

ATTRACTING INVESTMENTS IN GREEN HYDROGEN IN CENTRAL ASIA

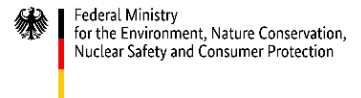
Insights from Uzbekistan

18 September

Peline Atamer
Senior Policy Analyst and SIPA Programme Manager
Global Relations / Environment Directorate
Peline.Atamer@OECD.org



Supported by:



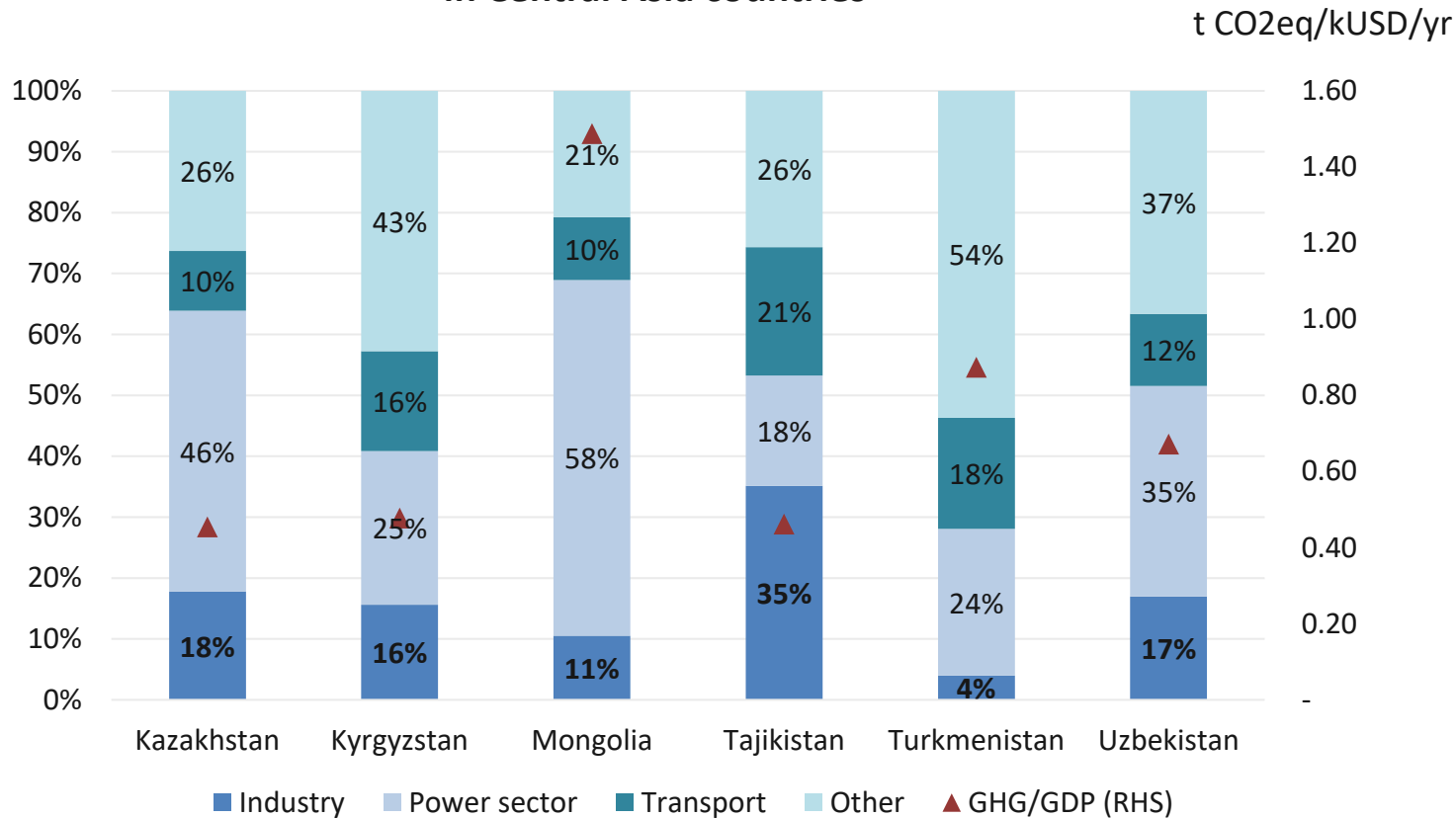
based on a decision of
the German Bundestag





