



EU MISSION PLATFORM | CLIMATE NEUTRAL AND SMART CITIES

Climate City Contract

2030 Climate Neutrality Commitments

Climate Neutrality Commitments of the City of Tampere





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1 Introduction

Explain your city's motivation to join the EU Mission "100 climate-neutral and smart cities by 2030" and highlight your city's present commitments to climate action. You may also want to include the aims of this document.

Your text

The City of Tampere joined the EU Mission "100 climate-neutral and smart cities by 2030" because we want to be part of the Mission Cities Initiative. Together, a large group of cities can make a difference in Europe and this can benefit other cities around the world, and we want to be part of the change. EU Mission will help us to make connections, get new perspectives and ideas, and get sparring support from experts. We hope the Climate City Contract process and the Mission Label will help mobilise more funding and finance which is needed to make an impactful change.

Mission label will also bring important recognition for the climate work we are already doing, while sharing our lessons with other cities. The label gives us a mandate around what we do, encouraging all businesses and citizens in the Tampere region to join us in working towards a carbon-neutral Tampere.

Tampere aims to be climate neutral by 2030. This means that Tampere will reduce its greenhouse gas emissions by 80 per cent compared to 1990 levels and that the remaining 20 per cent will be compensated for example, by increasing carbon sinks, such as forests and green areas. The climate neutrality goal has been explicitly stated in the city strategies and mayoral programs since 2017.

Tampere has a continuous tradition of sustainability and climate work since first citizen engagement actions in the 1990s. The climate neutrality goal has been explicitly stated in the city strategies and mayoral programs since 2017. A detailed <u>Carbon Neutral Tampere 2030 roadmap</u> with 305 tangible actions, as well as emission impact and cost estimate evaluations, has been created through active citizen and stakeholder engagement and cross-sectoral cooperation. The roadmap and its latest update in October 2022 have been approved by the City Board. The plan will be regularly updated and monitored through an open platform, <u>Tampere Climate and Environmental Watch</u>.

The results of the climate work done in Tampere have been significant. To summarize the results, we have achieved a 30 % reduction in absolute greenhouse gas (GHG) emissions (reference year is 1990) while the city population has grown from 173 000 to 250 000 or 45 %. Subsequently, the per capita emissions have reduced more than 50 %. Since these figures from 2021, the city energy utility has renewed its largest plant in 2022 which will bring a further 20 percentage points decrease in GHG emissions.

The roadmap contains major actions such as investments in renewable energy and smart solutions in district heating, including carbon capture and storage studies, and saving energy by replacing outdoor lighting with smart LEDs and energy retrofitting of the city's service buildings. The construction of the tramway and the conversion of bus fleet to low emission will enable more sustainable mobility. Our city-owned public utility and service companies are committed to the climate neutrality goal.

People-centred housing, sustainable mobility, smart energy systems, circular economy, and green and blue infrastructure, as well as co-creation with citizens, are at the core of our flagship urban investments, such as the new Hiedanranta city district. We also use data- and Al-driven solutions to develop smarter and more sustainable urban infrastructure and public services.

Our annual climate budget is an important climate governance and transparency tool, which as part of the official financial statements makes visible the progress towards climate neutrality and the financial resources allocated for the measures.





Achieving the above climate vision requires a change in our ways of doing and thinking in all spheres of urban development and urban life, and determination for working together. Citizen empowerment, human-centered actions and co-creation are at the core of our climate policy and all related actions. We are co-creating a climate neutral city and a just and resilient urban future for Tampere together with our citizens,

The development of the CCC and the process it incorporates has already shown that we have gaps in our climate work. We need support for these, and a rethinking of the city's governance approaches. For example, funding issues are a big challenge for us, and this is what we will be working on before the next CCC update to make up for the gaps. The City of Tampere is already engaged in co-development, but this needs to be continuously developed in a way that takes into account all citizens and businesses of different backgrounds.

2 Goal: Climate neutrality by 2030

Articulate your 2030 climate neutrality ambition, as expressed and defined in your Cities Mission Expression of Interest (EoI). This should include your ambition and commitment to a 2030 horizon as a whole city, as well as describe any exclusion areas and summarise how these areas would be addressed beyond 2030. (A more detailed plan for exclusion areas should be included in the 2030 Climate Neutrality Action Plan.) Your 2030 ambition should be supported at a minimum by a Council decision, and it is recommended that it is also supported by a wider stakeholder group. We also recommend you to list other co-benefits you aim to achieve when working towards the climate neutrality goal, like well-being, health, equity, justice, financial savings.

Your text

The City of Tampere aims to be carbon neutral by 2030. This means that greenhouse gas emissions in the city area will be reduced by 80% compared to 1990 and the remaining 20% will be offset. Achieving this target will require a reduction in climate emissions, in particular from construction, housing, transport, energy use and consumption. The city's climate measures have been compiled in <u>the Carbon Neutral Tampere 2030 roadmap</u>, a long-term plan. The implementation of the roadmap measures can be monitored on the <u>Tampere Climate Watch</u>.

Our sector-specific vision for 2030 includes the following:

- The city will grow primarily into public transport zones and regional centres, the modal share of sustainable modes of transport will be 69%
- New construction will be at zero-energy level, and the carbon footprint of housing small
- Renewable energy will amount to 80%
- Consumption will be sustainable and the circular economy functioning
- Urban nature and structures will bind carbon

According to the roadmap impact analysis, the city's measures will achieve a 73% reduction in greenhouse gas emissions by 2030. It has not yet been possible to assess the impacts of all measures. The most important factors that remain excluded from assessment are the measures whereby we can affect the mobility choices of local residents through instruments such as town planning and transport system development.

