

ENSURING ENERGY SECURITY AND EFFICIENT USE OF ENERGY

Issues of the energy sector, including achievements, challenges in the framework of the Ministry's activities under the Medium-Term Development Program of the Republic of Tajikistan 2016-2020

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TAJIKISTAN NATIONAL DEVELOPMENT STRATEGY UP TO 2030

ENERGY SECURITY

EXIT FROM THE COMMUNICATION DEADLOCK

FOOD SECURITY

INDUSTRIALIZATION

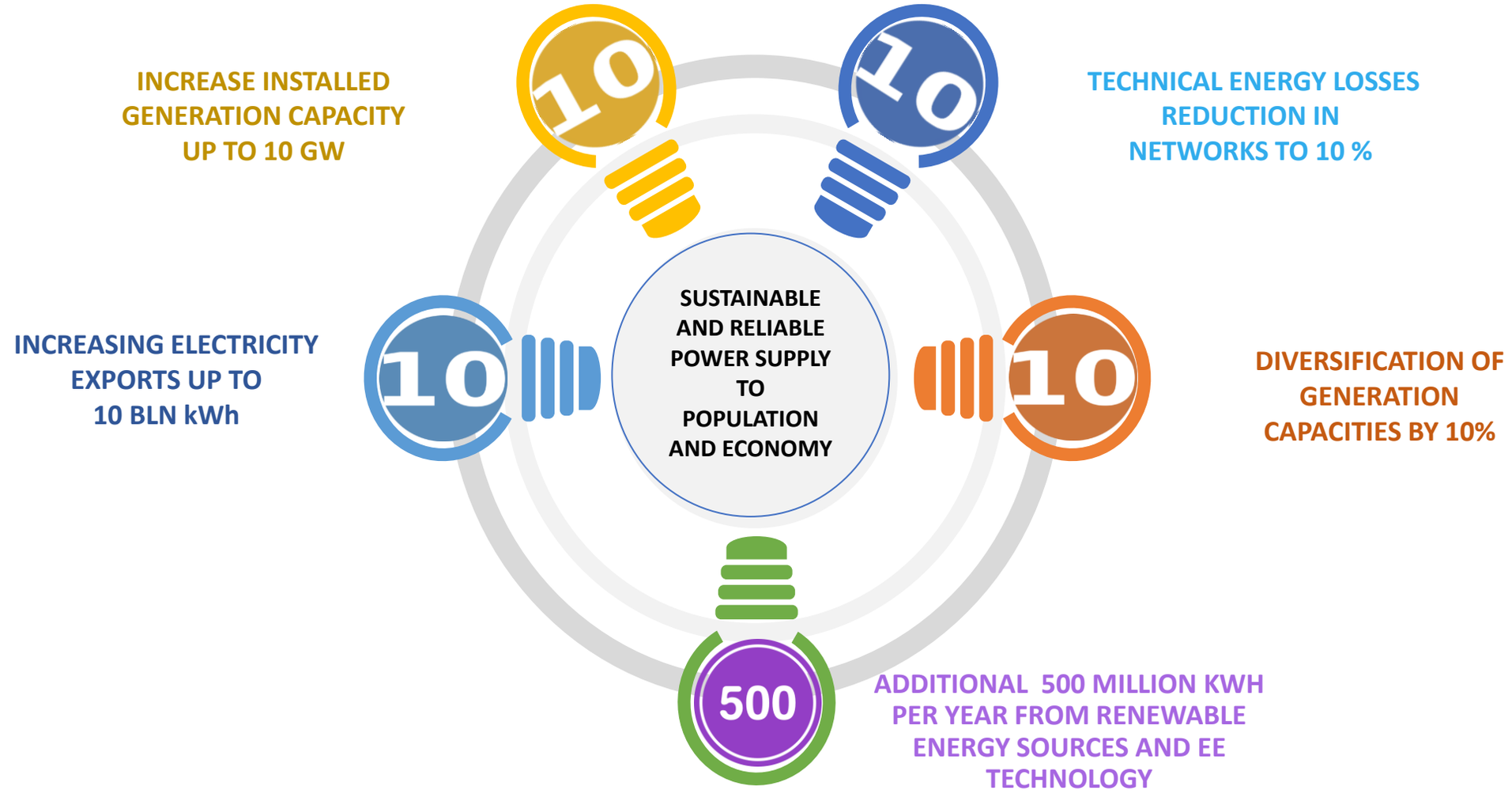








LONGTERM SECTOR DEVELOPMENT STRATEGY



KEY DEVELOPMENT INDICATORS

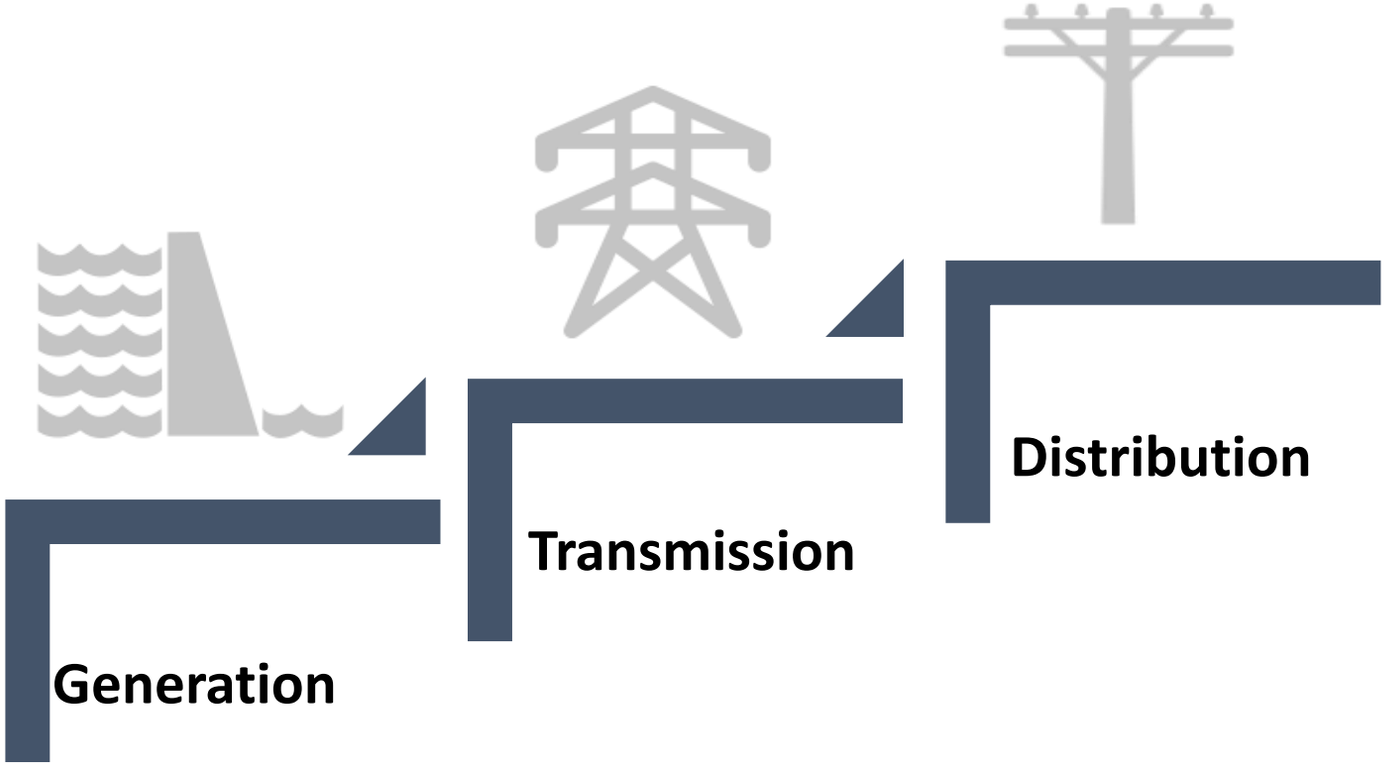
Tajikistan National Development Strategy up to 2030 in the Energy Section identifies the key development indicators as follows **10/10/10/10-500**, which means increasing the installed generation capacity up to 10 GW, reducing technical and commercial losses in networks to 10%, increasing electricity exports up to 10 billion kWh per year, diversification of generation sources by 10% and additional more than 500 million kWh per year due to renewable energy sources and the use of energy-efficient technologies.

MEDIUM-TERM DEVELOPMENT PROGRAM OF THE REPUBLIC OF TAJIKISTAN FOR 2016-2020

Key monitoring and evaluation indicators

