UNIVERSITY OF CENTRAL ASIA

GRADUATE SCHOOL OF DEVELOPMENT

Decarbonization of energy in Central Asia

Dr. Ablay Dosmaganbetov, Research Fellow,
IPPA, GSD, UCA

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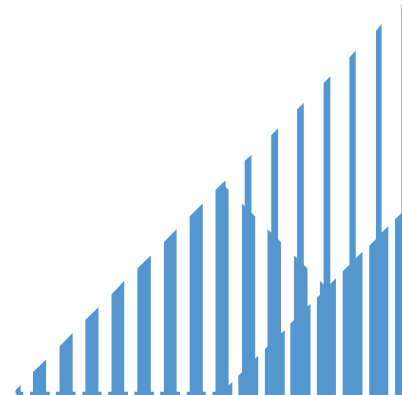
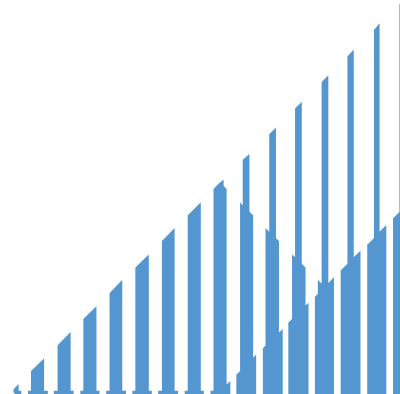
Content



About the study

- The study aims to evaluate the policy environment in the Central Asia region to determine how effectively current policies promote a shift towards more sustainable energy.
