



# **„RENEWABLE ENERGY AS A MEASURE OF LAST RESORT”**

## **ANALYSIS OF SLOVAK NECP BY SAPI**

The plan of Slovakia for decarbonisation - as written in the final version of NECP that was approved by the government in December 2019 - is based on the following key points:

- Nuclear energy as core of low emission energy mix
- RES as the measure of last resort to complement nuclear energy, PV and wind only
- Heating & cooling relying on DH systems with increasing share of biomass
- Transport based mainly on the development of battery-based electrical mobility and biomethane, minimum necessary ambition (14%)

Our analysis of the NECP and the points above was performed using the following views:

- Existing status, trends in energy consumption development in Slovakia
- Technical and economical potential of RES in all sectors based on global development trends
- Higher level of ambition to achieve the intended purpose of NECP

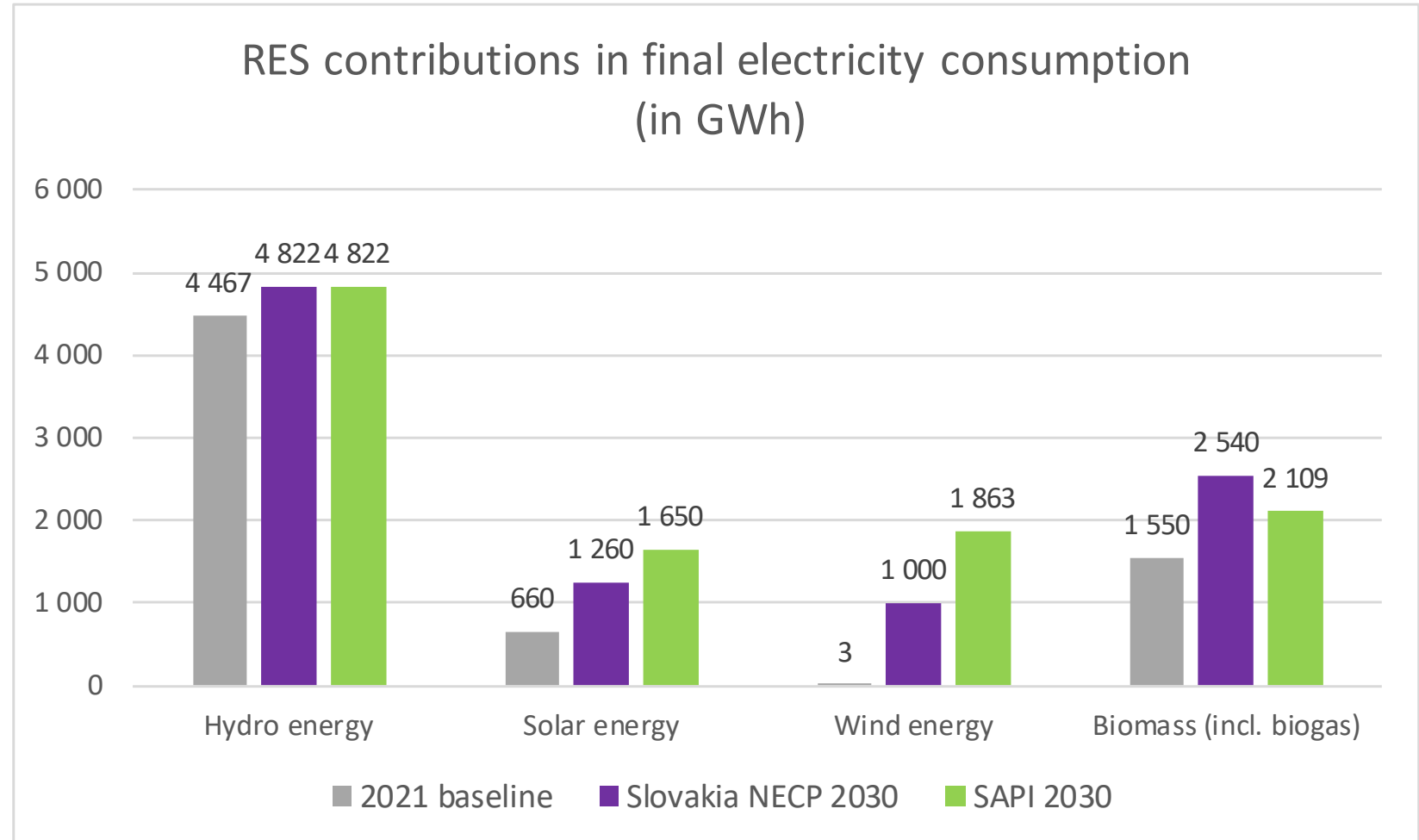
# NECP main targets

Targets of EU and Slovakia	EU 2030	SR 2030	SAPI 2030
GHG emissions (compared to 1990)	- 40 %	Targets are not set for member states	Not analyzed
Emissions in ETS sectors (compared to 2005)	- 43 %		
GHG emissions in non-ETS sectors (compared to 2005)	- 30 %	- 20 %	Not analyzed
Total RES share total	32 %	19.2 %	25.6%
RES share in transport	14 %	14 %	33.2%
Energy efficiency	32.5 %	30.3 %	Not analyzed
Interconnectivity of electrical grids	15 %	52 %	Not analyzed

- The calculation of RES share is flawed, the number in 2030 should be 20.8%.
- Forecast of gross final energy consumption not explicitly included in NECP
- Reverse calculation of forecasted consumption revealed that the trajectory is based on incorrect baselines in 2021 for electricity and heating & cooling - not corresponding to Eurostat 2018 and national data for 2019

