CLIMATE STRATEGY of Bank CenterCredit for the period 2025-2050 (with detailed targets until 2030)

June 2024

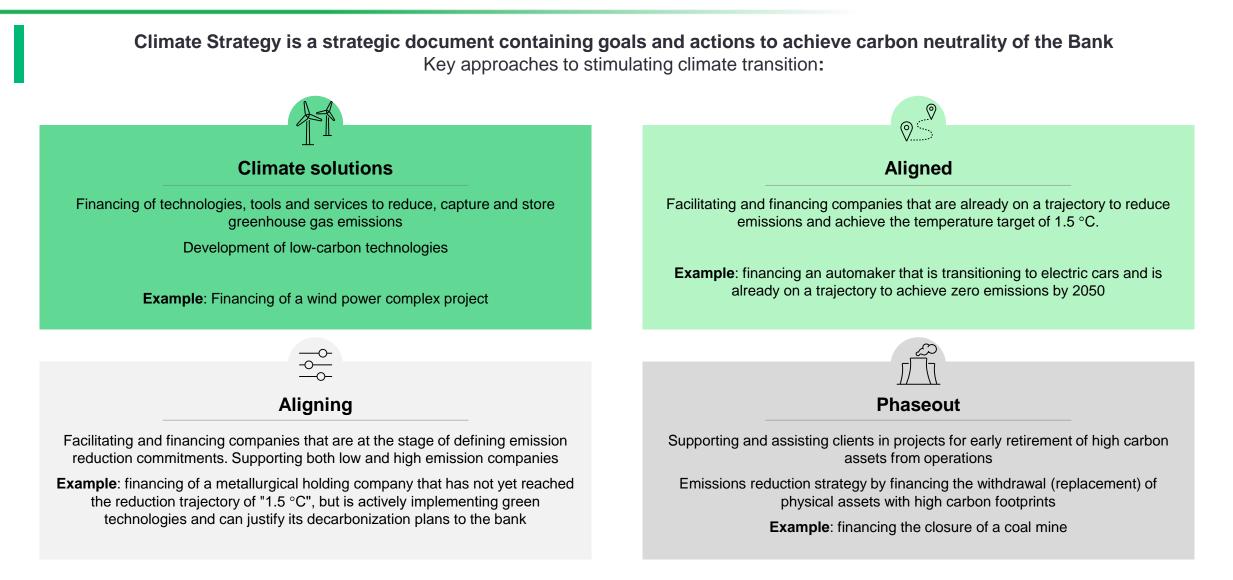




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Definition of a climate strategy and main approaches for financing the climate transition





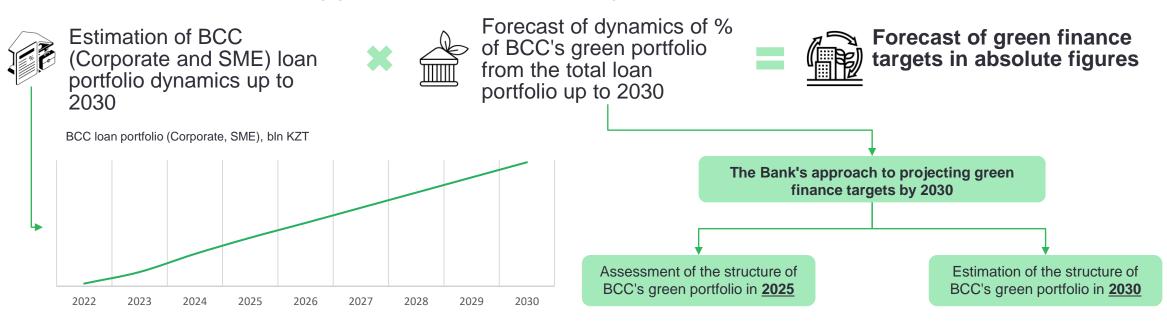


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Approach to defining the Bank's green portfolio growth targets and set targets

A top-down approach to assessing green/sustainable finance targets



Growth dynamics of BCC's green portfolio to achieve the goals by 2030, in billion KZT

	2025	2026	2027	2028	2029	2030
Volume of green loan portfolio*	120	163	212	268	331	400







