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EU's ambitious targets for Renewable Energy and the role of Prosumers – Latvian Case

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ministrija

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EU LONG TERM CLIMATE AND ENERGY TARGETS

Year 2030



At least 55% less net greenhouse gas emissions by 2030, compared to 1990 levels

Year 2050

Climate-neutrality by 2050 - an economy with net-zero greenhouse gas emissions

No person and no place left behind

Economic growth decoupled from resource use



REPowerEU: AFFORDABLE, SECURE AND SUSTAINABLE ENERGY FOR EUROPE

- **REPowerEU is a plan for:**
 - saving energy
 - producing clean energy
 - diversifying our energy supplies
- **SHORT-TERM MEASURES:**
 - Common purchases of gas, LNG and hydrogen via the EU Energy Platform for all Member States who want to participate as well as Ukraine, Moldova, Georgia and the Western Balkans
 - New energy partnerships with reliable suppliers, including future cooperation on renewables and low carbon gases
 - Rapid roll out of solar and wind energy projects combined with renewable hydrogen deployment to save around 50 bcm of gas imports
 - Increase the production of biomethane to save 17 bcm of gas imports
 - Approval of first EU-wide hydrogen projects by the summer
 - An EU Save Energy Communication with recommendations for how citizens and businesses can save around 13 bcm of gas imports
 - Fill gas storage to 80% of capacity by 1 November 2022
 - EU-coordination demand reduction plans in case of gas supply disruption



REPowerEU: AFFORDABLE, SECURE AND SUSTAINABLE ENERGY FOR EUROPE

MEDIUM TERM MEASURES TO BE COMPLETED BY 2027

- New national REPowerEU Plans under the modified Recovery and Resilience Fund – to support investment and reforms worth €300 billion
- Boosting industrial decarbonisation with €3 billion of frontloaded projects under the Innovation Fund
- New legislation and recommendations for faster permitting of renewables especially in dedicated ‘go-to areas’ with low environmental risk
- Investments in an integrated and adapted gas and electricity infrastructure network
- Increased ambition on energy savings by raising the EU-wide target on efficiency for 2030 from 9% to 13%
- Increase the European renewables target for 2030 from 40% to 45%
- New EU proposals to ensure industry has access to critical raw materials
- Regulatory measures to increase energy efficiency in the transport sector
- A hydrogen accelerator to build 17.5 GW by 2025 of electrolysers to fuel EU industry with homegrown production of 10 million tonnes renewable hydrogen
- A modern regulatory framework for hydrogen

REPowerEU: Clean energy

Renewables are the cheapest and cleanest energy available, and can be generated domestically, reducing our need for energy imports.



In March 2023, as part of the European Green Deal and the REPowerEU plan, the EU provisionally agreed stronger legislation to accelerate the rollout of renewable energy, raising the EU's binding renewable target for 2030 to 42.5% with the ambition to reach 45%.

