Interreg Europe action plan template

Action Plan for the region of TARTU / ESTONIA

Tartu Regiooni Energiaagentuur
Tartu Regional Energy Agency

Part I – General information

Project: Public Organisations Transform Energy Transition POTEnT

Partner organisation(s) concerned: Tartu Regional Energy Agency

Country: ESTONIA

NUTS2 region: ESTONIA

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Part II – Policy context

The Action Plan aims to impact: X Investment for Growth and Jobs programme

Name of the policy instrument(s) addressed: The Operational Programme (OP) for Cohesion Policy Funds Priority axis 2.6 Energy Efficiency Investment and axis 2.9 Sustainable Urban development: supporting sustainable development strategies of five larger urban areas in Estonia, one of them being Tartu.

Further details on the policy context and the way the action plan should contribute to improve the policy instruments:

The Operational Programme (OP) for Cohesion Policy Funds Priority axis 2.6 Energy Efficiency Investment priority 1: Supporting energy efficiency, smart energy management and renewable energy use in public infrastructure, including in public buildings, and in the housing sector; Specific objective 1: Energy efficient housing sector and street lighting, and increased share of renewable energy in final consumption.

Energy management can help to identify the potential areas for increased efficiency and foresee the adequate measures/resources for improving the energy performance among the municipalities. Municipalities can improve their energy monitoring and promote the monitoring practices among other organisations/households in their territory. State can then collect the data from the municipalities using unified forms and assess the progress of fulfilling national energy/emission goals. The process of municipal energy monitoring can be automated using ICT tools.

Three main challenges in energy management on municipal level are the (lack of the) capacity in the administration and the specific problems related with working with the data.

The main challenge of working with energy data is that the data about production and consumption of energy resources is not always collected, making difficult to prepare the analysis and understand the trends in the sector. Moreover, the access to existing data sets can be difficult and require considerable amount of effort. Data collection, analysis and visualization platform will help administrators to keep track of the energy consumption and its impacts. The platform will help to breach the caps of existing data sets and makes the task of energy management more accessible for the Estonian municipalities. Due to the immense resources (and intersectoral agreements) this development is requiring, RAP will set on designing the main parameters of this platform.

The Operational Programme (OP) for Cohesion Policy Funds Priority axis 2.9 Sustainable Urban development: supporting sustainable development strategies of five larger urban areas in Estonia, one of them being Tartu.

Sustainable planning methodologies have greater impact on achieving national energy efficiency targets on municipal level. Sustainable Energy Action Plans (SEAP) have been aiming for 20% increased efficiency on energy consumption correlating national 2020 energy targets. Sustainable Energy and Climate Action Plans (SECAP) are aiming even higher 40% (and now 55%) of efficiency correlating with national targets for 2030. Sustainable planning increases the local cross-sectoral cooperation for improved efficiency in consumption.

Sustainable energy planning is relatively new area for the government institutions and municipalities. There is no established methodology in Estonia that would address the problems of sustainability in the energy planning. There is no fixed terminology and different institutions are using different vocabulary for describing the same (or similar) processes. These languages themselves tend to be highly bureaucratic and artificial, potentially creating mistrust among the

public and making participatory processes more difficult. At the same time the public participation is already a challenge as it requires the general public and non-experts to understand the highly abstract technical concepts like emission calculations, energy efficiency etc. Promoting internationally established methodologies for sustainable energy planning and localising these to better fit to the Estonian situation will help institutions to change their energy policy and improve the cooperation with the stakeholders and communities.

Sustainable planning requires specific knowledge and skills that is lacking among the administration. These skills are related with setting up the procedures, governing the process and validating the results for sustainable energy planning. Providing tutoring, mentoring and training for the administration will help to identify the shortcomings and develop institutional capacity for sustainable energy planning. It also helps to interact with other institutions like municipalities, service providers, advocacy groups etc to improve the cooperation and develop wider acceptance for new policies. This cooperation can be local, national and international with more than 3000 municipalities all over Europe that have developed their sustainable energy plans and can share their experiences.

