

National plan for increasing the number of nearly zero- energy buildings in Latvia



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1 Starting point

Please give a short overview of your national building stock. Describe the most important characteristics and emerging needs. Additionally, illustrate the chronological development of national requirements on the energy performance of buildings (for an example, see guidance document)

1.1. Building stock

Energy consumed in building sector constitutes 40% from all energy-balance therefore building sector in Latvia and other countries of the European Union includes fundamental potential for the achievement of common goals of energy efficiency. Energy consumption for the greater part of current buildings is high, and those houses have essentially lower thermal features than it is possible to provide using currently available technologies. Most of houses will be exploited for substantially long period of time, wherewith step-by-step renovation of those houses is topical by improving their energy efficiency.

There are about 1.35 million of houses registered in Real Estate Cadastre Information System (hereinafter – RECIS) with a total area of 198 million m², including different types of auxiliary buildings. In about 400 thousands of buildings energy is used for regulation of the indoor climate (buildings are heated), from wich 352.4 thousands of buildings with a total area of 86.9 million m² are residential houses.

There are 997 thousands of non-residential buildings registered in RECIS, including 934 thousands of buildings where the energy consumption is negligible – different types of auxiliary buildings (560 thousands), agricultural buildings (317 thousands), as well as garages, warehouses, storage tanks and bunkers.

Data about the area and quantity of the residential and non-residential buildings, which consumes energy, are summarized in Table 1.¹

Table 1.

Primary use	Quantity, thousand.	Area, million m ²
Residential buildings		
Single dwelling house	300,7	33,9
Two apartment house	12,4	2,5
Three or more dwelling house	38,6	50,4
Various Social houses	0,7	0,1
Total	352,4	86,9
Non-residential buildings		
Wholesale and retail buildings	11,4	6,1
Office buildings	7,3	6,6
Hotels and other buildings for temporary accommodation	4,8	2,3

¹

Information report „The renovation financing solutions“, approved in the Cabinet of Ministers on June 4, 2013, protocol No. 33#30

Educational and research institutions	3,9	6,6
Communication buildings, stations, terminals	2,9	0,9
Health facilities	1,3	2,0
Buildings for entertainment	1,3	1,1
Sport buildings	1,0	1,1
Museums and libraries	0,5	0,3
Total	34,3	27,0

1.2. Construction periods

Residential and non-residential buildings can be divided into construction periods according to their thermal and technical characteristics. Different building construction periods are summarized in Table 2.¹

Table 2.

Construction period of the building	Characteristics of the buildings
until 1940.	Pre-war buildings, mostly made of wood in rural areas, brick - in cities. Most of the buildings have up to two storeys.
1941. – 1960.	Post-war good quality brick buildings. The residential buildings sector can be characterized with model brick building projects.
1961. – 1979.	Model construction was widely launched in residential building sector. Projects of 316th, 318th, 464th, 467th, 103rd, 602nd and 104th series has been constructed, using clay bricks, aerated concrete and expanded clay as a construction material for external walls.
1980. – 1991.	New construction requirements, defined in the Soviet Union Building Standart „Thermal Engineering of the building envelope“. The beginning of the 119th series of buildings in Latvia, a series of special projects are realized, using concrete and expanded clay for production of the panels.
1992. – 2002.	Building process of standart/typical buildings is practically stopped. The Ministry of Architecture and Construction of the Republic of Latvia significantly increases requirements for the building envelope.
after 2003.	Latvian Building Standart 002-2001 „Thermal engineering of the building envelope“ comes in force. During this period appears buildings with large glazed surfaces.

Division of multi-family residential buildings depending on the number of floors and construction period is summarized in Table 3 and Table 4, using data given by RECIS. By size, the major share of multi-family residential buildings are wooden houses, which were built until 1941. By living space the major share of multi-family residential buildings are 3-5 storey buildings, built between 1961. and 1992.¹

Table 3. Division of multi-family residential buildings depending on the number of floors, quantity

	Until 1941.g.	1941.- 1960.	1961.- 1979.	1980.- 1992.	1993.- 2002.	After 2003.	Total
Wooden external walls	8332	1421	440	59	17	8	10277
1-2 storey	5244	2818	2998	605	57	62	11784
3-5 storey	2514	903	5294	3373	226	196	12506
6 and more storey	496	22	514	854	62	100	2048

Table 4. Division of multi-family residential buildings depending on living area, million m².²

	Until 1941.g.	1941.- 1960.	1961.- 1979.	1980.- 1992.	1993.- 2002.	After 2003.g.	Total
Wooden external walls	2.29	0.33	0.11	0.017	0.004	0.005	2.76
1-2 storey	1.84	1.12	1.53	0.43	0.042	0.042	5.00
3-5 storey	2.98	1.50	14.13	9.27	0.53	0.56	28.97
6 and more storey	1.38	0.11	2.67	4.71	0.34	0.58	9.80

Division of non-residential buildings depending on the construction period is summarized in Table 5. By size, the major share of non-residential buildings are offices, which were built until 1941, by area – wholesale buildings, built between 1961. and 1980.

