



## Group Procurement guide - A guide for One-stop-shops



**City of Lappeenranta**

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## About RenoWave



The projects “One-Stop-Shop extended model to increase the multi-apartment building stock renovation in the BSR” (Renowave) establishes cooperation among homeowners, construction companies, energy agencies, and public authorities to initiate more energy-efficiency renovations in multi-apartment buildings. The main result of the RenoWave project will be a One-Stop-Shop (OSS) model that includes traditional and additional OSS services that cover all the steps necessary to initiate and implement energy-efficiency renovation projects in multi-apartment buildings. The RenoWave project is implemented under the Interreg Baltic Sea Region Program 2021-2027 with the support of the European Regional Development Fund. Implementation time of the RenoWave project is January 2023 to December 2025.

### Project partners

1. County Board of Dalarna (Sweden)
2. City of Lappeenranta (Finland)
3. Vidzeme Planning Region (Latvia)
4. Association of Communes and Cities of Małopolska Region (Poland)
5. Magistrat of the City Bremerhaven (Germany)
6. Baltic Environmental Forum Latvia (Latvia)
7. Housing Initiative for Eastern Europe (Germany)
8. Let's renovate the city NGO (Lithuania)
9. Polish Foundation for Energy Efficiency (Poland)
10. North Sweden Energy Agency (Sweden)
11. Development Centre of Võru County (Estonia)

### Summary of Deliverable

The Guide for Group Procurement of Energy Investments in multi apartment buildings provides useful instructions about how HOMAB's (=Home-Owned-Multi-Apartment-Buildings), OSS and all relevant stakeholders can identify the existing renovation needs of the building and cooperate with other HOMAB's who have similar needs. The Guide offers practical advice and support in the form of a visual and easily understandable process chart, which details shall be clarified to carry out joint group procurements.



[www.interreg-baltic.eu/project/RenoWave](http://www.interreg-baltic.eu/project/RenoWave)

***The Renowave project establishes cooperation among homeowners, construction companies, energy agencies, and public authorities to initiate more energy efficiency renovations in multi apartment buildings.***



## What is the idea of Group Procurement?

**This Guide is for all relevant stakeholders, who are interested in to promote group procurements. The Guide aims to provide step-by-step guidance and support for example for OSS (=One Stop Shop) service providers and for HOMABs to understand how to implement group procurements.**

The Guide offers practical advice in the form of a visual and easily understandable process chart, which shall be considered to carry out successful group procurement process. It facilitates understanding the idea of group procurements, i.e. how HOMABs can gain economic advance and save money by achieving lower unit prices and how OSS can support the overall process.

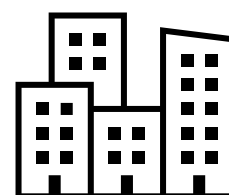
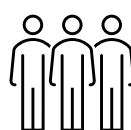
Furthermore, there also exist other significant indirect benefits, like using of working hours by the building manager and/or board members for the whole group procurement process. The advantage of collective work may be remarkable instead of implementing the same steps building by building. This, of course, depends on the estimated price of working hours. The Guide supports the implementation of group procurements, especially when several HOMABs (mostly of the same age) have similar renovation, energy efficiency or renewable energy targets. At the same time all these activities conducted by HOMABs contributes to reduced carbon emissions and overall environmental sustainability.

The content of Guide has been piloted and tested by the city of Lappeenranta, Finland. The city provides energy advisor services as OSS for the whole South Karelian region. Energy advisor services have established the local collaboration forum for HOMABs at the beginning of 2021. Since then, regular forum meetings and joint activities have taken place, having about 30 forum events until the end of 2024. During the heating period of 2023 – 2024 energy audits were conducted for 13 voluntary HOMABs. Based on the results of the audits, a more detailed planning phase of group procurement was implemented during the spring of 2024.

The plan for implementing four pilot group procurement measures (solar panel installation, exhaust air heat pumps, powered roof extractor and renewing of heat exchanger equipment) was presented at the end of June 2024 for the HOMABs. All the steps and tips presented on the process chart (link below) and the next pages of this guide are based on experiences gathered during piloting at Lappeenranta region. The “Guide for Group Procurement of Energy Investments in multi apartment buildings” is a natural continuation of the “Guide for Establishing Collaboration Forums “. They can, of course, also be used separately as stand-alone-guides.

