Energy sector trends and latest developments in the Kyrgyz Republic

Energy and human development

Anna Arkhangelskaya, PhD, NHDR Economist
anna.arkhangelskaia@undp.org

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Content

Public functions of the energy sector

- Meeting the current energy demand
- Maintaining security of energy supply and quality parameters
- Readiness to cover future demand (advance development)
- Supply of energy at affordable and equitable tariffs for all consumers
- Compliance with environmental protection requirements
- Related services to improve energy efficiency
- etc.

2014-2024 years - «International Decade of Sustainable Energy for All (SE4All)»

Energy

Security

Networks

Food and clothes

Transport

Heating

Work

Space

Health

Lighting

House

Content

Public functions of the energy sector

Key indicators of the current state and development of the energy sector in the Kyrgyz Republic

Sustainable energy use indicators

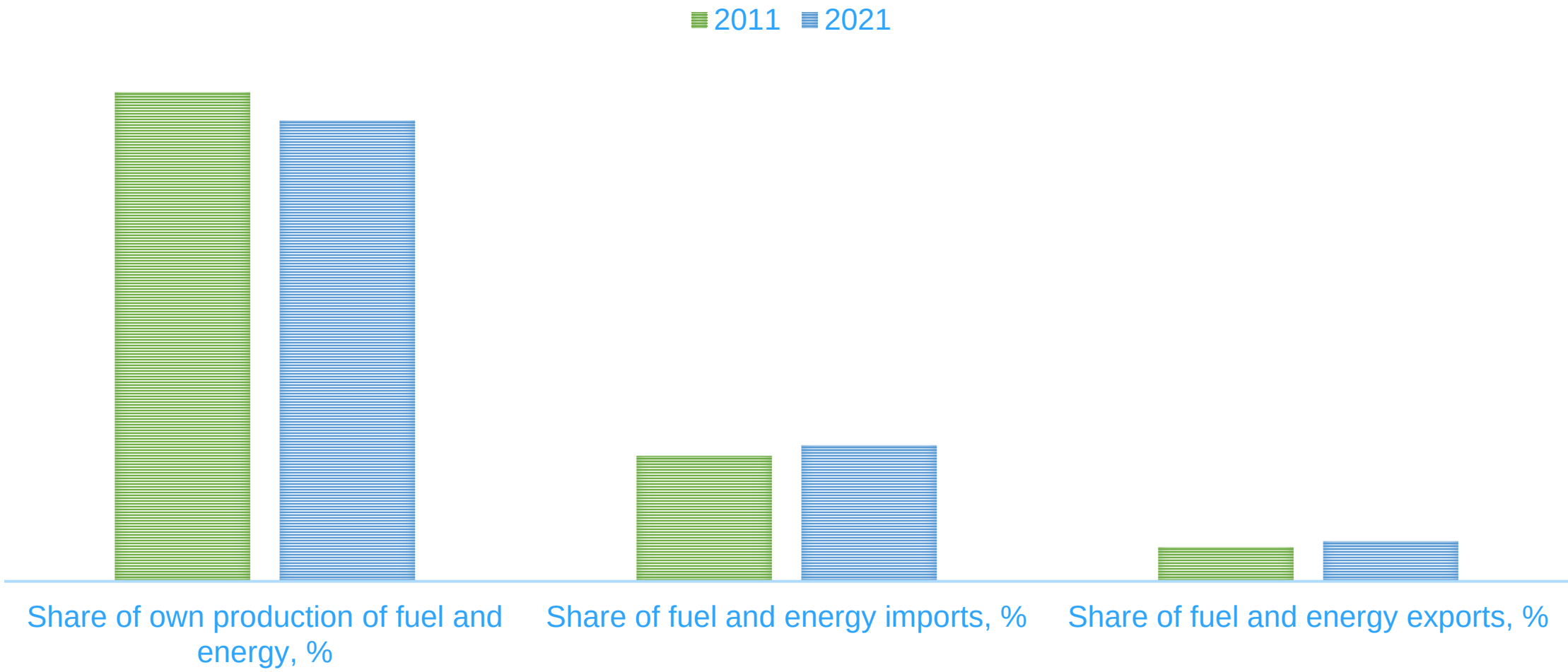
Energy development goals and priorities

Resource base

- Hydropower: 18500 MW
- Coal: 1.3 billion tonnes
- Oil: 88.5 million tons
- Natural gas: 5578.9 million m3

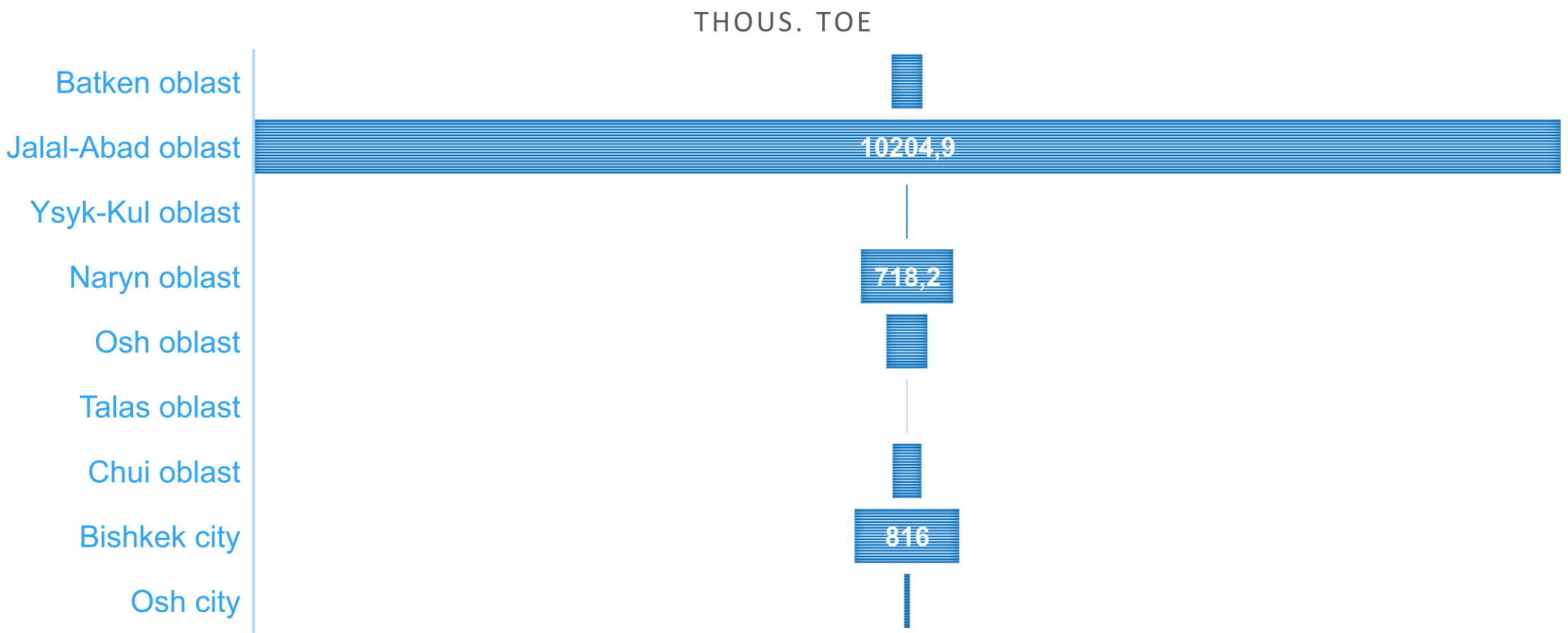
- Small hydropower plants: 5-8 billion kWh/year
- Wind: 44.6 mln kWh/year
- Solar: 490 billion kWh/year
- Biomass: 1.3 TWh/year (UNECE, 2018).