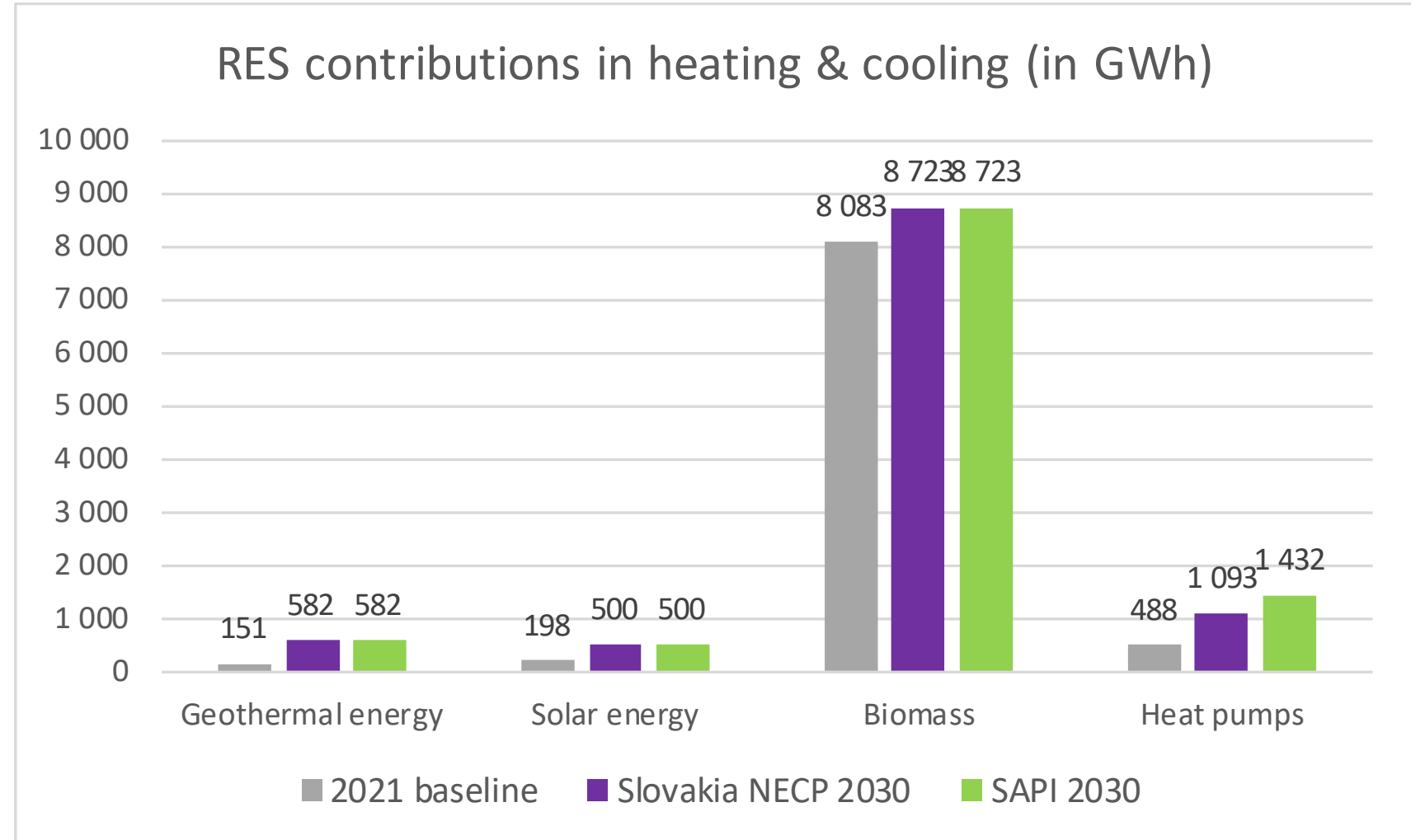
# RES in electricity consumption

- The technical and economical potential of wind and solar energy (mainly PV) is substantially underrated
- Biomass and biogas technology utilization has an incorrect 2021 baseline and doesn't take into account the sustainability of existing power plants after FiT support cut-off
- New biomass and biogas will face REDII sustainability criteria
- NECP doesn't explain why and how the proposed trajectory should be achieved