Both actions are relevant for the Operation Programme and the OP will be used to finance certain activities. The energy management system will be mandatory for decision-making related to the OP or other policy instruments.

Part III – Details of the actions envisaged

ACTION 1:

Name of the action: Energy Management System for Estonian municipalities

1. **Relevance to the project** *(please describe how this action derives from the project and in particular from the interregional exchange of experience. Where does the inspiration for this action come from?)*

POTEnT project addresses a key challenge for European cities and regions: how to achieve more carbon reduction by harnessing the potential of direct and local action by citizens and communities. Improving local energy management is important for the municipalities for increasing their role in energy transition. TREA is designing a policy for improving energy management among the Estonian municipalities and providing them tools and skills necessary for setting up energy management procedures with minimal extra administrative cost, learning from experiences of other project members. For this the usage of digital tools and automated data collection/analysis systems was the focus on interregional learning.

Centralised Utility Bill Payment & Monitoring, demonstrated by Milton Keynes Council (UK) and Smart Water Metering system demonstrated by City of Ostrava (Cz) were most notable examples of the automatic real-time monitoring systems for public services provided by the partners. During their interactive online presentation at 18.02.2021 Milton Keynes offered an insight to a holistic energy data collection platform capable of telemetry and providing analytics/reports directly from the system. The system is built around online platform that is simultaneously used for data collection (direct data transfer from the service providers), data analysis (for energy and CO2 emissions) and access management for the different users. This combination is noteworthy as it solves potential problems Estonian experts are facing when working with data, most importantly the accessibility of the different data sources (see figure 1.1) but also the lack of capacity for the initial energy analysis and emission calculation. Flexibility is added by providing the manual interface for non-standard data sets, allowing the entire history of the objects to exist on the platform. In Milton Keyes case the data platform was a private service that is well suited model for

object-based monitoring. It's not clear if similar ownership model will be used for Estonian case but this can be a possibility.

During their online presentation at 20.05.2021 Ostrava provided an overview for TREA and City of Tartu of the water metering system functioning in a similar economic and procedural environment for Estonian municipalities, encouraging the uptake of the technology in more familiar terms. The telemetry application is similar to what is used in Tartu and in other Estonian cities but is developed to collect the data in a bigger scale and in more detail (household basis), simplifying the service for the end-customer and potentially improving the quality of the data. This solution functions as an example of real-time consumption data collection that can function as a part of a larger system, providing added value and improving the service for the customers. In Estonian case, data collection will focus on energy carriers and the water consumption is not the first priority but the central application and the monitoring protocol is essentially similar.

2. **Nature of the action** (*please describe precisely the content of action 1. What are the specific activities to be implemented?*)

- Creating central energy data management and visualisation toolbox for Estonian municipalities.
- Linking the existing energy data repositories with the new system.
- Collecting energy and emission data for municipalities.
- Supporting the retrofitting of residential apartment buildings in municipalities.
- Supporting the energy communities in municipalities.
- Supporting the newly created system with capacity building.

The main activity is to develop national data management (collection/analysis/visualisation) system for Estonian municipalities and support the municipalities with capacity building and advisory services for using the system in the public decision-making process. As seen during interregional learning in UK and Czech Rep. – data management systems can support the municipalities in their daily task of energy management and planning.

System will bring together, aggregate, analyse and visualise the data related to energy production and consumption (see example in figure 1) already collected through the different state entities and service providers. The system will facilitate the data about electricity production and usage, heat conversion, usage of natural gas and other combustion fuels. Addition to energy carriers and conversion quantitative and qualitative data will be provided about related topics like access to energy services, energy poverty, (public and private) transport milage, ground water level, contamination, air quality, climate risks etc. Data collection interface will be provided for the local data missing from the system, allowing system to enquire the information directly from the data holder.

