Corporate Climate Action in Support of NDCs

A Case for Science Based Targets in India

SCIENCE BASED TARGETS (SBTs)

Targets adopted by companies to reduce greenhouse gas (GHG) emissions are considered "science-based" if they are in line with what latest climate science says is necessary to meet the goals of the Paris Agreement – *to limit global warming to well-below 2°C above pre-industrial levels and pursue efforts to limit warming to 1.5°C.* SBTs provide companies with a clearly defined pathway to future-proof growth by specifying how much and how quickly they need to reduce their GHG emissions.

Global emissions in 2030 will be about

↑90%

higher than they should be, under 1.5 °C scenario[1]

1 Climate Action Tracker
2 Paris Agreement, 2015
3 Climate Action Tracker, India

RATIONALE FOR SBTs

Total anthropogenic GHG emissions continue to increase, despite the global efforts of governments and other actors. Under current trajectories, global mean temperatures are projected to increase by 2.2°C to 4.4°C by the end of this century. The majority of global GHG emissions are directly or indirectly influenced by the corporate sector. Companies have a pivotal role in ensuring that the global temperature goals are met. Many companies, recognizing the risk that climate change poses to their businesses and the opportunity it creates for leadership and innovation, have set GHG emissions reduction targets. However, most business targets do not match the ambition and timelines consistent with a 1.5°C future.

SBTs provide companies with a clearly defined pathway to future-proof growth by specifying how much and how quickly they need to reduce their GHGs to align with climate science. SBTs are based on an objective, scientific evaluation of what is needed for global GHG emissions reduction, determined by relevant carbon budgets, rather than what is achievable by individual companies. This offers a firm foundation for companies' long-term climate change strategies, while giving them a competitive advantage in transitioning to a low-carbon economy. Companies need to play a crucial role in combating climate change, by setting GHG emissions reduction targets that are aligned with reduction pathways for limiting global temperature rise to 1.5°C or well-below 2°C, compared to pre-industrial temperatures.

THE OPPORTUNITY

The Paris Agreement[2] in 2015 saw 195 countries commit to prevent dangerous climate change by limiting global warming to well below 2 °C; with 186 countries submitting their Intended Nationally Determined Contributions (INDCs), now NDCs, signalling an acceleration in the transition to a low carbon economy. In December 2018, the Climate Action Tracker (CAT) rated India as '2°C compatible', with the possibility of upgrading to the Paris goal of '1.5 °C compatible' with the adaptation of the National Electricity Plan in 2018.[3]

In the NDC document submitted by the Government of India (GoI), one critical aspect mentioned was of the contribution of voluntary initiatives contributing in reducing the GHG emissions. SBT setting is one such voluntary initiative which can holistically help the industrial sector prepare and implement the roadmap for GHG emissions reduction.

The manufacturing industries and construction sector together account for

18.4%

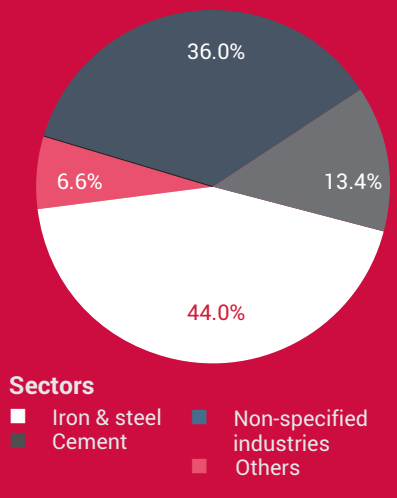
of total emissions from the energy sector.

Paris Agreement in 2015 saw 195 countries commit to prevent dangerous climate change

ROLE OF INDUSTRY IN EMISSION REDUCTIONS

The GoI voluntarily committed to reducing the GHG intensity of the country by 20-25% by 2020 of 2005 levels; however, with the conclusion of COP 21 in Paris in 2015, the Government revised their GHG target and committed to a more ambitious target of reducing the GHG emission intensity by 33-35% by 2030 from 2005 levels.

The corporate sector can play a crucial role in order for India to achieve these commitments, since most of the GHG emissions are directly or indirectly related to industries. As per India's Second Biennial Update Report, submitted in December 2018,[4] manufacturing industries and construction sector emitted 3,51,909 Gg CO_2 e in 2014 that together account for 18.4% of total emissions from the energy sector. In addition, the Energy and Industrial Processes and Product Use (IPPU) sectors in India contributed to 2 Million $GgCO_2e$,[5] accounting for 8% of GHG emissions. Commercial & Industrial customers also consume more than 50% of electricity in India.