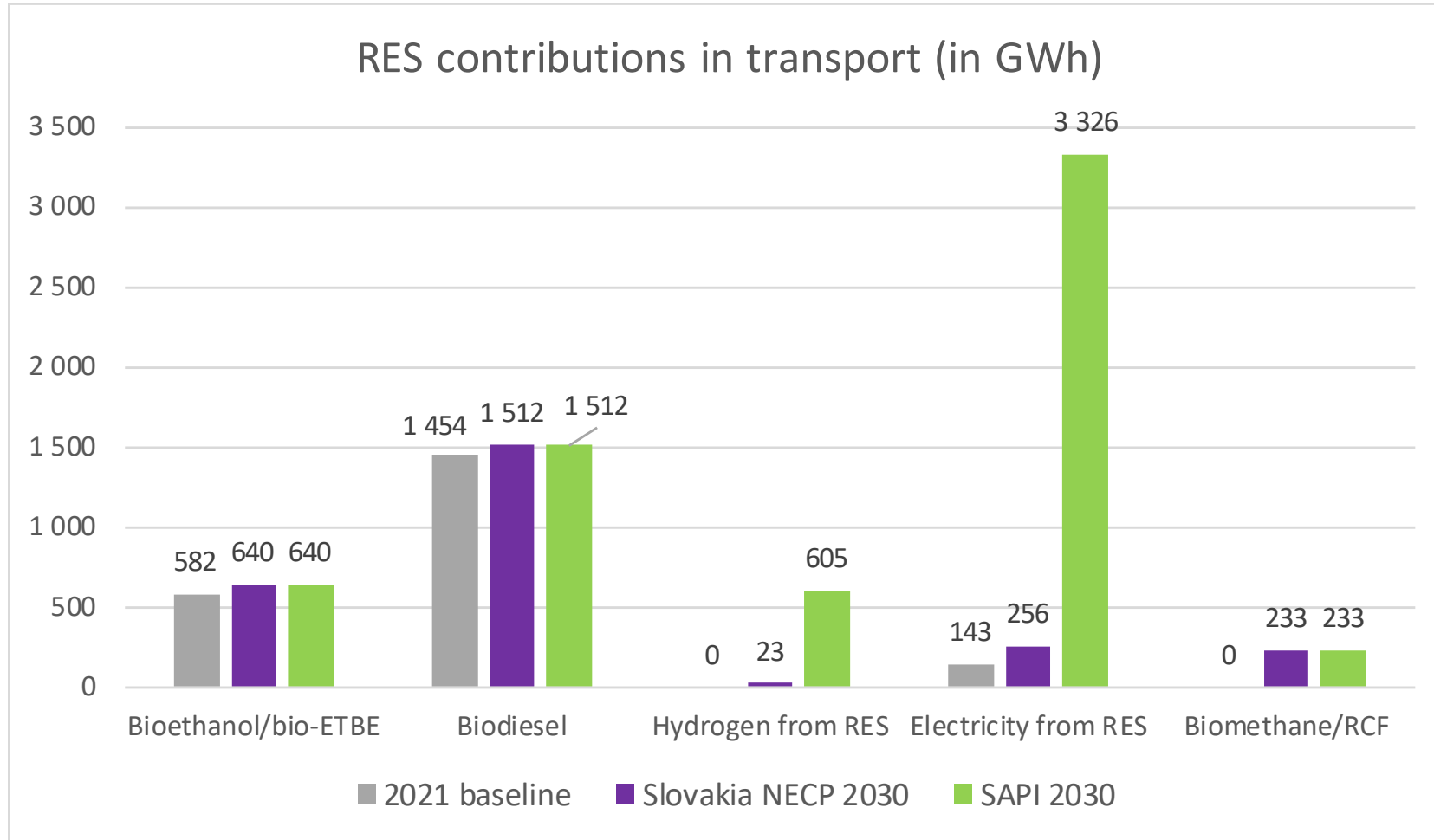


# RES in heating & cooling

- The role of heat pumps is underrated, not even global CAGR
- The potential of RES increase in this sector is limited due to existing high level of gasification and due to compliance issues of sustainability criteria for biomass usage
- Contrary to above the NECP places too much focus on this sector and DH systems (must be preserved at all costs)



