



# **RENEWABLE ENERGY:**

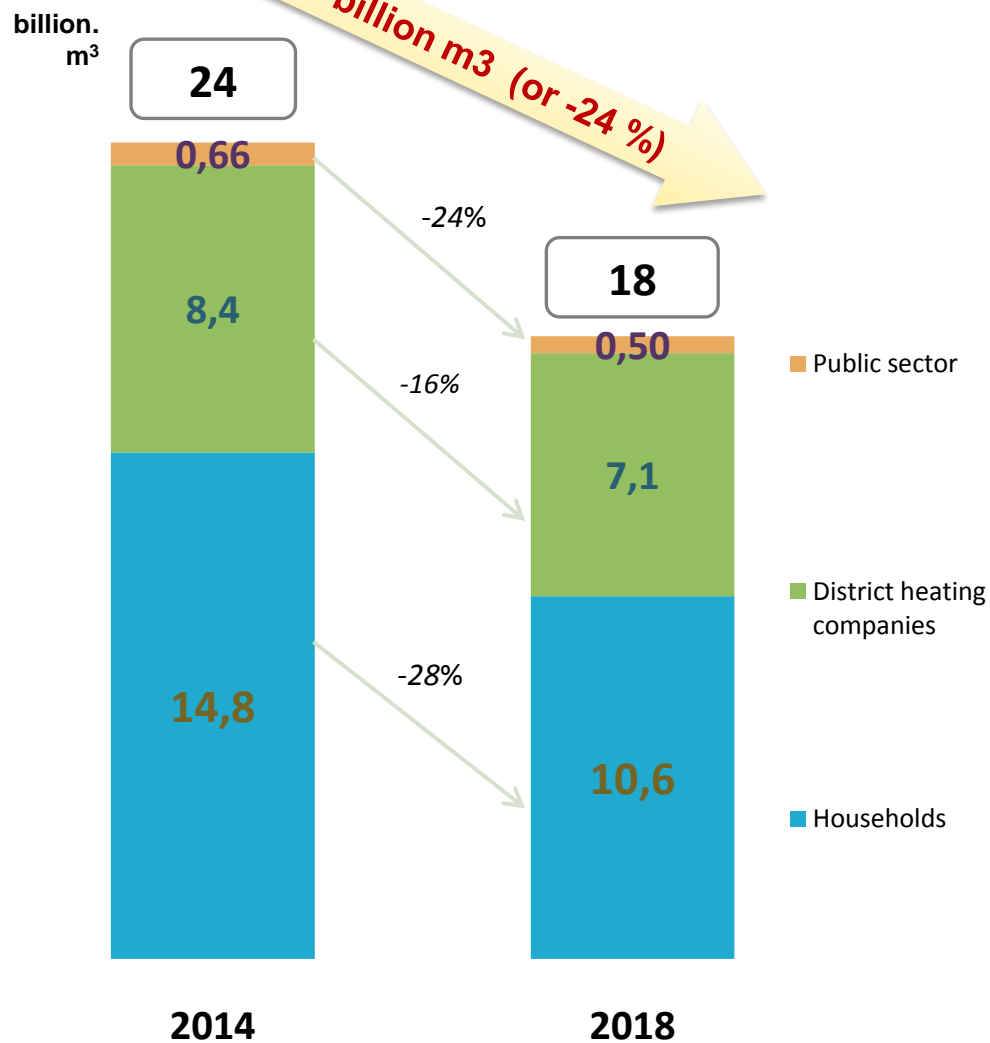
**KEY REFORMS FOR SUSTAINABLE  
DEVELOPMENT IN UKRAINE**

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**RENEWABLE ENERGY EXPERT, GERE VICE-CHAIR**

# MAIN PRIORITY: NATURAL GAS SAVING

## Dynamics of natural gas consumption in 2014-2018\*



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

## Achievements in 2014 – Q3 2019:

Invested in Ukrainian "clean" energy projects

$\Sigma \approx 4.1$  billion €

## IN RENEWABLE ENERGY:

**2 282 MW** of new heat capacities

Investments – **524 million €**

**3 899 MW** of new renewable energy capacities

Investments – **3.3 billion €**, including:

→ **11 888\*** of households installed SPP with total capacity – **276 MW**

Investments – **240 million €**

## IN ENERGY EFFICIENCY:

**682 609** of families implemented energy efficiency measures via "warm" loans in the residential sector

Investments – **278 million €**

**355** ESCO-contracts are concluded in the public sector

Investments – **18,5 million €**

\*Q2 2019



# CURRENT STATUS OF ENERGY EFFICIENCY AND RENEWABLE ENERGY IN UKRAINE

## National Renewable Energy Action Plan-2020

**11%** of Renewables in final energy consumption

## Energy Strategy of Ukraine till 2035

**25%** of energy, produced from RES in the structure of primary energy supply

**€ 20 bln**

## National Energy Efficiency Action Plan-2020

of energy saving comparing to the average final energy consumption in 2005-2009

**9%**

## Potential directions of investment attraction

### Necessary investments by 2035 for:



construction of **renewable energy facilities** (SPP, WPP, small HPP, CHP, biomass boiler station, biogas facilities, etc.)



construction of capacities for production of **equipment for renewable energy facilities**



construction of **biofuel production plants** (solid, liquid)



growing of **energy crops**



**Residential sector** – continuation of state program for stimulating households to implement energy efficiency measures

**€ 44 – 74 bln** – investment potential



**Industry** – state support for realization of energy efficiency measures

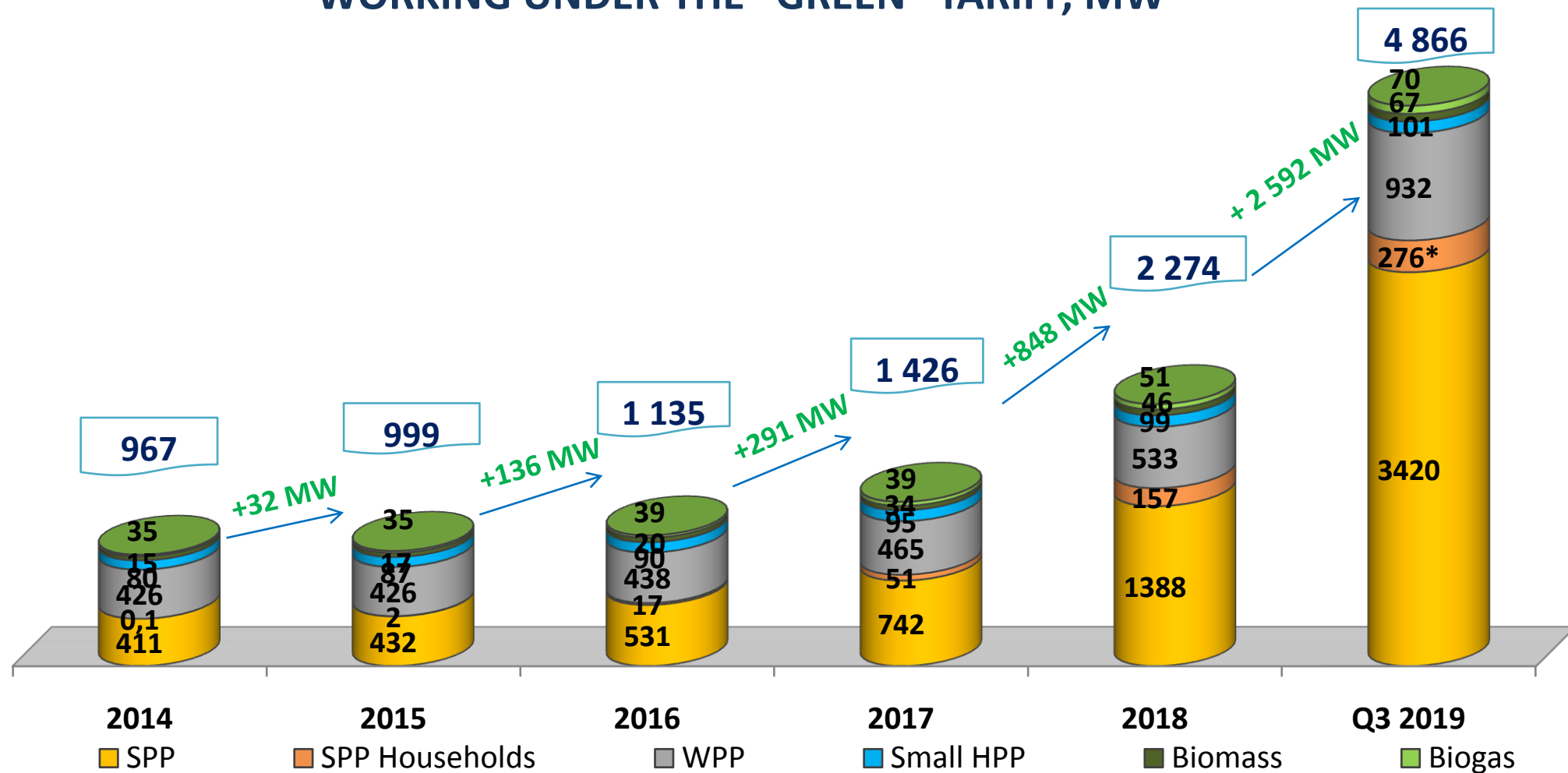
**€ 2,3 bln** – investment potential



**Public sector** – development of EPC market

**€ 8 bln** – investment potential

# **INSTALLED CAPACITY OF RENEWABLE ENERGY OBJECTS WORKING UNDER THE "GREEN" TARIFF, MW**



From the beginning of 2015, 3 899 MW were introduced and around € 3.3 bln were invested.