The major share of emissions from various sectors under IPPU are shown in the pie chart.

NDCs have an impact on Indian businesses with respect to future market strategies and their repercussions on investments, R&D initiatives, and capacity-building. Businesses need to follow a step-wise approach to reduce their GHG emissions, starting with measuring their footprint based on their growth projections, setting targets, developing a roadmap for mitigation and then disclosing their emissions.

Disclosures also help organizations measure, understand and communicate their economic, environmental, social and governance performance, and consequently set goals, and manage change more effectively. They provide a robust platform for a company to communicate its sustainability issues and impacts, while forming an important part of shareholder and stakeholder relations. This kind of transparency leads to better decision making, which helps build and maintain trust in businesses and related investments for investors, stakeholders, state and non-state actors.

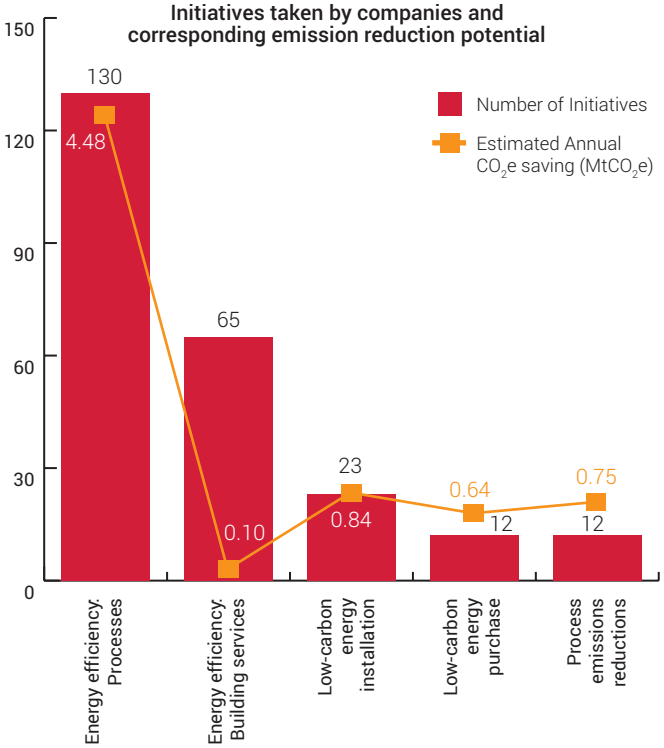
Businesses are not immune to climate risks. Extreme weather and shifting climate patterns pose physical risks to businesses leading to disruption of supply chains, labour issues, decline in productivity and direct loss of assets. Businesses are also exposed to several transition related risks, namely legal risks involving climate related litigation for failure to mitigate, adapt or disclose climate risks, market risks stemming from fluctuations in supply and demand of commodities, products & services, technology risks due to technological disruptions necessary for a lower carbon economy, challenging established business models, reputational risks due to stakeholder pressure on corporate governance and climate change issues, and regulatory risks stemming from policy actions that mitigate climate change. Despite these climate-related risks, companies are also presented with an increasing number of market opportunities, by enhancing competitiveness, reducing input costs, innovating and maximizing outputs.

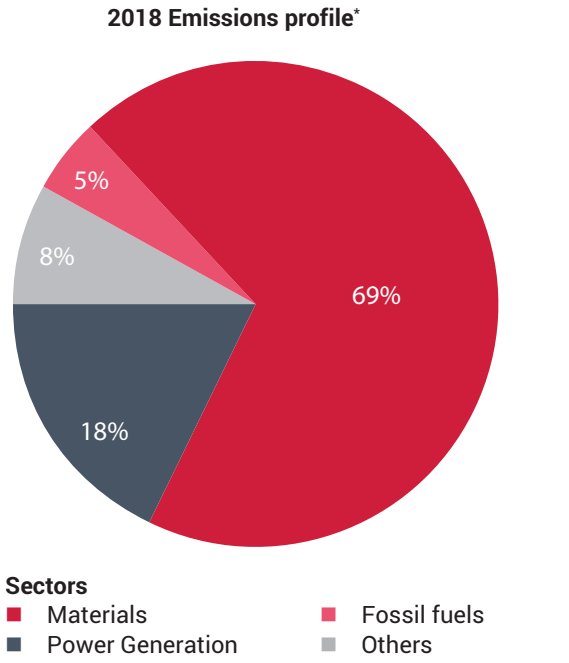
EMISSION REDUCTION INITIATIVES BY COMPANIES

Data disclosed to CDP shows a steady rise in commitments and contributions by businesses. 'Energy efficiency: Processes' is the most deployed Emission Reduction Initiative (ERI).