The fuel and energy balance of the KR for 2021



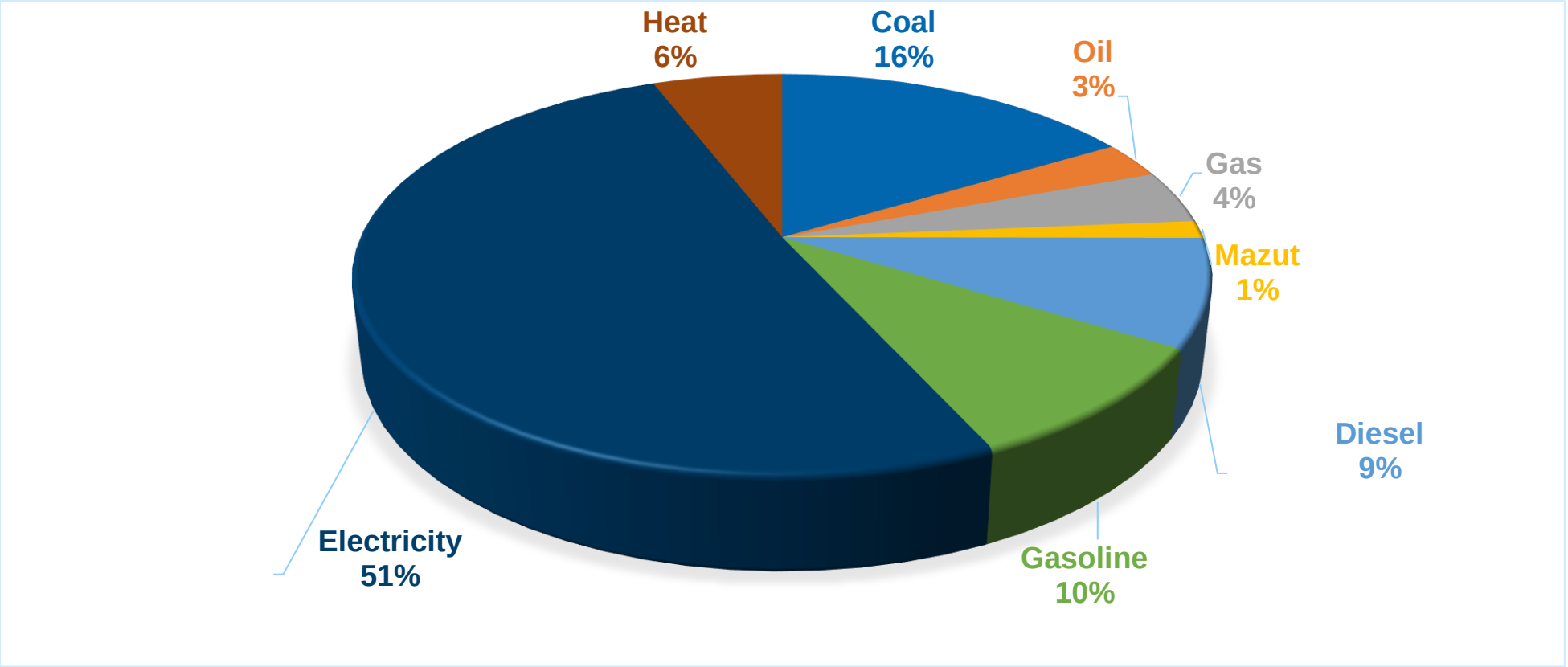
Source: NSC

Production of fuel and energy resources by oblast of the Kyrgyz Republic, 2020 г.



Source: NSC

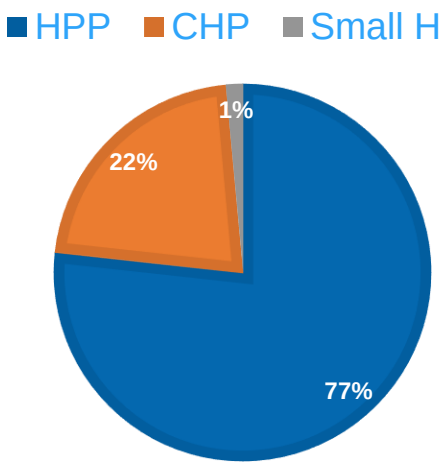
Structure of fuel and energy resources consumption by type, 2020