- The study will culminate in a background paper detailing the current situation, policy frameworks, assessments, and recommendations for aligning energy infrastructure investments with the goals of the Paris Agreement and the 2030 Agenda in Central Asia.



Study workflow & further steps

Phase I
- Gathering and preparing a dataset of investment in energy infrastructure projects for 6 CA countries over 16 years (2008-2023)

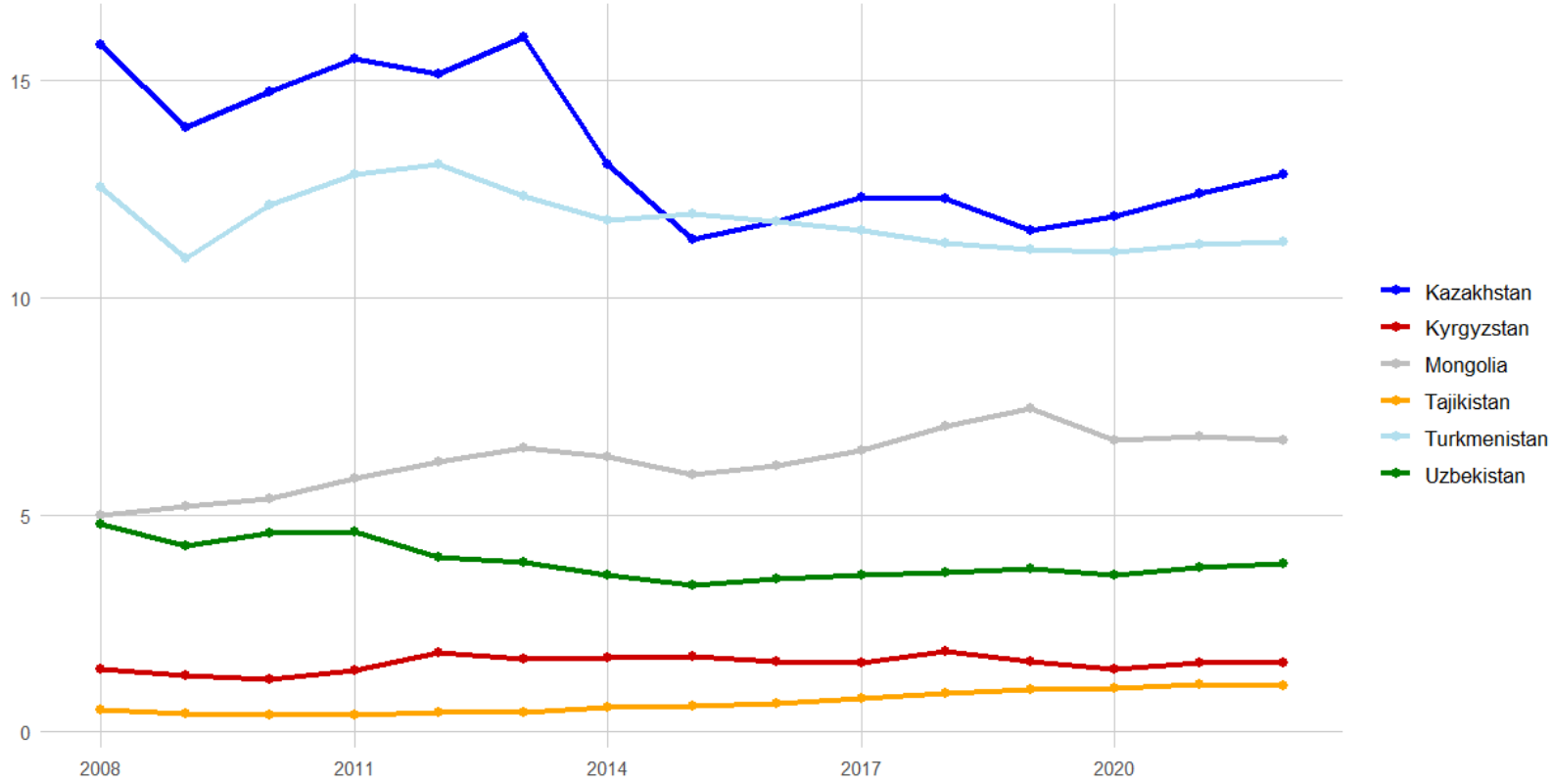
Phase II
- Making a preliminary data analysis to understand trends and patterns of low-carbon energy infrastructure.

