



UKRAINE:

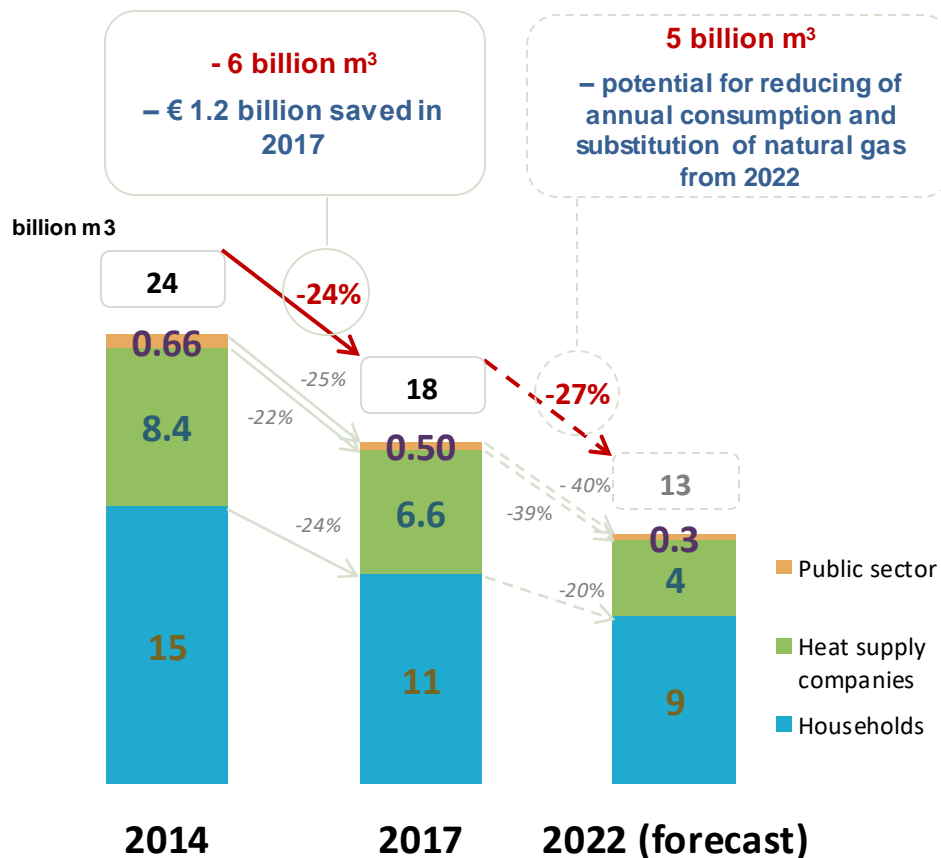
FINANCING MECHANISMS FOR ENHANCING ENERGY EFFICIENCY IN BUILDINGS

State Agency on Energy Efficiency
and Energy Saving of Ukraine



MAIN PRIORITY: REDUCTION OF NATURAL GAS CONSUMPTION

Dynamics of natural gas consumption in 2014-2017*



Achievements of 2014 - III quarter of 2018:

Invested in Ukrainian "clean"
energy projects

Σ ≈ 1,6 billion euros

IN RENEWABLE ENERGY:

2 000 MW of new heat capacities

Investments – **460 million €**

958 MW of new renewable energy capacities

Investments – **910 million €**, including:

➤ **6 031** of families installed SPP with total capacity - **121 MW**

Investments – **120 million €**

IN ENERGY EFFICIENCY:

500 000 of families implemented energy efficiency measures via "warm" loans in the residential sector

