Uzbekistan's Carbon Market Strategy: National Objectives

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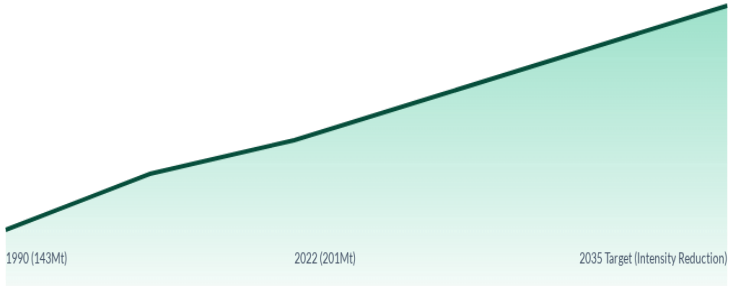
Greenhouse gas emissions in Uzbekistan

Total GHG emissions: 209.61 million tons

- Total emissions: 209.61
- Natural absorption: 8.46
- Net emissions: 201.15

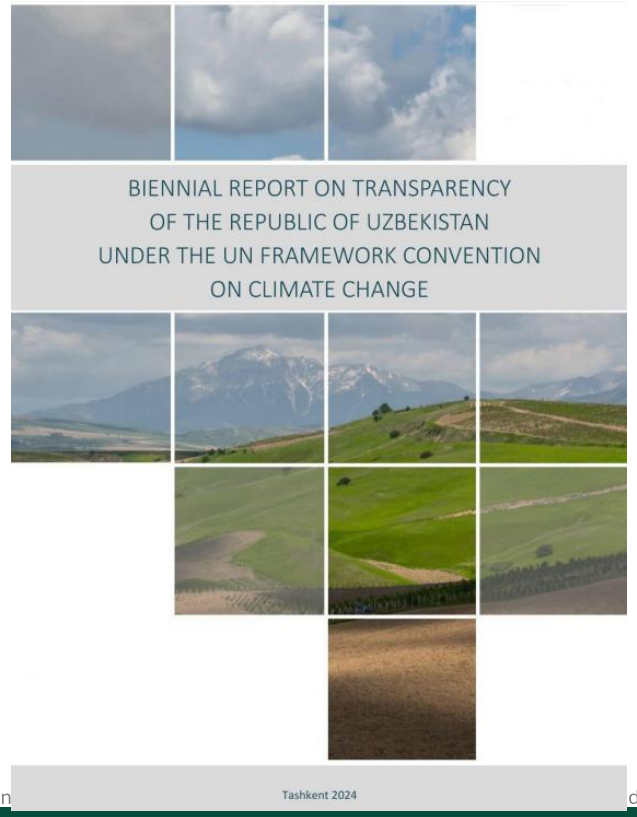
NDC 3.0 (2010-2035)

Targeting a **50% reduction** in GHG intensity per unit of GDP by 2035 (vs. 2010 baseline).



