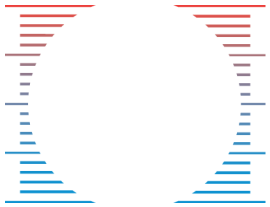

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Climate change policies and the UK business sector: Overview, impacts & suggestions for reform

Authors: **Samuela Bassi, Antoine Dechezleprêtre & Sam Fankhauser**
Grantham Research Institute on Climate Change and the Environment at LSE
and Centre for Climate Change Economics and Policy (CCCEP)

London, 11 March 2014

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Content

- **The current status of UK energy policy and taxation**
  - Policy coverage
  - Policy overlap
  - Uneven carbon pricing
- **Competitiveness issues**
  - CCA/CCL
  - EU ETS
- **Proposal for policy reform**
  - Rationale & Proposal
  - Illustrative example (2013 and 2020)
  - Recommendations

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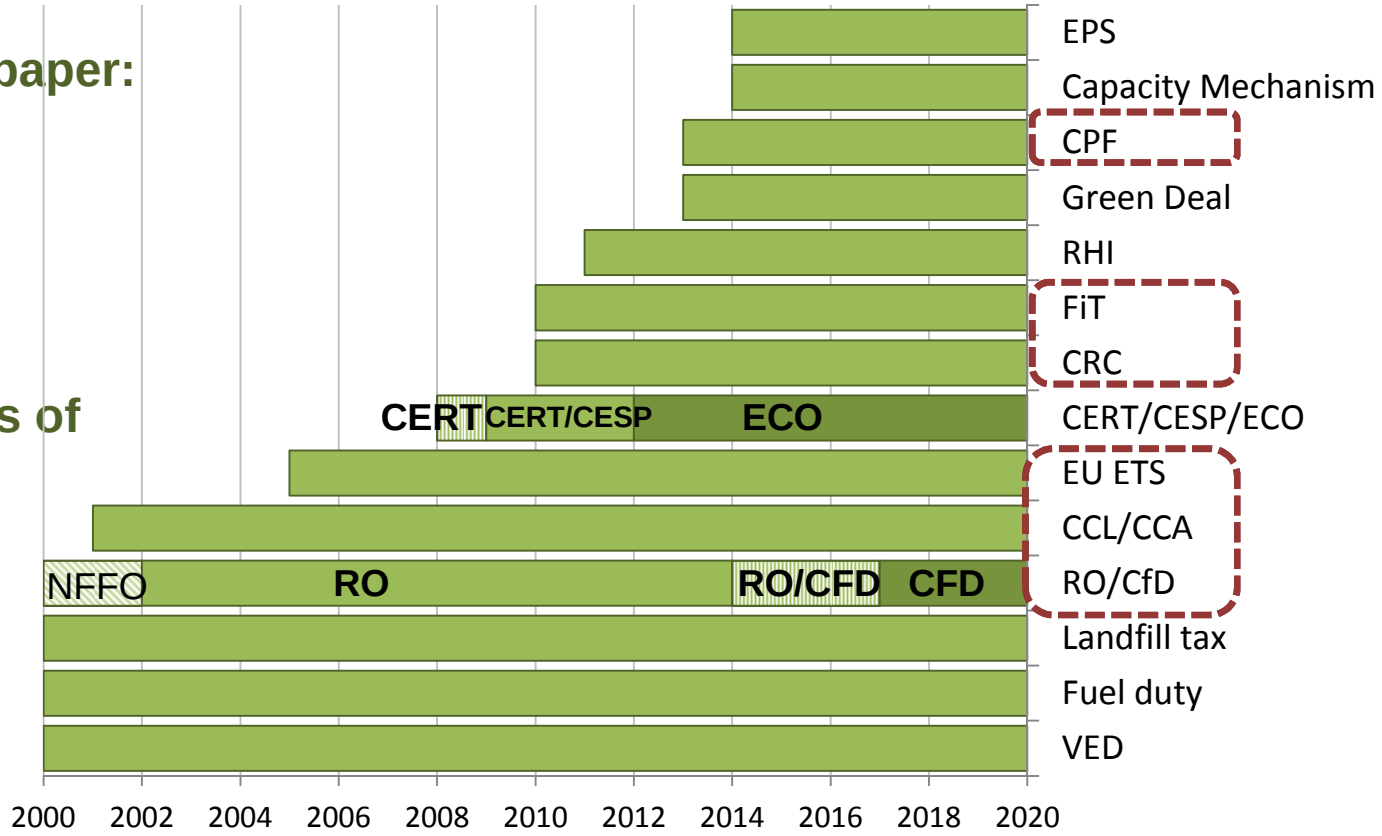
Focus of analysis: Policy coverage

Key focus of the paper:

- CCL
- CCA
- CRC

And indirect costs of

- ETS
- CPF
- RO and FITs



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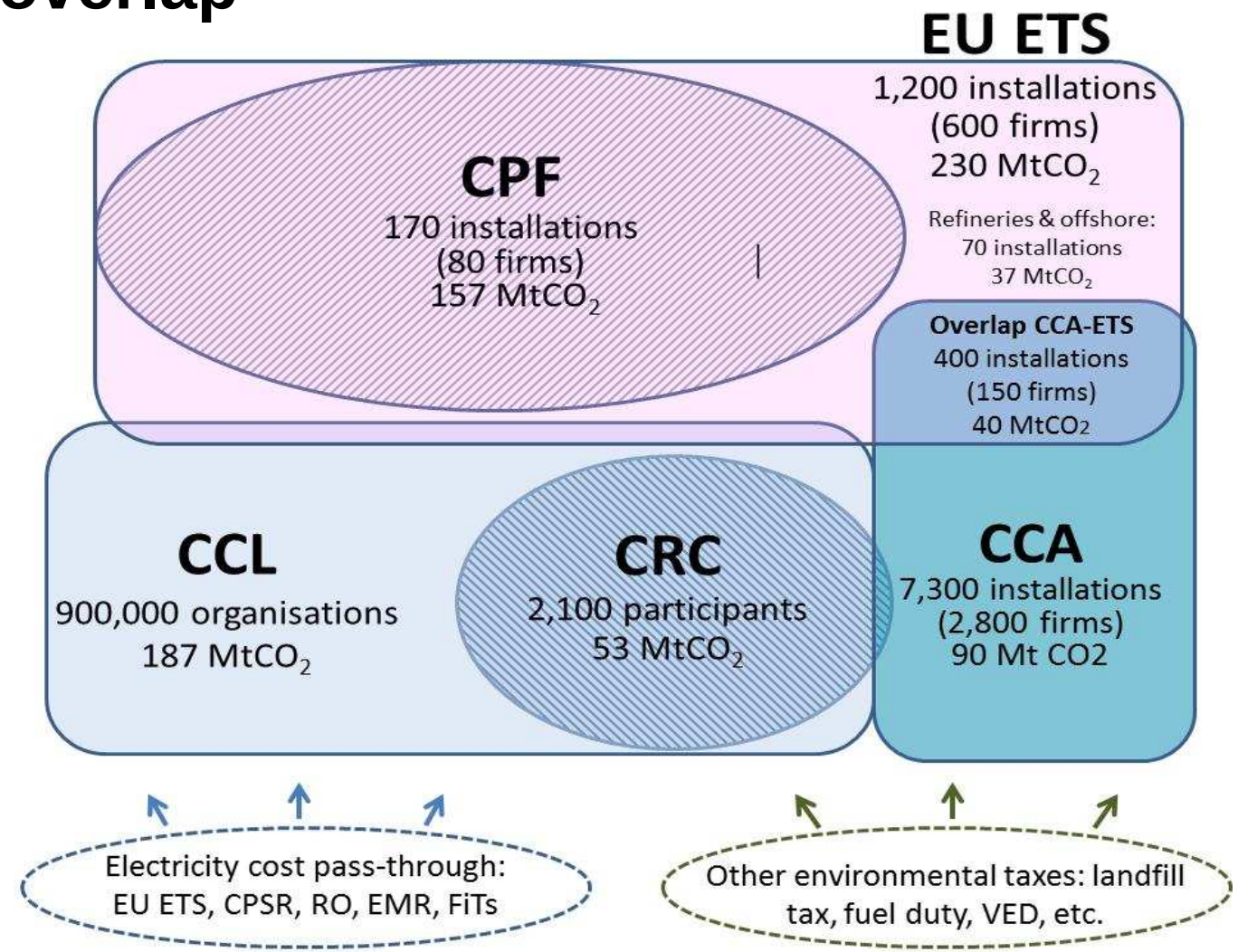
Policy overlap



