

A self-assessment questionnaire   
for *Act Now* municipalities

ENERGY MANAGEMENT & ENERGY STRATEGIES FOR MUNICIPALITIES: STATE-OF-THE-ART ASSESSMENT

## **State-of-the-art of one hypothetical municipality in Latvia**

**Thematic area “Energy Efficiency and Energy management in buildings”**

This questionnaire is developed within the project *ActNow!* and it follows the main concept of the project focused on a synergy among expert partner and each Municipality involved.

The aim of the survey is to:

1. collect basic information about the energy management practices and energy strategies;
2. identify key stakeholders for establishing local energy efficiency work groups (LEEG).

The information collected aims to identify the starting points for a specific and tailored capacity building schemes in municipalities addressed to Energy Efficiency and Energy Management in Buildings.

A more detailed description of the tool is reported in the overall self-assessment tool for the definition of customized capacity building through the assessment of the existing capacities, and to let understand what still needs to be established,

The questionnaire was developed by Riga Technical University and Project Zero in cooperation with the Act Now coaching partners.

*The questionnaire is to be filled-in in a tandem approach by coaching partners and municipality partners*

**FOCUS AREA OF THE QUESTIONNAIRE FOR YOUR MUNICIPALITY IN THE ACT-NOW PROJECT IS:**

*Please mark  from the list (multiple choices available).* ***Use Bold to indicate the priority focus area (only one choice available).***

