

Title of the measure:	LV 13 Green public procurement and Implementation of the exemplary role of the public sector
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General description

Latvia's 2nd NEEAP for years 2011-2013 [1] had stated green public procurement and the exemplary role of the public sector as the horizontal measure. Target audiences – state and municipal authorities. The importance of green public procurement for the following years is underlined by the 2014 Report regarding the progress towards the indicative national energy efficiency targets in 2014-2016 according to Directive 2012/27/EU [2, p.41&42].

The green procurement is one of the Article 7 (Energy Efficiency directive) alternative measures, included in the Latvia national Plan of the Alternative Measures of Energy Efficiency Policy to Reach the Target of Energy End-Use Consumption Saving 2014-2020 [19].

The objective of the green public procurement is to reduce the impact on the environment taking into account in procurement procedures environmental life-cycle considerations as well as to foster social improvements (better working and living standards, improved buildings' accessibility for handicapped persons, etc.). Environmental and energy efficiency factors shall be included in the selection criteria for the most economically advantageous tender [1].

Latvia's 2nd NEEAP [1] had stated the following measures in order to implement the exemplary role of the public sector:

- (i) the procurement of energy efficient electrical equipment that has efficient energy consumption in all modes, including stand-by mode;
- (ii) the use of energy audits and implementation of the resulting cost-effective recommendations.

At the moment Latvia has undertaken several measures to encourage the public sector to purchase energy efficient products, services and buildings.

In 17 February 2015 the Cabinet of Ministers (Government) has approved the "Green Procurement Promotion Plan for years 2015-2017" [5]. The Plan has defined the overall target – to reach in 2017 the share of green public procurement of 30% within the total financial volume of the financed by state budget's procurement done by state and municipalities institutions¹.

The ***re-casted Law on Energy Performance of Buildings*** (entered into force on 9 January 2013 [6]) lays down (Section 7) that public buildings owned by the central government or municipalities are subject to energy certification, owing to the provisions of the Law the central government and municipalities are given correct information about the energy performance of buildings occupied, to be rented or bought by the public sector. As a result, strong legal background for setting energy performance criteria in public procurement of buildings is established [2].

The requirements of green procurement requirements have been included in financial programmes co-financed by national Climate Change Financial Instrument² (see Interaction of Measures below). The

¹ This 30% share relates to overall volume of green procurement, no particular data regarding energy efficiency related green procurement. In 2015 it had been reached the overall share of green public procurement of 19%. Namely, total public procurement by state budget was 1.868 MEUR of which 0.355 MEUR had constituted green public procurement [14, Fig.2].

² Latvia, due to active participation in the GHG emissions trading mechanism, has the revenues from the sale of GHG emissions under procedures pursuant to Article 17 of the UNFCCC Kyoto Protocol. Part of these revenues had been allocated as the national green investment programmes of the national Climate Change Financial Instrument (CCFI) for CO₂ emissions reduction.

requirement to carry out energy audits is included for all open tenders of financial measures, financed by EU Structural Funds and national Green Investment (Climate Change Financial Instrument) Schemes.

With a view to encouraging municipalities to purchase products, services and buildings with high energy efficiency performance, the relevant recommendations are included in the methodological recommendations drawn up by the Ministry of Environmental Protection and Regional Development for elaborating development programmes of municipalities (**the Sector-specific Policy Guidance for Municipalities, Chapter 21 “Guidance in the field of energy and energy efficiency [10]**), which should be considered by municipalities in drawing up and implementing their development programmes for 2014-2020. Purchasing of energy-efficient products, services and buildings at a municipal level can be facilitated by binding regulations and action plans issued by municipalities [2].

In addition, Latvian Environment Investment Fund, in the period 01.11.2013-31.10.2016, realized the international co-operation project “Procurement in Municipalities Focusing on Energy Efficient Solutions” (PRIMES, the leading partner – the municipality of Holbaek, Denmark), co-financed by the *Intelligent Energy Europe Programme* and targeted to capacity building of municipal specialists in this area (heat insulation materials, transport, equipment of schools and municipal offices, indoor, outdoor and street lighting, etc.) [11].