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Overview of the SBTi approach to setting decarbonization targets for financial institutions



SCIENCE SBTi recommends that financial institutions use one of three methodological approaches1 to set targets for reducing financed emissions:

Sectoral Decarbonization Approach (SDA)

- A sector-oriented approach to setting emission reduction targets that considers differences in CO₂ emission reduction potential in different sectors of the economy
- Within the approach, targets can be calculated in 2 ways: absolute value method and through emission intensity

SBT Portfolio Coverage Approach

 Under this approach, financial institutions commit to working with their borrowers and/or investors to set their own evidencebased targets

Temperature Rating Approach

 Financial institutions determine the current temperature score of their portfolio based on CO₂ reduction targets set by clients



Instruments used:

- Near-Term Setting Tool
- Net Zero Tool

• SBTi Finance Tool (Github)

• SBTi Finance Tool (Github)

- Option selected by the Bank
- 1 Depending on asset class (corporate loan / project finance / securities, etc.)



Defining parameters for setting decarbonization goals

Industry

- A set of targets has been calculated for the following sectors: Energy, Agriculture, Metals and Manufacturing¹
- The sectors were selected based on their CO₂ emissions
- Thus, the Bank covers 82% of the carbon footprint and 22.3% of the corporate portfolio²

Metric

 Absolute value: reduction of emissions in the sector in absolute terms



Year selection

- Baseline 2023
- Intermediate target 2030
- Long-term goal 2050



- The IEA NZE 2050 1.5-degree scenario is recommended. Under this scenario, financial institutions are required to deliver annual emission reductions of at least 4.2% annually
- Thus, given the chosen scenario and the timeline, a single target percentage reduction (42%) will be defined for all sectors

1- The Production sector includes mining industry, production of consumer goods, chemical industry, oil and gas industry, machine building

2- Share of total outstanding loan debt of corporate loan portfolio as of 01.01.24



5 6 7

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Summary table of financed emissions: volumes and targets

	2023				2030		
	GHG emissions, mIn tons CO ₂	GHG emissions, %	Corporate portfolio coverage ¹ , bln TG	Corporate portfolio coverage ¹ , %	GHG emissions (interim target), million tons of CO ₂	GHG emissions (interim target), ∆ million tons of CO ₂	
Portfolio Carbon Footprint (Scope 3):	5.8	100%	813.2	100%	-	-	
Energy sector	3.5	60.9%	80.8	9.9%	2.05	(1.45)	
Agriculture	0.3	5.9%	18.5	2.2%	0.2	(0.1)	
Steel industry	0.5	8.7%	38	4.7%	0.29	(0.21)	
Manufacturing	0.4	6.5%	44.8	5.5%	0.24	(0.16)	
Other industries	1.1	18%	631.1	77.7%	-	-	

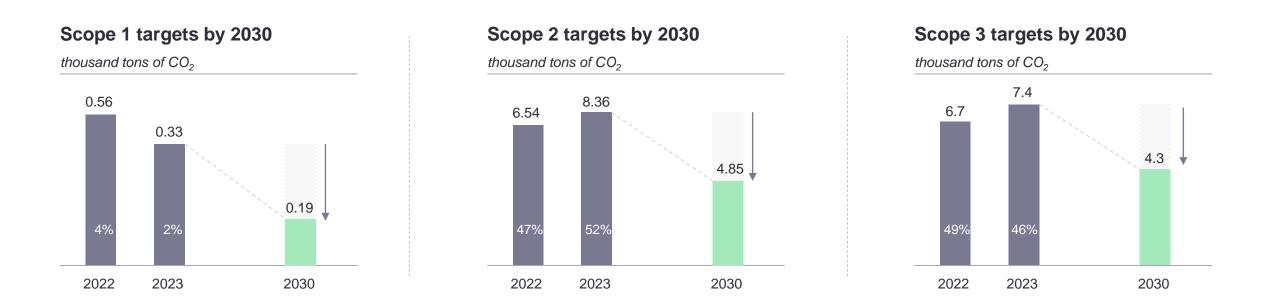
1 - Corporate loan portfolio (without defaults and negative values) as of 01.01.24



