

Climate City Contract 2030

Between Borlänge Municipality and the government agencies the Swedish Energy Agency, Vinnova, Formas, the Swedish Agency for Economic and Regional Growth, the Swedish Transport Administration, the Swedish Environmental Protection Agency and Viable Cities.

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1. Purpose of the Climate City Contract 2030

The purpose of this Climate City Contract is to accelerate the pace of the climate transition in cities within the framework of the 2030 Agenda, while contributing to the recovery of the Swedish economy in the wake of the coronavirus pandemic. The Climate City Contract expresses the partners' intention to raise the level of ambition in sustainable urban development and climate transition. The Climate City Contract also provides Sweden and Swedish cities with a good foundation to be international role models for climate transition in cities. This will be achieved through mutual, long-term commitment to efforts on the part of the undersigned government agencies, the Viable Cities innovation programme, and the city/municipal authority as set out below.

2. Parties

Parties in the Climate City Contract 2030 are:

- Borlänge Municipality.
- The government agencies: The Swedish Energy Agency, Vinnova, Formas, the Swedish Agency for Economic and Regional Growth, the Swedish Transport Administration and the Swedish Environmental Protection Agency.
- The Viable Cities strategic innovation programme.¹

3. Municipal commitments

3.1. Municipal climate goals

Overall goal for Climate Neutral Borlänge 2030

Borlänge Municipality and the 12 other parties behind Climate Neutral Borlänge 2030 have agreed on a shared overall goal.

"A Borlänge where climate emissions are reduced to virtually zero, and where we take our part of the responsibility for living up to the Paris Agreement. This means we will keep within our carbon budget and reduce emissions in relation to it. It also means that the emissions we cause beyond the municipal boundaries will decrease at a similar rate and to a minimal level. In addition to lowering emissions, we also need to develop carbon sinks. The transition to a circular economy is fundamental, as are healthy ecosystems that have the ability to bind carbon.

¹ Viable Cities is a strategic innovation programme funded jointly by the Swedish Energy Agency, Vinnova and Formas. The programme runs 2017–2030 and has approximately 130 members. The host organization is KTH Royal Institute of Technology.



Borlänge is a pioneer and an inspiration to others regionally, nationally and globally in terms of transitioning to a climate-neutral municipality based on a good life for all within planetary boundaries.”

Impact goals for Climate Neutral Borlänge 2030

Climate Neutral Borlänge 2030 shall contribute to a reduction in Borlänge’s climate impact.

- Reduced climate impact in line with the carbon budget and the rate of emission reduction linked to it.
- Reduced climate impact from consumption-based emissions.

In addition to the carbon budget and the consumption-based emissions are emissions from major industry (SSAB), emissions that arise locally but are accounted for nationally. These emissions do of course also need to be reduced, but are dealt with outside of the two impact goals. SSAB has an active role in Borlänge’s climate transition and is on the Project Consortium.

Specific goal for the work up to 30 September 2024

- Increase the rate of climate transition through new collaboration forms, new processes and methods to enable transformative societal changes.

Municipal climate goals

The overall goal and the impact goals agree with the Municipality’s climate goals as adopted by the Municipal Council.

Borlänge Municipality shoulders the responsibility for fulfilling the Paris Agreement. Borlänge Municipality has therefore prepared a carbon budget which shows how much the municipality can emit to keep to the agreement, and what rate of emission reduction this entails if we are to keep within the carbon dioxide budget. The calculations show that we can emit a maximum of 1,328 kilotons of carbon dioxide in 2020–2040, which means an emission reduction rate of 16% a year. If we emit more carbon dioxide than the budget limit, we need to compensate for those emissions with an even higher emission reduction rate in subsequent years, or with high negative emissions.

Borlänge Municipality’s Environmental Strategy 2021–2030 clarifies our climate ambitions. The municipal group shall work for the following:

- A climate-neutral Borlänge by 2030.
- Carbon dioxide emissions in Borlänge that are within the carbon budget of 1,328 kt of CO₂ emissions in 2020–2040.



- A reduction in carbon dioxide emissions encompassed by the budget of 16% a year in Borlänge, to virtually zero by 2045.
- The emissions we cause based on consumption shall also decrease at a similar rate. By 2045, greenhouse gas emissions shall be below 1 ton CO₂e per person.

The prerequisite for succeeding with the climate transition is a transition to a circular economy and having healthy ecosystems with the ability to bind carbon. The Environmental Strategy's priorities alongside the climate are circular economy and biodiversity, and therefore they are also cornerstones of this work. A circular economy means a resource-efficient city with virtually zero waste and closed, toxin-free ecocycles. Biodiversity shall increase through preservation and development.

3.2. Strategy

The Strategic Plan is the Municipal Council's most important tool in managing and governing the operations of the committees and municipal enterprises. The plan is decided in the first year of a new mandate period. The plan outlines the Municipality's vision, vision areas, governance model, ownership directives for the municipal enterprises, goals for good economy and economic frameworks. The Borlänge Municipality Environmental Strategy 2021–2030 is a tool for concretizing the environmental ambitions of the Strategic Plan. The aim of the Environmental Strategy is to enable the entire municipal group to work towards the set goals. The fundamental point of departure is the vision area *An ecologically sustainable Borlänge that takes responsibility for the environment both now and in the future.*

The Borlänge municipal group can make an important difference for the climate, but is not the sole owner of the process. Together with the residents of Borlänge and the business sector, we can do even more. Borlänge's Environmental Strategy 2021–2030 clarifies three approaches for how the municipal group will work to bring about change. The approaches aim to involve more parties in the process so that we can have an even greater impact.