Investments – **220 million €**

204 ESCO-contracts are concluded in the public sector

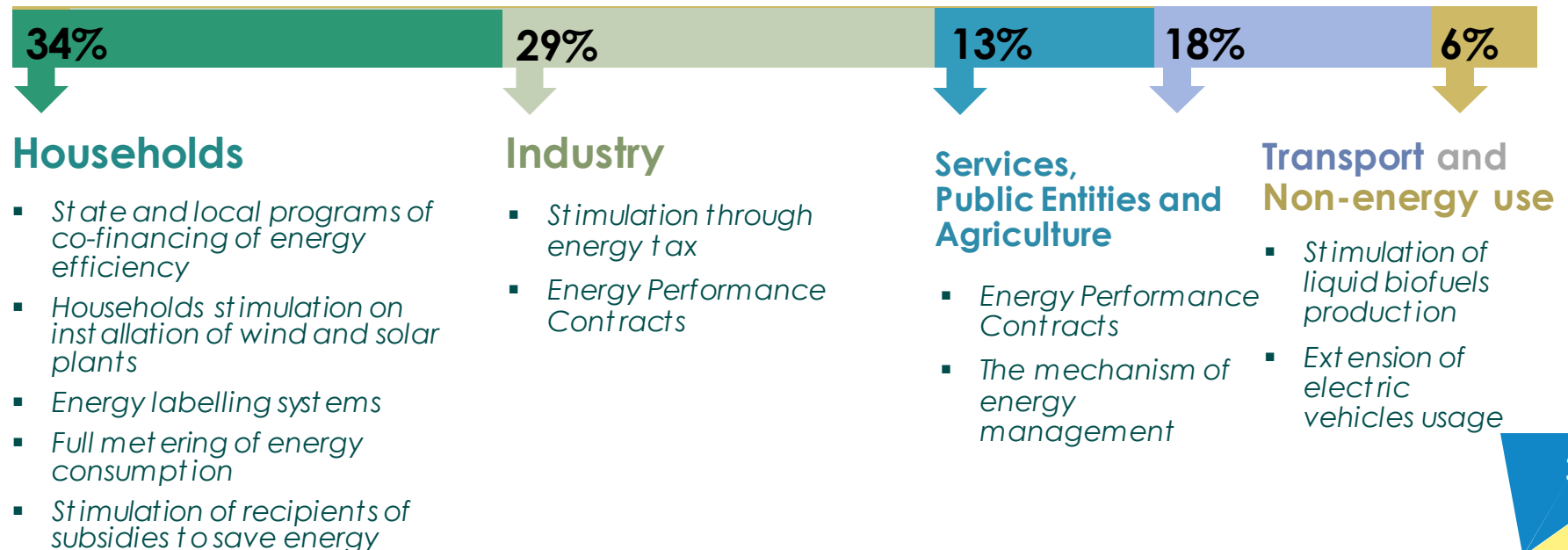
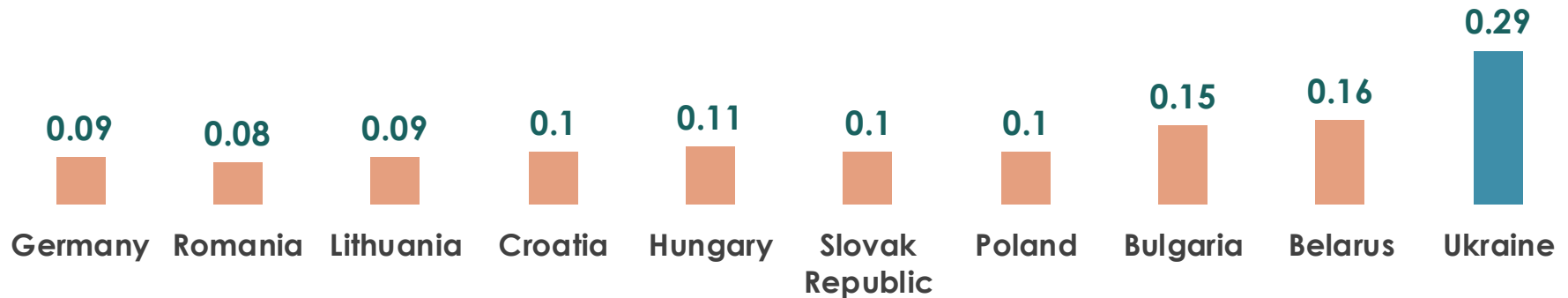
Investments – **6,3 million €**

* according to operational data of NJSC "Naftogaz of Ukraine" and PJSC "Ukrtransgas" (without temporarily occupied territories)



ENERGY EFFICIENCY AND RENEWABLE ENERGY SECTORAL POLICIES

Energy intensity in European countries (IEA, 2016)





