



29 September 2017

“National Policy of the Republic of Belarus in the Field of Sustainable Energy”

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Sustainable Energy Legislation

- 1. Law of the Republic of Belarus “On Energy Conservation”, dated 8 January 2015, No. 239-3.**
- 2. Law of the Republic of Belarus “On Renewable Energy Sources”, dated 27 December 2010, No. 204-3.**
- 3. Directive of the President of the Republic of Belarus “Economy and Thrift – the Main Factors of the Economic Security of the State”, dated 14 June 2007, No. 3 (as amended by Decree of the President of the Republic of Belarus, dated 26 January 2016, No. 26).**
- 4. The Concept of Energy Security of the Republic of Belarus, dated 23 December 2015.**
- 5. State Program “Energy Conservation” for the period up to 2016-2020.**

Target Indicators of Energy Policy of the Republic of Belarus

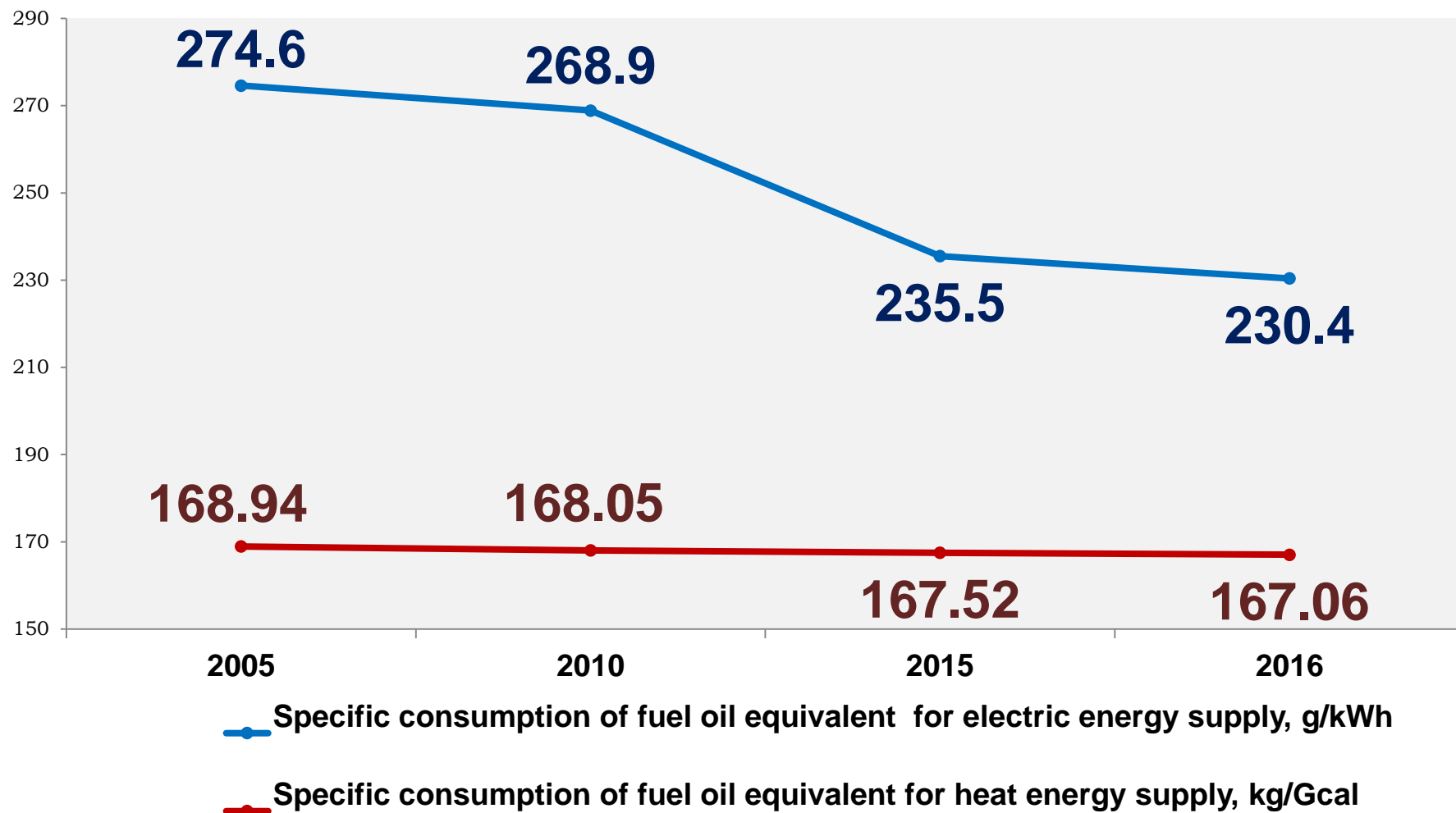
| Indicator | 2015 (actual) | 2016 | 2020 | 2025 |
|---|----------------------|---|---------------------------------|------|
| Reduction in GDP energy intensity, % | 12.7 | 0.4 | 2 | 6.6 |
| Share of domestic energy resources in gross consumption of fuel and energy resources (FER), % (energy independence) | 13.9 | 15 (actual) | 16 | 17 |
| Share of renewable energy sources (RES) in FER gross consumption, % | 5.5 | 5.9 (actual) | 6 | 7 |
| FER saving based on energy conservation activities, ths tons of oil equivalent | 7,788 (2011-2015) | 1,171 (target – not less than 1,000) | 5,000 (target for 2016-2020) | 3 |