Approach 1: The Municipality as a pioneer

Approach 2: Borlänge in cooperation

Approach 3: Empowerment, information and education

3.3. Organization and management

Project Consortium

The Project Consortium is behind the application in Viable Cities Call #8 Climate Neutral Borlänge 2030 from April 2021. All 13 organizations in the consortium have



committed to contributing to the project. The Project Consortium is a part of the project as a whole, but contributes in different ways in the various groups, with varying roles and assignments included in the project.

Innovation Team

The Project Consortium and Innovation Team comprise the same parties as regards the organizations represented in the project consortium. The people representing each organization in the Innovation Team may vary.

The Innovation Team has the mandate and ability to accelerate the transition to a climate-neutral city by 2030 based on Borlänge's specific challenges. The Innovation Team is comprised of selected representatives from the organizations in the Project Consortium, and works on multiple fronts, both between municipal administrations and enterprises, and with parties in research, business and civil society. The team plays an important role in preparing and continuously developing a Climate City Contract 2030 in order to accelerate the transition. The Innovation Team will be active throughout the project period and will meet regularly. In order to be able to develop a Climate Investment Plan and contribute to the Climate City Contract, the Innovation Team will work to bring together expertise and parties with different mandates to identify challenges, develop solutions, and bridge the gaps that exist in terms of responsibility, for example, in order to achieve a climate-neutral Borlänge by 2030. This will be a brand new constellation for Borlänge. The work will be monitored and adapted during the project period. The Innovation Team is headed up by Dalarna Science Park as the process manager.

Commissioning agent

The commissioning agent is the Municipal Executive Board. The Environment & Urban Management Committee, whose job it is to coordinate the Municipality's environmental strategy work, and the board of Borlänge Energi have been involved in the process of shaping the assignment, and play important roles. The chairpersons of the Municipal Executive Board, the Environment & Urban Management Committee and Borlänge Energi therefore form a political reference group with extensive, ongoing participation in the project.

Political reference group

The political reference group comprises the Chair of the Municipal Executive Board, the Chair of the Environment & Urban Management Committee, and the Chair of the Borlänge Energi board of directors.

Steering Committee

The project's Steering Committee is the group management team, and is made up of people who support the project's commissioning agent. The project's commissioning agent is the Municipal Director.



The Steering Committee backs and supports the project's commissioning agent, but does not assume that person's overall responsibility for the project.

The commissioning agent may authorize their representative to make decisions and take care of ongoing management. The Steering Committee also includes the commissioning agent's representative, the sectoral manager for urban management.

Operational Steering Committee

The Operational Steering Committee includes the commissioning agent's representative who is the link between the two steering committees. As required, the commissioning agent authorizes their representative to make decisions on the commissioning agent's behalf. Similarly, as required the commissioning agent's representative feeds back issues that need to be decided on by the commissioning agent and raised with the Steering Committee.

The Operational Steering Committee's role is to support the commissioning agent's representative. The Operational Steering Committee has a role similar to that of the Steering Committee, but on a more operational level.

Project manager

The project manager is in charge of the process and responsible for ensuring the goals are achieved. One of the project manager's most pivotal tasks is to lay the foundations and remove any obstacles, so that everyone can work, collaborate and communicate simply and efficiently.

Working groups

Working groups are put together for each work package. The working groups are staffed appropriately to deal with a specific task in a specific work package.

3.4. Collaboration with business, academia and citizens

Quadruple helix organization – the Innovation Team

A quadruple helix organization has been established to strengthen collaboration in Borlänge around the Climate Neutral Borlänge 2030 mission. The organization is called the Innovation Team and is comprised of selected representatives from the organizations in the Project Consortium, and works on multiple fronts, both between municipal administrations and enterprises, and with parties in academia, business and civil society. The Innovation Team has the mandate and ability to accelerate the transition to a climate-neutral city by 2030 based on Borlänge's specific challenges.

Mobilization of the business sector

In order to further accelerate the transition and mobilize a critical mass of businesses in Borlänge, the project has prepared a local Climate City Contract which companies can sign to join in the work for a climate-neutral Borlänge by 2030. Businesses that



choose to join Climate Neutral Borlänge 2030 are expected to allocate time and commitment to speed up the transition work in their company, and also to share their knowledge and experiences, and participate in the overall process towards a climate-neutral city.

The local contract is called Climate City Contract Borlänge and entails a commitment to the overall goal of the project. The Climate City Contract is not static, but is to be consolidated, developed and adjusted year on year. Companies are encouraged to commit to more actions that have a collective impact on emissions.

In return companies enjoy access to the network, workshops, and a level-based development network. They may also use the Climate Neutral Borlänge 2030 logo in their communication to show that they are on board with the project's ambitions.