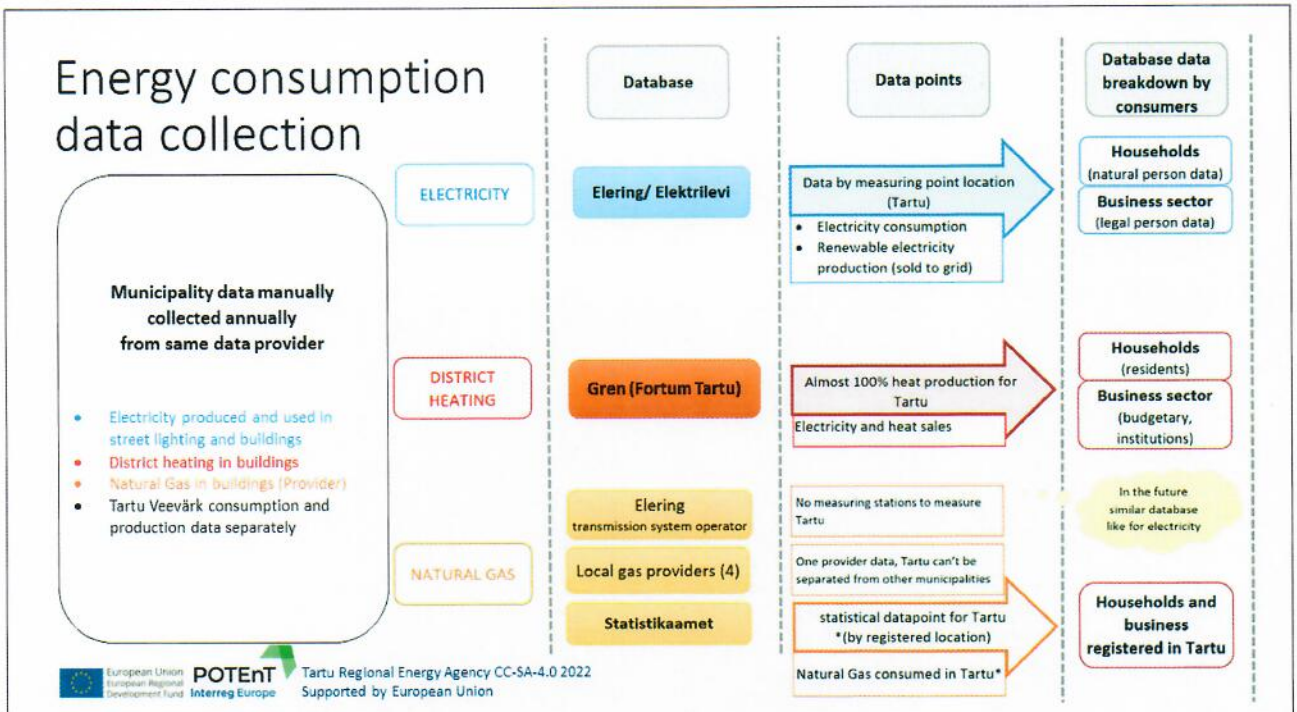

Figure 1.1. Energy data collection for City of Tartu (EE) for preparing the baseline inventory

System will be developed under the supervision of Ministry of Economic Affairs and Communication in the cooperation with Ministry of Environment, responsible for integrating the the environmental and climate data. System will be made available for the municipalities trough the bilateral agreements for providing the municipal data into the system. Municipalities can add additional objects and regions to their data collection, allowing the more accurate representation of the complex energy relationships between the energy producing and consuming objects that rarely follow the administrative borders.

System will be supported with dedicated training program facilitated by Ministry of Economic Affairs, Ministry of Environment and Tartu Regional Energy Agency. Training program will increase the capacity of administrative staff for energy management and planning and will include the technical trainings for analysing the energy sector, its greenhouse gas emissions, feasibility of investments, alleviation of energy poverty etc. Addition to technical capacity the training will address inclusive policy making, public engagement into the energy decisions, green procurement procedures etc. Dedicated section of the training will be dedicated into the usage of the energy management platform.

