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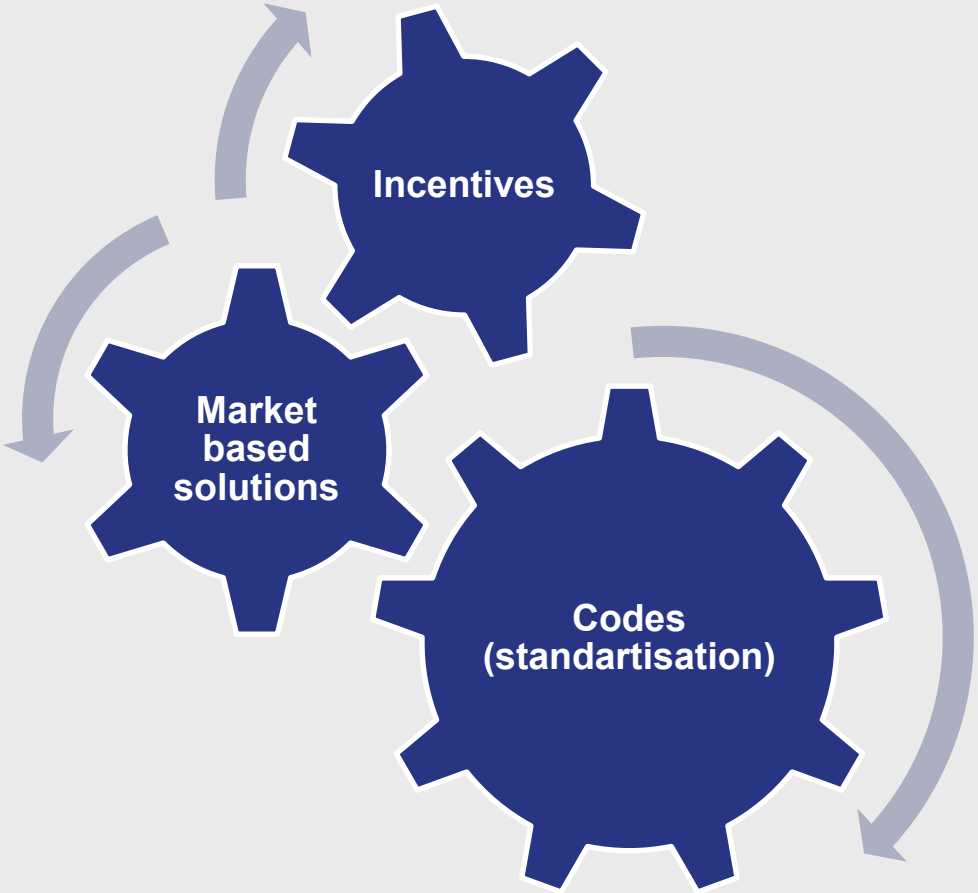
Energy Community