New forms of citizen engagement

In order to achieve systems innovation and transformative change in the city, new forms of citizen engagement are required. Everyone who lives and works in Borlänge needs to be involved in the work to a higher degree. Dialogue and ways of expanding engagement need to be established. In this the 2047 Science Center and football club IK Brage have key roles, alongside the Municipality and municipal enterprises, in bolstering collaboration.

Further methods for expanding citizen engagement are to be developed. This will take place in tandem with method development alongside the programme office and the other Viable Cities. There are also ambitions to involve more associations and individual citizens, although suitable methods and approaches need to be developed.

Sustainable Arena

Sustainable Arena is about spreading word of the work towards a more sustainable society. Using a sustainable arena, football club IK Brage and Borlänge Energi want to establish collaborations with companies, associations and the Municipality looking at how we, together, can create a better society and long-term social, economic and ecological sustainability in a wide range of fields and operations. Alongside IK Brage's sporting events, a forum is created for working with and engaging individual citizens and highlighting climate and sustainability issues.

Sustainable Arena is about taking responsibility for the impact we have on our surroundings, and working with a focus on responsible environmental, social and commercial aspects.

Borlänge Energi Arena Domnarvsvallen/Sustainable Arena shall serve as an inspiring and informative meeting-place, and act as a catalyst for sustainability work on the ecological, social and economic planes. The venue will also be a test arena for new



technology and new ideas, and in this way promote and increase knowledge about sustainability.

Hackathons with 2047 Science Center

2047 Science Center will enable high school students to engage in the challenge of a climate-neutral Borlänge by 2030, and find solutions that contribute to Borlänge's portfolio of efforts for climate neutrality.

3.5. Climate Investment Plan

The climate perspective shall permeate the Municipality's budget and financing process in order to plan and execute the necessary transition work. The municipal group is undergoing development for coordinated investment and budget work. The provision of premises plan is a closely linked planning tool with a work process. The climate transition shall be an integral perspective in both these processes. This entails a process approach in several stages. One tool in this work is the concretization of climate actions in a Climate Investment Plan.

Climate investment plans are a new way of preparing roadmaps for cities, which include a social and business perspective on actions and investments. Climate benefit and auxiliary benefits are clarified in order to create decision data that enables correct prioritization.

The Climate Investment Plan is about providing a cohesive idea of the municipal, regional, national and private actions and investments that will be needed to achieve set goals. It also indicates how new or emerging markets are created for companies that can deliver sustainable buildings, energy systems, mobility solutions, recycling systems, supporting digital systems and so on.

Based on the Climate Investment Plan, the municipal group's transition function will manage the actions and investments over which the municipal group has control. The Innovation Team and the wider collaboration platforms that are built up will be important to the implementation of other parts of the Climate Investment Plan.

3.6. Digital support for implementation

Digital tools that support the climate transition are an integral part of the Municipality's climate work. The Innovation Team has digitalization expertise. The Municipality will analyse how digitalization can be a tool for transition. Digital tools for visualizing data in prioritized areas with particular potential for the transition will be developed.



3.7. Innovation hub for climate-neutral municipalities

Quadruple helix organization – the Innovation Team

A quadruple helix organization has been established to strengthen collaboration in Borlänge around the Climate Neutral Borlänge 2030 mission. The organization is called the Innovation Team and is comprised of selected representatives from the organizations in the Project Consortium, and works on multiple fronts, both between municipal administrations and enterprises, and with parties in academia, business and civil society. The Innovation Team has the mandate and ability to accelerate the transition to a climate-neutral city by 2030 based on Borlänge's specific challenges.

The Innovation Team is working together to deliver solutions that contribute to Borlänge's climate neutrality. The fundamental thought behind the Innovation Team is that collaboration between different sectors is what enables new solutions to be born and realized at a faster pace. Moreover, it is by bringing together important players from different sectors that we can bridge the responsibility gap that exists in climate issues.

The Innovation Team works in an innovation process that comprises three main parts: knowledge gathering, ideas generation, and realization. The different parts run in tandem with each other throughout the project period, although knowledge gathering will be more in focus at the start of the project period and realization at the end.

Based on Borlänge's climate challenges and emissions, the Innovation Team has prioritized five different challenge areas. These are transport, consumption and commerce, construction, energy systems (incl. waste), and carbon sinks. Behavioural changes and physical planning are common threads running through virtually all five areas.

The Innovation Team works concertedly on one challenge area, and then moves on to the next one. This does not happen in strictly chronological order; the processes run concurrently to some extent. For each challenge area, a number of more specific challenge issues are defined. Ideas are then generated around the challenge areas, and the resulting ideas are then collected in a portfolio, called the Borlänge Portfolio, for further development and evaluation. The aim of the Borlänge Portfolio is to gather all the resulting ideas and facilitate their realization. Accelerating the climate transition requires a wide array of solutions. A single actor cannot feasibly own them all; there has to be an ecosystem of different solutions and actors. The portfolio is a bank of ideas and solutions that aims to make it easier for the actors to navigate the ecosystem, and individually and jointly realize more of the solutions.



3.8. Climate adaptation

The Municipality works with climate adaptation in physical planning and through the subsidiary programme Climate Change linked to the action programme under the Swedish Civil Protection Act.