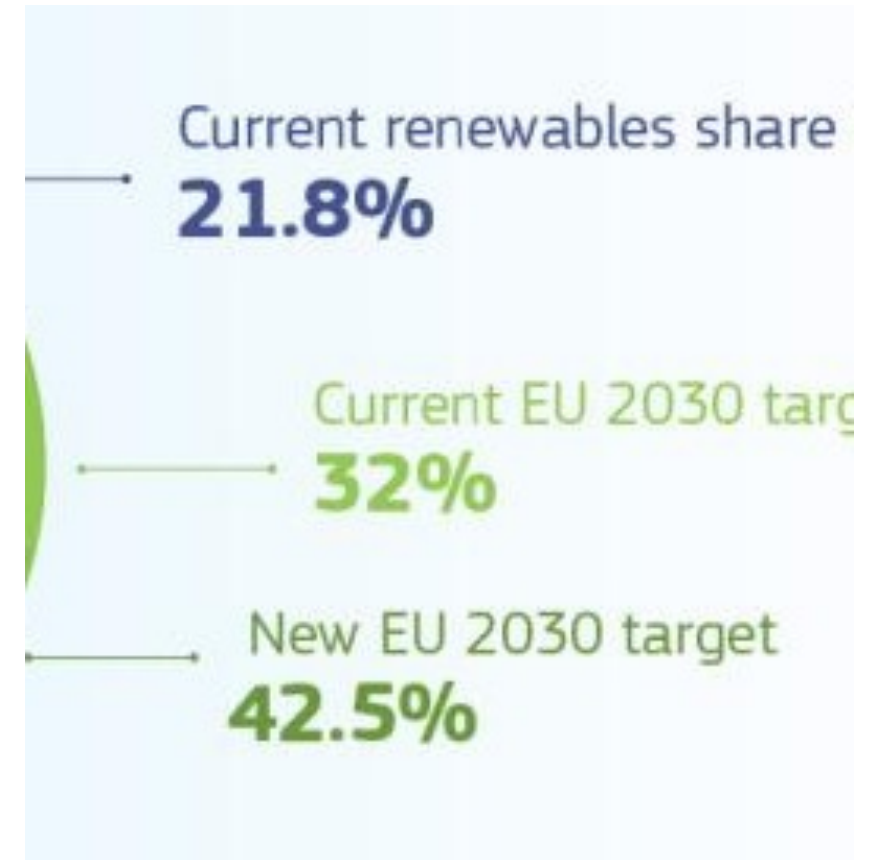


Reaching 45% as foreseen under REPowerEU would almost double the existing share of renewable energy in the EU, bringing the total renewable energy generation capacities to **1,236 GW** by 2030, in comparison to the **1,067 GW** by 2030, envisaged under the Fit for 55 package.

REPowerEU: Clean energy

The EU Solar Energy Strategy will boost the roll-out of photovoltaic energy. As part of the REPowerEU plan, this strategy aims to bring online over **320 GW** of solar photovoltaic newly installed by 2025, over twice today's level, and almost **600 GW** by 2030. These frontloaded additional capacities displace the consumption of **9 bcm** of natural gas annually by 2027.

The production and use of energy account for more than 75% of the EU's greenhouse gas emissions. Decarbonising the EU's energy system is therefore critical to reach our 2030 climate objectives and the EU's long-term strategy of achieving carbon neutrality by 2050.



Decarbonisation targets for Latvia

Policy outcome in the energy subdimension of the decarbonization dimension of RES	Actual value	Target value				
	2017	2020	2022	2025	2027	2030
Share of renewable energy (RES) in final energy consumption (%)	39,01	40	41,8	44,3	46,5	50
<i>indicative share of RES in electricity production (%)</i>	<i>54,36</i>	<i>59,8</i>				<i>>60</i>
<i>indicative share of RES in heat and cooling production (%)</i>	<i>54,58</i>	<i>53,4</i>	<i>55,2</i>	<i>56,08</i>	<i>56,69</i>	<i>57,59</i>
Share of RES in final energy consumption in transport (%)	2,5	10	-	-	-	7
Share of advanced biofuels and biogas in final energy consumption in transport (%)	0	-	0,2	1,0	-	3,5

Latvia: status quo in electricity sector

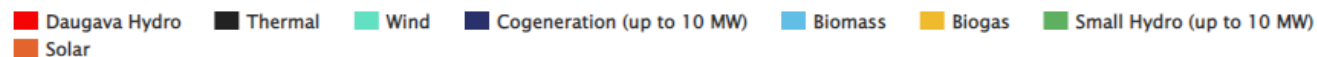
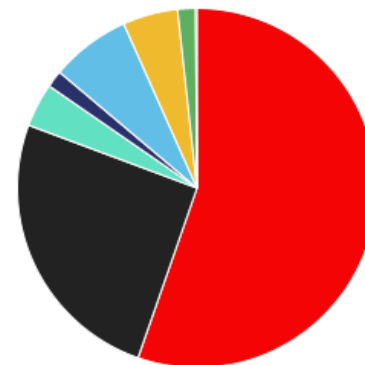
ELECTRICITY GENERATION IN LATVIA