Law “On Energy Conservation”

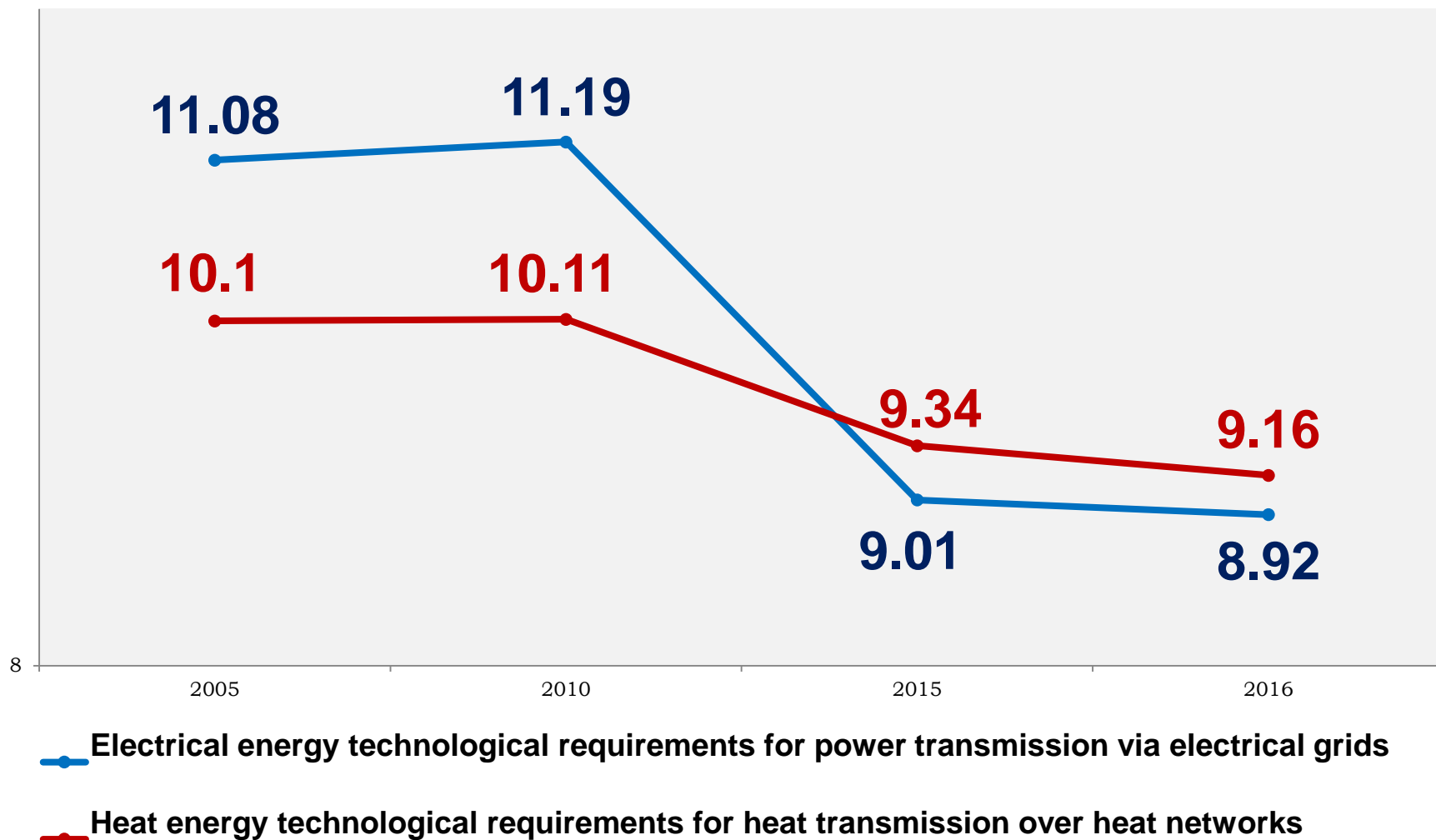
- **Areas of the state regulation in the field of energy conservation :**
 - ✓ **conducting energy surveys (energy audits);**
 - ✓ **setting indicators in the field of energy conservation;**
 - ✓ **setting fuel and energy consumption norms;**
 - ✓ **developing and implementing state, sectoral and regional energy conservation programs;**
 - ✓ **supervising sustainable use of fuel and energy resources;**
 - ✓ **performing state expert examination of energy efficiency;**
 - ✓ **setting technical rates, standardizing, assessing conformance;**
 - ✓ **stimulating efficient and sustainable use of fuel and energy resources.**