3.9. Climate-smart mobility

According to Borlänge's carbon budget, transport accounts for the majority of CO₂ emissions in Borlänge. There is great potential to reduce emissions in the transport sector by increasing the percentage of sustainable journeys (walking, cycling, public transport) and by transitioning the vehicle fleet. The Project Consortium and the Innovation Team therefore prioritize transport and climate-smart mobility. The Municipality has adopted goals and approaches for climate-smart mobility in its Environmental Strategy 2021–2030 and in the Transport Strategy for Borlänge Municipality. The Municipality will accelerate work on climate-smart mobility in accordance with both strategies.

3.10. Reporting and follow-up

The Municipality's climate goals are monitored in an Environmental Report every calendar year.

Impact goal 1 (Reduced climate impact in line with the carbon budget and the rate of emission reduction linked to it) is monitored annually in the Borlänge Municipality carbon dioxide budget. The monitoring is based on nationally coordinated data, with a two-year lag. This means that there are no definitive values for the past year; they are only available later. However, forecasts are made for the next two years, which do provide a good indication.

Impact goal 2 (Reduced climate impact from consumption-based emissions) is monitored through the Stockholm Environment Institute's Consumption Compass tool, as well as statistics from the Swedish EPA. There is some uncertainty regarding exactly how these emissions will be monitored nationally, and monitoring in the project will therefore keep up to date with developments.

The specific goal for the work up to 30 September 2024 (Increase the rate of climate transition through new collaboration forms, new processes and methods to enable transformative societal changes) is monitored annually in the status report to the Swedish Energy Agency.



4. Viable Cities' commitments

The innovation programme Viable Cities is implemented in a broad collaboration in order to contribute to the transition to climate-neutral cities by 2030 as part of Sweden's commitment to meet the Sustainable Development Goals (SDGs) of the 2030 Agenda and the aims of the Paris Agreement. This includes being international role models for climate transition in cities.

Viable Cities works with a wide range of stakeholders across disciplinary boundaries, industries and societal sectors. The programme connects centres of research excellence with large, small and medium-sized enterprises in a range of industries, as well as with public sector and civil society organizations.

Within the framework of Viable Cities' strategic innovation role, the programme shall strive to achieve the following:

4.1. Better regulation

Viable Cities intends to create competence support with policy labs to provide the municipality with a better overview of current and proposed Swedish and European legislation, regulation and standards of relevance to the cities' climate transition. This includes process support for changing regulations and standards to facilitate the climate transition in practice. In the initial phase, this will be linked to work to develop system demonstrators (see Section 6).

4.2. Innovation

In order to make it easier for the municipality to implement innovations that can accelerate the pace of climate transition, Viable Cities will provide a competence network and process support, including by engaging other strategic innovation programmes in the ongoing development of Climate City Contract 2030, particularly in the areas of mobility, energy, built environment, the circular economy, health and digitalization. Based on the collaboration agreement on climate-smart mobility signed with the strategic innovation programme Drive Sweden, this area of collaboration will be further developed with both cities and government agencies, not least the Swedish Transport Administration.

4.3. Coordinated funding

Viable Cities will work in the following ways to support the municipality's funding needs for the climate transition and to promote collaboration and synergies between government agencies and other stakeholders that fund climate transition and sustainable urban development.



- Viable Cities shall continue to work with Climate City Contract 2030 with the 23 cities and five government agencies involved in the programme.
- Through the Council for Sustainable Cities, Viable Cities has launched a collaboration to create synergies between urban climate transition grants from government agencies and Climate City Contract 2030. The agencies are currently working to coordinate the various initiatives under way in the field of sustainable urban development, see Section 5.3 Coordinated funding.
- Viable Cities collaborates with Kommuninvest and the European Investment Bank (EIB) among others in order to develop forms for strengthening the long-term funding of municipal climate investment plans.

Viable Cities continues to develop forms for climate investment plans for cities, the aim being to support all cities in their efforts towards climate neutrality by 2030.

4.4. Cooperation with the EU Cities Mission

Viable Cities cooperates closely with the support structures built up around the EU's Cities Mission – including the NetZeroCities platform (an EU mission platform), CapaCITIES (a network of national nodes), and the Driving Urban Transitions (DUT) Partnership programme.

5. Commitments by the government agencies

The government agencies commit to collaborating within the strategic innovation programme Viable Cities. The agencies thereby contribute to the purpose of the mission-led work to transition to climate-neutral cities by 2030 with a good life for all within planetary boundaries.

Climate City Contract 2030 means that new working methods need to be developed, both between different actors and organizations, and between different levels of governance.

During 2023, the agencies will continue to develop work in the interagency innovation team. Continued dialogue with cities and regions is important in order to capture needs and contribute to systems transition. This work entails active participation in the Transition Lab Forum facilitated by Viable Cities, in which joint workshops, reflective discussions and teaching seminars are important aspects. New working methods may also entail that government agencies initiate experiments and pilot projects.

The agencies undertake to continue joint efforts to support the municipalities' climate transition in the following areas in 2023:



5.1. A learning approach in policy development

The government agencies work together to create the conditions for proactive dialogue and learning regarding policy development, and existing and proposed regulations on sustainable urban development and climate transition.