Phase III
- Providing a literature review and including additional data/analysis (i.e., carbon-intensive energy projects)

Phase IV
- Identifying key challenges and opportunities for energy decarbonization in the CA region

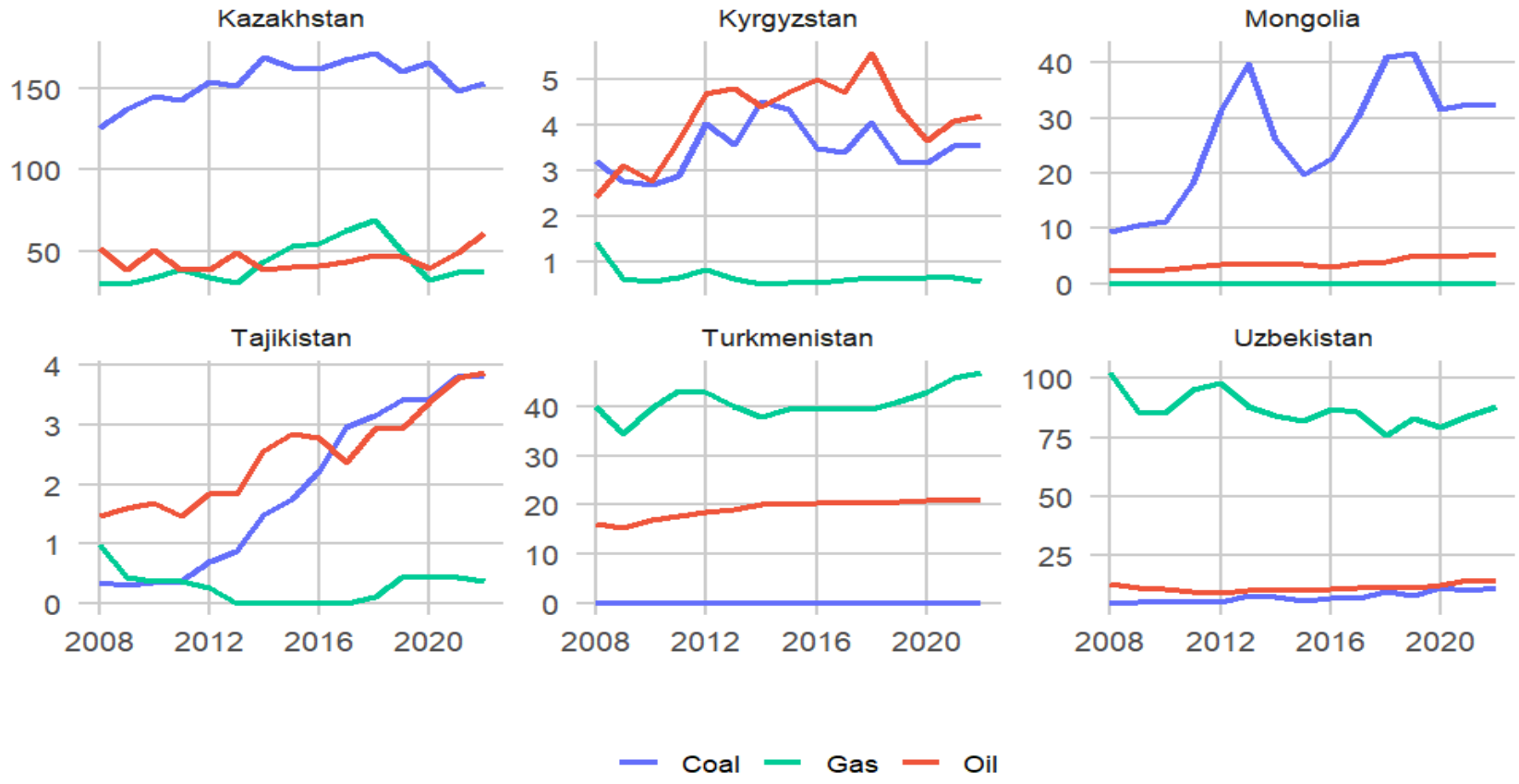
Phase V
- Outlining some policy recommendations based on findings of data analysis

Regional energy dynamics (1): CO2 emissions, tonnes per capita



Source: Emissions Database for Global Atmospheric Research

Regional energy dynamics (2): CO2 emissions, mln. tonnes



Source: Emissions Database for Global Atmospheric Research

Projects included in the analysis

Investment in low-carbon energy infrastructure

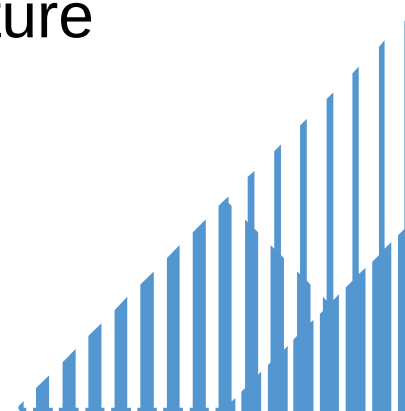
(Phase II)

- Energy-efficiency projects
- Renewable energy projects
- Other energy-related projects