CDP 2018 data shows that out of the 52 reporting companies across sectors in India, the highest emissions of 2,06,550 GgCO2e came from the Materials sector, which includes companies from sectors, such as Chemicals, Cement & Concrete, Metallic Mineral Mining, Metal Smelting, Refining & Forming. GHG emission due to industry energy use has grown by 10%, between 2005 to 2013. Also, its share in the total industrial emissions has increased from 65% to 76% in the same period. This puts impetus on the sector to be the focus of India's emission mitigation policy, and it is critical to devise ways for the sector to reduce dependence on fossil energy while ensuring rapid growth in production, reducing emissions intensity and enhancing international competitiveness.

4 INDIA Second Biennial Update Report to the UNFCCC
5 INDIA Second Biennial Update Report to the UNFCCC





*the sector classification is based on CDP's Activity Classification System (ACS)

Sustainability is a business issue. With consumption growing rapidly due to growing population and rising income, there is unprecedented strain on natural resources. SBTs are becoming a mainstream business practice - because more and more companies, like ours, are recognizing that the transition to a low-carbon economy is a huge business opportunity as well as the only way to secure sustainable prosperity. Following the Mahindra Challenge at Davos 2018, i.e. reaching 500 commitments to SBTi by September 2018, in a short span of two months 27 companies signed up and at present more than 500 companies have committed to SBTi. Taking on emission and carbon footprint reduction targets as per the SBT framework gives a sense that the organisation is on an ambitious and meaningful path to combat climate change.

– Anand Mahindra
Chairman
Mahindra Group

GOVERNMENT INITIATIVES

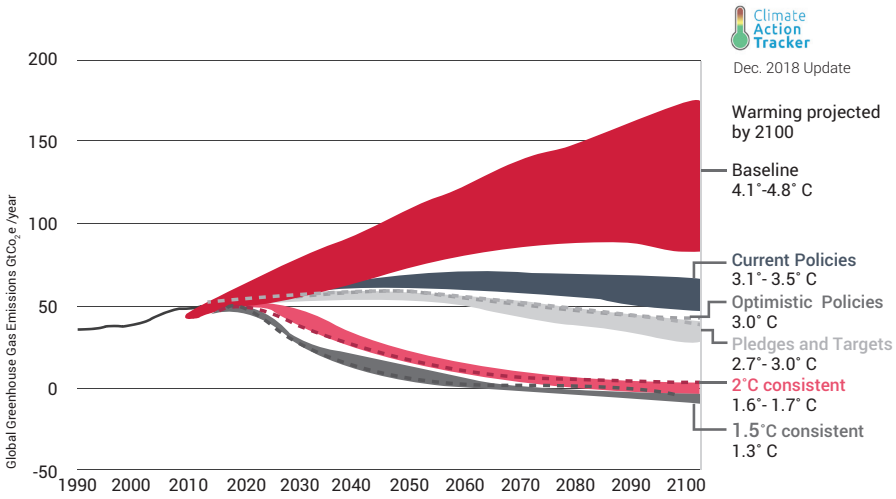
To achieve the NDCs, the GoI has committed to implement various initiatives focused on renewable energy, energy efficiency, afforestation, etc. India is running one of the largest renewable capacity expansion programmes in the world, as a result of which installed renewable power capacity has already crossed 78 GW as of March 2019 (excluding large hydro). The industry sector has a significant role to play in achieving the country's climate targets, through the PAT scheme, and adopting renewable energy to decarbonize the energy supply. The Ministry of Power and the Bureau of Energy Efficiency state that the first cycle of the PAT scheme resulted in savings of 5.6 GW and 31 $MtCO_2e$ between 2012 and 2015. The policies and initiatives to combat climate change have so far yielded positive outcomes especially the PAT scheme and renewable energy targets. Renewable energy installed capacity accounts for more than 22% of the installed power capacity, with the current share of renewables in actual energy produced going up to ~10%. The PAT cycle 2 is anticipated to reduce absolute emissions to the tune of 3-4% of India's total emissions, which together with the outcomes of PAT cycle 1 constitutes ~5-6% of India's total emissions. The PAT cycle is being implemented on a rolling basis, with inclusion of more & more businesses and newer sectors, e.g. railways, discoms and refineries have been added in addition to the eight existing sectors, and more sectors are expected to be added over a course of time.