Source: See Bassi et al (2013) and sources therein

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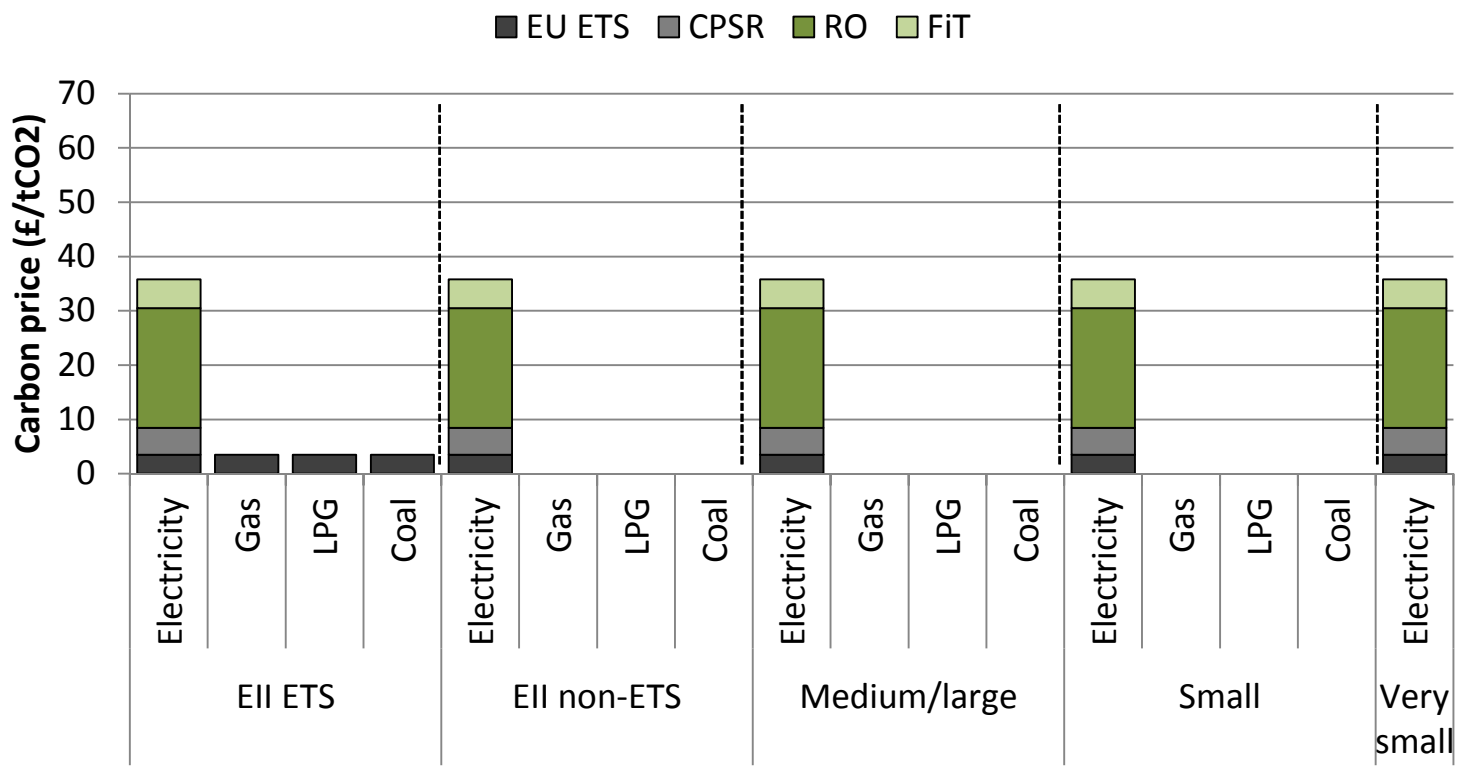
Uneven carbon prices across firms and fuels

- EU ETS and pass-through costs



Source: Authors' calculations

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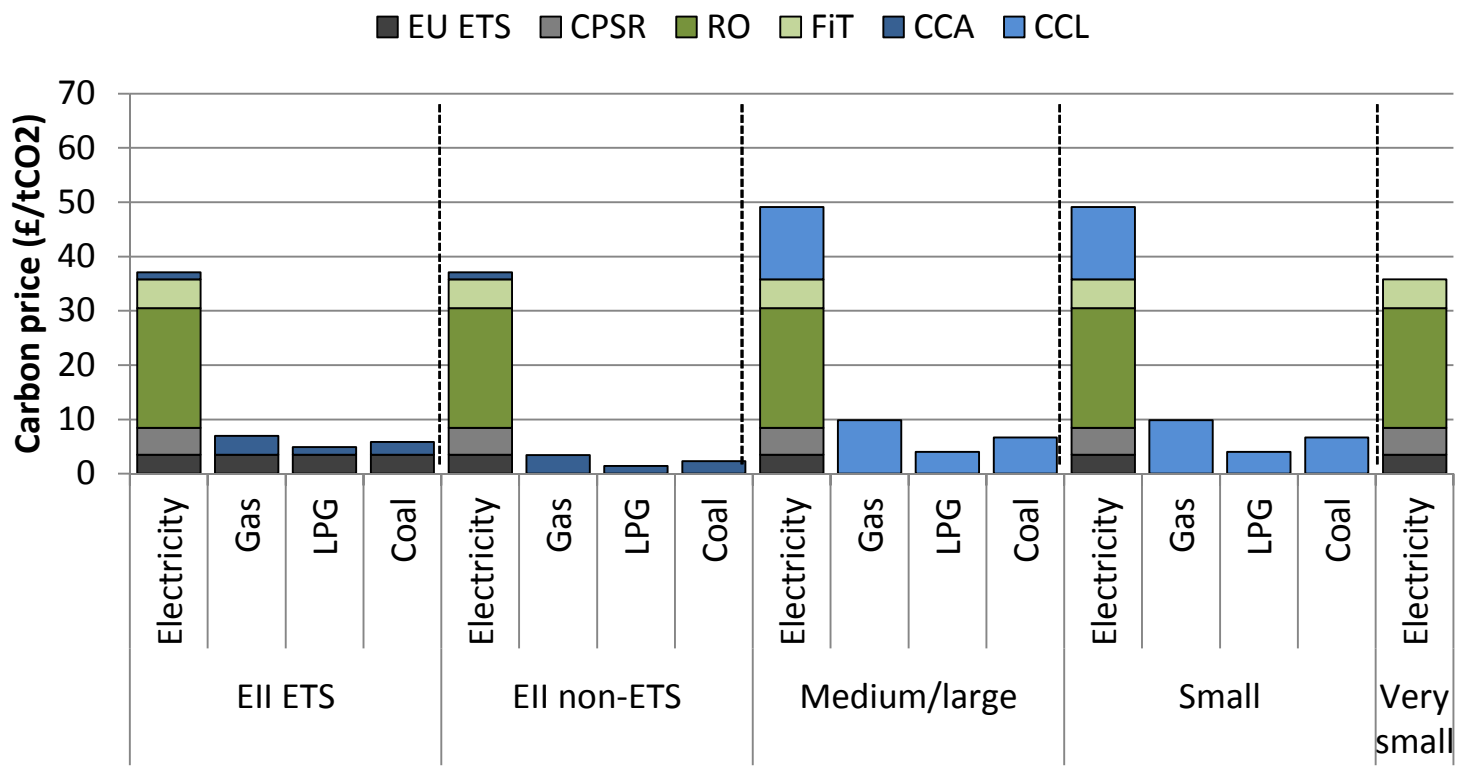
Uneven carbon prices across firms and fuels

