



Guvernul Republicii Moldova  
Ministerul Economiei

**RENEWABLE ENERGY COORDINATION GROUP**

# **THE APPROACH ON IMPLEMENTING AUCTIONS TO GRANT THE SUPPORT FOR RENEWABLE ENERGY PROJECTS IN THE REPUBLIC OF MOLDOVA**

**10<sup>th</sup> of November, Viena, Austria**

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**Ministry of Economy**

# ENERGY SECTOR REVIEW

- The Republic of Moldova is highly dependent on energy imports, 88% of the energy consumption is covered from import;
- Very high energy intensity (roughly 3 times over EU average);
- The share of RES in final energy consumption is about 13,3% (according to the 2014 Energy Balance).

The lack of own resources and high energy intensity sets the energy efficiency and renewable energy sources as a top priority



# INSTITUTIONAL FRAMEWORK ON RES PROMOTION

**Ministry of Economy –**  
public central authority in the energy sector

**Energy Efficiency Agency –**  
administrative authority in the field of EE & RES

**Energy Efficiency Fund –**  
institution focused on identification and financing  
of EE & RES projects

**National Agency for Energy Regulation –**  
institution focused on energy sector regulation

Government Decision  
No. 690 of 13.11.2009

Government Decision  
No 1173 of 21.12. 2010

Law  
No. 160 of 12.07.2007

Government Decision  
No. 767 of 11.08.1997

## RES PROMOTION LEGAL FRAMEWORK

### Law on Adherence of the RM to the Treaty establishing the Energy Community

Law No.117 of 23.12.2009

- **Energy Strategy 2030**
- *Law on renewable energy sources*
- **Law on promotion of the use of renewable energy**
- **Law on thermal energy and promotion of cogeneration**
- **Methodology for the determination, approval and application of tariffs for electricity generated from RES**
- **National Renewable Energy Action Plan**

GD No.102 of 05.02.2013

*Law No.160 of 12.07.2007*

Law No.10 of 26.02.2016

Law No.92 of 29.05.2014

DNERA No. 321 on 22.01.2009

GD No. 1073 on 27.12.2013

# PRINCIPLES OF STATE POLICY REGARDING PROMOTION OF RES

The principles of the state policy in the field of renewable energy are the following:

- adjusting of the national legal framework to European and international standards;
- promotion of renewable energy through supporting scheme according to existing legislation
- guarantee the commercialization of renewable energy through non-discriminatory connection to the grids;
- ensure state administration in the field of renewable energy;
- ensure the access to information on renewable energy production and use for individuals and businesses

# EXISTING RES CAPACITIES

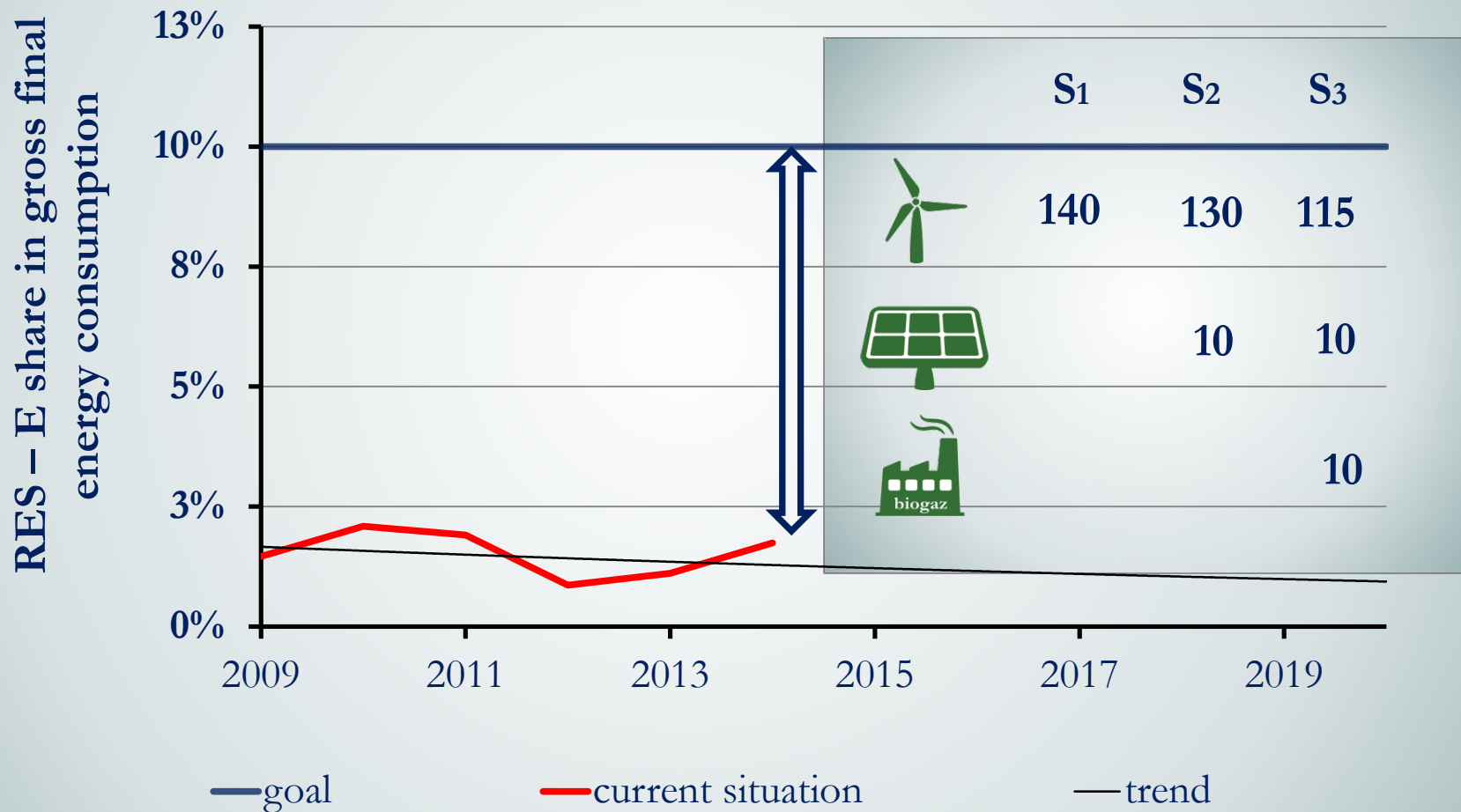
Source	Existing capacities, <i>MW</i>		Existing tariffs
	<i>E</i>	<i>H&amp;C</i>	¢€/kWh
1. Hydro (non-pumping)	16		
2. Solar	2,2		9,5
3. Wind	1,1		6,2
4. Biomass		112,57	
– residential sector		37,65	
– public sector		74,92	
5. Biogas	2,81		8,5 - 9,5
<b>TOTAL</b>	<b>22,11</b>	<b>112,57</b>	

