Deep Decarbonization Pathways

NDC INSIGHTS n°9

Asia's giants in transition: How China and India are shaping the global path to net zero

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🌎 Two countries, one global impact

China and India together account for over a third of the world's population and a major share of global emissions. Their choices in the coming decades will determine not only whether the Paris goals are met but also how fairly and feasibly the transition unfolds.
The latest country fiches from the Deep Decarbonization Pathways (DDP) Initiative highlight the different contexts in which these two countries are tackling the same challenge: how to cut emissions without stalling development.

China: Decarbonization at scale

China has pledged to peak CO_2 before 2030 and achieve carbon neutrality before 2060. The transition is guided by the "1+N" policy framework, which centers on rapid clean power expansion, deep electrification, and the use of market-based tools like carbon pricing.

Progress is already visible. By the end of 2024, non-fossil power capacity reached 1,950 GW, accounting for 58.2% of total installed capacity. The transport sector is also shifting rapidly: in 2024, China sold 12.86 million new energy vehicles, making up 40% of the domestic auto market and 70% of global EV sales.

But the road ahead is steep. To meet its neutrality goal, China's CO_2 emissions need to decline at an average of 9% per year between 2030 and 2050. That means scaling renewables and storage, phasing out coal, expanding the national emissions trading scheme, and accelerating electrification in industry, buildings, and transport.

The social impacts will be significant—millions of jobs lost in fossil industries, but possibly even more created in clean energy and related sectors. Managing this balance, while mobilizing the trillions in investment required, will be key.

Read the China's country fiche

India: Growth with constraints

India is on track to meet its 2030 NDC targets, which include reducing the emissions intensity of GDP by 45% from 2005 levels, raising the share of non-fossil power capacity to 50%, and expanding forest cover. Its net zero goal is set for 2070.

India's emissions are still growing, driven by coal use in power and industry, but per capita emissions remain well below the global average. The challenge is balancing rapid economic growth and poverty reduction with an accelerated shift to clean energy.

Progress is visible in the power sector: renewable capacity has tripled since 2014 to reach 234 GW in 2025, and India is on track to achieve its 500 GW non-fossil target by 2030. Transport is another bright spot, with rapid EV uptake in two- and three-wheelers, and Indian Railways targeting net zero by 2030.

But hard-to-abate sectors like steel, cement, and freight transport remain major hurdles for the long term. In the short term, India's priorities lie elsewhere: expanding grid infrastructure, scaling storage and hydrogen, improving industrial efficiency, and making sure coal transitions are fair for affected workers and regions.

India also puts unique emphasis on lifestyle change through its "LiFE – Lifestyle for Environment" initiative, the first of its kind to be written into an NDC. By promoting sustainable consumption across energy, water, and waste, LiFE aims to make climate action part of daily life for India's 1.4 billion citizens.

Read the India's country fiche

What this means for NDCs

The experiences of China and India underscore two realities. China, illustrates the challenge of scale—mobilizing vast investment, phasing down coal while sustaining economic growth, and ensuring that the pace of decarbonization accelerates after 2030. India, meanwhile, illustrates concerns about equity in the transition—delivering clean development while lifting millions out of poverty, and ensuring that transitions in coal-dependent regions are just.

Both cases show that the next round of NDCs must do more than set targets. They must align climate ambition with social and economic priorities, backed by investment, technology cooperation, and institutional reforms that can withstand the pressures of growth.

Next in NDC Insights: Launching the 2025 DDP report

Ten years on from the Paris Agreement—how much real progress have countries made on climate action?

In our next edition, we'll launch the **2025 Deep Decarbonization Pathways (DDP) report: *A Decade of National Climate Action: Stocktake and the Road Ahead***, which takes a deep dive into country-level progress on climate action since the Paris Agreement. The report brings together insights from across the DDP network, analyzing where countries are delivering, where gaps remain, and what needs to happen next to stay on track for 1.5°C. The countries included in this report are: Argentina, Brazil, Canada, China, Costa Rica, Dominican Republic, France, EU, Germany, Guatemala, India, Indonesia, Ivory Coast, Japan, Kazakhstan, Mexico, Nigeria, Senegal, South Africa, Thailand, and the United States.

Save the date:
Launch of our 10-year stocktake on national climate action
📍 **Paris** | 🗓️ **6 October 2025** | 🕒 **3:30 pm** *(invite-only)*
Full invitations will be sent out soon—stay tuned!

Missed the last newsletters? Download:
n°1 "Beyond pledges: Are NDCs addressing the transformations we need?"
n°2 "What role for Carbon Capture and Storage? A measured look at its place in the transition"
n°3 "Can land use deliver on climate and development goals?"
n°4 "Can we tackle non-CO_2 emissions without compromising food security?"
n°5 "From ambition to action: Where can countries reduce emissions in the next five years?"
n°6 "Laying the foundations for long-term emissions reductions"
n°7 "No transition without inclusion: Why the path to net zero must be fair"
n°8 "What the U.S. and South Africa can teach us about reaching net zero"

About the DDP and why this newsletter matters

The Deep Decarbonization Pathways (DDP) initiative supports countries in designing strategies for deep emissions cuts aligned with development goals.

Since 2013, DDP has worked with local experts to build bottom-up, country-driven pathways that turn climate ambition into real, grounded action.

Stay updated with the country news, publications and events!

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Our mailing address is:
DDP Initiative
27 Rue Saint-Guillaume
7e Arrondissement
Paris 75007
France