Achieving the above climate vision requires a change in our ways of doing and thinking in all spheres of urban development and urban life, and determination for working together. Citizen empowerment, human-centered actions and co-creation are at the core of our climate policy and all related actions. We are co-creating a climate neutral city and a just and resilient urban future for Tampere together with our citizens, communities, universities and companies. The Mission Label will be a big part of the achievement as well.





Co-benefits:

By working together to create a carbon-neutral city, we will also increase equality, safety, health, a welcoming and vibrant city, among other co-benefits. Mitigating climate change helps prevent habitat loss, while diverse, thriving nature helps adapt to climate change and acts as a carbon sink. These two should always be promoted simultaneously.

Reductions in greenhouse gas emissions often lead to health benefits. Lower levels of air pollutants improve air quality and reduce respiratory illnesses, and increased use of electric vehicles and public transportation reduce noise pollution, improving the quality of life for residents. Climate-friendly urban planning leads to more walkable cities, better public transportation, and increased green spaces, improving the quality of life for urban residents. Investments in public transportation and active transportation options can reduce traffic congestion and thus improve mobility in cities.

Climate actions are often economically profitable because those often result in cost savings; higher investment costs often pay for themselves quickly. Furthermore, climate actions drive innovation, fostering the development of new technologies and solutions that can have broader applications beyond just mitigating climate change thus boosting local economy. Transitioning to a low-carbon economy can create new job opportunities in renewable energy, energy efficiency, and other green and digital sectors, contributing to employment and economic growth. Investments in renewable energy sources and energy efficiency can reduce the dependency on fossil fuels, enhancing energy security and reducing exposure to energy price fluctuations.

In some cases, it is possible to monetise the economic benefits of the actions. A monetary assessment may increase the acceptability of measures by allowing their multiple benefits to be monetised, for example in a cost-benefit analysis. The City of Tampere's Investment Plan assesses the wider economic impacts of the city achieving its target of sustainable mode share by 2030, separately assessing the economic costs and benefits to the city organisation, citizens, and wider society (see IP Table 7). This has been done because mobility and modal shift have been identified as the key and most difficult elements to achieve the carbon neutrality target. The results also include the monetisation of indirect benefits, such as health benefits.

3 Key priorities and strategic interventions

This is the core section of the Commitments document that should summarise **at least 3 or 4 systemic strategic priorities** that need to be implemented for your city to become climate neutral by 2030. These should be meaningful changes that will have a profound impact on reducing GHG emissions in your city, like decarbonising the heating system in the city or generating 100% energy from renewables. The individual commitments between your city and other stakeholders should address these key priorities and contribute to reaching them. The annexed 2030 Climate Neutrality Action Plan should describe the all interventions, including those to reach your priorities as well as all further actions, in detail and describe how your city plans to implement them.

Your text

Tampere is experiencing a rapid population growth (245 000 inhabitants in 2021 vs. estimated 280 000 in 2040). This means major urban investments during this decade. We want to make sure all our investments and policy interventions contribute to climate neutrality and ecologically resilient urban biodiversity. Our overall vision is to ensure sustainable growth of Tampere without compromising health and well-being equity and urban biodiversity of the city.

Tampere's climate neutrality goal is defined as an 80% reduction from the 1990 emission level while offsetting the remaining 20%. The importance of climate change mitigation has been recognized in the Tampere City Strategy. One of the four focus areas set out in <u>the City of Action Strategy</u> published in 2021 is Carbon Neutral Actions. Among the goals of this focus area is a 60% emission





reduction from the 1990 level by the end of this council term (2025). In addition to the strategy, commitment to the climate neutrality goal is part of the Mayor's Programme for 2021–2025. According to the Mayor's Programme, the measures set out in the Carbon Neutral Tampere 2030 Roadmap will be implemented.

To pursue the strategy Tampere has established a four-year development programme, called Carbon Neural Actions, which focuses especially on citizens and private sector. The aim of the program is to enable sustainable choices for everyone. The Carbon Neutral Actions is one of the three new development programmes for the Council period and contributes to each of the four priorities of the strategy. The programme is a continuation of the Sustainable Tampere 2030 programme, which was in place during the 2017-2021 council period. The key aim is to support residents in changing their own consumption and mobility habits and ensure fair and equitable transition to a climate resilient society.

The City's climate actions have been gathered into the Carbon Neutral Tampere 2030 Roadmap. The roadmap was created together with all the city's service areas, various units, public utilities, and city's companies. The Climate and Environmental Policy Unit coordinates the process and monitors the implementation of the measures. The roadmap currently contains a total of 305 measures under six different themes: 1. *sustainable urban planning, 2. sustainable mobility, 3. sustainable energy, 4. sustainable construction, 5. sustainable consumption, and 6. sustainable urban nature.* Each measure has at least one team that is responsible for its implementation. The operating model ensures that the entire city organization is committed to the carbon neutrality target.

In addition to the citizens, we have identified specific companies in the city as critical stakeholders necessary to bring about accelerated change. These include a factory and large companies with the potential to influence the commuting of large numbers of people. Stakeholder engagement will play a key role in the coming years, and the Mission process will support this work.