# PREVIOUS SUPPORTING SCHEME FOR INVESTORS IN RES TECHNOLOGIES

Methodology of determining, approval and application of tariffs for electricity produced from RES. Features:

- approach "*from case to case*" the green tariff was determined separately for each producers of RES - E
- application of principle „*cost +*” the green tariff was determined after the investments were done and confirmations submitted to the Regulator
- a multiplier coefficient was applied in order to shorten the payback period
- adjustment/ annual review of the tariffs set for RES - E
- follow up of the green tariff levels on neighbor markets

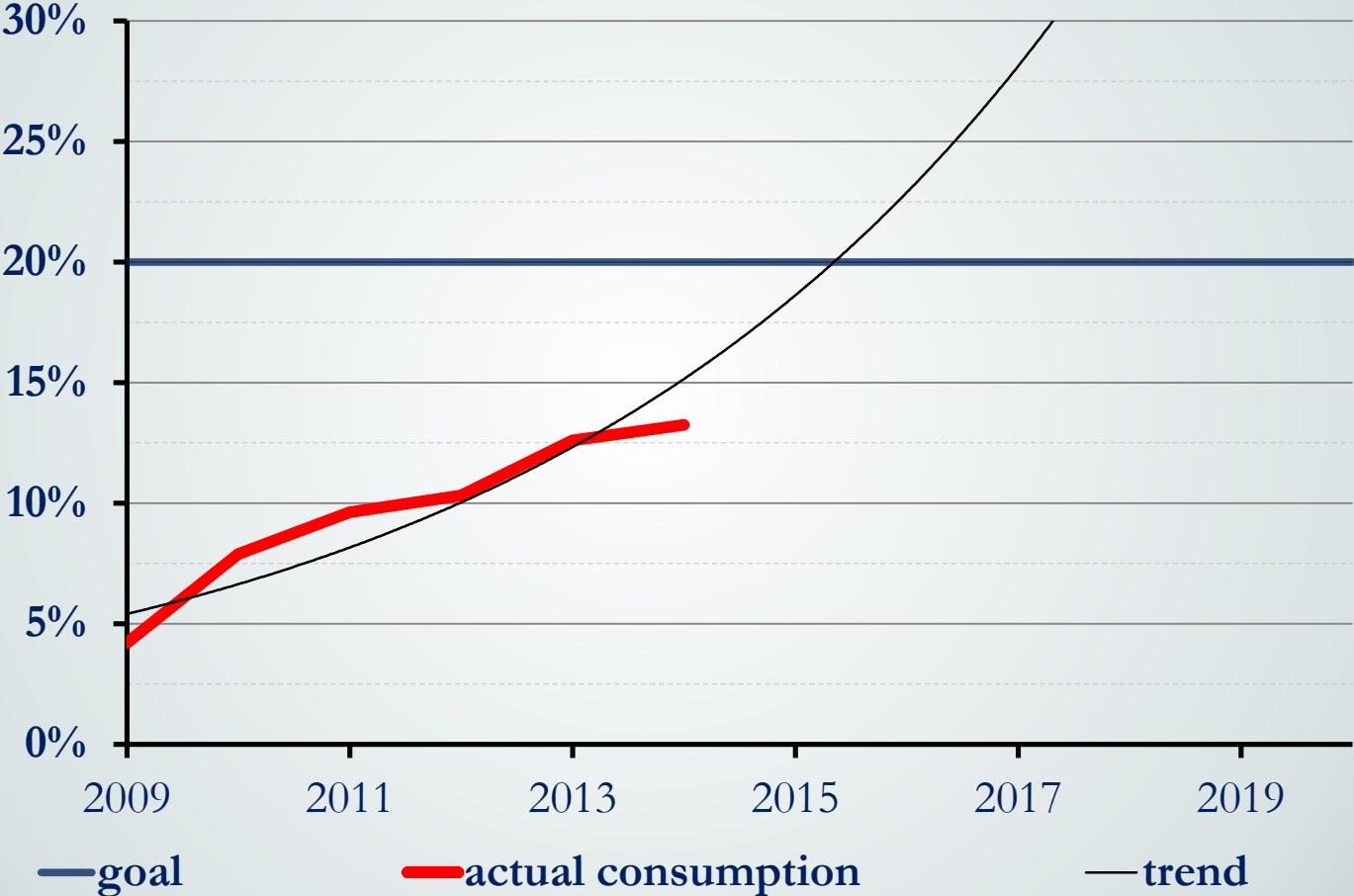
# RES - E SHARE IN GROSS FINAL ENERGY CONSUMPTION