Generation type	Year 2022, MWh	Relative changes from the previous year	Year 2021, MWh
Daugava Hydro	2 653 033	1,3%	2 619 797
Thermal*	1 215 715	-36,9%	1 925 652
Wind	188 364	34,5%	140 022
Cogeneration (up to 10MW)	73 260	-67,5%	225 425
Biomass (up to 10MW)	344 055	-5,9%	365 784
Biogas (up to 10MW)	237 283	-9,4%	261 969
Small Hydro (up to 10MW)	77 678	13,3%	68 575
Solar	5 262	122,2%	2 369
Production (Total)	4 794 651	-14,5%	5 609 592

Latvia: status quo in electricity sector

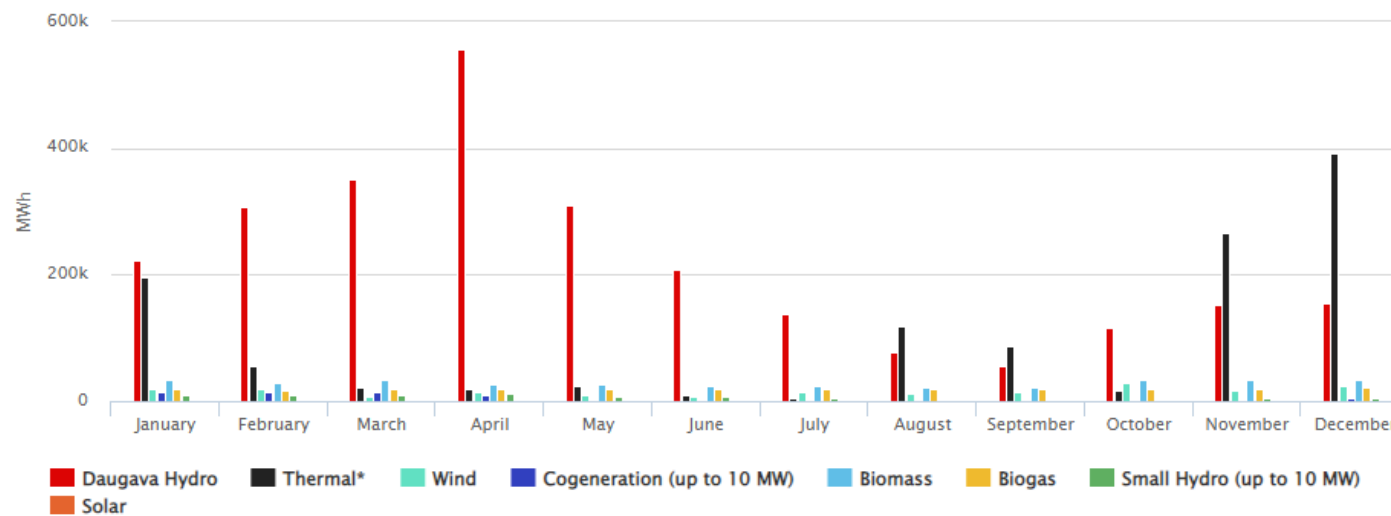
Electricity production balance in Latvia

