

The slide features four large, solid blue circles of varying sizes positioned around the central text. One circle is at the top center, one at the bottom center, one on the left side, and one on the right side.

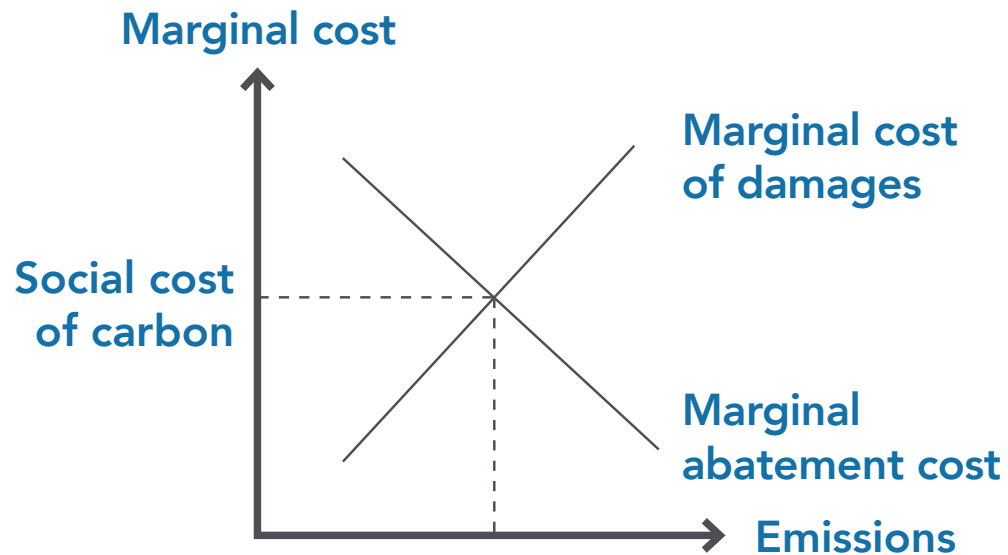
The polluter-pay principle

Can carbon and pollution based taxation be a means to implement the polluter-pay principle?