Tampere already has a very strong foundation for its climate work and the Carbon Neutral Tampere 2030 Roadmap already contains a comprehensive set of measures and their impacts. The progress of climate work is monitored in the Climate Watch and the Climate Budget. The CCC's Investment Plan summarises the costs of these measures up to 2030. However, the Action Plan has identified systemic strategic priorities that need to be taken into account in addition to those already planned to reach the target:

- 1) **Boosting modal shift** by co-creating actions with citizens and big employers to promote sustainable transport, and studying the public opinion
- 2) **Transforming city logistics** move to lighter vehicles and alternative propulsion by guiding
- 3) **Promoting industrial electrification** by communicating with big fossil fuel users to update projections and plans, implementing Green Deal for zero-emission construction sites and providing oil heating advice to SMEs.
- 4) **Providing energy advice** and alleviating energy hardship/mitigating energy vulnerability by oil heating advice to private home owners, developing financing models and piloting energy advice to people with potential energy hardship.
- 5) **Promoting smart energy systems** and systems integration by preparing an energy strategy and an urban development platform.

4 **Principles and process**

Highlight the key principles that will guide your city as it implements its Climate City Contract, like accountability, transparency, or an open attitude to new approaches. The process should encompass principles like **co-creation**, **innovation**, **multi-actor** and **citizen engagement**, and should be **systemic and demand-driven in nature**. It should also be based on **monitoring** and **joint learning**. The





Commitments Guidance document provides more specific guidance on how integrate these principles into your own process.

Your text

In Tampere, we have understood that achieving climate neutrality by 2030, and ensuring a just and inclusive urban climate transition, requires new ways of engaging citizens and making their sustainable choices as easy as possible. The transition must be socially justified and meaningful to people. By 2030, everyone in Tampere has to able to live a climate resilient lifestyle and make climate friendly choices best suited for oneself, regardless of one's socioeconomic situation, neighbourhood, age, gender or health. This requires strengthening of cultural sustainability of our climate action. It means keeping everyone on board and working seriously towards cohesive and sustainable communities and the social and ecological change.

Tampere aims to be transparent with its climate work. Our roadmap's measures can be followed in our Climate Watch service, where all the measures are listed, and progress is followed. All the citizens can follow Tampere's climate work process.

Tampere has a dedicated team in charge of citizen participation and engagement. Many climaterelated citizen engagement activities have been carried out in collaboration with them. Furthermore, in the city strategy 2021-2025, one of the four focus areas is Carbon Neutral Actions. In collaboration with academia, we plan to build an understanding and communicate the benefits and impacts of daily, realistic climate actions and make them more attractive for citizens and businesses. This programme is organizing co-design and co-creation activities, dialogues, campaigns, and courses for citizens including youth. Our ambition is just transition to climate resilient society, where everyone can lead a change toward climate neutral future.

The key aim is to support residents in changing their own consumption and mobility habits and ensure fair and equitable transition to a climate resilient society. The guiding principles and tools are co-creation and citizen participation, communication, use of data to support the change and broad collaboration with stakeholders. The goal is to identify and develop approaches that support citizens' own capability and motivation to change their consumption and mobility habits to make them more sustainable. With the City of Tampere's award-winning <u>SUMP</u> (Sustainable Urban Mobility Plan), we can also learn lessons for other plans, such as the roadmap, on inclusion and equality.

The City of Tampere wants to mitigate and adapt to climate change in the best possible way. The city wants to take into account groups that are particularly vulnerable to climate change. Therefore, measures to adapt and prepare for climate change will be designed in cooperation with vulnerable groups. Vulnerable groups have been identified as children and young people, the elderly and elderly, people with disabilities, people on low incomes, people with long-term illnesses and mental health problems, migrants and refugees. The results of the vulnerability analysis will be completed by the end of 2023 and will be used, for example, in the update of the Carbon Neutral Tampere 2030 roadmap.

The City of Tampere is also launching Climate Justice Discussion Forum in the fall 2023. This discussion forum is bringing together residents and other stakeholders to be set up to support the Carbon Neutral Actions development programme, with the aim of ensuring that the programme's interventions are fair and take account of the different opportunities for different types of people in Tampere to take carbon neutral actions.

Besides citizen work, Climate Neutral Actions programme's aim is to support companies in climate and environmentally sustainable business and help them find new business opportunities through circular economy and carbon neutrality.

One of the many forms of business collaborations is the <u>Tampere Region Climate Partnership</u> which has systematically involved companies, associations, and communities in pursuing a carbonneutral Tampere since 2020. Currently, 116 organizations have joined the CP. The climate partners define their own organization's climate actions and goals related to climate change mitigation and





they focus on e.g. energy savings, energy efficiency, environmental friendliness in procurement, waste management or staff engagement. The climate partners receive information on climate issues, get support, gain visibility, with opportunities to present their own activities and attracting new customers climate resilient life regardless of the neighborhood they are living in or their life situation.

During the CCC process we have identified specific needs for closing our current gap. We will find solutions to this during our next Climate Neutral Tampere 2030 roadmap's updating process, which starts in the autumn of 2023 and will be ready in the autumn 2024. During the process, we will have dialogues and workshops within the whole city organization and subsidiaries. We have also identified the importance of companies in the city with which a more strategic partnership would be relevant in climate work. These include for example a factory and large companies with the potential to influence the commuting of large numbers of people. Stakeholder engagement will play a key role in the coming years, and Mission work will support this work. We will also deepen our cooperation and co-creation processes with academia and citizens during the next two years. By the next CCC update we will have more signatories in our commitment plan and together with our stakeholders we will achieve the climate neutrality target.