# RES CONSUMPTION IN THE GFEC

SHARE RES IN GFEC



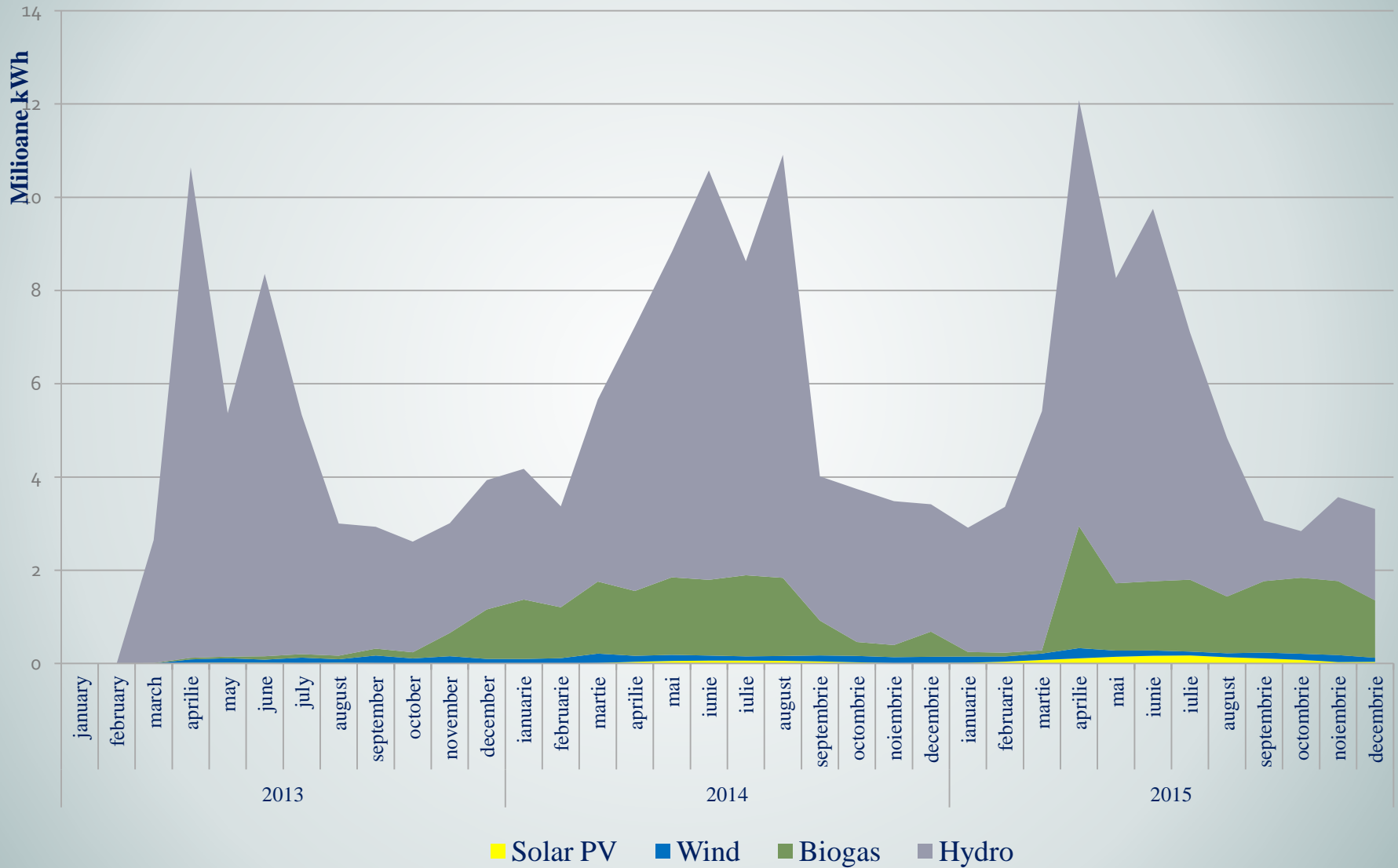
# RES SHARE IN THE GFEC

## THE BIOMASS WEIGHT

Year		2010	2011	2012	2013	2014
RE consumption <i>ktoe</i>	Biomass, <i>ktoe</i>	<b>166</b>	<b>210</b>	<b>220</b>	<b>260</b>	<b>273</b>
	%	96	97	99	98	98
	RES-E, <i>ktoe</i>	<b>7</b>	<b>7</b>	<b>3</b>	<b>5</b>	<b>6</b>
	%	4	3	1	2	2
	<b>TOTAL</b>	<b>173</b>	<b>217</b>	<b>223</b>	<b>265</b>	<b>279</b>
	%	100	100	100	100	100
RES share in the GFEC		8,34	10,12	10,85	12,58	13,25

