Upgrade the Model Where Policy Needs It

Five modular upgrades to the Climate Policy Assessment Tool: section 6 in ten slides

Keep CPAT's core small enough to audit, and answer each new question with a module that reads its outputs: one carbon-price scale, the EU border charge, the cost of clean capital, one activity layer, and growth, revenue and debt.

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Five questions the core cannot answer, five modules that can

Ministries ask	Module	Paper
What is our policy mix worth as a carbon price?	Total Effective Carbon Price	6.1
What will the EU border charge cost exporters?	CBAM Policy Tool	6.2
What will clean capital cost, and should the budget pay?	Public investment extension	6.3
How do we link CPAT to our other models?	Common activity layer	6.4
What does the program do to growth and debt?	Macro-Fiscal-Energy Scenario Tool	6.5

Each reads CPAT's prices, fuel use, emissions and revenue, adds one piece of economics, and states its method in a few equations.

Source: Section 6 overview, Table 1.

Headline carbon prices understate a policy mix by almost half

$21

per tonne: explicit prices of a stylized mix of tax, subsidy and fuel standard

$37

per tonne: the uniform tax that cuts as much, long run ($32–38 across the evidence)

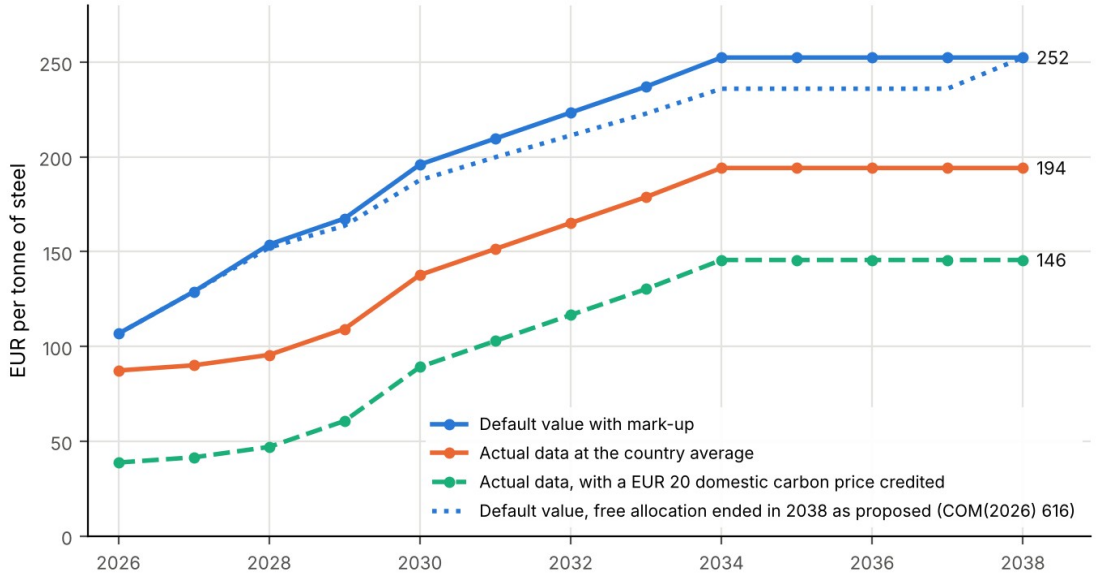
$28

per tonne after one year, before new capital replaces old

The Total Effective Carbon Price scores standards, subsidies and feebates on one scale; not yet computed for a real country.

Source: Paper 6.1 (stylized three-sector economy); Black et al. (2022).