REDUCTION IN SPECIFIC FUEL CONSUMPTION FOR ELECTRICAL AND HEAT ENERGY SUPPLY IN THE BELARUSIAN ENERGY SYSTEM OVER THE PERIOD OF 2005-2016

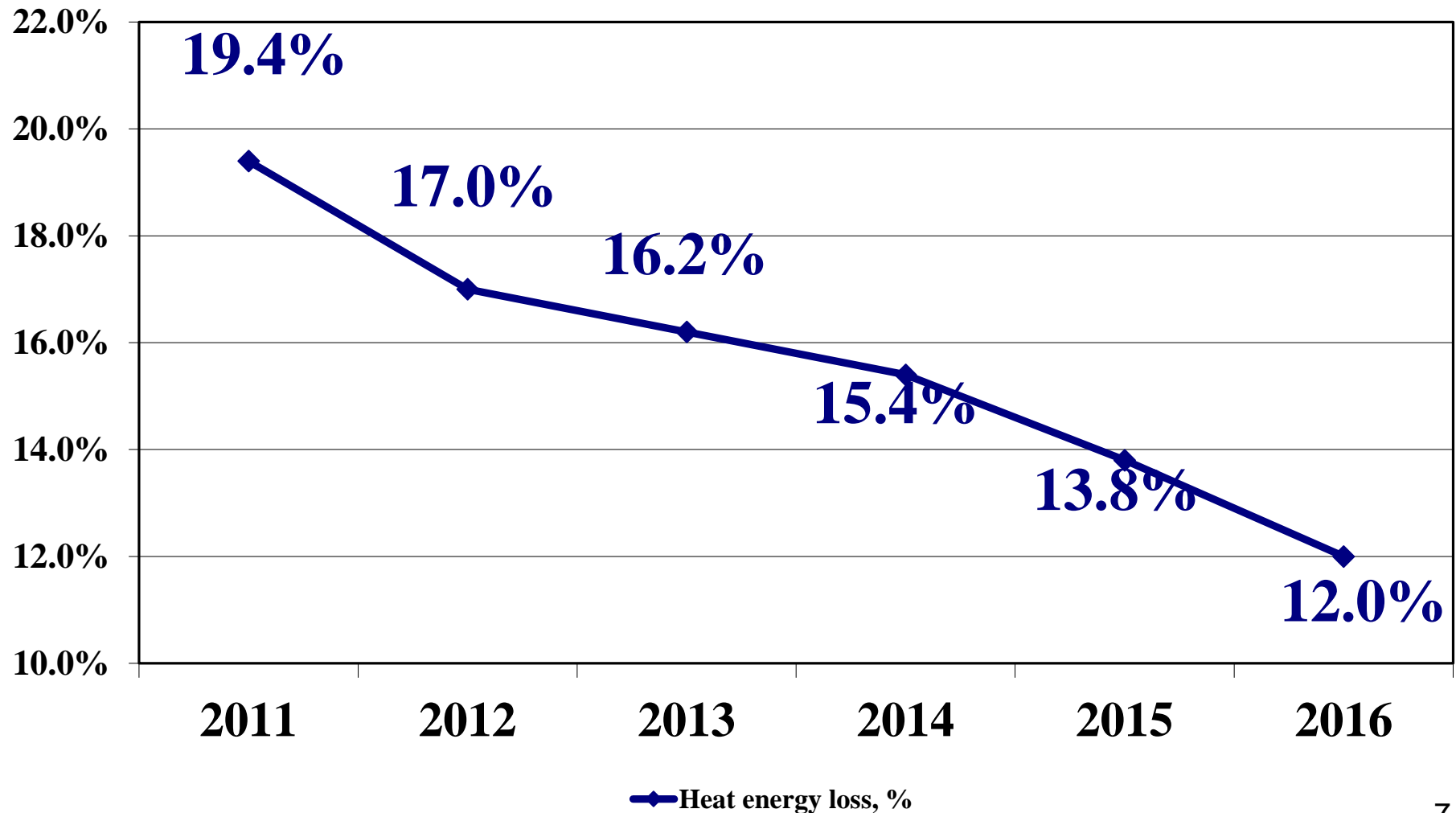
(by 16.1% and 1.1% respectively)