Energy Performance of Buildings Legal Framework in Georgia, Moldova and Ukraine

Kyiv, 15 November 2018

Energy Efficiency Policy



Energy Performance of Buildings standards

AREAS		Overarching	Building as such		Technical Building Systems (under EPBD)									Other systems or appliances (not under EPBD)	
MODULES		M1		M2	M3	M4	M5	M6	M7	M8	M9	M10	M11		M12
SUB-MODULES					Heating	Cooling	Ventilation	Humidification	Dehumidification	Domestic Hot Water	Lighting	Building Autom. & Controls	Photovoltaic, Wind		
1	1.General	EN ISO 52000-1	1.General		1.General	EN 15316-1	EN 16798-9	EN 16798-3	EN 16798-3	EN 16798-3	EN 15316-1	EN 15193-1	EN 15232-1		–	
2	2.Common terms and definitions, symbols, units and subscripts	EN ISO 52000-1	2.Building Energy Needs	EN ISO 52016-1 EN ISO 52017-1	2.Needs					EN 12831-3	EN 15193-1				–	
3	3.Applications	EN ISO 52000-1	3.(Free) Indoor Conditions without Systems	EN ISO 52016-1 EN ISO 52017-1	3.Maximum Load and Power	EN ISO 52016-1 EN ISO 52017-1 EN 12831-1	EN ISO 52016-1 EN ISO 52017-1 EN 16798-11		EN ISO 52016-1 EN ISO 52017-1	EN ISO 52016-1 EN ISO 52017-1	EN 12831-3				–	
4	4.Ways to Express Energy Performance	EN ISO 52003-1	4.Ways to Express Energy Performance	EN ISO 52018-1	4.Ways to Express Energy Performance	EN 15316-1	EN 16798-9	EN 16798-3	EN 16798-3	EN 16798-3	EN 15316-1	EN 15193-1	EN 15232-1		–	
5	5.Building Functions and Building Boundaries	EN ISO 52000-1	5.Heat Transfer by Transmission	EN ISO 10077-1 EN ISO 10077-2 EN ISO 10211 EN ISO 12631 EN ISO 13370 EN ISO 13789 EN ISO 14683 EN ISO 6946	5.Emission & Control	EN 15316-2 EN 15500-1 EN 12098-1 EN 12098-3 EN 12098-5	EN 15316-2 EN 15500-1	EN 16798-7 EN 15500-1	EN 16798-5-1 EN 16798-5-2	EN 16798-5-1 EN 16798-5-2			EN 15232-1		–	
6	6.Building Occupancy and Operating Conditions	EN 16798-1 ISO 17772-1	6.Heat Transfer by Infiltration and Ventilation	EN ISO 13789	6.Distribution & Control	EN 15316-3 EN 12098-1 EN 12098-3 EN 12098-5	EN 15316-3	EN 16798-5-1 EN 16798-5-2			EN 15316-3		EN 15232-1		–	
7	7.Aggregation of Energy Services and Energy Carriers	EN ISO 52000-1	7.Internal Heat Gains	EN 16798-1 ISO 17772-1	7.Storage & Control	EN 15316-5 EN 12098-1 EN 12098-3 EN 12098-5	EN 16798-15				EN 15316-5 EN 15316-4-3		EN 15232-1		–	
8	8.Building Zoning	EN ISO 52000-1	8.Solar Heat Gains	EN ISO 52022-1 EN ISO 52022-3	8.Generation & Control	EN 12098-1 EN 12098-3 EN 12098-5 EN 15316-4-1 EN 15316-4-2 EN 15316-4-3 EN 15316-4-4 EN 15316-4-5 EN 15316-4-8	EN 16798-13 EN 15316-4-2 EN 15316-4-5	EN 16798-5-1 EN 16798-5-2	EN 16798-5-1 EN 16798-5-2	EN 16798-5-1 EN 16798-5-2	EN 15316-4-1 EN 15316-4-2 EN 15316-4-3 EN 15316-4-4 EN 15316-4-5		EN 15232-1	EN 15316-4-3 EN 15316-4-4 EN 15316-4-5 EN 15316-4-10	–	
9	9.Calculated Energy Performance	EN ISO 52000-1	9.Building Dynamics (thermal mass)	EN ISO 13786	9.Load Dispatching & Operating Cond.	EN 15316-1	EN 16798-9						EN 15232-1		–	
10	10.Measured Energy Performance	EN ISO 52000-1	10.Measured Energy Performance		10.Measured Energy Performance	EN 15378-3					EN 15378-3	EN 15193-1	EN 15232-1 EN 16946-1		–	
11	11.Inspection		11.Inspection		11.Inspection	EN 15378-1	EN 16798-17	EN 16798-17	EN 16798-17	EN 16798-17	EN 15378-1	EN 15193-1	EN 16947-1		–	
12	12.Ways to express Indoor Comfort	EN 16798-1 ISO 17772-1			12.BMS											
13	13.External Environment	EN ISO 52010-1													–	
14	14.Economic Calculation	EN 15459-1													–	

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EPBD in Energy Community EaP countires
Deadlines for transposition and implementaiton

	Transposition Deadline	Date of Adoption	State of play	Implementation Deadline	State of play
Georgia	30 June 2019	-	Ongoing	31 December 2019	-
Moldova	30 September 2012	11 July 2014	Paritally transposed	31 March 2013	To be impemented
Ukraine	30 September 2012	22 July 2016	Paritally transposed	31 March 2013	To be impemented

EPBD Wrecking Balls – politicaly sensitive

- ✓ *Definition of building units (apartments or buildings)*
- ✓ *Inspection of heating and air conditoning systems + system of fines*
- ✓ *Certification of certifiers*
- ✓ *New buildings/old buildings and their certification*

EPBD in Energy Community EaP countires
Main compliance concerns Moldova

- ✓ *Term "building unit" does not include apartments, term "EU standard" is missing*
- ✓ *Apartments are not certified*
- ✓ *Annexes of Directive shall be transposed (methodology for calculation of EPB shall be updated, etc.)*
- ✓ *Existing residential buildings with multiple apartments commissioned before the entry into force of this law are not certified*
- ✓ *No requirement for drawing up the list of measures and instruments to promote the objectives of this Directive*

EPBD in Energy Community EaP countires
Main compliance concerns Ukraine

- ✓ *Number of definitions is missing (major renovation, building unit, etc);*
- ✓ *There is no obligation to have analysis of possible use of alternative systems and also introduction of intelligent metering systems as part of project documentation for buildings which are constructed;*
- ✓ *No encouragement, in relation to buildings undergoing major renovation, to consider high-efficiency alternative systems;*
- ✓ *No obligation to certify buildings or building units (including apartments) which are constructed, sold or rented out to a new tenant.*