3	FUEL AND ENERGY COMPLEX							
#	Indicator	Unit of measurement	2015	2016	2017	2018	2019	2020
3.1	Power generation, total	million kWh	17384	17800,4	17930,1	25302,9	25302,9	28040,4
3.2	Power generation at the HPP	million kWh	17181	17302,2	16742,1	24114,9	24114,9	24552,9
3.3	Power generation at the TPP	million kWh	202,506	498,156	1188	1188	1188	3487,5
3.4	Activation of capacities, total Including: to HPP to TPP	MW		150 150	150 150	800 800		710 10 700
3.5	Power shortage (-)	million kWh	-4476	-4389	-4610	+2522,9	+2132,9	+4460,4
3.6	Annual demand for electricity generation	million kWh	21860	22190	22540	22780	23170	23580
3.7	Electricity production per capita	million kWh/person	2,02					2,78
3.8	Extraction of oil	thousand tons	24,5	24,0	23,9	23,8	24,5	25,0
3.9	Gas extraction	thousand m3	4200	4200	4300	4400	4500	4600
3.10	Planned investments, total including foreign	million somoni dollars USA	137,6 122965,0	161,3 333169,0	180,36 249640,0	201,6 166520,0	223,7 396100,0	254,7 350000,0
3.11	Export of electricity	million kWh	1379,8	1410,5	1425,6	3440,9	4310,5	4925,6
3.12	Average electricity tariff	Cent/kWh	2,04	2,35	2,8	It is calculated after reconstruction		
3.13	Tariff growth rate in 2015	%	15	15	15	It is calculated after reconstruction		

