



«Reducing environmental footprint through promotion of renewables in Belarus»

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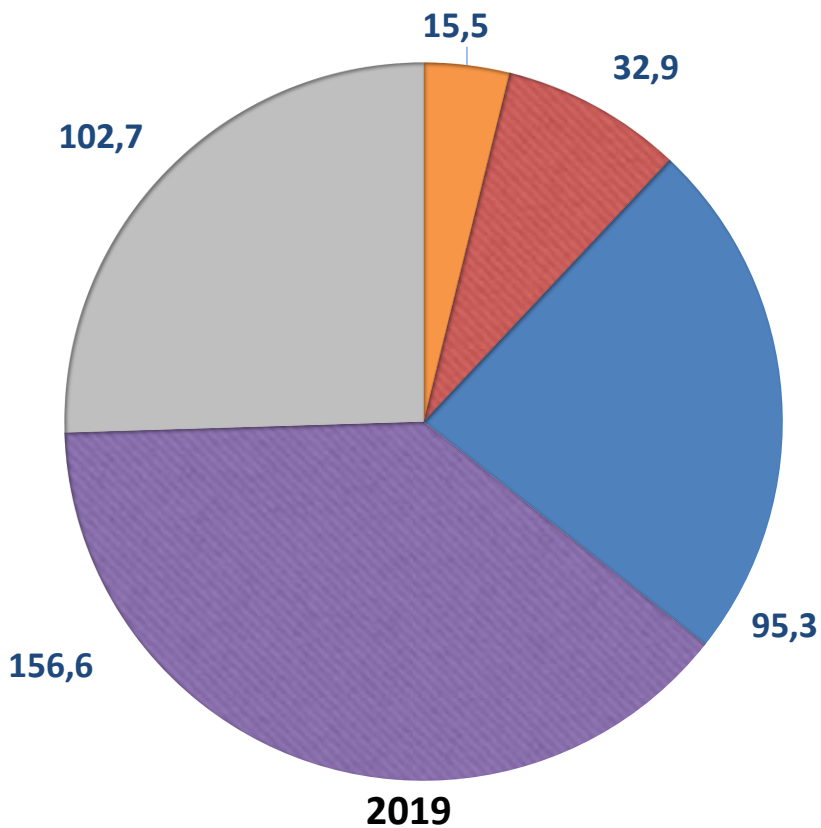
Legislative framework for green economy, improving energy efficiency and the use of renewables in the Republic of Belarus

1. National Plan of Action on Green Economy until 2020 adopted in 2016 includes:
 - energy efficiency in buildings;
 - re-use of wastes;
 - e-mobility;
 - increasing potential of the use of renewables.
2. Law on Energy Saving of 8 January 2015
3. State Programme «EnergySaving» for 2016-2020.
4. Law on Renewable Energy Sources of 27 December 2010
5. Decree of the President on Use of Renewable Energy Sources of 24 September 2019 r. № 357 (establishing quotas and Feed-in-Tariffs)

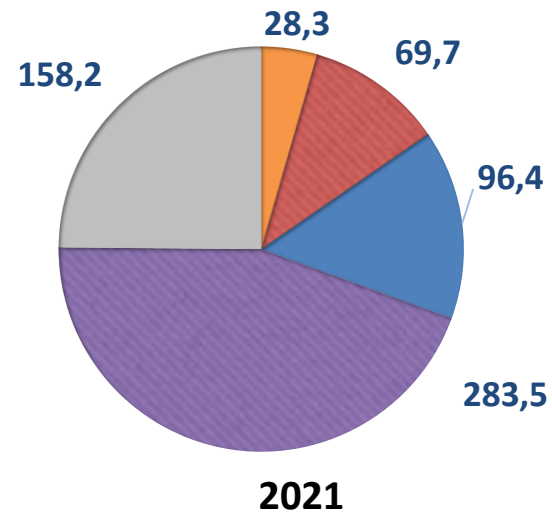
Energy policy targets of the Republic of Belarus

Indicator	2016-2018 (achieved)	2016-2020	2025
GDP energy intensity decrease, %		-1,6	-2
Share of locally produced primary energy to total energy consumption, %	15,5	16	17
Share of renewables to total energy consumption, %	6,1	6	7
Saving of fuel energy resources due to implemented measures, Mtce	3,1	5000	

Renewables electrical capacity, MW



- biomass
- biogas
- Hydro
- solar
- wind



On 01.07.2019 electrical capacity of renewables made 403 MBtr and will have increased up to 635 MW by 2021

Construction of renewables, 403 MW of installed electric capacity as of 01.07.2019

51 hydro power plants (95 MW)



Vitebsk HPP 40 MW

97 wind turbines (102,7 MW)



Wind power farm «Grabniki», 9 MW, Grodno region

55 solar stations (156 MW)



Solar Station «Belarusneft», 56 MW, Gomel region

25 biogas complexes (32,9 MW)



Biogas complex «Rassvet», 4,8 MW, Mogilev region

EU project «Developing an Integrated Approach to a Stepped-UP Energy Saving Programme» for schools and kindergartens, 2 mln. Euro (2013-2017).



Solar collectors in machinery college in Vitebsk



Waste heat recovery in kindergarten № 6 in Oshmiany, Grodno region



Energy efficient equipment in the kitchen, school № 4 in Dzerzhinsk, Minsk region



Thermal insulation and double-glazing in kindergarten № 45 in Grodno»

UNDP project «Improving Energy Efficiency in Residential Buildings in the Republic of Belarus» – 4,5 mln. \$. (2012-2018).



Block of flats for 180 families in Mogilev



Thermal energy consumption, in kWh/m² per year:
For heat and ventilation 25 (against 40-50 in the best local practice)
For hot water supply 20 (against 80-90 in best local practice)



Accumulation of electricity and sector coupling

Coupling of electricity and transport sectors – to be introduced with the use of electricity in a short term perspective

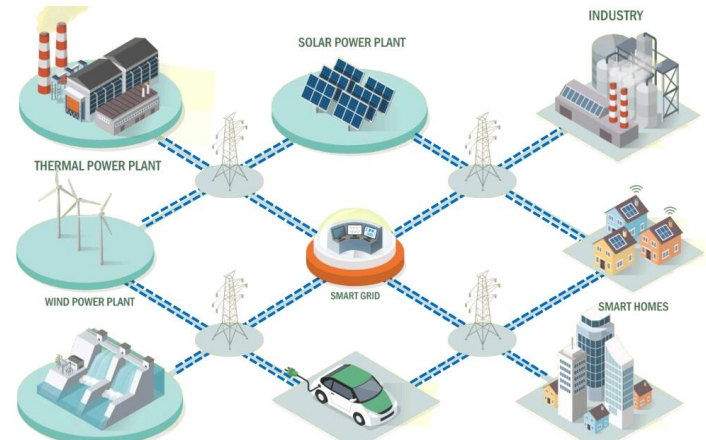
Issues of balancing at electricity market and «smart» charge for electric vehicle

Integrated response management due to digitalization

Integration of renewables into the grid with the use of digitalization

Program on Establishing a National Electric Vehicle Charging Stations (2018) emphasizes:

- installation of 1304 electric charging stations along highways and in cities by 2030
- application of batteries (1 MW) at charging stations
- the network of electrical charging stations will be integrated by software and operated by PA “Belarusneft”



Directions for further cooperation

- energy storage and integration of renewables into the national grid with the use of digitalization;
- e-mobility and promotion of infrastructure for electric vehicles;
- thermal renovation and construction of energy efficient buildings;
- wastes recovery and energy efficiency

Thank you for your attention!