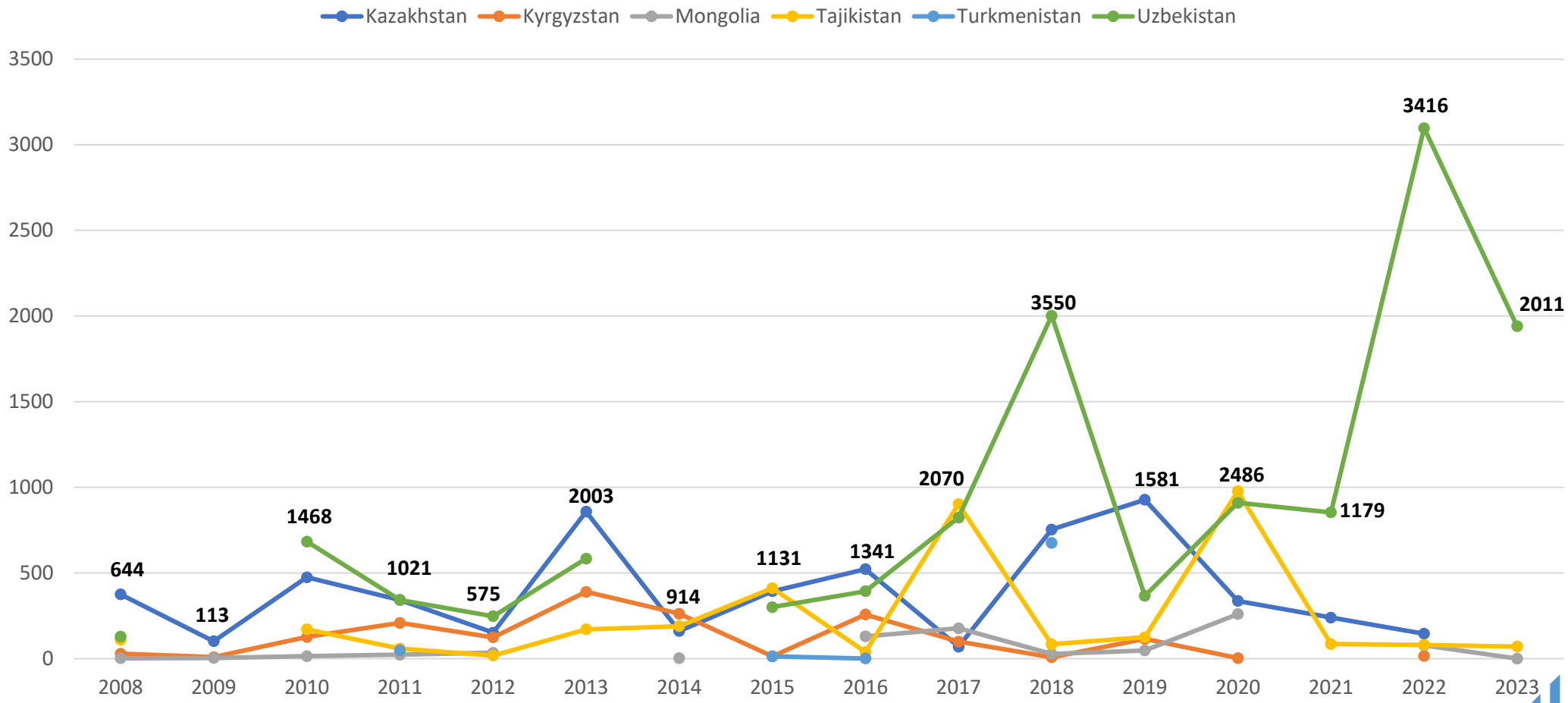
Investment in carbon-intensive energy infrastructure

(Ongoing, will be updated in Phase III)