Table 5. Division of non-residential buildings depending on the construction period, their quantity and area, million m².²

Constr. period	Until 1941.		1941-1961		1961-1980		1980-1993		After 2003	
Type of building	QTY	Total area, m ²	QTY	Total area, m ²	QTY	Total area, m ²	QTY	Total area, m ²	QTY	Total area, m ²
Offices	1799	1605317,5	734	437294,15	1735	1441559,93	1276	1097348,80	554	1799
Educational institutions	970	1208085,9	407	555973,32	1127	2069065,71	617	1439981,46	137	970
Health facilities	446	421813,01	152	97828,24	304	594917,80	209	523600,60	49	446
Hotels	539	329375,44	227	156056,00	1092	508342,85	965	485575,88	523	539
Sport buildings	52	38656,5	39	28952,60	211	151512,20	224	174217,60	143	52
Wholesale buildings	1329	586931,7	688	201075,76	1447	759636,53	892	468670,30	1325	1329

² National report on calculation of cost-optimal levels of minimum energy performance requirements in Latvia, defined under article 5(2) of the Directive 2010/31/EU on Energy Performance of Buildings.

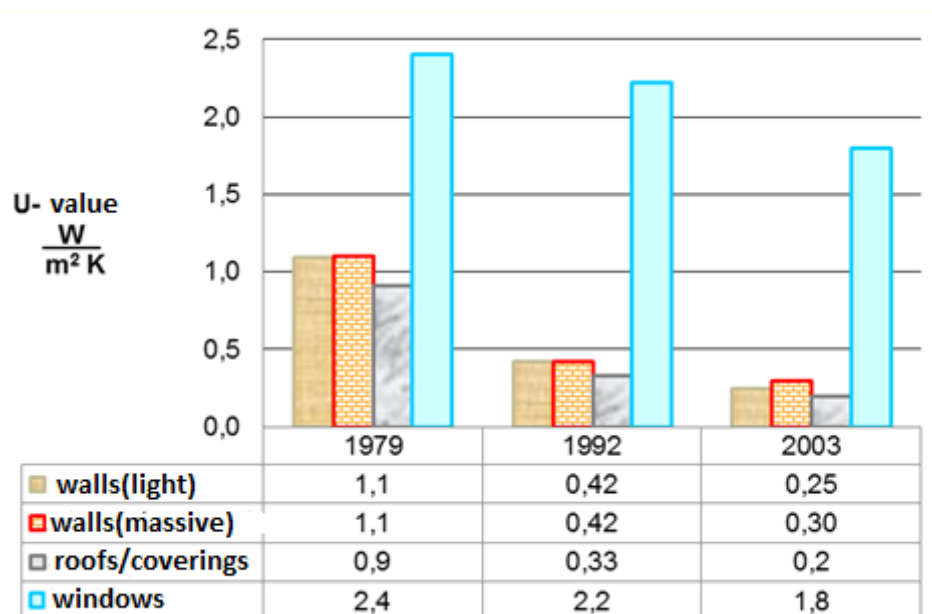
1.3. Type of key construction elements and U-value

Regulations regarding thermotechnics of building envelopes since 1979 are summarized in Table 6 and comparison of different requirements is shown in Figure 1.

Table 6. Nominative Values of Heat Transmittance Coefficient U for building envelope of residential buildings and heating energy consumption in buildings constructed in accordance with regulations.²

Roofs and coverings which are in contact with outdoor air		1980	1992	2003
Roofs and coverings which are in contact with outdoor air	W/(m²·K)	0.90	0.25 – 0.40	0.2 k*
Roofs and coverings which are in contact with outdoor air		-	0.5	0.25 k
Walls at weights less than 100 kg/m²		1.1	0.33 – 0.50	0.25 k
Walls at weights 100 kg/m² and over				0.3 k
Windows and doors		2.4	1.9 – 2.4	1.8 k
Thermal bridges		-	-	0.2 k
*Temperature factor k = 19/(T _{iekš.} – T _{ār.}), depending on climate zone for residential buildings k is from 0,95 (in Liepaja) to 1,09 (in Aluksne).				
Energy consumption for heating	kWh/m²a	150 – 200	100 – 130	70 – 90

Figure 1. Changes of regulations regarding thermotechnics of building envelopes since 1979.²



Latvian multi-family building stock consists of 39,6 thousand buildings with a total area of 50,4 million m², most of them (98% by quantity and 95,5% by living area) are constructed until 1993, before the time when thermal requirements were significantly increased, thus, these buildings are with a very low level of energy efficiency.

Only 3% per amount and 5% per area of houses in Latvia are built after 2003 and can be considered as correspondent to the current requirements of energy.

Analyzing the multi-family buildings depending on the material of their external walls, the most often they are built of bricks (43% of total number of multi-family buildings and 40% of total living area). 29% of residential multi-family buildings are made of wood, while 26% of living space is located in buildings, which are made of concrete. (See Figure 2 and Figure 3).