SCIENCE BASED TARGETS

Companies need more ambitious emissions reduction targets that ensure that the transformational action they take is aligned with current climate science. Despite setting environmental targets, their pace and scale may not be enough to make the required contribution towards achieving the Paris goals. The Science Based Targets initiative (SBTi) is the only benchmark framework available to measure against this uncertainty.

Tata Chemicals is engaged in an energising transformation agenda built on the three pillars of Innovation, Sustainability and Digitisation. We embrace environment friendly technologies and business practices while tracking our carbon footprint and setting targets to reduce carbon emission. Setting Science based targets will help us transition towards growth which is in consonance with low carbon economy.

– R Mukundan
Managing Director & CEO
Tata Chemicals Limited



2100 WARMING PROJECTIONS
Emissions and expected warming based on pledges and current policies

2°C vs 1.5°C

The 1.5°C report of IPCC pushed the boundaries of climate science, shedding light on a new body of research that explores global emission trajectories compatible with keeping warming at 1.5°C and well-below 2°C, compared to pre-industrial levels. Acknowledging the risks involved in exceeding 1.5°C, SBTi is urging companies to aim for the most ambitious target possible. How some of the impacts vary by limiting warming to 1.5°C vs 2°C are summarised in the table.

Selected impacts	1.5°C	2.0°C	2°C impacts
Global population exposed to severe heat at least once every 5 years	14%	37%	2.6x worse
Number of ice-free artic summers	At least one every 100 years	At least one every 10 years	10x worse
Reduction in maize harvest in tropics	3%	7%	2.3x worse
Further decline in coral reefs	70-90%	99%	Up to 29% worse
Decline in marine fisheries	1.5 M tonnes	3M tonnes	2x worse

WHY SHOULD COMPANIES COMMIT TO SETTING SBTs?

SBTi is a strong signal to the international community that a business is taking its environmental responsibilities seriously. SBTs provide companies with a transparent and credible foundation for their corporate climate action plans to reduce their risks and increase the opportunities. This also helps to create a pathway for future-proof growth, while availing the following benefits.

Benefit	Benefits translated by setting SBTs
International competitiveness	■ Reduction in GHG emissions translating into low energy costs, competitive advantage, profitability and increased resilience ■ Long-term first mover advantages over competitors ■ Higher credibility with stakeholders with enhanced decarbonization ambition
Converting risks into opportunities	■ Demonstrates leadership & proactivity towards a low-carbon regulatory environment ■ $27.5 trillion (roughly equivalent to 93 percent of U.S. equities by market capitalization) are at significant climate risk as per a Sustainability Accounting Standards Board (SASB) research[6]
Attract new investors	■ Investors recognizing importance of transition to a low carbon economy and sustainable economic growth ■ The Global Investors Coalition on Climate Change commits to "work with the companies in which they invest to ensure that they are minimizing and disclosing the risks and maximizing the opportunities presented by climate change and climate policy"[7]
Preparedness	■ Enables adherence to international climate change commitments ■ Enhanced preparedness to upcoming regulations, avoiding a rapid transition

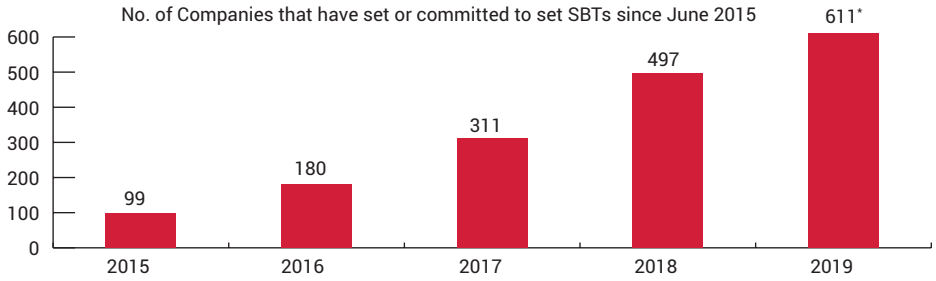
6 Supporting the work of the TCFD, SASB
7 Investor Briefing Note, Climate Action 100

Carbon emissions not only alter climate cycle but also impacts the ecosystem. Greater economic growth can be achieved if we connect the dots between climate change, water scarcity and energy shortage. Setting SBTs have helped us to define our sustainability roadmap and would certainly reap economic benefits.