- Oil and gas energy infrastructure
- Coal energy infrastructure

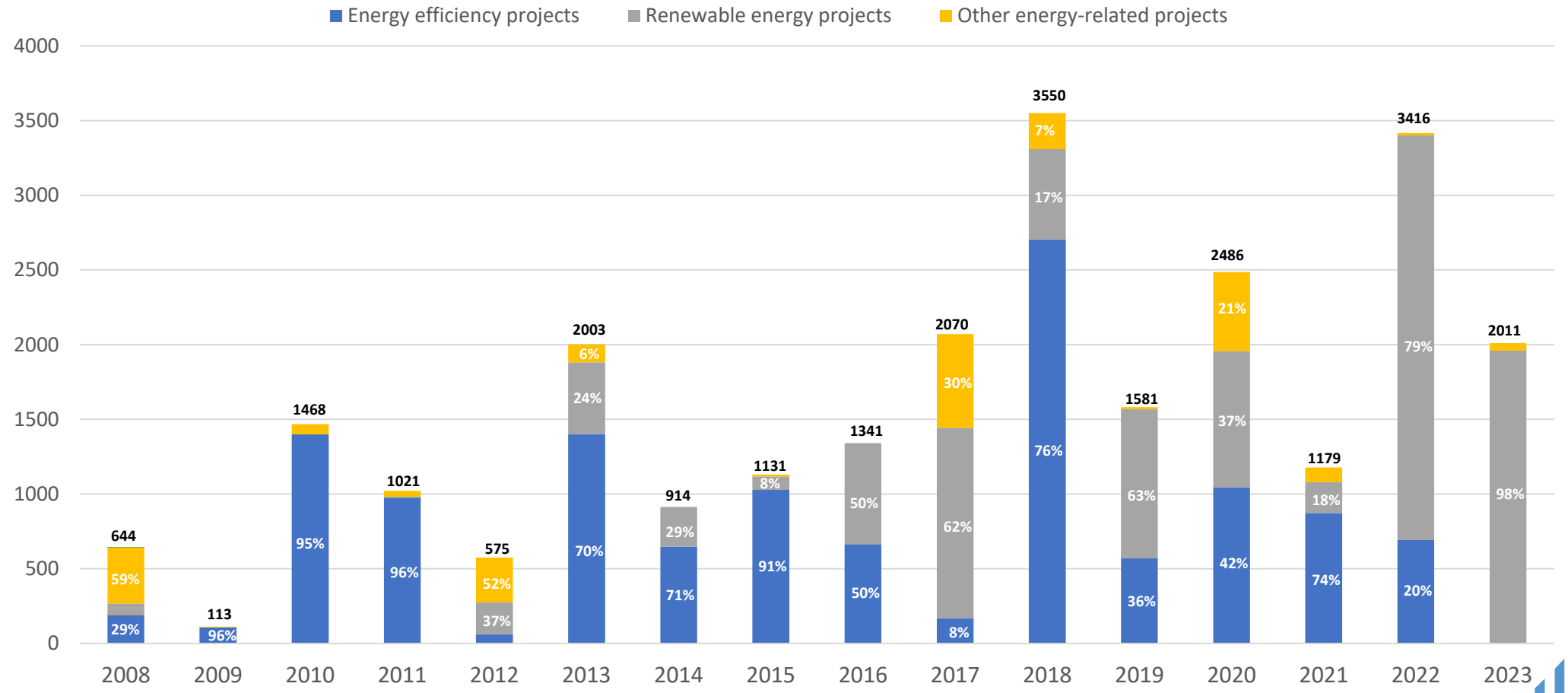


Dynamics of investment in energy infrastructure projects for 16 years by countries, mln. USD



