



MINISTERUL ENERGIEI  
AL REPUBLICII MOLDOVA

# **Empowering citizens to go green with renewables self-consumption**

# The Republic of Moldova 2030 RES Objectives

**Overall RES  
target  
27%**

**Electricity RES  
target  
30 %**

**H&C RES  
target  
47,99%**

**T RES target  
8.9 %**



# Moldova and its partners are working to rapidly transform its energy landscape

## The 2030 Energy Community objectives

27% of energy mix from renewable sources by 2030

Maximum primary energy consumption of 3.00 Mtoe by 2030

Maximum final energy consumption of 2.80 Mtoe by 2030

Limit greenhouse gas emissions to 68.6% of 1990 levels by 2030

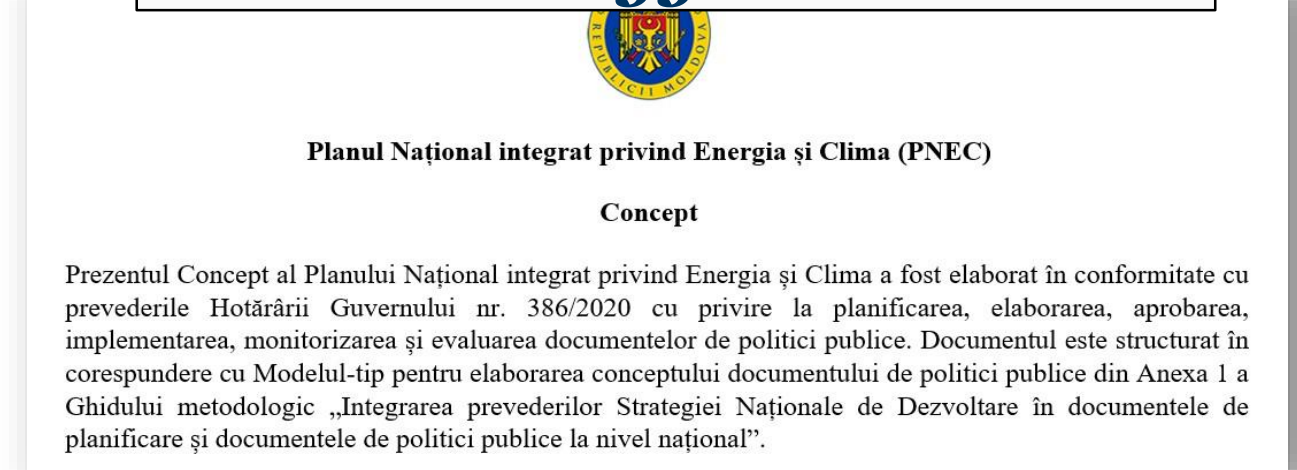
...while also proactively working towards an independent, sustainable, and resilient energy sector

### Energy Strategy



Establishes a competitive and environmentally sustainable energy sector, integrated into European infrastructure and energy markets.