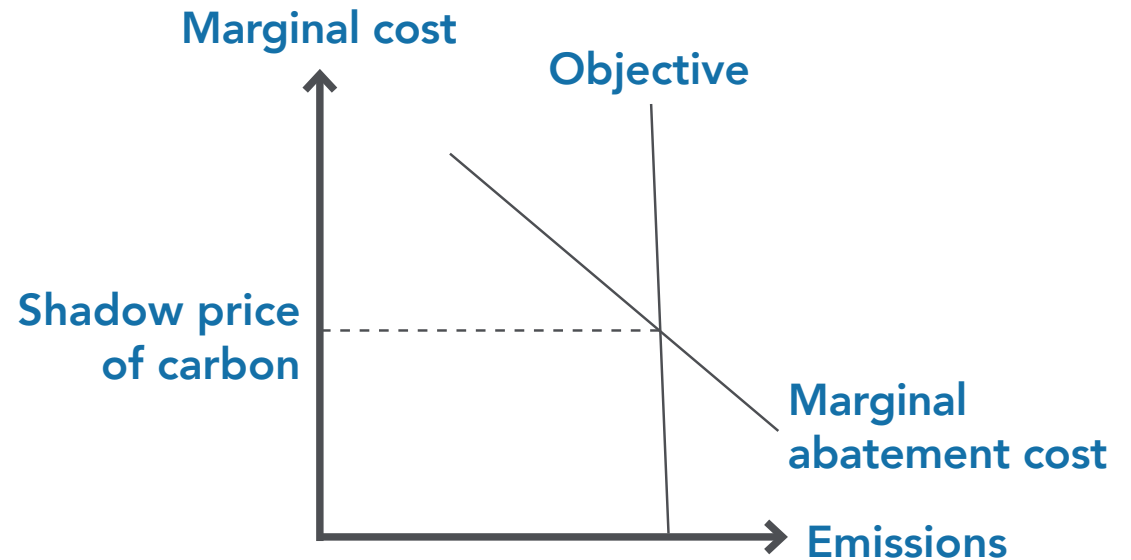
Alain Quinet

I. The polluter-pay principle: 2 different approaches

Cost-benefit
approach

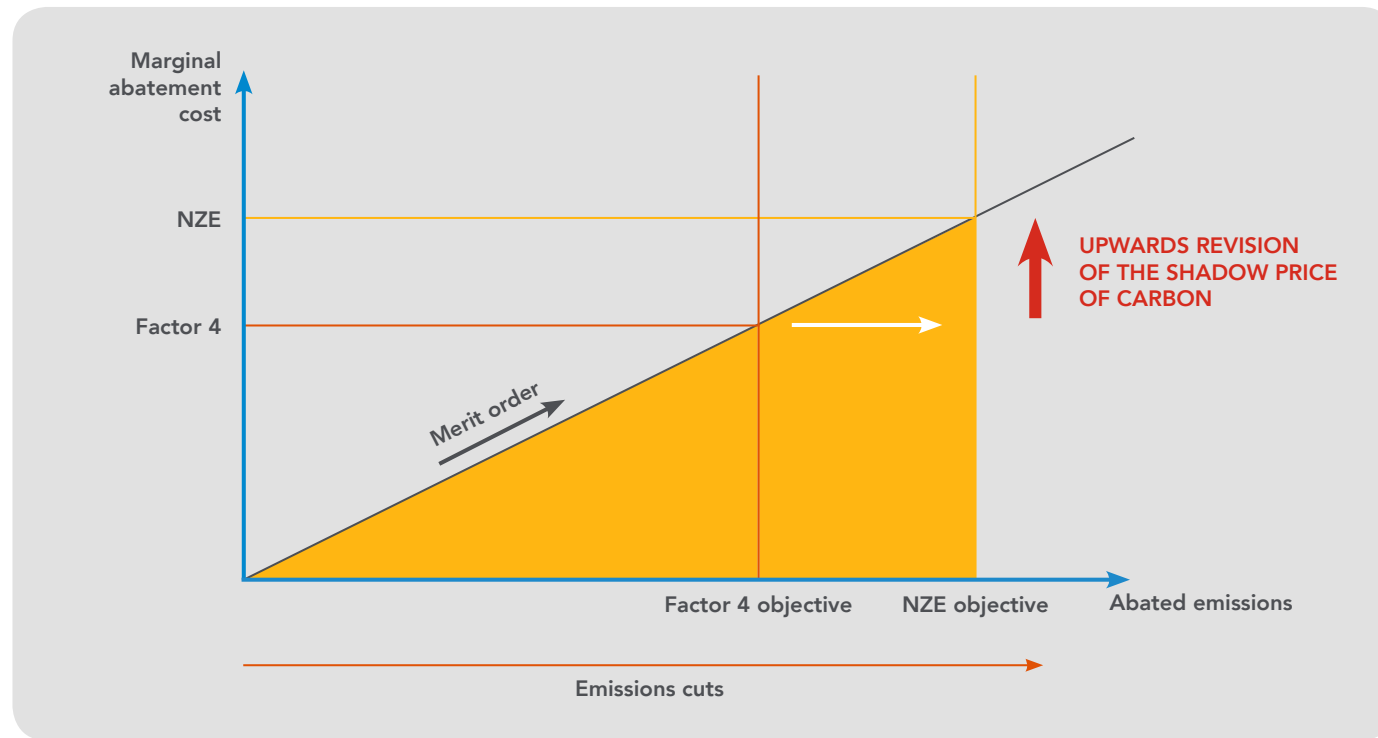


Cost-efficiency
approach



I. The polluter-pay principle: 2 different approaches

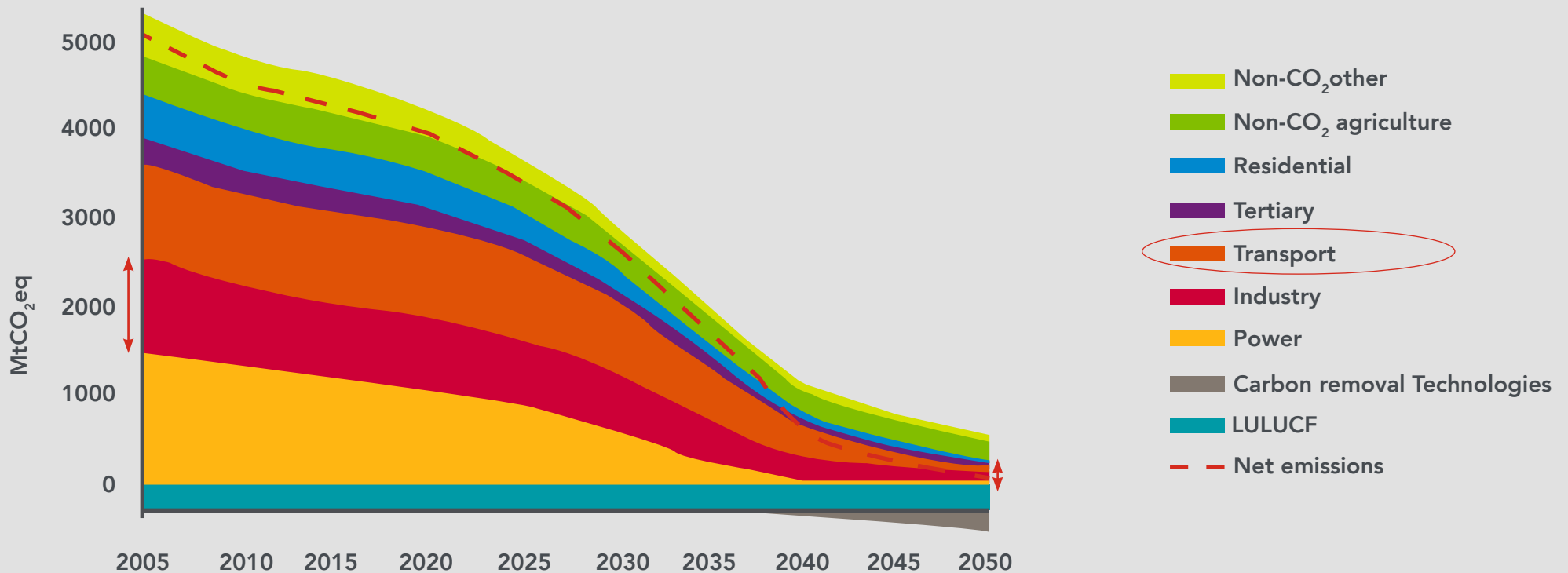
➔ Reduction of the global carbon budget -> carbon neutrality



- ➔ Need for expensive technologies by 2050
- ➔ Large uncertainties on abatement costs by 2050

I. The polluter-pay principle: 2 different approaches

GHG emissions trajectory in a 1.5°C scenario



Source: European Commission (2018)