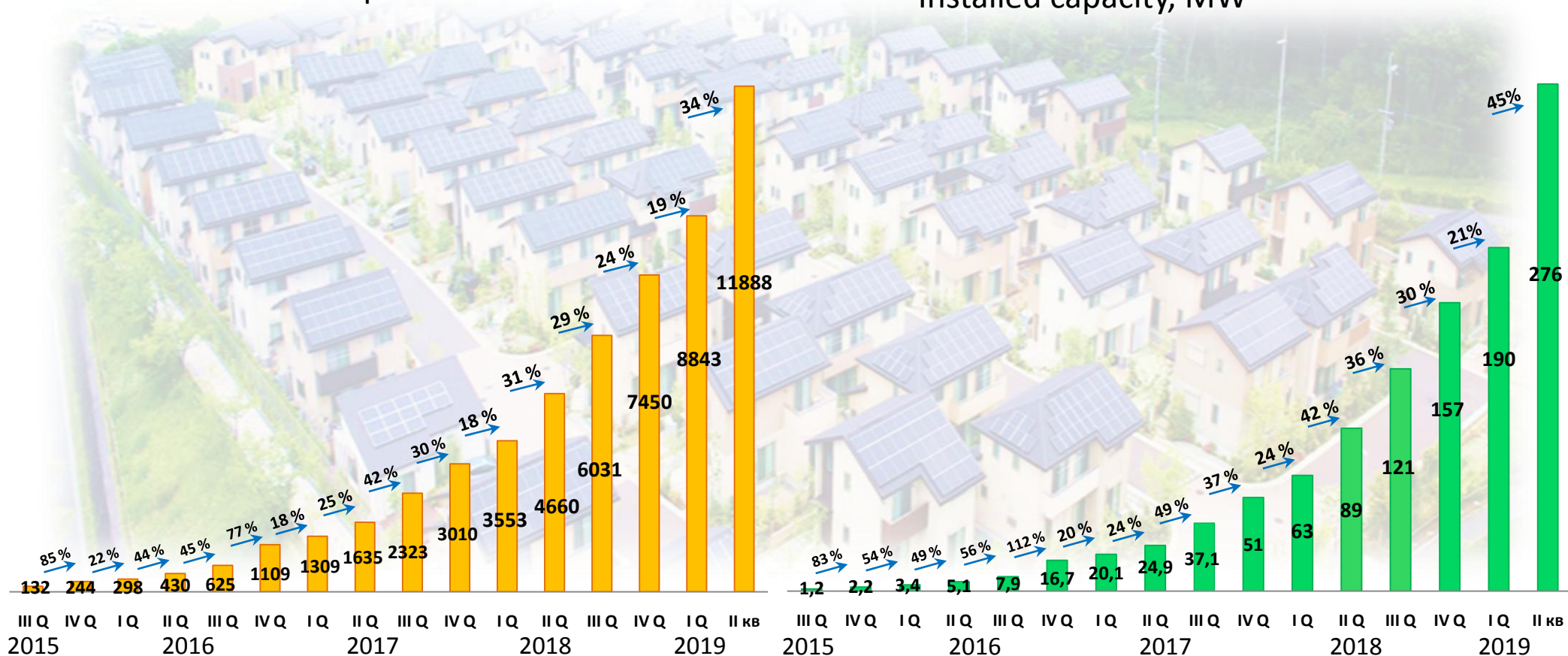




# DYNAMICS OF SOLAR INSTALLATIONS IN PRIVATE HOUSES

Number of private households

Installed capacity, MW



Around **240 mln EURO** invested.

The number of private houses eligible for solar panels installation is 6,5 mln.



## NEW RENEWABLE ENERGY INCENTIVES INTRODUCTION

Conducting pilot auctions

Revision of the auctions conducting order

Auctions holding period

07.2019

Law adoption

2020

2030



PPA terms  
**20 years**



**Obligatory participation:**

**from 2020:**



**SPP  $\geq 1$  MW;**



**WPP  $\geq 5$  MW;**

**Other key points:**

**All types of RES**  
will participate  
in auctions

Electronic Trading  
System

**PROZORRO**

Bank guarantee  
**15 000 €** for 1 MW  
**Land and**  
**Specifications for**  
**accession**

Premium for the  
use of Ukrainian  
equipment **5% -**  
**10%** (current law)

Specifications are valid:  
**SPP – up to 2 years;**  
**WPP, CHP on**  
**biomass, small HPP –**  
**up to 3 years**

**WEBINAR with IRENA**  
on the introduction of an auction system  
to support renewable energy



**Joint International Conference**  
«Auction Support Scheme in Ukraine for  
Renewable Energy Deployment»



Date: October 31, 2018

Date: February 21, 2019

The result: the proposals made by IRENA experts with appropriate practical advice are sent to the Verkhovna Rada Committee on Fuel and Energy Complex for consideration during drafting the Law



**On February 24, 2018, Ukraine became a member of the International Renewable Energy Agency (IRENA)**





## «FEED-IN» TARIFF

€ct/kW\*h

	2019	Law 2712-VIII			
		2020	2021	2022	2023
SPP (ground based)	15,02	11,26 (-25%)	10,88 (-2,5%)	10,50 (-2,5%)	10,12 (-2,5%)
WPP ( > 2,0 MW)	10,18	9,05 (-10%)	-	-	-
SPP households	18,09	16,26 (-10%)	-	-	-
Hybrid (SPP+WPP) households	-	Introduction of “feed-in” tariff (12,28 €ct/kW*h)			
Biomass	12,39	The tariff is unchanged and stays at the fixed level of 2019 (12,39 €ct/kW*h)			



