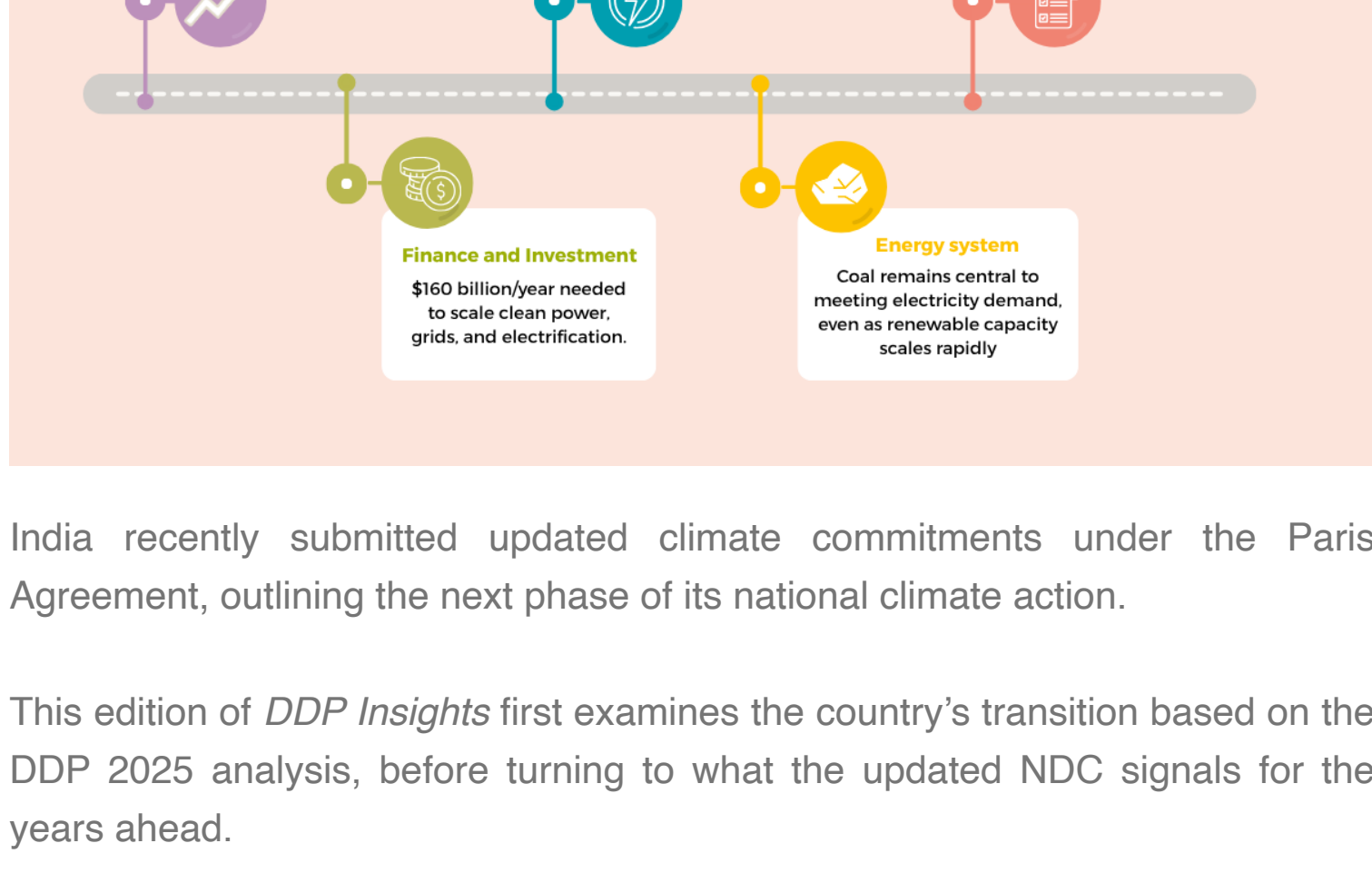




Deep Decarbonization Pathways

DDP Insights

India



India recently submitted updated climate commitments under the Paris Agreement, outlining the next phase of its national climate action.

This edition of *DDP Insights* first examines the country’s transition based on the DDP 2025 analysis, before turning to what the updated NDC signals for the years ahead.

A transition shaped by growth and rising demand

India’s pathway since the Paris Agreement reflects a dual dynamic: rapid growth in energy demand alongside measurable progress in emissions intensity.

Between 2005 and 2020, India reduced the emissions intensity of GDP by 36%, putting it on track toward its 2030 target. At the same time, emissions continue to rise in absolute terms, reflecting expanding economic activity and increasing energy use.

This dynamic shapes the overall trajectory of the transition.

A coordinated but uneven transition

India’s climate action is underpinned by a broad and increasingly coordinated policy framework.

Since 2015, the country has introduced more than 650 policies across national and sub-national levels, supporting renewable energy, electrification, efficiency, and clean fuels. These efforts are aligned through its updated NDC and Long-Term Low Emissions Development Strategy (LT-LEDS), linking short-term action with a long-term net-zero goal by 2070.

At the same time, implementation challenges remain. Infrastructure constraints, uneven progress across sectors and regions, and financing needs — estimated at around USD 160 billion per year in the energy sector through 2030 — continue to shape the pace of change.

What this tells us

India’s pathway shows that deep decarbonization in emerging economies is closely tied to development.

The next phase of the transition will depend on how effectively different parts of the system evolve together — from scaling clean power and strengthening grid infrastructure, to managing coal dependence and accelerating changes in industry, transport, and consumption.

The next phase of the transition will depend on how effectively different parts of the system evolve together — from scaling clean power and strengthening grid infrastructure, to managing coal dependence and accelerating changes in industry, transport, and consumption.

As emissions intensity continues to fall and clean energy deployment accelerates, the challenge is not whether the transition is underway, but how it can be sustained — in a way that supports both climate goals and continued economic growth.

Explore the full analysis

Ten Years After Paris: Transition Outlook INDIA

Emissions trajectory since Paris Agreement

Emissions continue to rise, but GHG intensity fell 36% by 2020 vs. 2005, placing India on track toward its 45% reduction target by 2030.

Progress

Energy system transformation shows some momentum, with an increasing share of renewables in electricity capacity. While coal still plays a central role in meeting demand, share of renewable sources in the energy mix has increased consistently. Total installed capacity grew from around 305 GW (2015-16) to 475 GW (2024-25), with renewable sources reaching almost 50% of installed electricity capacity in 2025, 5 years before the 2030 NDC target. Grid infrastructure is being gradually expanded and strengthened.

Decoupling economic growth from emissions intensity

GHG emissions intensity of GDP was reduced by 36% by 2020 compared to 2005, placing India on track toward its 45% NDC target (2030). With rising demand and critical development needs, total emissions in India continue to rise, however emissions growth has remained slower than GDP growth, reflecting some structural efficiency shifts.

Strengthening of coordinated climate governance around long-term objectives since the Paris Agreement

The Indian LT-LEDS, submitted to UNFCCC in 2022, was produced by a multi-ministerial task force involving all ministerial authorities in charge of relevant sectors. Throughout its development phase, consultations were held with sub-national governments, civil society organizations, academia, and private sector representatives. Climate objectives are increasingly integrated across sectoral policies, and planning instruments, providing a coordinated framework for long-term transition.

Enablers

Long-term perspective integrated in national climate policy-making through alignment of NDC and LT-LEDS

India’s updated NDC and LT-LEDS combine short-term targets with a long-term decarbonization strategy towards a net-zero target by 2070. This alignment aims at linking climate and development priorities in electricity, industry, transport, buildings, and lifestyle-based mitigation under a single strategic framework.