The Group Procurement process chart can be opened [here](#).

How to establish a collaboration forum. Find the guide [here](#).





## Guide for group procurement - a step-by-step introduction

### Step 1



**Identify & decide if a group procurement can be of interest for the group of buildings that the OSS support**

#### Useful tips for step 1:

- the long-term-renovation plan should be drafted for the period of next 3-5 years in cooperation with board members and the building manager
- the long-term-renovation plan, 3-5 most relevant EE-measures / renovations should be included
- support the HOMAB in updating and reviewing the plan regularly and keep it always on the agenda of the annual meeting of a building association
- the plan shall be familiar to all residents in the building and approved by most participants of the annual building association meeting. In many cases, the legal majority means 50 % +1 approvals.
- Inform the HOMAB on funding options to implement planned measures
- consider starting to gather agreed renovation fees from apartment owners beforehand to collect initial funding and to have better loan terms

- make sure that all relevant documentation regarding the history of the building has been documented and uploaded to the joint folder (for example, provided by the building manager company). This means structural drawings, documentation of all implemented renovations (both in common spaces and in private apartments), etc.

### Step 2



**Discuss and decide if HOMABs should be invited to be part of a group procurement**

#### Useful tips for step 2:

- group procurements are recommendable, especially when HOMABs have similar renovation needs and goals.
- by implementing group procurements, HOMABs are most likely able to achieve lower unit prices, cost savings, better profitability and shorter pay-back-time
- invite HOMABs to take part of existing collaboration forum in your region or establish a forum



## Step 3

**Support HOMABs in taking the decision to join a group procurement and to join a collaboration forum**

### Useful tips for step 3:

- organize sharing of know-how regarding energy efficiency and renovation measures
- organize sharing of experience and good practices with others
- invite experts to learn more
- discuss the renovation needs and the option of implementing group procurements



## Step 4

**Discuss and decide with the board of the HOMAB if the HOMAB should carry out an energy audit.**

### Useful tips for step 4:

- the energy audit report clarifies the status of the building and proposes practical energy efficiency measures or other renovations to be considered to implement
- by conducting an energy audit, a lot of comprehensive data regarding the building is gathered on the same document
- the energy audit report also helps to consider if your building should join the preparation phase of group procurements in cooperation with several other HOMABs
- in the forum meeting, discuss beforehand all the phases of the whole process, starting from energy

audits to practical implementation of group procurements. If needed, invite an external expert (for example, your local energy advisor) to make a presentation

- ensure the number of housing associations participating in the energy audits. Estimate the preliminary audit costs.
- end tender requests for energy audits. Try to receive at least three offers. Find the information of approved suppliers
- specify exactly in the tender request what shall be reported as the result of the energy audit. For example, the report should contain an easily understandable list of proposed energy efficiency measures or renovations.
- clarify the model/template/instructions to be used for reporting the results. If possible, ask the supplier to use the template provided, for example, by your national energy authority
- review carefully received offers and select the best one which fulfils the requests of the tender
- support HOMABs in signing a contract with the selected supplier
- participate in the inspections, for example, when the audit site visit will be done in your building
- provide any requested documents/materials related to your building
- preferably schedule the energy audit to be carried out during the heating season, for example, the district heating system can be assessed better during winter.



## Step 5

**Assist and support HOMABs how to review the results of the energy audit carefully and how to focus especially on the proposed measures. Support them to decide if they could proceed with these results.**

### **Useful tips for step 5:**

- at least board members and the building manager should participate in the review meeting and decide on further actions. If proposed measure(s) deviate significantly from the approved long-term-renovation plan, discuss the matter at the annual housing association meeting (if needed, organize additional meetings)
- organize a common forum workshop where the main results of the audits are reviewed together
- the workshop will be prepared by the forum leader, who will gather a summary of the audit results and prepare a proposal for possible group procurements
- active discussions in which measures can be implemented together as a group procurement. All participants shall give their comments.
- advise HOMABs to agree on the deadline when they will inform their decision on whether they are participating in the further planning of the group procurement(s)