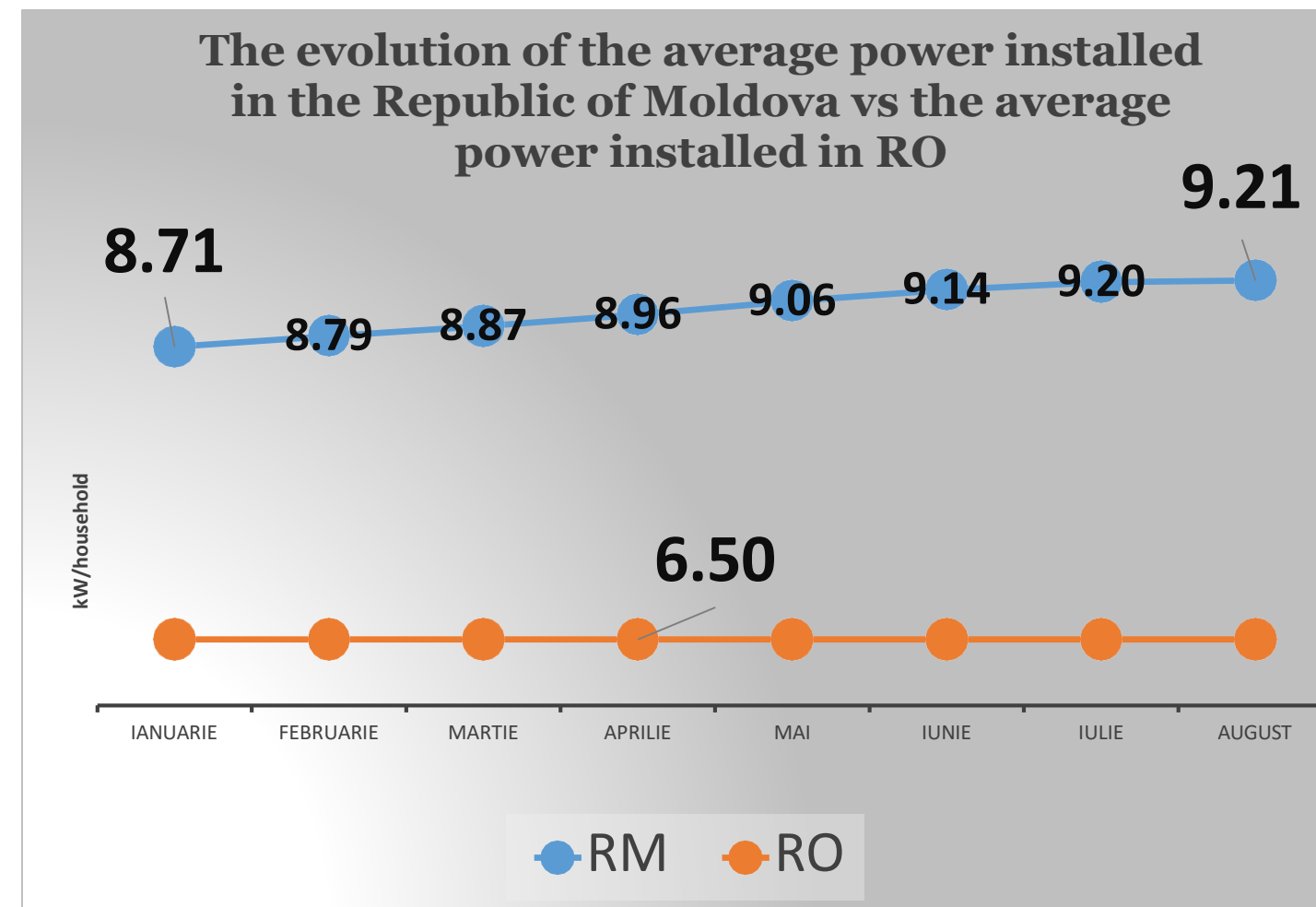