**Municipal buildings**

Private house owners and rental flats

House associations / public house

Commercial buildings

Other: *please name*

**Municipality partner of *ActNow*! project**

**Name, surname: \_\_\_\_\_\_**

**Position: Energy Manager**

**Date of completion: \_\_\_\_\_**

**Coaching partner (Project Partner No)**

**Name, surname:**

**PART I MUNICIPALITY PROFILE AND CONTEXT**

| NO | AREA | QUESTION |
| --- | --- | --- |
| 1. General description of the municipality and the regional context | | |
| 1.1 | Location | *Please describe briefly the geographic location of your municipality.*  Latvia is located in the north-eastern part of Europe. It is one of the 3 Baltic states. The hypothetical municipality is located in the northeastern part of Latvia.. |
| 1.2 | Population | *Please describe the residents of the municipality. Consider following aspects:*   * *total population (latest data);* * *annual growth rate (positive or negative, %/year);* * *resident population by age groups (under working age, of working age, over working age, % of total population);* * *unemployment rate, % of population of working age.*   The declared population in Municipality on January 1, 2018 is 18000 inhabitants. The total number of the inhabitants has decreased by 12 percent from 2010, or 3431 inhabitants. In five Parishes out if 13, the declared population is under 1000. Only in four parishes, the declared population exceeds 1500. The largest declined population is in the 19-62 age and 7-18 age groups. Under working age is 17,5 % of the total population and over working age is 24,0 %. Only in some of the rural Parish the population falls below 10 %. The largest drop in population is in “Hypothetical” parish more than 10 percent from 2012 to 2017 year, the smallest “Invented” parish more than 2 percent. Unemployment rate of population of working age is 8.0 %. |
| 1.3 | Administrative & industrial centers, regional characteristics | *Please mention the major administrative and industrial centers located in the municipality and any specific local characteristics (e.g. focus on agricultural production, industry, other).*  There are 10 administrative centers of parishes and 1 main town. There is one larger industrial center in the “X” parish and a number of large companies that are not concentrated in one place. In the industrial center there is a company producing wood furniture, CHP plant, wood chip pellet plant, wood processing company, sanitary ware and confectionery plant. There is an asphalt production company and a wood pellet production company in “Y” parish near the main town, 2 metal processing enterprises and 1 wood processing company in the main town. In “Z”parish there is a wood pellet production company, in the “”W” parish, a wood processing company and bakery and dairy products. Companies in main town, “X”, “Y”, “Z” parishes are engaged in wood processing. 40% of the business district was engaged in wood processing and forest management, 10% in agriculture and 5% in the transport and logistics services. |
| 1.4 | National and regional framework regarding energy management and climate issues | * Are there any binding national (and regional, if applicable) targets regarding energy efficiency, renewable energy and CO2 emissions in your country pulling the development at local municipality level?   Yes  No   |  | | --- | | If answered Yes, please explain your selection in more detail | | *Consider answers to these questions:*   * *Which are the major national (and regional, if applicable) policy goals and policy planning documents? Please name and briefly describe the relevant policy planning documents (provide web links to sources, if available).* * *What is the timescale for these goals?*   The main regional medium-term priorities in the Planning Region Development Program 2015-2020 is:  1) ensure effective energy planning;  2) to promote energy efficiency improvement.  At the national level, Energy Development Guidelines 2016-2020 state that compared to 1990:  1) reduce GHG emissions by 20%, but by 2030 40%;  2) an increase in the share of renewable energy in energy consumption up to 20%;  3) increase energy efficiency by 20%.  The Law on Energy Efficiency of Buildings stipulates that energy certification of buildings (*https://likumi.lv/doc.php?id=253635*) must be carried out for public buildings with a total area of over 250 square meters or if it is being renovated.  The Latvian National Development Plan for 2014-2020 (*http://www.varam.gov.lv/lat/pol/ppd/ilgtsp\_att/?doc=13858*) in the Action Plan "Energy Efficiency and Energy Production" intends to promote the use of local renewable energy resources in energy production, as well as increase the energy efficiency of public and residential buildings. Some of the tasks to be performed are:  1) Development of the municipality's energy plan, providing for complex measures for the promotion of energy efficiency and the transition to renewable energy sources;  2) Energy efficiency programs in the public and municipal public sector;  3) Utilization of renewable energy resources in energy production, reducing dependence on fossil energy resources and promoting energy efficiency in district heating. | |  * Is there any binding commitment for local authorities to contribute to achievement of the above described national/regional targets or is municipal engagement based on volunteer decisions?   Yes, there is a legal binding commitment for local authorities  No, there is no legal obligation for local authorities and municipal engagement is based on volunteer principle   |  | | --- | | Please explain your selection in more detail | | *Consider answers to these questions:*   * *What is the role of local authorities?* * *Are there any guidelines and other support provided at national/regional level for local level authorities to help them achieve national/regional targets?*   The role of municipality has a direct impact on the goals to be achieved. If municipalities do not reduce their GHG emissions to their level, then Latvia as a country will never achieve a 20% reduction by 2020. Therefore, local government development documents are closely linked to the spatial development planning documents, so that the direction is common. However, concrete actions are not defined in any municipal planning documents to achieve one of the objectives.  Right now, a new town development strategy is being developed, which will already include an energy-efficient action line.  At the regional level, different seminars, trainings and meetings are organized for local government employees to train in energy planning and energy efficiency issues. | | |
| 1.5 | Energy consumption patterns in the municipality | * Is there a district heating system in your municipality?  |  |  |  | | --- | --- | --- | | Yes  No  Partly (in the city/-(ies) but not in parishes) | | | | If answered Yes or Partly, please explain in more detail | | *Please describe briefly the basic facts about the district heating system (location, ownership, operation, annual amount of energy produced, percentage (estimation) of total heat demand, types of facilities linked to the district heating grid).*  The town has one large heating system. An exception is the connection of the Museum with a small district heating system that heats 2 buildings. It workes with a wood pellet boiler. The largest producer of heat energy in the town is the boiler house owned by ”X” Enerģija ltd with installed capacity of 12 MW and “Z” invest ltd cogeneration plant with installed heat capacity of 5 MW and electricity capacity 0,999 MW. In both boiler houses there are chip boilers that provide energy production. The heat supply network mainly belongs to the municipality, except for the main connections with the heat energy producers. ”X” Enerģija ltd networks leased for a fixed period for sale of heat energy. In 2015, the produced thermal energy was 6000 MWh, but purchased from “Z” invest ltd 15000 MWh.  In severa; parishes there are larger or smaller central heating systems.  Since December 2017, the “Y” village has been supplied with a co-generation plant plant with installed heat capacity of 12 MW and electricity capacity 2,5 MW owned “Hypo” Ltd. Energy production is carried out in a wood chip boiler. The heat pipes that connect the CHP plant to the former boiler house belongs to “Hypo”Ltd., the rest of the network is municipal property. The average annual production is around 2120 MWh for district heating system by calculation. Cogeneration plant also provides heat energy for a pellet production plant and a furniture manufacturing company.  Since mid-2017, the thermal power of the “X” and “Y” villages is provided by the twon municipality corporation. The boiler houses and all heating pipes have been transferred to the capital company. The total capacity of “X” boiler houses is 1 MW, while “Y” boiler house - 12 MW. Heating boilers and the transmission system are outdated, therefore, in the following year it is planned to completely restructure the system by installing one common boiler house, a wood chip boiler, for both villages with an approximate capacity of 1.2 MW and installing new heat tubes and heating units in buildings.  The other boiler houses and networks in the villages belong to the municipality, which also manages them to provide heat.  In the town, the central heating system operates with a wood heating boiler of 1 MW. The total heat produced is about 800 MWh per year by calculation. In 2018, the system should be fully restored by disconnecting from the district heating systems consumers who do not wish to receive heat supply in a centralized manner, move the boiler house and place a new wood pellet boiler with rated power 150 kW. All the heat pipes will be re-installed.  In the village of “Z”, the central heating system operates with two wood pellet boilers with a rated power of 250 kW each. There are no heat meters in this system, so the heat energy generated is estimated around the consumption of wood pellet, which is approximately 675 MWh per year.  In the village of “Z”, the central heating system operates with a wood heating boiler of 1 MW. The total heat produced is approximately 2200 MWh per year by calculation.  In the village of “Z” the central heating system operates with a wood heating boiler of 1 MW. The total heat produced is approximately 2440 MWh per year.  