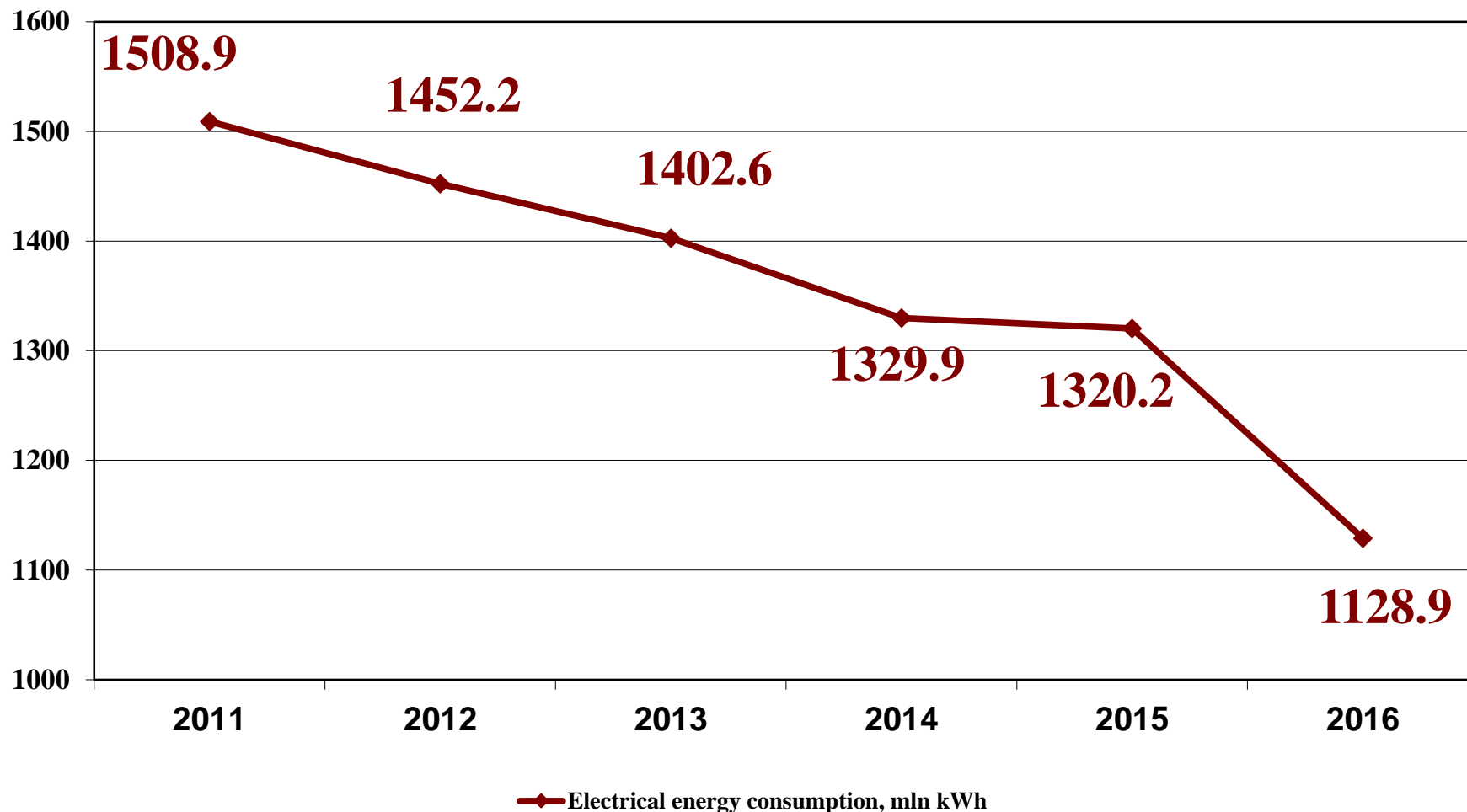
DYNAMICS OF TECHNOLOGICAL HEAT AND ELECTRICAL ENERGY REQUIREMENTS FOR TRANSMISSION VIA BELARUS' UNIFIED ENERGY SYSTEM OVER THE PERIOD OF 2005-2016