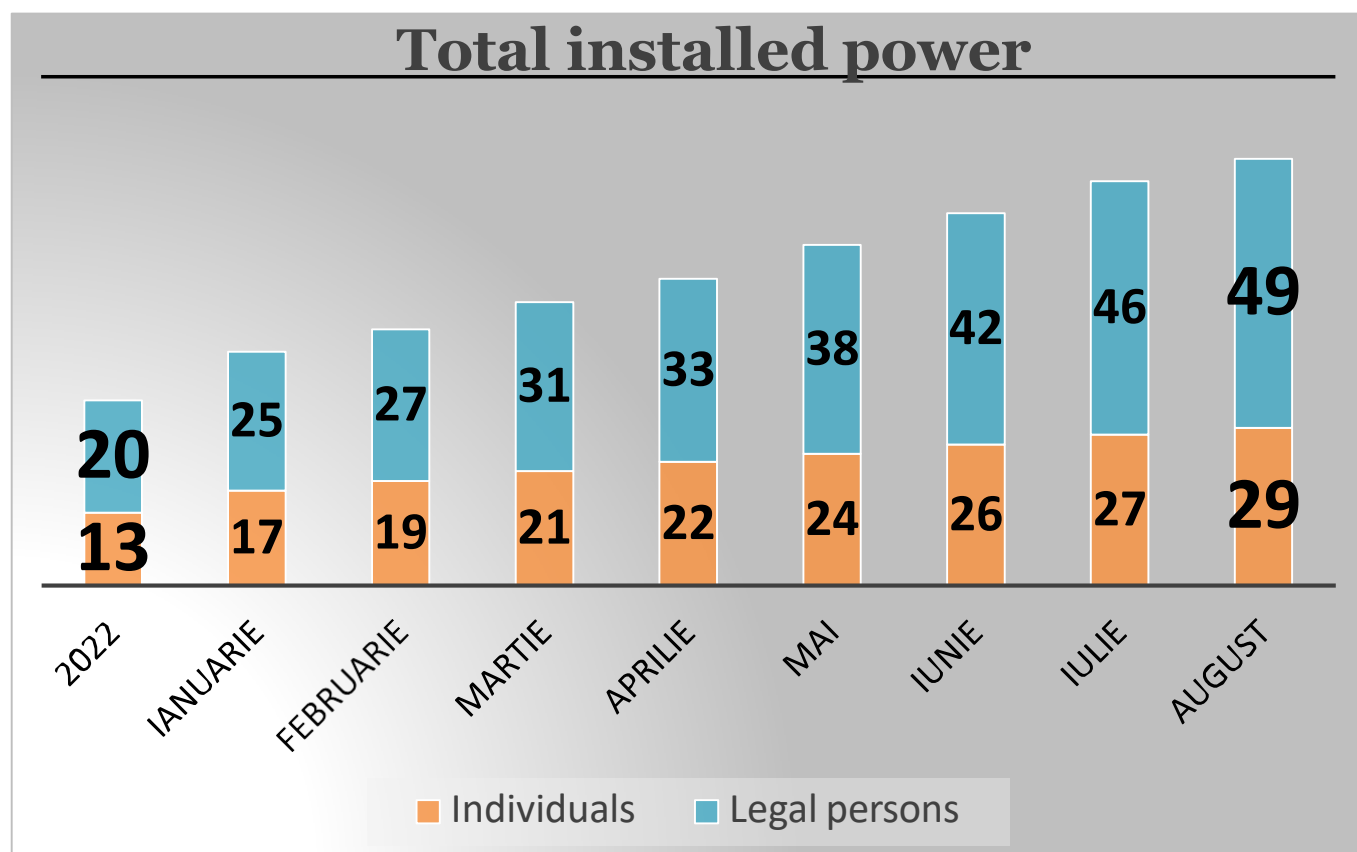
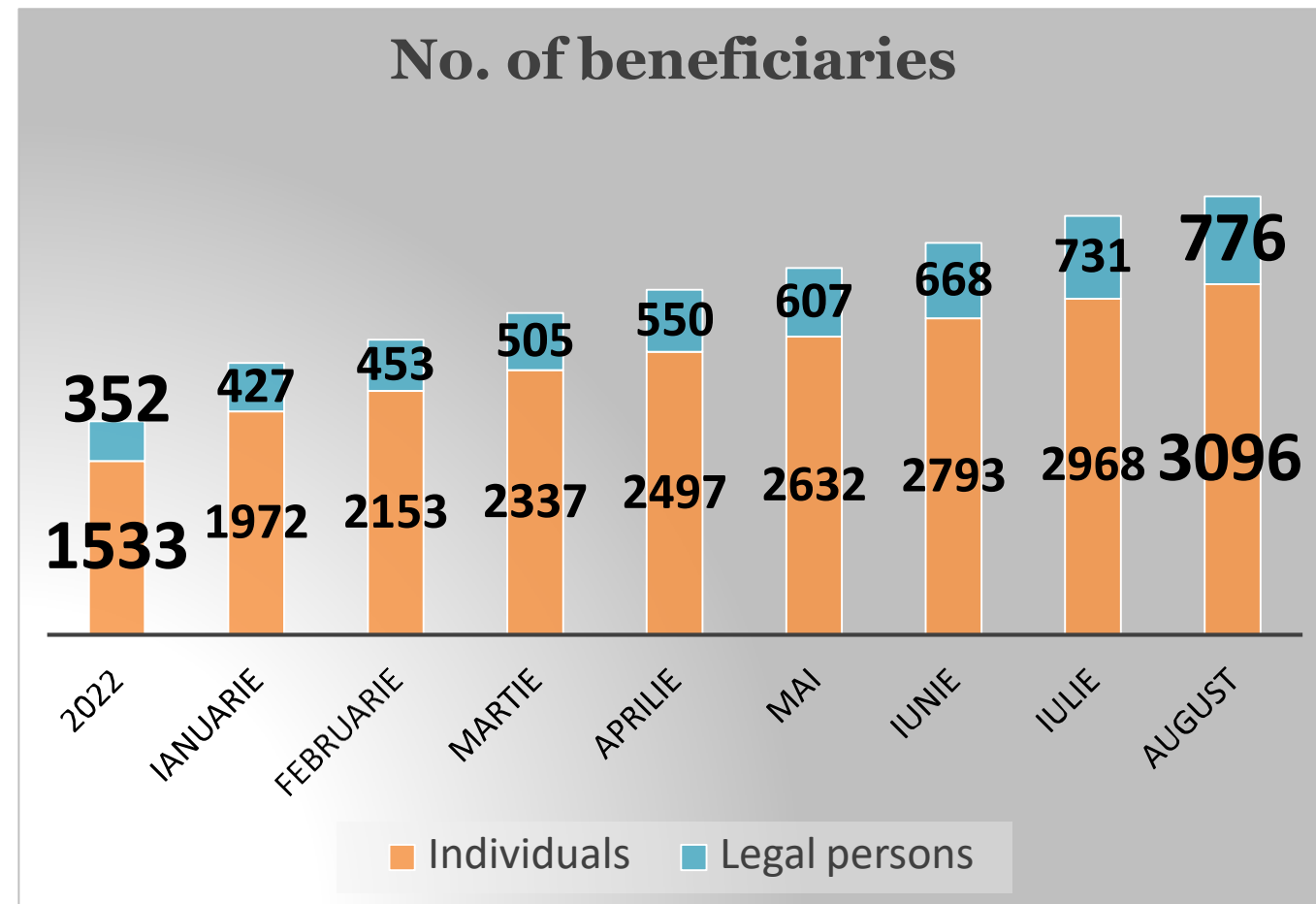
### National Energy & Climate Plan