- CCL/CCA



Source: Authors' calculations

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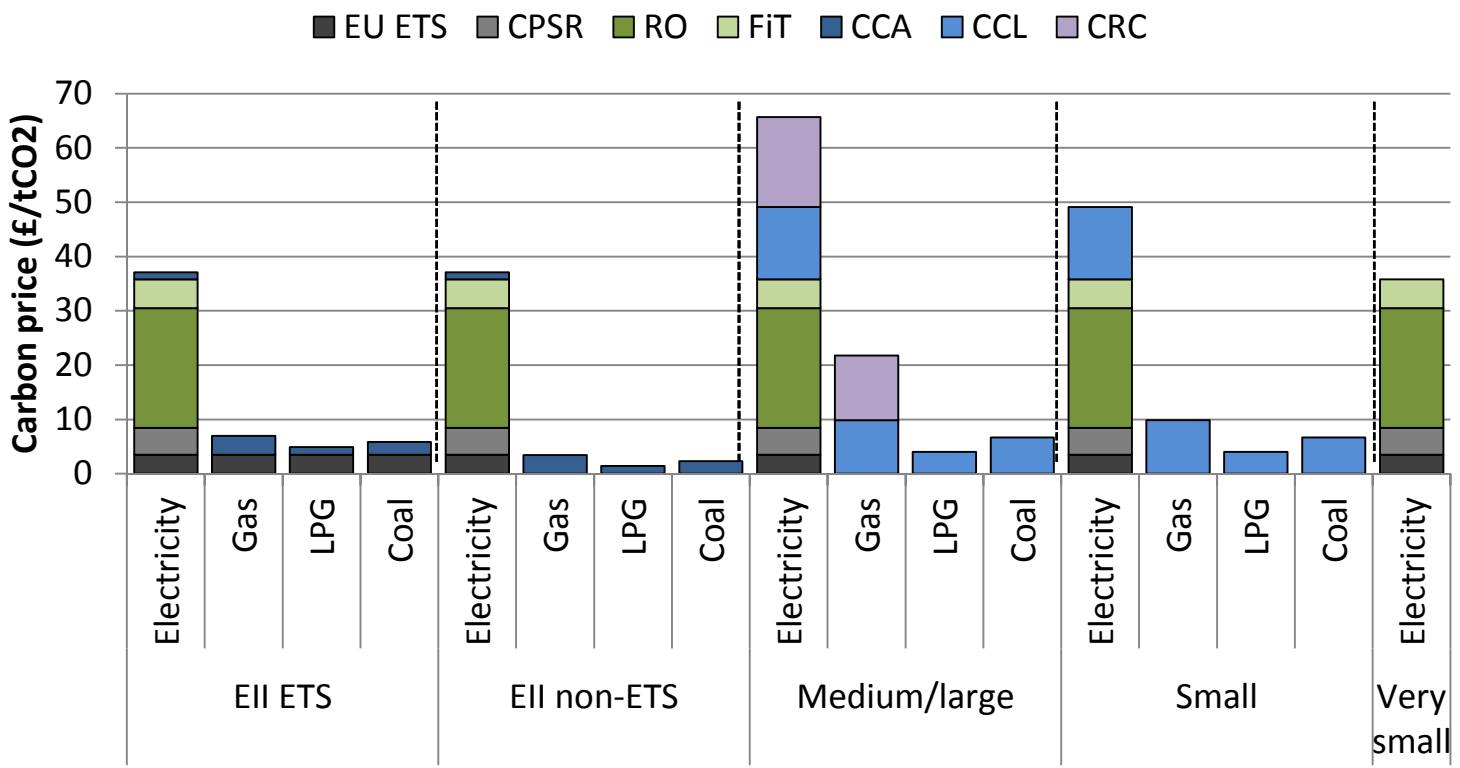
Uneven carbon prices across firms and fuels