In the village of “W”, the central heating system operates with two wood pellet boilers with a rated power of 50 kW each. The boilers were installed at the end of 2017, therefore there is no exact data on the heat produced.  In the village of “Z”, the central heating system operates with two wood heating boilers of 300 kW each. In system there are no heat meters. The total heat produced is approximately 1700 MWh per year by calculation.    Beļava  Lejasciems  Ranka | | |  * If possible, specify energy sources used for energy (heat and electricity) production in your municipality:  |  |  |  | | --- | --- | --- | | Natural gas  Coal  Oil  Wood (logs, chips, pellets, other) | Photovoltaics  Solar water heating  Other renewables  Other: *please name* | | | Please explain your selection in more detail | | | | *Consider answers to these questions:*   * *What is the balance of energy resources (resources by type in % of total)?* * *What is the annual fuel consumption?* * *Which technologies are used for heat and electricity production?* * *Are the resources locally supplied or imported?* * *What is the share of renewable energy sources of final energy demand?*   The energy supplied to municipal buildings is produced from renewable energy sources. Approximately 75% of all energy is produced from wood chips, 20% of wood, but only 5% of wood pellets. The solar energy in one building provides warm water and it is a very small part on the overall energy consumption.  The annual fuel consumption data are calculated, because from some heat suppliers we do not have precise consumption data.  In CHP generates steam from which the turbine is turned to generate electricity, the rest of the heat through the heat exchanger is transferred to the central heating system. At present, firewood heating boilers have been preserved in several villages, which provide heat energy. In one central heating system, the heat is supplied by wood-pellet boilers. In larger systems, heat exchangers are used to separate grids from building heating networks. However, a large part of the systems regulating the temperature with the three-way valves are not separated.  If only municipally owned buildings are considered, then 100% of the heat energy is produced from renewable energy sources. There is no data on electricity.  Electricity in the municipality region is produced by 4 wind turbines, 7 hydroelectric stations, 1 biogas plant and 2 CHP. Data on volumes produced are not known to the municipality.  For the production of heat energy, raw materials are supplied both from local enterprises and other Latvian enterprises. Boiler houses that are in the management of the municipality do not buy raw materials from other countries. There is no information available to the municipality about boiler houses owned by enterprises. | | | | |  * Is primary fuel and energy consumption (electricity, heat) being monitored in your municipality?  Yes  No  Partly  I don’t know   If answered Yes, please select the boundaries, where data is monitored?  Municipality owned buildings (administration buildings, schools, kindergartens, social houses etc.)  Private owned buildings  Public transport  Street lighting  Other: *please mention*  Please explain your selection in more detail   |  | | --- | | *Consider answers to these questions:*   * *Which data is being monitored and since when? What is the purpose of monitoring data (where is the data applied)?* * *Is there any guidance/working aids for data monitoring available in your municipality?* * *How often data is collected (monthly, quarterly, yearly)? Who is responsible for collecting data?* * *Is data analyzed after collection?* * *Which are the major challenges/problems in the existing data monitoring approach (e.g. incorrect data supply related to negligence (human aspects)). Any changes planned?*   Electricity consumption data are monitored. Heat consumption data in Municipality have been available since 2012. Such data were not compiled in the parishes, therefore need to search in archive. In most of the parishes there is no thermal energy monitoring equipment and information on energy consumption is available only on spent fuel calculations. Data collection is done once a month. Usually, consumption data is taken from the service provider's bill. When the year is over, data collection and more analysis are carried out.  While there was no energy manager in the town District Council, data were collected by a communal engineer, but in the parishes, it was not done at all. Since the beginning of 2017, when full accounting was centralized, consumption data from used fuels and bills is available in accounting. From the end of 2017, the entire monitoring of the county monitoring data was transferred to the energy manager. One of the tasks of this is to create a functioning system for the consumption data to be delivered accurately and at specific timescales.  Data analysis so far has been limited to comparing annual total energy consumption data between municipal buildings in order to cope with the worst situation and plan energy efficiency measures.  At this moment data collection is done in order to develop a Sustainable Energy Action Plan and Energy Management system for municipality owned public buildings. Previously, the data collection was carried out in order to determine energy inefficient buildings and heat insulation measures after total heating.  In Municipality there are no guidance for data monitoring. Several municipal buildings have a remote reading system that helps to keep up with the thermal energy consumption of buildings. So far, only one parish has installed such a system, which makes it possible to see changes in the total consumption of the village. The system provides storage and graphic display of consumption data and can be accessed with the Internet.  In the current system, the main problem is the lack of data because most of the systems do not have a heat meter that prevents the acquisition of accurate consumer data. In addition, in the places where these meters are located, there is a lack of common data capture to be used for analysis.  It is planned to install heat meters in a gradual way, and they should be equipped with remote monitoring equipment in order to reduce data perversion errors and make them more accessible.  There is a lack of unified data processing policies and tools to provide visually and understandable information.  There is a lack of understanding among people about why such specific data is needed.  It is planned that the energy manager will manage these problems. | |
| B) Municipality targets, policies and investments | | |
| 1.6 | Policy commitment toward climate change mitigation, adaptation, energy & resource efficiency, presence of energy and climate baseline | * Are there any climate change mitigation/adaptation and/or energy use targets set in the municipality?  Yes  No   If Yes, please indicate the related policy planning documents in which these targets are set:  Municipality Sustainable energy action plan (SEAP)  Municipality Sustainable energy and climate action plan (SECAP)  Energy management system and policy according to ISO 500001 standard  Other energy management system  Climate adaption strategies  Other document: please name  Please explain your selection in more detail   |  | | --- | | *Please describe briefly the policy planning documents you selected and the targets. Consider answers to following questions:*   * *Which targets have been already achieved?* * *Which obstacles have been identified while trying to achieve the targets?* * *If your municipality has a SEAP/SECAP and/or an energy management system, has the first monitoring procedure already taken place and when is the forthcoming monitoring planned?* * *What is the planned role of renewables?*   Your answer here. |  * What is the motivation for the targets set (multiple choices available)?  |  |  | | --- | --- | | Allocated funds  Image building  Promotion of economic development  Climate protection | Citizen’s will  Replacement of/new energy supply  Other: *please name* |  * Is there a baseline status for energy consumption and/or climate state-of-the-art developed in the municipality?  Yes  No   Please explain your selection in more detail   |  | | --- | | *Consider answers to these questions:*   * *What kind of baseline? Who or what initiated the decision to develop the baseline?* * *Which is the baseline year?* * *Which are the baseline values?* * *Any changes planned? Why?*   Your answer here. | |
| 1.7 | Fund allocation for support of climate and energy policy implementation | * Are there any funds allocated in a medium timescale for implementation of climate and energy related projects in your municipality?  Yes  No   If Yes, please indicate the sphere where funds are going to be allocated:  Energy efficiency measures in buildings  Energy efficiency measures in heat supply  Energy efficiency measures in public lighting  Energy efficiency measures in public transport  Climate change adaptation measures  Capacity building of municipality staff and stakeholders  Other: *please name*  Please explain your selection in more detail   |  | | --- | | *Consider answers to these questions:*   * *What projects are going to be implemented?* * *When are the projects going to be finalized?* * *What is the expected result of these projects?* * *If possible, specify the planned amount of funding* |  * Are the funds for climate and energy projects in your municipality planned and allocated with respect to municipality’s goals or do they depend mostly on the occasion and the ability to implement specific projects?   Funds for energy and climate projects are planned in advance in respect to municipality’s climate and energy goals outlined in the policy planning documents and the baseline  Funds for energy and climate projects are planned in occasionally depending on ability to attract financing for specific projects  Other answer: *please name*  Please explain your selection in more detail   |  | | --- | | Mostly it is subordinated to the available funding for the projects, rather than the targeted pursuit of specific plans. Municipal development plans are based on the financing available in the projects. Of course, the local government is created rolling list of objects that need operations faster than elsewhere, but the list will vary depending on available funds. | |