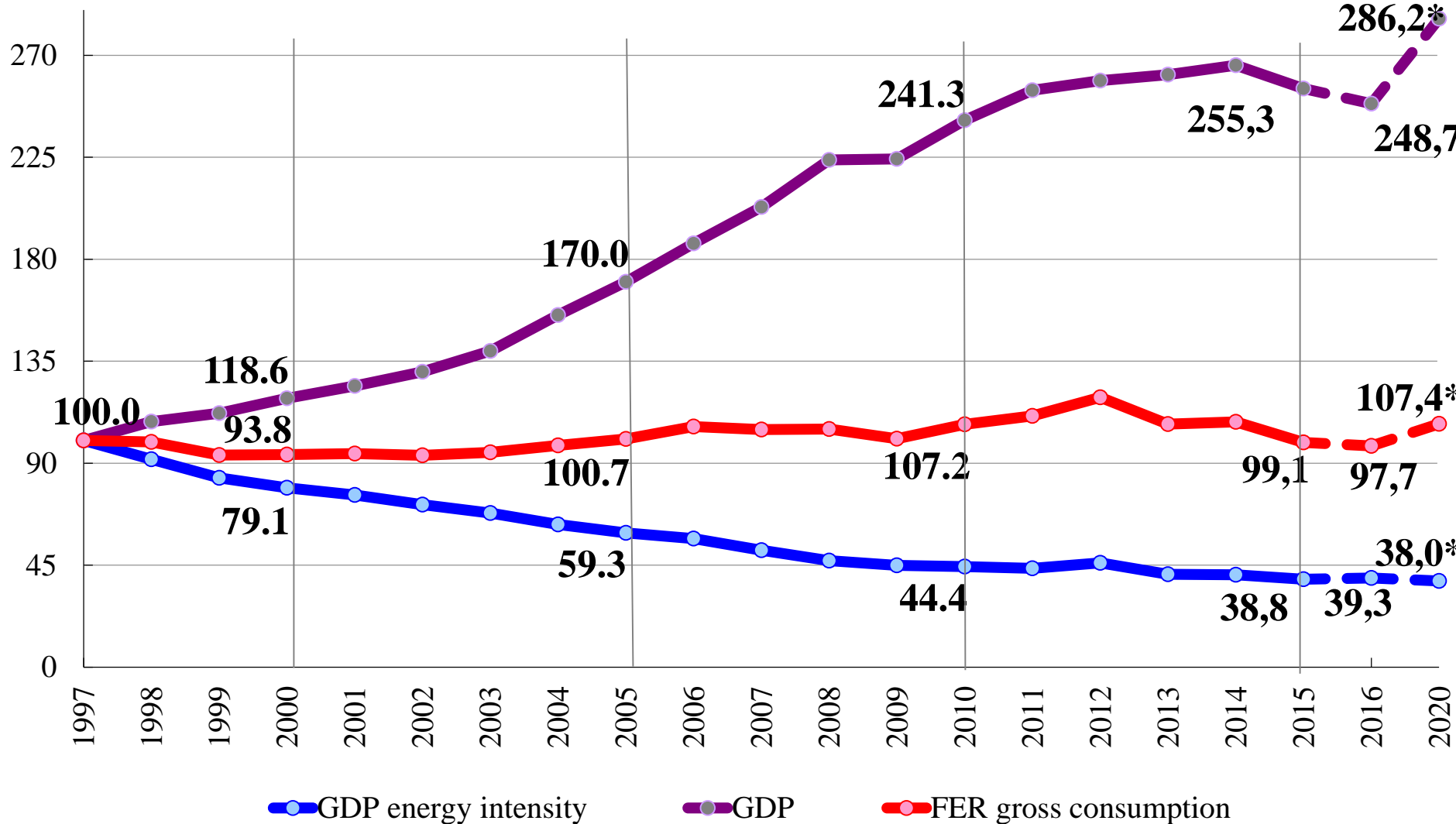
Reduction in Loss of Heat Energy Transportation **by** **38.1%** in Utility Services Organizations over the Period of 2011–2016



Reduction in Electrical Energy Requirements **by 25.2%** for Transporting Heat Energy in Utility Services Organizations over the Period of 2011 – 2016



Change in the GDP, FER Gross Consumption and GDP Energy Intensity as Compared to 1997 Level (%)