# RES-E GENERATION BY TECHNOLOGIES

FOR THE 2013-2015 PERIOD



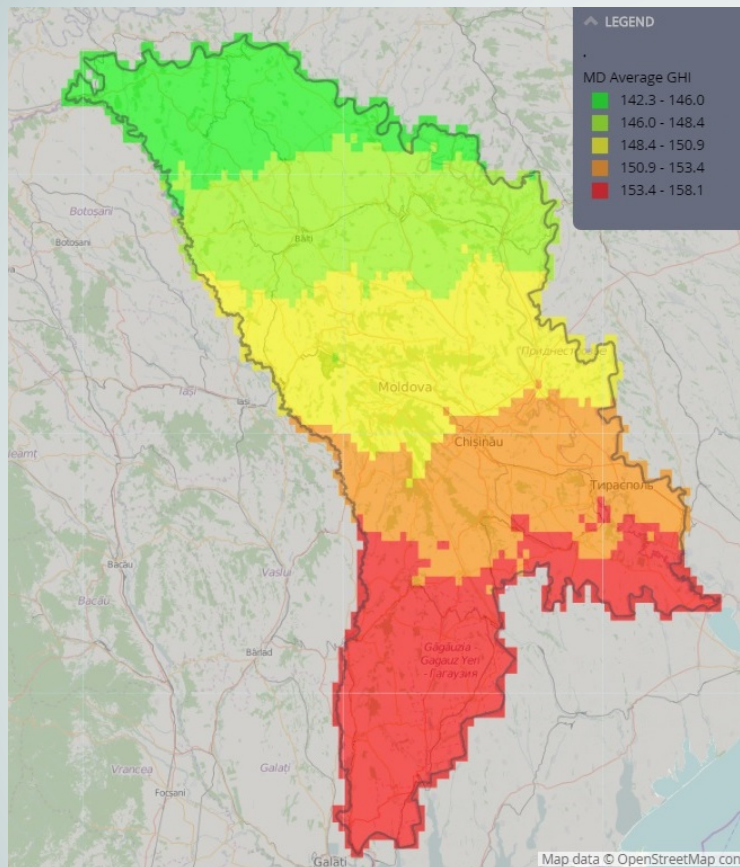
# TOOLS FOR ATTRACTING INVESTMENTS IN EE & RES FIELDS

- **Unique Centre /One stop shop/ for informing investors in energy efficiency and renewable energy sources fields**  
/carried out by Energy Efficiency Agency/
- **Wind Energy Resources Map /in process/ and Solar Energy Resources Map /in process/**
- Tax and custom duties exemptions\*
- ESCo and PPP legal framework in place
- Data base in field of energy efficiency and renewable energy sources  
/developed and updates on permanent basis by Energy Efficiency Agency/



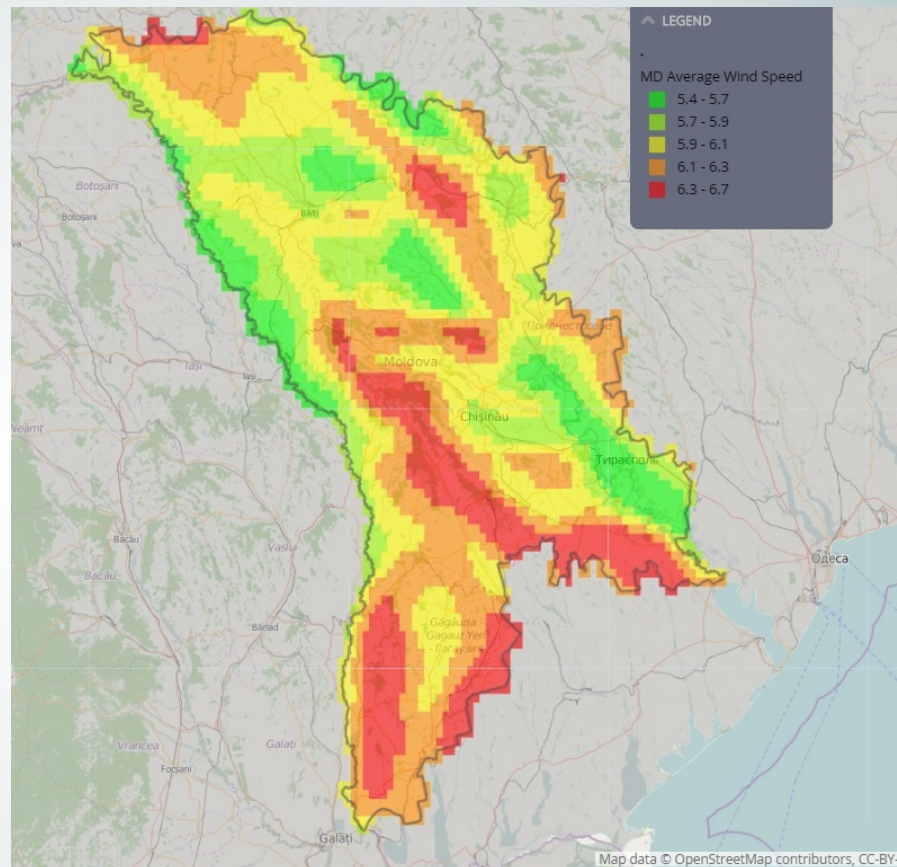
\* Under public consultation process

# SOLAR<sup>(1)</sup> AND WIND<sup>(2)</sup> INTERACTIVE MAP POTENTIAL DEVELOPED WITH INOGATE SUPPORT



(1)

Platform used



(2)