The further development of legal background of green public procurement, to meet the requirements of the Article 6(1) of the Directive 2012/27/EU – purchasing only products, services and buildings with high energy-efficiency performance- has been done [7] by:

- ***Amendments to the Public Procurement Law*** [8, entered into force on 29 March 2016] have **introduced the term “energy efficiency”** (thus adding it to the environmental protection and climate change mitigation provisions) in technical specifications for public supply and service contracts (amendments to the Section 17.3). The Amendments ensure that state direct management bodies procure energy efficient products and services (the new Section 46² **“Special provisions in relation to energy efficiency” has been included and entered into force from 1st July 2016**). In a new Public Procurement Law [16] these provisions are stated respectively in the Sections 20.4 and 55. Latvia has used the option (Art. 6.4 of the Directive) that the energy efficiency criteria provisions may be stated for the whole package of products, not for the each particular product, thus the forms how to include energy efficiency requirements in procurement procedures are widened.
- ***Cabinet of Ministers (Governmental) Regulations No 612*** [15, entered into force 23 September 2016, issued pursuant noted above Section 46²], transposing the requirements of the Energy Efficiency Directive 2012/27/ES, state the Requirements regarding energy efficiency which shall be fulfilled by state direct administration institutions in their public procurements. Namely, the procured goods shall correspond to energy efficiency class B at least (if the particular good is marked by energy efficiency classes), or shall correspond to the requirements stated by the eco-design requirements (if applicable for the particular good); or the energy efficiency shall not be lower than *Energy Star* labelling (if the EU Regulation No 106/2008 regarding energy efficiency of office equipment applies for the particular good)³. If the services is procured, the service provider shall procure only such goods which corresponds to the noted above requirements. After new Public Procurement Law [16] has come into force, **new Cabinet of Ministers Regulations No 180** (2017, [17]) have been adopted which continues the noted above provisions.
- ***Amendments to the Law on the Energy Performance of Buildings*** [9, entered into force on 5 April 2016] essentially seeks to ensure that central government bodies acquire and lease only energy-efficient buildings (the new Sections 14.3-14.5 are included). In the buildings, which do not correspond to minimum energy efficiency requirements and central governmental bodies had started to use them from **the 1st April 2016**, at least three economically justified energy efficiency measures, indicated within energy certification report, shall be implemented during next three years after signing the lease contract (according Transitional Provision No7, this requirement does not relate to buildings which lease contracts had been signed up to 31 March 2016)

³ Regarding energy efficiency requirements for tyres – see MURE database Tertiary sector measure TRA-LV25.

In 15 December 2016 it was adopted the re-cast Public Procurement Law [16], in force from 01 March 2017. The new Law maintains the principles described above, namely,

- the Section 19 defines general framework for green procurement,
- the Section 20.4 regarding content of technical specifications defines possibility to include energy efficiency, climate protection/adaptation and environmental protection considerations,
- the Section 55 defines special provisions regarding energy efficiency.

According these provisions of the Section 19 it is adopted the **Cabinet of Ministers (Governmental) Regulations No 353 “Requirements of Green Public Procurement and the Procedure They shall be Applied” [18], which have come into force 01 July 2017.** These new Cabinet of Ministers provisions define both:

- (1) the list of **the groups of goods and services for which green procurement requirements and criteria shall be applied mandatory** (Annex 1 of [184]), the energy efficiency requirements are presented in the Annex A of the Measures Description,
- (2) **the list of the groups of goods and services for which green procurement requirements and criteria might be applied voluntary** (Annex 2 of [18]), the energy efficiency criteria, applied for office buildings, are presented in the Annex B of the Measures Description,

Impact evaluation (methods and results)

Evaluation method – “top-down” [1].

During the period of the 2nd NEEAP (2011-2013) it had been anticipated increase of the number of green public procurements by at least 20%. [1]. No *ex-ante* quantitative data on energy saving had been provided by the 2nd NEEAP.

The **Latvia 1st NEEAP** [12] had envisaged the annual energy saving in year 2016 resulting from the implementation of the exemplary role of the public sector - 0.144 PJ (40 GWh), of which procurement of energy efficient electrical equipment - 70% and construction of energy efficient public administration buildings – 30%. The actual final energy consumption in Latvia tertiary sector (commercial and public, in total) in years 2008-2015 varied in the range 23.45-26.1 PJ. Electricity consumption in 2008-2015 varied in the range 8.4-10.4 PJ, in average 9.5 PJ [13]. Thus, according the anticipations of the 1st NEEAP the impact of the measure might be around 0.5% of the final energy consumption of the tertiary sector.