Residential buildings		Public entities
Multi-Apartment	Private (Individual)	
Number of Buildings		
≈ 80 000	≈ 6,5 mln	≈ 100 000
Necessary Investment		
≈ from 44 to 74 bln EURO*		≈ from 4 to 8 bln EURO*
Annual Saving Potential (in gas equivalent)		
8 bln cubic meters		800 mln cubic meters

*depending on the thermal modernization level



STATE SUPPORT PROGRAM FOR HOUSEHOLDS ("WARM LOANS PROGRAM")

Duration: Active since Oct '2014

Mechanism:

Partial reimbursement of loans got by individual households & condominiums

Financial intermediaries:

Oschadbank, Privatbank,
Ukreximbank, Ukrgasbank

Support share:

20% - for biomass boilers (**35%** for obtainers of housing subsidies)

35% - for energy efficiency measures for individual households

40% - for condominiums (**70%** for obtainers of housing subsidies)

Funding:

EUR 190 million (≈ 6,1 billion UAH) has been distributed to ≈500 000 households

EUR 72 million (≈2.3 billion UAH) – reimbursed by the Government (during 2014 - 2018)

+ **166 regional programs** functioning in 2018 for extra reimbursement of «warm» loans

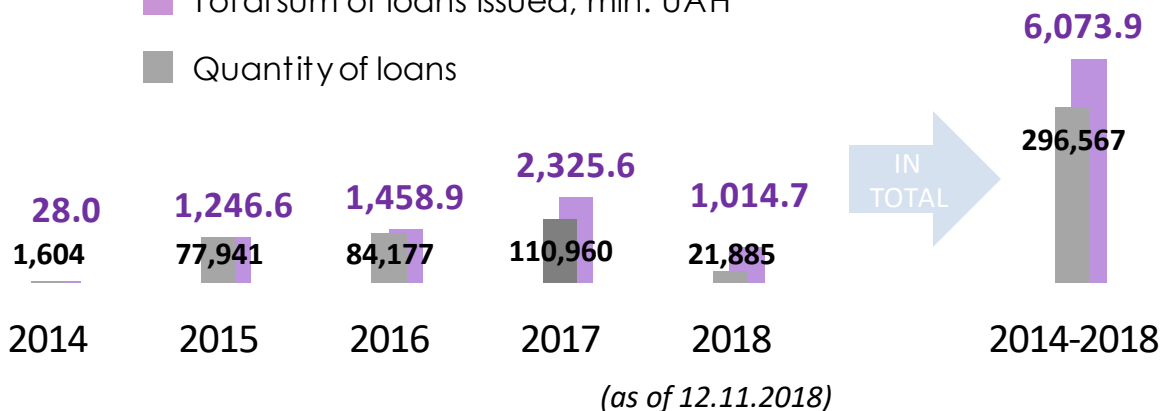
Effect: Estimated annual savings of resources in natural gas equivalent is **242 mln m³**.

Amounts of reimbursement:

- in 2014 - 2.4 million UAH
- in 2015 - 302 million UAH
- in 2016 - 861 million UAH
- in 2017 - 818 million UAH
- in 2018 - 500 million UAH