TREA will organize the energy management training program for 100 municipality experts in Estonia. The program will improve the skills of the municipal experts on the topics of energy management in their organizations as well as fair energy transition for the entire municipality. The training will provide theoretical background and practical skills for understanding the energy production, conversion, distribution and consumption among the local community with the focus on the environmental, social and economic impacts of energy services. Each of the training sessions will develop a specific focus like the data collection, baseline analysis, efficient consumption, usage of renewable energy sources etc. The training will be prepared and implemented in cooperation with the Ministry of Economic Affairs and Communication and the Ministry of Environment.

TREA will support 5 municipalities on collecting their energy and emission data and will create data sets for municipal energy management. These data sets will contain information (100 data points) about the accessibility and the usage of the energy services as well as the energy carriers

(fuels) used in mobility. The data will form a basis for setting up local energy management procedures and energy efficiency policies. The members of EU Covenant of Mayors will use data sets for submitting their reports to the Mayor office.

TREA will support 5 municipalities on retrofitting their privately owned multiresidential apartment buildings. Renovation of European building stock is one the most important measures in EU energy and climate policy and also the the focus of the European Green Deal. According to European Commission about 35 million buildings could be renovated in Europe. Due to the fully privatized building stock, Estonian municipalities have only limited options on supporting the renovation process. TREA will develop one-stop-shop model for supporting the retrofitting of multiresidential apartment buildings, offering full consultations service for the building associations, responsible for the renovation. TREA will also advise municipalities on supporting their citizens in the renovation process and will coordinate the renovation roundtable – a working group of experts throughout the renovation service chain to analyze and improve the renovation market.

TREA will support 5 municipalities on establishing renewable energy communities while providing technical, financial and legal support as well as training for the (potential) members of these communities. Energy communities are indicated in EU directives as a flexible way to increase the local renewable energy production in the municipalities and improve the efficiency and potentially reduce the cost of the local energy services while bringing in new (private) investments and creating new green jobs. As there are no renewable energy communities in Estonia the municipalities can have important role on setting up the pilot projects and establishing the first communities using public-private-partnership models. Due to the constant energy demand of large public buildings, municipalities can offer long-term cooperation for these new energy providers and will benefit from the renewable electricity produced by these communities. TREA will provide support and guidance for municipalities for setting up the energy community model and establish the first communities.

3. **Stakeholders involved** *(please indicate the organisations in the region who are involved in the implementation of the action1 and explain their role)*

Ministry of Environment is responsible for collecting the information about the environmental impact of energy consumption in Estonia. They are also responsible for implementing EU climate policy on national level. Since 2021 ministry is supporting the municipalities in their effort of improving the climate resilience. They will be supervising the integration of environmental and climate data into the platform.

Ministry of Economic Affairs and Communication is responsible for the energy policy in Estonia. They support municipalities on setting up local energy plans. They will be supervising the integration of energy data into the system.

City of Tartu, represented by Tartu Regional Energy Agency is the second largest city in Estonia and the first municipality with public digital platform for visualising energy, environmental and transport data. City can share their experiences of collecting energy data for preparing the emission inventory and developing municipal data platform.

4. **Timeframe** (*please specify the timing envisaged for action 1*)

Energy management training program: Sept – Oct 2022.

Collecting energy data for 5 municipalities Sept 2022 – July 2023.

Supporting the retrofitting of residential apartment buildings: Aug 2022 – July 2023.

Supporting the energy communities in 5 municipalities: Aug 2022 – July 2023.

5. **Indicative Costs** *(please estimate the costs related to the implementation of action 1)*

Energy management training program: € 2 000.

Collecting energy data for 5 municipalities: € 25 000.

Supporting the retrofitting of residential apartment buildings: € 50 000.

Supporting the energy communities in 5 municipalities: € 25 000.

6. **Indicative funding sources** *(please describe how action 1 will be financed. Is it through the policy instrument(s) indicated in part II):*

Energy management training program: Ministry of Economic Affairs and Communication.