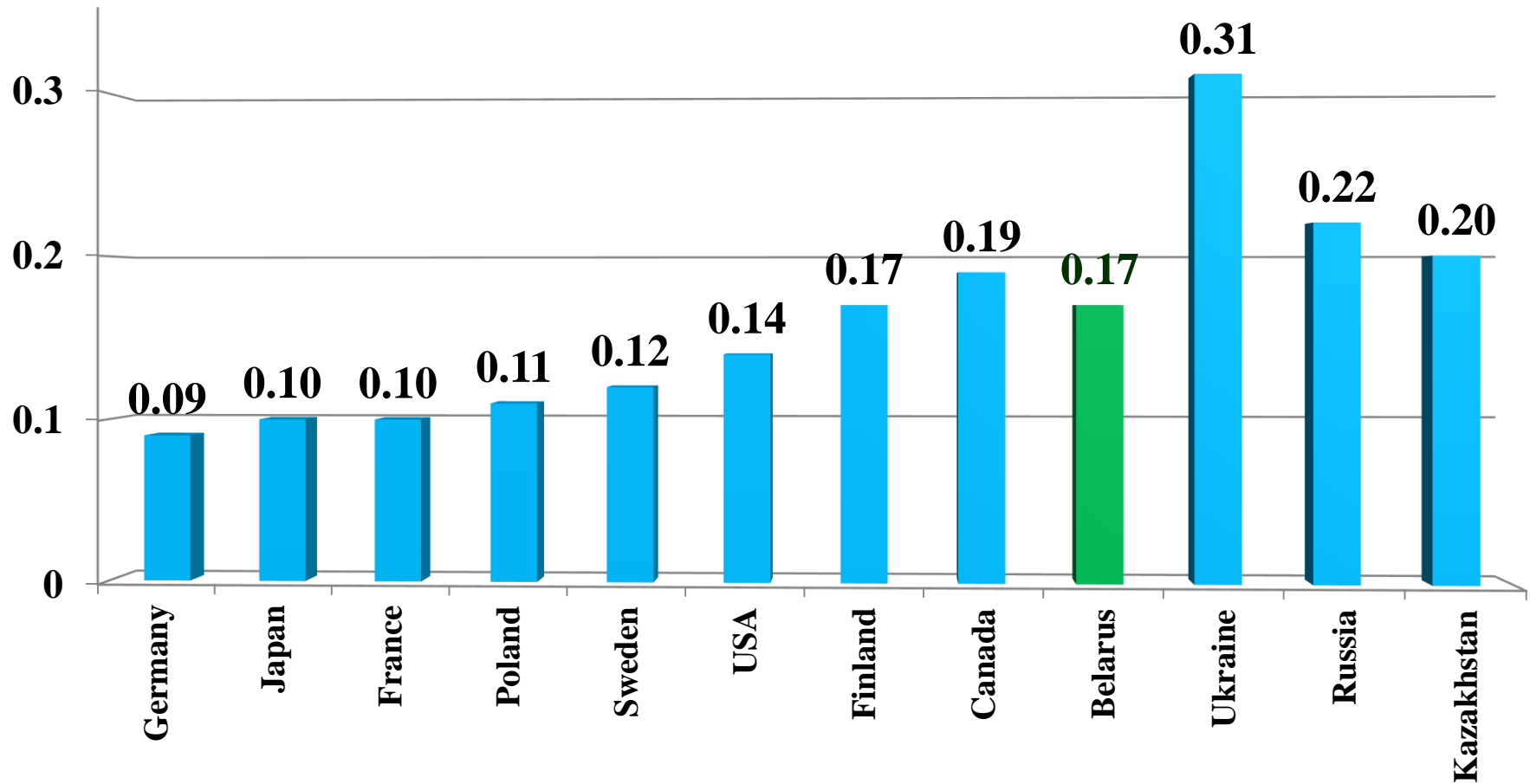


Dynamics of Energy Intensity of the Gross Domestic Product (GDP) Countrywise

(tons of oil equivalent per USD1,000 in 2010 prices in PPP terms)

| | 1990 | 2000 | 2010 | 2014 | <i>1990/2014</i> |
|----------------|-------------|-------------|-------------|-------------|--------------------|
| WORLD | 0,21 | 0,20 | 0,19 | 0,14 | <i>1,50</i> |
| Belarus | 0,62 | 0,38 | 0,21 | 0,17 | <i>3,65</i> |
| Russia | 0,47 | 0,49 | 0,35 | 0,22 | <i>2,14</i> |
| Ukraine | 0,52 | 0,63 | 0,41 | 0,31 | <i>1,68</i> |
| | | | | | |

2014 GDP Energy Intensity in the World (in 2005 Prices in PPP Terms) According to the IEA (Key World Energy Statistics 2016)