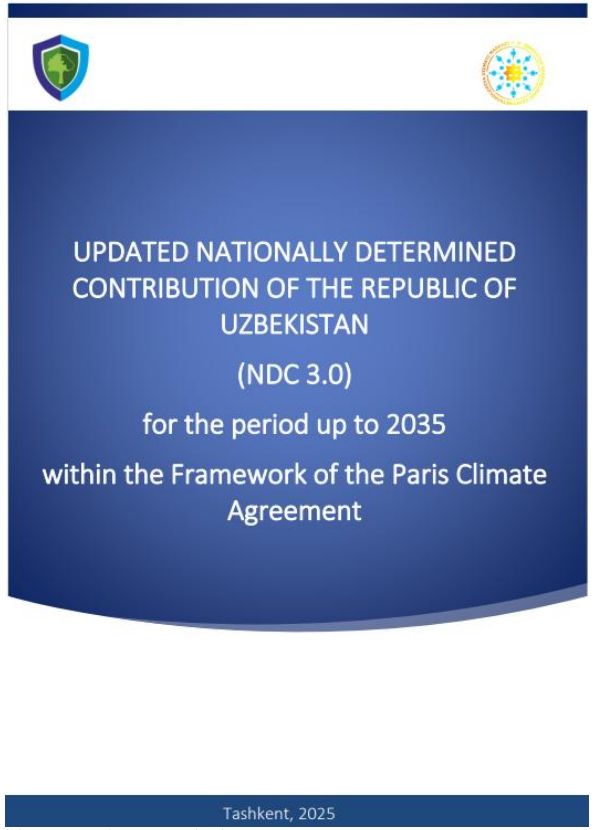
Share of GHG emissions by gas

CO_2 (Carbon dioxide) – 135.55 (64.7%)
CH_4 (Methane) – 60.20 (28.7%)
N_2O (Nitrous oxide) – 12.74 (6.1%)
HFCs (Hydrofluorocarbons) – 1.13 (0.5%)



Sectoral distribution of GHG emissions

Energy – 133.51 (63,7%)
Industry – 30.25 (14,4%)
Agriculture – 35.35 (16,9)
Waste – 10.50 (5%)



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Priority Issues & Financial Needs

TOTAL ANNUAL INVESTMENT NEEDS

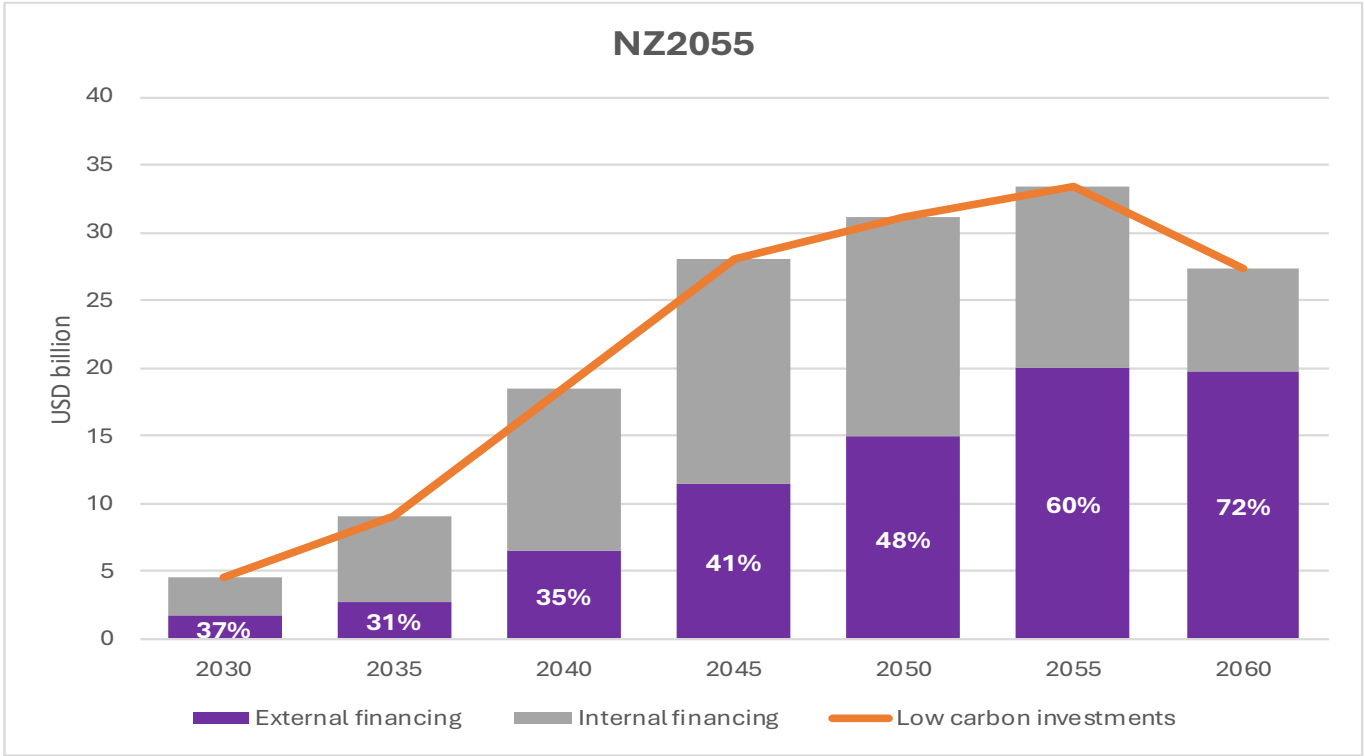
NZ2055	NZ2060
USD 20.36 billion per year	USD 18.32 billion per year
6.75% of GDP	6.07% of GDP

