	Low	L: partnership T: cooperation
Public transport users	Low	Low	Medium	L: provision of information, advice T: participation, communication
Pedestrians	Low	Low	High	L: provision of information, advice T: communication, participation
Cyclists	Medium	Low	High	L: provision of information, advice T: communication, participation
NGO ('Pilsēta cilvēkiem', neighbourhood associations, etc.)	Medium	Medium	High	L: partnership, consultation T: cooperation, communication

^{* 4} levels of involvement: information, consultation, involvement, partnership. 6 types of involvement: communication, consultation, cooperation, empowerment, participation, delegation.