Figure 2. Percentage division of multi-family buildings, which are registered in RECIS, depending on the material used for external walls (by quantity).²

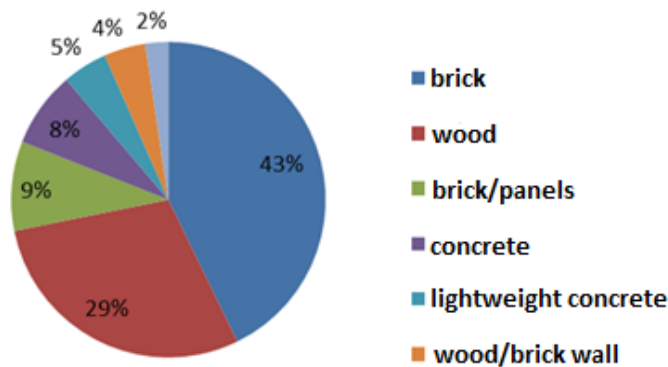
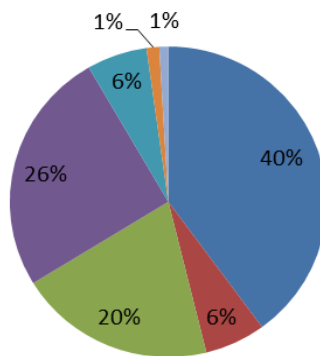


Figure 3. Percentage division of multi-family buildings, which are registered in RECIS, depending on the material used for external walls (by living area)²



2 Application of the definition of nearly zero-energy buildings

Please indicate how a nearly zero-energy building is defined within national context and explain underlying assumptions and factors that provide the rationale for the chosen definition.

For reporting the detailed application in practice of the definition of nearly zero-energy buildings, the table presented in the Annex is to be used.

If a national definition of nearly zero-energy buildings does not exist yet in your country, please indicate here whether precise plans are already under development and if so, please describe these plans. Please also describe if any currently used non-governmental definitions will be considered in these plans and/or a future directive.

In accordance with the paragraph 6 of section 7 of the Law On the Energy Performance of Buildings, adopted by the Saeima on December 6, 2012, which entered into force on January 9, 2013, nearly zero – energy building (hereafter – NZEB) is defined as a building with a very high energy performance using high efficiency systems for the energy supply thereof. Detailed requirements for NZEB are set out in the Cabinet Regulation No. 383 “Regulations Regarding the Energy Certification of Buildings” of 9 July 2013 (hereafter – Cabinet Regulation No. 383), where paragraph 17 of the regulations states that the building is NZEB and class A building if it meets the following requirements:

- The energy demand for heating does not exceed 30 kWh/m²a, simultaneously ensuring indoor climate in accordance with construction laws and requirements, as well as hygiene and labor protection requirements.
- Total primary energy consumption for heating, hot water supply, mechanical ventilation, cooling and lighting does not exceed 95 kWh/m²a.
- High-performance systems are used in the buildings, which:
 - provides at least 75% of ventilation heat recovery during the heating period;
 - provides at least partial use of renewable energy.
- There are no low-efficiency fossil fuel heating system installed in the building.

The first and second part of 10th Section of the Law On the Energy Performance of Buildings states that “(1) The objectives for the construction of high energy performance class buildings and the reconstruction of existing buildings into high energy performance class buildings shall be determined by policy planning documents. (2) Financial and other forms of support measures for the construction of high energy performance class buildings and the reconstruction of existing buildings into high energy performance class buildings shall be determined by other regulatory enactments. ”

Requirements specified for NZEB are developed considering the experience of the Ministry of Environmental protection and regional development during the implementation of the Climate Change Financial instrument (hereafter – CCFI) project “Low energy buildings” and precondition, determined in “Latvian long-term Energy strategy 2030”, which states that it is necessary to stimulate connection of new consumers to district heating system, including limitation of low-efficiency fossil autonomous heating installations in areas where the district heating is available.

3 Intermediate targets for improving the energy performance of new buildings in order to ensure that by 31 December 2020 all new buildings are nearly zero-energy buildings

Please report the 2015 targets ensuring that by 31 December 2020 all new buildings are nearly zero-energy buildings. Also explain how they relate to and help to ensure that all new buildings are nearly zero-energy buildings by 31 December 2020.

What are the qualitative and quantitative 2015 targets for all new buildings?

3.1.1 Qualitative 2015 targets: Interim energy related requirements for new residential and non-residential buildings

Requirements on fraction of renewable energies:

Requirements on useful energy demand:

Requirements on primary energy demand:

Taking into account that Latvia has no prior experience of NZEB construction, definition of targets is still at the research stage. In 2011 in accordance with Cabinet Regulation No. 1185 „CCFI financed project tender „Low energy buildings“ regulations“, CCFI financed tender/competition was announced. The aim of this competition/tender was reduction of carbon dioxide emissions by building of NZEB, as well as renovation of existing buildings. There were 8 projects approved for the building of the new NZEB and 6 projects approved for reconstruction or renovation of the existings buildings to NZEB, most of which were implemented in 2013. Monitoring results of the realized/implemented projects after 1 year of NZEB operation/exploitation (at the end of 2014) will be evaluated and will allow us to develop further targets for NZEB.