| 1.8 | Commitment at the top political level and the overall perception in the municipality | * What is the attitude at the municipality's top political level (mayor, executive director, city council) regarding climate and energy challenges?   Politicians are aware of the importance of solving climate and energy challenges and show strong support to development and implementation of climate and energy policies  Politicians are aware of the importance of solving climate and energy challenges but their hands are tied due to lack of knowledge, financial and human capacity  Politicians are not aware of the importance of solving climate and energy challenges due to lack of information  Politicians are not aware of the importance of solving climate and energy challenges and do not show any interest in these topics  Please explain your selection in more detail   |  | | --- | | A major problem is the lack of funding for hiring a skilled workforce. To date, there has not been any person in the municipality who would think and plan work on climate and energy issues. Perhaps, therefore, in municipal planning documents, these topics are not being addressed and the work of the municipality, including politicians, does not unanimously think about this issue. |  * Please evaluate the overall attitude and perception about climate and energy challenges in your municipality at the municipality staff level.   Poor  Below average  Average  Good  Excellent  Please explain your selection in more detail   |  | | --- | | Much of the municipality's staff does not want to change the routine of ordinary affairs and the environment around it. However, speaking with them, the feeling is that employees understand the need and the sense of correct use of energy. In the municipality, these issues were not considered complex in the past due to the lack of staff resources. | |
| 1.9 | Supportive aspects and obstacles for implementation of climate and energy related policies | * Which are the major obstacles in your municipality delaying the implementation of climate and energy related policies?   Lack of national level strategy and guidance  Lack of commitment at municipality’s top political level  Lack of financial resources for policy implementation  Lack of knowledge for policy planning and implementation  Low awareness and involvement of stakeholders (public utilities, energy system operators, financing institutions, private investors and other)  Different interests/motivation or conflict of interest  Other answer: *please name*  Please explain your selection in more detail   |  | | --- | | Lack of funding for hiring an employee who would be responsible for integrating national policy positions into a local development planning document. Just as for the collection and analysis of energy data, to develop action plans to achieve the goals.  The problem is also in the planning and implementation of policies, as the plans have previously been very inaccurate so that all possible actions can be adapted. The problem with such plans is that they do not plan. Plans lack of specific objectives to be achieved in a shorter and medium terms.  At the moment, energy and climate policy planning is not taking place any of stakeholders and the interest in these issues is negligible. At the same time, cooperation and exchange of views are not given much importance. Due to short deadlines and shortage of employees, documents are developed within the municipality without discussing them with stakeholders. The current situation has led to a gap in negotiations with stakeholders, so there is no data exchange.  The biggest problem that I see at the local government level when implementing the policy is the lack of different interests and lack of motivation to change. It will be an attempt to convince head of the institutions and head of the parish administrations of the urgency of these issues and the need for policy. |  * Which are the major supportive aspects in your municipality for the implementation of climate and energy related policies?   Presence of national level strategy and guidance  Strong commitment at municipality’s top political level  Presence of a leader person in our municipality  Availability of funding programmes and resources  Presence of capacity building schemes  High awareness and involvement of stakeholders (public utilities, energy system operators, financing institutions, private investors and other)  Other answer: *Recruiting an energy manager*  Please explain your selection in more detail   |  | | --- | | When replacing the head of the town, the feeling starts that a lead is interested in developing a successful and operational planning program that will include energy issues. The energy planner is also involved in the development of the new planning document.  Financing is needed to achieve the necessary indicators for reducing emissions and using renewable energy sources in energy supply. The planning documents of Latvia and the European Union determine the available funding that can be obtained for the implementation of this policy. Funding for energy efficiency improvements in buildings and heating systems is granted annually from the EU.  At last, municipality has an employee who will be responsible for collecting energy data, analyzing it and developing planning documents. This will provide a better understanding of the energy and climate issues of employees and stakeholders as well. | |
|  | 1. **BUILDING ENERGY EFFICIENCY** | |
| 1.10 | Energy efficiency in buildings | * Have any projects improving building energy efficiency been implemented so far?   Yes, many  Yes, a few  No  Please explain your selection in more detail   |  | | --- | | *Please describe the main measures/projects implemented in your municipality addressing energy efficiency in buildings (including municipality´s buildings, housing association buildings and the commercial building stock). Consider answers to these questions:*   * *Who initiated energy efficiency measures (in which cooperations)?* * *What measures have been implemented?* * *What funding sources were used?* * *What results have been achieved?* * *What were the major difficulties and what worked well?* * *What is the public opinion about these activities?*   The municipality has data only on municipal energy efficiency projects. Energy efficiency measures are initiated either by the Development and Projects Unit or by the building manager. The following is a comparison of energy consumption data to determine if the building's energy performance is so poor. Mostly, implementation depends on project financing available at a given moment.  Here are listed some of the implemented projects:   * Increasing energy efficiency at pre-school educational establishment "Z":   + Insulation of building enclosing structures,   + Replacement of the existing insulation of the window and door mounting sutures, window sill insulation,   + heating unit and system reconstruction,   + solar collector for warm water heating,   The project aims to achieve energy savings of 200 MWh per year and CO2 savings of 60000 kgCO2 per year.   * Increase of energy efficiency of town Library:   + Insulation of building enclosing structures,   + Rain sewerage and drainage construction.   The project aims to achieve energy savings of 90 MWh per year and CO2 savings of 20000 kgCO2 per year.   * Increase of energy efficiency of “Z” gym:   + Insulation of building enclosing structures,   + Roof reconstruction,   + Replacement of exterior doors,   + Mechanical ventilation reconstruction.   The project aims to achieve energy savings of 196,33 MWh per year and CO2 savings of 45000 kgCO2 per year.   * Increase of energy efficiency of “W” primary school   + Insulation of building enclosing structures,   + Reconstruction of the heating system,   + Basement door replacement.   The project aims to achieve energy savings of 50 MWh per year and CO2 savings of 55000 kgCO2 per year.   * Increase of energy efficiency of town High School:   + Insulation of building enclosing structures,   + Reconstruction of the heating system.   + Reconstruction of internal grids and replacement of lighting on LEDs.   The project aims to achieve CO2 savings of 45000 kgCO2 per year.  Two types of funding are mainly used for implementation of projects:   * Co-financing of the Climate Change Financial Instrument; * European Agricultural Fund for Rural Development.   In the municipality of town, 6 multi-apartment buildings, 10municipal buildings in the town and 15 in parishes have been renovated. The total number of buildings that are owned by the municipality and which are or would be required to keep records of energy resources is 90.  To date, XX projects have been carried out, in which both renovation of buildings and renovations of heating systems were carried out. Currently there is a reorganization of the social care center, the design of the reconstruction of 3 heating systems and the immediate rebuilding of the secondary school will be started. As far as possible, all projects are about building insulation.  Problems in designing are caused by specialists' negligence and short deadlines, which resulted in errors also referring to the construction process. In the construction process, all things are closely connected, therefore, the design error creates an additional burden for the construction company, which carries out construction work and the municipality. The builder has to come up with solutions and it often requires additional funding from the customer - the municipality. However, it is a pleasure that all the parties involved have always wanted a high-quality result. As a result, the discussions lead to solutions that will make the additional investment insignificant.  The next problem that occurs after project implementation is building or system operation. People are used to ancient systems where electronics and modern technology were not so common. You need to have a patient and purposeful job to teach the builders of the building wisely to operate it. In buildings where the service staff has been hit, energy-efficient operation and system monitoring are felt.  In the public, opinions are divided on the design of the project and the need for it, as well as the quality of the work. Regarding the achievement of energy efficiency indicators and the real situation in this area, society is lacking in knowledge to be able to analyze and understand the significance of these indicators. In general, the society supports activities that focus on development and the clean environment around. | |

