

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

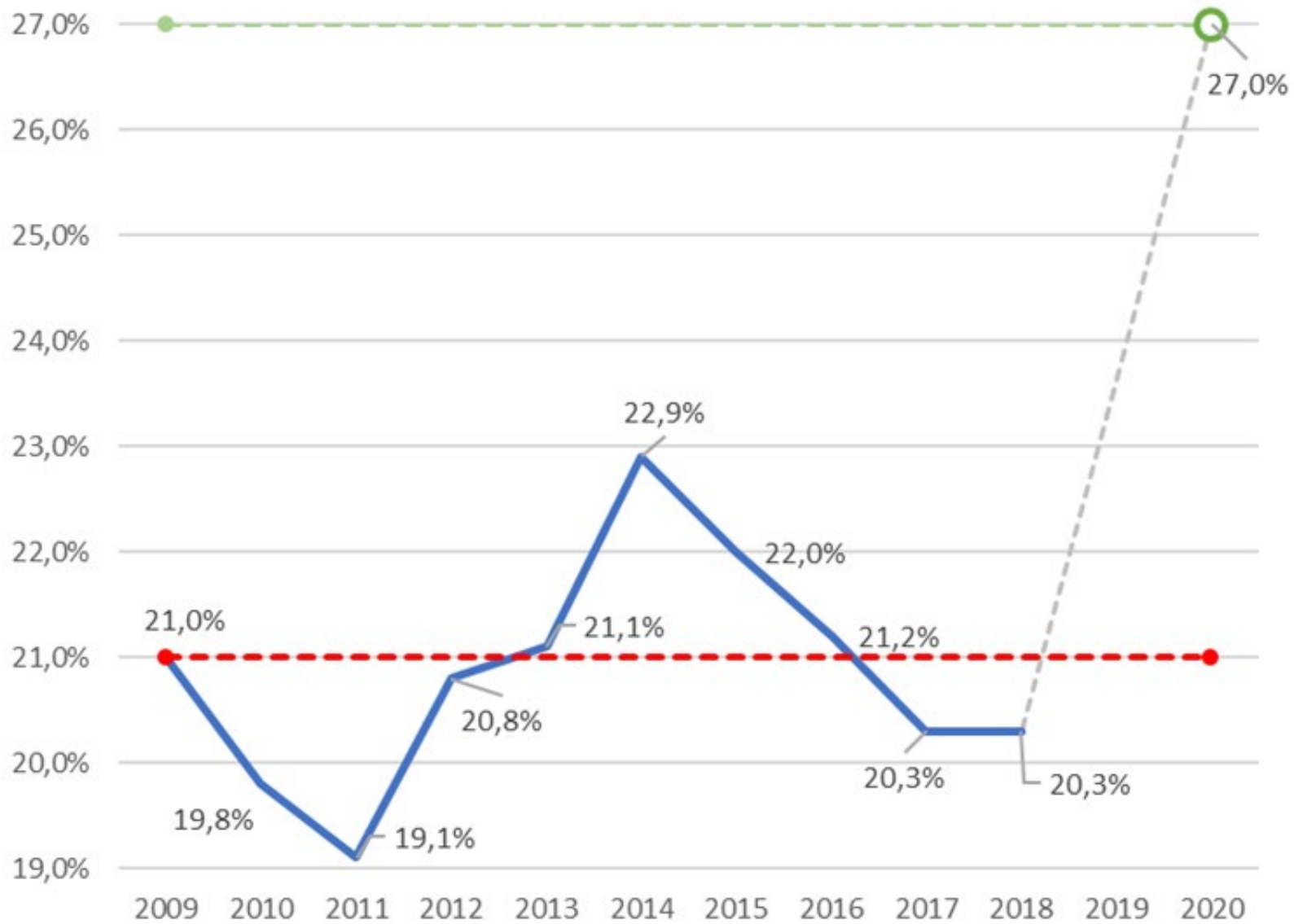
Background

- 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

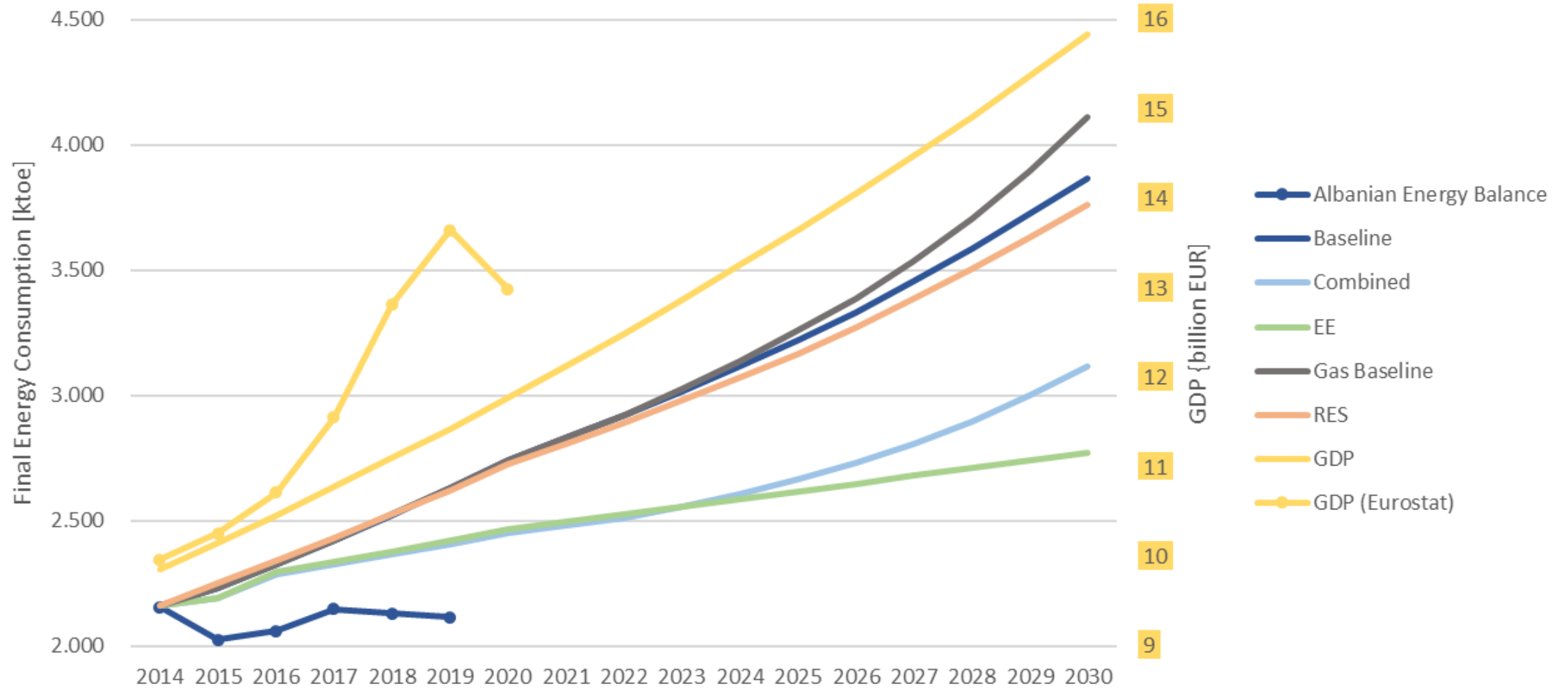
	Total primary energy supply [ktoe]	Final energy consumption [ktoe]	Baseline Year (2009)	Share of Energy from Renewable Sources (2019)	Target share of energy from RES in 2020	Total Capacities of Renewable Energy [MW] (2019)
Albania	2,340.0	2,067.1	31%	36.7% (Eurostat)	38%	2,591
Georgia	5,101.0	4,176.4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