SECTOR REFORM PROGRAMME



Restructuring of the National Power Company

Adaptation of International Financial Reporting Standards

Boundaries of accountability and other property issues prepared

Establishment of two separate companies (transmission and distribution)

The process of writing off physical and obsolete funds is established

Use of modern Tariff Methodology

Development of Grid Code

SIGNIFICANT DEVELOPMENTS IN THE SECTOR

NEW 220 kV LINES	675.8 km
NEW 500 kV LINES	461.8 km
NEW 220 kV SUBSTATIONS	9 units
NEW 500 kV SUBSTATIONS	3 units
NEW CAPACITY	2000 MW

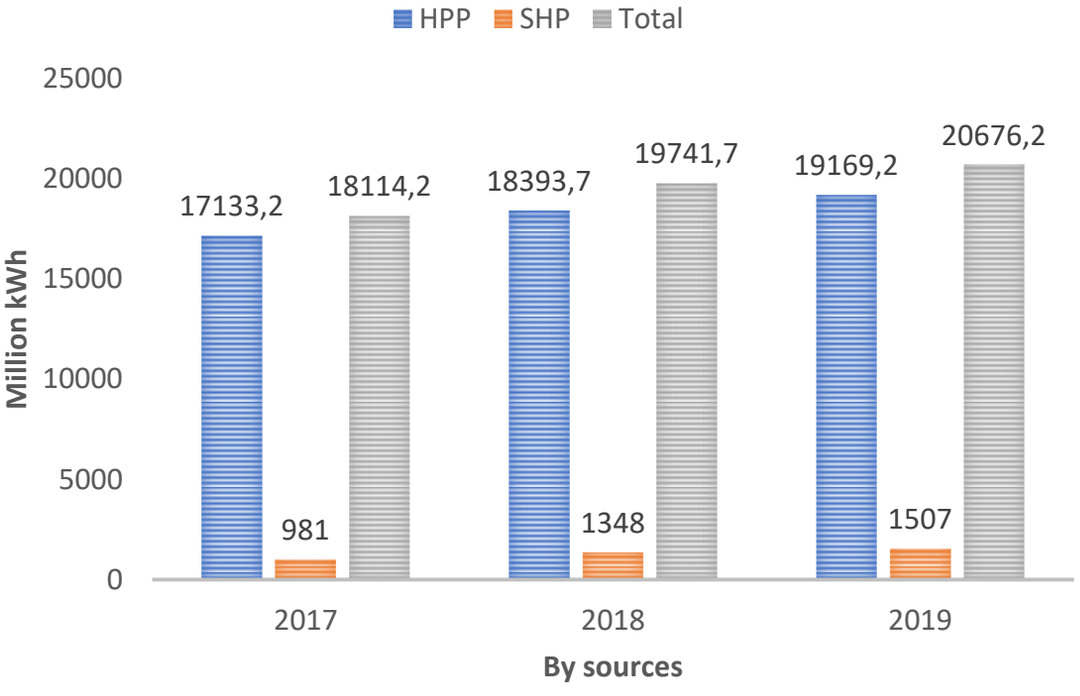






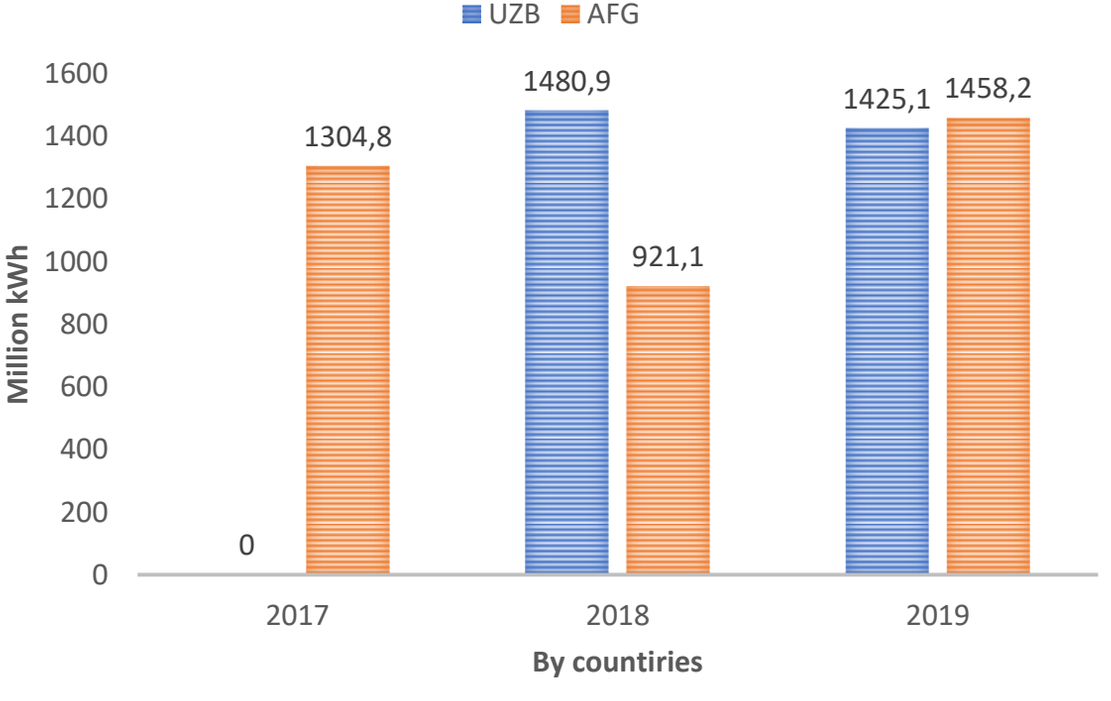
ENERGY IN FIGURES

POWER GENERATION



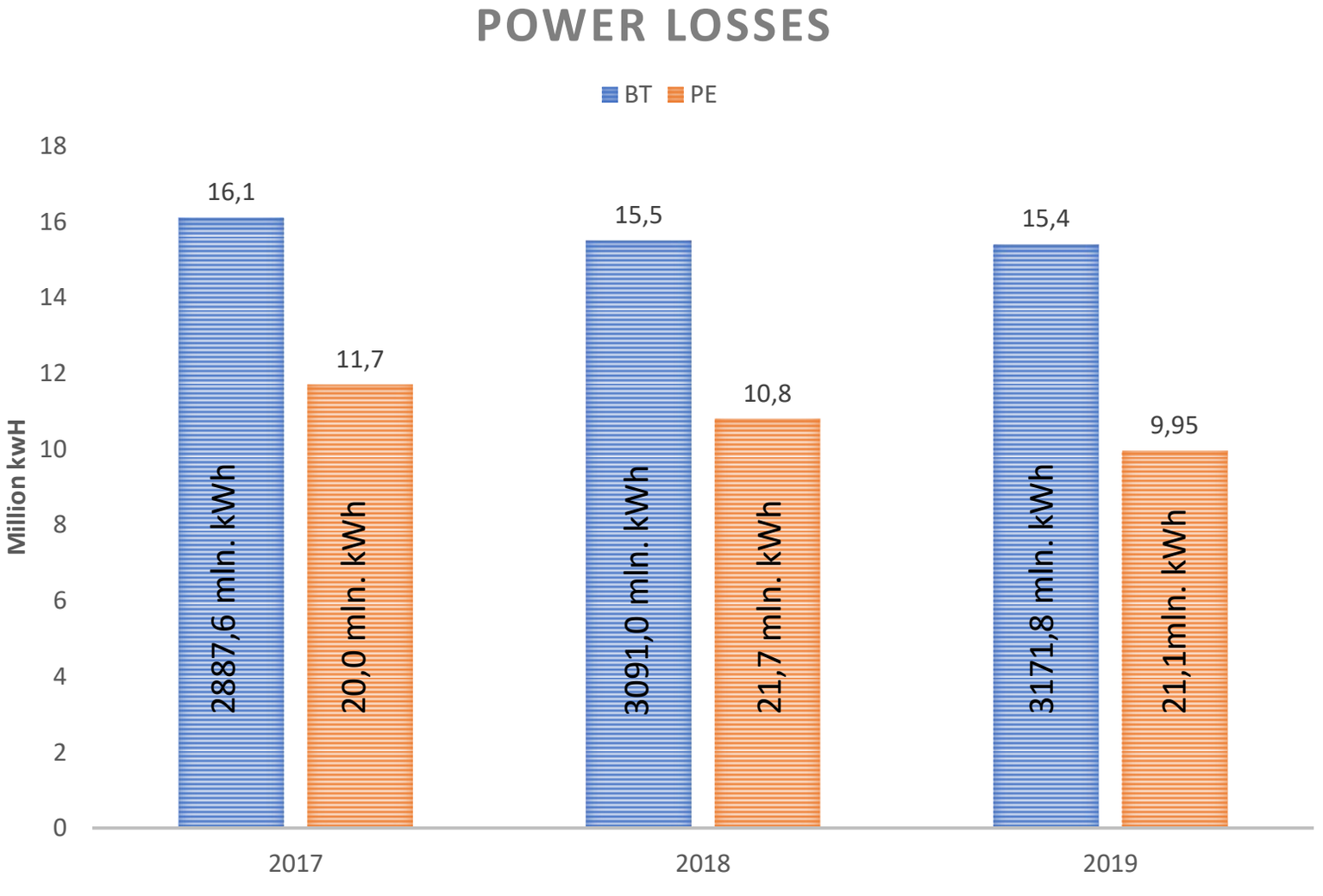
Total generation for 2019 was 20676 million kWh