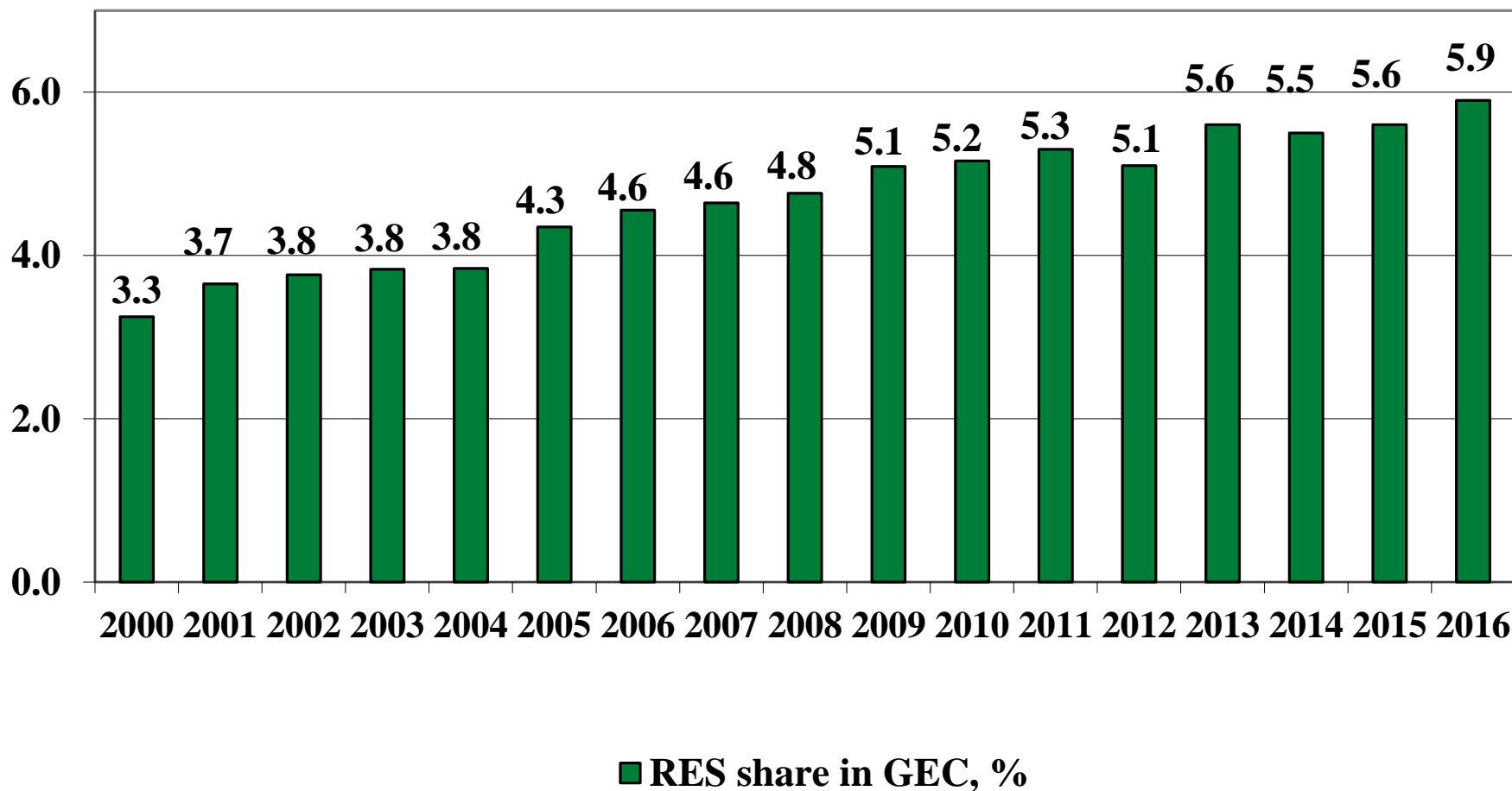
Law “On Renewable Energy Sources”

- The state guarantees as follows:
 - ✓ unimpaired and non-discriminatory determination of the nearest point of connection to the national power grids;
 - ✓ guaranteed connection of renewable energy generation plants to it in the manner prescribed by the laws;
 - ✓ modernization of national power grids to technically connect renewable energy generation plants to the nearest point of connection to the national power grids;
 - ✓ equal conditions of connection to the national power grids in the contracts for procuring energy for all renewable energy producers;
 - ✓ reception of all offered energy generated from renewable energy sources and supplied by renewable energy producers to the national power grids;
 - ✓ payment for the renewable energy using higher and feed-in tariffs.