## Step 6

**Support HOMABs in taking the decision (at the latest according to the agreed deadline) whether their building association wants to proceed to the planning phase of group**

**procurement and which of the proposed measures(s) they are involved in.**

### **Useful tips for step 6:**

#### **Planning phase: tendering and content**

- assist HOMABs to organize a common forum workshop including the following topics:
- building up a group procurement organization
- launching the planning phase for group procurements
- launching the tendering process to get a consultant for the planning phase (according to the same principles as energy audits)
- ➔ **advise them to send tender requests for potential planning phase consultants.**
  - try to receive at least three offers. Consider if it's beneficial to use the same organisation that performed the energy audits. Note that the implementation of the planning phase requires time
- assist them to specify exactly in the tender request what shall be the result of the planning phase provided by the chosen consultant
  - comparison of proposed investments/measures
  - preliminary costs and price estimates
  - necessary ancillary work
  - permits by authorities and other documents, which are required before starting the implementation phase
  - proposal of financing sources/methods
  - gathered enough (min 3) of tenders provided by service



providers for the implementation phase and assistance in the selection process. Note some periods of the year may be challenging for suppliers to provide offers if they are at the same time implementing installations. Enough time to gather tenders is needed.

**At least the following information shall be included in tenders:**

- ➔ presentation of technologies and equipment to be utilized in the implementation phase (based on details presented in tenders above)
  - ➔ clear specification of how the pricing differs for individual procurement/group procurement. The offer must indicate the economic benefit of group procurement e.g. how group procurement affects unit prices
  - ➔ comparison of the content. The cheapest one is not necessarily the best one if the content does not sufficiently meet the requirements
  - ➔ ask for references from previous similar projects
- define the deadline when the plan must be ready
  - agree on a convenient number of common workshops to present the progress of the planning phase
  - participate in the workshops during the planning phase and be active in the meetings: make questions, give comments, ask for more details, etc.
  - gather and submit any additional documents/materials requested

regarding your housing association to ensure the smooth progress of the planning phase

- participate in on-site visits to your building and be ready to clarify some relevant issues and provide any additional documents

**➔ When all this is fulfilled, the planning phase is completed.**

## Step 7



**Support HOMABs to review the results of the planning phase by the board members or by additional housing association meetings. Encourage them to taking the decision to move on to the implementation phase based on the results of the planning phase.**

### Useful tips for step 7:

Advise HOMABs to conduct following Preparations before the signing of the contract

- be familiar with the offers received and select the best one in terms of overall economy, which meets the conditions of the request. Contracts with service providers for the implementation phase are made based on the results of the planning phase
- check that the supplier has no problems with tax or pension insurance contributions or other unsolved discrepancies
- sign a contract with the selected supplier





## Assist HOMABs how to organize the supervision of work progress

- agree who is the contact person representing the housing association (building manager, board chairman or board member)
- clarify who is the primary contact person for the supplier (shall be defined in the contract)
- actively monitor that the work is progressing according to the contract
- communicate with the personnel and management of the implementation phase. In practical matters, active communication is important before problems/misunderstandings
- agree on the parking spaces, storage of items related to renovation, electricity & water usage, keys to doors, daily cleaning, waste management, toilets & washing places for installation personnel (all of these should be specified in the agreement)
- agree the procedure in case of accidents or damages during work (also in the agreement)
- review of work progress, approval of intermediate stages and keeping the agreed schedule
- procedures for receiving and documenting completed work (also in the agreement)

## Step 8



**Advise HOMABs how they are able to decide whether they can accept the work is completed.**

### Useful tips for step 8:

- check details together with the supplier that all work phases have been carried out per the contract
- complain in written form to the supplier about all detected deficiencies and demand that they be corrected
- accept payment of the invoice after the supplier has fulfilled all its obligations and corrected any complaints
- read all instructions regarding installed equipment. If needed, agree on the user training with the supplier (this shall also be defined in the contract).