During 2023, the agencies will explore and test forms, such as policy labs, for identifying obstacles and challenges in policy and regulations for sustainable urban development and climate transition.

The agencies will continue to contribute to activities that promote the development of climate investment plans, digitalization and data sharing, system demonstrators and collaboration processes that relate to multi-level governance.

During Sweden's EU Presidency in the first half of 2023, the government agencies will be involved in several of the 150 or so EU meetings to be held in Sweden. The meetings are forums for learning and policy development, and cities and regions are important participants. Planned discussions include the EU's urban agenda on sustainable urban development and a conference on Green Cities.

5.2. Funding for research, innovation and development

The government agencies fund initiatives for research, innovation, development and systems innovation that support accelerated climate transition.

The agencies' funding focuses on different types of research, innovation, application and demonstration, and to some extent investment support. Funding is provided through open calls and other forms, such as client networks, needs-owner networks and innovation procurement.

As part of the transition process, the agencies² and Viable Cities have launched an initiative on urban system demonstrators. During autumn 2022, an initial 'design phase' was carried out as part of the initiative. A follow-up call will be made in 2023. The purpose of the effort is to create a form of initiative that takes a clearer systems perspective to the transition process.

5.3. Coordinated funding

To create better foresight and centralized information, the government agencies continuously develop coordination of the various efforts under way in the field of sustainable urban development and climate transition. Development takes place within the framework of several of the agencies' existing tasks and assignments, such as the Council for Sustainable Cities, strategic innovation programmes, the national

² Vinnova



research programmes for climate and sustainable community building, as well as the European Regional Development Fund.

During 2022, the agencies have begun initial tests with some of the cities, in order to develop, in dialogue, a method for portfolio analysis of the agencies' collective funding for cities. The innovation work is planned to continue in 2023. The long-term goal is for the work to contribute to work on cities' climate investment plans.

Hallbarstad.se is the Council for Sustainable Cities central website. Development work on the website will continue in 2023, partly to publicize upcoming funding opportunities, and partly to make it clearer and more user-friendly.

5.4. Participation in European initiatives for sustainable cities

The government agencies are involved in and work with several different European initiatives to support the development of sustainable cities and communities.

Work to support Swedish participation in the Horizon Europe 2021–2027 research programme includes contributing to the design of calls and activities, and informing and advising actors planning to take part in applications for different European efforts. The government agencies also collaborate in the execution of the EU's Regional Development Fund 2021–2027 with efforts for sustainable urban development.

The agencies will continue to collaborate in the Driving Urban Transitions to a Sustainable Future Partnership³, where there will be calls and other activities in the field of sustainable urban development in the years to come, as well as the European Commission's New European Bauhaus⁴ initiative, the European Urban Initiative (EUI)⁵ and URBACT⁶.

The agencies will also contribute to develop support functions for the cities selected to participate in the Cities Mission. One example is the CapaCITIES⁷ programme. Through CapaCITIES, national change processes are initiated and strengthened to establish national networks and governance structures.

³ The Swedish Energy Agency, Formas and Vinnova

⁴ New European Bauhaus highlights the significance of aesthetic, social and cultural values in the green transition.

⁵ The European Urban Initiative is a hub for sustainable urban development on an EU level. The EUI will offer funding for cities to improve and increase their capacity in designing strategies, policies and projects for sustainable urban development (urban-initiative.eu).

⁶ URBACT is a European collaboration programme for exchange and learning in sustainable urban development, Swedish Agency for Economic and Regional Growth,

⁷ the Swedish Energy Agency and Viable Cities are taking part.



6. Strategic development projects 2023

The following strategic development projects will be conducted within the framework of Viable Cities Transition Lab during 2023 in collaboration with municipalities, with the aim of further developing the content of the Climate City Contract 2030 during its upcoming revision.

6.1. System demonstrations

In collaboration with the involved government agencies, Viable Cities is developing a new form of initiative to drive systems innovation for transformation in line with the Cities Mission. A system demonstrator will be conducted to demonstrate the transition of entire social systems in a real-life environment. An important part of this kind of approach is a portfolio of efforts where new solutions, models, initiatives and experiments are linked to a greater whole. Many actors from different sectors are being mobilized in order to learn how to scale up. The system demonstrators start from central areas in the Climate City Contract 2030 and are intended to contribute to revisions of the contract based on insights arising from the work.

During 2022, Vinnova and Viable Cities have jointly begun a design phase to explore how system demonstrators can be a powerful tool in the transition to climate-neutral cities. In collaboration with a number of cities, six consortiums began the design phase in autumn 2022. A call is planned during 2023 for the establishment phase, with the ambition of enabling a number of system demonstrators in Sweden. In tandem, four system demonstrators are being planned Bogotá (Colombia), Bristol (UK), Curitiba (Brazil) and Makindye Ssabgabo (Uganda) within the Climate Smart Cities Challenge alongside UN-Habitat. The aim is to strengthen the exchange of experiences between system demonstrators both nationally and internationally in 2023.