4 5 6 7

The Bank's objectives to mitigate its own negative carbon impact

- Emissions Scope: Scope 1, 2, 3
- Base year: 2023
- Target year: 2030
- Scenario: 1.5°C aligned pathways (SBTi requirement)



The Bank commits to reducing Scope 1, 2 and 3 emissions by 2030 by 42% compared to the base year 2023





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Coal Industry Clients Phase-Out Plan

2025-2030

Development and approval of a detailed plan of the coal production financing phase-out, approval of a long-term target

2030-2045

Implementation of measures aimed at stimulating reduction in financing of coal industry clients to 1% of the Bank's loan portfolio by 2045

- Commitment to set a target of coal industry financing volume by 2045 (no more than 1% of the Bank's loan portfolio)
- · Preparation of a policy for coal industry financing phase-out

Measures to reduce the share of coal industry clients' loans in the Bank's portfolio may include a set of approaches of interaction with current/new clients (an approximate and non-exhaustive list of measures):

- Limiting the total balance of debt of coal industry clients in **absolute figures**
- Stopping the issuance of loans, except for green loans, to new coal industry clients in the absence of a decarbonization strategy or plans
- A complete halt of the issuance of all types of loans to clients whose activities are related to the coal industry
- Complete ban on financing new clients from the coal industry
- Financing of current clients only for existing projects and facilities, etc.

Criteria for refusal to issue a loan

In case of refusal to issue loans, the Bank first refuses to finance any projects related to primary activities in the coal industry and aimed at increasing coal production or expanding its use (development of new deposits, mining, transportation, processing of coal, etc.)

The Bank allows the issuance of green loans aimed at projects to modernize existing coal facilities and reduce the carbon footprint (introduction of BAT, installation of cleaning filters, etc.), provided that all such loans are fully repaid by 2045, in accordance with the overall strategy to reduce coal financing

The Bank's coal industry clients are defined as companies with **at least 25%** of their revenue generated by coal mining

2045



Further actions aimed at withdrawal of the coal industry from the Bank's loan portfolio

• A set of measures, including repayments of all loans and the Bank's complete withdrawal of the coal industry loans from its loan portfolio

NB: The Bank does not have in its loan portfolio projects related to unconventional types of oil and gas fuels, such as bitumen, shale oil and gas, Arctic oil and gas, liquefied natural gas, as well as ultra-deepwater oil and gas. Moreover, the Bank does not invest in such projects, as well as in coal mining projects





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The Bank conducted 2 types of stress testing to determine the Bank's exposure to climate risks



Stress testing of risks associated with the climate transition, their impact on Financial metrics of the Bank's loan portfolio



Stress testing of physical risks of floods and wildfires, their impact on the Bank's mortgage portfolio and key financial metrics



1 2 3 4 5 6



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Approach to climate change scenarios (1/3)

0 A high-level approach to scenario development

a Data collection:

- A set of macroeconomic and financial variables under climate change scenarios (NGFS, Bank of England):
- Real GDP for the 3 largest economies in the world (USA, Eurozone, China)
- Unemployment rate for the 3 largest economies in the world
- Interest rates
- Household income indices, consumer price indices
- Assessment of the effect and significance of the impact of global macroeconomic variables on the indicators used in stress testing of the credit risk of the Bank's corporate loan portfolio (TONIA, real average monthly cash income of the population)
- Forecasting the dynamics of the tested indicators under climate change scenarios using selected models

1 Data collection and preparation

- Data used:
 - Macroeconomic Variables of Climate Transition Scenarios under Two Scenarios:

1. «Below 2°C» (assumes a gradual tightening of government climate policies and a 67% chance of limiting temperature rise to 2°C by 2050, containing the physical risks of climate change);

2. «*Current Policies*» (does not imply additional development of state and other climate policies, a low level of transition risks, but uncontrolled consequences of the implementation of physical risks in the future)

- The Bank's variables for stress testing of the credit risk of the legal entity segment (TONIA, real average monthly cash incomes of the population)
- Formation of a set of global macroeconomic variables to analyze the degree of impact on TONIA indicators and real average monthly cash incomes of the population of the Republic of Kazakhstan
- **Time series generation:** data organized into time series covering the period from 2010 to 2025