The EU's border charge is large, and for dirty goods most of it arrives at once



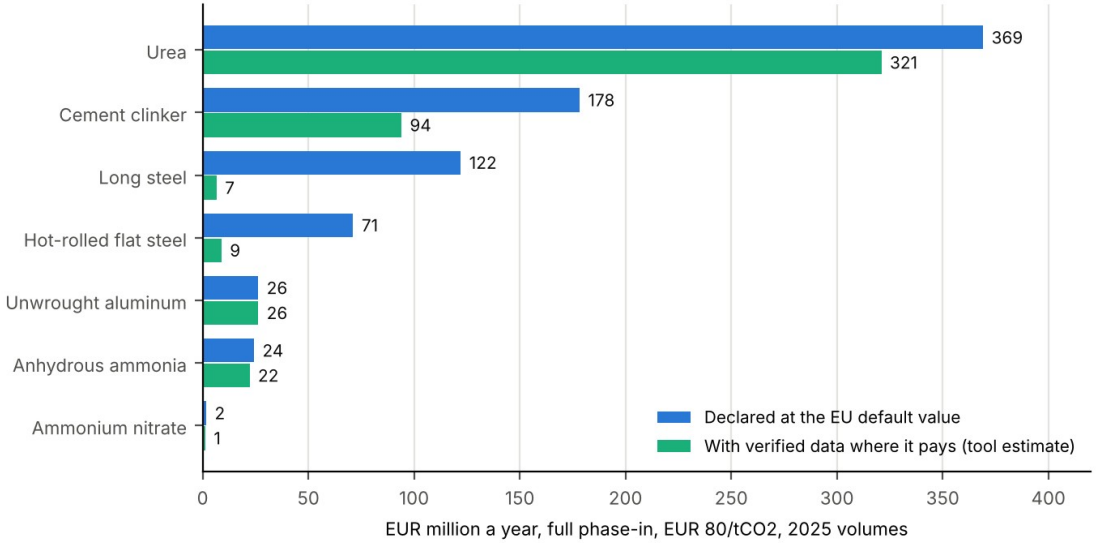
Turkish hot-rolled steel: €107/t in 2026, €252/t at full phase-in, at €80/tCO_2.

Three levers: verified data (€58/t), cleaner production, a domestic price the EU deducts (€49/t at €20).

A domestic price keeps the money at home.

Source: Paper 6.2; Regulation (EU) 2023/956 as amended by 2025/2083.

For Egypt, data cut the steel charge by 90 percent but urea's by 13



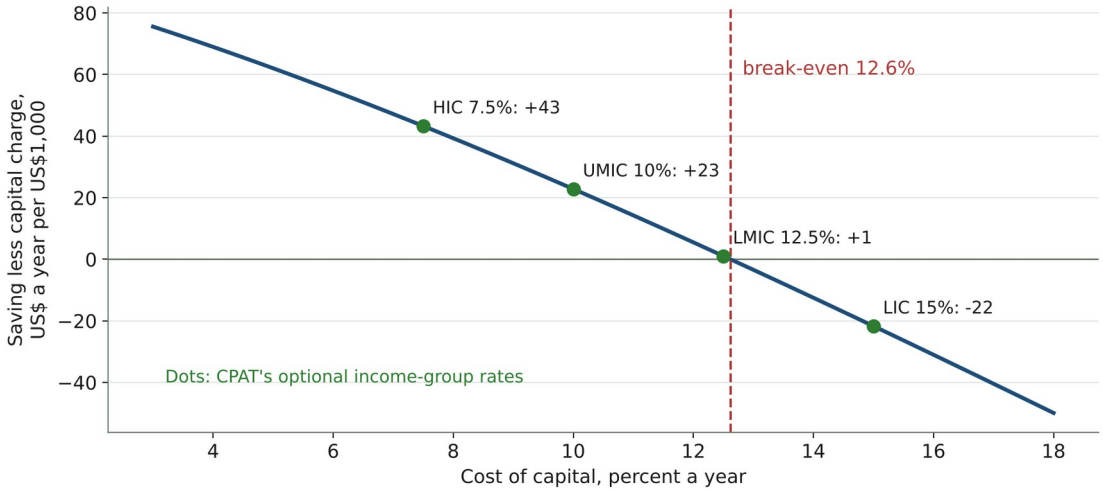
Total: €793m a year at default values, €480m with verified data (2025 volumes).

Corrected: urea's bound CO_2 counts as emitted; ammonium nitrate's ammonia counted in full.

Earlier figures (€595m and €177m) are superseded.

Source: Paper 6.2 (illustrative tool results; Eurostat volumes).

The cost of capital, not the size of the bill, decides whether clean capital pays



Break-even at 12.6%: a stylized clean asset pays handsomely at 6% and fails above that.

CPAT's default: each country's own rate plus a technology premium; income-group rates are an option.

Each point off is worth about $36bn a year of global clean energy investment.

Source: Paper 6.3; CPAT documentation; CPAT-AI.

A project can be worth building and still break the budget's cash flow

The test: value per net budget dollar against the cost of raising a dollar of tax (about 1.2).