3.1.2 Quantitative 2015 targets: Share of nZEB according to official nZEB definition on all newly constructed buildings (define reference parameter e.g. number of buildings, floor area, volume etc.):

Please see Section 3.1.1.

Miscellaneous:

From your point of view, how close is your country at the moment in achieving this target? In case there is no target defined yet, please indicate when it is expected to have such a target.

Please see Section 3.1.1.

4 Intermediate targets for improving the energy performance of new buildings in order to ensure that by 31 December 2018, new buildings occupied and owned by public authorities are nearly zero-energy buildings

Please report here the 2015 targets ensuring that by 31 December 2018 all new public buildings are nearly zero-energy buildings. Also explain how they relate to and help to achieve that by 31 December 2018, all new public buildings are nearly zero-energy buildings

What are the qualitative and quantitative 2015 targets for all new buildings occupied and owned by public authorities?

4.1.1 Qualitative 2015 targets: Interim energy related requirements for new public buildings

Requirements on fraction of renewable energies:

Requirements on useful energy demand:

Requirements on primary energy demand:

Please see Section 3.1.1.

4.1.2 Quantitative 2015 targets: Share of public nZEB according to official nZEB definition on all newly constructed public buildings (define reference parameter e.g. number of buildings, floor area, volume etc.):

Please see Section 3.1.1.

Miscellaneous:

From your point of view, how close is your country at the moment in achieving this target? In case there is no target defined yet, please indicate when it is expected to have such a target.

Please see Section 3.1.1.

5 Policies and measures for the promotion of all new buildings being nearly zero-energy buildings after 31 December 2020

5.1 Residential buildings

5.1.1 Relevant regulations

Directive 2010/31/EU, The Law on the Energy Performance of Buildings, The Cabinet regulations No 383 from 09/07/2013.

5.1.2 Relevant economic incentives and financing instruments

Further support for construction of NZEB will be based on CCFI funded competition/tender "Low energy buildings" results.

In accordance with the Section 15 of the Law on the Energy Performance of Buildings (1) the general supervision and coordination of the energy performance of buildings shall be performed by the Ministry of Economics. (2) The ministry of Economics shall:

- 1) develop and implement the policy on the energy performance of buildings;
- 2) maintain the information systems necessary for administration of certification of the energy performance and inspection heating systems and air conditioning systems of buildings;
- 3) perform measures in order to inform the society regarding various methods and practice, as well as draw up and administrate support instruments, which serve to improve the energy performance of buildings;
- 4) perform measures which promote the renovation of buildings or the construction of low or nearly zero-energy buildings;
- 5) perform measures so that users are provided with recommendations in respect of inspection of heating systems and air conditioning systems and improvement of the performance thereof;
- 6) perform other tasks related to the policy for the energy performance of buildings specified in other regulatory enactments or policy planning documents.

5.1.3 Energy performance certificates' use and layout in relation to nZEB standard

Separate requirements regarding energy performance certificates of NZEB are not specified in regulations of energy performance of buildings and Law on the Energy Performance of Buildings.

Section 7 of the Law On the Energy Performance of Buildings states that the certification of the energy performance of a building shall be performed:

- 1) for a building to be designed, reconstructed or renovated, in order to accept it for service or sell it;
- 2) for a building unit in a building to be designed, reconstructed or renovated, in order to sell this building unit, if an individual accounting of energy carrier or thermal energy is anticipated for it;
- 3) for an existing building, in order to sell, rent or lease it, if the certification of the energy performance is requested by the purchaser, tenant or lessee;
- 4) for an existing building unit, the heating area of which exceeds 50 square metres, in order to sell, rent or lease it, if the certification of the energy performance is requested by the

purchaser, tenant or lessee and this building unit has an individual accounting of energy carrier or thermal energy (Until 31 December 2015 the certification of the energy performance of building units shall not be applicable if the relevant building unit is rented or leased);

5) for an existing public building in the State or local government ownership, the heating area of which exceeds 250 square metres (Until 9 July 2015, the certification of the energy performance specified in this Clause shall be performed for public existing buildings belonging to the State or local government, the heating area of which exceeds 500 square metres);

6) in cases where a building owner has taken a decision on certification of the energy performance of the building.

In accordance with the Section 9 of the Law on the Energy Performance of Buildings depending on the consumption of energy resources, buildings shall be divided as follows in the classification system of the energy performance of buildings:

- 1) Basic energy performance class buildings;
- 2) High energy performance class buildings (class A buildings that meet the requirements of NZEB defined in Section 2).

Section 10 of the Law states that the objectives for the construction on high energy performance class buildings and the reconstruction of existing buildings into high energy performance class buildings shall be determined by policy planning documents.