Collecting energy data for 5 municipalities: Tartu Regional Energy Agency.

Supporting the retrofitting of residential apartment buildings: Tartu Regional Energy Agency trough different EU projects under Horizon Europe program.

Supporting the energy communities in 5 municipalities: Municipal budget.

ACTION 2

Name of the action: Sustainable Energy and Climate Planning for Estonian municipalities

1. **Relevance to the project** *(please describe how this action derives from the project and in particular from the interregional exchange of experience. Where does the inspiration for this action come from?)*

POTEnT project addresses a key challenge for European cities and regions: how to achieve more carbon reduction by harnessing the potential of direct and local action by citizens and communities. In this process proper energy planning is crucial as it provides the local legislative, financial and social framework for low-carbon economy. In this context, *Växjö Energi 100% (fossil free production)* demonstrated by Energy Agency for Southeast Sweden (SE) is a prominent example of integrated energy planning on municipal level. It shows the importance of policies that support a transition to more sustainable heating and emphasize the importance of local governance.

Even further, *Local Carbon Offset Fund* as demonstrated by Milton Keynes Council (UK) is an example of innovative climate impact intervention on local level, combining also a financial tool for further carbon reduction. Especially finding new financial models is encouraging for the public authorities when setting up new energy plans as the energy sector sees typically some of the highest investments in the community. Local Carbon Offset fund as used in Milton Keynes works as an example of where this money will be coming from.

2. **Nature of the action** (*please describe precisely the content of action 1. What are the specific activities to be implemented*)

- Localizing and standardizing the sustainable planning methodologies.
- Supporting the development of national energy plan.
- Supporting the preparation of integrated energy and climate action plans.

- Capacity building for local administration.

The main action is to introduce the improved energy planning models for Estonian municipalities. These improved models will be used to for preparing medium-term (10-15y) energy plans that will integrate energy, social and environmental aspects of municipal planning and will help to set measurable and clear targets for local energy transition. These actions will be supported by the capacity building for the municipalities and stakeholders. Action 2 is supported by action 1 as it takes an advantage of the improved municipal energy management and especially energy data platform.

Sustainable planning methodologies have greater impact on achieving national energy efficiency targets on municipal level. For example, Sustainable Energy Action Plans (SEAP) have been aiming for 20% increased efficiency on energy consumption correlating national 2020 energy targets. Sustainable Energy and Climate Action Plans (SECAP) are aiming even higher 40% (up to 55%) of efficiency correlating with national targets for 2030. Sustainable planning increases the local cross-sectoral cooperation for improved efficiency in consumption.

There is no lack of sustainable planning methodologies in expert literature. Specifically, the methodology for SEAPs and SECAPs has been well established by European Commission and Covenant of Mayors (CoM) network, providing easy to understand guidebooks and data collection/analysis platform for the members of CoM network. The project will take advantage of this and will use these publicly prepared and openly shared materials as an input for further localizing the methodology. Following the SECAP methodology using the CoM guidelines has additional benefits for the municipalities interested of joining CoM network, however with some adjustments and localisations it can be fully usable also for non-members.

Figure 2.1. Selection of publicly available guidebooks for sustainable planning in Covenant of Mayors repository

One of the challenges for using SECAP methodology has been that the relevant regional and national institutions do not accept this for municipal energy planning according to national regulations. However, this is finally changing with Estonian Ministry of Environment providing financial support for developing and implementing sustainable energy and climate plans since 2021. Still, despite the existing guidelines and support from national institutions, the development of sustainable energy and climate plans has a long way to go to be fully implemented by majority of Estonian municipalities.

The methodology of sustainable energy planning will be localized further, providing the shared terminology and vocabulary as well as the description of procedures, processes and algorithms for sustainable energy planning for the municipalities and national institutions alike. Based on the existing SECAPs in Estonia (from City of Tartu and City of Tallinn) the process of preparing sustainable energy plan will be analysed and streamlined for making it more accessible for the smaller municipalities. Especially the data collection as the most complex and expensive element

will be improved with the help of national energy management platform, set up during the Action 1.

