“Our collective failure to act strongly and early means that we must now implement deep and urgent cuts”

“To deliver the cuts we need, nations have to raise the ambition of their current pledges over fivefold for the 1.5°C goal when they revise their NDCs in 2020.”

Inger Andersen, 26/11/2019

Emissions Gaps Report 2019
SECTOR LEVEL DISTANCE TO TARGET ANALYSIS

An unprecedented approach to sector level climate target analysis

- Bridges bottom-up and top-down approaches to identify sectoral technology roadmaps
- Evaluation of the climate alignment of financial assets
- Guides stakeholders from integration of new risk metrics to actual investment decisions in climate performing assets or projects
- Leverages Beyond Ratings CLAIM© model and 2° Investing Initiative’s bottom-up data

Meeting investor demands

- Lack of methodology in the construction/updating of NDCs for governments
- Inconsistent company targets in relation to country trajectories
- Corporates’ incorrect identification of projects aligned with a +2° (or any other temperature increase) target

NCTIP reconciles the macro & micro perspectives
DETERMINING CONSISTENT EMISSIONS BUDGETS AT SECTOR LEVEL BY COUNTRY

A 4-step process

1. +2° budget allocation per sector based on marginal abatement cost curves (MACC)

2. Creation of sector level trajectories that are consistent with country level targets

3. The trajectory takes into account the current situation of assets and projects in progress

4. Feedback loop if no solutions are identified (adjustments may be made to the initial allocation between sectors)
OVERVIEW OF SECTOR MODELLING: EXAMPLE OF POWER GENERATION

1. Estimation:
   - Power consumption per country
Input:
   - GDP
   - Population

2. Minimisation of the cost of producing electricity determines future capacities
   Key constraints:
   - Annual capacity variation
   - Physical limit on hydroelectricity production
   - Choice for new nuclear

3. Outputs:
   - Future production and capacities
   - Cost of producing electricity
   - Carbon intensity of electricity production
   - Risk profile(s)

Inputs:
- Emission factors
- OPEX/CAPEX
- Capacities (Coal, Oil, Gas, Nuclear, Biomass, Wind, Solar, Geothermal, Hydro, power storage)
Welcome to the Climate Technology Compass developed by the 2° Investing Initiative and Beyond Ratings.

This platform enables investors, financial institutions, corporates and governments to map the technology transition and investments necessary to achieve the 2°C target for 101 countries and 8 climate relevant sectors.

START
Chose a Country

Results are currently available for 101 countries. Countries were chosen based on data availability as well as the country’s contribution to greenhouse gas emissions.
CHOOSE A SECTOR

Transition scenarios are currently available for 8 sectors. You can access a detailed description of the methodology used for each sector on the respective pages.
CHOOSE A SCENARIO

The scenario determines the overall carbon budget by country and by sector.

SCENARIO 2°C
- Substantial greenhouse gas mitigation efforts
- Carbon budgets compliant with a +2°C temperature increase
- Strong technological innovation

SCENARIO NDC
- In line with the countries 2030 NDC's
- Carbon budgets compliant with a +3-4°C temperature increase
- Moderate technological innovation

→ back to sectors
Using bottom-up data database as well as emission and production constraints from the selected scenario, this model outputs transition pathways for power generation in terms of technology mix, emissions and investment needs.
A large part for renewables
Most investments are in the solar sector
Coal is still a major part of the Chinese electricity production mix in a NDC scenario.
Small effort on the carbon intensity in a NDC scenario
THANK YOU!

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