5.1.4 Supervision (energy advice and audits)

Separate requirements regarding the supervision of NZEB are not specified in regulations of energy performance of buildings and Law on the Energy Performance of Buildings.

In accordance with the Law On the Energy Performance of Buildings certification of the energy performance of a building is a process during which the energy performance of an existing building or building units is determined, and an energy performance certificate of the building is issued or the planned energy performance of a building or building unit to be designed, reconstructed or renovated is determined and a temporary energy performance certificate of the building is issued by an independent expert. Law On the Energy Performance of Building states that independent expert is an energy auditor or another person entitled to perform certification of the energy performance and inspect heating systems and air conditioning systems.

In accordance with Section 6 of the Law when an independent expert is evaluating the energy performance, the following shall be taken into account:

- 1) the thermal capacity of the building envelope;
- 2) the heating system and cooling system;
- 3) the hot water supply system;
- 4) the air conditioning system;
- 5) the built-in lighting systems;
- 6) the ventilation and air permeability;
- 7) the location and orientation to cardinal points;
- 8) the impact of the sun;
- 9) outdoor climatic conditions and indoor microclimate;
- 10) internal loads.

The Cabinet Regulation No.383, issued in accordance with the Law On the Energy Performance of Buildings determines the procedure of energy certification, the sample of energy performance certificate and temporary energy performance certificate, registration procedure, comparative evaluation system of energy efficiency, classification system of energy efficiency, as well as energy efficiency and high-efficiency system requirements for NZEB.

According to the Cabinet Regulation No. 383 energy certification of the building must be carried out by an independent expert, who calculates the energy performance of the building in accordance with the laws and regulations, issues an energy performance certificate and prepares recommendations for improvement of the energy efficiency of buildings, which applies to all groups of buildings.

Independent expert must indicate an energy performance class in the energy certificate and temporary energy certificate according to the Section 14 of the Cabinet Regulation No. 383 for residential and non-residential buildings, where NZEB belongs to class A, if it complies with the requirements defined in Section 2.

5.1.5 Information (tools)

Separate procedures/requirements for information about NZEB in Latvia do not exist.

In accordance with the Law On the Energy Performance of Buildings the Ministry of Economics shall maintain the information systems necessary for administration of certification of the energy performance and inspection heating systems and air conditioning systems of buildings; perform measures in order to inform the society regarding various methods and practice, as well as draw up and administrate support instruments, which serve to improve the energy performance of buildings and perform measures so that users are provided with recommendations in respect of inspection of heating systems and air conditioning systems and improvement of the performance thereof.

5.1.6 Demonstration

Separate requirements for demonstration regarding NZEB in Latvia do not exist.

In accordance with the Section 14 of the Law On the Energy Performance of Buildings (1) The purchaser, tenant or lessee of an existing building or building unit or the purchaser of a building to be designed is entitled to become acquainted with the energy performance certificate of the building or the temporary energy performance certificate of the building, if certification of the energy performance of the building is anticipated for the relevant building or building unit in accordance with the requirements of this Law.

(2) The purchaser of an existing building or building unit or the purchaser of a building to be designed is entitled to become acquainted with the energy performance certificate of the building or the temporary energy performance certificate of the building following the acquisition of the building or building unit, if certification of the energy performance is anticipated for the relevant existing building or building unit or the building to be designed in accordance with the requirements of this Law and if the relevant document has not been appended to the file of the residential house.

5.1.7 Education and training

Separate requirements for education and training regarding NZEB in Latvia do not exist.

Education and training of society regarding to energy efficiency will be organised by the campaign "Let's live warmer!" ("Dzīvo siltāk!") and Energy Efficiency Center of Latvenergo AS.

The campaign „Let's live warmer!“ is a communication campaign developed to promote energy efficiency of buildings in Latvia. There were more than 175 informative events organised in Latvia from 2010 to 2013 – discussions, seminars, conferences, exhibitions, with more than 8500 participants. Information about current activities regarding energy efficiency are regularly sent to nearly 2000 clients and business partners.

In spring 2009 the aid programme „Improvement of Heat Insulation of Multi – Apartment Residential Buildings“ funded by the European Regional Development Fund was started. The aim o of the programme was and still is the improvement of energy efficiency for housing in multi - apartment residential buildings ensuring the sustainability of housing stock and

efficient utilization of energy resources. In order to inform people about the programme and encourage the housing insulation in Latvia, the campaign "Let's live warmer!" has been developed.

The campaign was established basing on the cooperation memorandum signed in the 25th of February 2010 with additional signatures on 23rd of September 2010 and 22nd of September 2011.

The main aim of the memorandum is to ensure the availability of information on housing insulation issues. Additional aims are the following:

- To encourage cooperation between industry associations in order to ensure the flow of information about current industry promotion;

- To ensure the information about apartment house management;
- To ensure the information about EU funding for housing insulation;
- To give the information about benefits of insulation;
- To educate people about conditions providing qualitative insulation;
- To give the information about construction quality standards and technologies;
- To inform people about latest trends in housing insulation issues.