II. The shadow price of carbon

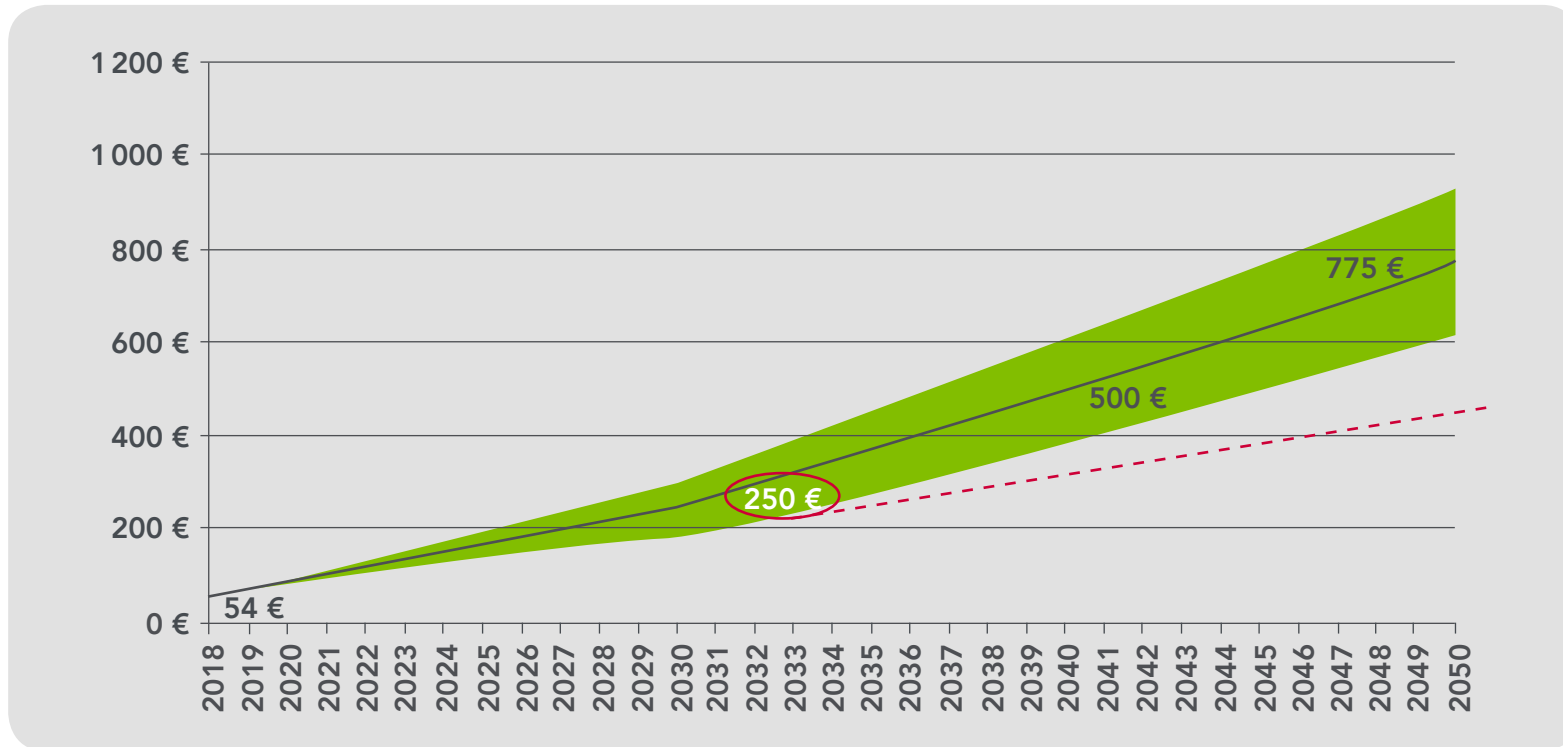
1. IPCC Estimates

		Average Shadow Price of Carbon (\$2010)	
Scénario	Description	2030	2050
1.5° high	Probability of exceeding 1.5°C between 50% and 67%	129	586
Lower 2°	Probability of exceeding 2°C between 34% and 50%	164	518
Higher 2°	Probability of exceeding 2°C between 34% and 50%	56	169

Source: IPCC (2018)

II. The shadow price of carbon

2. The new French Value



Source: Alain Quinet (2019)

