

@TheIFS

Major economic challenges: Climate Change

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 IFS

Rapport

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CLIMATE CHAPTER

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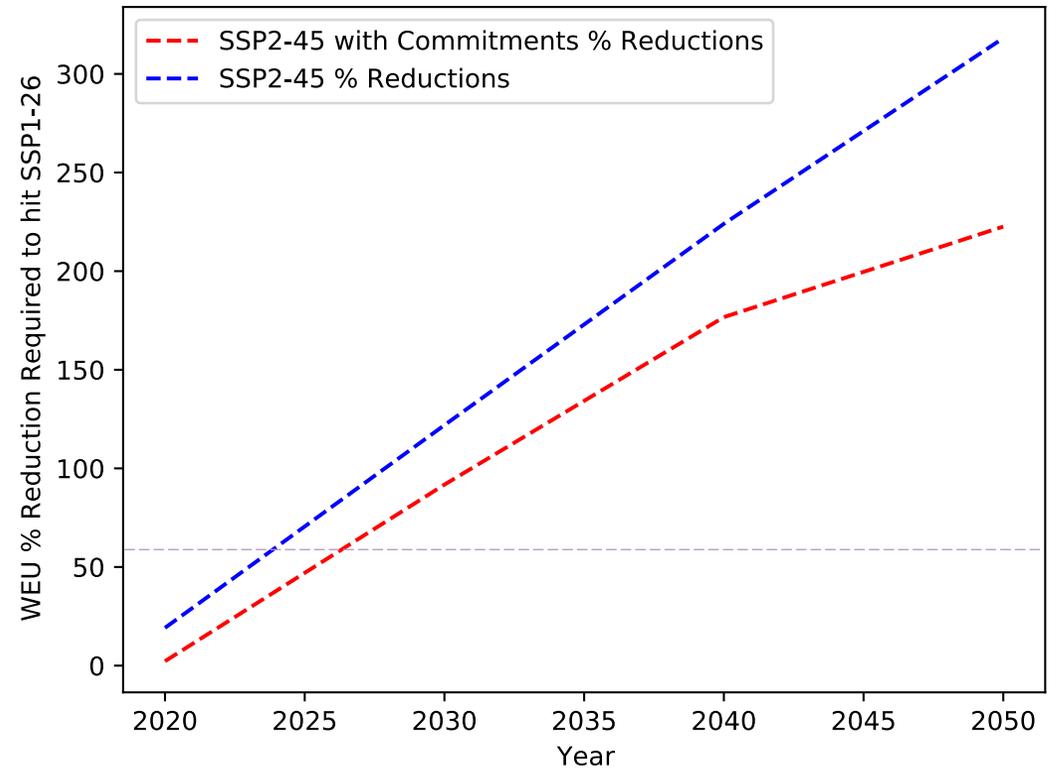
TIME TO ACT

- **Climate urgency.**
 - We are not on the right track for the 2°C.
- Discrepancies between **beliefs and reality**:
 - Search for the least-cost decarb actions and policies;
 - Sacrificing things to fight CC continue to be socially unacceptable. Should we favor policies that hide costs?
 - Preference for subsidies over taxes. But subsidies must be financed by taxes.
 - Regressive climate policies: An issue that can be solved.
- **Holistic strategy** is necessary. EU is the right decision level.
- **Risk management.** A clear, strong vision is necessary, but flexibility is key for implementation.

AN AMBITIOUS SET OF POLICIES

- To satisfy **EU targets**, need to develop an ambitious set of policies that are fast paced, politically feasible, and as efficient as possible:
 - Carbon pricing
 - Investment subsidies
 - R&D
 - Bans
 - Among others.
- Crucial to consider international aspect of the problem as otherwise infeasible: which policies can best contribute to **global reductions**?

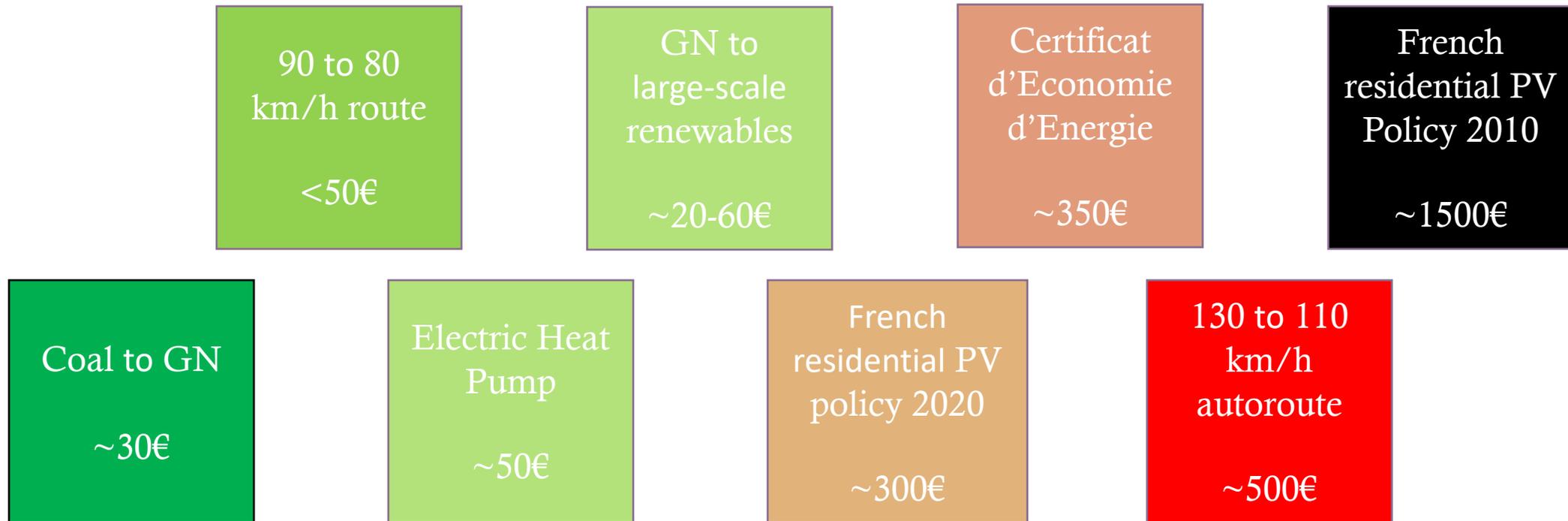
By how much should EU reduce emissions to fill the gap of the 2°C target?