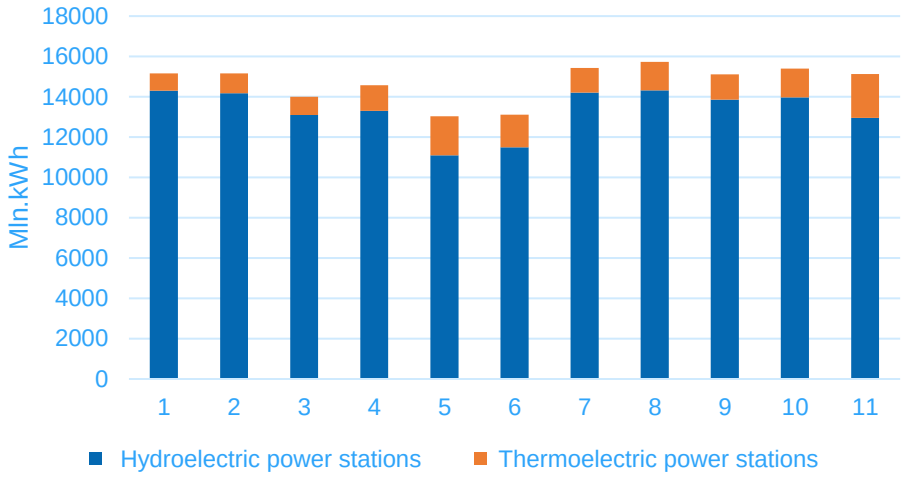
Source: NSC

The electricity sector in the Kyrgyz Republic: main parameters

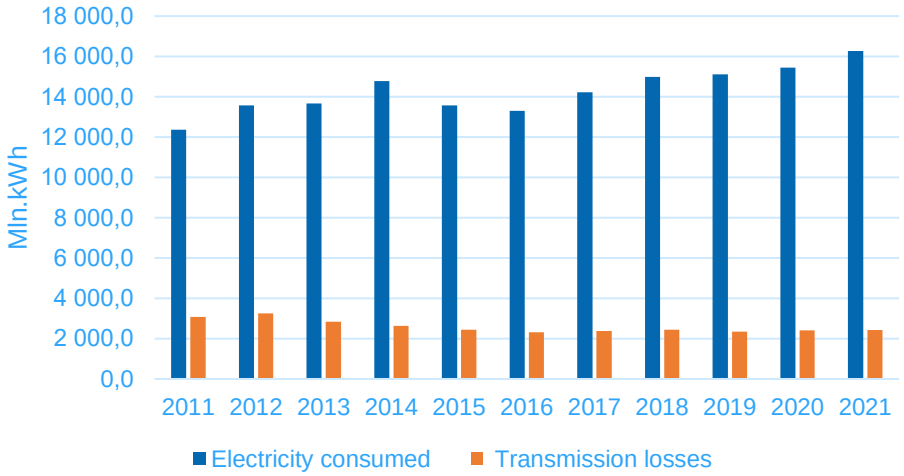
TOTAL INSTALLED CAPACITY OF EPP



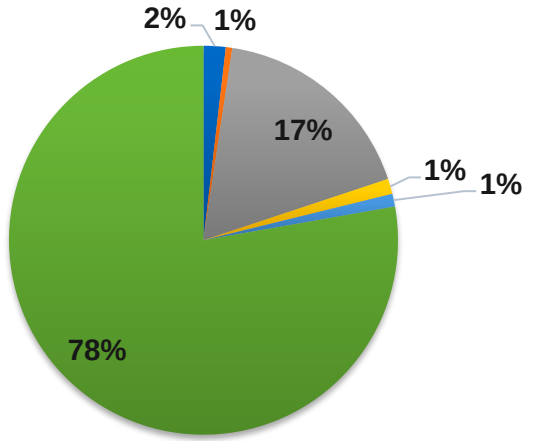
Electricity generation



Total electricity consumption in 2021

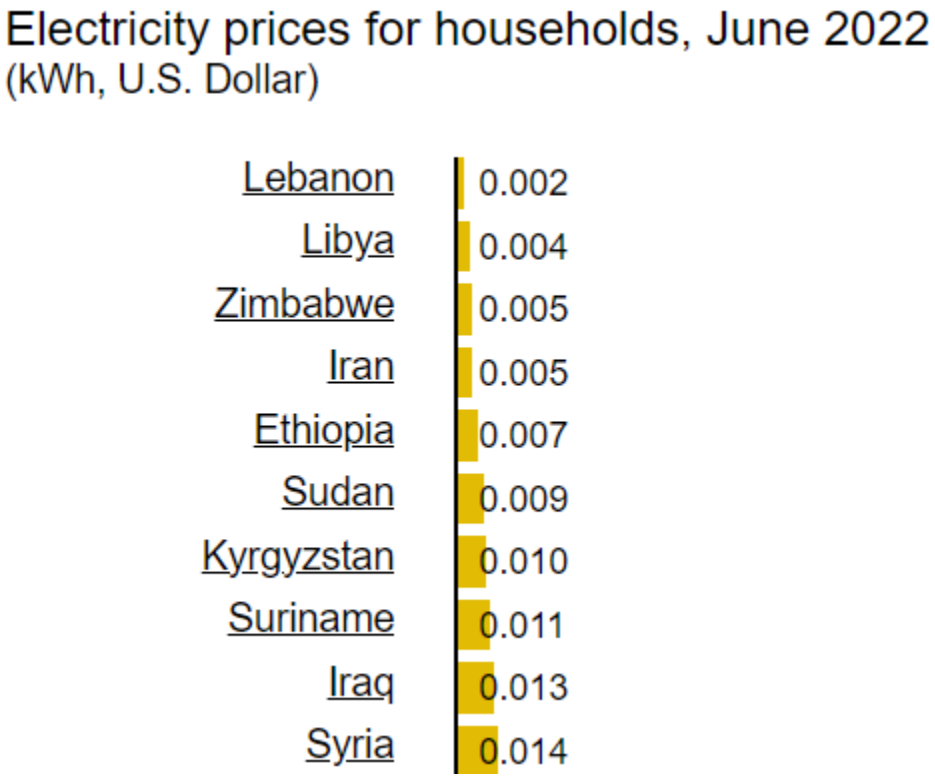


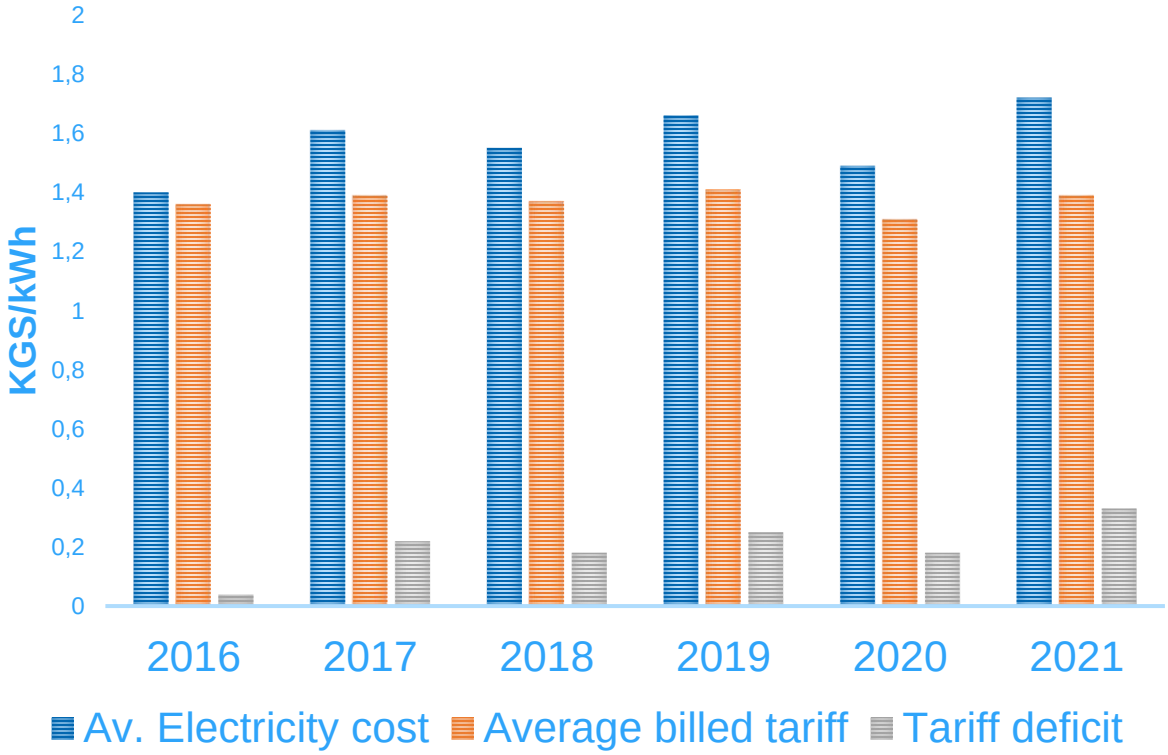
Electricity consumption structure



Source: NSC

Medium-term electricity tariff policy





Source: https://www.globalpetrolprices.com, NSC

Key threats to energy security in the Kyrgyz Republic

Domestic:

- Irrational structure of the fuel and energy balance and uneven distribution of energy resources over the territory;
- rate of production lagging behind the rate of consumption and high dependence on one energy source - hydropower;