III. From shadow price to carbon pricing

2 schools of thought



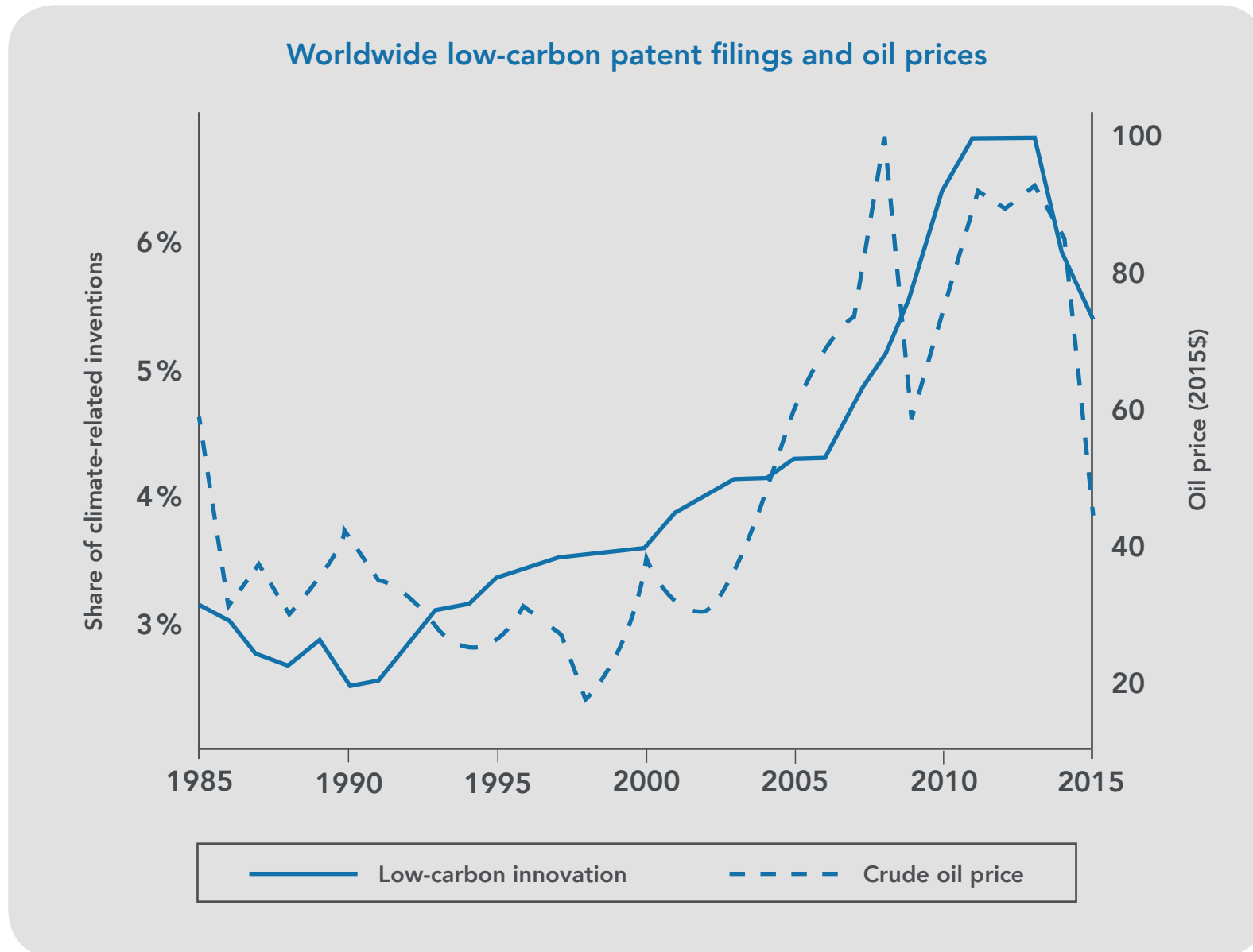
Shadow price should be translated in carbon pricing