Description of the climate transition scenarios used

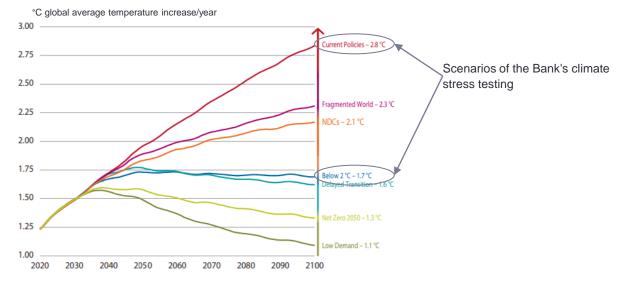
«Below 2°C» scenario

- A positive climate scenario with a moderately ambitious climate agenda, in which countries limit climate warming to two degrees Celsius by the end of the century («Below 2°C»)
- Prerequisites: starting from 2025, the countries are pursuing a coordinated climate policy. Agreed emission reduction targets are set to limit temperature increases to 2°C in 2100. All countries are introducing a price for greenhouse gas emissions in the form of a quota trading system and/or a carbon tax. As part of the emissions trading system, the government sets the allowed number of emissions, for exceeding which fines are provided

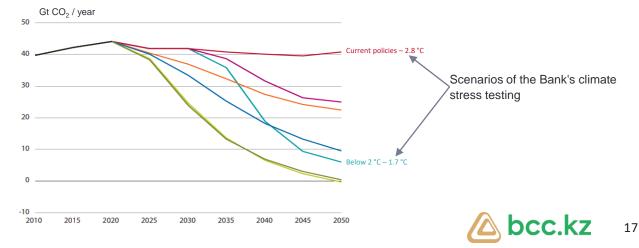
B «Current policies» scenario

- A negative climate scenario from the category of the "greenhouse world", which implies the refusal to introduce additional climate restrictions and assesses the possible effect only from the policies in force as of today
- The scenario implies the slow development and deployment of climate change technologies (e.g., CO₂ capture technologies), as well as the absence of any climate response measures / policies by states

1. Dynamics of the Earth's surface temperature according to the scenarios:



2. Dynamics of global CO2 emissions by scenarios:



Approach to climate change scenarios (2/3)

2 Features Modification

- **Calculating averages values**: For each year, the average of quarterly data is calculated to reduce volatility and highlight trends
- **Baseline Year Indicators**: This is a method used to normalize time series data by converting them to relative values compared to the selected base year (2010). This allows to evaluate changes in data over time relative to a fixed reference point
- Data differentiation and transformation: The differences between consecutive years are calculated and the square root is applied, which can help stabilize the variance and reveal hidden patterns
- Data standardization (z-scores): z-standardization is applied to normalize data, allowing variables to be compared at different scales and units

Statistical Modeling

To determine the relationships and impact:

- Building a regression model: usage of ordinary least squares method (OLS) to evaluate the effect of explanatory variables on the dependent variable
- **Multiple regression analysis: t**he interaction of two independent variables and their combined effect on the dependent variable

Testing models

- Lack of autocorrelation of residuals: no statistical relationship between residues and their lags. Autocorrelation can indicate an incorrect model specification (Breusch–Godfrey test)
- Homoscedasticity of residuals: verification of the equality of variances of model residues, which is important for the effectiveness of estimates and confidence intervals (White test)
- **Normal distribution of residuals**: important to justify the use of t-statistics and other parametric tests (Shapiro-Wilk)
- Independence of explanatory variables: checking the degree of linear relationship between variables (VIF test, correlation between explanatory variables)



Approach to climate change scenarios (3/3)

5 Variable Forecasting

- Based on the constructed and selected models (considering the tests carried out), the values of variables for analysis under two climate change scenarios were predicted
- Inverse transformations of variables were carried out and predicted values were determined based on the obtained coefficients of multiple regressions