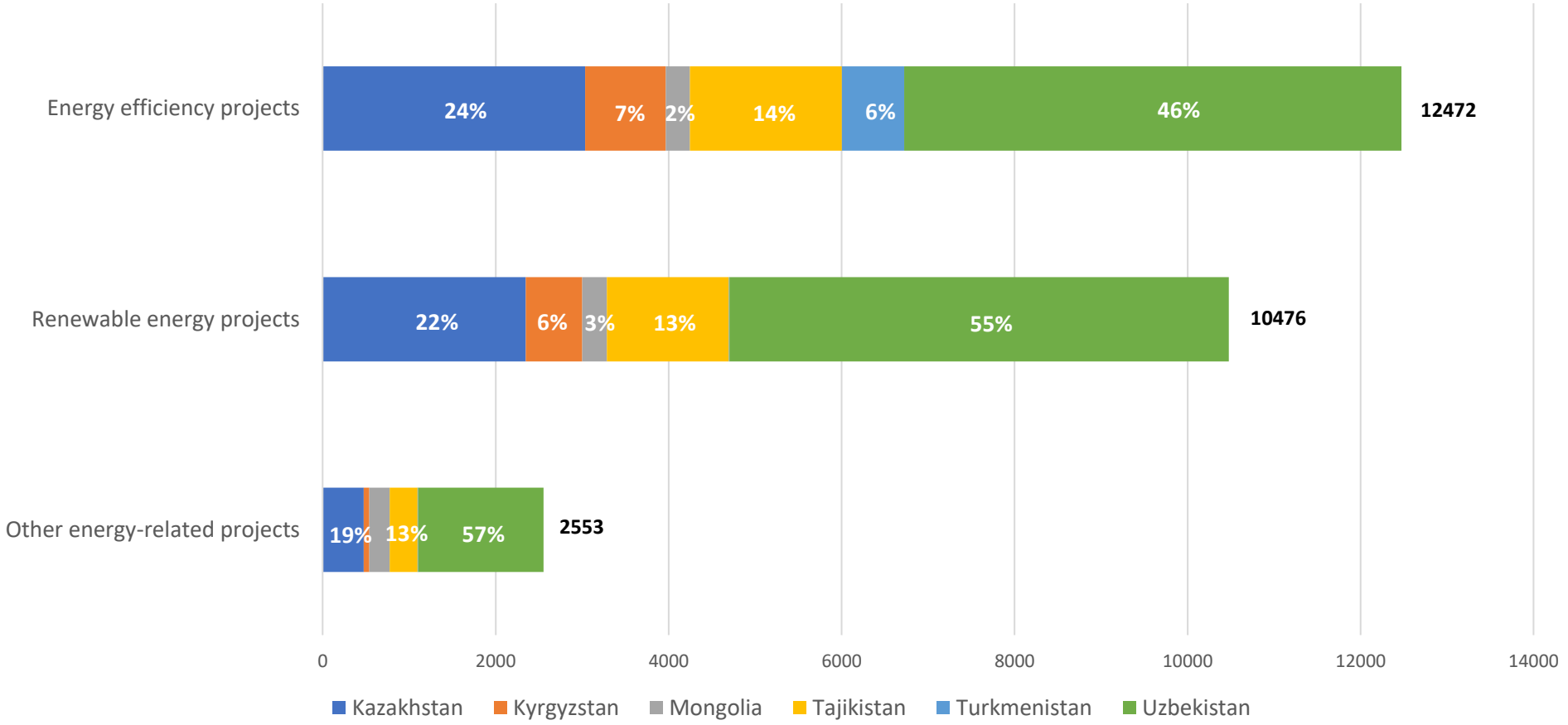
Note: Numbers in **bold** represent total investment in 6 CA countries for a particular year.

Dynamics of investment in energy infrastructure projects for 16 years by sectors, mln. USD



