



Green public procurement for the renovation of an old municipal building in Liepaja

Organisation: Latvian Environmental Investment Fund and Liepaja Municipality

- Achieving higher energy efficiency by renovating building
- Applying principles of green public procurement criteria and sustainable construction during technical project design for renovation
- **Note: The project is currently in the technical design phase**

Picture © Liepaja City Council



Standard product / conventional tender

Architectural services to develop project for basic renovation of the energy inefficient municipal building

GPP (PRIMES) tender

Architectural services for technical project considering sustainable/ energy efficient solutions

Results

Estimated annual CO₂ emission 100 t
Estimated annual energy reduction of 50 kWh

Introduction to case

1.1 PITCH-TALK – SUMMARY

Liepaja is a city in Latvia located on the western part of the coastline. The municipality owns an energy inefficient building, which Liepajas City Council would like to transform into a modern municipal building, making space for various municipal services. The municipality contacted the PRIMES Task Force team to develop green procurement requirements for the building renovation process. Principles of green procurement, sustainable construction and 'passive house' will be incorporated in all stages of the construction process (project design, building, post –building stage).

1.3 CASE CONTENT AND ISSUE

The municipal building is a large complex, currently in rather poor shape, and was originally designed to provide room for various service units. The total area of the current building is 4913.8 m² the volume of the current building is 18,804 m³, and related land area for improvement 3177 m². The City Council of Liepaja has an ambitious goal to transform this building into a modern, energy efficient building with a healthy indoor environment, creating room for various municipal services and the 200 municipal employees. The building shall also serve as a one-stop governmental agency e.g. where citizens could solve most of their important issues related to governmental or municipal services. Therefore particular attention is being paid to universal design taking into account needs of people with disabilities e.g. access with wheelchairs and comfort for people with visual impairment. The renovation shall be performed, while taking into account that the building is located in the historic centre. Although the building itself is not historic, the renovation project has to consider the protection needs of the surroundings. The first tender has been announced on 12.10.2015 but cancelled due to it exceeding the limits for negotiation procedure. Later the municipality announced 2nd tender, which ended with successful results.

1.4 SOLUTIONS APPLIED

The architect who won the tender is obliged to integrate the principles of low-energy building and sustainable construction into the renovation project. The goal of this tender is to lower the energy consumption to the level of a zero-energy building – for public buildings. Attention shall be paid to universal design (e.g. accessibility for people with disabilities) as well as the choice of building materials. Installing a new ventilation system will ensure a healthy indoor environment. Application of the life cycle costing will enable the municipality to decide on the best environmental and economical feasible solutions. Therefore the procurement case presents the bidders with high requirements. In order to achieve the goals, the city council procurer decided to co-operate with the PRIMES project, where experts helped to develop technical specifications integrating green criteria, verification etc.

Tender features

- *Subject matter:* Architectural services for renovation project of a municipal building using principles of green public procurement, sustainable building and energy efficiency.
- *Value of the contract:* 77 430 € (without VAT), which makes approx. 2,5-5% of total renovation costs
- *Type of procedure:* Open tender
- *Type of contract:* Service contract
- *Nature of contract:* Direct contract
- *Division in lots:* Not applied



Procurement objectives

The objective of the tender was to choose the most economically beneficial contract for architectural services to elaborate the renovation project of a municipal building using principles of green public procurement, sustainable building and energy efficiency. The tender also included later authorship surveillance during renovation phase.

Procurement approach

Firstly the municipality decided to try out a new tendering procedure – the negotiation procedure for hiring the architectural services which later was cancelled since the contract value exceeded the limits allowed for negotiation procedure.

In the first (cancelled) tender participated 4 bidders and in the final tender participated already 6 bidders.

The contractor shall comply, among others, with the following technical specifications:

- The contractor has to apply life cycle costing to demonstrate potential savings of more environmentally and economically preferable (e.g. energy efficiency) solutions according to Regulation No. 244/2012;
- The energy consumption for heating purposes is to be no more than 30-50 kWh / m² per year, while providing indoor climate complying with legal requirements regarding construction, hygiene and protection; however, in case of objective difficulties to achieve such target, the municipality can accept a solution offering energy consumption for heating purposes to be no more than 80 kWh / m² per year.
- Restriction of hazardous substances (only exceptional presence of substances of very high or candidate substances (according to REACH regulation) in materials, only exceptional use of PVC if no or very costly alternatives, restrictions of VOC, no SF₆);
- Preference to environmentally friendly materials (10% recycled, wood from sustainable forestry sources, in interior application, if possible, of eco-labelled materials).
- Monitoring options for heat, water and energy use.
- Lighting: energy efficient lightening (at least 75lm/W), automatic control system.
- Providing utilities for waste sorting.
- Providing environmentally responsible management of the building waste.
- Verification: contractor has to demonstrate it in technical project of renovation.