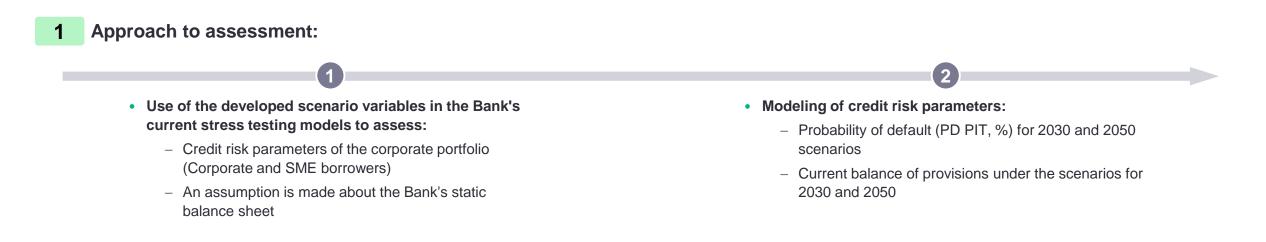
6 Formation of a baseline scenario

To define dimensions in current values:

- Basic scenarios for the dynamics of macroeconomic indicators (and, accordingly, variable scenarios) have been formed, regardless of the climate agenda
- This step makes it possible to determine the dynamics and degree of deviation of indicators from the scenario where there is no climate agenda (i.e., how much economic growth slows down under a particular climate scenario compared to economic growth without a climate agenda)



Approach to Assessment and Results of Climate Stress Testing of Transient Risk



2 Simulation results:

Parameter	Actual value (01.04.24)	"Below 2°C" scenario (2030)	"Below 2°C" scenario (2050)	Current policies scenario (2030)	Current policies scenario (2050)
PD PIT, %	4.1%	5.5%	5.1%	5.7%	7.4%
Additional annual provisioning, thousand T	_	12,837,952	9,240,603	14,152,642	29,130,155



Description of the approach to the scenario analysis of the Bank's physical climate risks (1/2)

Identification of material physical climate risks and scenarios

for assessment

Material risks:

- According to the analysis of external climate data and international reports, droughts and floods (river floods) are among the most dangerous extreme (acute) physical climate risks for the Republic of Kazakhstan
- In this regard, for a qualitative analysis of the long-term impact of physical climate risks, the risks of floods (river floods) and wildfires (because of droughts and average annual temperatures) are assessed

Scenarios analyzed:

- The Bank's physical risk stress testing pilot exercise analyzes two global scenarios for anthropogenic GHG emissions from the Intergovernmental Panel on Climate Change (IPCC):
 - Representative Concentration Pathways (RCP) 2.6 Low GHG Scenario with Effective Mitigation Measures
 - Representative Concentration Pathways (RCP) 8.5 high GHG emissions scenario with a "business as usual" trajectory

Note: A detailed description of the scenarios used is provided below

2 Defining the Perimeter for Analysis

- For a qualitative analysis of stress testing of physical risks, the perimeter of mortgage lending was chosen the portfolio of real estate that is pledged to the Bank
- The materialization of physical risks can lead to direct losses (destruction of real estate), as well as to indirect losses associated with the temporary insolvency of borrowers
- ► Factors that determine the perimeter for physical risk stress testing analysis:
 - The real estate asset class was chosen for the pilot exercise due to the greatest relevance of the consequences of the materialization of the most significant physical risks on a country scale with the greatest potential additional losses in the event of realization
 - Long-term nature of loans the average loan term on the Bank's mortgage portfolio is >10 years
 - The materialization of physical risk (floods) in 2024 confirms the relevance of the assessment
 - Limited availability of quantitative data: historical data on the materialization of physical risks, as well as limited granularity on the exact location of assets of the Bank's corporate borrowers and their exposure to physical risks

Despite the internal and external limitations of conducting a more detailed scenario analysis, the Bank is building up its expertise, as well as collecting data (in particular, by location) for a point assessment of the impact of the materialization of physical risks on the loan portfolio / own assets in the next iterations of the analysis