# RES in transport

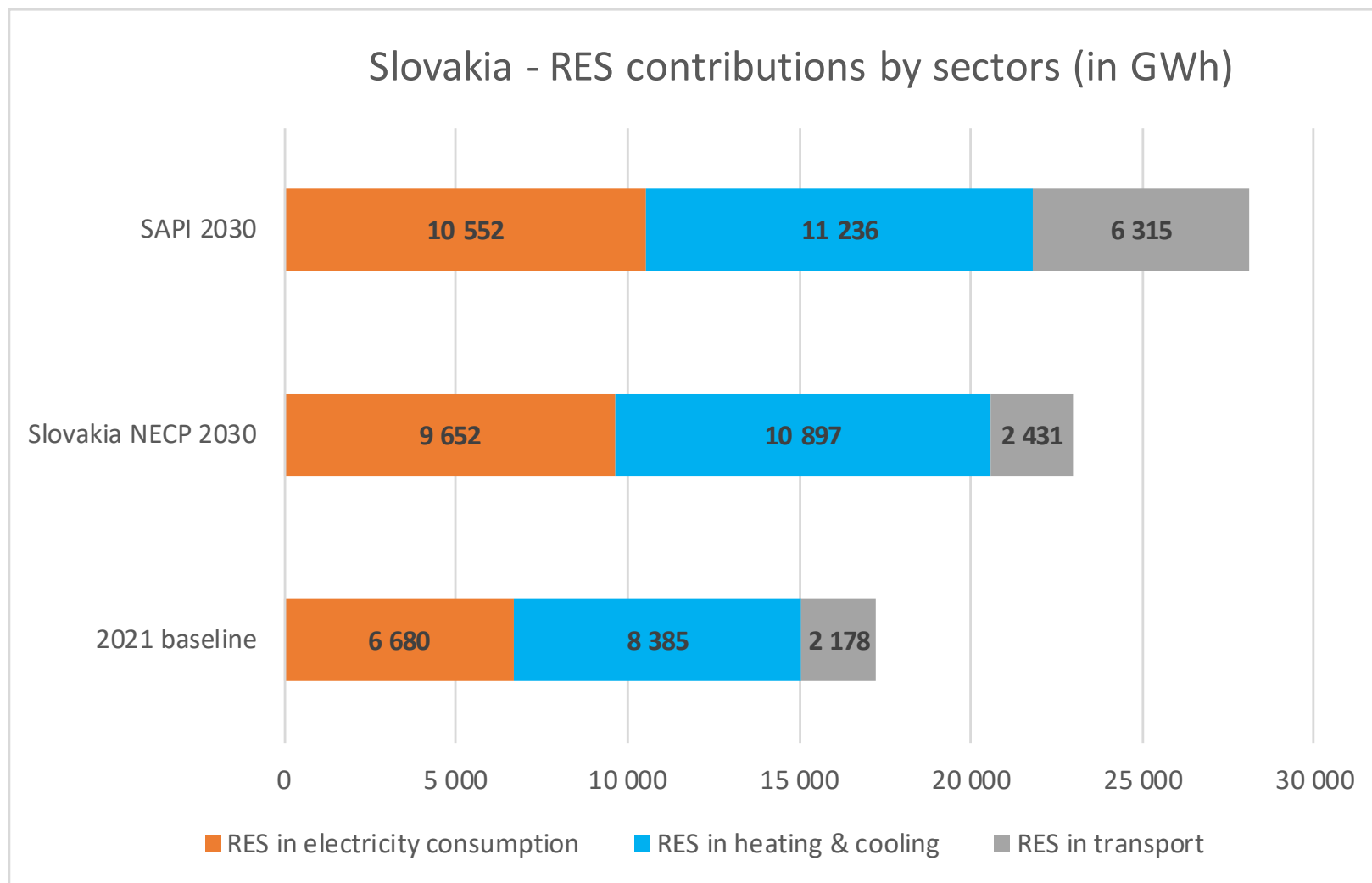


- NECP underestimates the potential of this sector for decarbonisation targets,
- Multiplication effects of electricity and hydrogen from RES are not applied in NECP (4x for road transport)
- Technological potential of battery and hydrogen based electrical mobility not envisioned, we propose the increase at higher than global CAGR
- Increase in biomethane won't do any difference