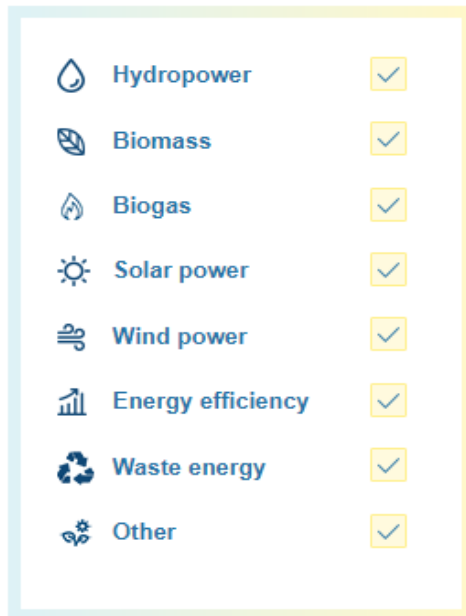




**103** implemented and  
**112** potential projects that require  
investments & soft loans more than

€ 4,2bln

**www.uamap.org.ua**

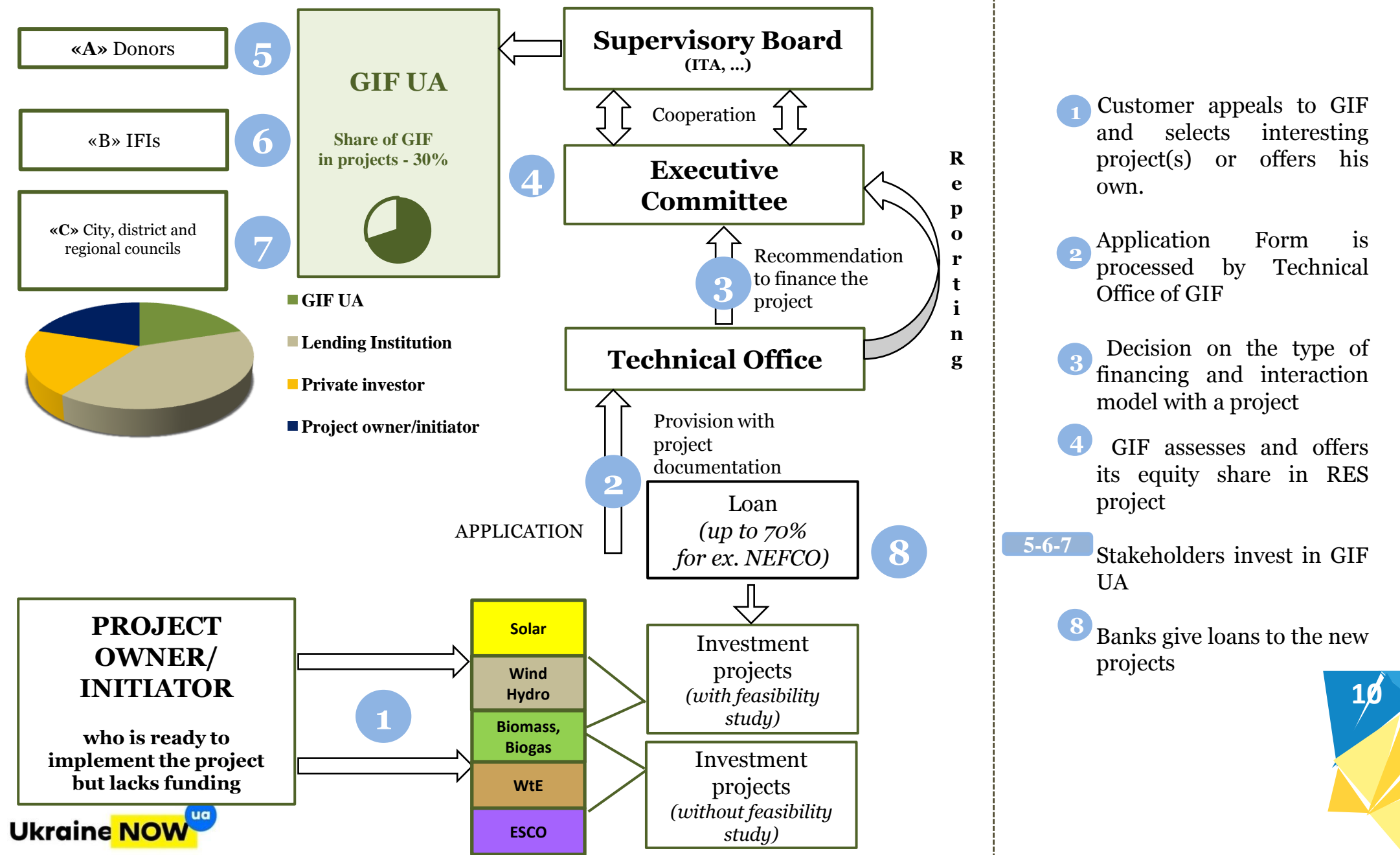


On behalf of:



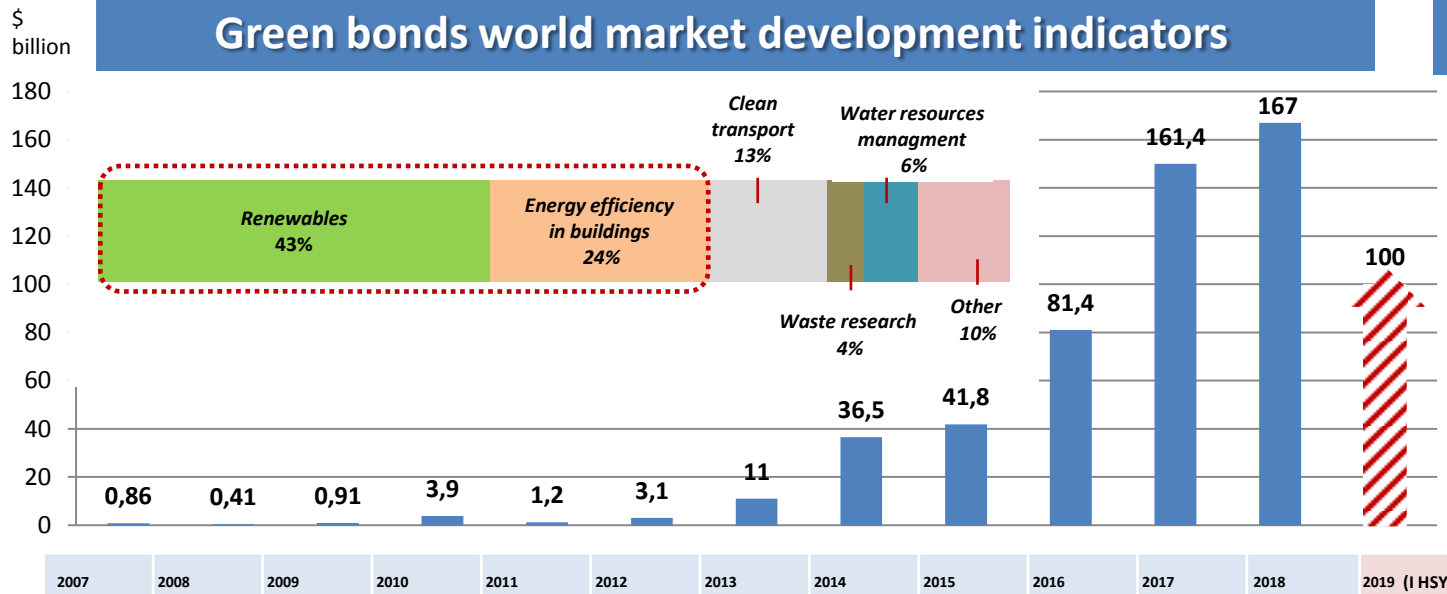
of the Federal Republic of Germany

# GIF UA: SCHEME OF OPERATION IN BRIEF

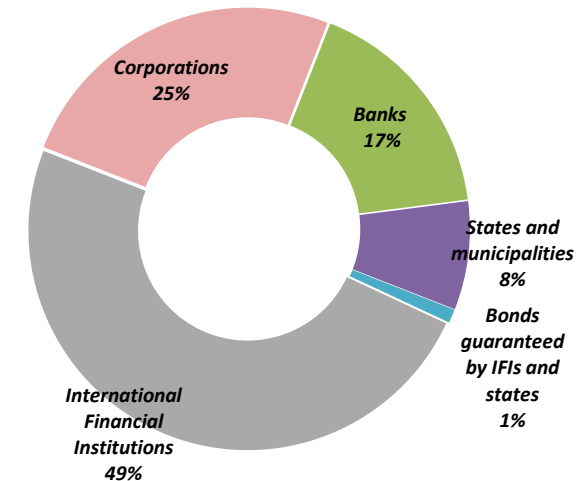


# CREATION OF CONDITIONS FOR GREEN BOND MARKET INTRODUCTION IN UKRAINE

## Green bonds world market development indicators



## Key world issuers



## Creation of conditions for implementation of green bonds market

**Draft of Resolution of Cabinet Of Ministers Of Ukraine «To approve Concept of Green Bond Market Introduction in Ukraine and Affirm Action Plan of Its Implementation»**



Establishing legal preconditions for green bond market introduction



Attracting investments to the green bond market



Contributing green bond market development

## Next stages

Introduction of guidelines key procedures and incentives for the green bonds market (in accordance with international)

preparation and implementation of pilot projects for the issue of green bonds by different issuers

arranging information campaigns and attracting stakeholders on Ukrainian green bonds market



# INVEST in UKRAINE!

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