

Explained: PM Modi's climate promises, and how far India is on track to meet them

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At the UN climate conference in Glasgow last Tuesday, Prime Minister Narendra Modi raised India's existing climate targets, and also [announced a few new targets](#). Importantly, none of the targets is likely to be too difficult to achieve.

Net-zero

Of the five-point targets announced by Modi, achieving net-zero emission status by 2070 is the one whose roadmap is not available right now. This promise seems to have been made primarily to satisfy the international demand. At the same time, 2070 is a long way away — and there is plenty of time to plan a roadmap to achieve that target.

The other four targets have to be achieved in a more immediate timeframe, by 2030.

Emission intensity, renewables

Two of the targets — reducing emissions intensity and increasing the renewable mix in installed electricity capacity — are already part of India's official Nationally Determined Contributions or NDCs, submitted in 2015 as part of the requirement under the Paris Agreement.

In that NDC, India had promised to reduce its 'emissions intensity', or emissions per unit of GDP, by 33-35% from 2005 levels by 2030, and to ensure that at least 40% of its installed electrical capacity in 2030 would come through non fossil-fuel-based energy sources.

Modi has now enhanced both these targets: emissions intensity reduction to 45%, and the share of renewables in installed electricity capacity to 50%.

There was some confusion about the renewables target because of the words Modi used in his speech. He said India intended to fulfil 50% of its energy requirement through renewable energy by 2030. But all previous commitments were formulated for electrical capacity, which is only one part of the larger energy basket.

A senior official of the Environment Ministry has since confirmed to [The Indian Express](#) that the enhanced target related to installed electricity capacity, not energy requirement. This will be reflected in the revised NDC India submits to the UN Climate secretariat incorporating the new targets.

India was already on course to achieve both these existing targets well before the 2030 deadline. India's emissions intensity was 24% below 2005 levels in 2016 itself, the latest year for which data are available. A 33-35% reduction is expected to be achieved within the next two years. Although initial reductions are easier to achieve than later ones, a 45% reduction is not expected to pose too much of a challenge.

The case of renewable installed capacity is not very different.

By November 2020, the share of renewables, including large hydropower, in total installed electrical capacity had already crossed 36%. The share of non-fossil fuel energy sources was over 38%. Most of the new capacity additions are happening in the renewable space, and therefore taking this share to 50% will likely not be too difficult.

Forest cover: Not addressed

The third promise made in India's NDC, about increase in forest cover, did not find a mention in Modi's speech. And that is the only target India is struggling to achieve.

In the NDC, India has promised to create an additional carbon sink of 2.5-3 billion tonnes of carbon dioxide equivalent through forest and tree cover by 2030. Although forest cover has been growing, according to official data, the pace of growth so far has been far from commensurate with what is required to meet the target.

Non-fossil fuel

Modi's other two announcements, about raising installed capacity of renewable energy, and an absolute reduction of 1 billion tonnes of carbon dioxide by 2030, are not part of India's existing commitments, but are nonetheless linked.

India had initially set out to install 20 GW of solar power capacity by 2020. That was later raised to 100 GW by 2022. Targets for wind and biogas were later added, making it a renewable energy power capacity target of 175 GW for 2022. Two years ago, Modi enhanced this to 450 GW for 2030. None of this was ever part of the NDC, but publicly announced targets India had set for itself.

In Glasgow, Modi said India would have 500 GW of non-fossil fuel-based energy capacity by 2030. Non-fossil fuels include not just renewables like solar or wind, but also nuclear and hydro, which together make up over 50 GW right now. Achieving the 450 GW target for renewable energy, therefore, would automatically achieve the target of 500 GW for non-fossil fuel energy sources.

Also, installed nuclear energy is in the process of a significant ramping-up. Installed nuclear power capacity is set to increase to 22 GW by 2031 from the current 7 GW.

Absolute emissions

The fifth target Modi announced was new and unexpected. The PM said India would ensure it reduces 1 billion tonnes from its projected emissions between now and 2030. Put another way, India would bend its business-as-usual emissions trajectory to ensure at least 1 billion tonnes of emissions are saved.

This is the first time India has talked about making a reduction in its absolute emissions. All previous formulations used to be in terms of emission intensity, which is emissions per unit of GDP.

The 1-billion-tonne reduction promise and the emissions intensity target, however, seem to be inextricably linked. The latter target too is about bending the emissions trajectory. It seeks to ensure that while India's GDP as well as emissions would continue to grow, the rate of growth of emissions would be slower than that of GDP, so that more GDP is created for the same amount of emissions.

Achieving the emission intensity targets would mean that India would be emitting far less than in the business-as-usual scenario. The numbers are not immediately evident, but this saving in emissions could form a substantial chunk of the 1-billion-tonne reduction now promised. It is possible it may even exceed 1 billion tonnes.

The promise to reduce 1 billion tonnes of emissions could, therefore, be another way of reiterating the emission intensity target.

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