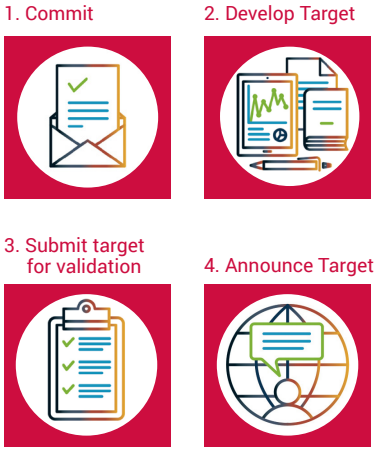
– Mr. Sunil Duggal
CEO
Hindustan Zinc Limited

GLOBAL CALL TO ACTION

The pace of SBT adoption by companies has been quite significant in a short timeframe (as shown in the graph) with many of the largest players making commitments. As on 14th August 2019, 611 companies signed up for SBTi globally, with 232 companies having their targets set. India stands at the fifth position after USA, Japan, UK and France in the number of companies committed to the SBTi. The highest number of companies under the SBTi are from the Food and Beverage Processing (46) sector, followed by Banks, Diverse Financials & Insurance (43) and Real Estate (39).



**Data for 2019 is till the month of August*



Companies get 24 months from the date of commitment to develop and get the target validated from the SBTi

THE SBTi – JOIN THE GLOBAL CALL TO ACTION

SBTi identifies and promotes innovative approaches for setting ambitious and meaningful corporate GHG reduction targets. The initiative's overall aim is that by 2020, SBT setting will become standard business practice and corporations will play a major role in driving down global GHG emissions. SBT setting is already becoming part of the annual report of companies and the data infrastructure for institutional investors through the **CDP questionnaire and scoring.** A set of basic requirements need to be met by any organization that wishes to develop its SBTs. Criteria for developing SBTs are highlighted on the next page.

INDIAN COMPANIES TAKING ACTION

As of August 2019, 30 companies have committed to the SBTi, with Mahindra Sanyo Special Steel becoming the first company in India as well as the first steel company globally to have its targets approved. Other companies with approved targets include Hindustan Zinc Limited, Tech Mahindra and Wipro classified under Mining – Metals, and the other two fall under the Software & Services sector respectively.

SBTi is an assured step towards objectively setting emission targets. It would immensely help align organizations towards the 1.5-degree scenario. YES BANK is fully committed to this initiative and takes pride in being a road-tester.

– Namita Vikas
Group President & Global Head, Climate Strategy & Responsible Banking
YES BANK

SBTi Company	Base Year	Target Year	Level of Ambition
wipro	2017	2022	14% reduction in absolute scope 1 and 2 GHG emissions and 10% reduction in absolute scope 3 GHG emissions
		2030	48% reduction in absolute scope 1 and 2 GHG emissions and 30% reduction in absolute scope 3 GHG emissions
Mahindra SANYO	2016	2030	35% reduction in Scope 1&2 emissions per tonne of steel produced and 35% reduction in Scope 3 emissions per tonne of steel produced
HINDUSTAN ZINC	2016	2026	14% reduction in absolute Scopes 1 and 2 GHG emissions and 20% reduction in absolute Scope 3 GHG emissions
Tech Mahindra	2016	2030	22% reduction in absolute scope 1 and 2 GHG emissions
		2050	50% reduction in absolute scope 1 and 2 GHG emissions

CRITERIA FOR DEVELOPING SBTs

Boundary: All company-wide Scope 1 and 2 GHG emissions must be covered (at least 95%).

Scope 3: A Scope 3 screening is required and an ambitious, measurable Scope 3 target is required when Scope 3 emissions cover more than 40% of total emissions.

Timeframe: 5-15 years into the future; from date target is submitted to SBTi for official validation (long-term targets recommended).

Progress to date: Forward-looking ambition is measured from the year with the most recent completed GHG inventory.

Reporting: Disclose GHG emissions inventory on an annual basis.

Level of ambition: At a minimum – consistent with the level of decarbonization required to keep temperature increase to 2°C while we encourage efforts towards 1.5°C.

Absolute vs. intensity: Intensity targets are only eligible when they lead to absolute emission reductions in line with climate scenarios for keeping warming below 2°C or when they are based on an approved sector pathway or method approved by the SBTi (e.g. the SDA).

Renewable energy targets: Targets to source renewable electricity at a rate that is consistent with 2°C scenarios are an acceptable alternative to scope 2 emission reduction targets (80% by 2025; 100% by 2030).

RESOURCES FOR SBT SETTING

Foundations of SBT Setting

SBTi Criteria and Recommendations (V4)

Best Practices in Scope 3 Management

Target validation Protocol

Companies taking Action

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IN COLLBORATION WITH