Methodological work will be supported by the capacity building for the municipalities and national institutions. TREA will cooperate with municipalities with existing sustainable energy plans in Estonia and in other EU countries for knowledge transfer. TREA will also share its own experiences of setting up 6 sustainable energy (and climate) plans. National institutions will inform the municipalities about the national support available for preparing and implementing the sustainable energy plans.

TREA with partners will develop supporting activities for the national energy plan prepared by the Ministry of Economic Affairs with the support of the Ministry of Environment. These activities will create a co-designing procedure for establishing the parameters of energy management system and will help to integrate these parameters into the national energy legislation. National energy plan is the central document for the energy planning in Estonia, describing the existing situation, the important trends and providing the foresight into the future of the energy sector trough the different scenarios. The plan will also describe the roles of different stakeholders (including the municipalities) in national energy management and will be the basis for developing the national support measures later. During the preparation process TREA with partners will develop a set of objectives, indicators and instruments for the national energy plan and will validate these with the stakeholders (50 organizations), organized around different aspects of national energy agenda. Participation process will be finalized during the intermediate seminars that will be used for collectively analyze and discuss the outcome of co-design procedures. Final suggestion will be validated with the relevant ministries and will be provided as policy suggestions.

TREA will support 5 municipalities in setting up their energy and climate plan using the localized methodology for integrated energy planning. Integrated energy plans will aim to reduce the energy consumption and related climate impacts by 40% by 2030. Energy plans will be developed in close cooperation with the municipalities and their local stakeholders. Planned interventions will be based on situation analysis and the foresight. The members of EU Covenant of Mayors will use integrated energy and climate plans for submitting their reports to the Mayors office.

3. **Stakeholders involved** *(please indicate the organisations in the region who are involved in the implementation of the action1 and explain their role)*

Ministry of Environment is responsible for collecting the information about the environmental impact of energy consumption in Estonia. They are also responsible for implementing EU climate policy on national level. Since 2021 ministry is supporting the municipalities in their effort of improving the climate resilience and setting up integrated energy and climate plans. They will support for the municipalities for preparing and implementing their sustainable energy plans.

Ministry of Economic Affairs and Communication is responsible for the energy policy in Estonia. They support municipalities on setting up local energy plans. They will support for the municipalities for preparing and implementing their sustainable energy plans. Ministry will be holding the updated methodology for integrated energy planning.

City of Tartu is the second largest city in Estonia is a member of Covenant of Mayors network and has approved the first sustainable Energy and Climate Plan in Estonia. It's one of the forerunners of energy transition and great source of inspiration for other municipalities.

City of Pärnu is currently preparing Sustainable Energy and Climate Plan. After finishing the preparation, they can share their experiences on setting up and implementing sustainable energy plan.

City of Tallinn is a members of Covenant of Mayors network, has approved their Sustainable Energy and Climate Plan and can share their experiences on setting up and implementing sustainable energy plan.

Union of Cities and Municipalities is and umbrella organisation connecting the local governments in Estonia and can be cooperated for large scale capacity building campaigns.

4. **Timeframe** (*please specify the timing envisaged for action 2*)

Supporting national energy plan: August 2022 – June 2023.

Preparation of integrated energy and climate action plans: August 2022 – July 2023.

5. **Indicative costs** (*please estimate the costs related to the implementation of action 2*)

Supporting national energy plan: € 50 000.

Preparation of integrated energy and climate action plans: € 50 000.

1. **Indicative funding sources** *(please describe how action 1 will be financed. Is it through the policy instrument(s) indicated in part II):*

Supporting national energy plan: Ministry of Economic Affairs and Communication.

Preparation of integrated energy and climate action plans: Municipal Budgets.

Date: 18.07.2022

Name of the organisation(s) : :
Tartu Regioonni Energiaagentuur

Signatures of the relevant organisation(s):
Director of TREA
Project manager