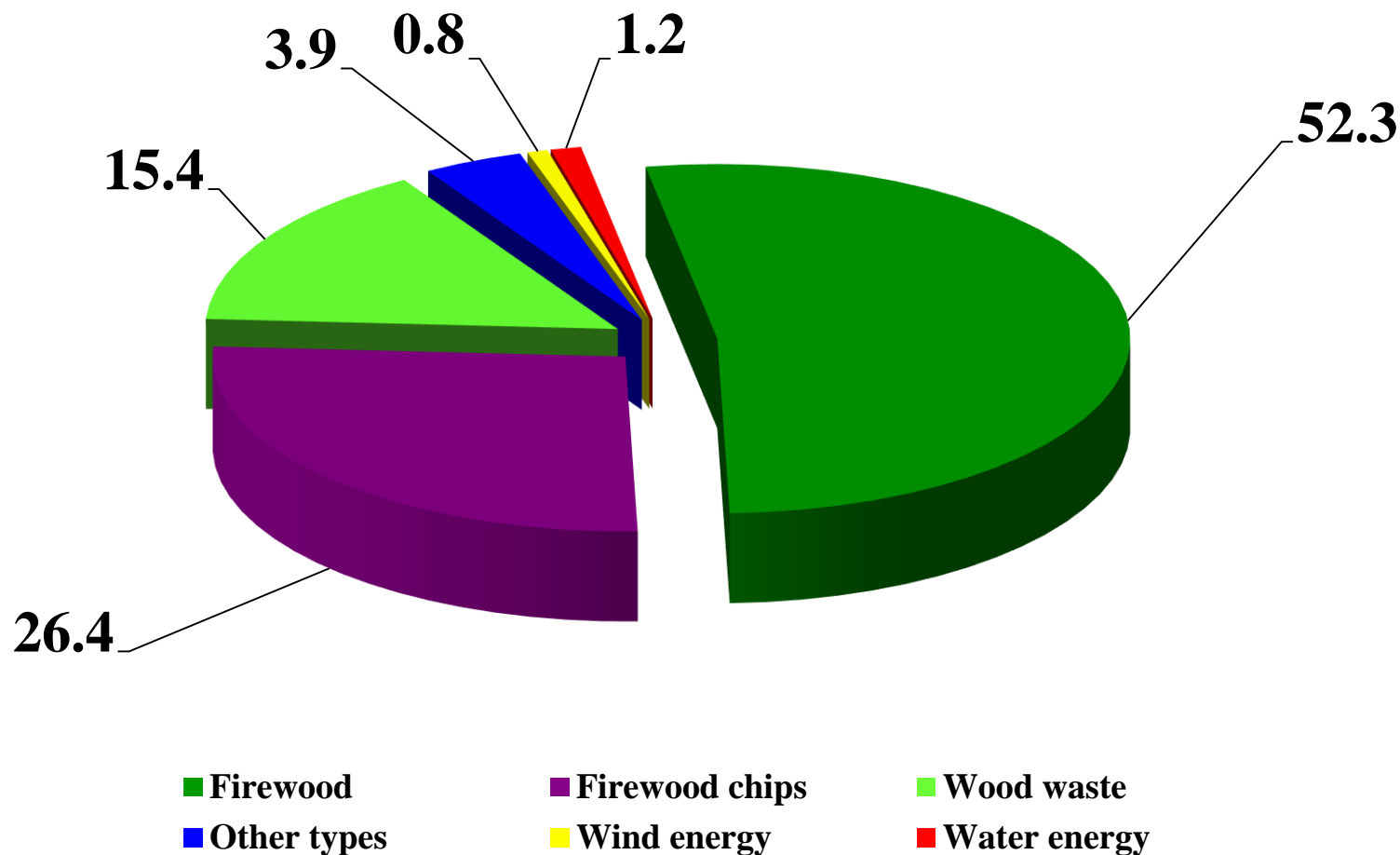
Renewable Generation Plants (RGP) in the Republic of Belarus as of 01.05.2017

| RGP type | Number of plants in the Republic of Belarus/installed capacity MW (as of 01.08.2017) |
|--|---|
| Energy sources using local fuels, including wood fuel-fired mini cogeneration plants | <p>about 6,000 units/ over 6,300 MW thermal output</p> <p>17 units/ 73.6 MW electrical/ 264 MW thermal output</p> |
| Biogas plants | 19 / 27.4 MW |
| Hydro power plants | 53 / 95.4 MW |
| Wind power plants | 78 / 75.9 MW |
| Photovoltaic power plants | 45 / 137.8 MW |

Share of Renewable Energy Sources in the Gross Energy Consumption (GEC) in 2000-2016, %



Balance of Renewable Energy Sources in the Republic of Belarus in 2016, %



Decree of the President of the Republic of Belarus

“On the Use of Renewable Energy Sources”

dated 18 May 2015, No. 209

Decree No. 209 created favorable conditions for the RES development in the Republic of Belarus in terms of the following:

- provision of the state support through allocation of quotas for building renewable energy generating plants by tender;**
- granting of a guarantee to an investor regarding invariance of the tariff surcharge rate for the first 10 years of operation of power plants when energy utilities procure RES-generated electrical energy;**
- differentiation of the size of the tariff surcharge rate for procuring RES-generated electrical energy depending on the actual equipment service life, electrical output and RES type;**
- elimination of the need to secure the quota in case of generation of electrical energy required for own business and application of the incentive coefficient for sale of this generated power;**

Building Renewable Energy Plants, Electrical Output, MW

| RES type | As of 01.08.2017, MW | Under investment agreements, MW | Under available quota for 2016- 2020, MW | Subtotal, MW |
|-----------------|-------------------------------------|--|---|-------------------------|
| Biomass | 73.6 | 9.9 | 19.4 (13) | 102.9 |
| Biogas | 27.4 | 4.5 | 53.9 (2.7) | 85.8 |
| Hydro | 95.4 | - | 60.3 (33) | 155.7 |
| Solar | 137.8 | 128 | 20.0 (5) | 285.8 |
| Wind | 75.9 | 126.6 | 62.0 (2.5) | 264.5 |
| Total: | 409.9 | 269 | 215 (56.2) | 893.9 |

Cooperation with international organizations in the sustainable energy sphere in 2001-2017

- World Bank: 7 projects (loan funds - \$422.7 m);**
- UN Development Program/GEF: 7 projects (grant funds - \$18.8 m);**
- European Union: 1 project (grant funds - EUR5 m);**
- European Union/UN Development Program: 4 projects (grant funds - EUR19 m and \$1.9 m).**



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THANK YOU FOR BEING WITH ME!

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