5 Signatories

Include a list of stakeholders who have committed to help your city achieve its goal to reach climate neutrality by 2030. Detailed commitments and agreements between individuals or groups of stakeholders should be appended to this Commitments document. This list will likely increase over time.

| Name of the institution | Sector/Area | Legal form | Name of the responsible person | Position of the responsible person |
|--|--|-----------------|---------------------------------|--|
| Tampere University (Tampere University Foundation) | Research and higher education | Foundation | Eeva-Liisa Viskari, PhD | Chief Specialist in Sustainability |
| Tampere University of Applied Sciences Ltd. (TAMK, Tampere University Foundation) | Research and higher education | Foundation | Dr. Eveliina Asikainen | Senior Lecturer, School of Pedagocical Innovations and Culture |
| Annalan Vuokra-asunnot Ltd | Property management | Limited company | Ville Salo; Satu Eskelinen | Financial Manager; CEO |
| Ekokumppanit Ltd (Ecofellows Ltd) | Environmental consultancy, environmental training | Limited company | Suvi Holm | CEO |
| Finnpark Ltd | Parking services | Limited company | Matti Anttila; Antti Marttila | Financial Manager; CEO |
| Hiedanrannan Kehitys Ltd | Urban planning | Limited company | Anna Saraste; Mikko Leinonen | Business Controller; CEO |
| Pirkan Opiskelija-asunnot Ltd | Rental apartments | Limited company | Timo Jokinen | CEO |
| Pirkanmaan Jätehuolto Ltd | Waste management services | Limited company | Jari Romo; Pasi Muurinen | Accounting Manager; CEO |
| Pirkanmaan Voimia Ltd | Catering and cleaning services | Limited company | Piia Saarenoja; Esa Sairanen | Business Controller; CEO |





| Tampereen Infra Ltd | Infrastructure construction and maintenance services | Limited company | Joonas Huhtanen; Lauri Niemi | Safety and Environment Manager; CEO |
|--|---|-----------------|---|--|
| Tampereen Messu- ja Urheilukeskus Ltd | Exhibition services | Limited company | Olli Tokoi | CEO |
| Tampereen Palvelukiinteistöt Ltd | Rental and management of properties | Limited company | Aija Puustelli; Mikko Salonen; Marko Tulokas | Head of Administration; Property Manager; CEO |
| Tampereen Raitiotie Ltd | Transportation | Limited company | Antti Ainola; Pekka Sirviö | Chief Financial Officer; CEO |
| Tampereen Seudun Keskuspuhdistamo Ltd | Waste water treatment | Limited company | Kirsti Toivonen; Timo Heinonen | Financial Manager; CEO |
| Tampereen Energia Ltd | Energy production, electricity sales | Limited company | Juko Vähätiitto; Jussi Laitinen | Business Intelligence Manager; CEO |
| Tampereen Särkänniemi Ltd | Activities of amusement and theme parks | Limited company | Heidi Paasikoski; Miikka Seppälä | Chief Financial Officer; CEO |
| Tampereen Tilapalvelut Ltd | Property service | Limited company | Anna Koivumäki; Petri Mölsä | Development Specialist; CEO |
| Tampereen Vesi Ltd (will be incorporated at the beginning of 2024) | Water supply and sanitation | Limited company | Tiiu Vuori; Petri Jokela | Development Engineer; CEO |
| Tampereen Virastotalo Ltd | Property service | Limited company | Terhi Karhumaa; Petri Mölsä | Financial Planner; CEO |
| Tampereen Vuokra-asunnot Ltd | Rental apartments | Limited company | Tero Huuhtanen; Marko Salonen | Building Services Engineering Expert; CEO |
| Tampereen Vuokratalosäätiö | Rental apartments | Foundation | Ville Salo; Eskelinen Satu | Financial Manager; CEO |





| Tampere-Talo Ltd | Meeting facilities, Conference rooms | Limited company | Heidi Rehakka; Pauliina Ahokas | Chief Financial Officer; CEO |
|-----------------------------|---|-----------------|---|--|
| TREDU-kiinteistöt Ltd | Property management | Limited company | Aija Puustelli; Lance Cagle; Marko Tulokas | Head of Administration; Property Manager; CEO |
| Tullinkulman Työterveys Ltd | Health Service | Limited company | Tiina Surakka | CEO |
| Vilusen Vuokra-asunnot Ltd | Property management | Limited company | Ville Salo; Satu Eskelinen | Financial Manager; CEO |

6 Contract with signatures

Express joint commitment / agreement for all stakeholders who sign this 2030 Climate Neutrality Commitments document.

As the Mayor of the City of Tampere we here by commit to make the City of Tampere climate neutral by 2030. We agree on the joint ambition and commitments, as formulated in the City of Tampere's Climate City Contract.

Date of signature:

Kalervo Kummola, the Mayor of the City of Tampere







Appendix: Individual Signatory Commitments

Specific agreements that articulate the details of the climate action(s) between the municipality and other stakeholders (individual or groups) can be added to the Commitments document appendix.

- 1. Commitment document of the Tampere University (pages 12-19)
- 2. Commitment document of the Tampere University of Applied Sciences (pages 20-27)

Climate City Contract

2030 Climate Neutrality Commitments

Climate Neutrality Commitments of the City of Tampere



Appendix: Individual Signatory Commitments – The University of Tampere

In this document city of Tampere's climate work partners describe their work and commitments that contribute to the goal of climate-neutral Tampere by 2030. This document will be attached to Tampere's Climate City Contract. This document may be updated and developed when working towards target year 2030. An update will be submitted to European Commission every two years for assessment.

Short introduction of Tampere University

Tampere University is one of the most multidisciplinary universities in Finland. We bring together research and education in technology, health and society. The University is known for its excellence in teaching and research, and it collaborates with hundreds of universities and organisations worldwide. Our community consists of 21,000 students and over 4,000 staff members from more than 80 countries.