Physical Climate Risk Stress Testing Scenarios Used

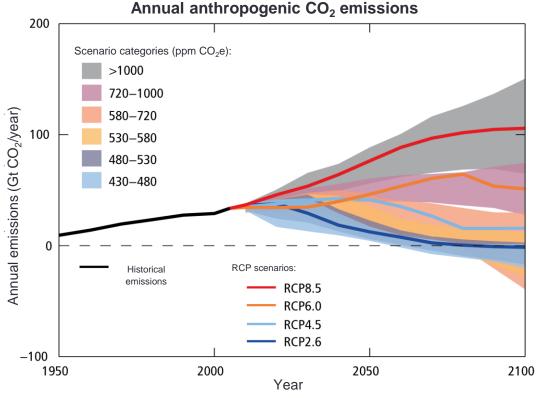
- Representative Concentration Paths (RCPs) scenarios have been developed by the Intergovernmental Panel on Climate Change (IPCC) to model different trajectories of future greenhouse gas concentrations and their impacts on the climate system
 - Each RCP scenario has a certain level of radiative forcing (in Watt per square meter) by 2100

A RCP 2.6 scenario

- The low-emission scenario assumes that greenhouse gas concentrations will peak around 2020 and then begin to decline
- The maximum radiative forcing is ~2.6 W/m² by 2100, and global warming is limited to ~1.5-2°C compared to pre-industrial levels
- Requires strong policy incentives, such as the widespread use of renewable energy, significant improvements in energy efficiency, and the introduction of carbon capture, utilization and storage (CCUS) technologies

B RCP 8.5 scenario

- RCP 8.5 is a "business as usual" scenario in which greenhouse gas emissions continue to grow, and no significant efforts are made to reduce them (including political ones)
- Radiative forcing reaches ~8.5 W/m² by 2100
- Does not involve significant measures to reduce emissions, the active use of fossil fuels continues, global warming exceeds 4°C compared to pre-industrial levels



Source: IPCC Assessment Report 6, 2021





Financial assessment of the impact of physical climate risks on the Bank's mortgage portfolio (1/2)

1 Assessment approach

- Average values of exposure to physical risks by regions of Kazakhstan were collected (according to the Climate impact explorer) in the context of combinations of three dimensions:
 - By types of risk: flood risk, wildfire risk
 - Scenarios: RCP 2.6, RCP 8.5
 - Forecast horizons: up to 2030, up to 2050
- Risk exposure values were assigned to mortgage loans, the balance of the term of which under the agreement exceeds 5 years, in accordance with the geographical location of the collateral object in the relevant region of Kazakhstan
- Based on the resulting range of risk exposure values, each risk exposure value was assigned 1 of 3 risk categories:
 - Low risk: Risk exposure <= 33rd percentile value of the range of risk exposure values
 - Medium level of risk: risk exposure < = value of the 66th percentile of the range of risk exposure values
 - High level of risk: risk exposure > value of the 66th percentile of the range of risk exposure values
- For mortgage loans that have been categorized as high-risk, the impact on the Loan-to-Value (LTV) ratio was assessed in the event of a devaluation of the collateral property's value (based on the latest market valuation by the Bank) by a) 50%; b) 25%
- When assessing the effect of the impact of physical risks on the horizon until 2050, a conservative assumption was adopted: the static structure of the mortgage portfolio was considered without reflecting the dynamics of loan repayment to assess the Bank's maximum exposure to physical risks as part of qualitative stress testing



Financial assessment of the impact of physical climate risks on the Bank's mortgage portfolio (2/2)

2 Assessment results				Loans in the "	Loans in the "High Risk" category			
Type of risk	Scenario	Forecast horizon	% of loans at high risk	Loan amount, bln KZT	Collateral value (according to the latest estimate of the Bank), billion tenge	Current LTV	LTV on collateral impairment by 25%	LTV on collateral impairment by 50%
Flood risk	RCP 2.6	until 2030	12%	125	258	48%	65%	97%
Flood risk	RCP 2.6	until 2050	6%	57	116	50%	66%	99%
Flood risk	RCP 8.5	until 2030	16%	163	320	51%	68%	102%
Flood risk	RCP 8.5	until 2050	40%	401	703	57%	76%	114%
Risk of fires	RCP 2.6	until 2030	23%	231	459	50%	67%	101%
Risk of fires	RCP 2.6	until 2050	25%	250	491	51%	68%	102%
Risk of fires	RCP 8.5	until 2030	25%	250	491	51%	68%	102%
Risk of fires	RCP 8.5	until 2050	30%	307	606	51%	68%	101%