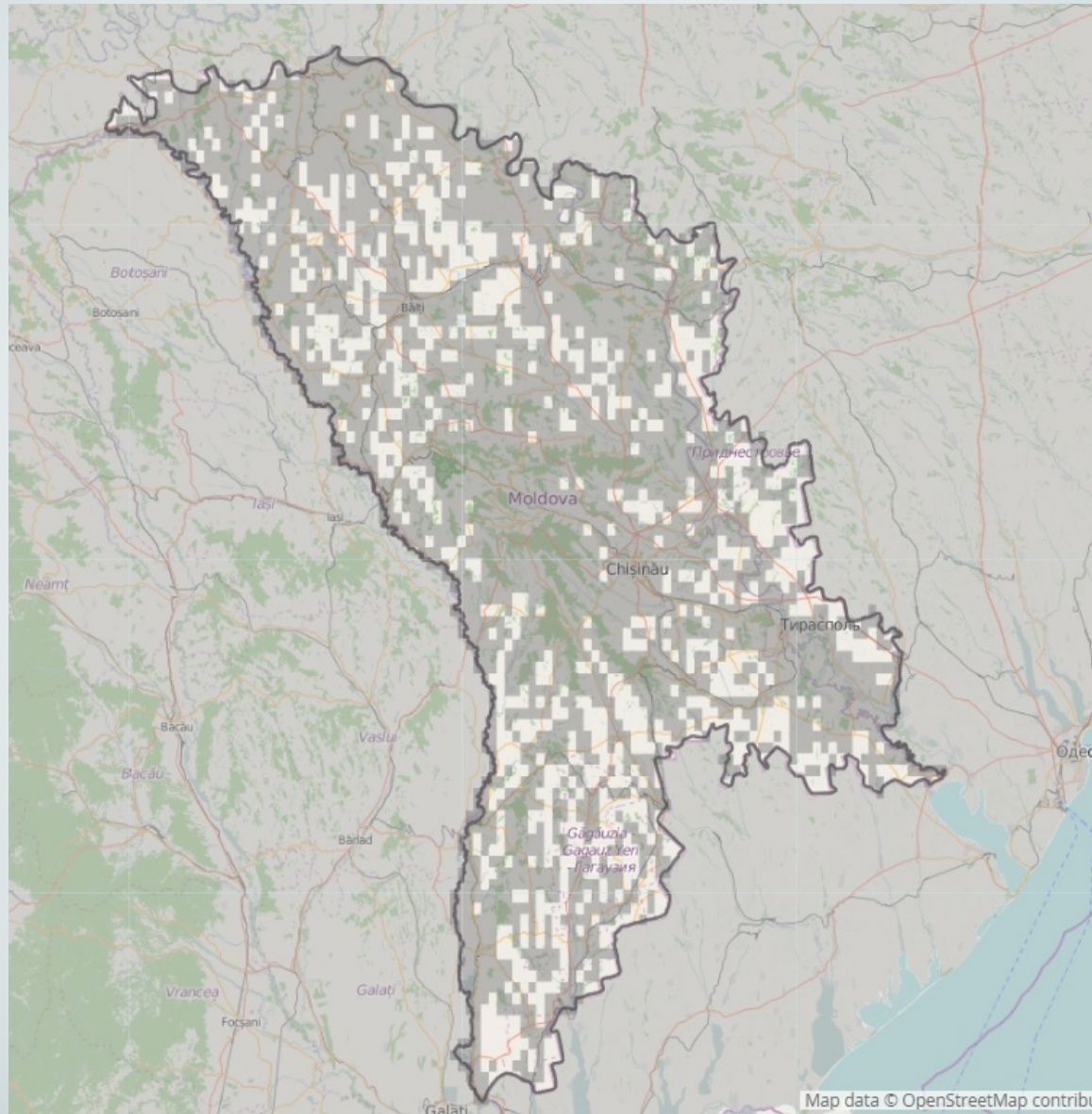
Platform used

Types of data used for map development

- Satellite data purchased from NASA
- Data registered by local weather stations (18 units)