■ Total sum of loans issued, mln. UAH

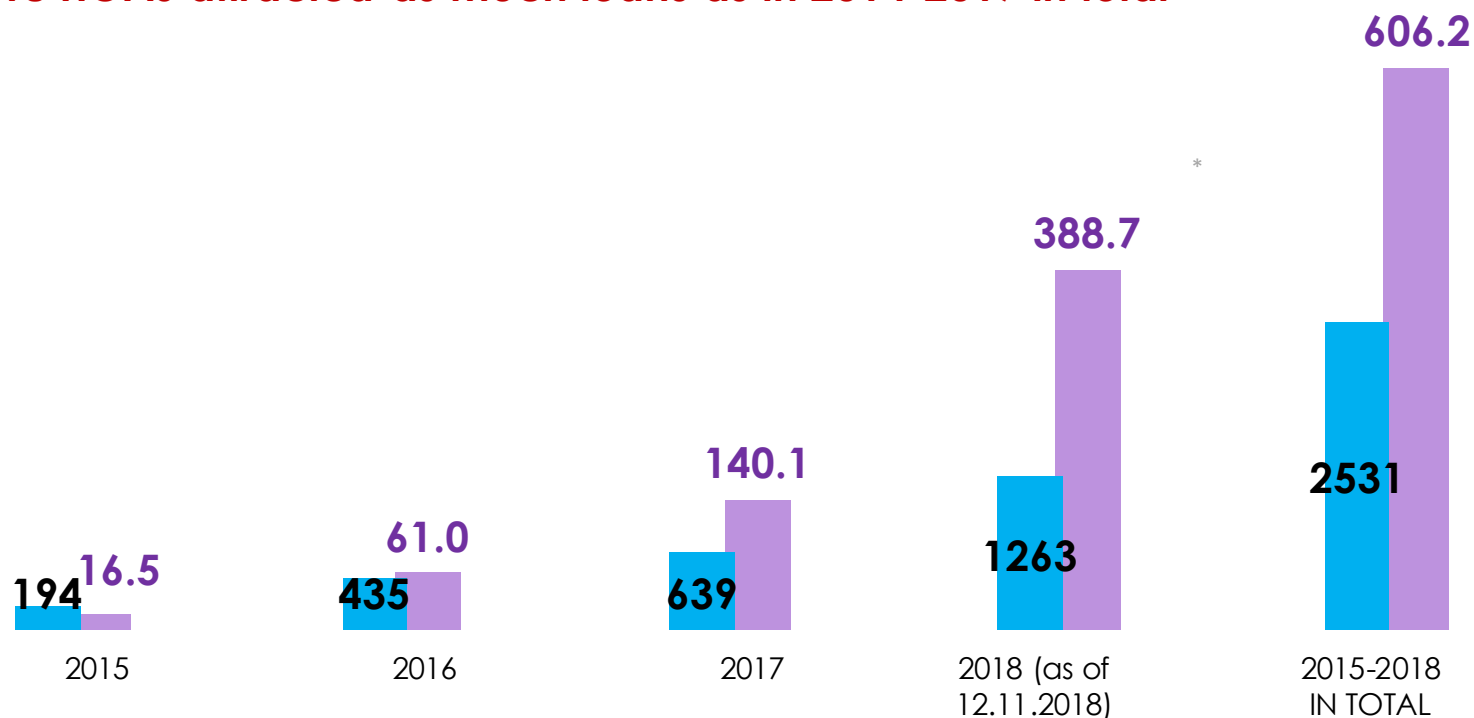
■ Quantity of loans





STATE SUPPORT PROGRAM FOR HOAs ("WARM LOANS PROGRAM")

**Demand on WARM LOANS for HOAs has the highest dynamics –
only in 2018 HOAs attracted as much loans as in 2014-2017 in total**



■ Quantity of loans issued

■ Amount of loans issued, UAH million



SUCCESSFUL CASES: **LUTSK** ("WARM LOANS PROGRAM")

Heat insulation
Individual heating unit
Modernization of engineering systems
Modernization of lighting
Installation of metering units



Total cost – 1,6 UAH million, incl.:

Insulation:

Total cost – 1,3 UAH million
State reimbursement– 0,5 UAH million
+ local reimbursement program

Other measures:

Total cost– 339 thousand UAH
State reimbursement – 165 thousand UAH
+ local reimbursement program

In the framework of 70/30 program – roof insulation
(without state and local programs)

Heating costs:

Before heat insulation

34 UAH / m² → 10 UAH / m²

After heat insulation
(heating season
2017-2018)