Year 2022

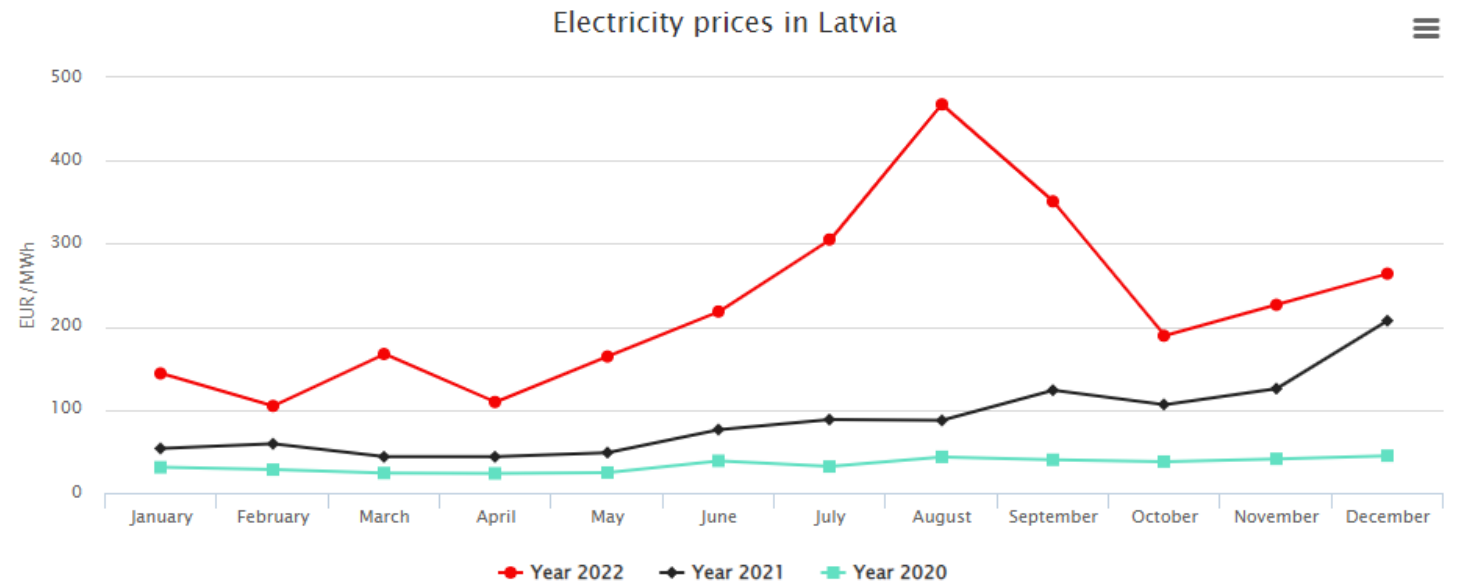


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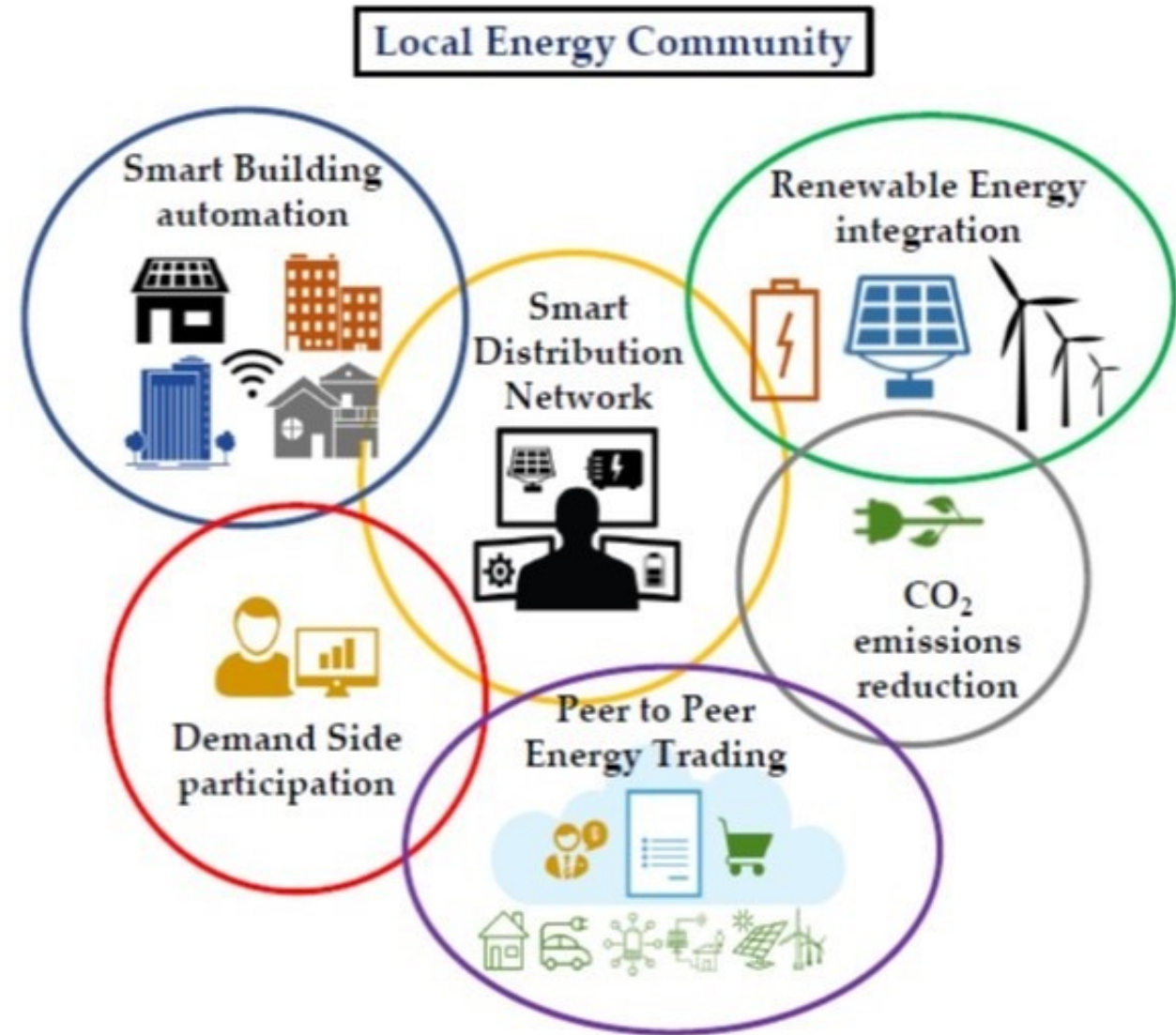
Electricity production balance in Latvia, year 2022