Almost all internationally recognized fields of study are represented in our university, which has seven faculties:

- Faculty of Built Environment
- Faculty of Education and Culture
- Faculty of Engineering and Natural Sciences
- Faculty of Information Technology and Communication Sciences
- Faculty of Management and Business
- <u>Faculty of Medicine and Health Technology</u>
- Faculty of Social Sciences

Tampere University has integrated sustainability as an elemental part of its strategy: *We work together to build a sustainable world.* This statement includes the principle of developing sustainable solutions through research and provide high-impact education for the benefit of the society.

Name of the organization: Tampere University

Number of employees in total and in Tampere: 21,000 students and over 4,000 staff members

Main business area / line of activity: Research and higher education

Organisations website: https://www.tuni.fi/en/about-us/tampere-university

Contact person in climate collaboration (name and position): Eeva-Liisa Viskari, PhD, Chief Specialist in Sustainability

Operations related to climate action: Tampere University is committed to the common goal of the Ministry of Education and Culture administrative branch in achieving carbon neutrality by 2030. Tampere University has calculated its carbon footprint annually since 2019. In 2022 the carbon footprint of the university was 15 000 t CO_2ekv - which is 40 % less than in 2019. Reduction is partly result of the Covid-19 pandemic and its multiplier effects and thus can be considered temporary, but also active measures have been taken to reduce the footprint, especially in the maintenance of the properties. Furthermore, the calculation model has changed during this time and more categories of carbon sources have been included in the calculation.

Tampere University has **many research groups actively doing research in the key strategic priority areas**, as defined in Table 1 of this document. Furthermore, our university is **active in advancing higher**



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education in climate issues, through its own bachelor and master's programmes (e.g., <u>Bachelor's</u> <u>Degree Programme in Sustainable Urban Development</u>) and also though national and international initiatives, such as the Climate University initiative where Tampere University contributes¹.

Existing collaboration with the City of Tampere and expectations for future collaboration related to climate action:

- Partnership agreement between the City of Tampere, Tampere University and Tampere University of Applied Sciences. The City of Tampere, Tampere University, and Tampere University of Applied Sciences have <u>agreed on a partnership</u> that aims at:
 - Deepening the existing cooperation between the parties
 - Developing the effectiveness of research cooperation in the development of the city and its services
 - Responding to the common challenges of the operating environment.
 - Promoting the region's competitiveness, attractiveness and recognition.
 - o Promoting the region's attractiveness as a student town
 - Promoting the effectiveness of international cooperation and the attraction of experts.
 - Enhancing the implementation of jointly identified advocacy goals nationally and internationally.
 - Strengthening the prerequisites for data-based decision-making

One of the focus areas for the Universities' cooperation in research, innovation and education is called *"sustainable city as a trailblazer"*. This supports research, innovation and educational collaboration in sustainability themes, including climate action.

- **Tampere Region Climate Partnership**. Tampere University has joined the Tampere Region Climate Partnership (<u>Climate partner Tampereen seudun ilmastokumppanuus</u>). The goal of this partnership model is to involve companies and communities in the region in pursuing a carbon-neutral Tampere in cooperation with the Sustainable Tampere 2030 program. Tampere University reports annually about the measures to reduce carbon footprint.
- STUE research community and profiling area. Tampere University has a multidisciplinary research community and profiling area called <u>Sustainable Transformation of</u> <u>Urban Environments (STUE)</u>. The aim of STUE is to create and promote research-based solutions that transform cities into safe, resilient, and sustainable living environments for people of all ages, ethnicities, and capabilities. STUE supports multidisciplinary research and fosters opportunities for collaboration between researchers and the public sector, civil society, communities, and businesses. STUE researchers and the city of Tampere have several collaborations.
- ECIU collaboration with European Mission cities. Tampere University is a member of the ECIU (European Consortium of Innovative Universities). The ECIU community has initiated a collaboration among those ECIU institutions and their respective cities that are part of the Mission for 100 Climate-neutral and smart cities. As part of this collaboration, Tampere University and the City of Tampere are discussing Mission-related opportunities and challenges with the other organisations involved. As a concrete action, the cities and universities are together identifying opportunities for research collaboration and searching for suitable European funding to support research collaborations in the Mission themes.

¹ <u>Climate University</u> provides free online courses for universities and everyone who wants to make the sustainability transition in the society real. The courses are made in multidisciplinary collaboration of several universities in Finland with the funding from the Ministry of Education and Culture, Finnish Innovation Fund Sitra and the participating universities.





• Existing and future research collaboration between the University and the City in Mission-related themes: Tampere University and the City of Tampere have several joint research projects (e.g. Horizon2020 funded <u>ReCreate project</u> on Circular Economy in the construction sector), and future research collaboration on Mission themes is planned.