Within the campaign around 175 events have been organized till the end of the year 2012 attracting more than 5500 participants on spot and more than 2740 participants looking events through online channels.

Within the campaign the contest "The Best Energy Efficiency Building" has been regularly organized since 2011, assessing buildings renovated in the previous year.

Blogs to follow the campaign are the following:

www.twitter.com/siltinam

www.youtube.com/siltinam

<https://vimeo.com/dzivosiltak>

www.slideshare.net/siltinam

www.facebook.com/dzivosiltak

<http://www.draugiem.lv/siltinam>

<http://www.draugiem.lv/group/16058011/dzivo-siltak>

„Latvenergo”AS Energy Efficiency Center.

The objective of the Energy Efficiency Center is to advise consumers on safer and more efficient usage of various electrical appliances. The Energy Efficiency Center often organizes lectures on power safety and energy efficiency, seminars in collaboration with the manufacturers (vendors) of the displayed appliances, lectures to school-children, students of universities and teachers.

The Center demonstrates a large variety of household electrical appliances. All the appliances are connected to the power network, water supply, and sewerage system and are

operated on site. The Center welcomes both individual and group visitors.

The Energy Efficiency Center provides recommendations to companies regarding the most efficient solutions for a lower electricity consumption as well as advice on available tariff types. To the lower secondary school students, we tell about the comfort, economy and technical advantages people get from the electricity. With pre-schoolers and primary school children we talk about power safety and give tips on safe use of electrical appliances and prevention of electric injuries.

5.2 Non-residential buildings

5.2.1 Relevant regulations

There is no separate regulation for non-residential buildings. Please see 5.1.1.

Please see 5.1.2.

5.2.2 Supervision (energy advice and audits)

Separate requirements regarding energy performance certificates of NZEB are not specified in regulations or laws.

Please see Section 5.1.2.

In accordance with the Section 9 of the Law on the Energy Performance of Buildings depending on the consumption of energy resources, buildings shall be divided as follows in the classification system of the energy performance of buildings:

- 3) Basic energy performance class buildings;
- 4) High energy performance class buildings (class A buildings that meet the requirements of the Cabinet Regulation No. 383 "Regulations Regarding the Energy Certification of Buildings" for low energy buildings, as well as class B – low energy buildings, which corresponds to average values of A and C class and there are high performance systems used in these buildings, which provides at least 75% of ventilation heat recovery during the heating period and at least partial use of renewable energy. Moreover, there are no low-efficiency fossil fuel heating system installed in the building.

5.2.3 Information (tools)

Please see 5.1.3.

5.2.4 Demonstration

Please see 5.1.4.

5.2.5 Education and training

Please see information about the Energy Efficiency Center of Latvenergo AS in Section 5.1.7.

5.3 From your point of view, how would you evaluate the current measures that are in force? Please also try to describe the existing gap between what is in force and what should be in force in order to ensure that after 31 December 2020, all new buildings are nearly zero-energy buildings. Are there precise measures planned for the future?

Taking into account that Latvia has no prior experience of NZEB construction, definition of targets is still at the research stage. In 2011 in accordance with Cabinet Regulation No. 1185 „CCFI financed project tender „Low energy buildings“ regulations“, CCFI financed

tender/competition was announced. The aim of this competition/tender was reduction of carbon dioxide emissions by building of NZEB, as well as renovation of existing buildings. There were 8 projects approved for the building of the new NZEB and 6 projects approved for reconstruction or renovation of the existings buildings to NZEB, most of which were implemented in 2013. Monitoring results of the realized/implemented projects after 1 year of NZEB operation/expluatation (at the end of 2014) will be evaluated and will allow us to develop further targets for NZEB.

6 Policies and measures for the promotion of all new buildings occupied and owned by public authorities being nearly zero-energy buildings after 31 December 2018

6.1 All new buildings occupied and owned by public authorities
<p>6.1.1 Relevant regulations There are no separate policies and measures for new buildings occupied and owned by public authorities being NZEB buildings. Please see 5.1.1.</p>
<p>6.1.2 Relevant economic incentives and financing instruments There are no separate policies and measures for new buildings occupied and owned by public authorities being NZEB buildings. Please see 5.1.2</p>
<p>6.1.3 Energy performance certificates' use and layout in relation to nZEB standard There are no separate policies and measures for new buildings occupied and owned by public authorities being NZEB buildings. Please see 5.1.3.</p>
<p>6.1.4 Supervision (energy advice and audits) There are no separate policies and measures for new buildings occupied and owned by public authorities being NZEB buildings. Please see 5.1.4.</p>
<p>6.1.5 Information (tools) There are no separate policies and measures for new buildings occupied and owned by public authorities being NZEB buildings. Please see 5.1.5</p>
<p>6.1.6 Demonstration There are no separate policies and measures for new buildings occupied and owned by public authorities being NZEB buildings. Please see 5.1.6</p>
<p>6.1.7 Education and training There are no separate policies and measures for new buildings occupied and owned by public authorities being NZEB buildings. Please see 5.1.7</p>
<p>6.2 From your point of view, how would you evaluate the current measures that are in force? Please also describe the existing gap between what is in force and what should be in force in order to ensure that after 31 December 2018, all new public buildings are nearly zero-energy buildings. Are there precise measures planned for the future?</p>
<p>There are no separate policies and measures for new buildings occupied and owned by public authorities being NZEB buildings. Please see 5.3.</p>