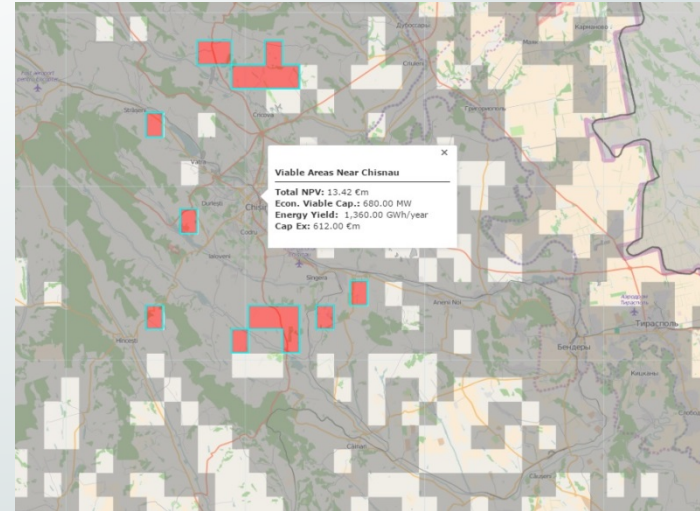
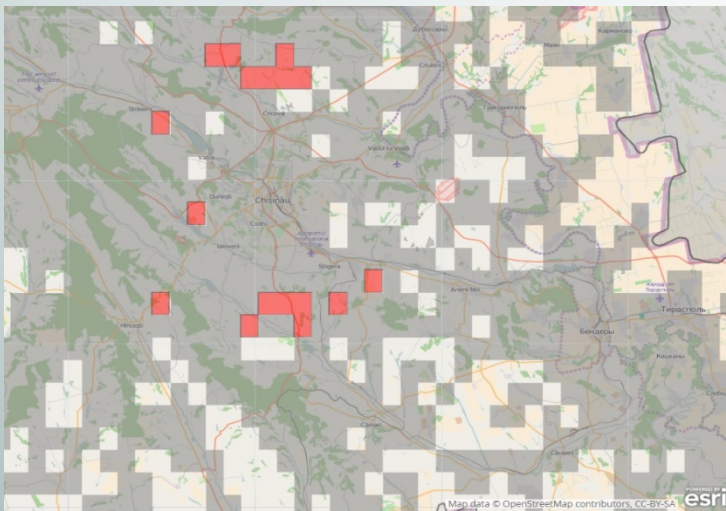
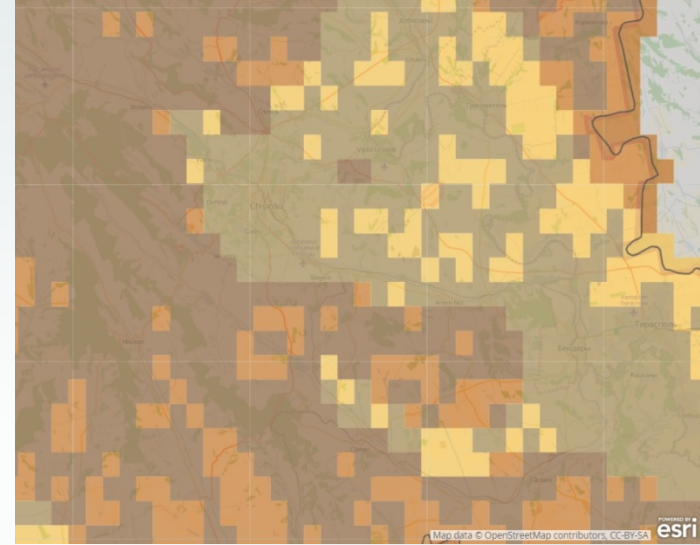
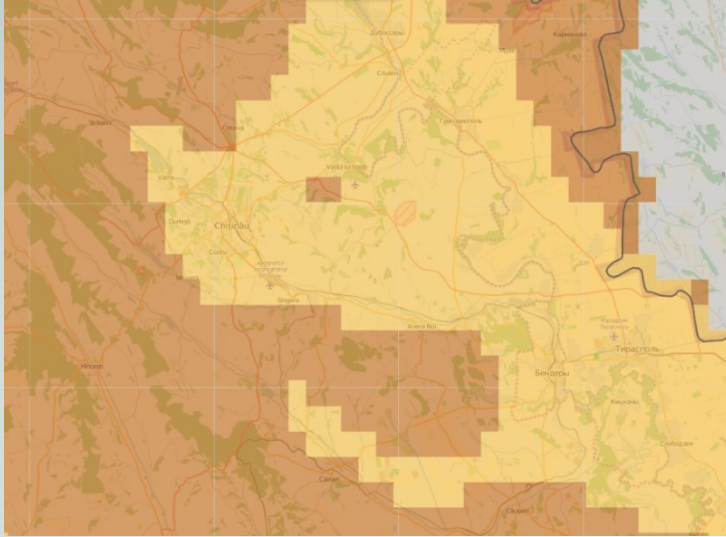
# SOLAR ENERGY MAP POTENTIAL