**PART II EXISTING ENERGY MANAGEMENT MODELS AND FUTURE VISIONS IN THE SELECTED BUILDING SEGMENT**

**Please refer here to the priority focus area, which you identified on p.2 of the questionnaire (mandatory). For description of additional building stock in your focus area, please use the table provided in Annex I (optional).**

| NO | AREA | QUESTION |
| --- | --- | --- |
| 1. Existing energy management models | | |
| 2.1 | Description of the building stock | *Please describe briefly building stock in the selected building segment for your municipality. Consider answers to these questions:*   * What is the function of chosen building stock?   These are municipally owned buildings. It is planned to choose buildings where active work is carried out and both employees and visitors are on a daily basis.   * Do you know how many buildings are there?   Yes, there are insert number buildings in the selected building segment in our municipality  I don’t know the exact number of buildings but there are around 101 buildings in the selected building segment in our municipality  I don’t know the number of buildings because such information is not collected in the municipality  Other answer: *please name*   * Please give an indicative evaluation of the age of the building stock:  |  |  |  |  | | --- | --- | --- | --- | | *Less than 5 years old* | *5-10 years old* | *10-20 years old* | *Older than 20 years* | | 5*% of all* | 10*% of all* | 5*% of all* | 80*% of all* |  * Does your municipality have digitalized data of the building stock?   Yes  No  Partly  Please explain your selection in more detail   |  | | --- | | *If answered Yes or Partly, please describe the digitalized data (e.g. if these are LOD1, LOD2, LOD3 data (LOD – level of detail used for modelling 3D objects).*  Your answer here. | |