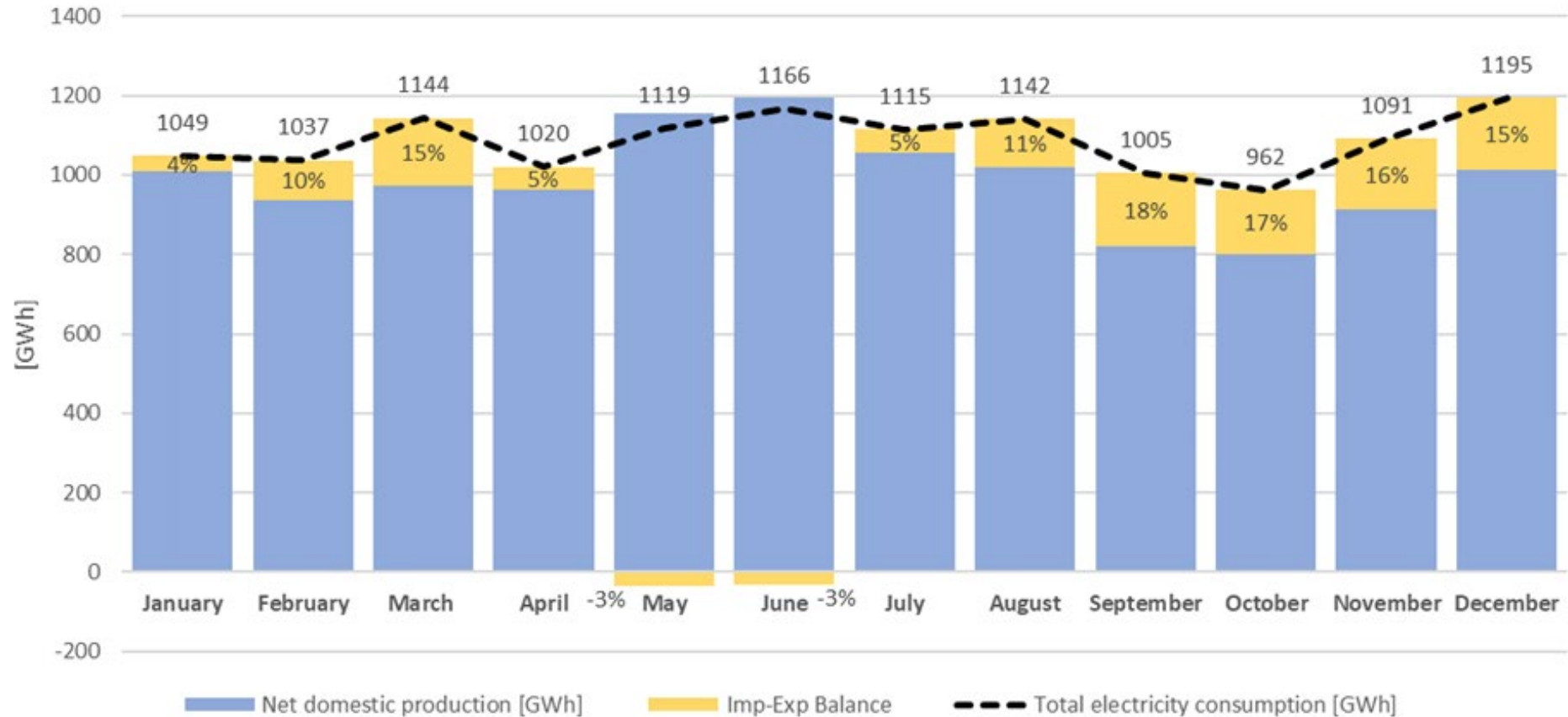


Albania - Final Energy Consumption and GDP Projections 2014-2030 (incl. real final energy consumption and GDP from 2014-2020)

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.)