Difference (NZ2055 vs NZ2060): -USD 2.04 billion per year; -0.68 pp of GDP

KEY TAKEAWAYS

- The power sector requires the largest share of investments, accounting for 49% of total needs under NZ2055.
- Achieving NZ2055 requires approximately USD 2 billion more per year than NZ2060.
- Carbon removal technologies (DAC + CCS) represent 22% of total investment needs under NZ2055.
- Total additional investment requirements reach 6–7% of GDP annually.

Internal and external financing needed for the realization of the low-carbon investments in the two NZPs



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Legal Framework & Institutional Arrangements

2019 PQ-4477 4 OCTOBER 2019

"Green Economy Transition Strategy"

Establishing the broad policy foundation for decarbonization energy efficiency and green finance.

2022 PQ-436 2 DECEMBER 2022

"Accelerating reforms for the transition to a green economy by 2030"

Introduced Article 6-oriented tasks: attract finance through carbon markets and build national institutional procedures.

2024 VMQ 117 7 MARCH 2024

Temporary Regulation for International greenhouse gas trading projects

Set the interim project implementation rules and introduced validation, verification, the national carbon units registry and anti-double-counting principles.

2024 PQ-213 5 JUNE 2024

National Transparency System (MRV)

Designated the national authority, strengthened MRV, the online platform and emissions reduction accounting and registry infrastructure.

2025 O'RQ-1073 7 JULY 2025

"On Limiting Greenhouse Gas Emissions (GHG)"

Introduced the legal basis for carbon units, operations with carbon units, verification, accounting and registry management.

2025 PF-110 7 JULY 2025

Participation in the international carbon units market

Operationalized participation in international carbon markets and ITMO under Article 6, including registry use and DNA-related arrangements.

INSTITUTIONAL STRUCTURE

Strategy & Operations

Interdepartmental Council

Acts as the high-level strategic oversight body directing national climate initiatives.

Ministry of Economy & Finance (MoEF)

Functions as the Designated National Authority (DNA) for financial and economic alignment.

Green Climate Center

The core operational hub consisting of seven specialized divisions: Secretariat, Approval Authorization, Legal & Compliance, CA & ITMO tracking, IT security, Reporting, and SDG.

Ecology & Compliance

Working Group

Facilitates cross-functional coordination and technical implementation of climate strategies.

Ecology Committee

Drives core environmental policy development, monitoring, and ecological alignment.

Uzhydromet

Provides essential meteorological, hydrological, and climate data support for initiatives.

UNFCCC

The ultimate international body for final reporting, global alignment, and treaty compliance.