Industrial sectors' contributions to climate and sustainability goals

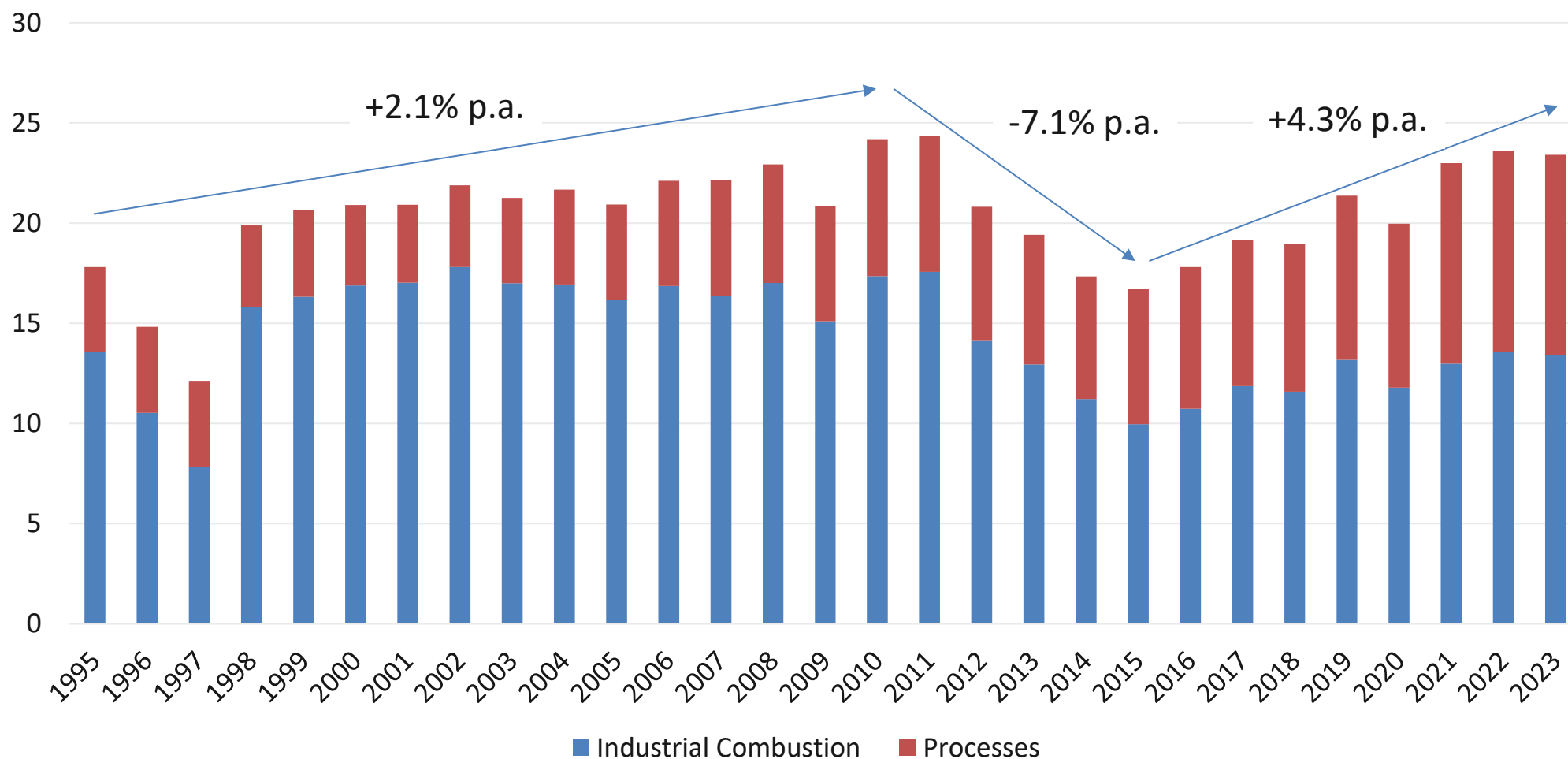
Sectoral contributions to national CO2 emissions and GHG intensity of GDP
in Central Asia countries



