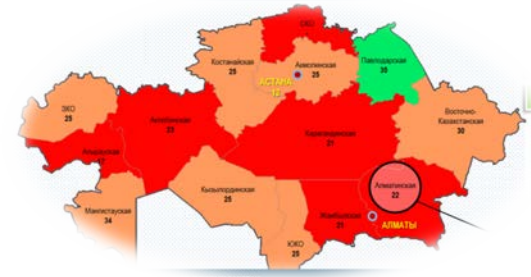


KAZAKHSTAN EXPERIENCE AND POLICY MEASURES TOWARDS CURCULAR ECONOMY THROUGH INNOVATION



EXPO
2017
ASTANA
FUTURE ENERGY



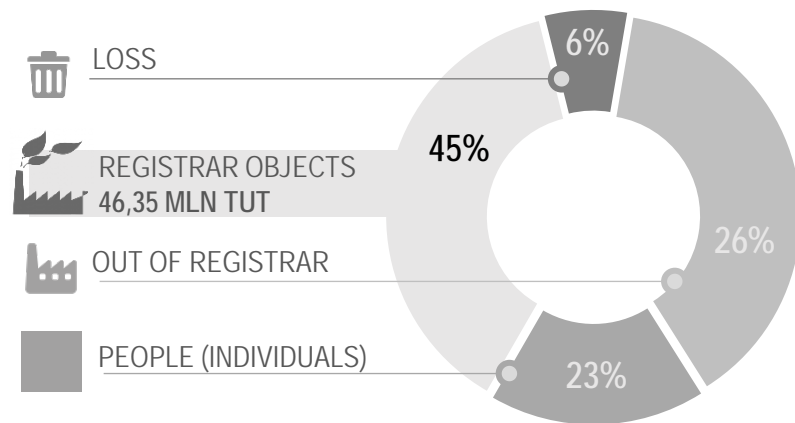
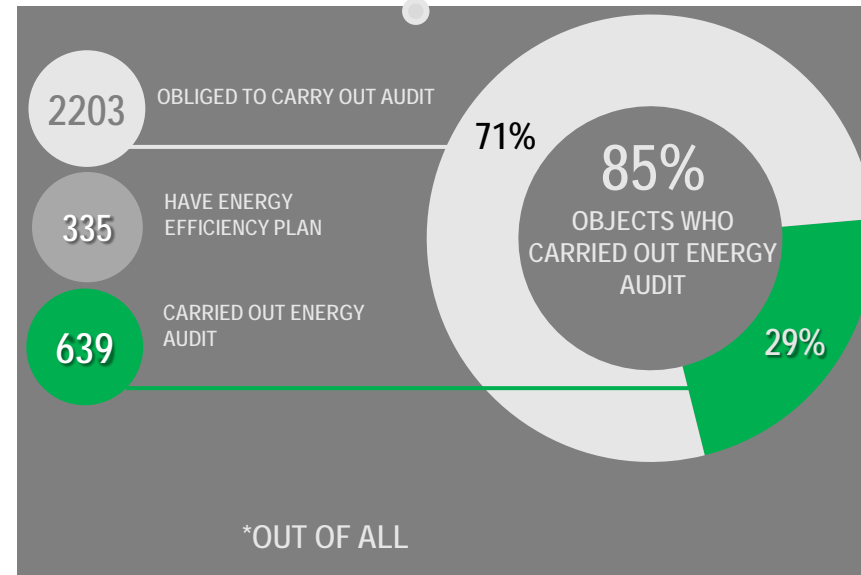
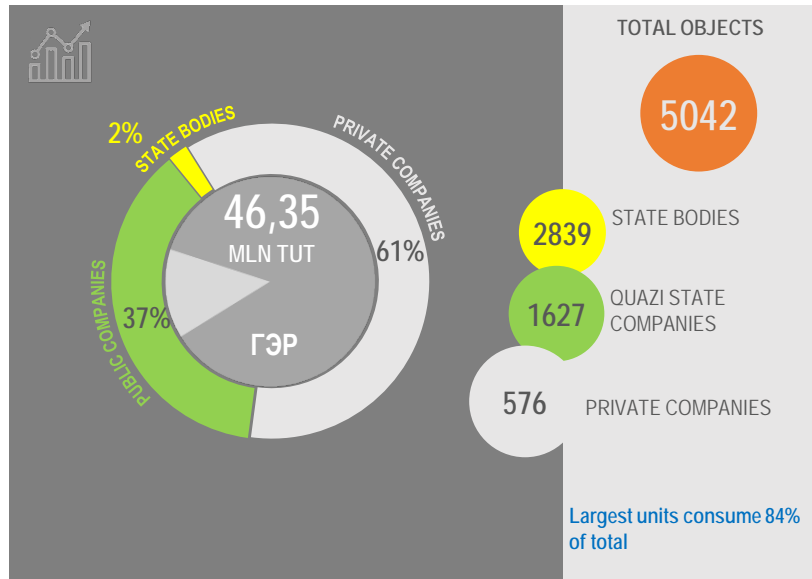
Team of Specialists on Innovation, Competitiveness and PPP
Tenth Session, 19-20 October 2017, Geneva