A CARBON VALUE TO MEASURE POLICY IMPACTS

- There is a **myriad of possible climate actions** controlled by a myriad of agents.
 - Some are (much) more costly than others. Not all green actions are socially desirable.
 - For each climate action, measure of cost per tCO₂ saved.
- Fix a cut-off cost, i.e., a carbon value, based on **carbon budgets**.
- If all mitigation acts that cost less than the carbon value are implemented, the politically-determined climate target should be attained.
 - 80€/tCO₂ in 2021? 300 €/tCO₂ in 2030?
- We recommend a systematic evaluation of climate policies.

VIABILITY THRESHOLD IN COST PER TCO2



BIGGEST MARKET FAILURE EVER! HOW SHOULD WE REFORM OUR MARKET ECONOMY?

- A **universal carbon price** equaling the carbon value.
 - Incentivize R&D (but is not sufficient);
 - The hundreds of billions euros of the recovery plans will not be enough (US/EU).
- Unicity of price is key.
 - Simple, transparent, lobby-proof;
- Inequality issue.
- We favor a EU cap&trade solution over a tax (infeasible in EU).

REFORM OF THE EU-ETS AND CBAM

- **Enlarge the scope** of EU-ETS to all EU emissions, including transport and residential sectors.
 - Otherwise, large hidden subsidies to the fossil fuel industry. Change framework.
- The carbon **leakage problem** and environmental dumping:
 - Attempt the diplomatic strategy. Level playing field with CBAMs. Elimination of free allowances.
- The **long-term credibility problem**:
 - Political agreement on a price floor, increasing with time. Or A Carbon Central Bank.
- Great bargain in Brussels.
 - Trade ambitious floor price against compensating the losers (Just Transition Fund).
 - Redistribution of the carbon dividend to states.

OTHER CLIMATE POLICIES

- **R&D subsidies** are key.
 - EU-ARPA-E and its modus operandi. Crucial to address the global problem.
- **Public sector:** Ambitious investment plan in green infrastructures.
 - Not sufficient. Use carbon value in public procurements with a sustainability dimension.
- **Private sector:** standards, norms, bans, subventions, feed-in-tariffs, ...
 - Measure hidden costs and co-benefits (jobs, inequality, environment, ...).
- **Difficulties:**
 - Rebound effect (insulation, bonus-malus); waterbed effect (PV); resistance from lobbies.

CLIMATE AND INEQUALITIES

- **Climate change policy** disproportionately affects the poor, as most climate policies are regressive:
 - The share of hh budget devoted to energy expenditures is declining with hh income.
 - Most climate policies increase the price of energy, and are thus regressive: feed-in-tariffs, subsidies for insulation, bonus for EV, carbon tax,...
- But the carbon pricing strategy allows for a **carbon dividend** whose allocation can make the mechanism progressive.
 - Biased perceptions: overestimation of regressivity; distrust in any compensatory mechanism.
- **Climate change impacts** also fall disproportionately on the poor (across/within countries).
 - Not the focus of our report but needs to be an active area of policy making.

ELECTRICITY MIX

- **Key sector!** Most other sectors will be electrified.
 - Renewables already cost effective at scale, political economy issues for rollout;
 - Second generation nuclear plants (with grand carénage and Cigéo) are unbeatable until 2040;
 - Keep dispatchable units while massive electricity storage tech develops;
 - Subsidize R&D: Electricity storage rather than capture & sequestration.
 - Reshape the electricity network;
 - Rapid phasing-out of coal. Natural gas is a transitory energy source, new capital investment unlikely advisable at growing carbon prices (and gas prices).
 - Make energy demand more flexible (price signal), protect against extreme events.
- Other sectors are also covered in the report (agriculture, residential, transport,...).

R&D

- Technology is crucial to solve the global problem (although one cannot wait for it to save the day!).
- Need to develop technologies that **prevent further global growth in emissions**, and that **enable global emissions cuts**.
- We highlight in the report key areas for public support:
 - **Non-fossil fuel energy technologies**, which are incentive compatible for noncomplying countries (smaller footprint and cheaper batteries, more efficient renewables).
 - **Negative emissions technologies**, which focus on scalable innovations. Covid-like international effort.
 - **Energy efficiency innovations**, that reduce the need for energy (LEDs a great example of a successful innovation).

A ROLE FOR CLIMATE ACTIVISM

- **Financial market players have less power and legitimacy** than most people believe.
 - Responsible investors should use an internal carbon price;
 - Financial carbon leakages are a problem: Low efficacy of divestment strategies.
- Empowerment of individual responsibility requires a massive effort in the **establishment of new carbon accounting standards**.
 - Complexity of tracing emissions along the value chain.
 - EU taxonomy is 0-1, opaque and not very credible. SRI/CSR should rely on a transparent carbon value to estimate social value creation of assets.
 - Once in place and improved, it could open the door to more easily price carbon (e.g., CBAMs), which should be more effective.