- Insufficient commissioning and lack of reserve capacities in the energy sector;
- Financial instability and inefficiency of fuel and energy complex enterprises due to pricing and tariff policies (high losses and taxes; ineffective financial management)
- Reduced investment flow and depreciation of fixed assets, exceeding the useful life of facilities, equipment and meters
- Uneconomical and irrational use of energy resources.

External:

- Environmental (cycles of low and high water, global warming, natural disasters);
- Geopolitical (dependence on imported gas, oil and oil products)

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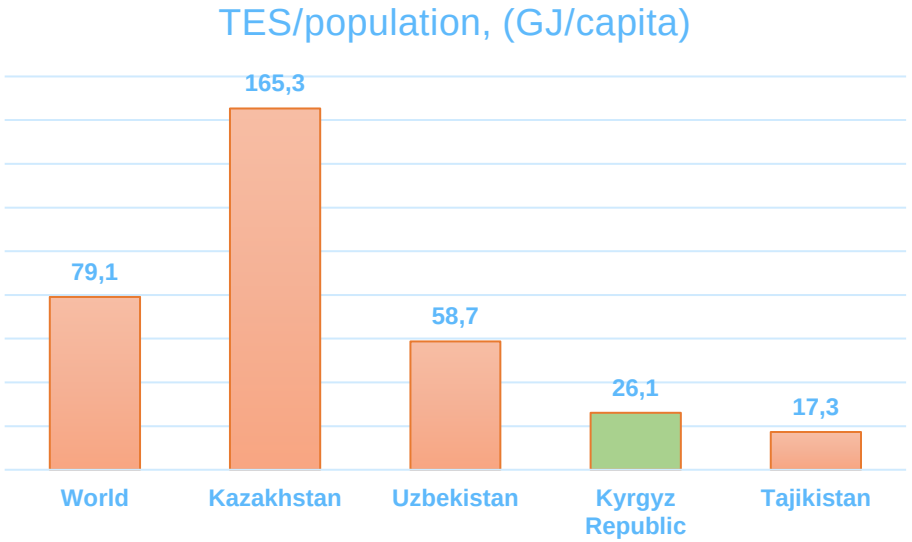
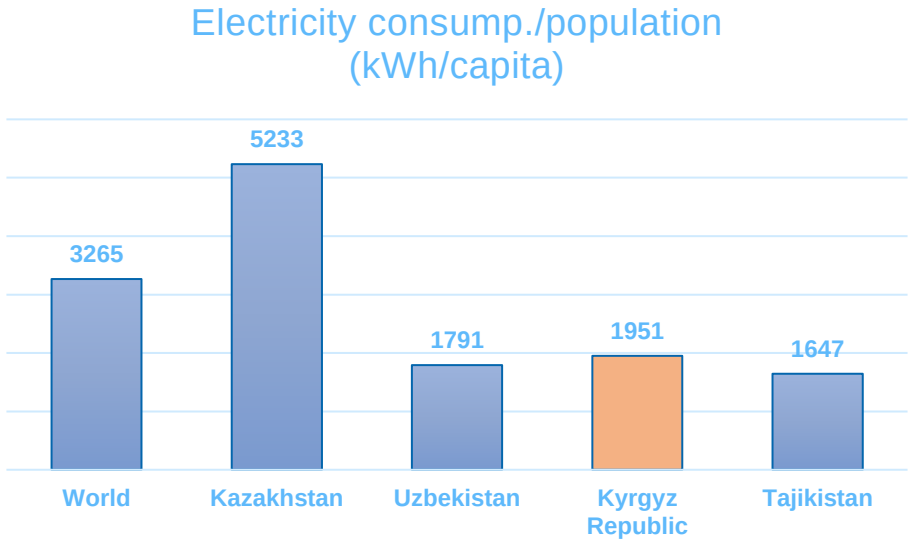
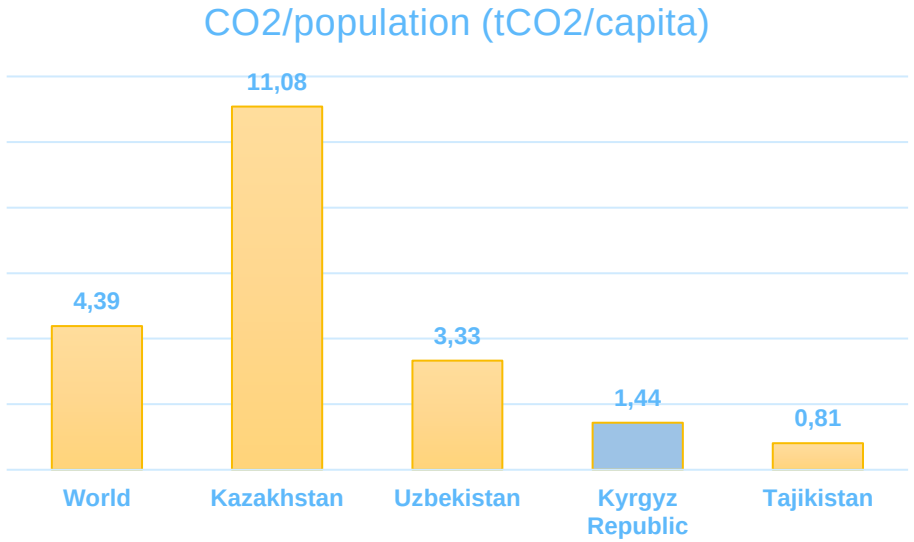
IEA Sustainable Energy Use Indicators