The NECP will link Moldova's energy ambitions to its climate commitments. Covering 5 sectors: Energy Security; Internal Energy Market; Energy Efficiency; Decarbonisation; Research, innovation, & competitive-ness



# Evolution of the Net-metering mechanism



On average, only 2.85 kW of installed power is needed to cover a household's own consumption.

The average installed power of the beneficiary of the net metering mechanism exceeds more than 3 times the required power of a household.



# Effects of the Net-metering Mechanism



<b>Maximum load</b>	<b>780 MW winter/ 650 MW summer</b>	<b>9 200 MW winter/ 7788 MW summer</b>
Net metering installed capacity (MW)	117 MW	423 MW
Share of maximum load	15% winter/ 18% summer	4.69% winter/ 5.43% summer
Capacity for balancing services (MW)	0	1 000 MW Natural gas 3,000 MW Hydropower

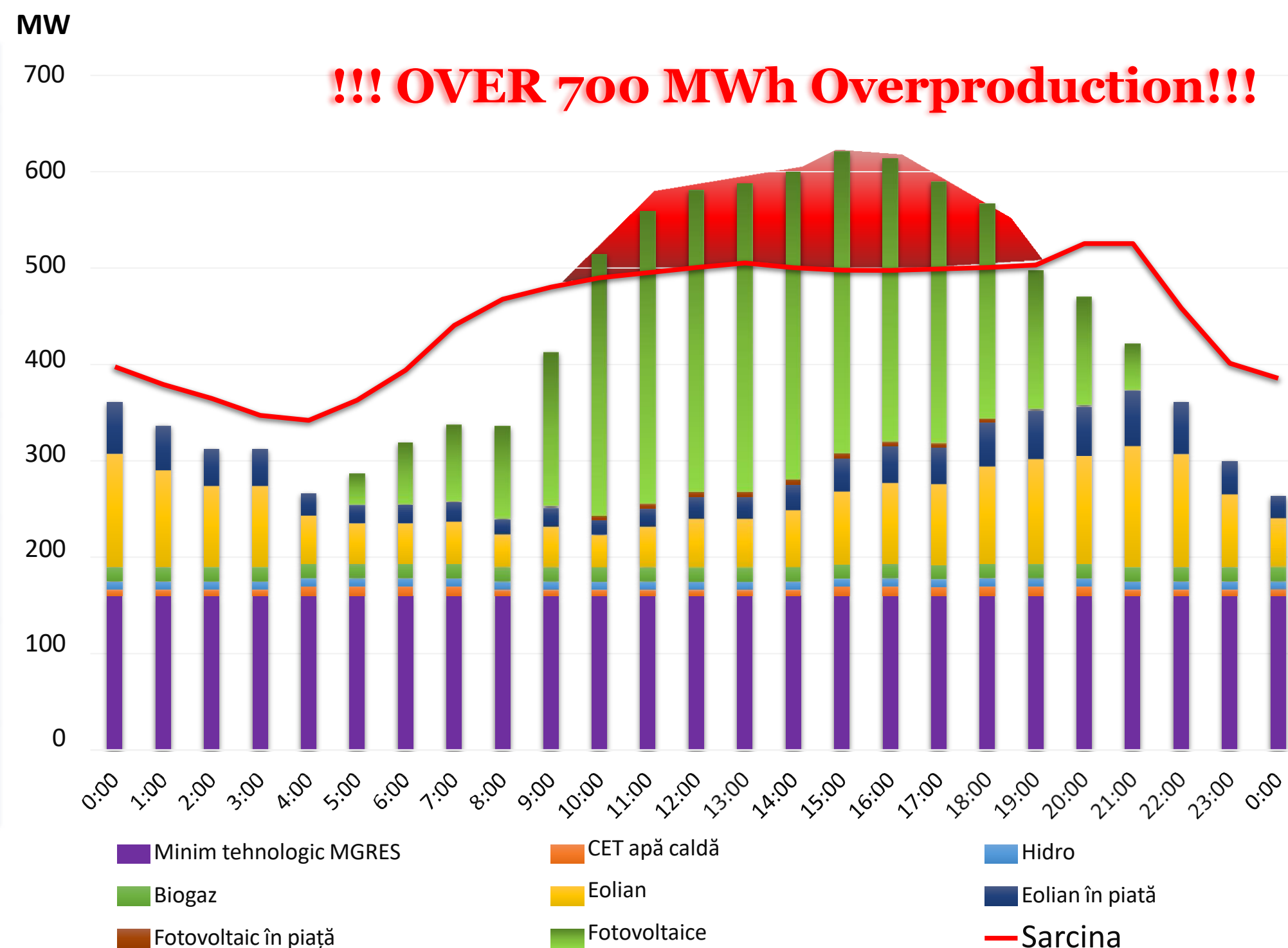
Romania's peak electricity load is 7.7 times higher than in the Republic of Moldova

Installed capacity of prosumers in relation to maximum load is twice less than in the Republic of Moldova



# Effects of the net-metering mechanism

Installed capacity to date (MW)					Expected capacities			
MW	On the market	Law SER 160/2007	Law SER 10/2016	Net-metering	Fixed tariffs	Auctions	N.M. (15%)	TOTAL
Solar	5	2	60	77	80	60	40	325
Eolian	77	27	-	-	35	105	-	244
Biogas	-	5.7	2	-	83	-	-	91
Hydro	16	0.25	-	-	5	-	-	21
<b>Total</b>	<b>98</b>	<b>35</b>	<b>62</b>	<b>77</b>	<b>203</b>	<b>165</b>	<b>40</b>	<b>680</b>