In its turn, the **Latvia national Plan of the Alternative Measures of Energy Efficiency Policy to Reach the Target of Energy End-Use Consumption Saving 2014-2020** [19] envisages the rather low 2020 cumulative energy savings of 1.1 GWh (0.004 PJ) due to implementation of the green purchase procedures.

The 2016 Report on Implementation of the Green Procurement Promotion Plan for years 2015-2017, prepared by the Ministry of Environmental Protection and Regional Development [14], indicates the relative share of green public procurement within the total procurement of electric appliances and construction works in 2015.

Table 1. Overview of Green Public Procurement in Latvia in 2015 [14, p.8-9]

Group of goods	Total procurement, in EUR	Green Procurement, in EUR	% of Green Procurement
Office equipment	584 795	0	0
Computers and monitors	20 855 977	246 664	1.18
Indoor lightning equipment	6 863 178	334 172	4.86
Construction works	521 544 737	58 582 999	11.23



Analysing the data presented in the Table 1, it has to be noted that part of procurements (especially computer equipment) are done within the system of Electronic Purchase System (EPS). Thus, within the EPS in 2015 it was purchased corresponding to the green purchase criteria [14, p.15-16].

- computer equipment -2 913 913 EUR (*Energy Star* labelling. 96.83% of all computer equipment purchased within the EPS),
- indoor lightning – 54 510 EUR (1.81% of all indoor lightning equipment purchased within the EPS).

Thus, one can see the total green procurement in energy related sectors of ~ 62MEUR in 2015.

Interaction of measures

The implementation of green public procurement had been stated as one of quality criteria for evaluation of the projects submitted within the open tenders co-financed by the national Climate Change Financial Instrument, see the following measures in the MURE database:

- (Tertiary sector) TER-LV7 “Investments in Municipal Public Buildings’ Energy Efficiency to Reduce GHG Emissions”,
- (Tertiary sector) TER-LV8 “Investments in Complex Solutions for GHG Emissions Reduction in Vocational Education Institutions’ Buildings. Investments in Higher Education Institutions Buildings’ Energy Efficiency”,
- (Industry sector) IND-LV24 “Complex Solutions for GHG Emissions Reduction in Industrial Buildings”.

Historical data

In the wider sense the consideration of green procurement in the field of energy had started in Latvia in 2006. In a great extent it was due to projects of the *Intelligent Energy Europe programme* realized by the “Ecodoma Ltd.” as a partner of international projects [5, p.17]:

- „*Green Labels Purchase - making a greener procurement with energy labels*” (2006 – 2008), objective – to increase the share of energy labelling application in procurements of state and NGO sectors, to elaborate the standardised tool for application in green procurements, to prepare recommendations to overcome main barriers regarding application of green procurement, the recommendations had been included in 2008 Green Procurement Guidelines [3] and had been applied in Regulations of open tenders of Climate Change Financial Instrument Programmes.
- ‘*Buy Smart - Green Procurement for Smart Purchasing*’ (started at 2009 as following of *Green Labels Purchase* project) – the work with the previously elaborated guidelines and tools were continued, the capacity building activities for state and NGO sectors had been performed;
- „*Buy Smart+*” (2012-2014).

NGO “Green Liberty (“Zaļā Brīvība”) had published in 2006 the Handbook on Green Procurement.

The green public procurement guidelines were adopted in Latvia in December 2008 [3]. This report has encompassed a detailed document named “Recommendations for the Promotion of Green Procurement by State and Municipal Authorities” [4] published in the website of the Latvian Procurement Monitoring Bureau. These recommendations have contained references to procurement legal documents, models for including energy efficiency criteria into the procurement conditions as well as explanations regarding the practical application of these criteria.

In 2010 the Green Catalogues had been included in the Electronic Purchase System, administrated by State Regional Development Agency, among them energy efficient lightning, eco-computers (EPEAT). In turn, in the website of the authority responsible for awarding Ecolabelling in Latvia (State Environmental Bureau) it had been included special part “Ecolabelling” regarding EU Ecolabelling legislation and products and services marked and included in the EU ecolabelling system.