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| 2.2 | Current energy management in buildings | * Do the municipality (if municipality is the owner of the building stock) or other owners (if the building stock is private owned) practice energy management?  |  | | --- | | Yes  No  Partly (depends on each building)  I don’t know |   Please explain your selection in more detail   |  | | --- | | *If answered Yes or Partly, consider answers to these questions:*   * *How is energy management organized? What measures are implemented?* * *Who is responsible and for what activities?* * *Why was this energy management model adopted? Any changes planned?*   *If answered No, what are the reasons for not having energy management in buildings?*  *If answered I don’t know, what are the reasons for the lack of information?*  In the municipality there are buildings where ventilation systems with recuperations are installed. In order to be able to operate these systems, it is necessary to observe various rules. Also, thermostats installed on radiators effectively control the heat supply to keep the room temperature constant.  In buildings where the head of an institution understands how to use new technologies or wants to save energy, he plans and trains his subordinates what to do and how it need to be done. Surveys and microclimate assessments are carried out. Mostly energy consumption planning is carried out in buildings, which must provide monitoring reports after project implementation.  At present, in some buildings, a constant room temperature of 21°C is determined, as well as in heat units, where possible, day and night modes are set with automatic control systems to reduce the heat consumption at time intervals when the building is not in operation. We strive, wherever possible, to monitor the activities in the heating units in order to avoid unreasonable consumption. For example, for hot water during the summer season, if there is no need for warm water. All activities are planned at the institution level. There are no internal rules of procedure or guidelines for planning the flow of energy resources.  There are currently no rules for identifying specific actions and rewarding results. Therefore, there is no responsible person. Since in some institutions its executives try to implement some energy efficiency measures, they take responsibility on a voluntary basis.  Such an energy management model has emerged as there were no guidelines and rules for energy efficiency standards in the municipality.  Planning and collecting data on all municipal buildings have now begun to identify the situation and begin to develop a SEAP. It is also planned to introduce an energy management system for public buildings belonging to the municipality.  The information collected at this time points to problems that prevent the implementation of such a system. Complete data on all heating systems is not available, as not all systems have heat meters, so the energy consumption can be determined theoretically. |  * Please evaluate the level of satisfaction of the involved stakeholders (municipality administration, energy manager, owner of the building, users and others) regarding the existing energy management practice?   Poor  Below average  Average  Good  Excellent  Please explain your selection in more detail   |  | | --- | | Speaking with the owners of buildings or heads of institutions, the attitudes of the employees involved are different. At first, there is a lot of confusion and sometimes even resistance, but later people get used to the new order and energy efficiency remains part of the daily routine.  In the town Municipality Council building, the total building temperature drop from 27°C to 22°C caused resistance because people were cold. Although 22°C is not at all a low temperature room, people were accustomed to an elevated temperature. After some time, employees get used of the temperature and nobody gets worse. This step in the building reduced energy consumption by 20 kWh. | |
| 2.3 | Need for improvement | * What are the key weaknesses and problems of the existing energy management model?  |  |  | | --- | --- | | Technical  Human resource  Interests, motivation | Incentives  Other: *please name* |   Please explain your selection in more detail   |  | | --- | | In the current energy management system, there are a lot of problems. There is no specific responsibility and targets for building energy performance. There are building technical staff who do not overcome the possibility of regulating the heating node. It affects the thermal energy consumption of the building.  Employee motivation is a small change, because it is an additional obligation to be followed at work. Often this resulted in dissatisfaction. It has been observed that younger employees are more likely to change, but those who will soon be retired do not want to change anything.  Since there are no rules, there is no incentive for employees to meet energy efficiency requirements. If there was a penalty or bonus system, most of the municipality's staff would address this issue.  There are plenty of places in municipality parishes that do not have thermal energy accounting. Of the 90 buildings, about 40buildings do not have a heat meter. Remote data readout is currently available in 15 out of 20 of the town buildings and one parish boiler house. In order to carry out monitoring and data analysis, which further forms the goals of the planning process, precise heat energy consumption is required. | |
| 2.4 | Positive aspects and achievements | * What are the key positive aspects and achievements in the existing energy management model?   When setting up an energy efficiency institution manager, he is more capable of motivating his employees as he knows their desires and opportunities. The stated goals are simple and understandable.  No additional staff is needed that motivates the institution to work more energy efficiently.  Technical staff plans to do their jobs without forgetting energy efficiency issues, for example, when choosing a light bulb or performing a service at a heat pump station. |
| 1. Future visions and expectations | | |
| 2.5 | Future challenges | * Which are the main challenges and future ambition regarding the building stock?   Empty buildings due to decreasing number of population  Need for new buildings due to increasing number of population  Poor technical condition of the buildings  Need to increase the awareness and knowledge of users of the buildings  Funds for implementation of energy efficiency measures  Climate issues  Other: *please name* |
| 2.6 | Next steps | * Have you already considered how to improve your current models of practice regarding energy management and the challenges selected in 2.4? What next steps are planned?   It is planned, together with the head of the institution and the person in charge, to establish a system for the energy management of the building for management issues. This way, indicating the actions required in the document, the goals to be achieved and the benefits of the employees.  Evaluate existing systems and install heat meters at key locations for monitoring and data analysis. After that, perform data analysis and offer institutions an energy profile of the building with graphs and basic input for the work to be done to improve the situation.  It is necessary to develop an energy plan for municipal buildings in order to determine global goals and baselines. Thus, planning objects that need to improve energy efficiency. Possibly include sections on private house owners and rental flats energy efficiency guidelines and stakeholder engagement discussions on these issues. |