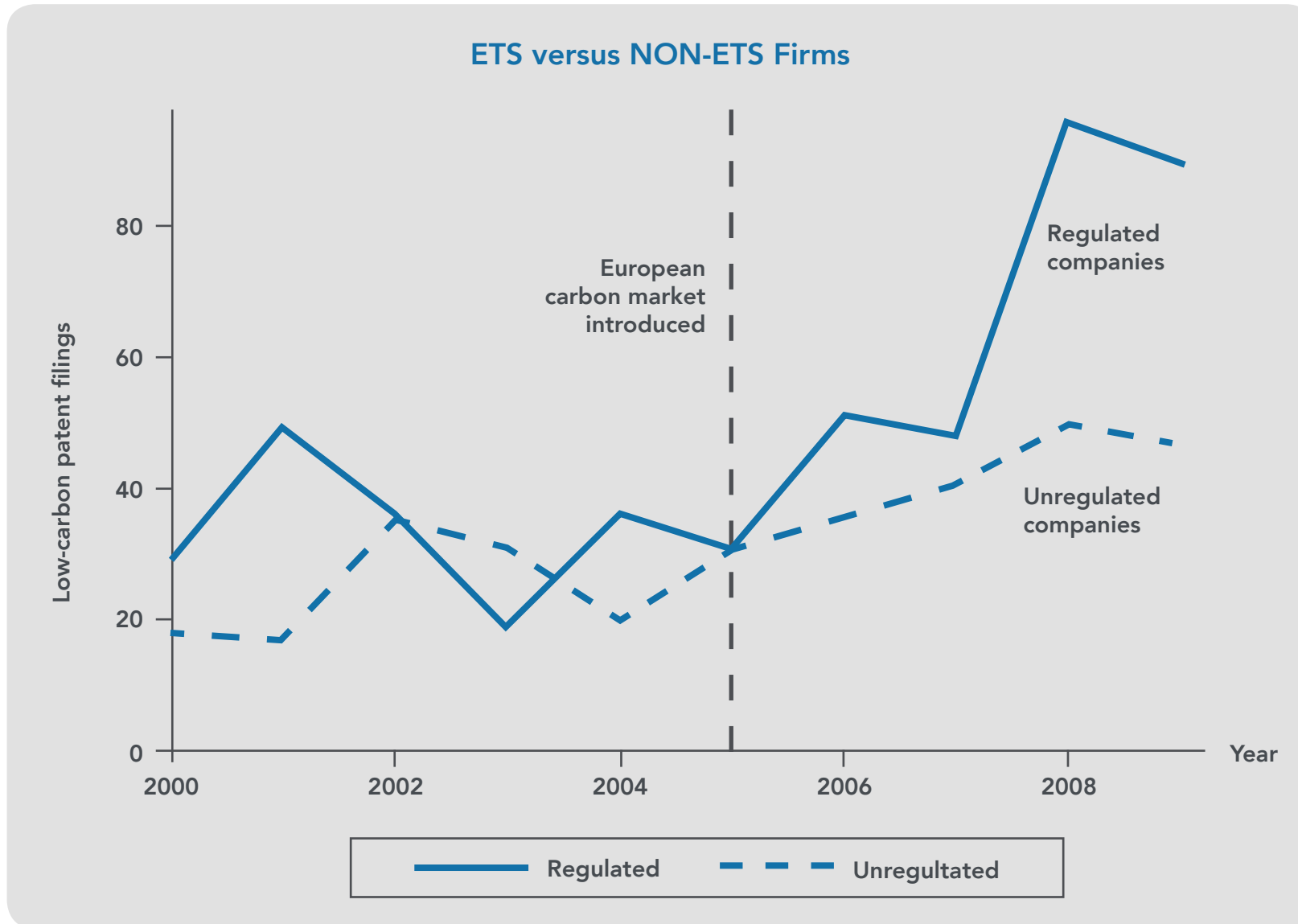
Shadow price should be translated in:

- better regulation (land use, spatial planning)
- low carbon infrastructure
- innovation
- carbon pricing