References

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3. Republic of Latvia Ministry of Environmental Protection and Regional Development (MEPRD) Information Report “On Recommendations for the Promotion of Green Public Procurement by State and Municipal Authorities and Recommendations for the Promotion of Green Construction” (*Informatīvais ziņojums “Par ieteikumiem zaļā publiskā iepirkuma veicināšanai valsts un pašvaldību institūcijās un ieteikumiem videi draudzīgas būvniecības veicināšanai”*), viewed by the Government, 22 Decembre 2008, <http://polsis.mk.gov.lv/view.do?id=2886> (in Latvian).
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12. Latvia’s First National Energy Efficiency Action Plan 2008-2010. <http://ec.europa.eu/energy/node/84> (see: First NEEAPs)
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16. **Public Procurement Law** (*Publisko iepirkumu likums*), recast, in force from 01 March 2017, <http://likumi.lv/ta/id/287760>
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ANNEX A.

Energy Efficiency requirements for the groups of goods and services for which green procurement requirements and criteria shall be applied mandatory

Annex 1 of the Cabinet of Ministers (Governmental) Regulations No 353 “Requirements of Green Public Procurement and the Procedure They shall be Applied”:

Printing equipment	<p>Energy consumption in usage mode shall correspond at least to energy efficiency requirements defined by the criteria of <i>ENERGY STAR</i> 2.0 version</p> <p>Additional points award for each 5% less electric energy consumption</p> <p>Additional points award for low electric energy consumption in standby mode</p>
Computer engineering	<p>Shall correspond to the newest energy efficiency criteria of <i>ENERGY STAR</i>, published in <i>EU Energy Star</i> web-site.</p>
ICT infrastructure	<p>ENERGY CONSUMPTION</p> <p>1.servers shall correspond to the newest energy efficiency criteria of <i>ENERGY STAR</i>, published in <i>EU Energy Star</i> web-site.</p> <p>2.servers, in which only one processor can be used, shall have one or several 220V power supply units efficiency of which is at least 88% at 50% load (if at least 90% and above - award points granted)</p> <p>3. servers, in which simultaneously more than one processor can be used, and disk arrays, which might have only one or two controllers, shall have one or several 220V power supply units efficiency of which is at least 90% at 50% load (if at least 92% and above - award points granted)</p> <p>4. servers chassis and disk arrays, which might have more than two controllers, shall have at least two 220V power supply units efficiency of which is at least 92% at 50% load (if at least 94% and above - award points granted).</p>