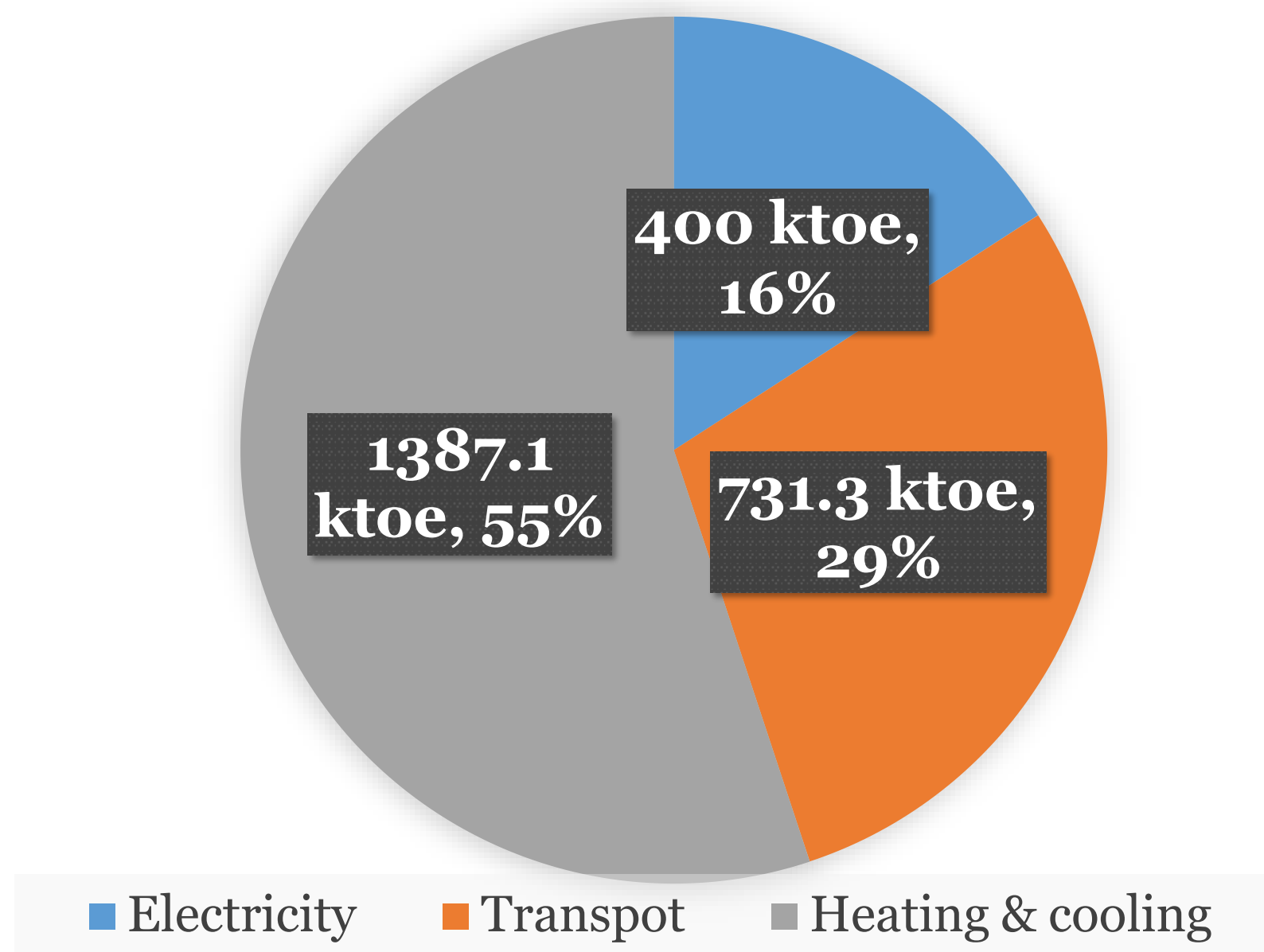
Consumption vs generation profile on a Sunday (summer)