III. From shadow price to carbon pricing



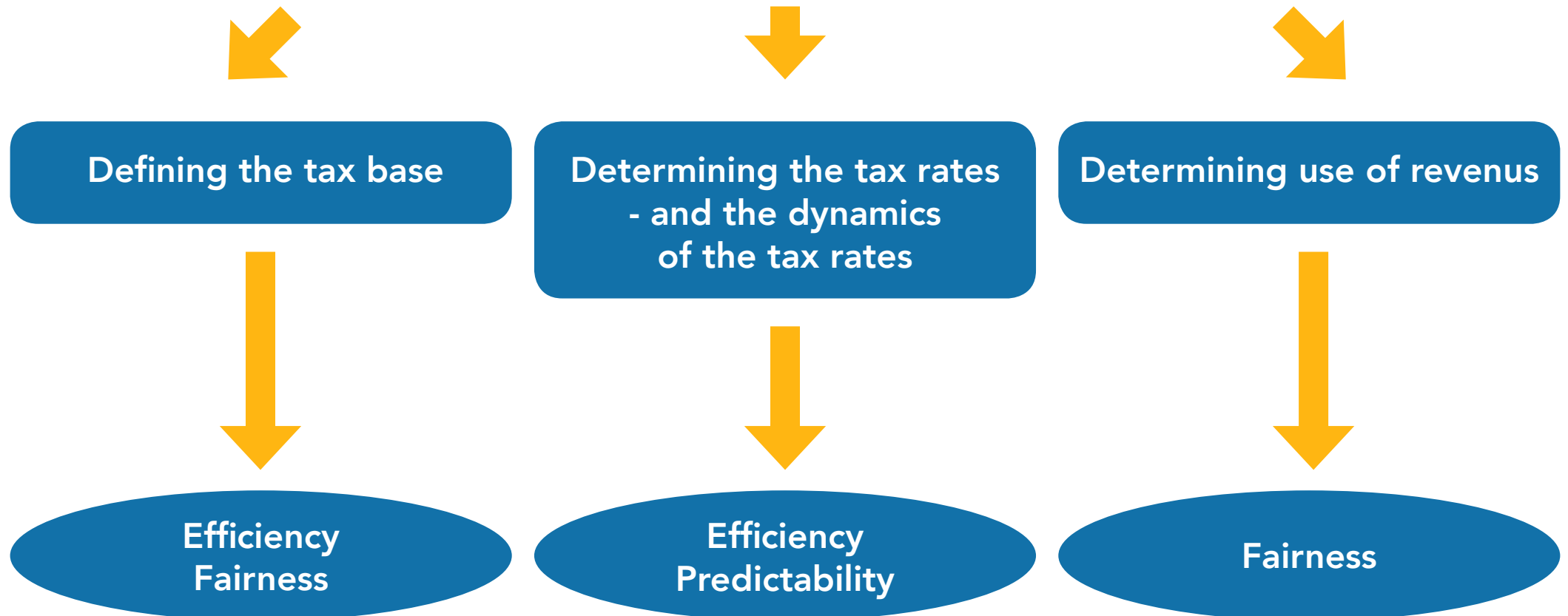
III. From shadow price to carbon pricing



Source : Dechez Le-Prêtre (2018)

IV. Carbon pricing: design and issues

Carbon pricing: a price, not a tax



IV. Carbon pricing: design and issues

1. Carbon pricing is regressive

Impact of a 10€/t carbon tax

	Rural area	Paris area
Richest 20% of households	- 80 €	- 40 €
Poorest 20% of households	- 40 €	- 20 €