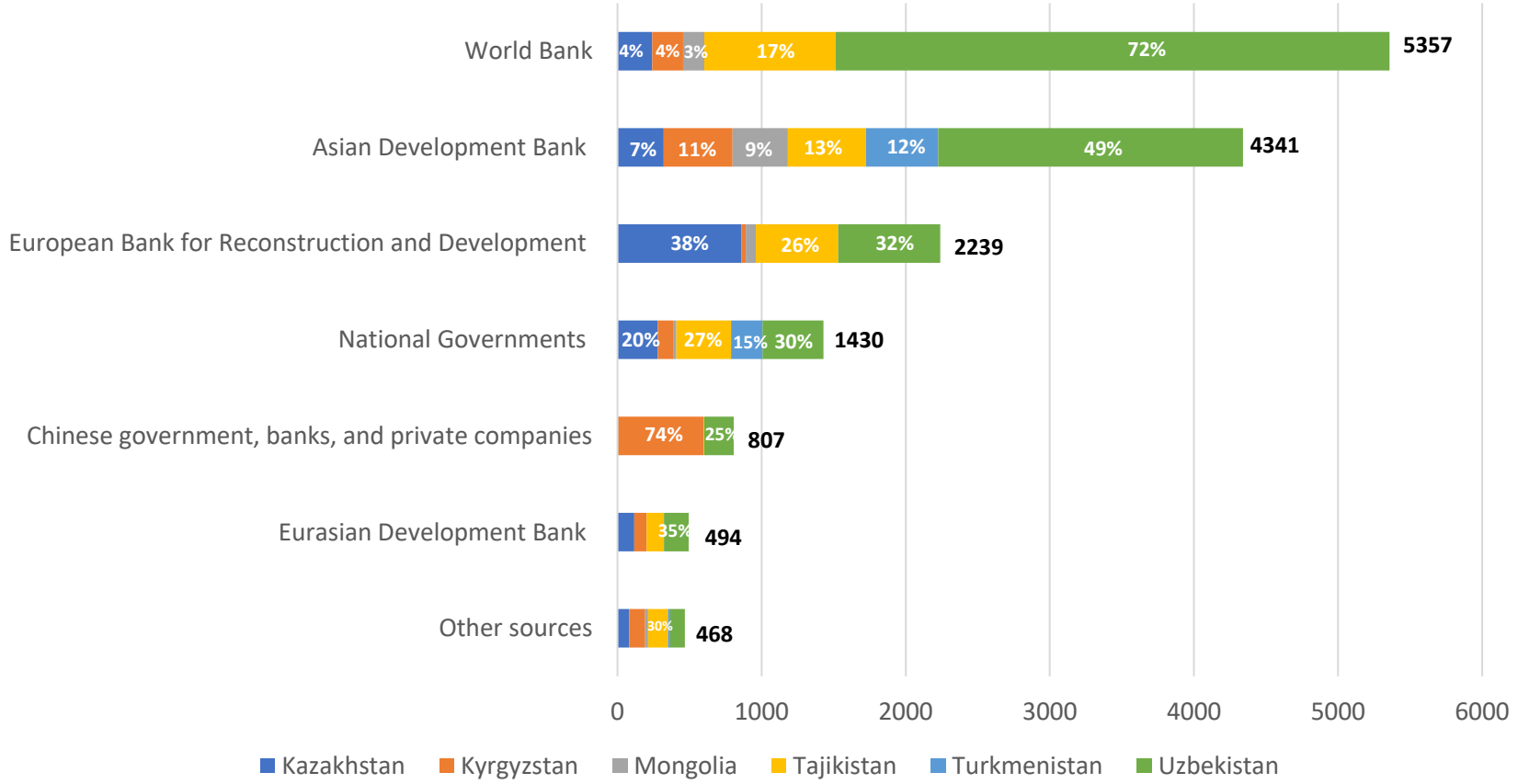
Note: Other energy-related projects include such projects as modernization of energy equipment, grid optimization, etc.

Total investment in energy infrastructure projects for 16 years by sectors and countries, mln. USD