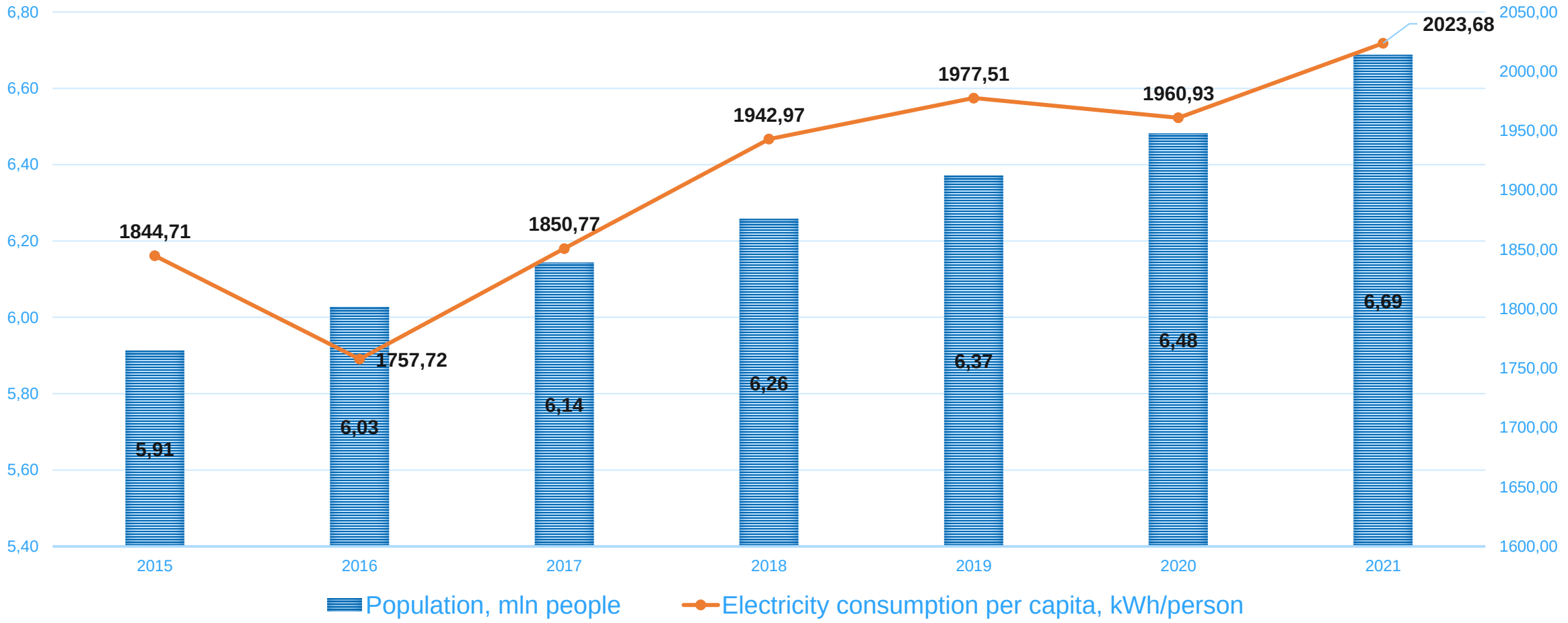






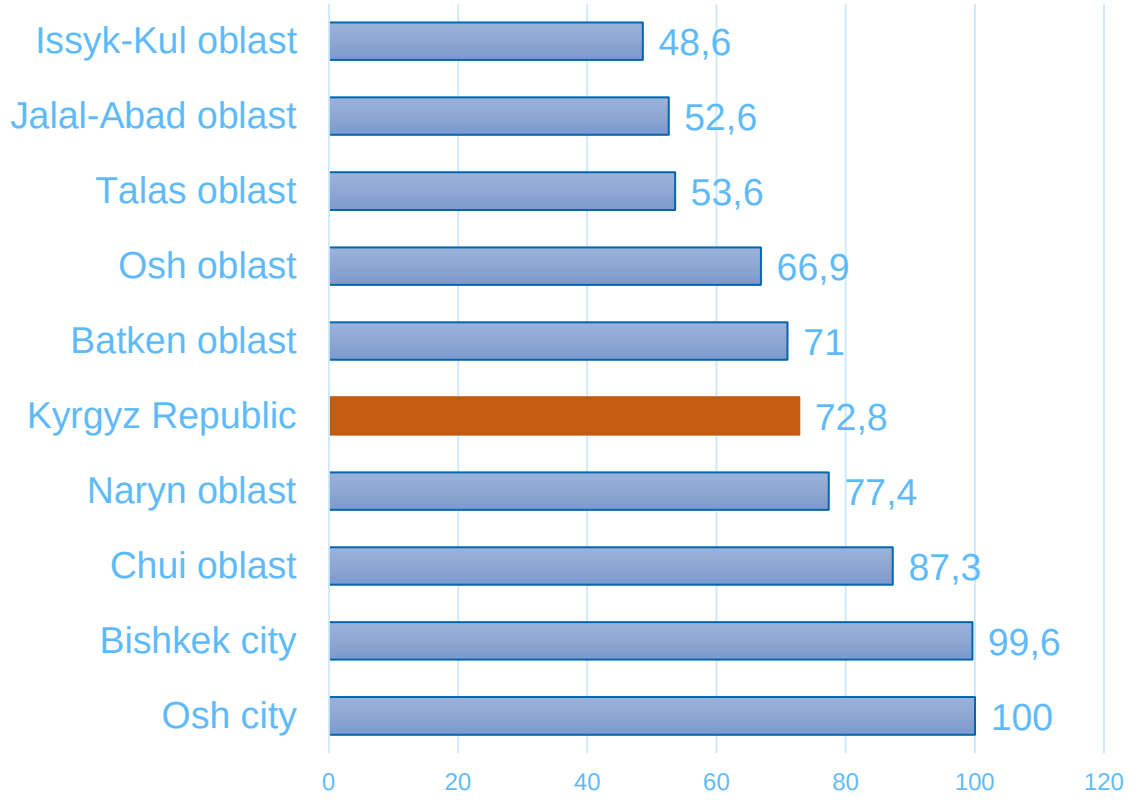
Source: IEA, 2022

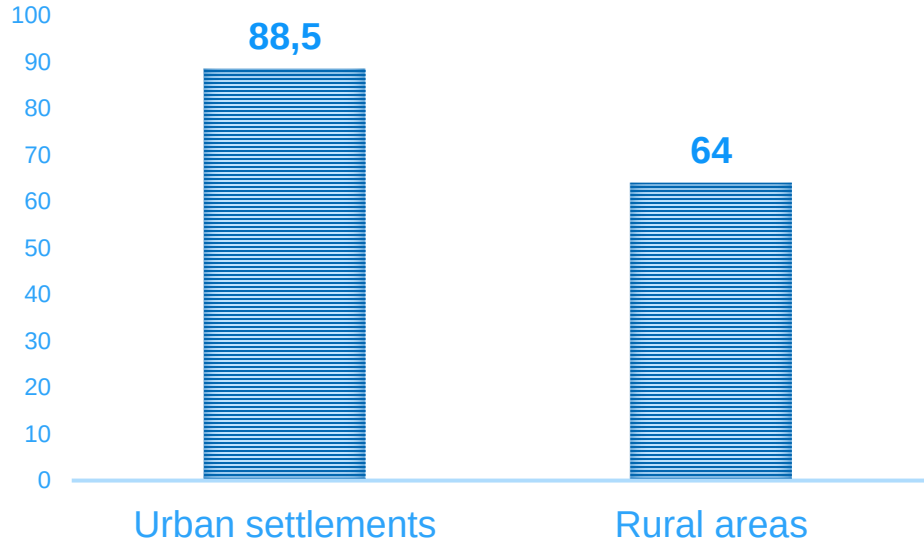