POWER EXPORTS

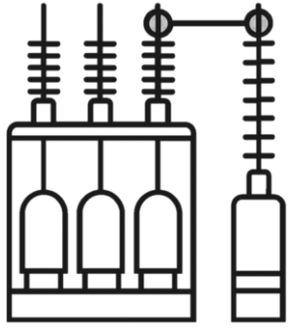


Total power export for 2019 was 2883 million kWh

ENERGY IN FIGURES



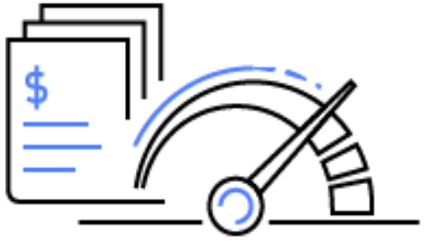
POWER LOSS REDUCTION ACTIVITIES



WHOLESALE BILLING FOR 500 kV, 220kV and 110kv SUBSTATIONS

The Asian Development Bank is helping Tajikistan introduce a wholesale metering and billing system for the national power company, Barki Tojik. The project will fund over 2,700 meters and introduce a new billing system to help reduce system power losses and improve efficiencies.

SUCESSEFUL STORY – SUGHD POWER LOSS REDUCTION PROJECT



EBRD and EU provided financing for the supply and installation of new electricity meters, meter reading system and automated billing system in the Sugd region of Tajikistan. The Project objectives was to reduce distribution network losses, improve quality of supply and increase energy efficiency.

BILLING FOR OTHER CITIES



The ADB and EBRD will support Barki Tojik to install metering and billing infrastructure for the cities Dushanbe, Bokhtar and Kulob. EBRD component with 40 mln. USD investment is on progress with recruitment of project implementation consultant. ADB billing for Dushanbe and other remaining big cities is on advance prepration stage.

POWER GENERATION AND REGIONAL POWER MARKET DEVELOPMENT 1-2

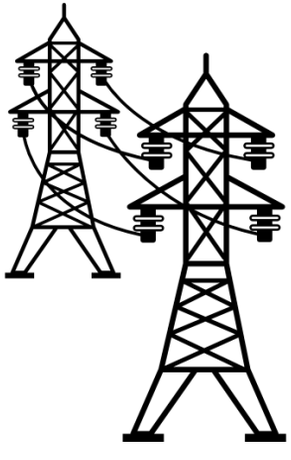


POWER GENERATION

Two turbines of Rogun HPP are installed and comisionned. For 2019 total generation from Rogun accounts for 840,3 million kWh.

ADB is supporting rehabilitation of 240 MW Golovnaya HPP, with WB assistance 3000 MW Nurek HPP is under rehabilitation, and 126 MW Kaykrakum HPP is being rehabilitated by EBRD, EIB and GF funding.

11MW Sebzor HPP will boost regional trade of electricity between Tajikistan and Afghanistan, as well as secure reliable electricity supply to the population of Badakhshan Region. Project is jointly supported by EU, KfW, WB, SECO and USAID with total grant investment of 54 million USD.