- Energy-intensive industrial sectors continue to receive significant amounts of investments (e.g. mining sectors)
- aligning future investments in industrial sectors with climate and green goals is central to Central Asia economies' sustainability and competitiveness



CO2 emissions from the industrial sector in Uzbekistan: decomposition and historical trend



Emissions from the production of cement, iron and steel, aluminum, chemicals, solvents, etc.: 43% of total CO2 emissions in 2023, +3.1% over 1995-2023 period

Combustion for industrial manufacturing: 57% of total CO2 emissions 2023 – stable over 1995-2023 period

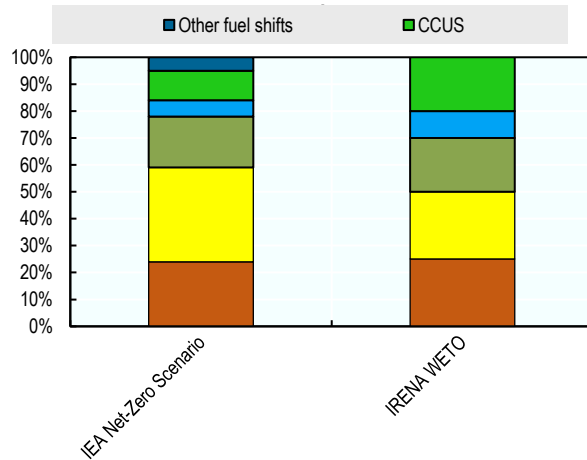
Source: author based on EDGAR database, accessed 08/09/2025

