Baringa

Global Energy Perspectives

The state of transition in the world's major emitters

#4: India

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.

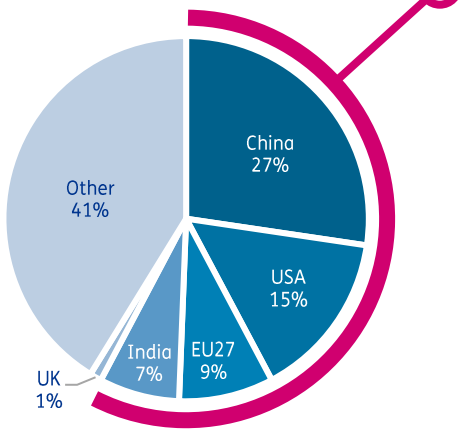
Political tension

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

2018 CO2 Emissions, % of Global Total



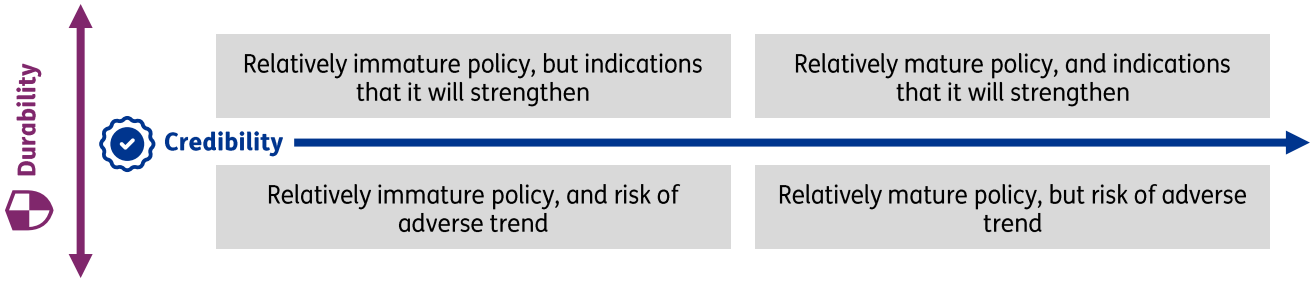
The top 4 global CO2 emitters produce 58% of global CO2 emissions. Their targets are disproportionately important to the global transition. However...

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.



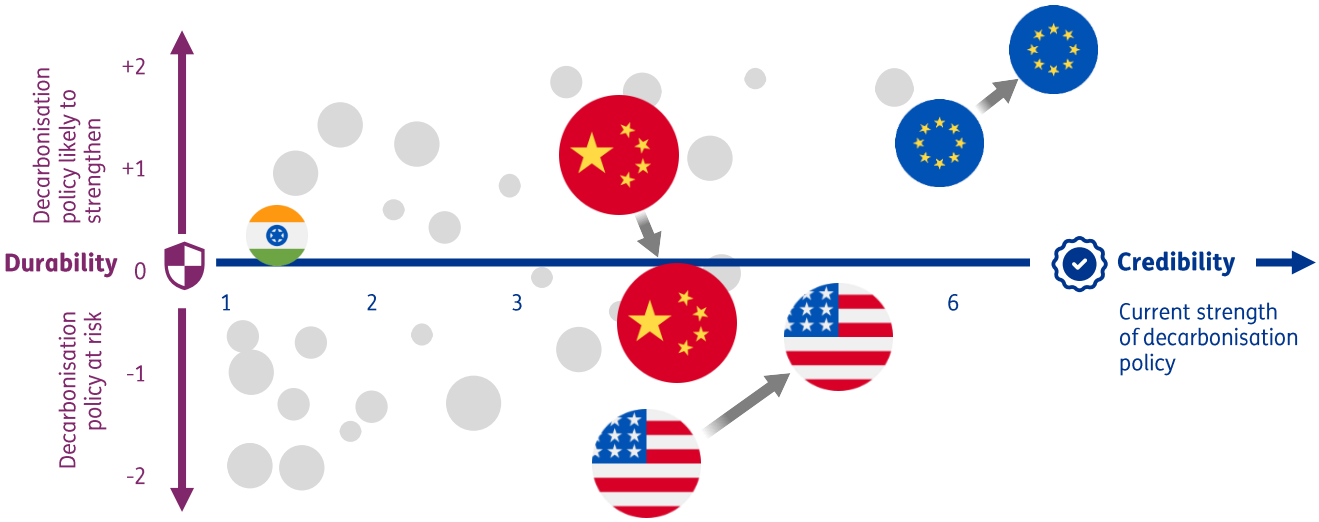
The State of the Transition: Country overview

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

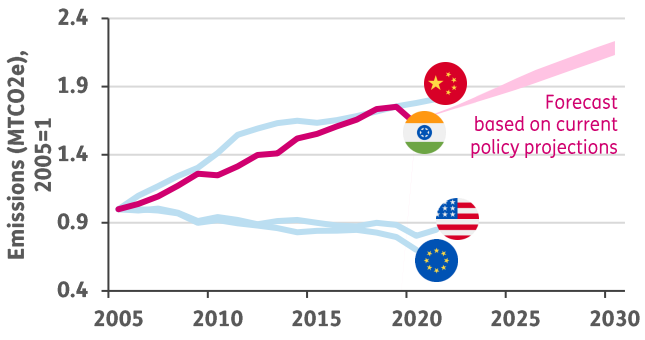
Historically India has performed poorly in our **Credibility** & **Durability** methodology, with low scores for **Credibility** and neutral scores for **Durability**. The **Credibility** axis, on the x-axis, looks at policy maturity, evaluating countries on its legislative and policy progress to net zero. The **Durability** axis, on the y-axis, looks at the political support, the momentum behind decarbonisation evaluating the risks of potential rollbacks.

India has suffered from a weak **Credibility** score owing to its priority for economic growth and poverty alleviation. Its low per capita energy use has aided In India's arguments that its right to economic development should be prioritised over Net Zero. Nevertheless, given India's population size it remains the fourth largest polluter and, therefore, crucial to global decarbonisation efforts.

With a low **Credibility** score, India's **Durability** outlook was neutral. Its limited policy and legislative progress made roll-back risks impossible, whilst the low salience of decarbonisation efforts made positive political momentum unlikely.

India: Rapid emission growth as India develops

Total Emissions (excl. LULUCF), Indexed to 2005



Source: Climate Action Tracker Forecasts, Baringa Analysis

Progress:

- Historically India has resisted committing to international targets. Its first commitments were at Paris in 2016, pledging to reduce the intensity of emissions as a proportion of GDP by 35% by 2030. It is on course to exceed that target.

Targets:

- Commitments to reduce the emissions intensity of its GDP by 2030 from a 2005 level.
- Achieve 50% zero carbon capacity in power generation by 2030.
- Net Zero by 2070.

India: Flatlining Credibility | Flatlining Durability

Re-running our methodology we see flatlining pressure for both credibility & durability in India.

The Credibility axis is flatlining.

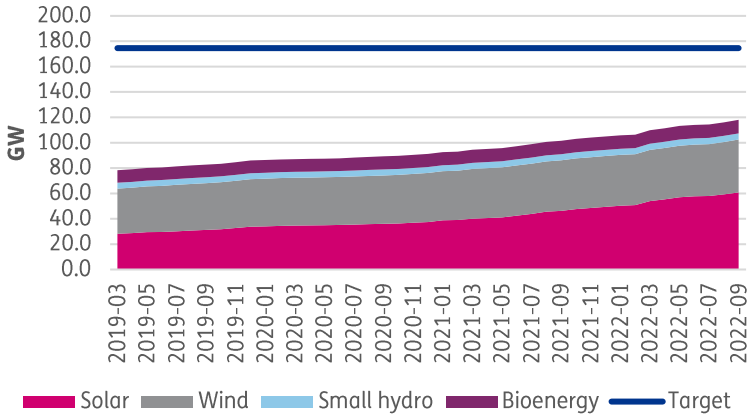
Credibility: High targets risk not being met

High ambitions with insufficient financial and policy backing.

India has achieved impressive rates of renewable deployment in recent years. However, credibility has flatlined in India owing to the challenges India faces on delivering on its climate promises. Whilst India has seen a significant upgrade in its targets, with new NDC's to reduce the carbon intensity of GDP, achieve a 50% carbon neutral power sector by 2030 as well as Net Zero by 2070, there is uncertainty over whether these aims can be achieved.

Firstly, operationalisation. Targets which are supported by defined policy have a patchy delivery record. For example, current RES targets for 2022 are set to be missed by over 60 GW, undermining the ability of India to meet its policy goals.

India expected to miss 2022 RES target



Source: Ember

Secondly, policy gaps. Many of India's most significant targets such as net zero and emission intensity reduction, have no short-term milestones, are not backed by policy or are explicitly contingent on foreign funding. All of this casts doubt over the credibility of these targets.

India's updated Nationally Determined Contributions marks shift

- Published first NDCs since signing Paris agreement
- Represents a shift in Modi's narrative and shift in commitments and pledges.
- Includes commitments e.g.
  - To reduce Emissions Intensity of its GDP by 45% by 2030, from 2005 level.
  - To achieve about 50% cumulative electric power installed capacity from non-fossil fuel-based energy resources by 2030.
- Builds on market driven progress e.g. solar deployed capacity increased by 5000% between 2012 and 2021.
- However continued lack of policy support to absolute emission target, the net zero policy deficit.

But policy implementation mechanisms lacking

Limited industry specifics

There is no accompanying industry specific plan to decrease energy intensity.

Domestic carbon credits market announced but target sectors undefined.

Funding challenges

Funding requirements are not defined and not secured. $10.1tn financing estimated as necessary for net zero by 2070.

Action plan undefined

No detailed action or implementation plan to meet either target-based commitments or statements.

Durability

On the Durability axis we also see a flatling level of commitment.

Capitalising on Russian coal dwarfs progressive climate policies

Risk	Impact RAG	Transition Response	Commentary
Gas and power price shock	Low	Negative	**Gas price shock resulting in decreased national demand for gas in favour of coal.** • India benefiting from discounted Russian gas and oil trade with imports of Russian oil to India up 23% on 2021 levels. • Coal import volumes from Russia up 359% since February.
Energy security	Medium	Negative	**Achieving energy security is a geostrategic imperative, resulting in decreased gas and increased coal in energy mix.** Coal production in FY22 up 8.6% from FY21 as government takes steps to incentivise more indigenous coal production.
Stagflation	High	Negative	**Cost of living crisis and growth ambitions driving accommodating policy to fossil fuel development.** • Windfall tax on fuel cut (2022) to stimulate domestic production and support households with inflated costs. • Modi preserving commitment to growth by hinging commitments to reduce emissions intensity to its GDP. • Commitment that ~50% electricity generating capacity made up from non-fossil fuels by 2030 is conditional on finance and tech transfer from other countries. • Capitalising on FDI opportunities with 'green, social, and sustainable debt' in India hitting $7.5bn in 2021, a six-fold increase from 2020.
Political tension	Low	Negative	**India is caught between the geopolitical tensions of the West and a Russian-China axis.** India's resource dependence on Russia and China has so far incentivised the country to continue to purchase Russian fossil fuels despite Western sanctions. If conditions were to deteriorate, however, India's trade access and economic growth could suffer, incentivizing greater domestic energy usage from coal.

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

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