Electricity consumption per capita in the Kyrgyz Republic



Source: NSC

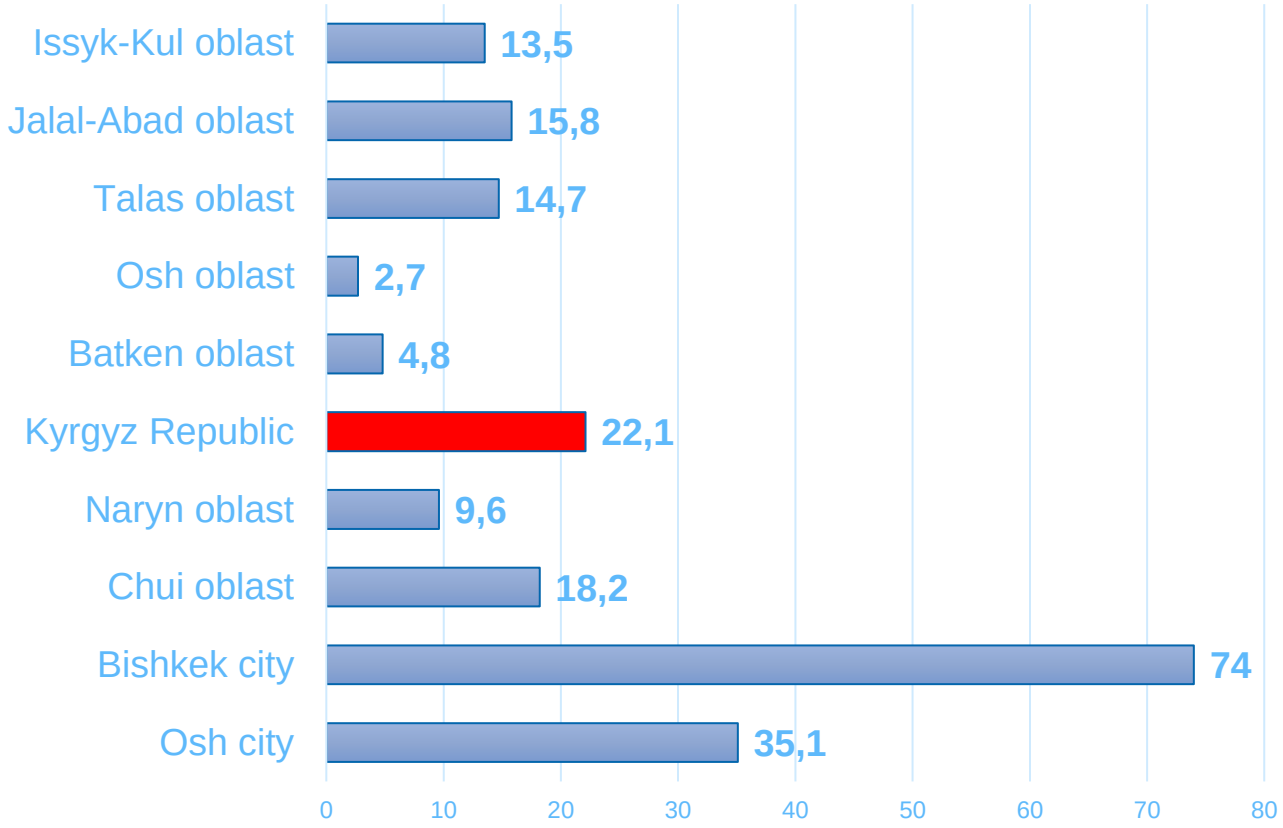
Share of population with access to electricity in 2020, %