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Impact Analysis of Significant Climate Risks and Adaptation Plans

Physical climate risks:

- According to the Bank's analysis, the risks of floods (river floods) and wildfires (because of droughts and rising average annual temperatures) are the most dangerous physical climate risks, to which exposure is higher in Kazakhstan on average than globally
- The materialization of physical risks is significant for the Bank, as it can lead to direct losses due to the destruction of real estate and indirect losses due to the temporary loss of solvency of borrowers
- The Bank analyses the potential financial impact of flood and fire risks during the climate stress testing process for the 2030 and 2050 horizons, focusing on assessing the potential impact on the real estate portfolio that is pledged for 5 years or more
- The impact of physical climate risks is manifested to a greater extent through the Bank's loan portfolio, so full minimization of their impact may not be achievable. The Bank is taking steps to mitigate this impact by adapting its work with clients and conducting regular revaluation of collateral. The bank is also preparing to comply with potential regulatory requirements for climate risk management

Plan for Adaptation to Potential Physical Climate Risks:

- The Bank's operating activities are not subject to physical climate risks, except for a minor potential impact on real estate (branches), so the Bank does not need special adaptation of operations or assets
- The bank analyses the physical climate risks of the portfolio through climate stress testing of physical risk and borrower data using the ESG scoring tool
- Considering the identified risk areas, the Bank is developing an action plan for working with clients starting from 2025 and later. Activities will include initiatives aimed at educating and assisting clients in minimizing physical climate risks, for example, by creating a green project book

3 Transitional climate risks:

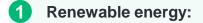
- The most significant transitional climate risks for the Bank are the impact on borrowers of the tightening of carbon regulation and legislation both at the domestic level (the greenhouse gas emissions trading system in the Republic of Kazakhstan ETS) and at the external level (border tax on carbon emissions in the EU CBAM)
- The expected increase in prices for carbon units, an increase in the number of ETS participants and other regulatory measures will increase the financial burden on carbon-intensive companies represented in the Bank's loan portfolio, which may lead to losses for the Bank due to a decrease in the solvency of borrowers
- The Bank assesses potential financial losses from the materialization of transition risks using climate stress testing of the transitional climate risk of the loan portfolio covering the horizons until 2030 and 2050, and analyzes the climate risks of clients for the current period through the ESG scoring tool and communication with borrowers regarding their readiness for tightening carbon regulation
- In the future, the Bank plans to improve its skills in managing transition risks and gradually adapt interaction with clients, focusing on changes in legislation and regulatory requirements, for example, requesting and analyzing climate risk mitigation plans and decarbonization strategies from carbonintensive borrowers



Assessment of opportunities and priority areas for development

A key opportunity in the climate agenda for the Bank is financing green industries and decarbonization of the economy. The Bank's analysis of the areas for the development of green technologies made it possible to assess the potential volume of green investments in CAPEX until 2030

The priority areas for increasing the share of financing by the Bank until 2030 within the framework of the climate strategy*:



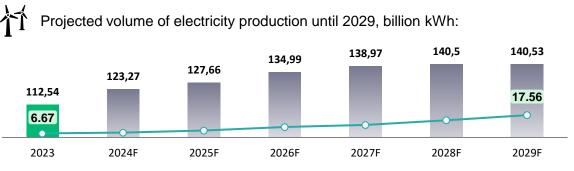
3.206 bln \$ Investments in CAPEX until 2030

- The key driver of development is the set goals for the share of renewable energy in the total electricity production in Kazakhstan (15% until 2030 and 50% until 2050) and state support measures for renewable energy sources
- Areas for financing until 2030: wind farms (\$2 billion), solar plants (\$600 million), small hydropower plants (\$406 million), biological plants (\$160 million)

2 Sustainable agriculture:

0.376 bln \$ Investments in CAPEX until 2030

- Direction that defines state goals and plans for subsidizing water-saving and irrigation technologies and related investments in the agro-industrial complex
- Now, water-saving technologies are the most realistic area for financing by the Bank within the framework of sustainable agriculture



- Renewable electricity production, billion kWh



Area of land using water-saving technologies according to state goals until 2030, thousand hectares:

