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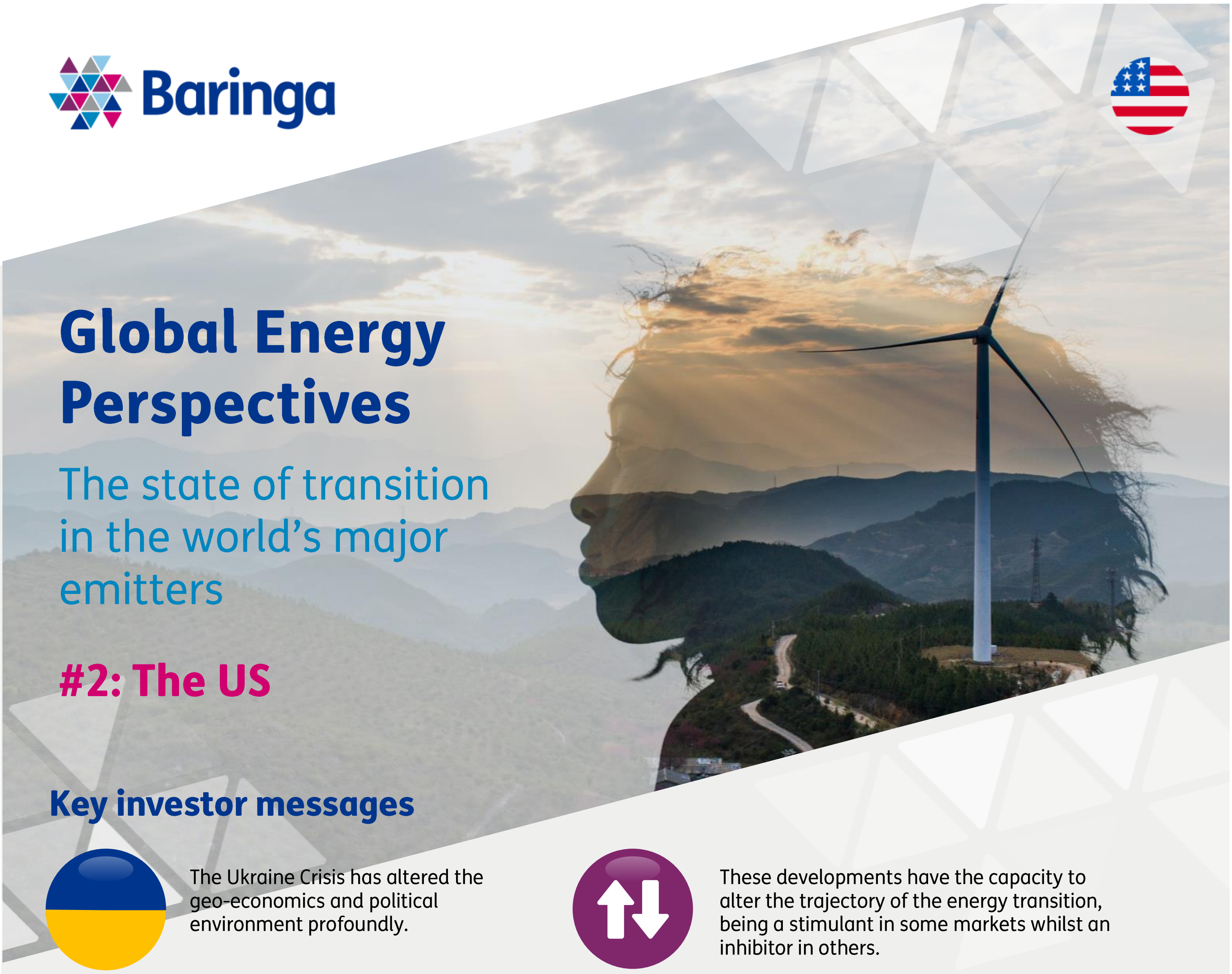


Global Energy Perspectives

The state of transition in the world's major emitters

#2: The US

Key investor messages

The Ukraine Crisis has altered the geo-economics and political environment profoundly.

These developments have the capacity to alter the trajectory of the energy transition, being a stimulant in some markets whilst an inhibitor in others.

These events underline the vulnerability of the transition to macro forces.

Investors should continue to monitor these risks and review their strategy when determining their exposure to the energy transition in different markets.

The Russian invasion of Ukraine has generated four impacts each with the potential to alter the course of the energy transition.

Gas and power price shock

Shortages of Russian pipeline gas has sent fossil fuel prices spiking, with European benchmarks in particular seeing unprecedented highs.

Stagflation

Rising commodity prices have stoked a bitter cocktail of accelerating inflation and decelerating growth. As a consequence the growth outlook globally has been slashed.

Energy Security

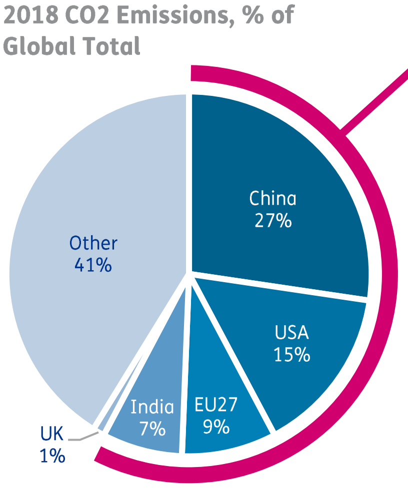
Governments have placed renewed importance on the imperative of energy security as faith in global supply chains have been rocked on account of Putin's weaponisation of gas supplies.

Political tension

The invasion of Ukraine has signalled an abrupt end to the stability of the post-cold war era. New geopolitical blocs creates instability abroad, whilst an emerging cost of living crisis threatens to enflame discord at home.

The State of the Transition: Climate Change & National Commitments

National Commitments suffer from credibility and durability risk



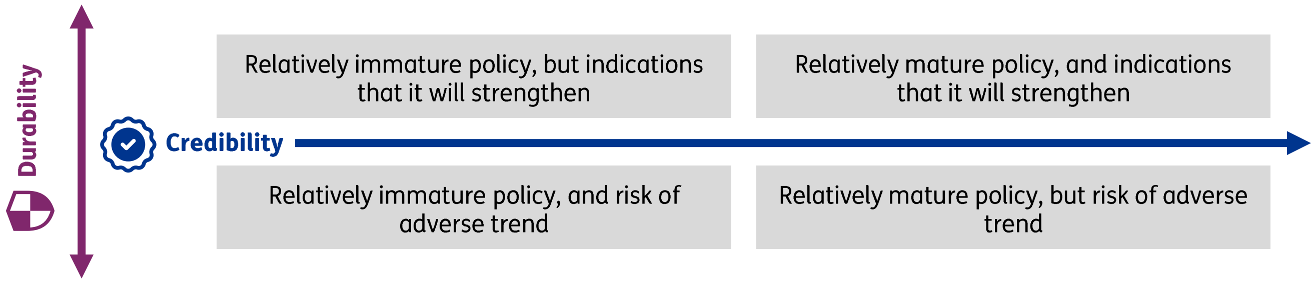
The top 4 global CO2 emitters produce 58% of global CO2 emissions. Their targets are disproportionately important to the global transition. However…

Future action is uncertain due to national commitments suffering from credibility and durability risk

Baringa's Global Energy Perspectives Team have developed a methodology to assess the credibility and durability of nations' commitments:

Credibility: A measure of policy maturity. How developed is domestic decarbonisation policy in relation to Net Zero.

Durability: A measure of the depth and breadth of political support. How vulnerable is the energy transition to political and economic shocks



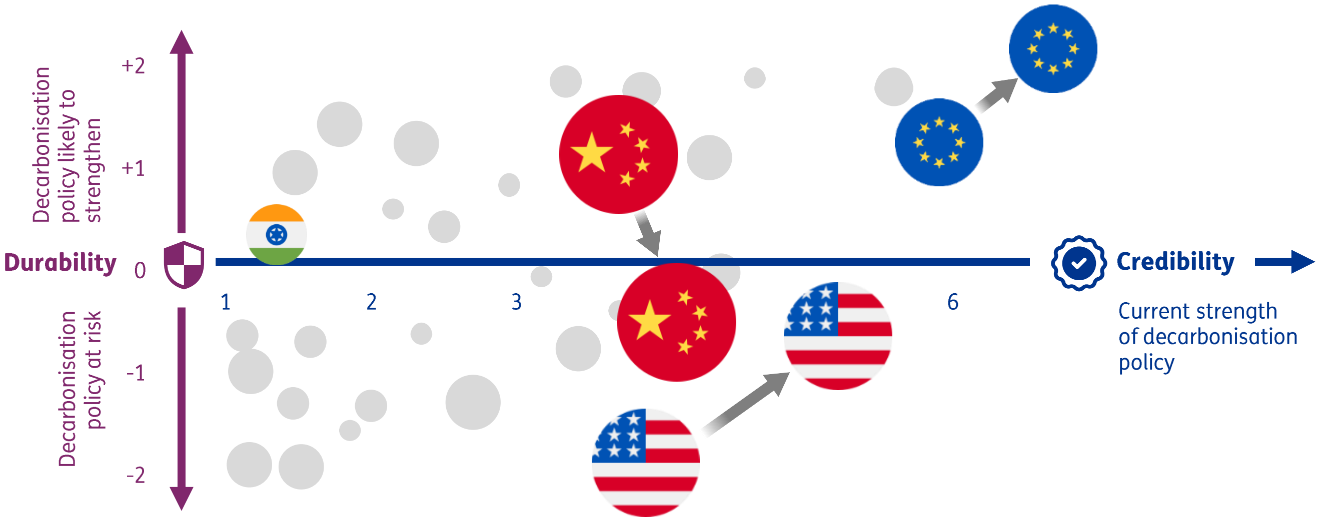
The State of the Transition: Country Overview

National Transition plans have been impacted by the changing economic geopolitical environment of 2022

Major political breakthrough with the passage of the Inflation Reduction Act, the first major climate act in decades. The support of Congress reduces future rollback risks.	↑	↑
Energy war creates a paradigm shift in thinking on energy security. The lack of domestic fossil fuels spurs and accelerated transition to reduce foreign dependencies.	↑	↑
Geopolitical turmoil risks heightening impotence of domestic coal for supply security, whilst growth slowdown risks stimulating a carbon intensive growth stimulus.	↗	↓
Commodity price shock has led to falling demand for gas in price sensitive markets like India, contributing to demand spikes in coal. Renewable build out is increasing at an impressive rate however, with fewer new coal plants built. Nevertheless, emission reduction targets remain unsupported by policy and are contingent on foreign finance.	→	→

Direction: PEP Credibility & Durability Index

Credibility & Durability is a measure of confidence over whether governments will reach Net Zero



Illustrative

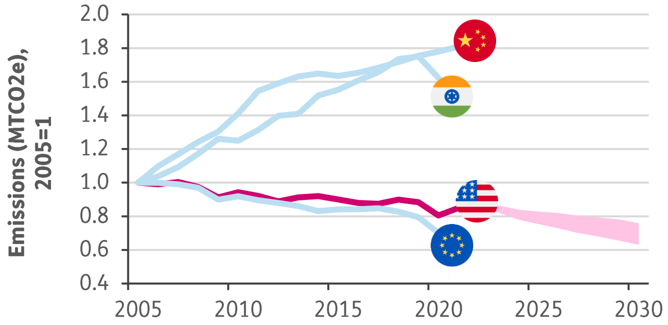
Historically **the US** has underperformed in our **Credibility** & **Durability** methodology, with underwhelming scores in credibility and negative scores in durability. The **Credibility** axis, on the x axis, looks at policy maturity, evaluating countries on its legislative and policy progress to Net Zero. The **Durability** axis, on the Y axis, looks at the political support, the momentum behind decarbonisation evaluating the risks of potential rollbacks.

The US suffered from a weak credibility score owing to the lack of legislative support for climate targets, with deadlock in Congress undermining the verbal commitments made by Presidents in international agreements.

Similarly, the lack of cross-party support for energy and climate policy, coupled with the lack of legislative progress, create significant durability risks as policy and regulatory agenda's could be repealed easily by each incumbent president. The rollbacks pursued aggressively by President Trump represents this manifestly.

US: Renewed targets and ambitions

Total Emissions (excl. LULUCF), Indexed to 2005



Source: Climate Action Tracker Forecasts, Baringa Analysis

Progress:

- Emissions have been on a downwards trajectory
- The US successfully achieved a Kyoto target of a 17% reduction in emissions on 2005 level in 2020

Targets:

- Net Zero by 2050
- Reducing GHG emissions by at least 50% by 2030, compared to 2005 levels

US: Rising **Credibility** | Rising **Durability**

Re-running our methodology we see rising scores for both Credibility & Durability in the US.