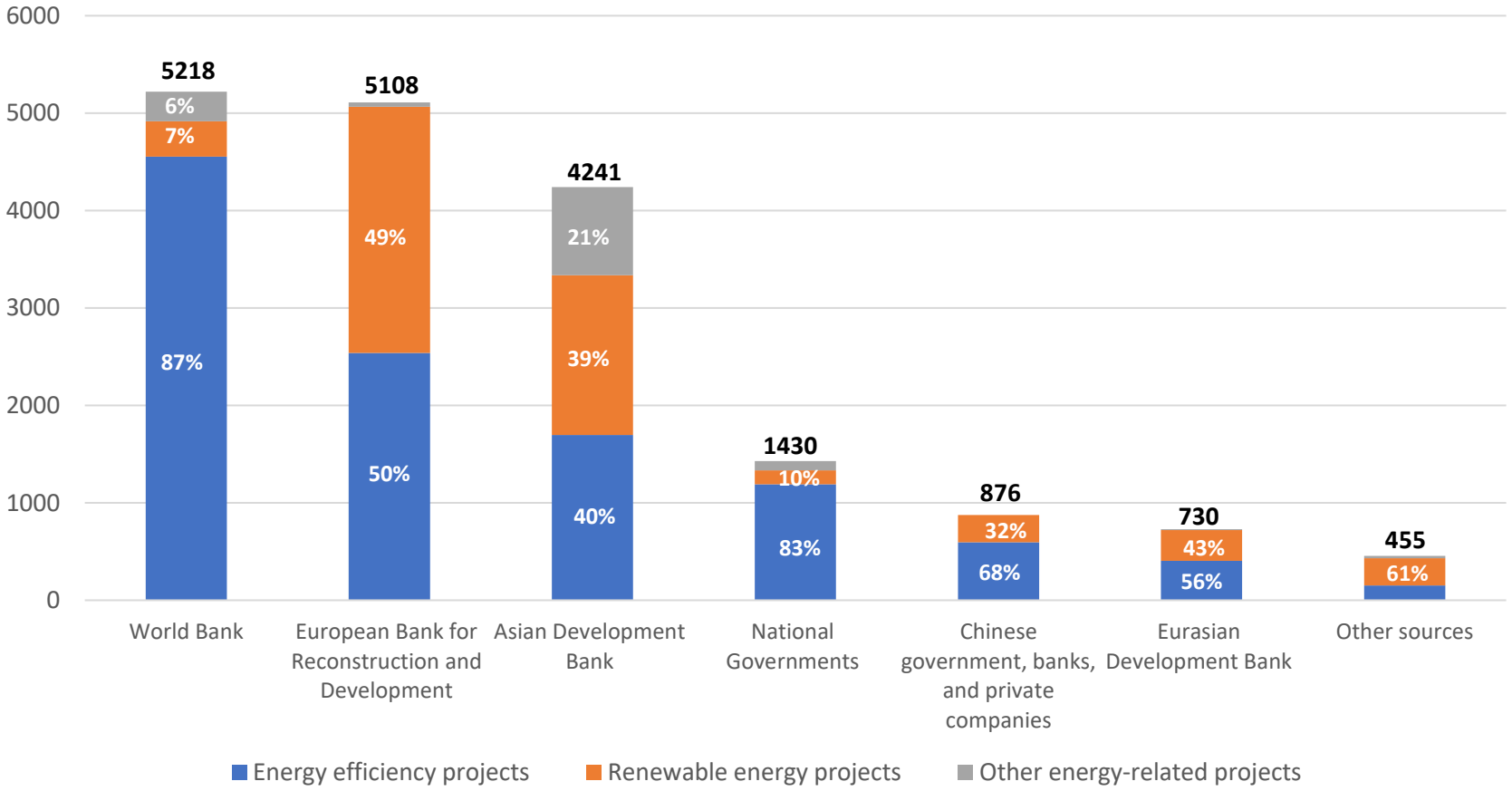
Note: Other energy-related projects include such projects as modernization of energy equipment, grid optimization, etc.

Total investment in energy infrastructure projects for 16 years by donors and countries, mln. USD



Note: Other sources include funding from such agencies as UNDP, Green Climate Fund, Japan agencies and funds, etc.

Total investment in energy infrastructure projects for 16 years by donors and sectors, mln. USD



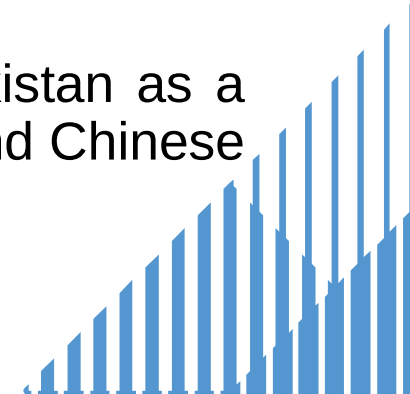
Note: Other sources include funding from such agencies as UNDP, Green Climate Fund, Japan agencies and funds, etc.

Preliminary findings

- **Overall Trend.** Over a period of 16 years, the energy infrastructure investment trends across six countries display fluctuating patterns. Uzbekistan had emerged as leader in attracting investments in low-carbon projects, while the other countries exhibit similar tendencies.

- **Sectors.** Among the three types of low-carbon investment projects, energy efficiency projects hold a significant share. However, investments in renewable infrastructure have seen a sharp increase in recent years. Kazakhstan and Uzbekistan are notable as the primary recipients of these investments.

- **Donors.** The distribution of investments by donors and countries highlights Uzbekistan as a major beneficiary. Multilateral Development Banks (MDBs), national governments, and Chinese entities have made substantial investments in energy-efficiency projects.



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Thank you!

Questions?