## Story of group procurement piloting experiences in Lappeenranta, Finland

### Background of local collaboration forum

In Lappeenranta, the collaboration forum for housing associations is a fruitful way to promote the quality of living cost-efficiently. The collaboration forum was established at the beginning of 2021. In the first phase, the focus was to exchange information, good practices, experiences and know-how for all members. These comprehensive targets were ensured by inviting experts, authorities, and companies to provide information about the best existing practices and solutions. The collaboration forum has been an excellent channel where representatives of housing associations meet each other by discussing various topics related to energy efficiency, renewable energy sources and the implementation of renovations. One of the original practical targets for the forum was to implement jointly agreed energy efficiency measures.

### Connection to the Renowave project and implementation of energy audits

Later, since the beginning of 2023, the forum activities were combined with Renowave - project. The goal was to pilot and demonstrate renovation measures as group procurement for the buildings owned by collaboration forum members. These targets started to take practical steps forward in the autumn of 2023 with the support of the



Renowave project. During October – November 2023, energy audits were conducted for 13 buildings. The audit reports included a comprehensive status review of each building. The following headlines were presented and handled in every detail in the audit reports (focus on suggested measures):

- suggested measures
- recommendations for further clarifications
- heating source
- air ventilation
- water system
- energy and water consumption
- lightning

Example of audit report here (available only in Finnish): [Example of energy audit report](#). As the result of audits, the following measures (for how many building associations) were suggested to implement as group procurement:

- solar panel installation (11)
- exhaust air heat pumps (9)
- powered roof extractor (8)
- renewing of heat exchanger equipment (5)

It is also remarkable that each audit report included a lot of minor renovation proposals, which can be implemented at once for buildings without any costs or with only low costs.

Attached are a few photos and videos (spoken in English) taken during the energy audits at Salmikatu. Audits were conducted by [Energy Plus Engineering Oy](#) based on the tendering process.



Link to the video available [here](#).

### Analysing energy audit results and decisions on further activities

The final result of the audits was reviewed on 22<sup>nd</sup> Jan 2024 at the local forum meeting, which was organised as a hybrid event. After lively discussions, the joint conclusion was that each board of the housing association would decide by the end of Feb 2024 which of four suggested measures (one or more) they want to proceed as the group procurement.

The next forum meeting was agreed to take place on 14<sup>th</sup> March 2024. In the meeting, the main topic was to summarize the decisions made by each board. As a result, 11 forum members were still interested in promoting group procurements. In two buildings that decided not to continue the process, there were no reports of such measures which could be implemented as group procurement. It was also decided that all four suggested measures would be promoted and further investigated how implementation could be carried out. For this purpose, an external expert needed to be selected, and the tendering process was started to find a convenient supplier to draft a more detailed plan for the implementation phase.



### Tendering request for the planning phase

A tendering request was sent to three potential suppliers in the middle of March, and the selection of the chosen expert was made at the end of March. The planning phase was expected to provide a detailed project plan. The translation of the tendering request is below:

*The city of Lappeenranta is requesting a tender for the further planning of the investments proposed based on the energy audits conducted at the end of 2023. Energy audits were carried out for 13 housing associations, and four energy efficiency measures were proposed to be implemented as a group procurement:*

- 1) Solar panel installation
- 2) Exhaust air heat pumps



3) Powered roof extractor

4) Renewing of heat exchanger equipment

*The housing companies have formed their opinion on the proposed measures (more information at the end of the tender request). Based on these, the planning phase will be started, and two separate offers will be requested for the implementation of this phase (below):*

*Option A: In the planning phase, all four proposed group procurement measures will be promoted. Option B: In the planning phase, measures 1 and 4 will be promoted as group procurement.*

*In both options A and B, the planning phase must contain at least:*

- *comparison of proposed investments*
- *preliminary cost and price estimates*
- *necessary ancillary work (e.g. execution of roof load-bearing calculations)*
- *the documents and reports required to start the implementation phase*
- *presentation of the financing sources and implementation options*
- *tendering and assisting in the selection of the service provider for the implementation phase*

*During the planning phase, two workshops shall be organized together with housing associations.*

*As the result of the planning phase, a project plan must be presented. The project plan identifies the measures to be conducted at the implementation phase of the group procurement and the costs for the measures if the procurement is carried out for one housing association or as a group procurement for several housing associations.*

### **The implementation of the planning phase**

The planning phase with the chosen supplier started on the 15<sup>th</sup> of April, and the target was the detailed plan would be ready to be presented by the end of June. A lot of additional information was needed to draft plans, and a data request was sent to all group procurement participants to facilitate the planning process.