**PART III STAKEHOLDERS AND MAJOR TARGET GROUPS**

|  |  |  |
| --- | --- | --- |
| NO | AREA | QUESTION |
| 1. Identification of stakeholders | | | |
| 3.1 | Relevant stakeholders | * Please identify relevant stakeholders involved into energy efficiency and climate action and coordination in the municipality:  |  |  | | --- | --- | | Public utilities  Energy system operators  NGOs  Construction companies  Financing institutions | Scientific institutions  Housing companies  Private investors  Other: *Regional Planning Region* |  * Are there already established work groups existing in the municipality which might be used for ActNow activities?  Yes  No   If answered Yes, please explain in more detail   |  | | --- | | A month and a half ago a Task Force on Energy Planning and Energy Efficiency was set up. The working group includes:   * Executive Director of the Municipality County Council as responsible for the development of the energy plan from the top management; * Energy manager as an energy plan developer; * As an energy plan maintainer:   + Head of Development and Projects Division,   + Water and waste management specialist in the Property Monitoring Division,   + Communal Engineer at Municipality Town Government,   + Administrative legal department senior staff specialist,   + Financial economist of Financial and economic department.   Other stakeholders (heat energy producers, building managers, urban and pagan public transport providers) will need to be involved in this work group. | |
| 3.2 | Stakeholder involvement | * Please evaluate the involvement of stakeholders in dialogue with municipality (applies to stakeholders identified in question 3.1; leave empty for stakeholders not relevant)  |  | Poor | Below average | Average | Good | Excellent | | --- | --- | --- | --- | --- | --- | | Public utilities |  |  |  |  |  | | Energy system operators |  |  |  |  |  | | NGOs |  |  |  |  |  | | Construction companies |  |  |  |  |  | | Scientific institutions |  |  |  |  |  | | Housing companies |  |  |  |  |  | | Private investors |  |  |  |  |  | | Other: *Regional Planning Region* |  |  |  |  |  |   Please explain your selection in more detail   |  | | --- | | *If answered Yes, consider answers to the following questions:*   * *How are stakeholders currently being involved in dialogue with municipality? Please, mention concrete examples of exchange and co-working. If possible, evaluate different levels of participation (information, consultation, dialogue, partnership according to the Code of Good Practice for Civil Participation in the Decision-Making Process available here https://www.osce.org/odihr/39400?download=true)* * *What are their roles?* * *What are their interests/lobby?* * *If the level of involvement is low, why there a lack of dialogue between the municipality and relevant stakeholders?*   The scientific institutions have engaged in the dialogue as two projects are being implemented together. The implementation of these projects provides for close cooperation and exchange of information. One of these projects is Act Now and the other LowTEMP. Riga Technical University is interested in obtaining energy consumption data and providing high-quality consultations to the municipality in order to develop an energy plan.  The Regional Planning Region develops spatial planning documents, which require information on the energy consumption of buildings from municipality. As well as providing training and experience for local government employees and beyond.  The low level in the negotiations is related to the lack of local government staff and lack of awareness on these issues. To date, the municipality has not conducted any discussions on energy efficiency issues with the parties involved. | |
| 3.3 | Citizen involvement | * Are municipality citizens currently being involved in dialogue with municipality?   Yes  No  Please explain your selection in more detail   |  | | --- | | *If answered Yes, how are citizens currently being involved in dialogue with municipality? Please, mention concrete examples of actions (e.g. meetings, exchange, cooperation).*  *If answered No, why is there a lack of dialogue between the municipality and general public?*  Because, to date, there has been no discussion of these issues and it has not been important for the municipality to initiate dialogue with general public.  Currently, an application is being developed that will allow people to communicate with local government in problematic situations. In this application it will be possible to specify deviations from norms, infrastructure defects, as well as positive aspects in municipality.  On the other hand, the lack of interest of stakeholders is because they feel that they interfere in their work, where the municipality has no business. |      * Please estimate the acceptance/interest of citizens towards renewable energy and energy efficiency   Poor  Below average  Average  Good  Excellent  Please explain your selection in more detail   |  | | --- | | The municipality has introduced internal rules of procedure, which involve co-financing by the municipality with a solution to energy efficiency issues. No support has been applied to this support until now.  The only thing dialogue with the public is the use of street lighting in different hours of the day. | |
| 1. Identification of major Act Now target groups | | | |
| 3.4 | Target groups for the Act Now project | * Please identify and describe from the selected relevant stakeholders in 3.1 the major target groups specific for your municipality that will be addressed in the Act Now project (e.g. the citizen stakeholders can be disaggregated to: young families with children, families with empty nesters, singles, students, inhabitants of smaller villages, users of public buildings etc.).   Energy system operators:   * Companies supplying heat in the town and “Z” village, * Municipal boiler houses.   Housing companies:   * self-government corporation municipal houses.   Scientific institutions   * Riga Technical University.   Users of public buildings |
| 3.5 | Target group challenges | * What are the main Act Now challenges for these target groups?   Involve energy efficiency talks by working together on data sharing on energy consumption and energy production.  Prove to the heat energy supplier that they should think about increasing the energy efficiency of buildings and heating system.  Delegation of responsibilities to local government employees and stakeholders to create quality energy planning and energy management systems.  To help understand the role of the municipality in the planning process.  Collection of data for scientific purposes for qualitative analytical work. |
| 3.6 | Ideas for solutions | * Do you already have in mind any potential solutions for the above described challenges?   Yes  No  Please explain your selection in more detail   |  | | --- | | *If answered Yes, what could be the main solutions to these challenges?*  At the very beginning, it is necessary to start negotiations, as there is at present no information on previous negotiations in this area with central heating system companies and housing company,  To develop workshops on the development of planning documents and their necessity, including the topics of discussion on energy efficiency and basic planning principles.  Install heat meters and remote readers for accurate monitoring. | |

**PART IV MUNICIPALITY COMPETENCES AND RESOURCES**

|  |  |  |
| --- | --- | --- |
| NO | AREA | QUESTION |
| 4.1 | Energy and climate project management in municipality | * Please describe, which departments and/or experts are involved in planning and implementation of energy efficiency and climate related projects in municipality and how:   General project managers: *please describe their responsibilities*  Climate and energy project managers: *please describe their responsibilities*  Municipality energy manager: *please describe his/-(er) responsibilities*  Building technical staff: *please describe their responsibilities*  Planning and development division: *please describe responsibilities*  Other: Other municipal departments*: describe his/-(er) responsibilities*  Please explain your answer in more detail   |  | | --- | | *Consider answers to following questions*   * *Which department/staff members are involved? “* * *What are their responsibilities?* * *How is exchange and interdisciplinary co-working ensured?*   General project manager: Attraction of financial resources for implementation of energy efficiency and climate-related measures.  Municipality energy manager: Collection of energy consumption data, implementation of energy efficiency and climate related projects and achievement and control of indicators foreseen in projects.  Planning and development division: Determining priorities and ensuring the realization of projects in the Municipality Council and financial institutions, as well as ensuring the maintenance of planning documents in the municipality.  At present, the collaboration between the department staff is ensured by mutual communication and instructions from the head of the department. There are no common strategies for co-operation in division, but they are planned to be developed.  Then, when the project application has to be submitted to a financial institution, then the council's decision on co-financing is required. For this reason, it is necessary to cooperate with the finance and economics department in order to finance the total municipal budget.  During the implementation of projects, it is often necessary to make public procurement for the purchase of services or materials. In such cases, you must co-operate with the Procurement Division.  In order to prepare the work performance contracts with builders or other service providers, co-occurring with the Administrative Law Department. |  * Is there a specific commitment about the responsibility of municipality employees related to awareness or engagement to support energy saving?  Yes  No   If answered Yes, please explain in more detail   |  | | --- | | Your answer here. |  * Is there a specific personnel/unit assigned to work with energy efficiency and climate projects?   Yes, *please name the position*  No, the work integrated into daily routine of other employees  If answered Yes, is this a temporary or permanent employment?  Temporary position for insert for how long  Permanent position |
| 4.2 | Joining Act Now project | * Who decided to join the Act Now project in your municipality?   The City Council  A department in the municipality  Other: *please name*   * Has the ActNow project led to new employment?   Yes  No  If answered Yes, please explain in more detail   |  | | --- | | The Act Now project was a recruited energy manager. The main job responsibilities are the implementation of the Act Now project. | |
| 4.3 | Capacity building | * Please evaluate the existing knowledge and awareness about climate and energy efficiency related aspects among the municipality staff in the following topics  |  | Poor | Below average | Average | Good | Excellent | | --- | --- | --- | --- | --- | --- | | Awareness about climate & energy issues in general |  |  |  |  |  | | Awareness about energy management |  |  |  |  |  | | Awareness about energy efficiency in buildings |  |  |  |  |  | | Awareness about funding sources & financial aspects of climate and energy efficiency projects |  |  |  |  |  | | Technical competence |  |  |  |  |  |  * Are there any measures being implemented to increase the internal capacity of municipality staff regarding energy and climate issues (e.g. peer-to-peer learning, mentoring visits, work shadowing, and themed training)?   Yes  No  Not currently, but planned  Please explain your selection in more detail   |  | | --- | | *If answered Yes, what measures are being implemented (e.g. software to monitor energy consumption, website, publications, events/workshops)?*  *If answered No, what is the reason for not implementing capacity building measures?*  *If planned, which supportive measures are planned to improve the awareness and know-how?*  At the beginning of this year, a small meeting was held for all Municipality Council employees to inform about energy efficiency issues. Arrivals were voluntary, so about 21 people arrived from around 100 employees.  It is planned to organize informative workshops before the heating season and the heating season in order to inform employees of all institutions about energy efficiency issues and give an insight into the consumption statistics of buildings used by institutions.  It is necessary to develop a systematic approach to the collection and visualization of data graphically in order to forward it to the head of the institution and technical staff for analysis. |  * Are there any measures being implemented to increase the capacity of stakeholders and citizens regarding energy and climate issues?   Yes  No  Not currently, but planned  Please explain your selection in more detail   |  | | --- | | *If answered Yes, what measures are being implemented (e.g. software to monitor energy consumption, website, publications, events/workshops)?*  *If answered No, what is the reason for not implementing capacity building measures?*  *If planned, which supportive measures are planned to improve the awareness and know-how?*  It is planned to hold informative meetings with stakeholders to inform about the processes in the municipality, energy efficiency and possible directions of cooperation.  It is possible to develop internal rules for co-financing NGO project applications aimed at implementing energy efficiency measures.  To organize experience exchange visits to other municipalities and countries. |      * Is there any guidance to the private sector (house owners, SMEs, etc.) to access public funding schemes?   Yes  No  Not currently, but planned  Please explain your selection in more detail   |  | | --- | | The website of the Ministry of Economics contains information for stakeholders involved. Including the implementation of housing energy efficiency improvement measures (*https://www.em.gov.lv/lv/nozares\_politika/majokli/*).  They provided information on active public housing and housing management companies on available public funding. The information is provided by the Ministry of Economics and Bank Altum, which provides the state guarantee for the project realization (*https://www.altum.lv/lv/pakalpojumi/energoefektivitate/daudzdzivoklu-maju-energoefektivitate-pamatinformacija/par-programmu/*). | |

