

# Financing renewable energy projects in the UNECE Region

Study report

Renewable Energy Financing and Investment in Albania, Georgia, Kazakhstan and Serbia

Financing decarbonization of energy system in the UNECE region

6 October 2021

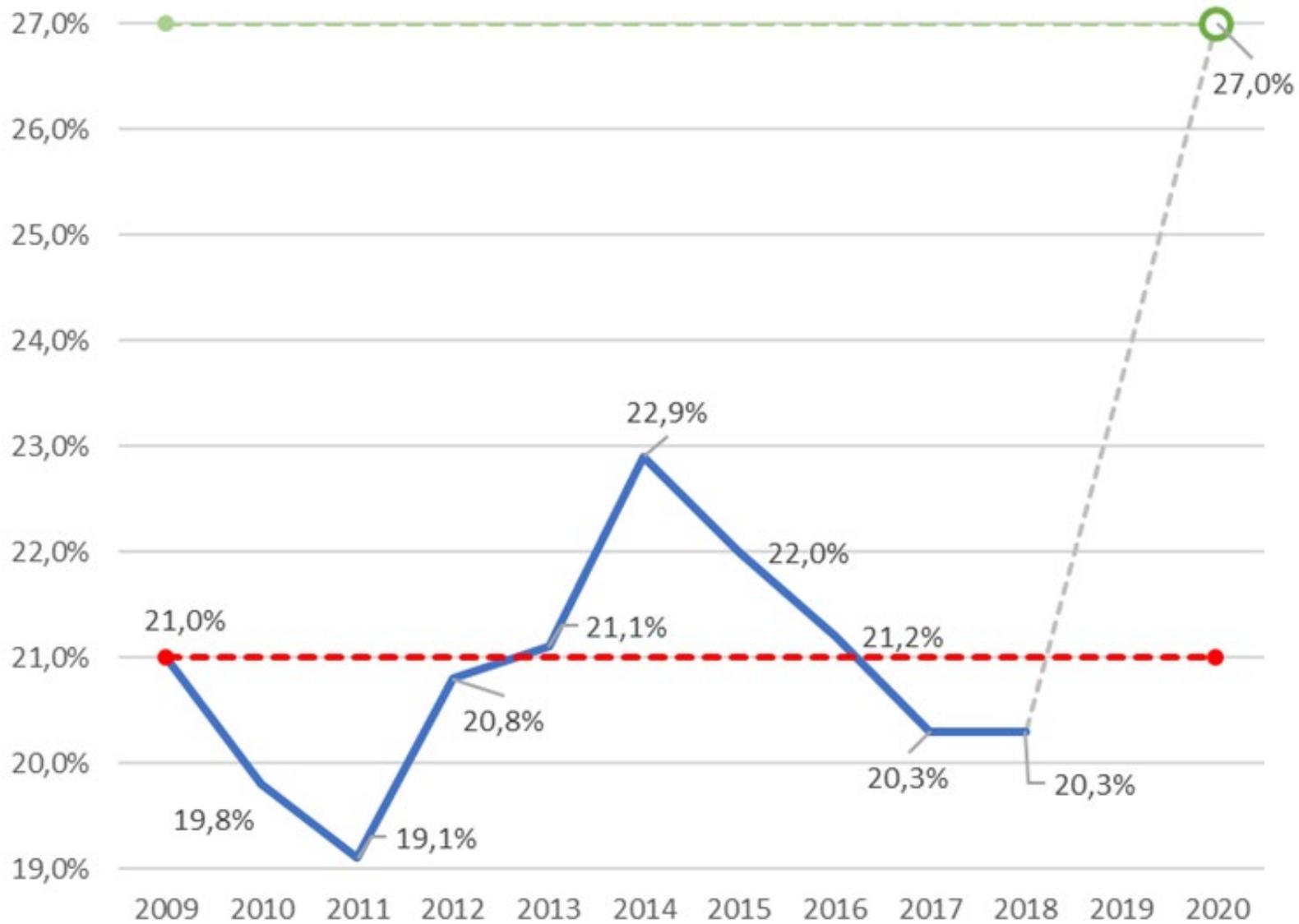
# Background

- Objective: provide an overview and analysis of renewable energy (RE) financing mechanisms and key actors as well as status of investments in four selected UNECE countries
- Based on desk research and interviews with UNECE Group of Experts on Renewable Energy (GERE) members
  - Georgia - Nikoloz Javshanashvili, PhD
  - Albania, Serbia and Kazakhstan – Matija Vajdić
- Overview of national targets, policies and programmes that support renewable energy investments, includes analysis of the status of RE and provides examples of RE investments