- EII/ETS sectors bear the lowest C price, non-CCAs sectors the highest
- Electricity has the highest implicit carbon price



Source: Authors' calculations

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Competitiveness and carbon pricing

- **Can different carbon prices be justified if there are competitiveness concerns?**
- Analysis of CCL/CCA and ETS competitiveness impacts

CCL/CCA analysis:

Update research by Martin et al. (2011)
Compare ~3000 CCA companies with ~4,000 CCL companies from 2001 to 2010:

- **similar characteristics** (turnover, employees, energy intensity,…);
- Operate in same sectors (**same international competition**);

Rates 2013/14

Fuel	CCL	CCA	unit
Electricity	0.524	0.052	p/kWh
Natural gas	0.182	0.064	p/kWh
LPG	1.172	0.410	p/kg
Coal	1.429	0.500	p/kg

Source: HMRC (2013a)

- Discount on CCL: 65% fossil fuels & 90% electricity (80% until April 2011)
- targets agreed with Government

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Findings

- **CCL firms abate more**: 20% reduction in energy intensity compared to CCA
- **No evidence of competitiveness impacts**: no difference between CCL and CCA in terms of employment, gross output, probability of exiting the market

Applying the CCL to all plants would have increased energy efficiency without jeopardizing profits or employment

Similar results were found for **EU ETS**:
- No competitiveness impacts in comparison to non-ETS
- EU ETS firms tend to be more innovative (R&D, patents)

CAVEATS

- Some sectors difficult to match – e.g. power, cement
- Relatively low carbon prices: CCL/CCA ~ £4-13 t/CO2; £15-30 t/CO2

Reform with higher carbon prices may have competitiveness impacts for some sectors

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Rationale for reform

- **Uniform carbon price**: Each tonne of CO_2 does approx. the same damage no matter who emits → apply same carbon price to all sectors and fuels

- **Competitiveness and effectiveness:** CCL more effective at reducing emissions; no empirical evidence that CCL harms competitiveness more than CCA (output, employment);

- **Minimise administrative burdens and overlaps** as they reduce efficiency – e.g. companies report high admin cost for CRC.

→ **Merge CCL, CCA and CRC into a single instrument** (retaining CCL design), applied to all sectors;