EPBD Implementation

Roadmap of milestone actions for transposition and implementation of the EPB Directive in Georgia

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Adoption and implementation of a national Calculation Methodology for energy performance of buildings

Actions
Development of a national calculation methodology for energy performance of buildings with national annexes (default input values) - National Standard
Adoption of relevant supporting CEN standards (within the national calculation methodology)
Development of climatic data base
Development of building inventory
Development of software for energy performance calculation (new or adoption / adjustment of existing software)
Training of experts and state officials in the calculation methodology and in proper use of the software
Establishment of “software support centre”
Necessary resources and funds allocated or secured

Adoption and implementation of Energy Performance Requirements

Actions
Selection of the approach to be used for setting of minimum energy performance parameters
Definition of national input values for the purpose of cost optimal calculations
Energy and cost calculations
Development and adoption of the Regulation describing the minimum energy performance requirements for buildings, building elements and technical systems (including the relevant standards)
Information/training of key stakeholders in the construction industry
Development of routines and specifications for documentation and checking compliance of the energy performance requirements
Training of “building inspectors”
Development of a National Plan for increasing the number of nearly zero-energy buildings
New buildings occupied and owned by public authorities are nearly zero-energy buildings
All new buildings are nearly zero-energy buildings
Necessary resources and funds allocated or secured

Establishing and implementing an Energy Performance Certificate System

Actions
Development and adoption of Regulation on Energy Performance Certification of Buildings, incl. national values for each class (A, B, C, etc.) (including the relevant standards)
Designing and operating the organisational model for the energy certification system (development of EPC, issue, control, information, training and accreditation of experts, reporting, evaluation, etc.)
Development of Guidelines for energy performance certification of buildings
Development of Certification Scheme or Tool (issue, statistics, information dissemination, reporting)
Development and adoption of Procedures for qualification and certification of independent experts for energy performance certification of buildings and corresponding Registry
Training, examination and certification of experts
Development and adoption of Regulations for an independent control system for control and verification of energy performance certificates of buildings
Establishment of Independent Control System and Registry (system and institution). The Control system should provide information enabling evaluation of the effectiveness of the Certification Scheme
Necessary resources and funds allocated or secured
Issue of energy performance certificates - reduction of the threshold to 250 m^2 total useful floor area of public buildings
Display of energy performance certificates - reduction of the threshold to 250 m^2 total useful floor area of public buildings

Establishing and implementing a system for Regular Inspection of Heating and Air-conditioning Systems

Actions
Development and adoption of Regulation on regular inspection of heating systems (for public and other buildings) (including the relevant standards)
Development and adoption of Regulation on regular inspection of air-conditioning systems (for public and other buildings) (including the relevant standards)
Designing and operating the organisational model for the inspection system(s) (…, control, information, training and certification of experts, reporting, evaluation, etc.)
Development of Guidelines for inspections, incl. report templates
Development and adoption of Procedures for qualification and certification of independent experts for regular inspection of heating and air-conditioning systems
Development and adoption of Regulations for an independent control system for control and verification of the inspection reports for heating and air-conditioning systems
Establishment of Independent Control System and Registry (system and institution)
Training and certification of experts
Report to EnCS on the equivalence of alternative measures if taken, to regular inspection of boilers
Report to EnCS on the equivalence of alternative measures if taken, to regular inspection of air-conditioning systems
Necessary resources and funds allocated or secured

Implementation of the information requirements and introduction and implementation of penalties

Actions
Development and provision of guidance and training for those responsible for implementing the EPBD
Development and update of a list of existing and proposed measures and instruments, incl. those of financial nature, which promote EPBD objectives
Information campaigns to owners and tenants of buildings on the different methods and practices that serve to enhance energy performance (incl. purpose and objectives of energy certification and inspections, cost-effective energy efficiency improvement measures, available financial instruments, etc.)
Establishment and operation of Information Centre (probably, web-based)
Establishment of a monitoring system (system and institution) for checking compliance with national provisions and for issuing and collecting penalties
Operation of the monitoring system

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EU4Energy Support for Georgia

Support in development of a national calculation methodology for energy performance of buildings with national annexes (default input values) - National Standard

Support in development and adoption process of relevant supporting CEN standards (within the national calculation methodology)

Support in development of Regulation on Energy Performance Certification of Buildings, incl. national values for each class (A, B, C, etc.) (including the relevant standards)

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EU4Energy Support for Moldova

Support in updating the methodology for calculation of energy performance of buildings

Support in development of minimum energy performance requirements, including definition of the reference buildings, calculation of the cost-optimal level of energy performance, setting minimum energy performance requirements for technical building systems and energy from RES

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EU4Energy Support for Ukraine

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Thank you
for your attention!

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