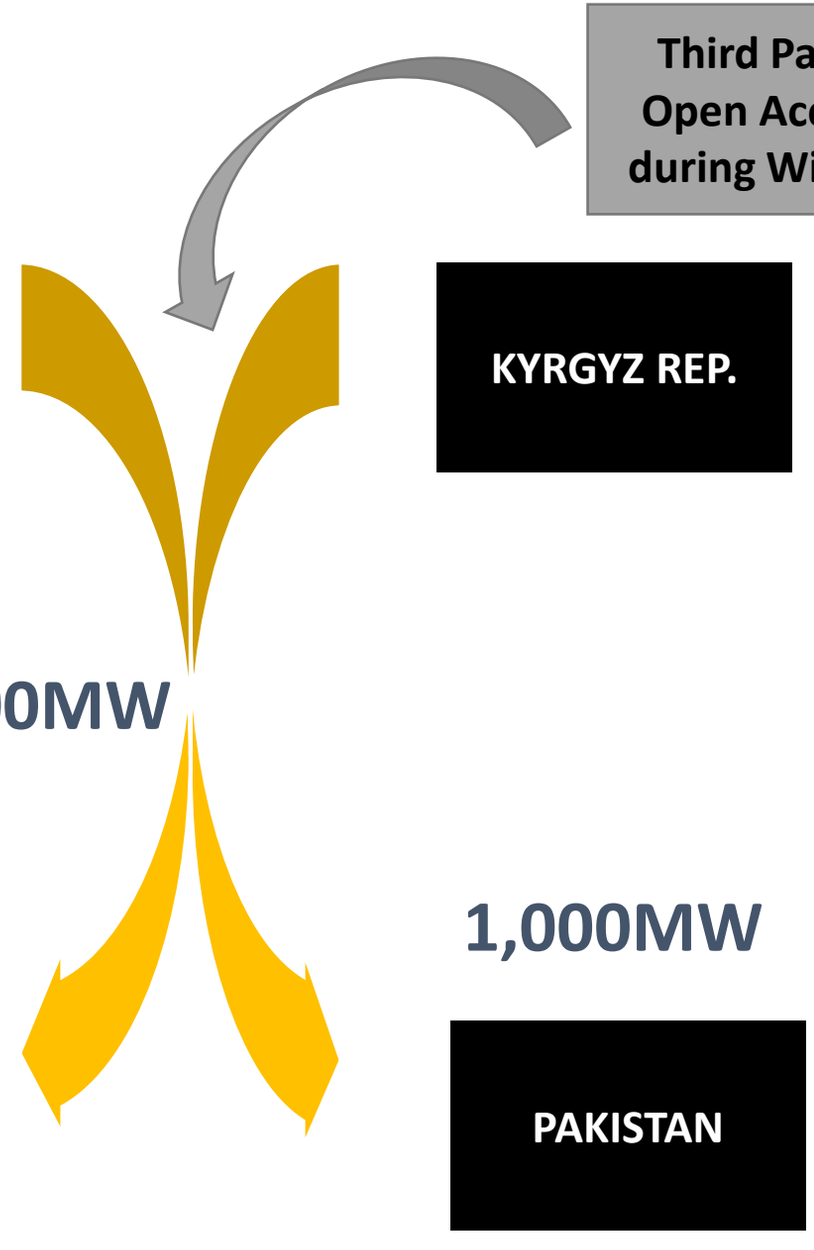
RECONNECTION TO THE CENTRAL ASIA POWER SYSTEM

35 million grant from ADB will support Tajikistan to be reconnected to the Central Asian Power System. The project is intended to provide the necessary infrastructure to achieve a full parallel operation between Tajikistan and Uzbekistan's electricity grids, meaning the reconnection of Tajikistan to the wider CAPS via Uzbekistan.

POWER GENERATION AND REGIONAL POWER MARKET DEVELOPMENT 2-2



Transport and trade of existing summer surplus power



MEDIUM-TERM DEVELOPMENT PROGRAM OF THE REPUBLIC OF TAJIKISTAN FOR 2016-2020

Results - monitoring and evaluation indicators

3.	FUEL AND ENERGY COMPLEX							
#	Indicator	Unit of measurement	2015	2016	2017	2018	2019	2020
3.1	Power generation, total	million kWh	**17134,3**	**17800,4**	**17930,1**	**19263,4**	**24096,4**	**26192,6**
	actual	million kWh	*17162*	*17251*	*18144*	*19742*	*20691,7*	*19770,5*
	As a result	million kWh	*+27,7*	*-549,4*	*+213,9*	*+479*	*-3404,7*	*-6422,1*
3.2	Power generation at the HPP	million kWh	**16832,5**	**17100**	**17200**	**18400**	**23300**	**24500**
	actual	million kWh	*16860,2*	*16650,6*	*17162,8*	*18394,5*	*19184,4*	*18114,0*
	As a result	million kWh	*+27,7*	*-449,4*	*-37,2*	*-5,5*	*-4115,6*	*-6386*
3.3	Power generation at the TPP	million kWh	**301,8**	**625**	**725**	**825**	**825**	**1730**
	actual	million kWh	*301,8*	*600,4*	*981,2*	*1347,5*	*1507,3*	*1656,5*
	As a result	million kWh	-	-	*+256,2*	*+522,5*	*+682,3*	*-73,5*
3.4	Activation of capacities, total	MW	**-**	**150**	**150**	**410**	**-**	**825**
	actual	MW		*300*	-	*360*	*400*	-
	As a result	MW		*-150*	-	*-50*	*+400*	-
3.4.1	**Including: to HPP**	MW				**410**		**125**
	actual	MW				*360*	*400*	-
	As a result	MW				*-50*	*+400*	-
3.4.2	**Including: to TPP**	MW	**-**	**150**	**150**	**-**	**-**	**700**
	actual	MW		*300*				-
	As a result	MW		*+150*				-
3.5	Power shortage (-)	million kWh	**-4476**	**-4400**	**-4600**	**-3500**	**+900**	**+2600**
	actual	million kWh			*0*	*0*	*0*	*0*
	As a result	million kWh						