6.2. Competitiveness and funding

One of the foundations of mission-oriented innovation is that the state and public organizations at different levels of society play an active role in co-creating and redesigning markets in collaboration with business and other players in society, such as academia and civil society. Concerted mobilization for the transition to climate neutrality can lay the foundation for companies in Sweden to develop new business strategies that enhance competitiveness by driving a transition to a sustainable, climate-neutral society. This is crucial to Sweden's ambition of being the world's first fossil-free welfare nation, and to our climate policy framework. During 2023, Viable Cities will further strengthen its collaboration with business in order to muster forces for transition. This will take place on several levels, particularly through collaboration in initiatives such as Fossil Free Sweden and The Green Transition Leap. In addition, there



will be development to strengthen the local mobilization of companies in the Climate City Contract 2030.

A central aspect of the Climate City Contract 2030 is to create a Climate Investment Plan with a broad perspective on what investments need to be made to achieve climate transition in a city by 2030 (with broad referring to a wide range of stakeholders such as citizens, civil society, companies, academia and public organizations). The municipality is believed to have control over about 15% of the required investments on average. One crucial task is to bring together the right actors from business (including the financial sector), public bodies and civil society to bring about the necessary investment and redirect financial flows to transition to climate neutrality, while also securing auxiliary benefits from the climate transition such as jobs, improved health, inclusivity and attractive living environments. Procurement is also a pivotal issue here. Viable Cities' work will continue in 2023 in order to secure the mobilization of investments and develop methods for climate investment plans.

6.3. Citizen engagement

Various societal challenges currently exist, adding further crises to the climate crisis. For example the pandemic, the war in Ukraine, crises relating to energy, food, raw materials and critical minerals, biodiversity and demographics. This also presents a demographic challenge where a growing percentage of the population feels excluded.

This increases the need for efforts aiming at inclusivity, and at putting citizens front and centre for the transition to climate neutrality and a sustainable society, for instance through new forms for citizen involvement (e.g. citizens' councils) and the development of attractive living environments (e.g. New European Bauhaus). During 2023, Viable Cities will further develop collaboration with cities, government agencies and other actors in order to create conditions for citizen engagement in the climate transition. This will be done primarily by developing new forms for citizen involvement in local climate city contracts and collaboration with European efforts in the area.

6.4. International Cities Mission 2030

In October 2021, the EU launched five missions as a new and innovative approach to working together to improve the lives of people in Europe and beyond. The five missions are intended to tackle major societal challenges such as health, climate and the environment and to formulate ambitious goals and deliver solutions by 2030. One of these missions is 100 Climate-Neutral and Smart Cities by 2030 – by and for the citizens (known as the Cities Mission), an important element of the delivery of the European Green Deal and a climate-neutral continent by 2050. This will considerably strengthen Swedish efforts to achieve climate-neutral cities by 2030 and to utilize the Climate City Contract 2030 as a tool to do so.



During 2023, work will be done to further strengthen links between Swedish and joint European efforts to achieve climate-neutral cities by 2030. This will take place within a range of initiatives involving cities, government agencies and the Viable Cities programme; for example, NetZeroCities (a platform for the implementation of the Cities Mission which will be developing e.g. an EU Climate City Contract and climate investment plans), the Driving Urban Transition Partnership, CapaCITIES, New European Bauhaus and others. Launched by the European Commission in January 2021, the New European Bauhaus initiative connects the European Green Deal to our built environment. In the implementation plan for the Cities Mission, the European Commission highlights that the EU Climate City Contract will also enable participating cities to integrate and promote the values and the principles of the New European Bauhaus initiative in their plans for climate neutrality. The Swedish National Board of Housing, Building and Planning (through the Council for Sustainable Cities) has been tasked by the Government with coordinating Swedish participation in New European Bauhaus.

Work on achieving climate-neutral cities by 2030 will continue to be developed globally. This will primarily be based on several already ongoing projects, e.g. linked to Sweden's EU Presidency in the first half of 2023, and the continuation of the Climate Smart Cities Challenge in the four cities outside of the EU in association with UN-Habitat.

7. Joint monitoring, evaluation and updating

Viable Cities and the municipality agree to conduct an annual review of the municipality's results within the framework of Climate City Contract 2030. Viable Cities shall prepare documentation for annual follow-up at municipal and national levels

7.1. Most important updates for the municipality

During the year, Borlänge Municipality has established a quadruple helix organization, an Innovation Team, that has worked on Borlänge's challenges in order to achieve climate neutrality. Five areas of emissions and transition have been prioritized. In the transport area, a broader group of organizations have worked on formulating problems and solutions. The national programme The Green Transition Leap has connected with Borlänge's process in order to contribute to even more solutions and methods based on a systems innovations perspective, as well as greater opportunities for upscaling.

In April, 13 organizations signed a climate contract to work together to speed up the climate transition in Borlänge. Since then, efforts have continued to convince more



organizations to sign up to the local climate contract, which has added a further eight companies.

Work on a Climate Investment Plan has begun with an initial gap analysis, and measures to disseminate understanding of the approach.

Work on Sustainable Arena has led to Borlänge Energi Arena/Domnarvsvallen being developed as a test arena and meeting-place for sustainability.

Borlänge Municipality has enjoyed a good collaboration and experience exchange with the other 22 cities in Viable Cities and the programme office, both in connection with the Transition Lab Forum and otherwise. Borlänge, Gävle and Eskilstuna have worked together on our cities' challenges and shared links to academia and our cities' universities.