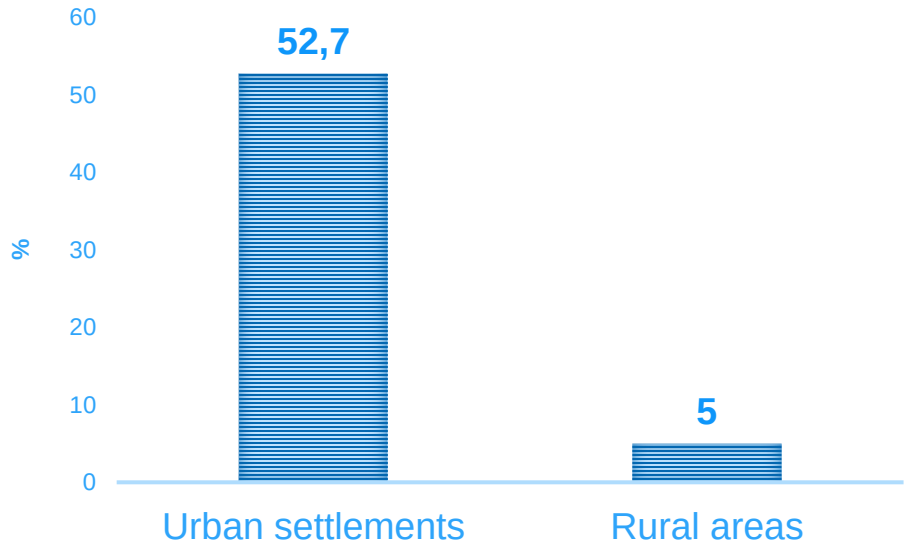




Source: NSC

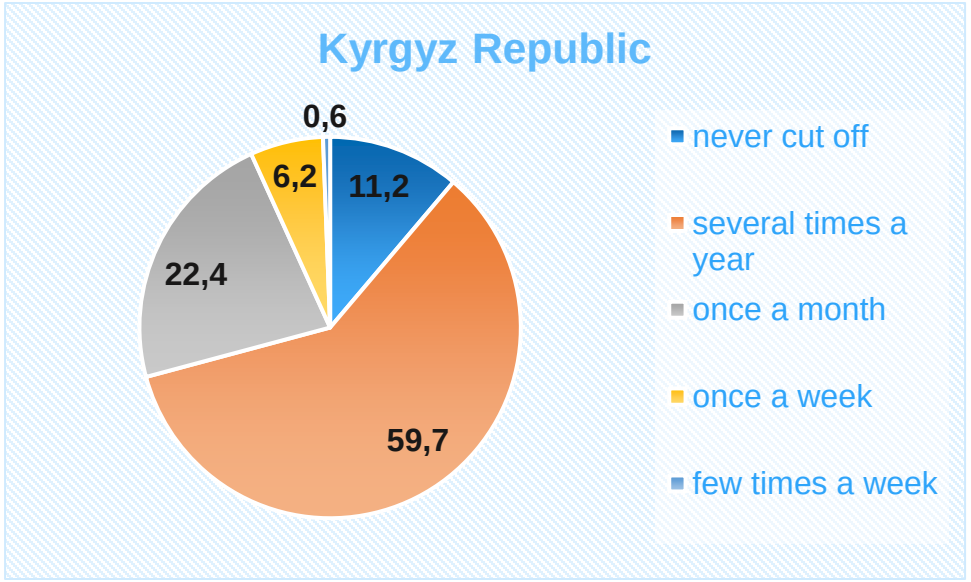
Share of population using mostly clean fuels in 2020, %