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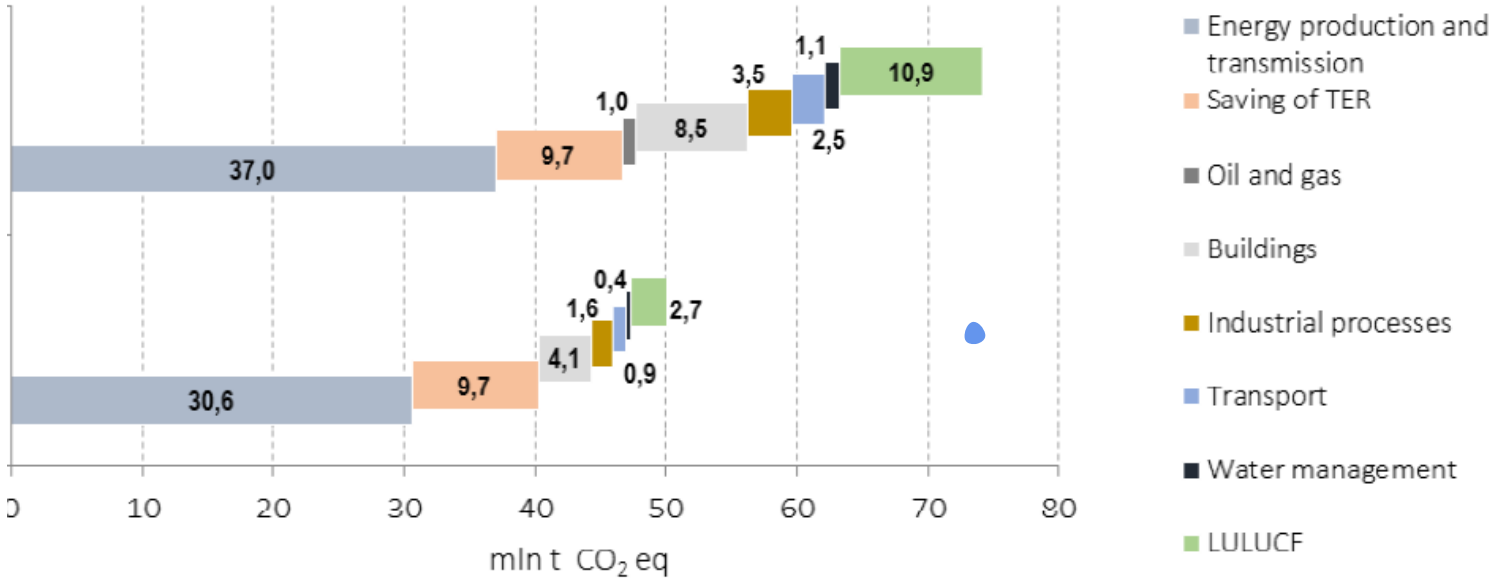
BTR/NDC: Assessment of Emission Reduction Potential



REALISTIC

Assessment of GHG emission reductions resulting from the completion of projects with guaranteed financing, which

- are currently under implementation;
- are prioritized and planned for the near future

The mitigation potential is approximately **50 million t CO_2-eq.**

AMBITIOUS

Assessment of GHG emission reductions from mitigation actions with a relatively high degree of implementation uncertainty, i.e., planned for the future but not yet secured with financing

The mitigation potential is approximately **74,2 million t CO_2-eq.**

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2030 Strategy: Carbon Market Alignment Energy & Transport Sectors

Energy Sector

Electricity Grids: Reduce distribution losses from 12.2% (2025) to 9.0% by 2030
Natural Gas Grids: Reduce distribution losses from 5.7% (2025) to 3.8% by 2030 (Targeting fugitive methane).
District Heating: Reduce heat network losses from 38.0% (2025) to 20.0% by 2030

Transport Sector – Electrification & Urban Mobility

Railways: Increase the share of electrified railways from 51.0% (2025) to 65.0% by 2030

Public Transit (E-Buses): Increase new operational buses to 5,000 units and electric buses from 646 (2025) to 2,000 units by 2030

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2030 Strategy: Carbon Market Alignment Water & Waste Management Sectors

Water-Energy Nexus – Agricultural Pumping

Decarbonizing Irrigation through Energy Efficiency
The Baseline: Water pumps consume ~16% of Uzbekistan's total electricity.
The KPI: Increase the share of energy-efficient water pumps from 19.0% (2025) to 30.0% by 2030