Olzhas Bilyalov
National Agency for Technological Development

GOVERNMENT POLICIES IN CIRCULAR ECONOMY



STATE ENERGY EFFICIENCY REGISTRAR



POTENTIAL BASED ON ENERGY AUDIT RESULTS
2015 – 2020 гг.



= \$ 187 MLN ANNUALLY



ENERGY CONSUMPTION IN KAZAKHSTAN (ton of conditional fuel)

PRELIMINARY RESULTS OF GOVERNMENT POLICIES IN RENEWABLE ENERGY

As for 2017, **50 solar/wind** and hydro electric plants with total power of **300 MWt**. State committed to reach alternative energy contribution to 3% (700 MWt)



Almost 100 technologies are considered for implementation by Kazakhstani companies:

- Oil & Gas — 27 technologies
- Coal and nuclear industry — 5 technologies;
- Electricity, energy efficiency and renewable energy — 44 technologies
- Ecology, waste management, water cleaning and air quality management — 29 technologies.



Shymkent Cement – ensures decline of energy consumption by 15% in 5 years.

Region Mayor – ensures fixed exhaust gas fee within 5 years.



Operating agency	KAZAKHSTAN INDUSTRY DEVELOPMENT INSTITUTE
Type of grant	TECHNOLOGY PROCECESS IMPROVEMENT GRANT <ol style="list-style-type: none"> 1. Energy audit/energy efficiency consulting 2. IT consulting/Tech.process devt. 3. Company management consulting (Kaizen, TPM, Six Sigma, 5 S, Kanban)
% cofinancing	40%
Maximum amount	US \$ 180 000
Project period	24 months



Operating agency	NATIONAL AGENCY FOR TECHNOLOGICAL DEVELOPMENT
Type of grant	TECHNOLOGY AQUISITION GRANT TECHNOLOGY COMMERCIALISATION GRANT Out of 16 priority areas 4 have to do with circular economy: <ol style="list-style-type: none"> 1. Energy efficiency technologies 2. Renewable energy technologies 3. Technologies in extraction, transportation and processing of mineral resources 4. Technologies in energy sector
% cofinancing	50%
Maximum amount	US \$600 000 for Tech. Commercialisation US \$ 1 200 000 for Tech. Aquisition
Project period	36 months

- In 2017 NATD received 206 applications for grants out which **30** were in within circular economy.
- Since 2012 NATD supported 14 large project in Energy Efficiency totaling **\$ 8,8 mln.** in grant funding

INTERNATIONAL COOPERATION



World Bank project "Increasing energy efficiency in Kazakhstan USD \$21,7 mln

K1. 100 units of social infrastructure (schools, hospitals, street lighting)

K2. Development of mechanism of creation of Energy Efficiency Foundation



"Low Carbon Sustainable cities" focusing on delivering projects in cities

"Promotion of effective lighting systems in Kazakhstan"



Technical Support of \$500 thousand for "PPP in energy efficiency in Kazakhstan" project



"SME Green Energy project" – \$200 mln from European Investment Bank.



3 projects in Eastern Kazakhstan (upgrade of three units – School, Hospital and Public Utility Management Organization)