7.2. Most urgent experiences to share for the municipality

For Borlänge Municipality, the past year has brought new working methods and collaboration platforms, enabling us and our partners to act more agilely. This bodes well for the future.

Cooperation and experience exchange with the other Viable Cities and the programme office have reinforced the Municipality's work.

Borlänge Municipality has discovered many new links to other organizations, companies and authorities on a local, regional, national and international level, clearly demonstrating the importance of working together on the climate transition, and not separately.

The authorities' endeavour to coordinate funding is of great value when it comes to our ability to increase the pace of our efforts.

7.3 Most important updates regarding Viable Cities

During 2022, far-reaching efforts have been made to lay a good foundation for all 23 signatory cities to deepen their work on the Cities Mission, as 14 cities were added in October 2021. The platform for faster learning has been evolved through the Viable Cities Transition Lab Forum, City Labs, Climate Breakfasts and a range of other formats for meetings between cities, government agencies and other actors. The collaboration with the signatory government agencies has been enhanced so as to further hone the Climate City Contract 2030 process. Viable Cities has also provided documentation for the government's task relating to local and regional climate transition, which is one of the foundations for the government's upcoming climate policy action plan.



During the year, efforts to develop practical, research-based tools and methods for climate investment plans have intensified. An initial prototype of a calculation tool has been available to all 23 signatory cities since October. Development of the system demonstrator concept also continued during the year, and in the autumn a design phase for a brand new effort was launched in a partnership between Vinnova and Viable Cities, which involves several cities.

During 2022, Viable Cities has had responsibility for a government assignment, Thriving North (support for innovation work for sustainable urban and community development in Norrbotten and Västerbotten). An initial prototype of a regional climate contract has been developed with a working group of representatives from the regions and county administrative boards in Västerbotten and Norrbotten. Moreover, a platform for regional societal transition has been initiated in northern Sweden. The platform is called Thriving North, and is now being carried forward by several players in Sweden's four northern regions.

The EU's work on the Cities Mission has been intensified during the year. September 2021 saw the launch of the Cities Mission, one of five EU missions. Cities across Europe were invited to register their interest in becoming forerunners in the transition to climate neutrality. As many as 377 cities applied. In June 2022, 112 cities were chosen to be pioneers in the climate transition, 100 in the EU and 12 in associated nations. These 112 include seven of the Swedish cities that are among the 23 signatories of the Climate City Contract 2030.

Over the past year, the European platform NetZeroCities has begun efforts to support implementation of the Cities Mission within the EU, primarily to facilitate the transition in the 112 cities. Viable Cities is also involved in this work. NetZeroCities is currently designing a Climate City Contract for cities throughout the EU as a tool for accelerated climate transition. Climate investments are an important aspect of this.

Two new complementary initiatives were begun during 2022 to support the Cities Mission in the EU. The first is the Driving Urban Transitions Partnership, in which Viable Cities is taking part together with Swedish organizations Vinnova, the Swedish Energy Agency and Formas. The partnership is a collaboration between national bodies from a large number of nations. The focus is on funding international efforts in three sectors that can help accelerate the climate transition: Positive Energy Districts, Circular Urban Economies and 15-minute City. The other is the CapaCITIES initiative. This EU collaboration aims to facilitate the establishment of national structures to enable climate transition in cities similar to Viable Cities in Sweden and CitiES2030 in Spain.

The Climate Smart Cities Challenge, a global innovation competition, has entered a new phase during the year, and teams of companies and organizations are now working in the four cities outside the EU in association with UN-Habitat.



7.4. Most important updates regarding government agencies

Work in the interagency innovation team

During 2022, the government agencies in the Climate City Contract have continued to develop work in their interagency innovation team. For instance, the team has compiled a summary of the government agencies' various forms of funding and financing instruments, and helped in ensuring that calls related to climate transition and sustainable cities are continually published on the hallbarstad.se website.

The Innovation Team has participated in Viable Cities Transition Labs and has taken part in and, supported by Viable Cities and the Stockholm Environment Institute, conducted workshops and meetings, in order to learn more about cities' climate investment plans and the agencies' role in the process. Alongside some of the cities, the innovation team has tested developing support and forms for analysing the government agencies' joint funding (including various research and innovation (R&I) programmes, city environment contracts) over the past five years. The aim in the longer term is that this work should contribute to commitments regarding coordinated funding and the cities' work on planning climate investments.

The government agencies' ongoing work includes many measures and initiatives that are of significance to the cities' work on climate transition. Compiling and providing information about these are important tasks for the government agencies. Below is a selection that relate to the cities in some way.

Funding for research, innovation and development

During the year, the government agencies have announced several calls aiming to facilitate the transition in cities.

Vinnova has worked with Viable Cities to publish a call for a design phase for urban system demonstrators, for instance. A follow-up call will be published in spring 2023. Other examples from Vinnova include Sustainable accessibility across Sweden, on mobility in sparsely populated areas, in association with Drive Sweden and Viable Cities, Civil society's solutions for climate transition, and Innovations to reduce electricity consumption in cooperation with the Swedish Energy Agency.