Waste Sector – Circular Economy & Waste-to-Energy

Tackling Methane through Waste-to-Energy (WtE)
Recycling Level: Increase MSW recycling from 5.3% (2025) to 7.0% (Step toward the 65% long-term goal)

Waste-to-Energy (Incineration): Increase the share of waste incinerated for alternative energy from 0% (2025) to 20% (Step toward 35% goal)

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2030 Strategy: Carbon Market Alignment - AFOLU

AFOLU (Forestry) – Expanding Natural Carbon Sinks

Total Forest Cover: Increase from 4.1 mln ha (2025) to 6.1 mln ha by 2030

"Yashil Makon" (Urban Greening): Establish 1,023 green parks across the Republic (up from 107 in 2025)

AFOLU (Aral Sea & Agriculture)

Monetizing Climate Adaptation and Soil Health
Aral Sea Bed Afforestation: Add +1.3 mln hectares of "green covers" to the dried seabed (from a 2.5 mln ha baseline)

Protective Shelterbelts: Increase protective forest plantations to prevent erosion and sand drifts from 14,055 ha (2025) to 30,055 ha by 2030

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Challenges in Carbon Market Readiness and Investment Opportunities

United Nations Climate Change

ipcc INTERGOVERNMENTAL PANEL ON climate change

Methodological & Reporting Gaps

•The Tier 1 Limitation: Currently, Uzbekistan relies heavily on IPCC Tier 1 default emission factors (e.g., for fugitive natural gas and LULUCF).

•The Tier 2/Tier 3 Mandate: To monetize emission reductions, the regulatory framework must enforce the collection of disaggregated, real-time activity data (e.g., mandatory LDAR in oil & gas).

•Corporate Disclosures (TCFD/ISSB): Transitioning State-Owned Enterprises (SOEs) from voluntary ESG reporting to mandatory, decision-useful disclosures aligned with IFRS S1/S2 and TCFD pillars (Governance, Strategy, Risk, Metrics).

•Internal Carbon Pricing (ICP): Recommending "shadow pricing" for domestic exporters to stress-test capital investments and prepare for cross-border tariffs like the EU CBAM.

Key Challenges

- Institutional capacity – limited expertise, weak cross-sector coordination
- Data management systems – gap in monitoring, and lack of reporting, and verification (MRV) infrastructure
- Market readiness – early-stage development of carbon pricing and trading mechanisms

Opportunities

- Private sector engagement – mobilizing local businesses for green investment
- Foreign investment – attracting international capital to support low-carbon and green projects
- Technology transfer – leveraging global innovations in renewable energy, digital MRV systems, and sustainable practices

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Opportunities for Knowledge Exchange

Uzbekistan’s role in climate policy offers significant potential for cross-border synergy within the Central Asia Regional Economic Cooperation (CAREC) Program.

- Standardized MRV: Joint development of monitoring protocols to reduce transboundary transaction costs.
- CAREC Climate Vision 2050: Aligning national strategies with regional long-term resilience targets.

Regulatory Alignment

Harmonizing national carbon pricing and legal "rulebooks" for Article 6 compliance.

Digital Registries

Establishing shared platforms for regional tracking and trading of carbon units (ITMOs).

CAREC Institute

Capacity building for Tier 2/3 MRV standards and mandatory ESG disclosures.

Green Corridors

Scaling infrastructure like the Caspian Sea Cable for renewable energy export.

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Conclusion & The Role of the Gap Analysis

- **The Challenge:** Uzbekistan has excellent strategic targets (Outputs/Outcomes), but international capital requires flawless data (MRV) and de-risked environments.

- **The Solution:** The Regulatory Gap Analysis will define the legal roadmap to:
  - Mandate Tier 2/Tier 3 data collection across SOEs.
  - Legally integrate satellite/SCADA data into the National Carbon Registry.
  - Implementing MRV
  - Operationalization of the carbon credit market.

  The Result: Transforming environmental targets into bankable, tradable financial assets.

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Thank you!

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