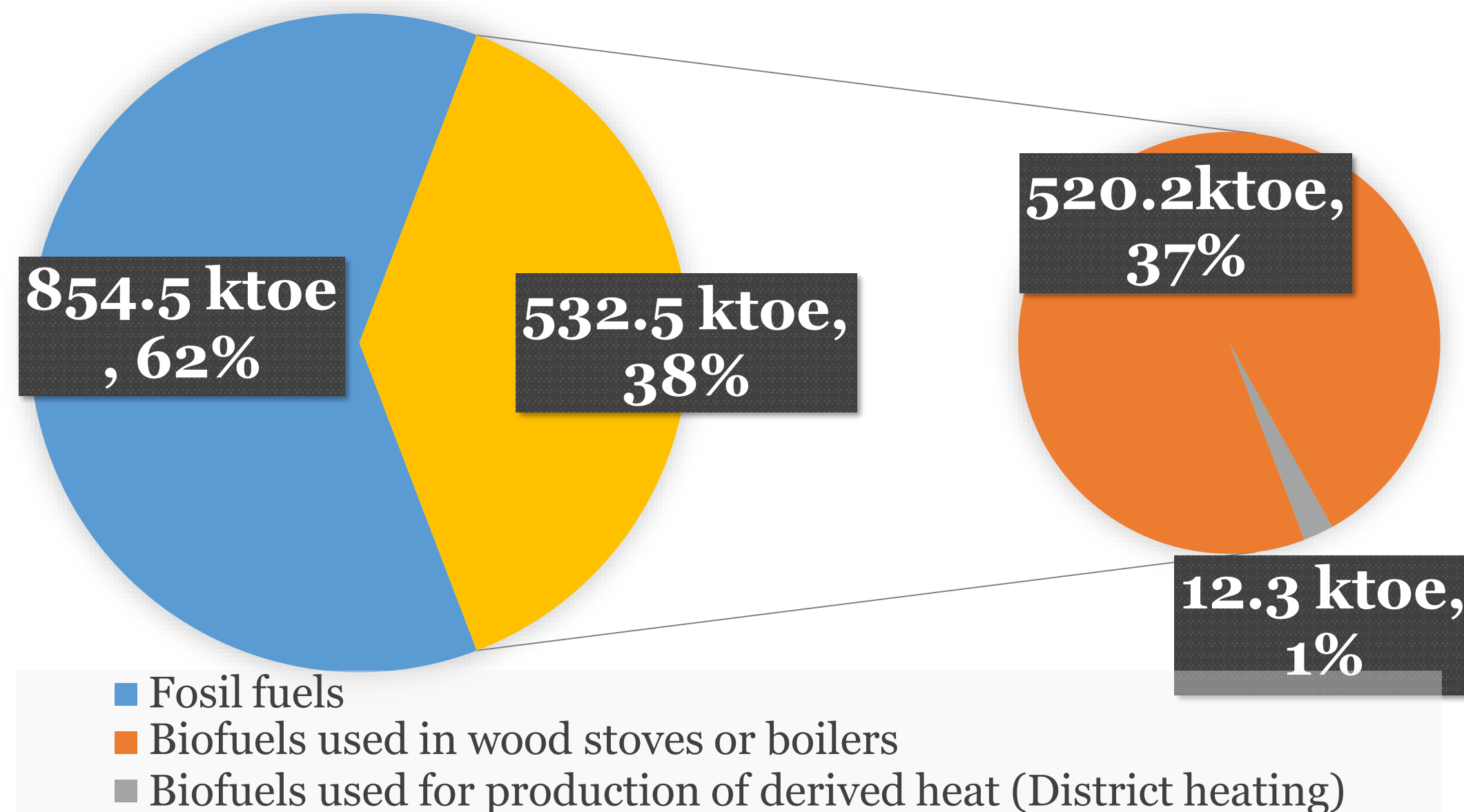
# Moldova Heating & Cooling sector overview



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Structure of Gross final consumption of energy (ktoe)



Structure of heating & cooling in the GFCE (ktoe)

# Challenges

- Intermittency of RES
- High investment costs for efficiently storing excess energy
- Lack of balancing capacities
- Upgrading existing infrastructure to accommodate distributed energy generation and self-consumption practices is costly
- High upfront costs for installing renewable energy systems can deter potential adopters
- Appetite of investors and businesses, Supply chain issues;
- Intelligent metering is a must
- Lack of technical knowledge or expertise for correctly dimensioning, installing, and maintaining renewable energy systems
- Complex regulations, permits, and standards can hinder the ease of adopting renewable systems
- Low energy performance of buildings increases energy demand for energy

# Solutions

- Clear vision in terms of RES development established in long term policies – NECPs, LEDs Energy Strategies
- Simple solutions for getting access to the grid for small
- Development of low carbon/ high flexibility non intermittent capacities
- Electrification of heating sector
- Development of Vehicle 2 Grid solutions
- Easy access and at favorable terms to financial instruments for investments in RES projects
- Support schemes for RES self consumption
- Demonstrative projects of using RES
- Development of P2P energy trading & smart grids/smart meters
- Encourage community-based projects and cooperative programs for collective investment in RES systems and grid integration solutions
- Requirements to new and refurbished buildings to meet RES & minimum energy performance requirements
- Capacity building; communication campaign





# Thank you!

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