SAVING – 70,6%



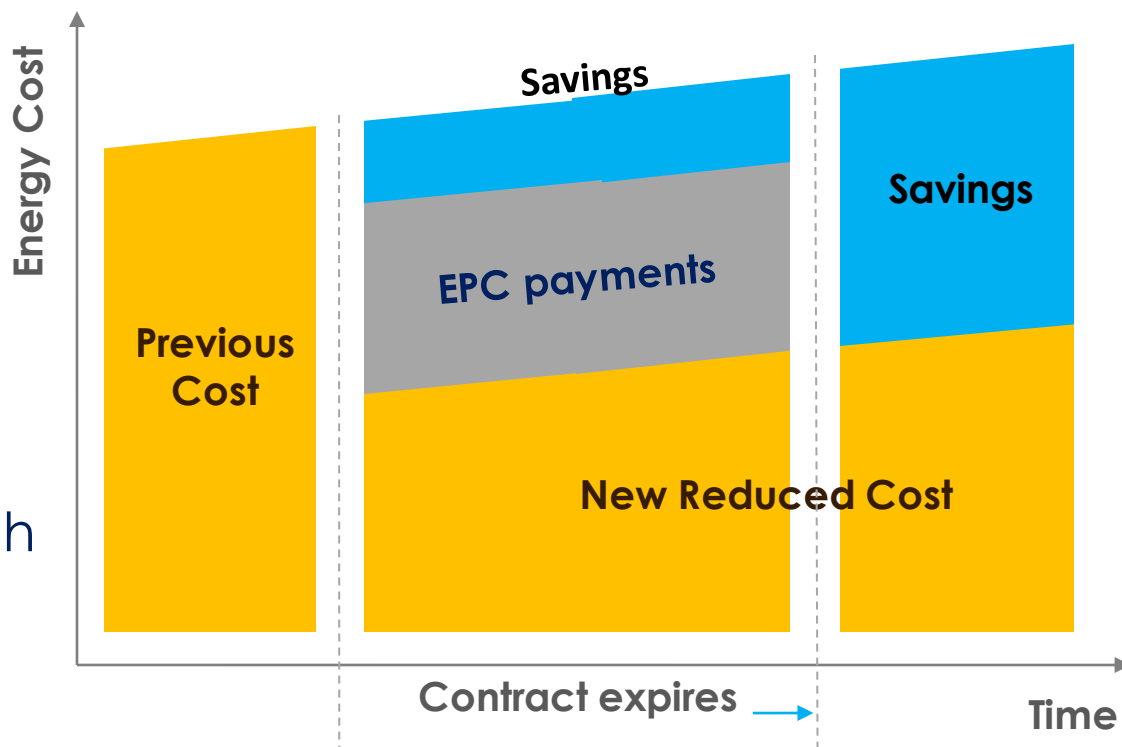
ENERGY PERFORMANCE CONTRACTING FOR PUBLIC SECTOR

2016:

first 20 EPCs were
concluded in 5 regions
of Ukraine

2017-2018:

184 EPC agreements worth
186,5 million UAH were
concluded



The appropriate laws and regulations developed with support of EBRD have been adopted. That gives the guarantee for investments return in the framework of state budgetary commitments.

ESCO (EPC) - TENDERS IN UKRAINE

Tenders were held in 43 cities of Ukraine

**EPC plans
2018:
≥ 370 contracts**

2016: 20 EPC contracts worth 18 million UAH were concluded

2017-2018: 184 EPC agreements worth 186,5 million UAH were concluded

EPC Tenders:

609 - EPC tenders

256 - Completed auctions via EPC proposals

184 - Concluded EPC contracts

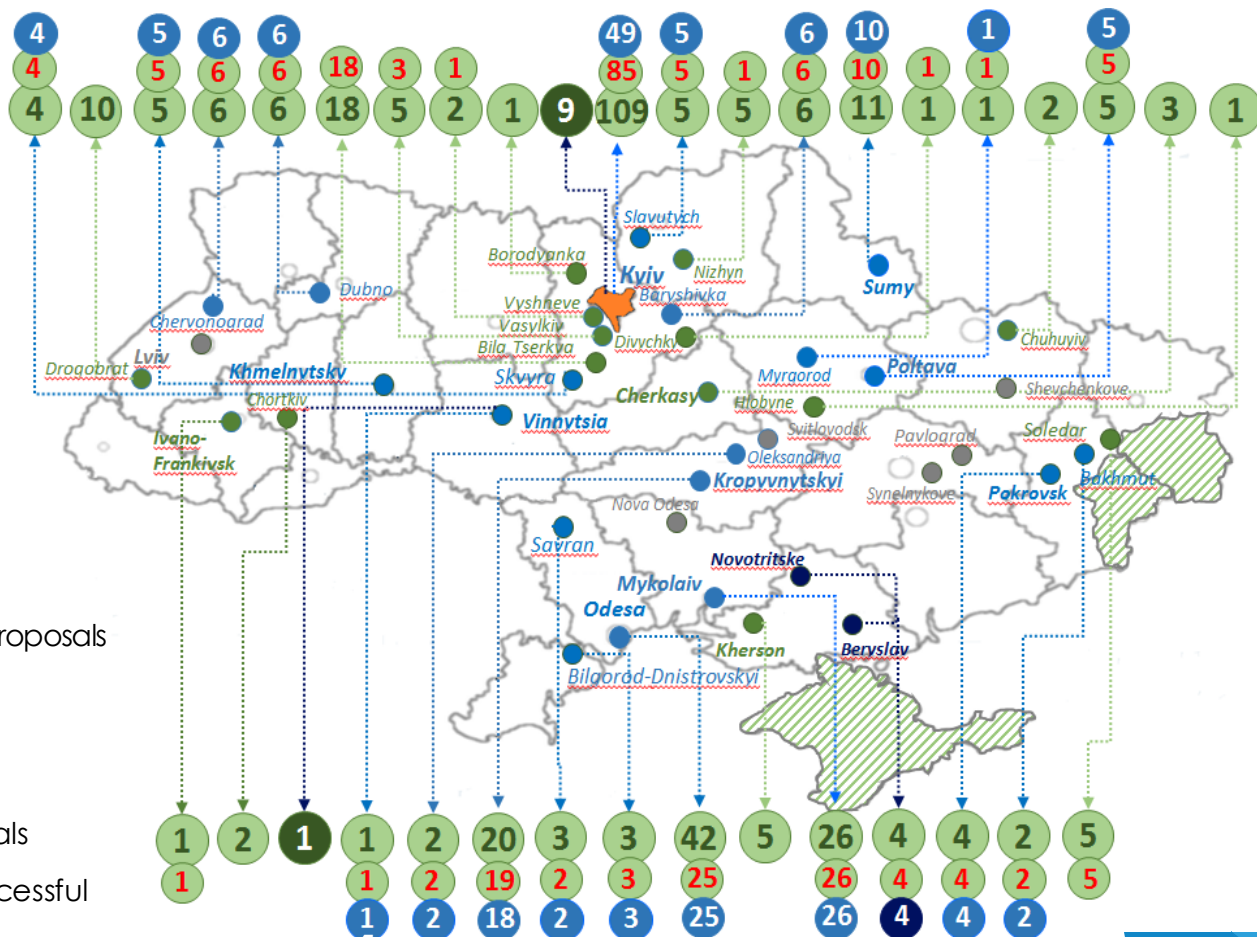
14 - Nearest auctions

60 - Open tenders for EPC proposals

279 - Cancelled and unsuccessful tenders*

43 - Cities where tenders are announced

* - no tenders (of 1 or <participants)





Law of Ukraine
«On energy efficiency of buildings»
of 22.06.2017 №2118-VIII,
introduces
mandatory certification of energy efficiency
from July 01, 2019