Scale-up of national policies and regulations aligned with short-term action and long-term goals

Since 2015, India has introduced over 650 national and sub-national policies directly or indirectly supporting its net-zero target. These include targeted measures on renewables, energy efficiency, electrification and clean fuels. Key mechanisms include production-linked incentives for solar PV and batteries, solar parks, wind repowering and energy storage obligations. Grid improvements have significantly lowered technical and commercial losses.

Integration of economic development and climate objectives

India’s transition approach emphasizes co-benefits for energy access, affordability, air quality, and green jobs. National initiatives such as Mission L1E, the National Green Hydrogen Mission, and clean cooking and efficiency programs embed climate action within broader development priorities.

Check the full India chapter from the DDP 2025 Report

This edition draws on the India chapter from the DDP 2025 report, “*A Decade of National Climate Action: Stocktake and the Road Ahead*”

- [Read the full India chapter](#)
- [Download the India one-pager](#)

An analysis of India's updated NDC: Insights by DDP in-country expert Prof Amit Garg

India published its updated Nationally Determined Contribution (2031–2035), approved by the Cabinet on 25 March 2026 and set to be communicated to the United Nations Framework Convention on Climate Change. It includes updated commitments across emissions intensity, clean energy capacity, and carbon sequestration.

As one of the major global emitters, this announcement was expected by the international community as a political signal of the country’s continued engagement with the Paris Agreement, and as an indication of the direction envisaged for national climate action over the coming decade.

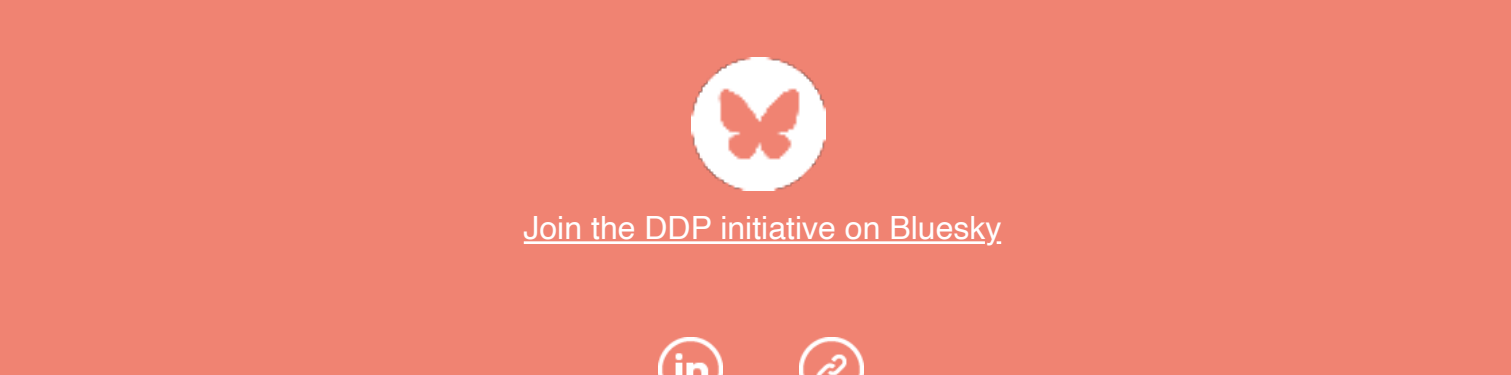
In this context, the updated NDC provides a reference point for the next phase of India’s transition. As the DDP analysis highlights, the key question is how these commitments translate into coordinated, system-wide changes across sectors — particularly in power, industry, transport, and land use.

For additional perspectives on India’s approach, see this recent analysis:

- [Read Prof. Garg’s full article here](#)

About DDP Insights

DDP Insights builds on the work of the Deep Decarbonization Pathways (DDP) Initiative, drawing on country-driven analysis to explore how national climate goals translate into real-world transformation.



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