Based on received data, other relevant information and details gathered on-site - visits at each building, the external experts drafted the plan for the implementation phase with professional calculation tools. Below are a few photos and videos taken during site visits at Maininkikatu and Vainöläkatu.



**Links to videos from Maininkikatu 9:**

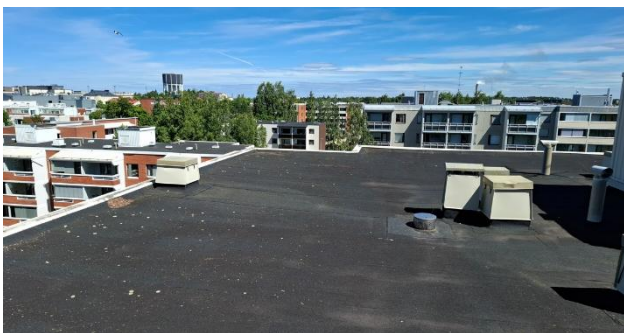
[Video 1](#)

[Video 2](#)





[Video of Väinöläkatu 5 inspection](#)



### **The first workshop during the planning phase**

The first workshop and status review of the planning phase was organised on 29<sup>th</sup> May, including a rough estimation of investment costs and profitability calculations for each measure.

- 1) Powered roof extractors
- 2) Renewing of heat exchanger
- 3) Exhaust heat pumps
- 4) Solar panel installation  
(general building electricity and established energy community)

Each topic included a very detailed presentation of the technical principles of equipment, preliminary price estimations and justification for the profitability calculations. Furthermore, the planned next steps before the second workshop were introduced and agreed upon. These planned actions included the tendering process of all four planned

measures (all as single procurement and group procurement) and own personal presentation of results for each of the participants.

### **The second workshop during the planning phase**

The second workshop took place on 25<sup>th</sup> June, including the following topics:

- 1) Results of the tendering process for each of the four measures
  - 2) Financing and implementation options for housing associations
    - ESCO services
    - Leasing
    - PPA, power purchase agreement
  - 3) Discussion how to proceed with investments
- As a result of tendering requests, the following number of tenders were received:
- Number of tender requests sent / tenders received/tendering company name:

- 1) Powered roof extractors  
3 / 1 / I-huolto Asennus Oy
- 2) Renewing of heat exchanger equipment  
5 / 3 / Cancera Oy , Espit Oy , Corecon Oy
- 3) Exhaust heat pumps  
4 / 2 / Nanea Oy, Proheat Oy
- 4) Solar panel installation  
5 / 2 / Novoka Oy, Nanea Oy





### **The forum meeting on 17<sup>th</sup> October**

In the forum meeting on 17<sup>th</sup> Oct, the feedback provided by housing associations was summarised. Three of them were still interested in continuing: As Oy Vuoksen Kartano, As Oy Louhenkartano and As Oy Maininkikatu 9. The rest were no longer interested, and the main reasons not to continue were the following:

- potential saving-% is too low, or there aren't savings at all
- pay-back time too long
- HOMABs have prioritised other investment plans to be implemented
- several tenants in many apartments, the owner does not get any gain from solar panel investment

### **Status at the end of November 2024**

Status review on 30<sup>th</sup> Nov 2024: Renowave - the project will exactly follow how the implementation phase continues by the three housing associations mentioned above. Renowave -the project is not able to support the practical implementation phase economically. Local energy advisors have agreed to regular follow-up, which means the implemented measures will be reported and communicated when they have been finalised.