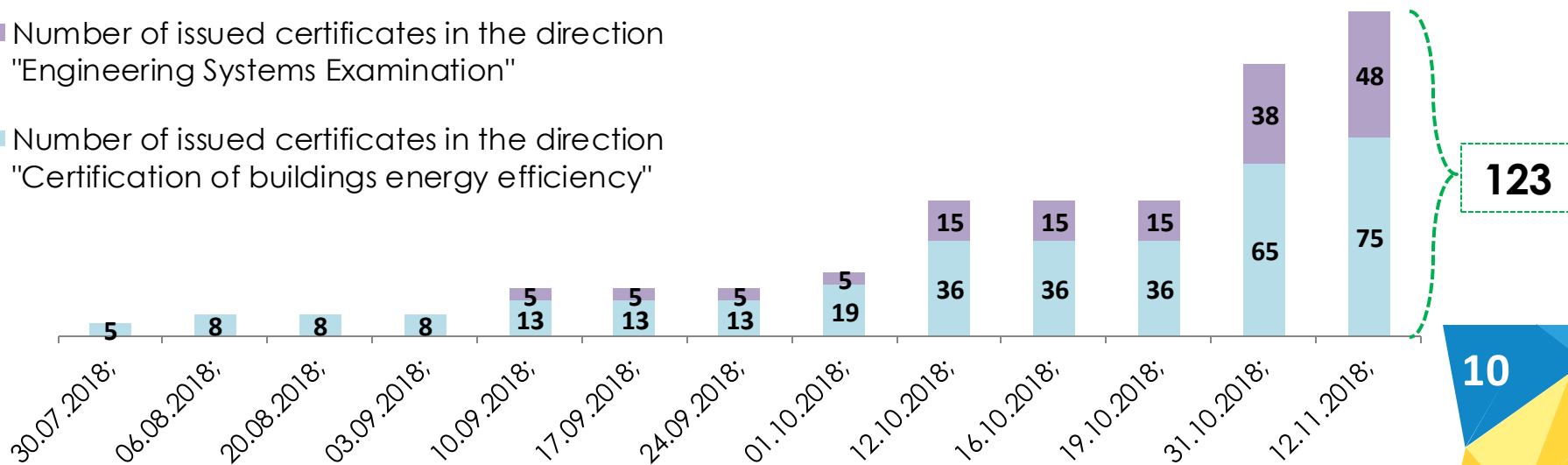


*Implementation
Directive 2010/31/EU is a
commitment of Ukraine
to the Energy
Community*

DYNAMICS OF ENERGY AUDITORS AND EXPERTS CERTIFICATION

- Number of issued certificates in the direction
"Engineering Systems Examination"
- Number of issued certificates in the direction
"Certification of buildings energy efficiency"

As of:



10



SAEE has prepared draft legislation for green bonds introduction in Ukraine

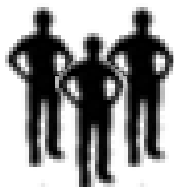
The concept of green bonds



debt instrument

the funds from the sale of which are sent exclusively for financing the "green" projects (both new and existing)

Main buyers



European Institutional Investors

for which financing of environmental projects is a demonstration of their socially responsible investment policy

Funds use compliance

energy efficiency projects

increasing thermal insulation of residential buildings

development of alternative energy sources

waste management

effective use of land resources

*conservation of flora and fauna, water resources,
increasing ecological compatibility for transportation of
people and goods*