<p>In-door lightning: lamps</p>	<p>Light efficiency the installed lamp shall have at least following energy efficiency class or higher:</p> <p>1. If lamp is foreseen to replace the old lamp in the existing lightning fixtures:</p> <ol style="list-style-type: none"> (1) tungsten halogen lamps - C, (2) Compact luminescent lamps without integrated throttle – B, (3) Sphere form, pear form, reflector type or chandelier type compact luminescent lamps with integrated throttle – B (4) other lamps (except halogen lamps) with colour rendering index $Ra \geq 90$ – B, (5) other compact luminescent lamps with integrated throttle – B, (6) 15 W T8 tube-type luminescent lamps and miniature tube-type luminescent lamps - B (7) round-type lamps –B, (8) other tube-type luminescent lamps – A, (9) other lamps, including LED and gas- discharge lamps – A. <p>2. If lamp is foreseen to be used in new or renovated lightning fixtures:</p> <ol style="list-style-type: none"> (1) all lamps with colour rendering index $Ra \geq 90$ (if required by the activity performed in the building) - B, (2) all other lamps - A. <p>The newest definition of the energy efficiency class shall be applied. Award points granted, if light efficiency is at least 110% of minimum requirement.</p> <p>Technical lifetime, in hours</p> <p>tungsten halogen lamps -2000, sphere form, pear form, reflector type or chandelier type compact luminescent lamps – 6000, other compact luminescent lamps – 10000, round-type lamps – 7500, T8 tube-type luminescent lamps with electromagnetic throttles (only for existing fixtures) – 15000, other tube-type luminescent lamps - 20000 High density discharge (HID) disperse light lamps - 12000, HID directional light lamps - 9000, Modernised LED with integrated lightning management - 15000 Other LED – 20000 Award points granted if technical time is at least 120% of required minimum.</p>
<p>Projecting indoor lightning</p>	<p>Specific power of lighting</p> <p>If lighting is planned for the whole building, the maximal power, consumed by lighting, divided by the total area of the building shall not exceed the values below, in W/m²:</p> <p>Parking place – 2.5; Court, Police – 14; Prison – 9; Exhibition hall, museum -9; Fire station - 12; Continuing education - 13; Hospital -12; Library -12; Office (separated type) -13; Office (open type) – 11; Post office -14; Public hall – 9; Dwelling premises – 11; Dwelling premises (common) -6; School -8; Sport centre -9; Municipal building – 11</p> <p>Award points granted, if specific power is less then 90% of required above.</p> <p>Normalised specific power of lighting</p> <p>If lighting is planned for the part (individual place) of the building, the maximal power, consumed by lighting, divided by the total area of the particular part of building and luminous emittance (measured in 100 lux) shall not exceed the values below, in W/m²/ 100 lux:</p> <p>Bedrooms – 7.5; Dining rooms – 3.5; Parking places – 2.2; Movement areas, including lifts, staircases – 3.2; Conference rooms – 2.8; Sport rooms – 2.8; Vestibules – 2.8; Wards and procedures rooms in hospitals – 4; Kitchens (in dwellings) – 5; Kitchens (restaurants) – 2.8; Laboratories – 2.8; Libraries - 3.2; Rest rooms, large – 6; Rest rooms, small – 7.5; Offices (open type) – 2.3; Offices (separated type) – 3; Industrial premises – 3.2; Post office rooms/control desk premises – 3.2; prison Cells -4; Registration premises (e.g. in hotels) – 4; Toilets, Bathrooms – 5; Retail Trade premises - 3.5; Teaching premises – 2.3; Warehouses – 3.2; Waiting rooms – 3.2.</p>

Award points granted, if normalises specific power is less then 90% of required above.

Projecting

1. Rarely visited premises shall have occupation controlling sensor,
2. Premises, not used in night and weekend, in which the lighting might be left by accident, shall have time-limit relay or occupation control sensor, ,
3. Lighting management in premises, having flank windows, shall provide that the lighting in the lamps' raw near and parallel to window might be switched off separately
4. Lighting switches in offices, school premises, laboratories shall be easy accesible for users and guests of the premises
5. Lighting in premises, accessible for daylight, and in reception areas shall have self-acting management equipment which reacts on daylight (switches, light regulator)

Award points granted, if light intensity regulation will be provided in premises, in which such regulation is recommendable (except offices, conference premises, school rooms, laboratories in which lighting regulation is mandatory).

Outdoor lighting equipment ielu

Light efficiency

Sodium high pressure lamps with colour rendering index Ra < 60 shall have at least the efficiency below.

Lamp's nominal power (W)	Lamp's calculated efficiency (lm/W), transparent	Lamp's calculated efficiency (lm/W), coated
W ≤ 45	≥ 62	≥ 60
45 < W ≤ 55	≥ 80	≥ 70
55 < W ≤ 75	≥ 91	≥ 82
75 < W ≤ 105	≥ 105	≥ 95
105 < W ≤ 155	≥ 114	≥ 107
155 < W ≤ 255	≥ 125	≥ 120
255 < W	≥ 138	≥ 133

Metal halogen lamps with colour rendering index Ra < 80 shall have at least the efficiency below.

Lamp's nominal power (W)	Lamp's calculated efficiency (lm/W), transparent	Lamp's calculated efficiency (lm/W), coated
W ≤ 55	≥ 85	≥ 80
55 < W ≤ 75	≥ 100	≥ 85
75 < W ≤ 105	≥ 105	≥ 90
105 < W ≤ 155	≥ 110	≥ 95
155 < W ≤ 255	≥ 100	≥ 92
255 < W	≥ 92	≥ 100

Metal halogen lamps with colour rendering index $Ra \geq 80$ shall have at least the efficiency below.