The Swedish Agency for Economic and Regional Growth has had calls from the European Regional Development Fund: Produce a local strategy for sustainable urban development and Drive a platform for collaboration and experience exchange. The city as a hub for green and digital transition is an initiative within The Green Transition Leap which is also financed by the Regional Development Fund. The initiative aims to develop practical new working methods for working with system innovation for local green transition.



Formas has published the call Climate-neutral and inclusive municipalities to increase the capacity and ability of municipalities to accelerate transition work towards climate neutrality which is characterized by social inclusion and equal living conditions. Within the national research programme for sustainable community building, Formas has published a call for Research schools for sustainable community building. The aim of the research schools is to bolster skills and knowledge development, and they are all distinctly interdisciplinary, practically oriented and challenge driven. Several municipalities are included in the research schools. Formas also funds many R&I projects every year in the fields of environment, community building and areal industries in many national and international calls.

In the Swedish Transport Administration's calls for City Environment Contracts, municipalities and regions can apply for funding that leads to a higher proportion of passenger transit by public transport or cycling and sustainable freight solutions.

The Swedish Energy Agency has published calls in the following programmes that are relevant to sustainable cities and communities: Humans, Energy Systems and Society (MESAM), Energy efficiency in cultural heritage buildings, Design for Everyday Energy Efficiency, Transport-Efficient Society and E2B2 (energy-efficient building and living), Graduate School in Energy Systems, and Bio+ (biobased society).

For many years, the Energy Agency has funded client groups and networks to create a platform for close collaboration between business operators and the state, with the aim of reducing energy use in buildings. The Energy Agency also finances the municipal and energy/climate advice service intended for households and private players.

Impact Innovation is the name of the next-generation strategic innovation programme. A call for preparatory projects was opened during the year. One of the three focus areas is Attractive, functioning communities, with cities being a particularly important target group.

On an international level, Formas, the Swedish Energy Agency and Vinnova jointly announce funds enabling bodies active in Sweden to take part in international R&I projects tackling urban challenges in the European Driving Urban Transition (DUT) Partnership. The first call includes 27 nations. On a general level, the partnership addresses issues relating to energy, mobility and use of resources in an urban context.

Government agency work and special government assignments

The Swedish Energy Agency has worked alongside the Swedish Agency for Growth Policy Analysis, Transport Analysis and the Uppsala County Administrative Board to draft supporting documentation for the government's next Climate Action Plan. The assignment regarding local and regional climate transition involved a great many dialogues with municipalities, regions, government agencies, research bodies, business and other relevant players, which form the basis for the barrier analysis, and



the proposed means of control or suggested actions that were presented. Many assignments are under way at the Energy Agency related to the electrification strategy, energy efficiency and secure energy supply, as well as the establishment of a national centre for carbon capture and storage (CCS).

The Climate City Contract agencies are also five of the 14 members on the government's Council for Sustainable Cities. In March 2022, the council was given an extended and modified remit, with more of a focus on working towards the 2030 Agenda's Sustainable Development Goal 11, Sustainable Cities and Communities. Several of the agencies have been involved in the National Board of Housing, Building and Planning's coordination assignment as part of New European Bauhaus (NEB). One example is the call Ideas for a future Kiruna, Gällivare, Boden, Luleå, Skellefteå and Umeå. Idea sketches ready in the project *Visioner: i norr – Hållbar Stad* (hallbarstad.se).

The Swedish Transport Agency's knowledge forum – Arena for Transport-Efficient Urban Environment – is part of a government assignment (2019–2022) to carry out communication and knowledge-enhancing measures for the transport sector's transition to fossil freedom. An R&I programme for geofencing, financed by the Swedish Transport Administration and run by Closer at Lindholmen, brings together the necessary players in society, business and academia to jointly develop solutions to promote the use of geofencing in controlling the transport system.

Some of the projects related to the development of systems innovation are Evolved working methods and processes for greater synergies between regional, national and international innovation efforts, Systems innovation in cities (Vinnova), Strengthening the regional work on sustainable development (various government agencies), Contributing to upcoming discussions on the EU's urban agenda (Formas), and Vinnova's initiative to support cities' ability to lead and organize innovation, for instance through the companion researcher network which for nearly ten years has been following the development of the Innovation Platforms for Sustainable Cities initiative, and the *Accelerera* project, which is developing and offering funding for innovation management in municipalities to ISO standard.

New signatory agency

The Swedish Environmental Protection Agency decided to sign the Climate City Contract 2030 in December 2022, and will therefore participate in the process moving forward.



8. The contract

The parties agree that their joint commitments as formulated above shall apply for 2023. The first version of Climate City Contract 2030 was signed in 2020. The Climate City Contract shall be updated and renewed prior to each new year.

Climate City Contract 2030

Between Borlänge Municipality and the government agencies the Swedish Energy Agency, Vinnova, Formas, the Swedish Agency for Economic and Regional Growth, the Swedish Transport Administration, the Swedish Environmental Protection Agency and Viable Cities.

Stockholm, 8 December 2022. The parties agree that their joint commitments as formulated above shall apply for 2023. The first version of Climate City Contract 2030 was signed in 2020. The Climate City Contract shall be updated and renewed prior to each new year.

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