Key strategic priorities

Please describe shortly on Table 1 your organization's role in the key areas of climate work in Tampere. You may fill in information only in the domains that are relevant to your organization.

| | Carbon footprint (CO2 reductions in Tampere) | Carbon handprint ² (new innovations, research, products, and services that contribute to CO2 reductions elsewhere) | Climate heartprint (changes in skills, capabilities, mindsets, and actions needed for systemic change towards a climate-neutral city) |
|---------------------------|--|--|---|
| Energy Systems | Tampere Universities Community facility management has EcoCompass Environmental Management System (EMS) and Certificate and is committed to reduce energy use. Tampere University properties use only carbon neutral electricity and district heating. | JUSTHEAT project aims to understand how home heating transition has impacted our lives and what we can learn for the current transition to low carbon systems. H2020-funded <u>BL2F</u> project use "Black Liquor" (side stream of pulp industry) to create a clean, high-quality biofuel | <u>CNESS - Climate Neutral</u> <u>Energy Systems and</u> <u>Society</u> is a newly established research platform on energy transition |
| Mobility and Transport | Ongoing discussion and measures to reduce carbon emissions from business traveling. | LIFE-funded <u>CANEMURE</u> project develops solutions for smart and low-carbon mobility <u>BiciZen</u> citizen science pilot aims is to increase awareness of urban mobility, communal engagement and cycling through cooperation between people cycling within the cities and municipal stakeholders | Transport Research Centre Verne at Tampere University promotes developing a sustainable transport system and logistics through research, education activities and societal impact. |

² This column includes a non-exhaustive list of research projects focusing on the priority areas, involving Tampere University researchers. For a more thorough overview of Tampere University carbon handprint and examples of research and innovation on the different priority themes,, please see a recently launched Sustainability Report (https://www.tuni.fi/en/news/tampere-universitys-sustainability-report-describes-communitys-multiple-actions-build-more):





| Waste and circular economy | Tampere Universities Community facility management has EcoCompass Environmental Management System (EMS) and Certificate and is committed to reduce waste and promote circular economy. | WASTE MATTERSaims toanalyse how variouschange agents engage intransformation towardCircular Economy (CE)business ecosystemsCICAT2025 projectaim toaccelerate the transitionfrom a linear economy to acircular economy | Research Centre for Managing Circular Economy (ManCE) brings together and consolidates circular economy expertise and strengthens the specialized research on circular economy University Platform for Circular Economy promotes the implementation of circular |
|----------------------------------|---|---|---|
| Built environment | Tampere Universities Community facility management has EcoCompass Environmental Management System (EMS), guiding the building maintainance | ReCreate-project(coordinated by TampereUniversity) developssolutions for reuse ofprecast concrete structuresand circular economywithin the constructionsector around Europe.The INPERSO project willdeliver inclusive,affordable, efficient, andsustainable renovationwhich will be adaptable tovarious climate zones andbuilding typologies butfocused on residential andheritage buildingsThe CIRCUIT project aimsto bridge theimplementation gapbetween theory, practiceand policy and showcasehow circular constructionapproaches can be scaledand replicated acrossEurope, to support thecreation of regenerativecities. | economy solutions. The Energy Efficient and Sustainable Built Environment group studies the hygrothermal behaviour of structures and construction materials, as well as the energy consumption of buildings and the physical phenomena that affects indoor air quality. <u>Research Centre Terra</u> produces research-based information that enables the safe construction and use of infrastructures as well as their cost-effective and sustainable maintenance |
| Nature-based solutions | Business2Nature project develops nature-based solutions and promotes biodiversity at Tampere university campus areas (e.g., through green roofs, campus gardens) | Business2Nature project develops understanding of creating and developing novel ecosystems in urban environments | Business2Nature project develops understanding of creating and developing novel ecosystems in urban environments |





Main climate actions

List and describe shortly main climate actions your organization is committed to that contribute to the goal of climate-neutral Tampere by 2030. If applicable, list also the estimated yearly CO2 reductions and the estimated need of investment.

| Climate action | Estimated yearly CO2 reductions (kt CO2-ekv) and the reduction year (if applicable) | Estimated need of investments (€) and year (if applicable) |
|--|--|--|
| Carbon neutrality by 2030. Tampere Universities community has made a <u>roadmap</u> to achieve this goal. ³ | | |
| | | |
| | | |
| | | |
| | | |

³ More detailed schedule and action plan is updated in the next update of this commitment

Climate City Contract

2030 Climate Neutrality Commitments

Climate Neutrality Commitments of the City of Tampere







Appendix: Individual Signatory Commitments – The Tampere University of Applied Sciences Ltd.

[Specific agreements that articulate the details of the climate action(s) between the municipality and other stakeholders (individual or groups) can be added to the Commitments document appendix.]

In this document city of Tampere's climate work partner describes their work and commitments that contribute to the goal of climate-neutral Tampere by 2030. This document will be attached to Tampere's Climate City Contract. This document may be updated and developed when working towards target year 2030. An update will be submitted to European Commission every two years for assessment.

Short Introduction of Tampere University of Applied Sciences Ltd.

Name of the organization: Tampere University of Applied Sciences Ltd. (TAMK)

Number of employees in total and in Tampere: 700

Main business area / line of activity:

Tampere University of Applied Sciences (TAMK) is a multidisciplinary and international higher education institution located in the Tampere Region in Finland. TAMK has around 11 000 undergraduate students in 17 bachelor's degree programmes and 15 master's degree programmes in the fields of culture, business, technology, natural resources, health care and social services, tourism and catering, humanities. TAMK offers over 40 degree programmes in total, of which seven are conducted in English. Close to 700 staff members work at TAMK and around 2000 students graduate annually. Since 2019, TAMK has been part of Tampere Universities Community with Tampere University.

TAMK's expertise ranges from engineering to health and social care and creativity, with special emphasis on practically oriented education and R&D activities. TAMK's profile both as a modern and dynamic education institution as well as an active project actor allows for genuine, long-lasting and confidential partnerships with enterprises as well as with public and third sector organizations.

TAMK has extensive experience in coordinating and participating in projects funded by several funding instruments including Erasmus+, Horizon Europe, EuropeAid, Interreg, ESF, ERDF etc. In RDI, TAMK focuses on practically oriented user driven approaches. Multidisciplinary solutions are developed to meet the changing needs of operational environments. TAMK's project portfolio is around Eur 20 million. Annually TAMK implements close to 200 projects and approximately 82 FTE (full time equivalent) are spent on RDI.