# Basic energy statistics

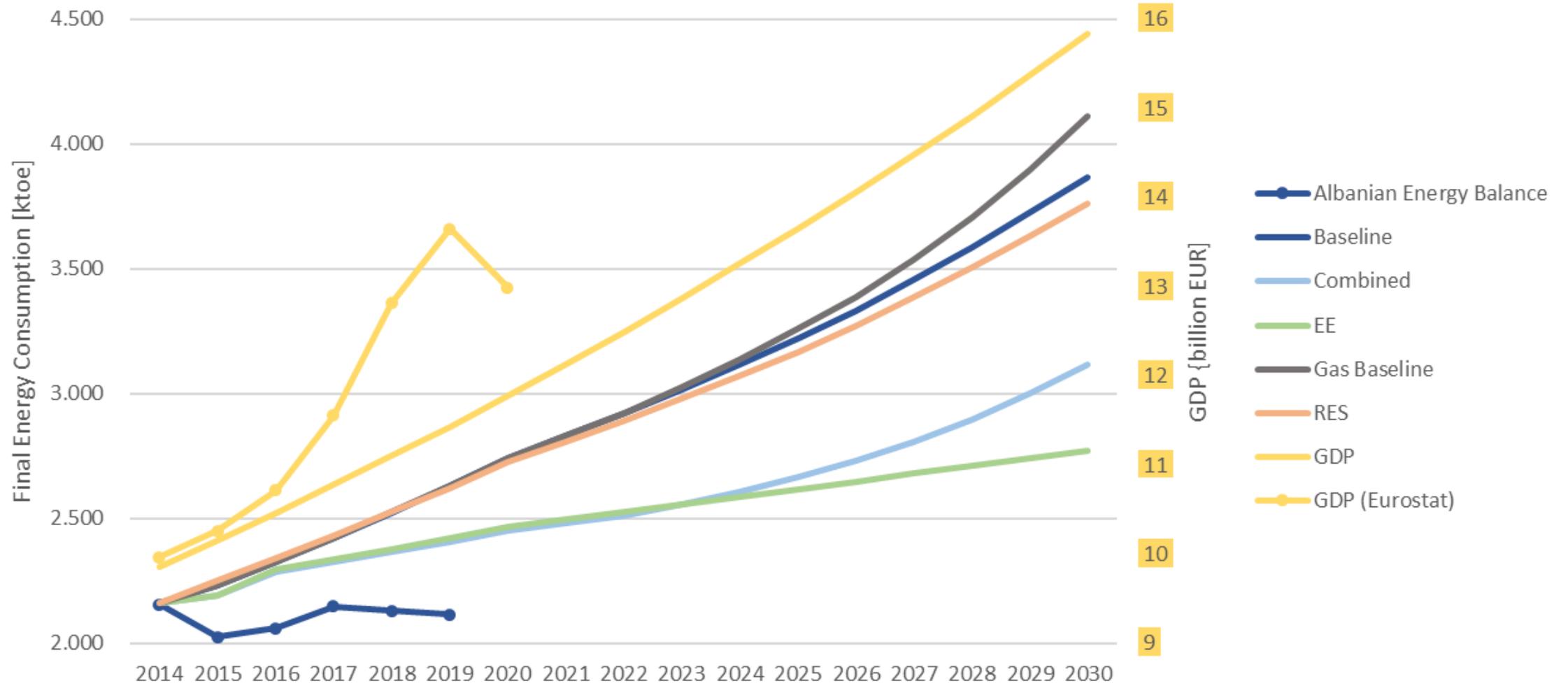
	Total primary energy supply [ktoe]	Final energy consumption [ktoe]	Baseline Year (2009)	Share of Energy from Renewable Sources (2019)	Target share of energy from RES in 2020	Total Capacities of Renewable Energy [MW] (2019)
<b>Albania</b>	2,340.0	2,067.1	31%	36.7% (Eurostat)	38%	2,591
<b>Georgia</b>	5,101.0	4,176.4	n.a.	28% (Geostat)	n.a.	3,337
<b>Kazakhstan</b>	73,148.0	45,510.0	n.a.	2.3% (stat.gov.kz)	3%	1,050
<b>Serbia</b>	15,277.9	8,361.0	21%	21.4% (Eurostat)	27%	3,491

- Solid progress in the past years (energy sector became an important component of the overall economic policy, liberalised economic environment, reduction and simplification of administrative procedures, privatisation, deregulation, etc.)
- (Probably) none of the four countries has reached its 2020 targets (*the official statistics for 2020 is not yet available*)



Serbia - Shares of Energy from Renewable Energy Sources in Serbia (source: EUROSTAT and ECS [27])

