

NCJCC «INTERNATIONAL GREEN TECHNOLOGIES AND INVESTMENT PROJECTS CENTER»

# Stages of transition to BAT principles in Kazakhstan IGTIG





**•** 2007

Submitted by Astana Initiative Partnership Programme "Green Bridge

2010

• 2012 •



#### "Green Economy"

On the Concept on Transition of the Republic of Kazakhstan to the Green Economy"

2015



#### **EXPO-2017**

"Energy of the Future." Alternative energy sources

2018



#### **Environmental Code**

2 Jan. Ecological Code of the Republic of Kazakhstan

2021

28 October



Reference books on BAT

Drafts of 16 BAT manuals developed

Environmental Code of 9 January 2007 No. 212

The concept of **BAT Art.5 EC RK** 



"Green Bridge" was included in the summit's outcome document

"Rio+20."



2013 •

70th session United Nations General Assembly (New York)

> **United Nations** Assembly



2017 •

**Ecological Code** 

2. Establishment of NJC "IGTIC

Concept of the Draft

**NJC "IGTIC** 



• 2021 •

Development rules RB BAT

**RB BAT Rules** 



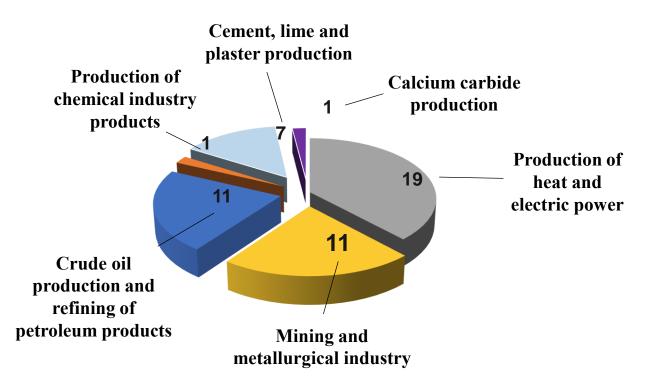
**•2023** •

3 BAT Reference Books approved by the Resolution of the Government of the RK



### Coverage of TOP-50 enterprises by BAT reference books

The developed 16 draft BAT reference books fully cover the activities of large enterprises included in the TOP-50 list



#### Name of BAT reference books

- 1. Oil and Gas Refining
- 2. Oil and Gas Production
- 3. Production of Inorganic Chemicals Approved
- 4. Production of Cement and Lime Approved
- 5. Lead Production Approved
- 6. Production of Copper and Precious Metal Gold Approved
- 7. Zinc and Cadmium Production Approved
- 8. Extraction and Enrichment of Non-ferrous Metal Ores (incl. precious)
- 9. Mining and Processing of Iron Ores (including other ferrous metal ores)
- 10. Production of Ferroalloys
- 11. Energy Efficiency in Economic Operations and (or) other activities
- 12. Combustion of Fuels in Large Plants for Energy Production
- 13. Production of Iron and Steel
- 14. Aluminum Production
- 15. Further Processing of Ferrous Metals
- 16. "Coal mining and preparation."

### Planned reference books to be developed in 2024-2027



- 1) Production of basic organic chemicals, products of fine organic synthesis and polymers
- 2) Production of titanium and magnesium
- 3) Wastewater treatment of centralized wastewater disposal systems of settlements
- 4) Monitoring of pollutant emissions into atmospheric air and water bodies (AMS)
- 5) Production of rare non-ferrous metals
- 6) Destruction and disposal of waste by thermal treatment
- 7) Waste neutralization
- 8) Landfilling of waste
- 9) Intensive breeding of pigs and poultry
- 10) Slaughter of animals at meat processing plants, meat and cold slaughterhouses
- 11) Manufacture of food, beverages, milk and dairy products
- 12) Tanning, dyeing, dressing of hides and skins
- 13) Production of pulp from wood or other fibrous materials
- 14) Production of glass, ceramic products
- 15) Dyeing of textile fibres, bleaching, dyeing of textile products

### Forecast effect from the introduction of BAT by industry

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Industry	Name of BAT reference books	% of emission reductions
Oil and gas industry	Oil and Gas Refining	13
	Oil and Gas Production	56
<b>Chemical industry</b>	Production of Inorganic Chemicals	60
<b>Cement industry</b>	Production of Cement and Lime	35
Mining and Metallurgical Complex (MMC)	Lead Production	70
	Production of Copper and Precious Metal - Gold	65
	Zinc and Cadmium Production	55
	Extraction and Enrichment of Non-ferrous Metal Ores (incl. precious)	75
	Mining and Processing of Iron Ores (including other ferrous metal ores)	80
	Production of Ferroalloys	77
	Aluminum Production	70
	Production of Iron and Steel	40
	Further Processing of Ferrous Metals	60
	"Coal mining and preparation."	70
Energy industry	Energy Efficiency in Economic Operations and (or) other	Reduction of fuel
	activities	consumption - 40%
	Combustion of Fuels in Large Plants for Energy Production	78
TOTAL		60

## **BAT** approach

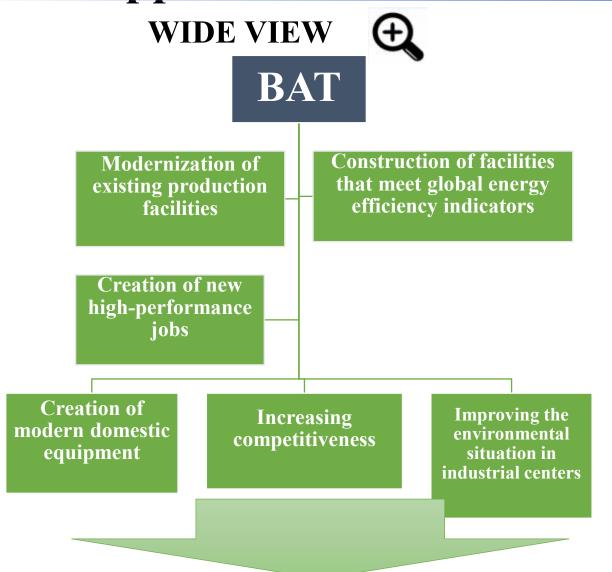






Environmental protection.

Tougher rationing of pollutant emissions and discharges







ACCELERATED TECHNOLOGICAL GROWTH ACROSS ALL INDUSTRIES