## ATTACHMENT

In summary, the costs and potential saving-% as group procurement were the following:

### Summary of results POWERED ROOF EXTRACTOR (Investment & single/group procurement / saving-%)

POWERED ROOF EXTRACTOR / tender by I-huolto Asennus Oy	
Address of the HOMAB	Investment costs (including VAT 24 %)
As Oy Louhenkartano, Väinölänkatu 5-9, Lappeenranta	5474 euros
As Oy Tyysterniementie 3, Tyysterniementie 3, Lappeenranta	5140 euros
As Oy Vuoksen Kartano, Heikinkatu 15, Imatra	11067 euros
As Oy Lappeenrannan Snellmaninkatu 29, Snellmaninkatu 29, Lappeenranta	5475 euros
Single procurement investment totally	27156 euros
Group procurement investment totallt	26070 euros

Potential saving - % as group procurement 4 %

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### Summary of results RENEWING OF HEAT EXCHANGER EQUIPMENTS (Investment & single/group procurement / saving-%)

RENEWING OF HEAT EXCHANGER EQUIPMENTS / tenders by Cancera Oy & Espit Oy & Corecon Oy			
Address of the HOMAB	Investment costs (including VAT 24 %) Cancera Oy	Investment costs (including VAT 24 %) Espit Oy	Investment costs (including VAT 24 %) Corecon Oy
As Oy Louhenkartano, Väinölänkatu 5-9, Lappeenranta	12735 euros	14632 euros	15004 euros
As Oy Tyysterniementie 3, Tyysterniementie 3, Lappeenranta	12313 euros	13020 euros	14260 euros
As Oy Koulukara, Koulukatu 24-26, Lappeenranta	13268 euros	14632 euros	15128 euros
As Oy Lappeenrannan Snellmaninkatu 29, Snellmaninkatu 29, Lappeenranta	12474 euros	14136 euros	14136 euros
Single procurement investment totally	50790 euros	56420 euros	58528 euros
Group procurement investment totally	50790 euros	56420 euros	58032 euros

Potential saving - % as group procurement 0 % / 0 % / 1 %

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## Summary of results EXHAUST HEAT PUMPS (Investment & single/group procurement / saving-%)

EXHAUST HEAT PUMPS / tenders by Proheat Oy & Nanea Oy		
Address of the HOMAB	Investment costs (including VAT 24 %) Proheat Oy	Investment costs (including VAT 24 %) Nanea Oy
As Oy Louhenkartano, Väinölänkatu 5-9, Lappeenranta	114900 euros	106144 euros
As Oy Maininkikatu 9, Maininkikatu 9, Lappeenranta	107900 euros	109179 euros
As Oy Vuoksenkartano, Heikinkatu 15, Lappeenranta	241900 euros	205523 euros
As Oy Salmikatu 2, Salmikatu 2, Lappeenranta	120900 euros	104175 euros
Single procurement investment totally	585600 euros	525021 euros
Group procurement investment totally	568618 euros	525021 euros

Potential saving - % as group procurement 2,9 % / 0 %

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## Summary of results SOLAR PANEL INSTALLATION (Investment & single/group procurement / saving-%)

SOLAR PANEL INSTALLATION / tender by Novoka Oy			
Address of the HOMAB	Size of the plant_Option_1 only general building electricity	Single procurement price (VAT 25,5 %)	Group procurement price (VAT 25,5 %)
As Oy Louhenkartano, Väinölänkatu 5-9, Lappeenranta	10 kWp	-	13200 euros
As Oy Maininkikatu 9, Maininkikatu 9, Lappeenranta	25 kWp	32900 euros	29900 euros
As Oy Saimaanhelmi, Marssitie 9, Lappeenranta	10 kWp	-	16500 euros
As Oy Saimaanvälke, Marssitie 13, Lappeenranta	10 kWp	-	16500 euros
As Oy Salmikatu 2, Salmikatu 2, Lappeenranta	10 kWp	14500 euros	13200 euros
As Oy Tietäjätupa, Tietäjänkatu 8, Lappeenranta	10 kWp	-	13200 euros
As Oy Tyysterniementie 3, Tyysterniementie 3, Lappeenranta	10 kWp	14500 euros	13200 euros
As Oy Vuoksen Kartano, Heikinkatu 15, Imatra	25 kWp	-	43300 euros
As Oy Yrjönkatu 11, Yrjönkatu 11, Lappeenranta	10 kWp	-	13200 euros
Single procurement investment totally		61900 euros	57600 euros
Group procurement investment totally			172200 euros