Award criteria:

- Price of architectural services (75%)
- Bid security in case of unforeseen additional costs due to in-compliances in the project (10%)
- Integration of green public procurement, sustainable building and energy efficiency principles in building design solutions (15%)

Selection criteria (must criteria on eligibility of bidders):

The bidders must show sufficient turnover, 1 reference for comparable buildings (2500m³ volume), constructed within the last 3 years (verification: list, contacts). The personnel responsible for projecting specific parts (energy efficiency, electricity, ventilation, heating, water supply) shall have corresponding qualification and at least experience with renovation or reconstruction (verification: list, contacts, education certificates).



Contract performance clauses

- The municipality can order expertise of the technical project on own costs; the service provider has to remove any in-compliances denoted by this expertise;
- The contractor is responsible for authorship surveillance of the renovation
- The contract includes possibility to apply fine if architect does not achieve promised results.

Criteria development

The criteria were developed by experts from the PRIMES project, following principles of low-energy housing (<http://pasivamaja.lv/>), Directive 2010/31/EU and Regulation 244/2012 for energy efficient buildings and various Latvian guidelines for sustainable building (<http://lpmc.lv/projekti/nordplus-green-icon/rezultati.html>), as well as EU and GPP criteria for buildings, which are under revision now. Most of the requirements addressed energy efficiency, as well as restricting hazardous substances (e.g. volatile organic substances, substances of very high concern) in building materials.

4



Estimated results

Results and deeper analysis will be carried out, after the tender procedure is finalized.

	Expected emissions	CO ₂ e	Expected energy consumption
Low Carbon Solution (max, if achieved 30 kWh/m ²)	29,8 t CO ₂ /year		147,4 MWh/year
Low Carbon Solution (min, if achieved 50 kWh/m ²)	49,6 t CO ₂ /year		245,7 MWh/year
Low Carbon Solution (min, if achieved 80 kWh/m ²)	79,4 t CO ₂ /year		393,1 MWh/year
Cosmetic renovation without energy efficiency measures	155,8 t CO ₂ /year		771,5 MWh/year
Total savings	76-126 t/year		378-624 MWh/year

The calculations are based on energy efficiency audit, applying emission factors for heating used by energy auditor (0,202 kgCO₂/kWh).

Lessons learned

- Political support from the leadership of local government is crucial when implementing green innovative procurement projects.
- It is deemed to be very valuable that the procurement team of the local government received expert support from the PRIMES task force.
- In the first negotiation round participated only 3 bidders, which can be explained by lack of experience in energy efficient renovation, but the final tender received 6 offers.

- It might be beneficial in such projects to invest more in the market consultations with potential architects and their associations. In this case the negotiation procedure, although it was not the right choice for this size of tender, it helped the municipality to develop better tender documentation.
- The first failure helped to improve the tender documentation.
- The procurement was very challenging for the suppliers, since there have not been many renovation projects in Latvia incorporating low-energy house principles and lifecycle costing.

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About PRIMES



Across six countries in Europe; Denmark, Sweden, Latvia, Croatia, France and Italy, PRIMES project seeks to help municipalities overcome barriers in GPP processes, many of which lack capacity and knowledge.

PRIMES aims to develop basic skills and provide hands-on support for public purchasing organisations in order to overcome barriers and implement Green Public Purchasing. This will consequently result in energy savings and CO₂ reductions – www.primes-eu.net

About GPP 2020



GPP 2020 aims to mainstream low-carbon procurement across Europe in support of the EU's goals to achieve a 20% reduction in greenhouse gas emissions, a 20% increase in the share of renewable energy and a 20% increase in energy efficiency by 2020.

To this end, GPP 2020 will implement more than 100 low-carbon tenders, which will directly result in substantial CO₂ savings. Moreover, GPP 2020 is running a capacity building programme that includes trainings and exchange. – www.gpp2020.eu



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6



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