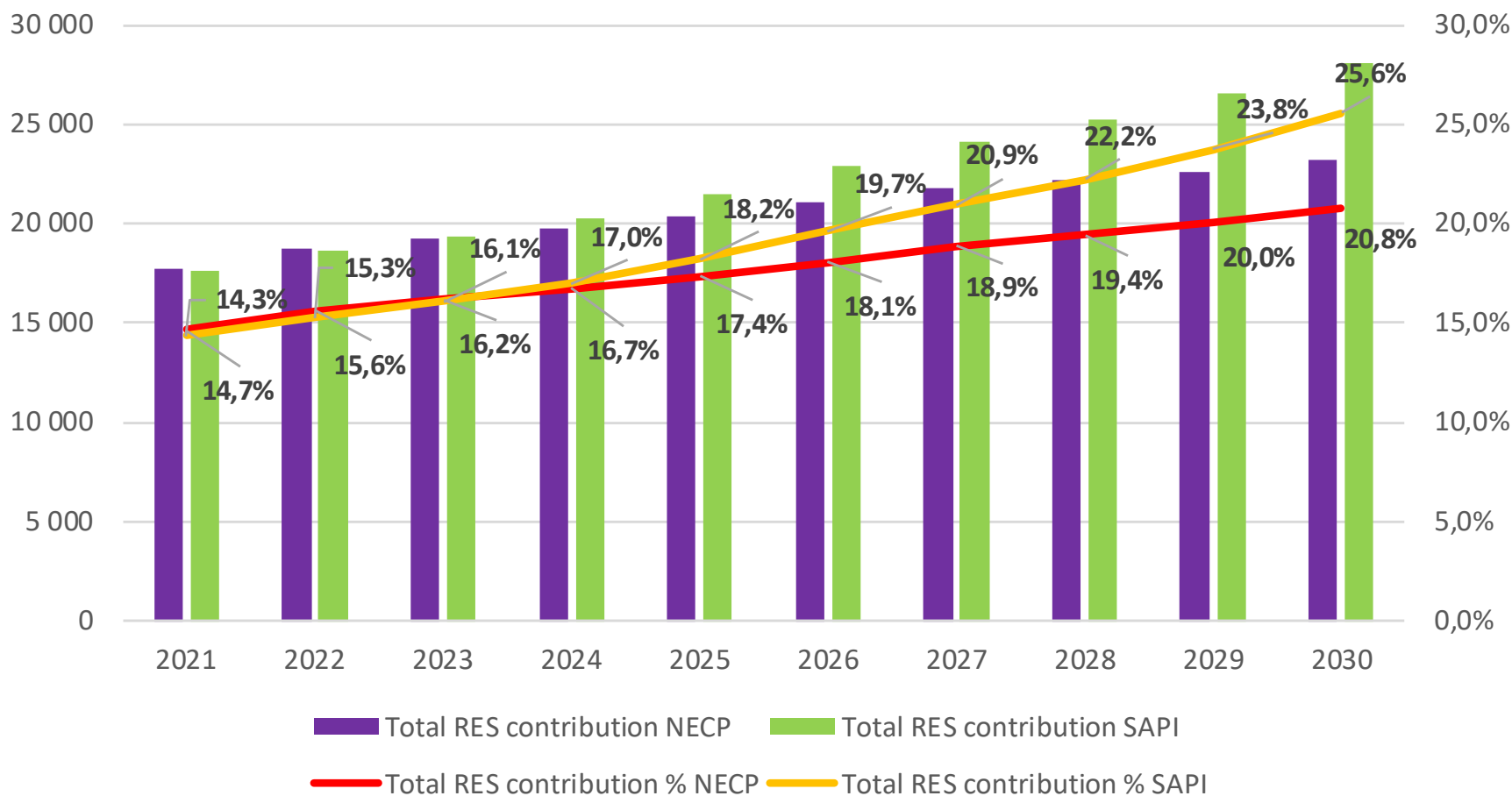
# Total RES contributions by sectors

- Baseline 2021 should be adjusted according to real data (Eurostat 2018 and national data 2019)
- SAPI proposes to increase ambitions in all sectors
- Contributions of RES in transport shouldn't be missed out due to allowed multiplication effects



# Total RES contributions in %

Slovakia - total RES contributions (in GWh and %)



- Recalculated NECP target RES share at 20.8% instead of 19.2%
- SAPI to propose RES share at 25.6% based on modified final energy forecast and different trajectories in all sectors, share increments not linear
- SAPI's proposal exceeds EC's recommendation to increase RES share to 24%



# Policy-making recommendations

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SAPI proposes that Slovak policy makers revise the NECP in the following way:

- (1) set more realistic forecast of final energy consumption (currently missing)
- (2) set more ambitious targets for RES taking into account technical and economic potential of RES technologies – wind, PV, electrical mobility, heat pumps
- (3) evaluate cost effectiveness of planned measures based on LCOE and value for money (currently missing)
- (4) focus on smart grid development leading to cancellation of stop status
- (5) include plans for development and integration of energy storage (missing)

**RES not as a measure of last resort but as cornerstone of future energy supply (!!)**

- Legislative scheme for self-consumption called "Local source" based on proposal from SAPI – enabled partial cancellation of stop status for grid connection and started development of prosumers
- EU program "Green for households" run by Slovak Innovation and Energy agency (SIEA) – investment support for 21 000 small-scale RES installations (up to 10 kW) in households by 2023

# For more details please contact us at:

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