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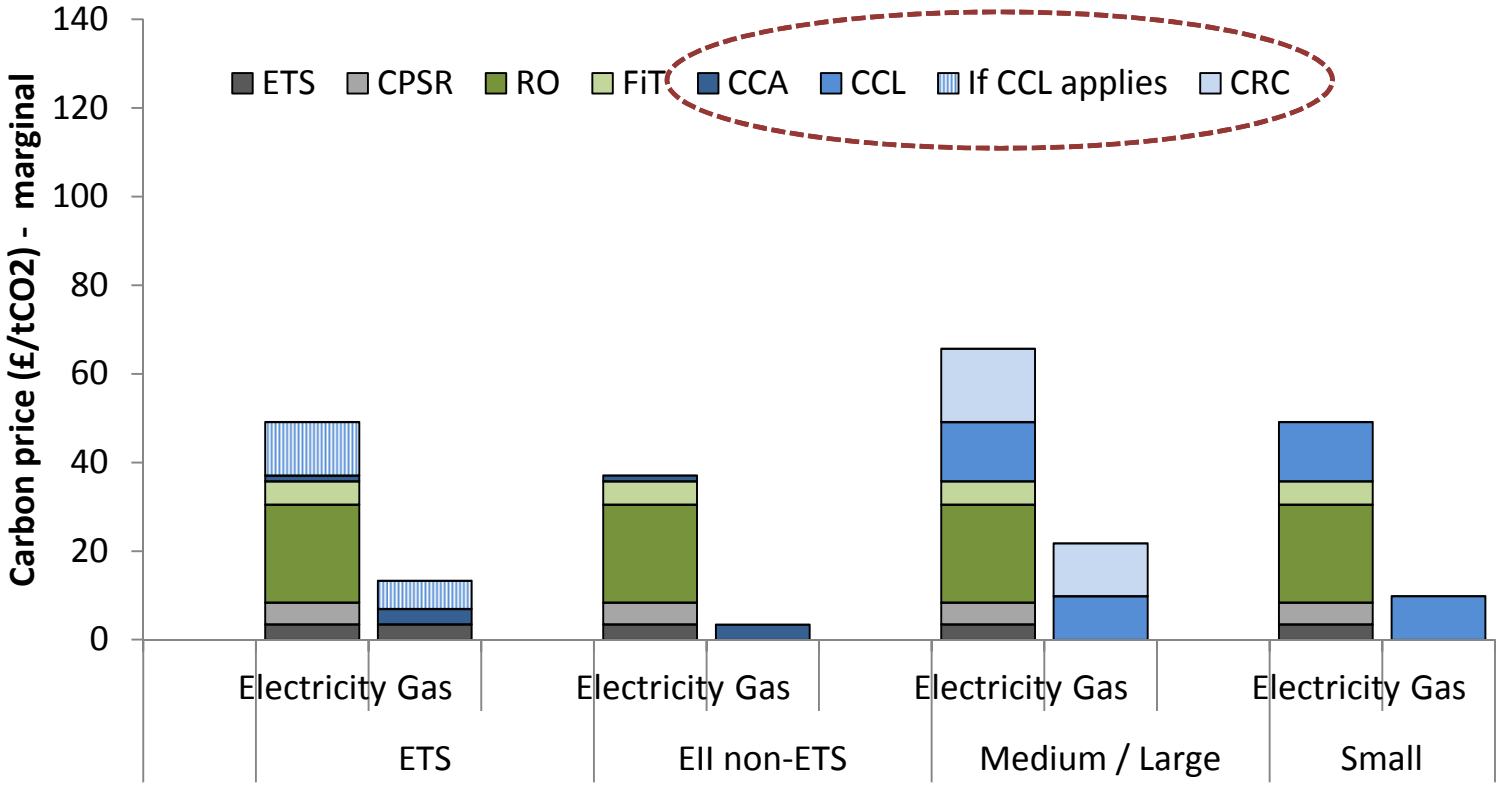
Illustrative reform: Electricity & gas

2013



Source: Authors calculations based on Advani, Bassi, et al. (2013)

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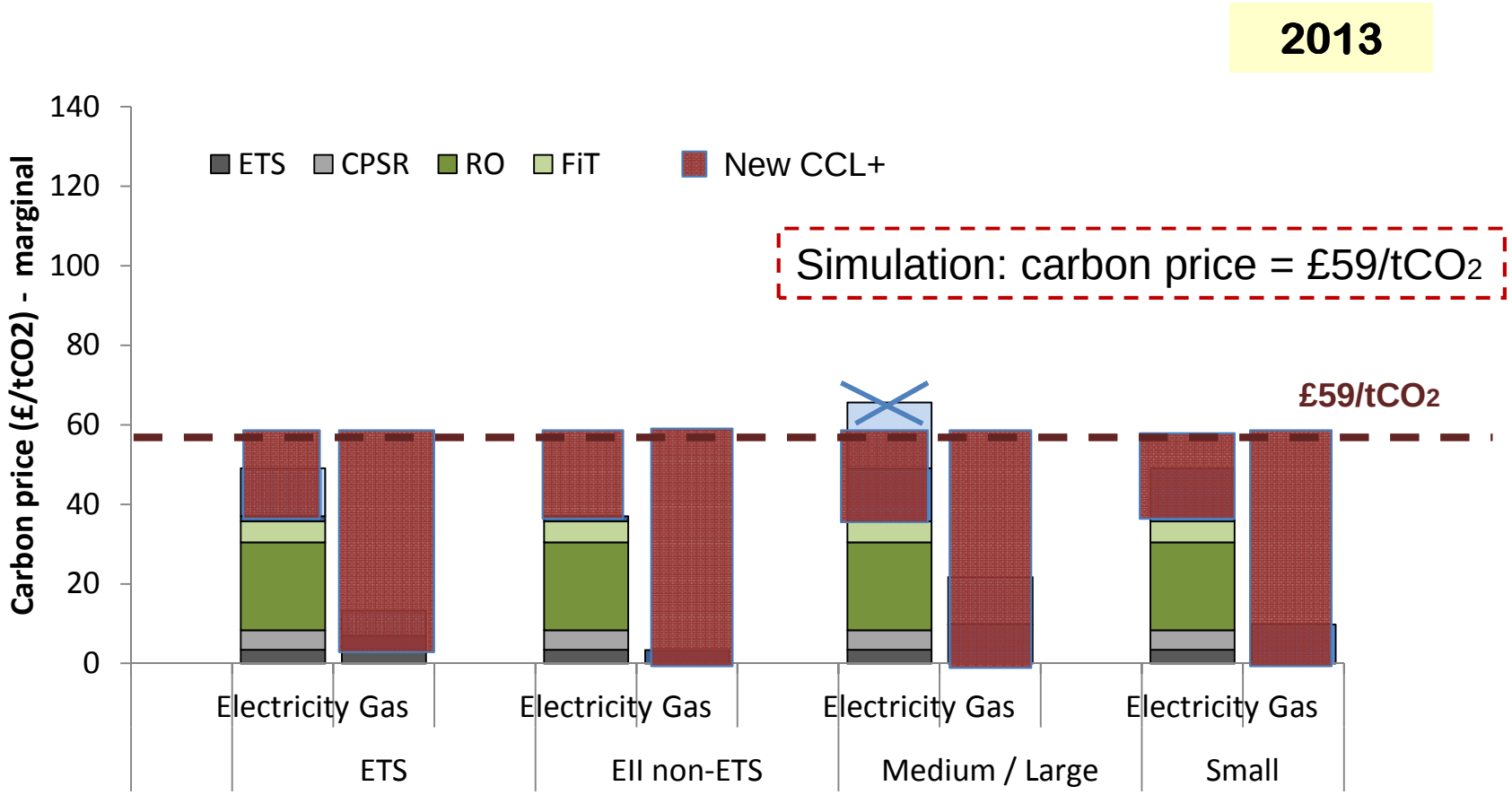
Illustrative reform: Electricity & gas