Lamp's nominal power (W)	Lamp's calculated efficiency (lm/W), transparent	Lamp's calculated efficiency (lm/W), coated
$W \leq 55$	≥ 85	≥ 65
$55 < W \leq 75$	≥ 94	≥ 70
$75 < W \leq 105$	≥ 95	≥ 75
$105 < W \leq 155$	≥ 96	≥ 75
$155 < W \leq 255$	≥ 97	≥ 80
$255 < W$	≥ 98	≥ 80

Efficiency of Throttles

Lamp's nominal power (W)	Minimum efficiency of throttle (η_{throttle}) %
$W < 30$	70
$30 < W \leq 75$	80
$75 < W \leq 105$	82
$105 < W \leq 405$	86
$W > 405$	91

Coefficient for the stability of luminous flux (LLMF) and lamp's long-endurance

Operation time, in hours	2000	4000	8000	16 000
LLMF	0,98	0,97	0,95	0,92
LSF	0,99	0,98	0,95	0,92

Efficiency of Throttles –award points granted if HID lamps have at least the efficiency below

Lamp's nominal power (W)	Minimum efficiency of throttle (η_{throttle}) %
$W \leq 100$	85
$100 < W$	92

Efficiency of metal halogen lamps – award points

If the metal halogen lamps are decided as the most suitable, the award points granted if the lamp has at least the efficiency below

Metal halogen lamps with colour rendering index Ra < 80		
Lamp's nominal power (W)	Lamp's calculated efficiency (lm/W), transparent	Lamp's calculated efficiency (lm/W), coated
$W \leq 55$	≥ 95	≥ 85
$55 < W \leq 75$	≥ 105	≥ 90
$75 < W \leq 105$	≥ 115	≥ 95
$105 < W \leq 155$	≥ 118	≥ 98
$155 < W \leq 255$	≥ 105	≥ 100
$255 < W$	≥ 110	≥ 105

Metal halogen lamps with colour rendering index Ra \geq 80		
Lamp's nominal power (W)	Lamp's calculated efficiency (lm/W), transparent	Lamp's calculated efficiency (lm/W), coated
$W \leq 55$	≥ 90	≥ 70
$55 < W \leq 75$	≥ 100	≥ 75
$75 < W \leq 105$	≥ 101	≥ 80
$105 < W \leq 155$	≥ 102	≥ 80
$155 < W \leq 255$	≥ 103	≥ 85
$255 < W$	≥ 104	≥ 85

Projecting outdoor lighting

Maximum value of energy efficiency

If the new lighting system will be established in case of traffic road, the maximum value is expressed by the following formula - average power, consumed by the lighting system, divided by the necessary brightness for the surface of the road and the lighted area. The value shall not exceed the values indicated below

Lamp's power (W)	Maximum value of energy efficiency (W/cd/m² · m²)
$W \leq 55$	0,974
$55 < W \leq 155$	0,824
$155 < W$	0,674

If the new lighting system will be established in case of contradictory zone, e.g., roads crossing, shopping street, dwellings area street, pedestrian road or bike path, the maximum value is expressed by the following formula - average power, consumed by the lighting system, divided by the necessary horizontal lighting and the lighted area. The value shall not exceed the values indicated below

Necessary lighting (lux)	Maximum value of energy efficiency (W/lx · m²)
$E \leq 15$ lux	0,054
$E > 15$ lux	0,044

Award points granted, if energy efficiency value is lower than 90% of the values required in the tables above.

Traffic lights	Consumed Power	
	If new traffic lights are installed or the existing ones are renovated, the consumed power shall not exceed the values below. The requirements relate to the separate module (not to the whole traffic lights fixture). The noted values includes also energy consumption in lamp's supply circuit.	
	Type of Module	Exploitation power <i>(25 °C temperature)</i>
	300 mm red circle	10
	200 mm red circle aplis	8
	300 mm red arrow	9
	300 mm yellow circle	10
	200 mm yellow circle	8
	300 mm yellow arrow	9
	300 mm green circle	12
	200 mm green circle	9
300 mm green arrow	9	

ANNEX B

The energy efficiency criteria, which might be applied voluntary: office buildings

Annex 2 of the Cabinet of Ministers (Governmental) Regulations No 353 “Requirements of Green Public Procurement and the Procedure They shall be Applied”:

MINIMUM ENERGY EFFICIENCY

The calculated energy efficiency shall correspond to the following requirements. Two versions regarding definition of minimum efficiency might be applied.