7 Policies and measures for the promotion of existing buildings undergoing major renovation being transformed to nearly zero-energy buildings

7.1 Residential buildings	
7.1.1 Relevant regulations	There are no separate policies and measures for existing buildings undergoing major renovation being transformed to NZEB. Please see 5.1.1.
7.1.2 Relevant economic incentives and financing instruments	There are no separate policies and measures for existing buildings undergoing major renovation being transformed to NZEB. Please see 5.1.2.
7.1.3 Energy performance certificates' use and layout in relation to nZEB standard	There are no separate policies and measures for existing buildings undergoing major renovation being transformed to NZEB. Please see 5.1.3.
7.1.4 Supervision (energy advice and audits)	There are no separate policies and measures for existing buildings undergoing major renovation being transformed to NZEB. Please see 5.1.4.
7.1.5 Information (tools)	There are no separate policies and measures for existing buildings undergoing major renovation being transformed to NZEB. Please see 5.1.5.
7.1.6 Demonstration	There are no separate policies and measures for existing buildings undergoing major renovation being transformed to NZEB. Please see 5.1.6.
7.1.7 Education and training	There are no separate policies and measures for existing buildings undergoing major renovation being transformed to NZEB. Please see 5.1.7.
7.2 Non-residential buildings	
7.2.1 Relevant regulations	There are no separate policies and measures for existing non-residential buildings undergoing major renovation being transformed to NZEB. Please see 5.2.1.
7.2.2 Relevant economic incentives and financing instruments	There are no separate policies and measures for existing non-residential buildings undergoing major renovation being transformed to NZEB. Please see 5.2.2.
7.2.3 Energy performance certificates' use and layout in relation to nZEB standard	There are no separate policies and measures for existing non-residential buildings undergoing major renovation being transformed to NZEB. Please see 5.2.3.
7.2.4 Supervision (energy advice and audits)	There are no separate policies and measures for existing non-residential buildings undergoing major renovation being transformed to NZEB. Please see 5.2.4.
7.2.5 Information (tools)	There are no separate policies and measures for existing non-residential buildings undergoing major renovation being transformed to NZEB. Please see 5.2.5.
7.2.6 Demonstration	

There are no separate policies and measures for existing non-residential buildings undergoing major renovation being transformed to NZEB. Please see 5.2.6.

7.2.7 Education and training

There are no separate policies and measures for existing non-residential buildings undergoing major renovation being transformed to NZEB. Please see 5.2.7.

7.3 From your point of view, how would you evaluate the current measures that are in force? Please also try to describe the existing gap between what is in force and what should be in force in order to stimulate the transformation of buildings that are refurbished into nZEB. Are there precise measures planned for the future?

There are no separate policies and measures for existing non-residential buildings undergoing major renovation being transformed to NZEB. Please see 5.3.

8 Additional Information

Please fill in any additional information on actions taken to increase the number of nearly zero-energy buildings in your country.

In 2011 in accordance with Cabinet Regulation No. 1185 „CCFI financed project tender „Low energy buildings“ regulations“, CCFI financed tender/competition was announced. The aim of this competition/tender was reduction of carbon dioxide emissions by building of NZEB, as well as renovation of existing buildings. There were 8 projects approved for the building of the new NZEB and 6 projects approved for reconstruction or renovation of the existings buildings to NZEB, most of which were implemented in 2013.

CCFI maximum support intensity of the total eligible project costs were 65% for small (micro) businesses and individuals, 55% for medium-size enterprises and 80% for the direct or indirect public administration and local governments.

During the implementation of the project, the proposers were required to comply with the following criteria:

- The energy consumption for heating oft he building does not exceed 35 kWh/m²a. Heat consumption should be calculated in accordance with the laws and methodology for calculating the energy performance of a building.
- Effectiveness indicator of total reduction of carbon dioxide emission (hereinafter – the performance indicator), which characterizes a reduction of carbon dioxide emissions in relation tot required funding, in the projects, submitted by enterprises and individuals is not less than 0,25 kgCO₂/EUR per year, but for direct and indirect administration bodies and local governments – 0,18 kg CO₂/EUR per year.

Taking into account that mentioned NZEB projects were realized in 2013, but it is possible to monitore and evaluate them only after 1 year of expluatation/operating, we do not have a monitoring results yet. Completed and still realizable projects are summarized in Annex 1.