Restricted Use - À usage restreint

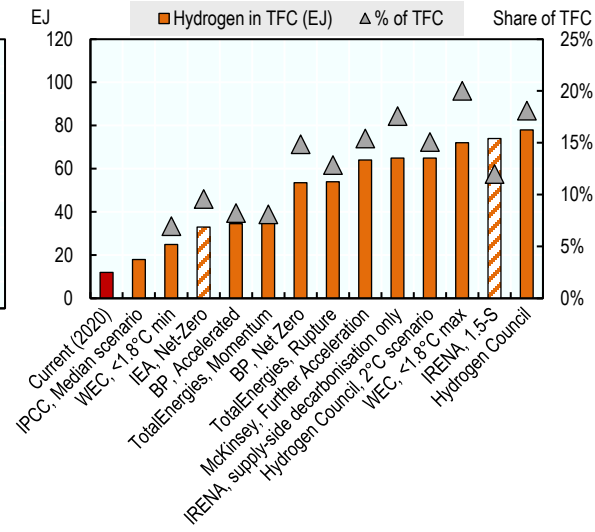


The role of renewable hydrogen in industry decarbonisation

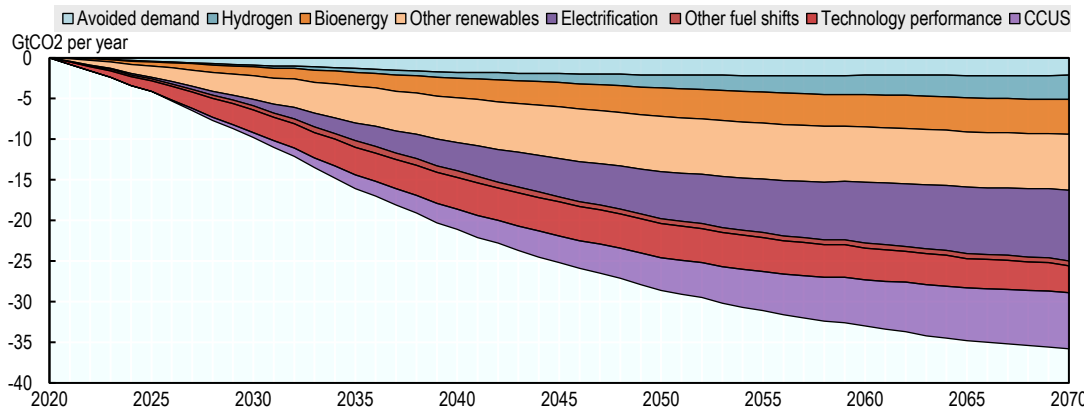
A. Sources of emission reductions in Net Zero



B. Scenarios of global hydrogen demand in 2050



C. Global energy sector CO2 emissions reductions by measure in the Sustainable Development Scenario relative to the Stated Policies Scenario



Hydrogen will play an important role in achieving net zero due to its ability to support the decarbonisation of hard-to-abate sectors

- Hard-to-abate sectors have limited decarbonisation options
- Electrification (RE) will play an important role in industrial decarbonisation, but new technologies – many in a low level of technological and commercial readiness – will be required for the final hurdle.
- Hydrogen is a promising alternative to fossil fuels in industrial processes that require high temperatures.



Recent hydrogen developments in Central Asia

In Uzbekistan

UKS - ACWA Power project

First green hydrogen project in Central Asia to reach Final Investment Decision (FID)

Financed by international financial institutions (IFIs) including the EBRD

2021: Presidential decree *On measures for the development of renewable and hydrogen energy in the Republic of Uzbekistan*

No national strategy and targets for renewable hydrogen development

Rest of Central Asia

Kazakhstan

- Svevind project
- National hydrogen strategy

Mongolia

- Sunsteppe project
- National hydrogen strategy under development

Tajikistan

- Drafting a roadmap for green hydrogen development

Kyrgyzstan, Turkmenistan

- Exploring potential for green hydrogen development



Recommendations for Uzbekistan: creating the framework conditions for attracting investments in green hydrogen

Develop a strategic vision

- Consider a formal commitment to decarbonise hard-to-abate industries and role of green hydrogen (under NDC or LTS plans)
- Envisage the development of a national hydrogen strategy, building on the 2021 Presidential Decree on renewable and hydrogen energy development

Create a business case for green hydrogen and support early investors

- Consider establishing targeted expenditure-based investment incentives
- Expand the use of de-risking approaches
- Envisage using carbon pricing instruments (ETS, carbon taxes)
- Continue to strategically engage with IFIs and bilateral co-operation platforms
- Include renewable hydrogen in green investment promotion efforts
- Align with international standards and certification requirements

Facilitate investment in green hydrogen and remove barriers to investment

- Ensure smooth permitting and licensing processes (planning and zoning, transport, water access, storage, handling and safety considerations)
- Consider leveraging SEZs and industrial clusters, enhancing agglomeration benefits and co-location of key infrastructure



Thank you!
peline.atamer@oecd.org

Supported by:



Federal Ministry
for the Environment, Nature Conservation,
Nuclear Safety and Consumer Protection

IKI



INTERNATIONAL
CLIMATE
INITIATIVE

based on a decision of
the German Bundestag

On behalf of:



Federal Ministry
for the Environment, Nature Conservation
and Nuclear Safety

of the Federal Republic of Germany

IKI



INTERNATIONAL
CLIMATE
INITIATIVE