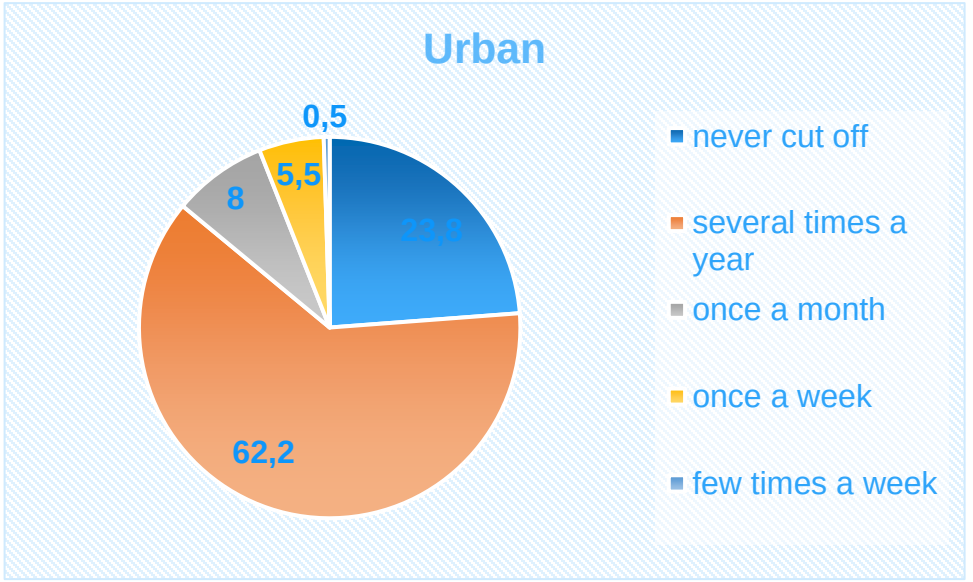


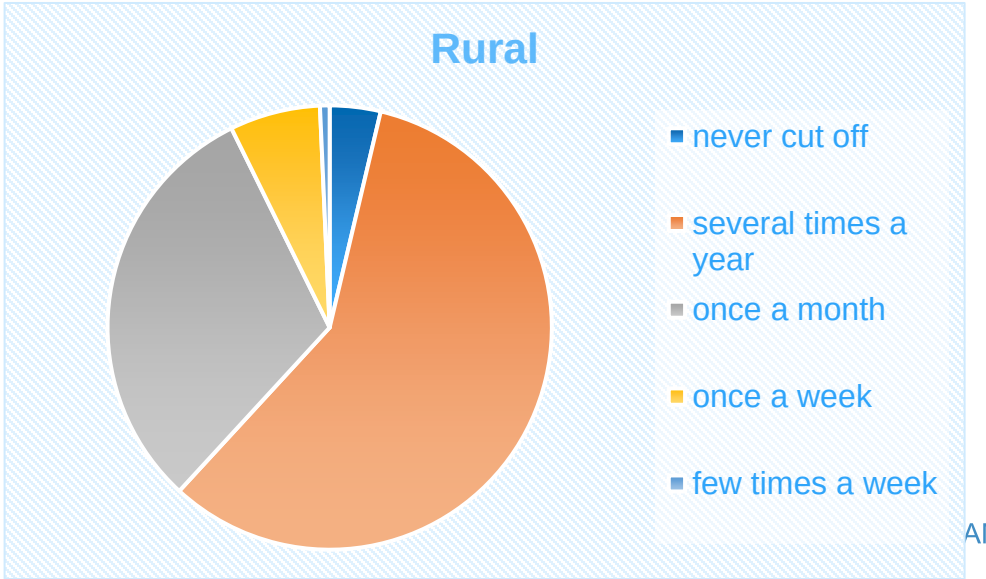


Source: NSC

Frequency of power outages in 2021, %







Source: NSC

AMME

Use of main energy sources for cooking in 2021

%	Total	Gas cooker with centralized gas supply	Gas cooker with gas in cylinders	Electric cooker	Solid fuel (stove, hearth)
Total					
Non-poor	100	28.4	1.3	50.5	19.8
Poor	100	18.3	1.1	58.4	22.3
incl. extremely poor	100	12.8	0	70.2	17
Urban					
Non-poor	100	57.2	0.9	38.4	3.6
Poor	100	44.4	1.4	47.4	6.8
incl. extremely poor	100	27.2	0	63	9.8
Rural					
Non-poor	100	5.5	1.6	60.1	32.7
Poor	100	0.3	0.8	65.9	33
incl. extremely poor	100	0	0	76.6	23.4

Source: NSC

Energy vulnerability factors

Practices (lack of political recognition or knowledge about support programs, way of using energy efficiently, etc.)

Negative impacts on public health (outdoor and indoor air pollution, low access to "clean" energy sources)

ENERGY VULNERABILITY

Infrastructure of the sector (level of gasification, high losses, availability of ASCE meters, etc.)

Impact of climate change on the energy sector (impact of inflow on hydropower generation, etc.)

Energy Efficiency (disproportionally high loss of useful energy during energy conversions in the home)

Energy tariff policy: electricity tariffs below cost and imported fuel at world prices

Content

National Development Strategy of the Kyrgyz Republic 2018-2040

- Quality and availability of social infrastructure
- Sustainable energy development, energy security of the country and regions, energy efficiency of the real sector of economy, availability of energy resources for each consumer.
- The share of clean energy sources in the country's total energy balance will be at least 10%, and energy and resource saving indicators will be in line with those of OECD countries.
- Large-scale programmes for energy-efficient renovation of old residential and non-residential buildings will be implemented, and there will be a ban on new construction without the use of energy- and resource-saving and high-efficiency technologies.
- It will also be mandatory for each building to generate a certain amount of energy for its own use, which will be regulated through fiscal and other measures.
- The most important solution for agglomerations will be decentralisation of heat supply, which will eliminate the problem of territorial expansion without loss of quality of life in these areas.

Sustainable Development Goals in the Kyrgyz Republic

SDG1. No Poverty: End poverty in all its forms everywhere.

SDG3. Good Health and Well-being: Ensure healthy lives and promote well-being for all at all ages.

SDG7: Affordable and Clean Energy: Ensure access to affordable, reliable, sustainable and modern energy for all.

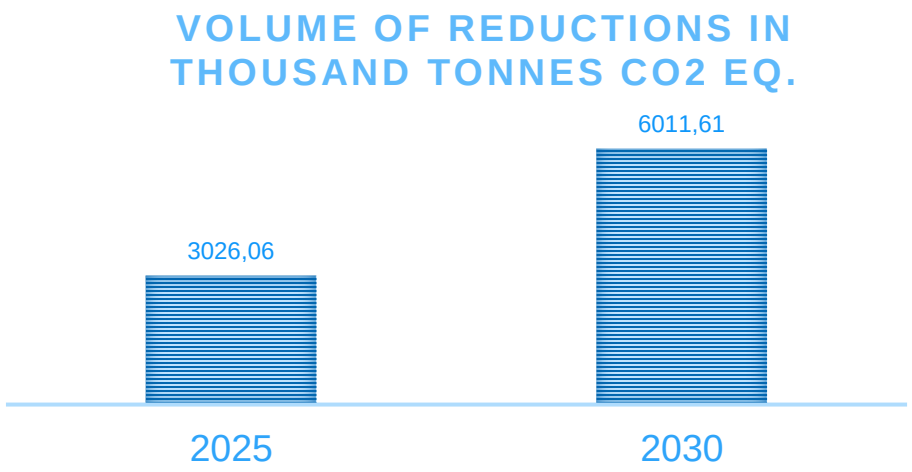
NDC 2021 (update)

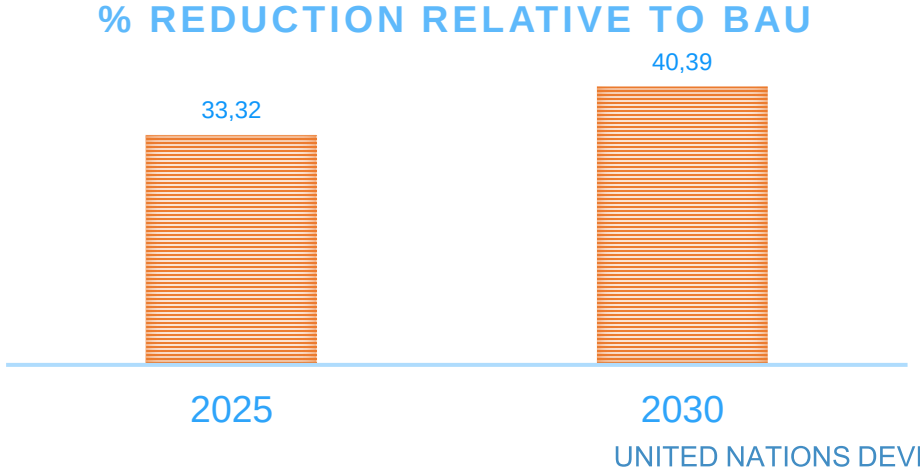
- The Energy sector generates about 60% of the country's greenhouse gas emissions.

- The mitigation potential in this sector will be realised through:

- development of RES
- increasing energy efficiency
- expanding gasification network
- using electric cars.

- Measure 3.1.2 Development of energy sector policies, taking into account climate change issues, gender aspects and interests of vulnerable groups





Source: NDC

Thank you!

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anna.arkhangelskaia@undp.org