Potential saving - % as group procurement 9 %

| 8





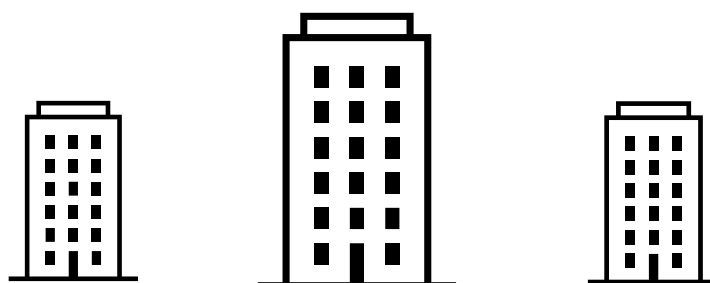
## Summary of results SOLAR PANEL INSTALLATION (Investment & single/group procurement / saving-%)

SOLAR PANEL INSTALLATION / tender by Novoka Oy			
Address of the HOMAB	Size of the plant_Option_2 energy community established	Single procurement price (VAT 25,5 %)	Group procurement price (VAT 25,5 %)
As Oy Louhenkartano, Väinöläkatu 5-9, Lappeenranta	15 kWp	18800 euros	16900 euros
As Oy Maininkikatu 9, Maininkikatu 9, Lappeenranta	25 kWp	32900 euros	29900 euros
As Oy Saimaanhelmi, Marssitie 9, Lappeenranta	25 kWp	32000 euros	29500 euros
As Oy Saimaanväike, Marssitie 13, Lappeenranta	25 kWp	32000 euros	29500 euros
As Oy Salmikatu 2, Salmikatu 2, Lappeenranta	10 kWp	14500 euros	13200 euros
As Oy Tietäjätupa, Tietäjänkatu 8, Lappeenranta	15 kWp	18800 euros	16900 euros
As Oy Tyysterniementie 3, Tyysterniementie 3, Lappeenranta	10 kWp	14500 euros	13200 euros
As Oy Vuoksen Kartano, Heikinkatu 15, Imatra	75 kWp	90800 euros	82900 euros
As Oy Yrjönkatu 11, Yrjönkatu 11, Lappeenranta	15 kWp	18800 euros	13200 euros
Single procurement investment totally		273100 euros	
Group procurement investment totally			248900 euros

**Potential saving - % as group procurement 9 %**

| 9

The most profitable measure, according to tenders, was the installation of solar panels with a saving potential of **~ 9 %**, this potential was valid both for option\_1 (only general building electricity) and option\_2 (energy community established). In option\_2, the plant sizes are bigger because the produced energy is planned to be utilized also by apartments joining the energy community. For powered roof extractors, the saving potential was approximately **~ 4 %** for exhaust heat pumps **~ 0...3 %** and for renewing of heat exchanger equipment **~ 0...1 %**, depending on the supplier. Also notable is that: a) the content of tenders varies between suppliers, which means that prices are not directly comparable b) the presented saving potential includes only the saving-% based on offered prices. In practice, there also exist other significant indirect benefits, like using of working hours by the building manager and/or board members for the whole group procurement process. The advantage of collective work may be remarkable instead of implementing the same steps building by building. This, of course, depends on the estimated price of working hours.





## One-Stop-Shop extended model to increase the multi-apartment building stock renovation in the Baltic Sea Region



Länsstyrelsen  
Dalarnas län



Energikontor  
Norr



LAPPEENRANTA



SEESTADT  
BREMERHAVEN



VIDZEME  
THE ONLY WAY IS UP!



VÕRUMAA  
ARENDUSKESKUS



STOWARZYSZENIE  
GMIN I POWIATÓW  
MAŁOPOLSKI



Polish  
Foundation  
for Energy  
Efficiency  
est. 1990

Project «One-Stop-Shop extended model to increase the multi-apartment building stock renovation in the BSR» (RenoWave) is implemented with the support from the EU funding Programme Interreg Baltic Sea Region 2021 -2027. The project develops One-Stop-Shop extended model specifically designed for the multi-apartment buildings in Baltic Sea Region countries. Partner countries - Sweden, Finland, Poland, Germany, Lithuania, Latvia and Estonia.

For more information: [www.interreg-baltic.eu/project/RenoWave](http://www.interreg-baltic.eu/project/RenoWave)