## FILTERS APPLIED



# SOLAR ENERGY MAP POTENTIAL

## SCASE STUDY

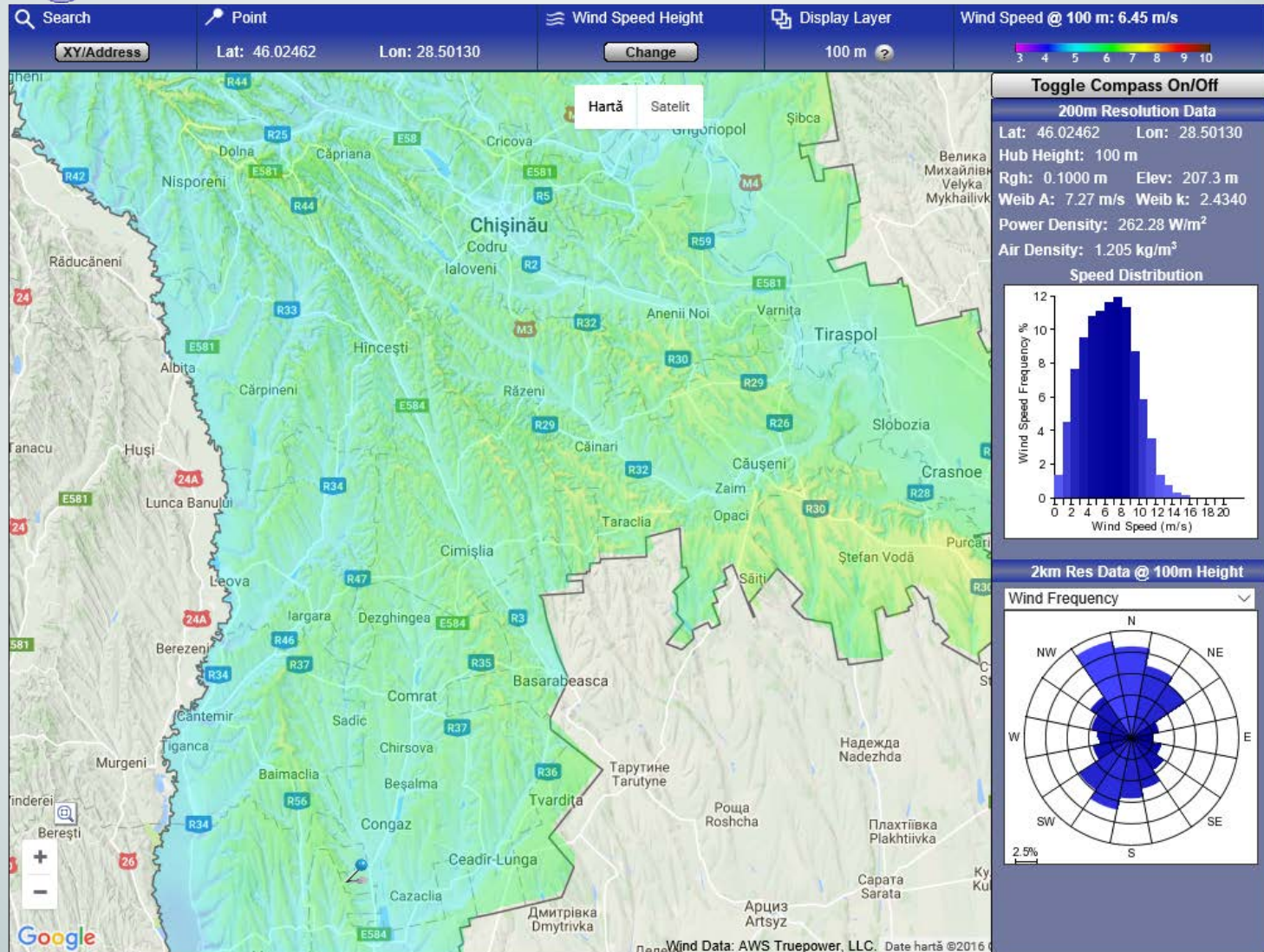


# WIND MAP POTENTIAL

DEVELOPED ACCORDING TO INTERNATIONAL STANDARDS



Data Download





# PROMOTION OF EE AND RES IN THE ROM STATE OF PLAY

1. Consultancy/ informational support
2. Mass-media campaigns
3. Mobile exhibitions
4. Radio and TV interventions, interviews
5. Audio and video spots, infographics
6. Leaflets, brochures, guidelines, instructions, etc.
7. Public events:
  - contests;
  - festivals, concerts feed by solar energy, flashmobs;
  - exhibitions;
  - national and regional Energy Days;
  - round tables, workshops, seminar, etc.



# SUSTAINABLE ENERGY INFORMATION CENTER

Logo:



**FB:** Centru de informare pentru Energie Sutenabila

<https://www.facebook.com/CIES12/?fref=ts>



**Infografic:**

<https://drive.google.com/file/d/0B0B7D9u3HenmVE5uN2RmUUNZbXM/view?pref=2&pli=1>

# MOBILE CARAVANAS

PROMOTING USE OF BIOMASS /PHOTOS/



# SUN DĂ-I FEST

## PROMOTING USE OF RENEWABLE ENERGY



# EE & SER PROMOTION

## MOLDOVA ECO-ENERGETICĂ NATIONAL CONTEST

2011-2012



2013-2014



2015



# Moldova Eco Energetică

În spiritul dezvoltării durabile



**Istorii**  
Eco Responsabile



**Idei**  
Eco Responsabile



**Tehnologii**  
Eco Responsabile

# THE NEW LAW ON RE USE PROMOTION

## KEY ELEMENTS OF THE NEW LEGAL FRAMEWORK ON RE

- establishment of the national targets for the share of energy from renewable sources in the gross final consumption of energy and an indicative trajectory
- Government is supporting the use of RE applying different supporting schemes and measures
- priority to RE sources/ power plants when dispatching;
- guaranteed access of electricity from renewable sources to the transmission and / or distribution grids
- the concept of central electricity supplier is to be applied;
- introduction of certification and accreditation schemes for the specialists working in the field;
- activities in the RE field are subjects of licensing;
- public awareness on use of renewable energy,

# NEW SUPPORTING SCHEME FOR RES INVESTORS

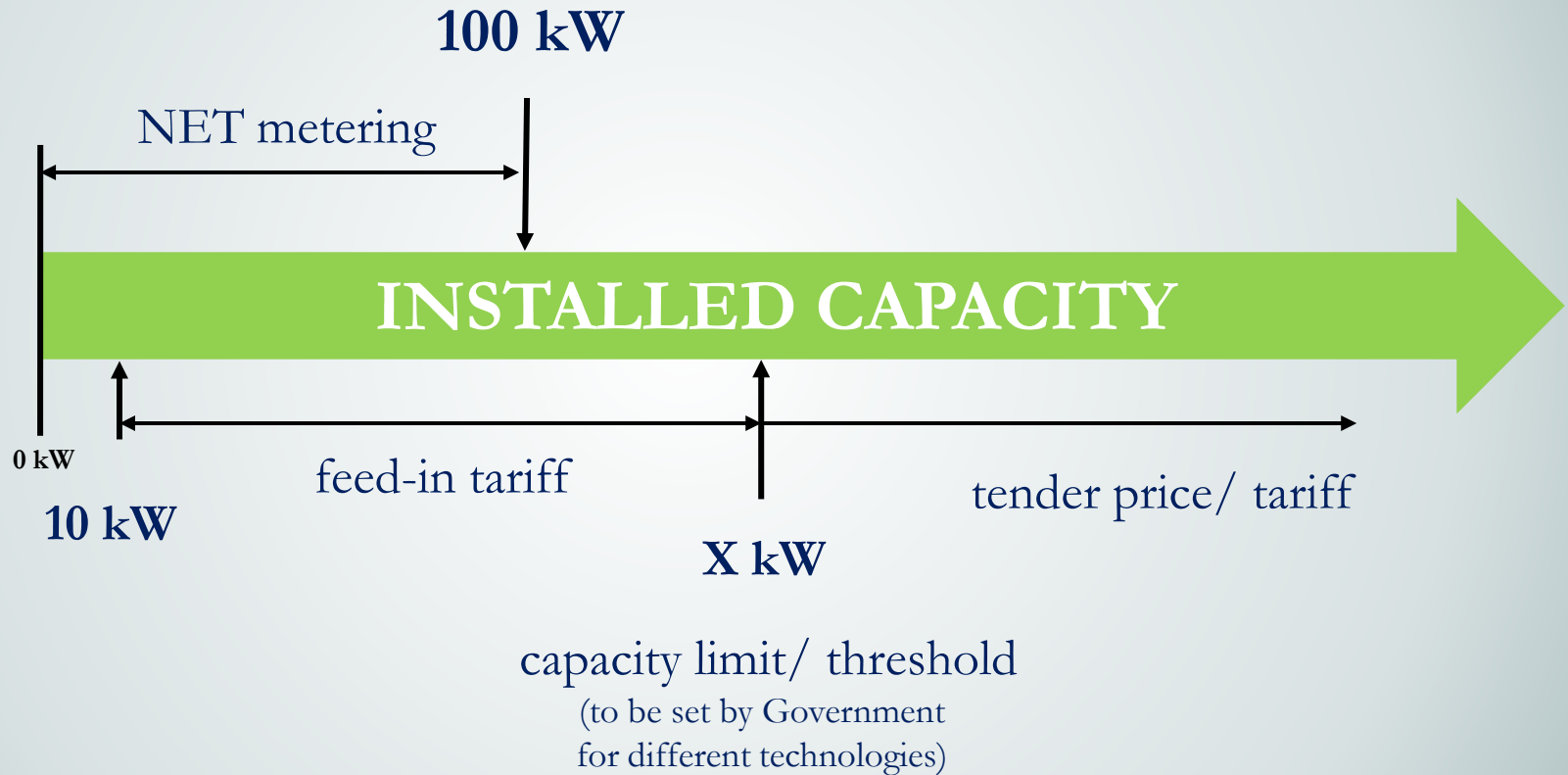
## ACCORDING TO THE NEW LAW ON RES PROMOTION

In order to increase the production and use of electricity from RES the following supporting scheme will be applied:

- fixed price – application for producers who holds or will hold power plants with a power greater than the cumulative capacity limit set by government
  - fixed tariffs – application for producers who holds or will hold power plants with cumulative power capacity not exceeding the limit set by the government, but not less than 10 kW
1. The concept of Electricity Central supplier will be applied
  2. Electric system operator/'TSO/ and DSOs will give priority to RES-E producers

# NEW SUPPORTING SCHEME FOR RES INVESTORS

## GRAPHIC PRESENTATION OF THE MECHANISM BEHIND THE SCHEME





# NET METERING CONCEPT

## KEY FEATURES

(1) A customer/producer is a final consumer of electricity and an owner or operator of an electricity generating unit that:

- a) produces electricity only from renewable sources;
- b) has installed capacity of **100 kW** at most;
- c) is interconnected and operates in parallel and synchronously with the electricity network;
- c) has installed capacity that **does not exceed** the electricity consumption capacity;
- d) is equipped with a protection mechanism [...].

(6) The customer/producer shall benefit from the Net Metering mechanism based on the '**first come, first served**' principle, if the amount of electricity supplied into the network does not exceed cumulatively 1% (one per cent) of the electricity supplied by the power supplier at regulated tariffs.

(7) **non-NET METERING** principle can be established, but in accordance with the principles and conditions negotiated directly by the Supplier and Producer /protection facilities shall be installed/.

# TENDERING OF RENEWABLE CAPACITIES

## KEY FEATURES

- The Government is organizing and conducting the tendering in accordance with a special Regulation, through Min. of Economy or a Gov. Committee.
- The tender documentation shall set forth terms and conditions including **tariff-caps, production capacity limits, construction milestones and other criteria, conditions or requirements** that may vary for different categories of renewable energy technologies, set by the Government for each tender
- ANRE /Regulator/ determines the **tariff-caps** and suggests them to the Gov.
- A time frame of **24 months** is offered to the investor **for building** the powerplant
- Only new equipment is allowed, produced at most **36 months before the date of the power plant comissioning**

# TENDERING OF RENEWABLE CAPACITIES

## DRAFT EVALUATION CRITERIA

WEIGHT	CRITERIA	EVALUATION FACTOR
80%	Cost	Lowest offered cost
20%	Technical credibility	Compliance with technical requirements
		Availability of feasibility study
	Financial credibility	Proved financial viability (equity, credits, bank guarantee, etc.)
		Availability of a business plan
	Eligibility of location	Ownership/ availability of land
Connection to the grid	Availability of the tech. conditions and complexity of the connection solutions	

**THANK YOU!**