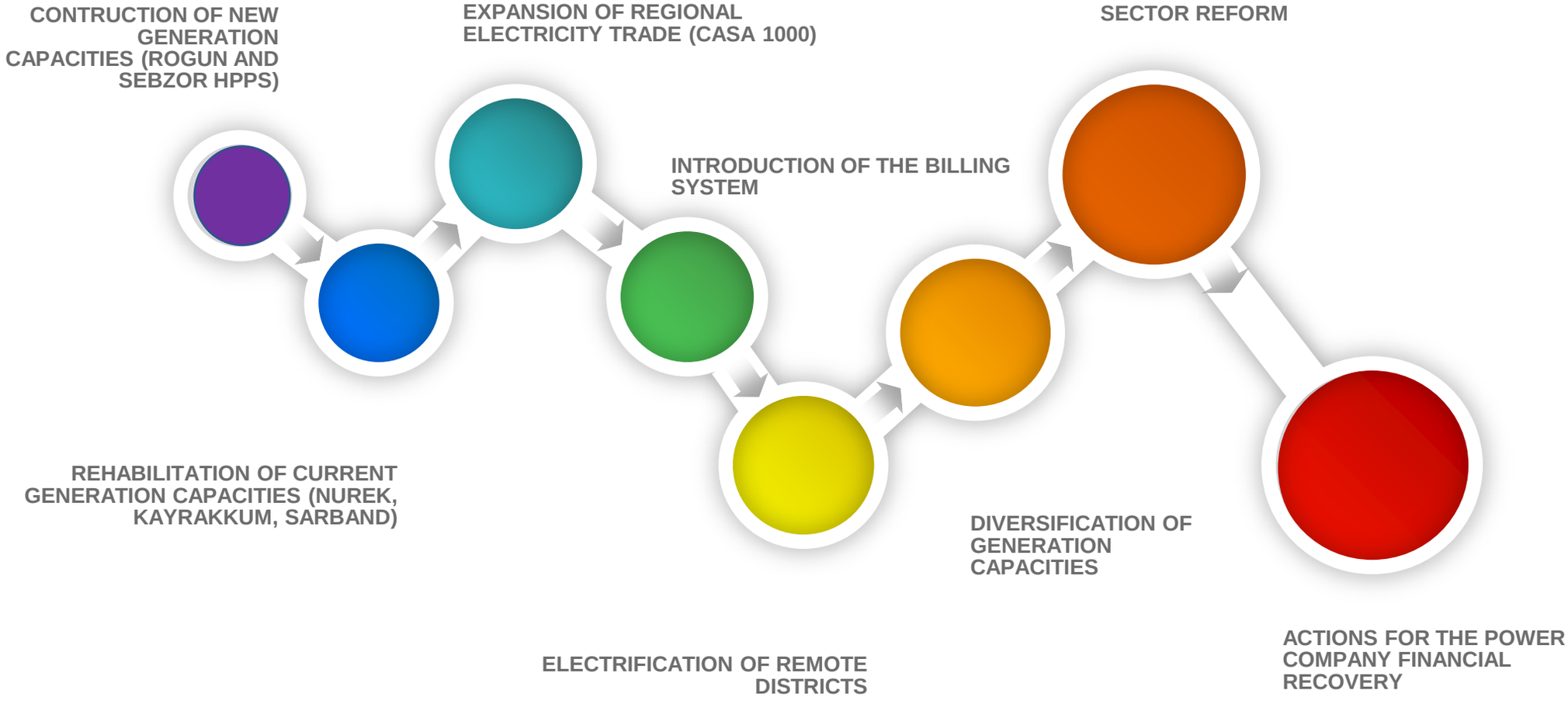
MEDIUM-TERM DEVELOPMENT PROGRAM OF THE REPUBLIC OF TAJIKISTAN FOR 2016-2020

Results - monitoring and evaluation indicators

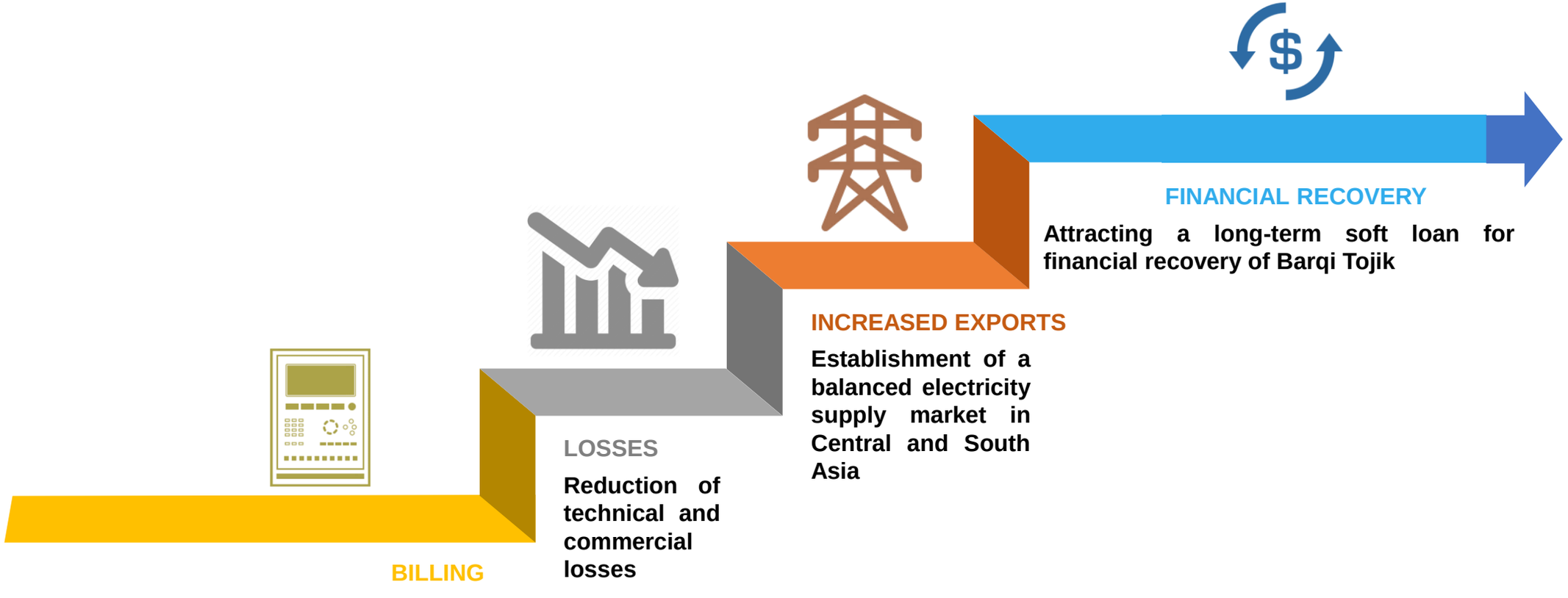
#	Indicator	Unit of measurement	2015	2016	2017	2018	2019	2020
3.6	Electricity production per capita	million kWh/person	**2,02**	**-**	**-**	**-**	**-**	**2,78**
	actual	million kWh/person	*2,00*	*2,04*	*2,01*	*2,11*	*-*	*2,20*
	As a result	million kWh/person	*-0,02*	*-*	*-*	*-*	*-*	*-0,58*
3.7	Export of electricity	million kWh	**1400,2**	**1388**	**1396**	**1533**	**4311**	**4926**
	actual	million kWh	*1412,3*	*1436,3*	*1398,3*	*2495,5*	*2913,5*	*1528,4*
	As a result	million kWh	*+12,1*	*+48,3*	*+2,3*	*+962,5*	*-1397,5*	*-3397,6*
3.8	Average electricity tariff	Cent/kWh	**2,04**	**2,35**	**2,8**			
	actual	Cent/kWh	*2,04*	*2,35*	*2,8*	*2,2*	*2,17*	*2,0*
	As a result	Cent/kWh	*-*	*-*	*-*	*-*	*-*	*-*
3.9	Tariff growth rate in 2015	%	**15**	**15**	**15**	**-**	**-**	*-*
	actual	%	*15*	*15*	*15*	*15*	*17*	*0*
	As a result	%	*0*	*0*	*0*	*-*	*-*	*-*
3.10	Extraction of oil	thousand tons	**31,0**	**31,2**	**23,7**	**23,7**	**24,3**	**28,8**
	actual	thousand tons	*24,6*	*25,1*	*23,4*	*23,9*	*23,2*	*24,5*
	As a result	thousand tons	*-7,4*	*-6,1*	*- 0,3*	*+0,2*	*-1,1*	
