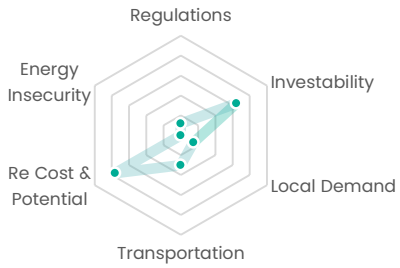
Uzbekistan

Index rank #39

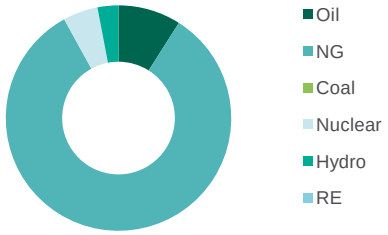
Aggregate score (out of 5) 1.8

GDP - USD (bn):	58
GDP per capita - USD:	1,686
Land area ('000 km2):	441
Population density (per km²):	75
Grid emissions factor (gCO²/kWh):	n/a

Hydrogen Drivers Matrix



Primary Energy Mix



0.6 Regulatory commitment
- Net zero by 2050
- Presidential Decree for hydrogen issued

1.5 Transportation
- Pipeline connection to large regional markets

3.2 "Investability"
- Rated BB- by S&P
- 69th in WB Ease of Doing Business
- Strong DFI funding support

3.8 RE cost and potential
- World class solar resource
- Good onshore wind resource
- Low renewable LCOE achieved with strong DFI funding support

0.7 Local demand potential
- Some ammonia production
- Some refining capacity
- Grid decarbonization

0.0 Energy insecurity
- Net energy exporter

Leveraging private and public partnerships to meet 2050 carbon neutrality

Uzbekistan has stellar renewable energy resources, and a robust pipeline of low-cost solar and wind projects have to date been procured with the technical assistance of and/or concessionary funding administered by development finance institutions. These projects have been at the forefront of clarifying the country's fast-changing and legacy-communist regulatory framework for foreign investments, establishing well-banked precedents that pave the way for hydrogen investments to come.

In January 2021, Uzbekistan declared its target for carbon neutrality by 2050, thereby taking the first step to opening up domestic use for green hydrogen. While no concrete roadmap yet exists, a Presidential Decree was signed shortly thereafter in April outlining measures to accelerate the green transition and to build a hydrogen infrastructure. Its aging fleet of gas power plants run at c.30% efficiency, and their replacement by low-carbon alternatives has garnered widespread support from DFIs, particularly EBRD with whom the country signed a MOU for collaboration towards 2050 carbon neutrality.

While the export case for Uzbek green hydrogen has yet to be defined, there is significant potential given the land-locked country is a net energy exporter to neighbours via gas pipelines. However, green hydrogen currently has limited export value given that carbon pricing does not exist in the region, and the development of such a market is likely to be a slow process.

Presidential Decree for hydrogen

A new Presidential Decree signed in April 2021 outlines measures to build hydrogen infrastructure and introduce innovative technologies that can further the development of renewable energy and hydrogen. As part of the measures, a National Research Institute of Renewable Energy Sources has been created, that includes a Research Centre for Hydrogen Energy, and the Laboratory for Testing and Certification of Renewable and Hydrogen Energy Technologies. This is seen as a symbolic and strategic step for the country's green transition.

ACWA Power and Air Products Collaboration

The Uzbekistan Ministry of Energy in January this year entered into a strategic framework agreement with ACWA Power and Air Products to develop research programmes and projects in the field of hydrogen and renewable energy. The agreement is part of ACWA's 2.5GW power project portfolio that is under development in the country, including 1GW of wind.