## Final Energy Consumption and GDP Projections 2014-2030

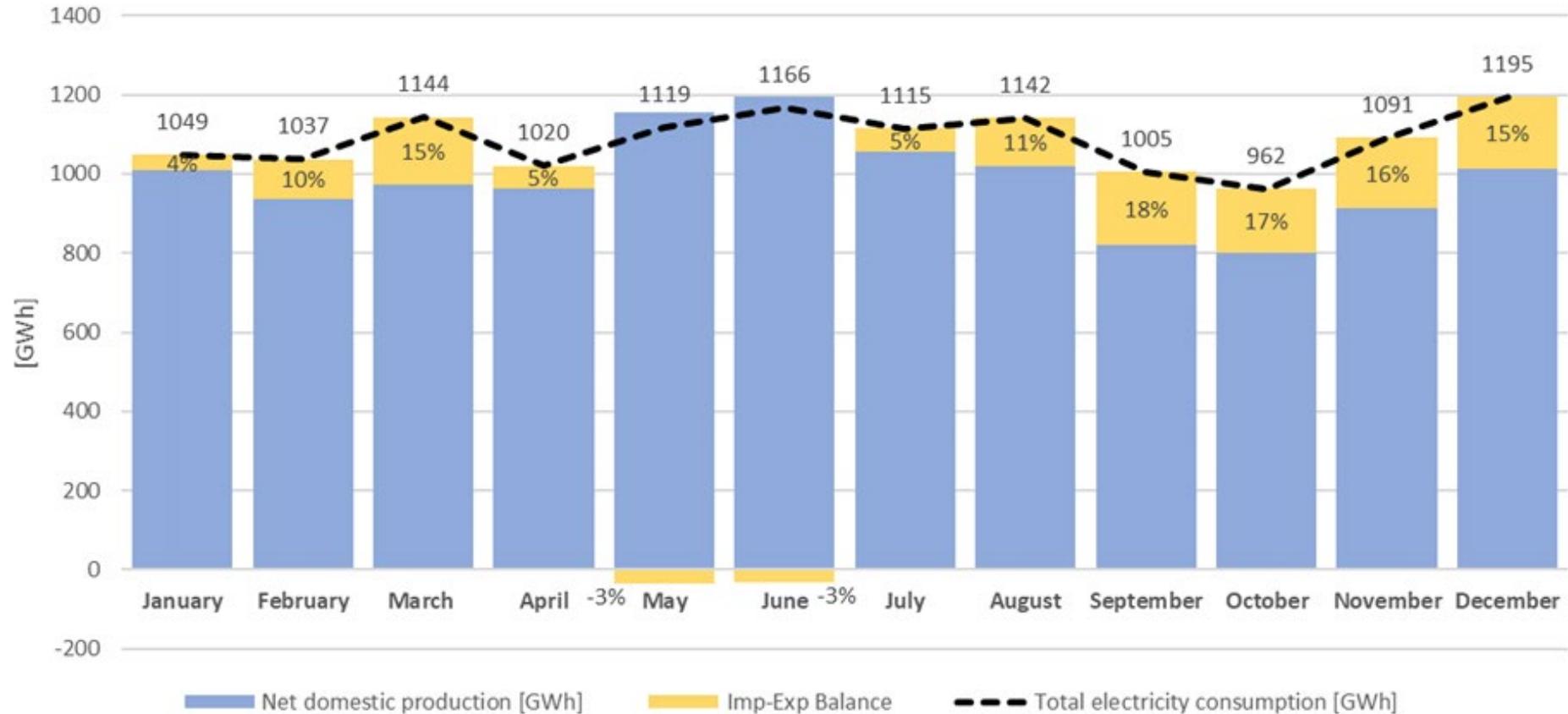


Albania - Final Energy Consumption and GDP Projections 2014-2030 (incl. real final energy consumption and GDP from 2014-2020)

# Regional overview

- Energy import dependency (except for Kazakhstan which is a net energy exporter)
- Albania and Georgia traditionally depend almost exclusively on hydropower for its electricity generation
- Awareness and lack of understanding of renewable energy is an obstacle (policy debates and cooperation among the relevant stakeholders is needed)
- Most of newly installed utility-scale RE sources are developed by foreign companies
- Focus is on the power sector (hydro, wind and solar), RE for heating (e.g., Rehabilitation of District Heating Systems in Serbia) and cooling as well as transport sector legs behind
- Great potential to leverage opportunities across several sectors (water, energy and food production)

Contributions of Net Domestic Production and Contributions of Import-Export Balance in Total Electricity Consumption in Georgia (2019) [GWh]



Georgia - Net domestic production, contributions of import-export balance and total electricity consumption in Georgia for 2019

# Policy landscape and international programmes

- All countries developed its primary legislation related to renewable energy sources and are slowly adopting the necessary secondary legislation (detailing legal, regulatory, and financial mechanisms and technical rules)
- First Nationally Determined Contributions were submitted in 2016 and 2017
- International programmes
  - EU4Energy Phase II – Georgia and Kazakhstan
  - Energy Community Treaty – Albania, Georgia and Serbia
  - UNECE and IRENA
  - UNDP, UNIDO, etc.
  - USAID, GIZ, DANIDA, SECO, etc.
  - EBRD, EIB, KfW, etc.

# Conclusion

- Development of sound legislative and regulatory framework for energy (transition to clean energy and the liberalisation of the energy market)
- Transition from administratively set feed-in tariffs (Serbia and Georgia) and contracts for difference to market based auctions (Kazakhstan and Albania)
- International donors (programmes) need to highlight the importance of collaboration and cooperation between the relevant stakeholders (not to forget gender equality)
- Strategic planning should be improved, and much more ambitious renewable energy targets need to be defined at the national level
- Action plans must be developed at the regional and municipal level (development of spatial models clearly presenting RE potential and environmental and societal impacts)
- Improvement of existing district level energy systems (transition towards nearly zero energy neighborhoods)
- Administrative simplification (procedures for authorization, permitting, licensing, etc.) including the designation of a one-stop shop
- Local RE technology production, investments into R&D (energy storage, etc.)