Key world issuers

EBRD

World Bank

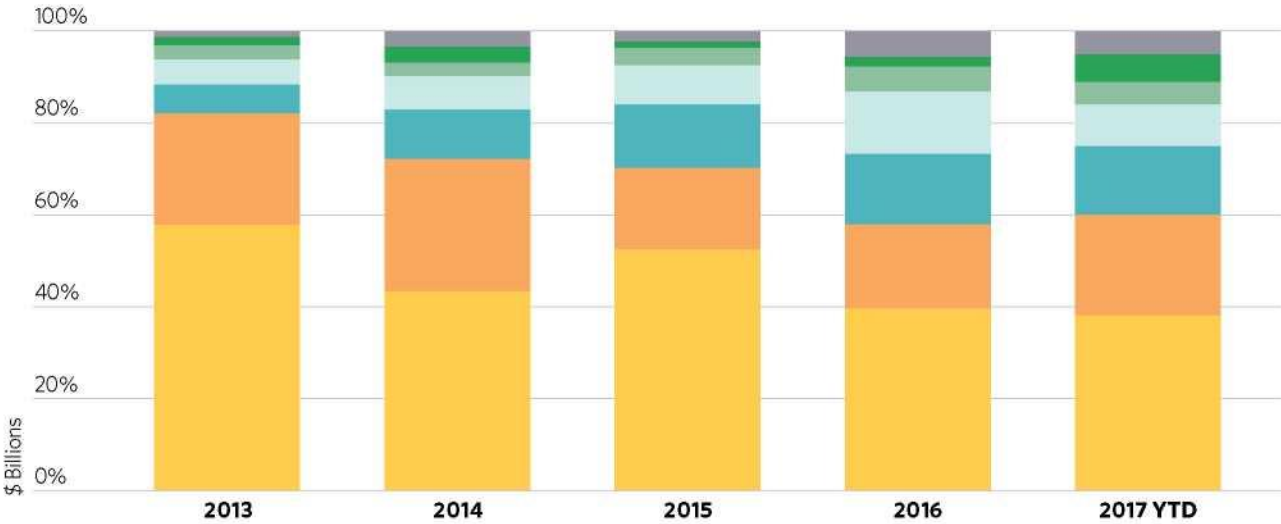
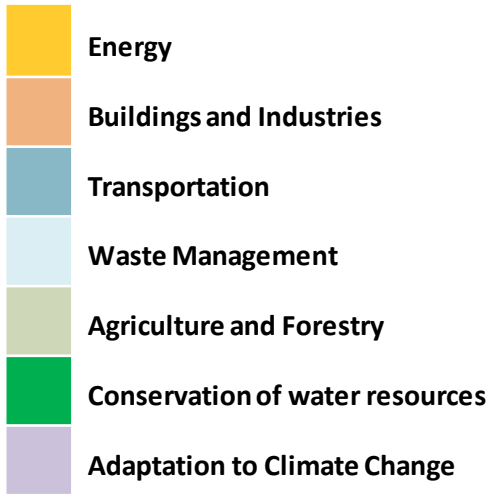
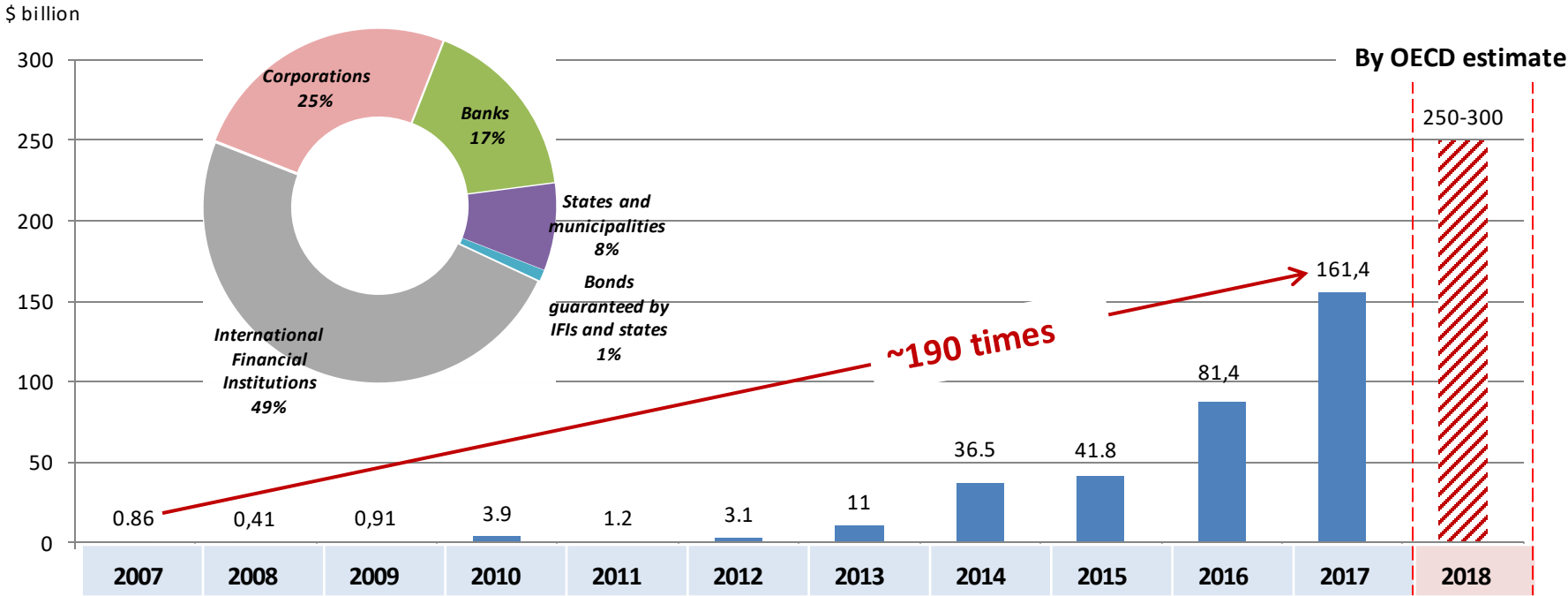
EIB

IFC

Other: government, municipalities, commercial banks, companies



GREEN BONDS WORLD MARKET INDICATORS



* according to Climate Bonds Initiative



INVEST in UKRAINE!

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