3.11	Gas extraction	thousand m3	**4 275**	**4 938**	**2 600**	**1 600**	**1 000**	**2 900**
	actual	thousand m3	*4 111*	*2 979*	*1 492*	*910*	*730*	*678*
	As a result	thousand m3	*-164*	*-1 959*	*-1 108*	*-690*	*-270*	*-*

CURRENT ACTIVITIES IN THE FRAMEWORK

MEDIUM-TERM DEVELOPMENT PROGRAM OF THE REPUBLIC OF TAJIKISTAN FOR 2016-2020



SECTOR DEVELOPMENT TOOLS (1/2)



BILLING

Introduction of billing system throughout the country. (investments required)

LOSSES

Reduction of technical and commercial losses

INCREASED EXPORTS

Establishment of a balanced electricity supply market in Central and South Asia

FINANCIAL RECOVERY

Attracting a long-term soft loan for financial recovery of Barqi Tojik

SECTOR DEVELOPMENT TOOLS (2/2)



SECTOR COMMERCIALISATION

Establishment of a regulator and introduction of a new Tariff Methodology.



MANAGEMENT

Financial and technical management based on international best practice.



EXPECTED OUTCOME

It is expected that after the implementation of these steps and the completion of the reform, the condition for the functioning of market mechanisms, a competitive environment, and, in general, the financial and technical stability of the energy holding will be ensured.

THANK YOU FOR YOUR ATTENTION !!!