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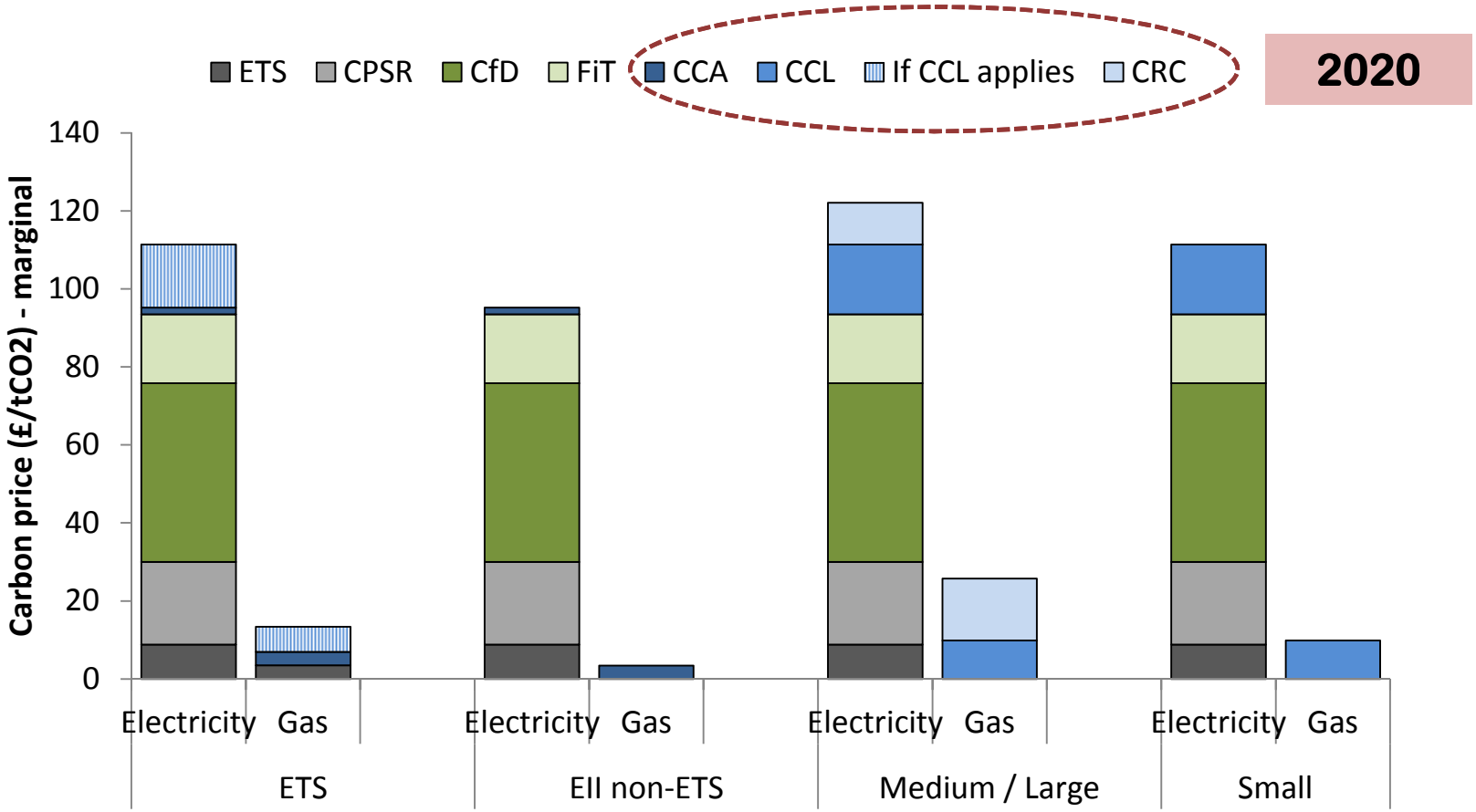