On the Credibility axis, there have been major advancements in US policy.

Two major pieces of legislation have been passed. The first, a bi-partisan bill invested $550b in infrastructure including essential EV charging infrastructure for green transport. The administration also reintroduced stricter fuel and emissions standards for vehicles.

The second, a bitter opposed bill called the Inflation Reduction Act. Whilst it remains a watered-down version of Biden's original Build Back Better act, without mandatory renewable energy targets for States, it nevertheless is significant. The act represents a major step forward providing $369 billion in rebates and tax credits to stimulate renewable energy deployment.

Whilst a 2030 Paris commitment deficit remains under the IRA it is estimated that over 500 million tonnes of carbon will be removed by 2030 relative to the pre-IRA trajectory. This represents a 40% reduction in US emissions relative to 2005.

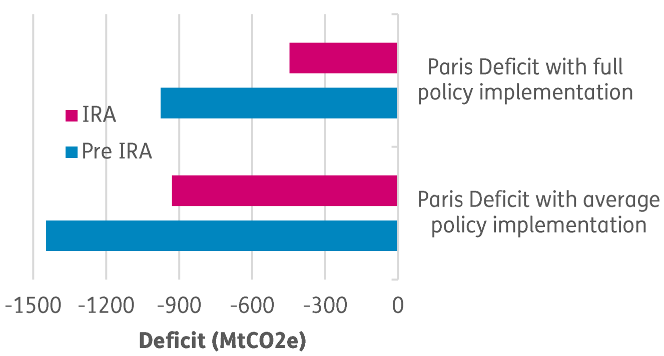
Major policy development – The Inflation Reduction Act

The IRA represents a win for Biden, but falls short on Paris agreement targets.

The IRA represents the most progressive climate policy in US history

- Largest climate investment in US history ($369 billion) seeking to:
  - Drive down consumer energy costs
  - Increase energy security
  - Reduce greenhouse gas emissions
- Three primary mechanisms to achieve these objectives:
  - Direct to consumers - rebates and tax credits
  - Direct to industry - production and investment tax credits
  - Direct to communities - grants and investment
- Funded primarily through taxation

The 2030 Paris Agreement Emissions Reduction Deficit



But ambition and implementation challenges remain

Mixed messages on oil and gas

Investment into oil and gas including new development in Alaska and Gulf of Mexico causes for concern for environmental campaigners.

Implementation risk in US States

The uptake of IRA subsidies is contingent on State support, with subsidies often considered a threat to local coal and gas jobs making this uncertain.

Paris deficit remains intact

Full implementation of IRA falls short of Paris Commitment of a 50% reduction in emissions by 2030.

Durability

On the Durability axis we also see some positive movement. In the US the four major impacts of Ukraine have been more muted, being either neutral or slightly positive for the energy transition.

Biden's landmark climate legislation keeps US transition hopes alive

Risk	Impact RAG	Transition Response	Commentary
Gas and power price shock	Low	Neutral	**Response has been to pay more for gas without focusing on reduced consumption.** Prices for US natural gas reached $10/mn Btu for first time since 2008 however Henry Hub prices remain well below European benchmarks.
Energy security	Low	Neutral	**US energy security neutral given abundance of domestic oil and gas.** Increase in shale production revolutionized US energy policy in the 2010s by creating energy independence for the first time in decades.
Stagflation	Medium	Neutral	**Stagflation resulting in increased debt and interest rates.** US inflation slowed to 8.3% in August 2022, suggesting the inflation peak has passed. Growth prospects look more resilient as a result.
Political tension	Medium	Positive	**Positive momentum following IRA passing in spite of persistent political polarisation on climate change.** • $369b spending over 10 years tackles emissions, whilst also serves domestic political agenda by prioritizing domestic jobs in manufacturing and deployment. • Climate has decreased political salience in upcoming midterms but the partisan gap remains strong at >45% • Rollback risk of IRA is minimised as would require majorities in both Houses to repeal the law.

If you are interested in hearing more, please get in touch with our experts.

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