Version 1. Energy efficiency.

- (a) for new buildings: shall correspond to (i) *Energy Performance Certificate (EPC)* C class, or (ii) $3 \times \text{kWh/m}^2$ threshold value for the best class, or (iii) maximum value 135 kWh/m^2 . The lowest value of specific energy consumption shall be chosen.
- (b) For renovated or reconstructed buildings: (i) EPC D class, or (ii) $4 \times \text{kWh/m}^2$ threshold value for the best class, or (iii) maximum value 170 kWh/m^2 . The lowest value of specific energy consumption shall be chosen.

Award points might be granted based on EPC class, or gradually for each 15 kWh/m^2 decrease of energy consumption,

Note. The threshold value shows the highest specific energy consumption, in kWh/m^2 , defined by EPC class.

Version 2. Cost-optimal levels of minimum energy performance requirements

The cost-optimal levels of minimum energy performance requirements, in kWh/m^2 , shall be defined by applying the methodology of the Commission Delegated Regulation (EU) No 244/2012 of 16 January 2012.



ZERO or LOW CARBON ENERGY SOURCES

If the placement allow the connection to highly effective and cost-optimal alternative energy systems shall be provided.

DAYLIGHT

In 80% percent no used office area it shall be provided average daylight coefficient 1.5% for outer courtyard facades and 0.7% - for inner courtyard facades

HEATING SYSTEM including COMBINED HEAT - POWER

1. **Heat boilers** with the capacity up to 400 kW and **micro CHP equipment** with the electric capacity not above 50kW_{el}, to provide heat energy for heating system,

Technology	Minimum efficiency in heating season	Maximum specific GHG emissions, in CO₂ equivalent
All heat boilers, except solid biomass fuel ones	$\eta_s \geq 90 \%$	
Solid biomass fuel heat boilers	$\eta_s \geq 75 \%$	
All heat boilers, except heat pump boilers		220 g CO ₂ eq./ 1 kWh heat power
Heat pump boilers		170 g CO ₂ eq./ 1 kWh heat power
Award points granted for each 1% efficiency improvement and for each 5 g CO ₂ eq./ 1 kWh heat power emissions decrease		

2. **CHP equipment with the electric capacity above 50kW_{el}**

- The total efficiency shall be at least 75%⁴
 - Primary energy savings is at least 1% for small scale (up to 1000 kW_{el}) and at least 10% for other (above 1000 kW_{el}) CHP⁵

BUILDING ENERGY MANAGEMENT SYSTEM (BEMS)

Shall be on place providing the energy data in real time and energy consumption measurement each half of hour at least. BEMS system shall be user friendly and not requiring the special users training. The main parameters (lighting, heating, cooling) shall be easy adjustable. The manager of the building shall prepare each months the report for users of the building, describing the consumption for heating, cooling, ventilation and lighting.

Energy efficiency agreement shall be developed based on the initial modelling of building's energy consumption, this agreement defines energy consumption limits for lighting, heating, cooling, ventilation and reserve energy supply equipment (the agreement does not include the users, e.g., computer servers and small capacity equipment, loads). If increasing the limits, building's manager is responsible for additional costs. If consumption is below the limits, the agreement defines the division of saved costs between the building's manager and building's users (the procedure of this division should be revised each year).

⁴ calculated according the Cabinet of Ministers Regulations No 294 (17.05.2016) "Primary Energy Savings Calculation Procedures for Combined Heat-Power Stations" (*Ministru kabineta 2016. gada 17. maija noteikumi Nr. 294 "Koģenerācijas staciju saražotās primārās enerģijas ietaupījuma aprēķināšanas kārtība"*), <https://likumi.lv/ta/id/282203>

⁵ calculated according the Article 6 of the Cabinet of Ministers Regulations No 221 (10.03.2009) "Regulations Regarding Electricity Production and Price Determination upon Production of Electricity in Cogeneration" (*inistru kabineta 2009. gada 10. marta noteikumi Nr. 221 "Noteikumi par elektronenerģijas ražošanu un cenu noteikšanu, ražojot elektroenerģiju koģenerācijā"*), <https://likumi.lv/doc.php?id=189260>