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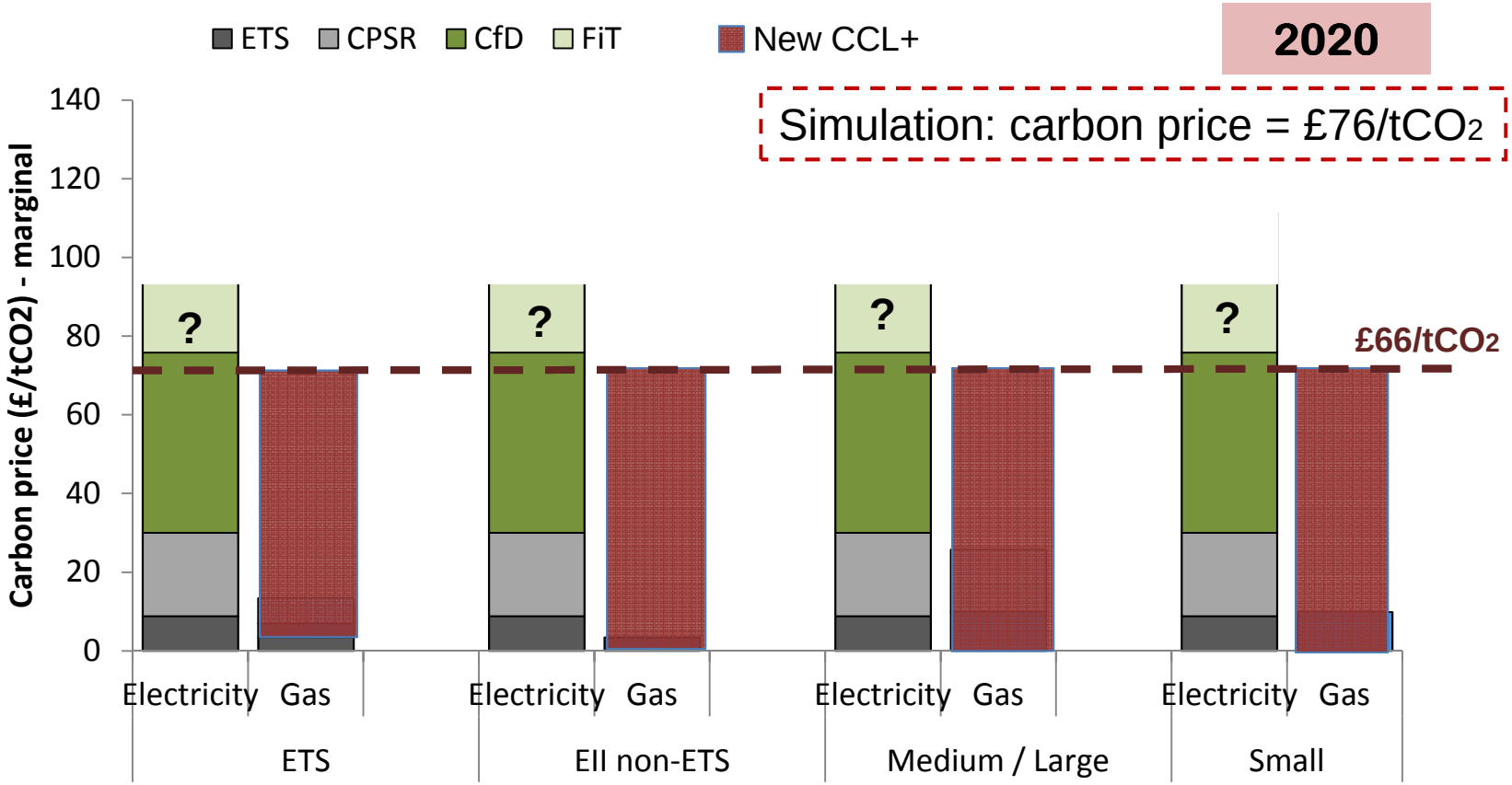

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Key conclusions & recommendations

- We recommend a policy reform where **CCA, CRC and CCL are replaced by a single new CCL rate** applying to all firms, of all size and sectors;
- This will **reduce admin burden and ensure a uniform carbon price** across the economy;
- The reform will result in **higher carbon prices for some of the sectors**, especially the EII. It can also generate significantly higher revenues to the Government;
- **Strong case for** recycling at least some of the extra revenues to address competitiveness and reduce other taxes

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Thank you.

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