Organisations website: https://www.tuni.fi/en/about-us/tamk

Contact person in climate collaboration (name and position): Dr. Eveliina Asikainen, Senior Lecturer, School of Pedagocical Innovations and Culture

Operations related to climate action:

TAMK is leading the working group on education at ARENE's (Rectors' Conference of Finnish UAS) programme on Sustainable, Responsible and Carbon-neutral Universities of Applied Sciences. TAMK is following the recommendations and actions of ARENE's programme in its own activities to reach







carbon neutrality and promote achieving the SDG's. In addition, TAMK has made the following voluntary commitments:

- Climate partnership of the city of Tampere. As a climate partnership TAMK is committed to promote carbon neutrality in its actions and annually report on the progress.
- TAMK has signed SDG Accord as the first UAS in Finland. SDG Accord is the university and college sector's collective response to the global goals.
- TAMK has also made Society's Commitment 2050. In this commitment, actors representing different sectors of the society commit to promote sustainable development in their work with concrete actions.

ARENE has given recommendation on the shared competences of UAS and their application, including sustainable development. These will be embedded into all degree programmes starting from 2024. Furthermore, the following degree programmes are build around sustainability themes: BA Programme in Environmental Engineering and MA Programme in Risk Management and Circular Economy.

Since 2012 TAMK has had a multidisciplinary sustainable development working group and since 2020 the mandate and resources of the group have increased significantly to promote sustainability and CSR responsibility at the university. TAMK facility and property management has applied for EcoCompass certificate in 2021. With the auditing and certificate of EcoCompass,TAMK aims at making the environmental work of TAMK systematic, reduce environmental effects and carbon footprint of the property and act responsibly in the community. In 2021 TAMK, together with Tampere University was accepted to join Ellen McArthur Foundation's circular economy profiled universities list. Profiled universities promote circular economy engagement through teaching, research, campus management, student led projects and influence and leadership.

Existing collaboration with the City of Tampere and expectations for future collaboration related to climate action:

- Partnership agreement between the City of Tampere, Tampere University and Tampere University of Applied Sciences. The City of Tampere, Tampere University, and Tampere University of Applied Sciences have <u>agreed on a partnership</u> that aims at:
 - Deepening the existing cooperation between the parties
 - Developing the effectiveness of research cooperation in the development of the city and its services
 - Responding to the common challenges of the operating environment.
 - Promoting the region's competitiveness, attractiveness and recognition.
 - o Promoting the region's attractiveness as a student town

• Promoting the effectiveness of international cooperation and the attraction of experts.

• Enhancing the implementation of jointly identified advocacy goals nationally and internationally.

• Strengthening the prerequisites for data-based decision-making

One of the focus areas for the Universities' cooperation in research, innovation and education is called "*sustainable city as a trailblazer*". This supports research, innovation and educational collaboration in sustainability themes, including climate action.

- **Tampere Region Climate Partnership**. Tampere University of Applied Sciences Ltd. has joined the Tampere Region Climate Partnership (<u>Climate partner Tampereen seudun</u> <u>ilmastokumppanuus</u>). The goal of this partnership model is to involve companies and communities in the region in pursuing a carbon-neutral Tampere in cooperation with the Sustainable Tampere 2030 program.
- Climate Universities. TAMK is a member of the Finnish Climate University (<u>Climate University</u> <u>– Teaching and learning for sustainable future</u>) which provides free online courses for





universities and everyone who wants to make the sustainability transition in the society real. The courses are made in multidisciplinary collaboration of several universities in Finland with the funding from the Ministry of Education and Culture, Finnish Innovation Fund Sitra and the participating universities.

• UNINOVIS Data for L.I.F.E. TAMK is a member of the UNINOVIS consortium (<u>https://uninovis.eu/</u>) in which partners are intensifying collaboration and preparing a renewed proposal to become one of the European University Alliances. The purpose of UNINOVIS is to create a strong and durable alliance focusing on Data Sciences. Data is present in all aspects of life, and represents new challenges for collective security, material and immaterial well-being, and the health of our democracies. Data is also central for the green and digital transition, which constitutes Europe's ultimate frontier. Understanding, analyzing, managing, using and securing data require certain skills: established skills, cutting-edge skills, skills that do not exist yet but need to be invented. To successfully face this ambitious challenge, Europe needs adequate teachers, infrastructures and tools. More importantly, it needs new transnational actors capable of delivering lifelong learning in Data Sciences across fields and European cultures.

One of the specific objectives is to foster green and digital transition for sustainability in the alliance and society at large by developing common ESG-reporting, staff training modules, and competence development in data use for green transition and service learning as well as by establishing a common distributed platform. UNINOVIS partners side by side with their associated partners will develop tangible pilots and demonstrations for fostering green UNINOVIS (e.g. green actions and campus).

• TAMK Applied Research Center (ARC) theme areas. As a spearhead of multidisciplinary applied research, TAMK's ARC supports fair digital and green transition of cities and working life via its two collaborating teams, green transition and just transition. Green transition team promotes new technologies and ecological innovations for citizens and companies with focus on key theme areas of digitalization, sustainability, and industrial management, whereas Just transition team concentrates on sociocultural challenges with focus on resilience of society, knowledge management and data-driven solutions, and pedagogy in education, communities, and organizations as main theme areas.