Thank you for your time filling-in answers!

The *Act Now!* project team

## **Annex I**

**Existing energy management models and future visions in the selected building segment (optional)**

**Please use this table to describe building stock in the selected focus area. For different building stocks use separate tables.**

| NO | AREA | QUESTION |
| --- | --- | --- |
| 1. Existing energy management models | | |
| 2.1 | Description of the building stock | *Please describe briefly building stock in the selected building segment for your municipality. Consider answers to these questions:*   * Please select the building segment (according to the selection on p.2 of the questionnaire)   Municipal buildings  Private house owners and rental flats  House associations / public house  Commercial buildings  Other: *please name*   * What is the function of chosen building stock?   Your answer here.   * Do you know how many buildings are there?   Yes, there are insert number buildings in the selected building segment in our municipality  I don’t know the exact number of buildings but there are around insert approximate number buildings in the selected building segment in our municipality  I don’t know the number of buildings because such information is not collected in the municipality  Other answer: *please name*   * Please give an indicative evaluation of the age of the building stock:  |  |  |  |  | | --- | --- | --- | --- | | *Less than 5 years old* | *5-10 years old* | *10-20 years old* | *Older than 20 years* | | insert number*% of all* | insert number*% of all* | insert number*% of all* | insert number*% of all* |  * Does your municipality have digitalized data of the building stock?   Yes  No  Partly  Please explain your selection in more detail   |  | | --- | | *If answered Yes or Partly, please describe the digitalized data (e.g. if these are LOD1, LOD2, LOD3 data (LOD – level of detail used for modelling 3D objects).*  Your answer here. | |
| 2.2 | Current energy management in buildings | * Do the municipality (if municipality is the owner of the building stock) or other owners (if the building stock is private owned) practice energy management?  |  | | --- | | Yes  No  Partly (depends on each building)  I don’t know |   Please explain your selection in more detail   |  | | --- | | *If answered Yes or Partly, consider answers to these questions:*   * *How is energy management organized? What measures are implemented?* * *Who is responsible and for what activities?* * *Why was this energy management model adopted? Any changes planned?*   *If answered No, what are the reasons for not having energy management in buildings?*  *If answered I don’t know, what are the reasons for the lack of information?*  Your answer here. |  * Please evaluate the level of satisfaction of the involved stakeholders (municipality administration, energy manager, owner of the building, users and others) regarding the existing energy management practice?   Poor  Below average  Average  Good  Excellent  Please explain your selection in more detail   |  | | --- | | Your answer here. | |
| 2.3 | Need for improvement | * What are the key weaknesses and problems of the existing energy management model?  |  |  | | --- | --- | | Technical  Human resource  Interests, motivation | Incentives  Other: *please name* |   Please explain your selection in more detail   |  | | --- | | Your answer here. | |
| 2.4 | Positive aspects and achievements | * What are the key positive aspects and achievements in the existing energy management model?   Your answer here. |
| 1. Future visions and expectations | | |
| 2.5 | Future challenges | * Which are the main challenges and future ambition regarding the building stock?   Empty buildings due to decreasing number of population  Need for new buildings due to increasing number of population  Poor technical condition of the buildings  Need to increase the awareness and knowledge of users of the buildings  Funds for implementation of energy efficiency measures  Climate issues  Other: *please name* |
| 2.6 | Next steps | * Have you already considered how to improve your current models of practice regarding energy management and the challenges selected in 2.4? What next steps are planned?   Your answer here. |