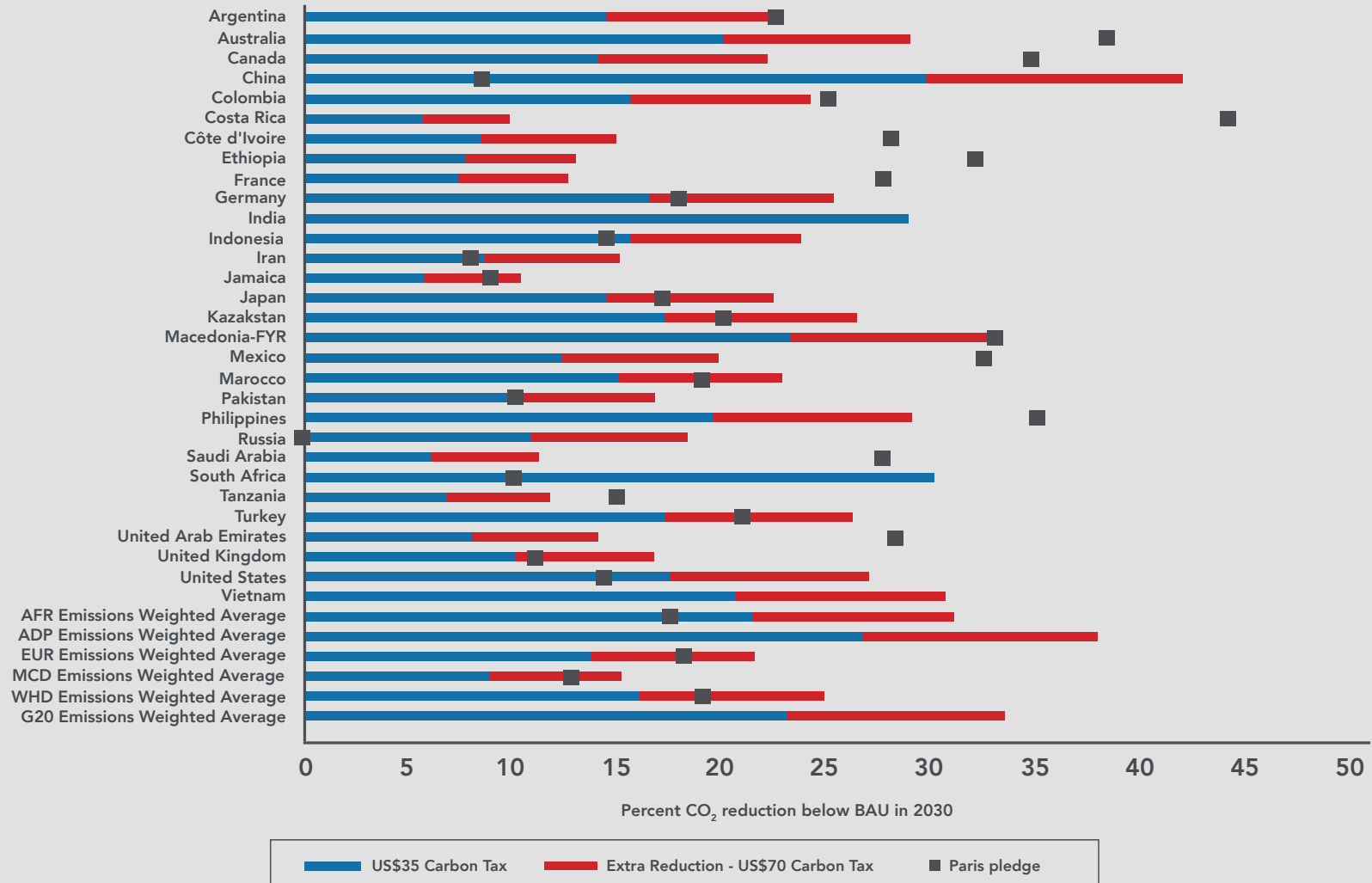
2. Carbon dividends can avoid unwanted effects

THE WALL STREET JOURNAL (27 Nobel Laureate Economists)

To maximize the fairness and political viability of a rising carbon tax, all the revenue should be returned directly to U.S citizens through equal lump-sum rebates. The majority of American families, including the most vulnerable, will benefit financially by receiving more "in carbon dividends" than they pay in increased energy prices.

3. Carbon tax is the worst form of instruments except for all the rest

Reduction in CO₂ from Comprehensive Carbon Pricing, 2030



Source: IMF (2019)