• TAMK Project Examples

<u>FUSILLI</u> H2020 project, 1.8.20-31.12.24, foster the urban food system transformation through innovative Living Labs implementation in city ecosystems.

<u>RUOKO</u> ERDF project, 1.3.21-31.8.23, recyclable package solutions for home-delivered meals – smartly and sustainably.

<u>PITS</u> ERDF project, 1.11.20-31.8.23, develop an industrial symbiosis in Pirkanmaa area and promote the transition to a low-carbon economy and resource wisdom in Pirkanmaa.

<u>SSTL</u> Team Finland Knowledge Programme project, 1.8.22-31.12.24, Smart and sustainable Transport and Logistics hub in Rwanda – transferring knowledge and best practices from TAMK and Tampere Region.

<u>SUSTAFIT</u>, BF project, 1.10.22-1.10.24, enable the participating companies to grow new business and export potential within sustainable nonwovens for the versatile existing and potential new product segments.

<u>SURE</u>, UIA project, 1.9.19- 1.9.22, aim towards sustainable urban security, especially in bigger events in Tampere City region.

<u>Sustainable Industry Ecosystem (SIE)</u> Academy of Finland, 1.1.21–31.12.22 project supports the ongoing digital transformation of Finnish industry towards an economically, ecologically and socially sustainable industry by combining circular economy, robotics, industrial technology, energy production, innovative digital solutions and artificial intelligence research tips.

<u>SPOTLOG - Green and Socially resPOnsible ciTy Logistics InnovaTions</u>, funded by Interreg Europe, 1.3.2023-31.5.2027





<u>LIFE-BECKON</u> - Boosting Energy Communities massive deployment by equipping local authorities with comprehensive technical assistance cooKboOk, integrated services and capacity building, funded by LIFE Programme, 1.11.2022-30.10.2025

<u>Wood construction knowledge for Tampere Region</u>, European Social Fund 2014-2020, 5/2021 – 12/2022

<u>Circular Economy RDI-network in Civil Engineering</u> (RATKI) 9/2021-8/2023 ERDF Designing of <u>E3 Excellence in Pandemic Response and Enterprise Solutions</u>, funded by Business Finland, 1.7.2021-30.4.2024

RECO - Resilient Smart City Solutions Ecosystem



Key strategic priorities

Please describe shortly on Table 1 your organization's role in the key areas of climate work in Tampere. You may fill in information only in the domains that are relevant to your organization.

| | Carbon footprint (CO2 reductions in Tampere) | Carbon handprint (new innovations, research, products, and services that contribute to CO2 reductions elsewhere) | Climate heartprint (changes in skills, capabilities, mindsets, and actions needed for systemic change towards a climate-neutral city) |
|---------------------------|--|---|--|
| Energy Systems | Tampere Universities Community facility management has EcoCompass Environmental Management System (EMS) and Certificate and is committed to reduce energy use. | Many of Tampere Universities technology projects support the ongoing digital transformation of Finnish industry towards an economically, ecologically and socially sustainable industry, e.g., in manufacturing, and energy sectors. The key target is CO2 reductions. As relates to carbon- neutral cities, urban design and citizen engagement, TAMK focuses on energy communities and buildings as a part of energy transition (renewables, EV charging, demand response, etc.). To connect carbon neutrality with resilient cities and societies, TAMK also excels in safe living solutions during pandemics. | |
| Mobility and Transport | TAMK's has invested much on activities and applications related to carbon footprint reduction (design, lifecycle calculations, logistics innovations and methodology). TAMK performs actively applied research, innovation and training in these topics through projects (e.g. SPOTLOG-project), | | TAMK's has invested in activities and applications related to carbon footprint reduction (design, lifecycle calculations, logistics innovations and methodology). TAMK performs actively applied research, innovation and training in these topics through projects, |





| | Innovation programs and education. | | innovation programs and education. |
|----------------------------------|--|---|--|
| Waste and circular economy | Tampere Universities Community facility management has EcoCompass Environmental Management System (EMS) and Certificate and is committed to reduce waste and promote circular economy. | TAMK's Material Revolution, Sustainability and Circular Economy Solutions team perform applied research focusing on biobased and recycled materials, sustainable and smart textiles, innovative packaging solutions, and consumers in value chain. | Waste and circular economy are important competences especially in Master's Degree Programme of Risk Management and Circular Economy, and Bachelor's Degree Programmes of Environmental engineering, Bioprocess engineering and Textile and Material engineering. |
| Built environment | TAMK is a forerunner in applied research of PV systems and energy communities. In addition, TAMK has developed low carbon timber construction education in several projects. Yet, circular economy in construction sector is one of TAMK's focus areas in RDI. | There exist some carbon storing research on side with timber construction education development, and there is potential to strengthen this area. | Energy efficiency and low carbon construction is in focus in two master's degree programs: building service engineering and construction management. In these programs, students adopt new techniques and attitudes to act as change agents in the industry. |
| Nature-based solutions | | | Multipurpose forestry including carbon sink retaining and chances for conserving and enhancing biodiversity in commercial forests (Master degree Programme in Forestry, tailored programmes for continuing education/lifelong learning) |





Main climate actions

List and describe shortly main climate actions your organization is committed to that contribute to the goal of climate-neutral Tampere by 2030. If applicable, list also the estimated yearly CO2 reductions and the estimated need of investment.

| Climate action | Estimated yearly CO2 reductions (kt CO2-ekv) and the reduction year (if applicable) | Estimated need of investments (€) and year (if applicable) |
|---|--|--|
| Carbon neutrality by 2030. Tampere Universities community has made a <u>roadmap</u> to achieve this goal. | | |