9 Possible improvements

Where do you see most room for improvement in order to increase the number of nearly zero-energy buildings in your country? Please also try to give examples for appropriate measures.

Taking into account that Latvia has no prior experience of NZEB construction, definition of targets is still at the research stage. In 2011 in accordance with Cabinet Regulation No. 1185 „CCFI financed project tender „Low energy buildings“ regulations“, CCFI financed tender/competition was announced. The aim of this competition/tender was reduction of carbon dioxide emissions by building of NZEB, as well as renovation of existing buildings. There were 8 projects approved for the building of the new NZEB and 6 projects approved for reconstruction or renovation of the existings buildings to NZEB, most of which were implemented in 2013. Monitoring results of the realized/implemented projects after 1 year of NZEB operation/expluatation (at the end of 2014) will be evaluated and will allow us to develop further targets for NZEB.

Projekta nosaukums	Statuss 9.12.2013.	Projekta beigu datums apstiprinātais	Projekta izmaksas kopā	Projekta izmaksas attiecināmās	Projekta izmaksas KPI	Plānotais CO ₂ emisiju samazinājums, t gadā	Plānotais siltuma enerģijas patēriņš apkurei, kWh/m ² gadā
Zema enerģijas patēriņa ēkas "Valgundes sporta halle" jaunbūve Jelgavas novadā	pabeigts	01-nov-13	Ls 1144 443,48	Ls 592 900,36	Ls 474 320,28	n/a	14,00
Ventspils pilsētas domes ēkas renovācija Jūras ielā 36, Ventspilī	pabeigts	28-feb-13	Ls 752 708,85	Ls 465 062,48	Ls 306 941,23	86,918	12,04
Garkalnes vidusskolas ēkas zemas enerģijas patēriņa energoefektīva rekonstrukcija izmantojot videi draudzīgas tehnoloģijas un būvmateriālus	realizācija	31-okt-13	Ls 524 998,00	Ls 524 998,00	Ls 419 998,40	105,364	14,30
Zema enerģijas patēriņa standartiem atbilstoša vienģimenes dzīvojamā jaunbūve, Kadiķu ceļš 3A, Jelgava	pabeigts	01-jūn-13	Ls 62 740,82	Ls 30 999,24	Ls 20 149,51	n/a	14,79
LV KU SIA "HM Rīga" ražošanas ēkas rekonstrukcija atbilstoši zema enerģijas patēriņa prasībām	pabeigts	01-jan-13	Ls 472 185,01	Ls 372 255,94	Ls 176 353,33	305,598	14,81
Vienģimenes dzīvojamās ēkas "Kalnamuižas", Siguldas pagastā, Siguldas novadā būvniecība pēc Zema enerģijas patēriņa ēkas standartiem	pabeigts	30-nov-12	Ls 157 893,83	Ls 47 267,23	Ls 30 723,70	n/a	12,26
A/S "RAR" biroju ēkas rekonstrukcija atbilstoši zema enerģijas patēriņa prasībām	pabeigts	31-okt-12	Ls 1130 303,81	Ls 1126 977,81	Ls 730 210,58	623,54	14,64
Energoefektīvas savrupmājas jaunbūve ZEMDIMDI Ādažu novadā, Baltezers ciemā	pabeigts	01-nov-12	Ls 145 917,00	Ls 96 839,23	Ls 62 945,50	n/a	14,45

Energoefektīvas pasīvās divģimeņu dzīvojamās ēkas jaunbūve	realizācija	30-apr-13	Ls 300 342,92	Ls 81 287,38	Ls 52 551,80	n/a	10,50
Jaunas zema enerģijas patēriņa biroja ēkas būvniecība Liepājā, Kūrmājas prospektā 8/10	pabeigts	01-feb-13	Ls 189 634,56	Ls 112 231,11	Ls 72 950,23	n/a	13,91
Energoefektīvas pasīvās viengīmenes dzīvojamās ēkas jaunbūve Rīgā, Ernsta Bergmaņa iela 5	realizācija	01-okt-13	Ls 278 590,60	Ls 78 330,50	Ls 50 914,82	n/a	14,50
Tiskādu speciālās internātpamatskolas rekonstrukcija, kas atbilst zema enerģijas patēriņa ēkas prasībām	realizācija	31-aug-13	Ls 639 434,75	Ls 573 911,72	Ls 459 129,37	123,6837	15,00
Zema enerģijas patēriņa viengīmenes dzīvojamās ēkas (jaunbūves) būvniecība ar patēriņu ne lielāku kā 15 kWh/kv m gadā apkurei "Daugavpils", Daugavpils, Tīnūžu pagastā, Ikšķiles novads	pabeigts	29-feb-12	Ls 63 704,38	Ls 44 744,43	Ls 29 083,88	n/a	13,10
Tiskādu vidusskolas rekonstrukcija, kas atbilst zema enerģijas patēriņa ēkas prasībām	realizācija	30-sep-13	Ls 648 380,60	Ls 628 540,43	Ls 502 832,35	180,7713	15,00