Latvia: status quo in electricity sector



Prosumers as
one of key
solutions to RES
and climate
challenges



Prosumers as one of key solutions to RES and climate challenges

State of play in Latvia:

- More than 150 MW of solar PV capacities built by Q1 2023
- Mostly based on direct support for CAPEX to households in 2023 (more than 10 000 households by Q1 2023)
- Main driver – current electricity prices
- Long-term driver electricity net-billing systems (historically – kWh-to-kWh system, currently – transition kWh-to-EUR system)

Prosumers as one of key solutions to RES and climate challenges

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Prosumers as one of key solutions to RES and climate challenges

Energy communities:


- are legal entities (e.g., an association or a capital company) whose purpose is to produce energy for their members and create environmental, economic and social benefits for the community and locality in which they operate.
- There are two types of energy communities: citizen energy communities and renewable energy communities.

Definition by Energy Law of Latvia:

An energy community is a legal entity engaged in the generation, trade, sharing, consumption and storage of electricity, mainly from renewable energy sources and other types of renewable energy, the provision of demand response services, the provision of electric vehicle recharging services, energy efficiency services or other energy services.

Currently energy communities have been acknowledged and defined by the law, however, specific rules and regulations for them are under development.






Prosumers as
one of key
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Advantages:

- Increased investment in energy production capacities
- Smarter energy consumption and management
- Incentive to increase energy efficiency
- Improvement of energy balance on yearly basis

Challenges:

- Decline of grid efficiency and technically challenging dispatching and balancing
 - Potentially detrimental effect on enterprise-level competition and investments
 - Unresolved political issues – application of network fees and network codes on conventional users and prosumers
 - Potential costs of kWh-to-kWh to system operators
 - Fair distribution of network capacity to different groups of users
- 

Prosumers as one of key solutions to RES and climate challenges

Recommendations:

- Support schemes and policy should target and address prosumers, who focus on covering own consumption, there should be a clear limit
- Support should be directed at initial installment costs, but should not apply to network fees
- Introduction of bi-directional smart meters
- Increasingly significant to agree on technical policy regarding using of connection, metering and potential curtailment of production



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THANK YOU!