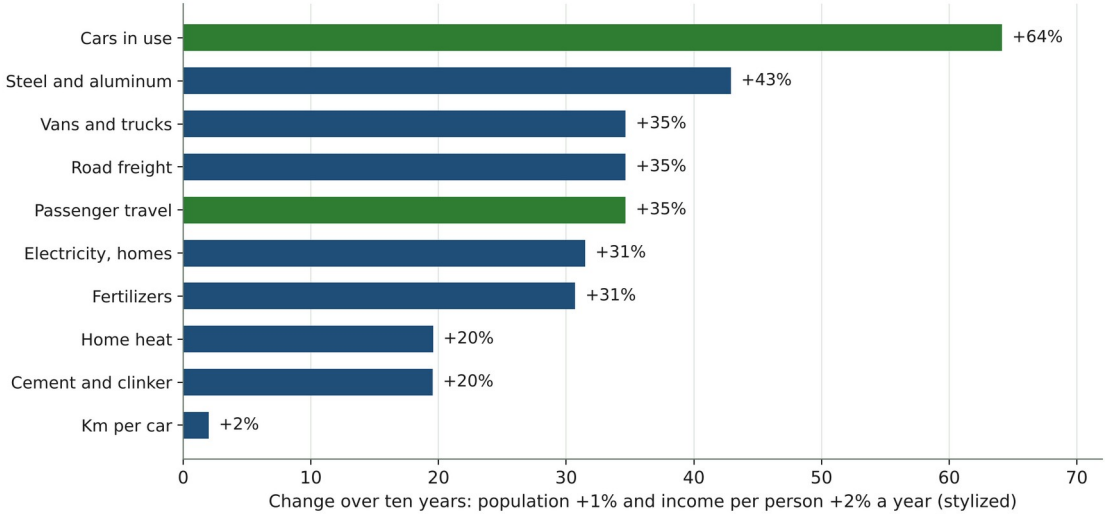
Stylized island: a solar plant worth $108m leaves the budget $14.6m a year short on a seven-year loan.

A guaranteed PPA narrows the gap but adds a contract liability of 7.6% of GDP.

So count cash, debt and contract liabilities on one ledger.

Source: Paper 6.3, worked example (stylized).

Linked models need one baseline, a carbon price counted once, and a check on cars



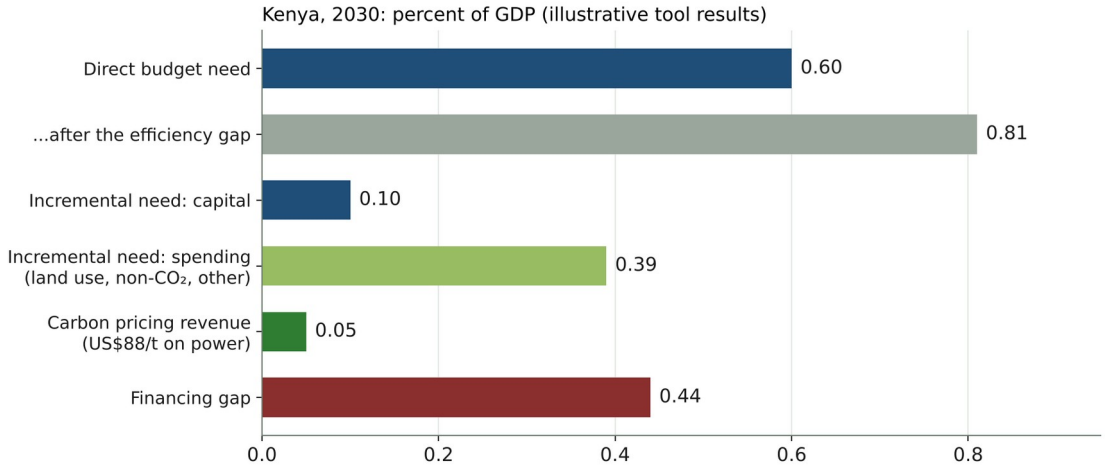
One layer: ten activities, one rule, one forecast, one base year.

Price response only where the model has none (SISEPUEDE, FTT).

Cars +64%, travel +35% in ten years; check every year that car travel fits.

Source: Paper 6.4 (stylized: population +1%, income per person +2% a year).

Financing and efficiency, not the size of the program, decide growth and debt



Kenya (illustrative): budget need 0.5% of GDP in 2030, mostly land use and non-CO_2.

Pricing pays ~5%: a grid over 90% renewable leaves little to tax.

Debt: about +7 points of GDP by 2050, from high risk already (IMF–World Bank, 2023).

Source: Paper 6.5; IMF Country Report 24/13.

What to do

What section 6 shows

One scale: a policy mix worth $37/t where prices say $21.

Border charge: the right lever differs by product.

Capital: its cost decides; cash can bind before value.

Linking and macro: one baseline; financing beats size.

Actions

Finance ministries: report the TECP; run the CBAM numbers per product; test spending on cash and contract liabilities.

Teams running CPAT: state the cost of capital used; link models through one activity layer.

Development banks: pay for verified policy, not projects; lower the cost of capital.