

Climate Change, Energy Policy and Green Taxation

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The dimensions of the problem



Current targets, performance and instruments



The conventional economic toolbox



Political economy constraints

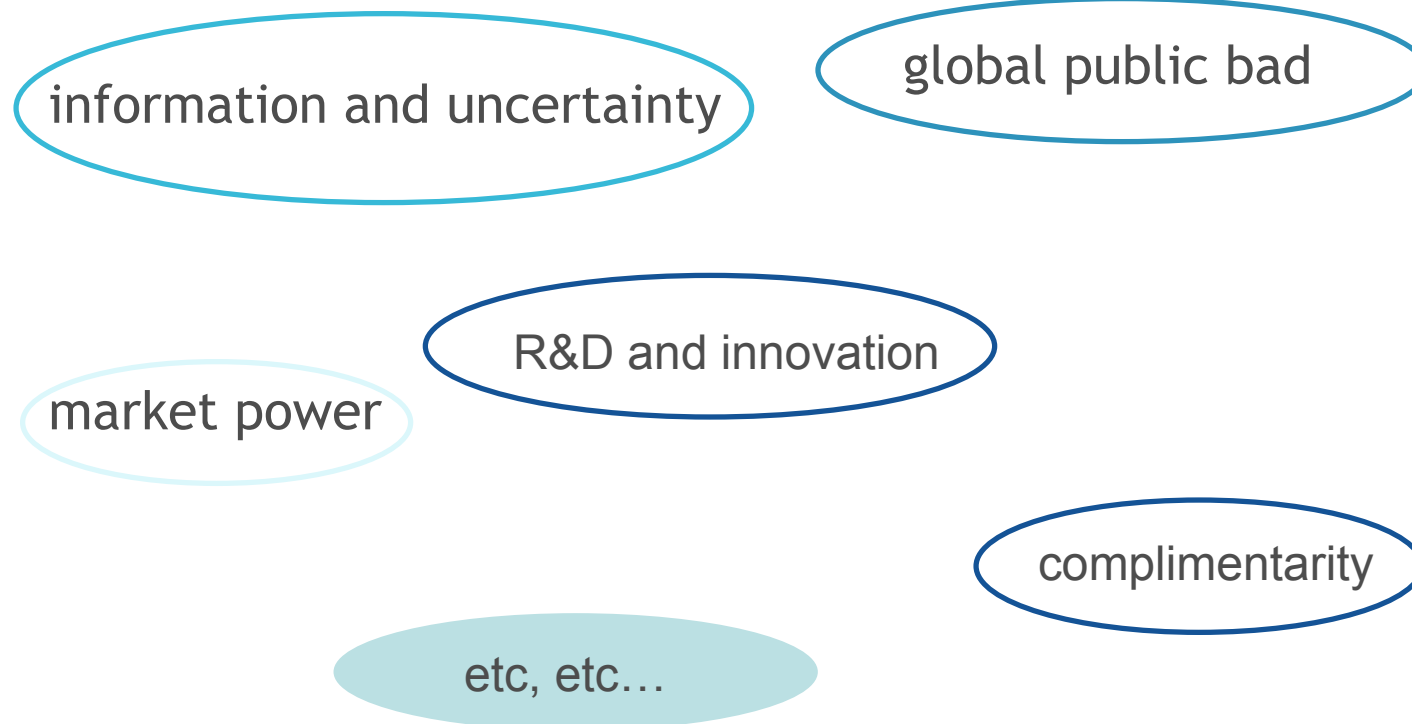


Income effects, hypothecation and credibility



Towards a more efficient solution

Multiple market failures



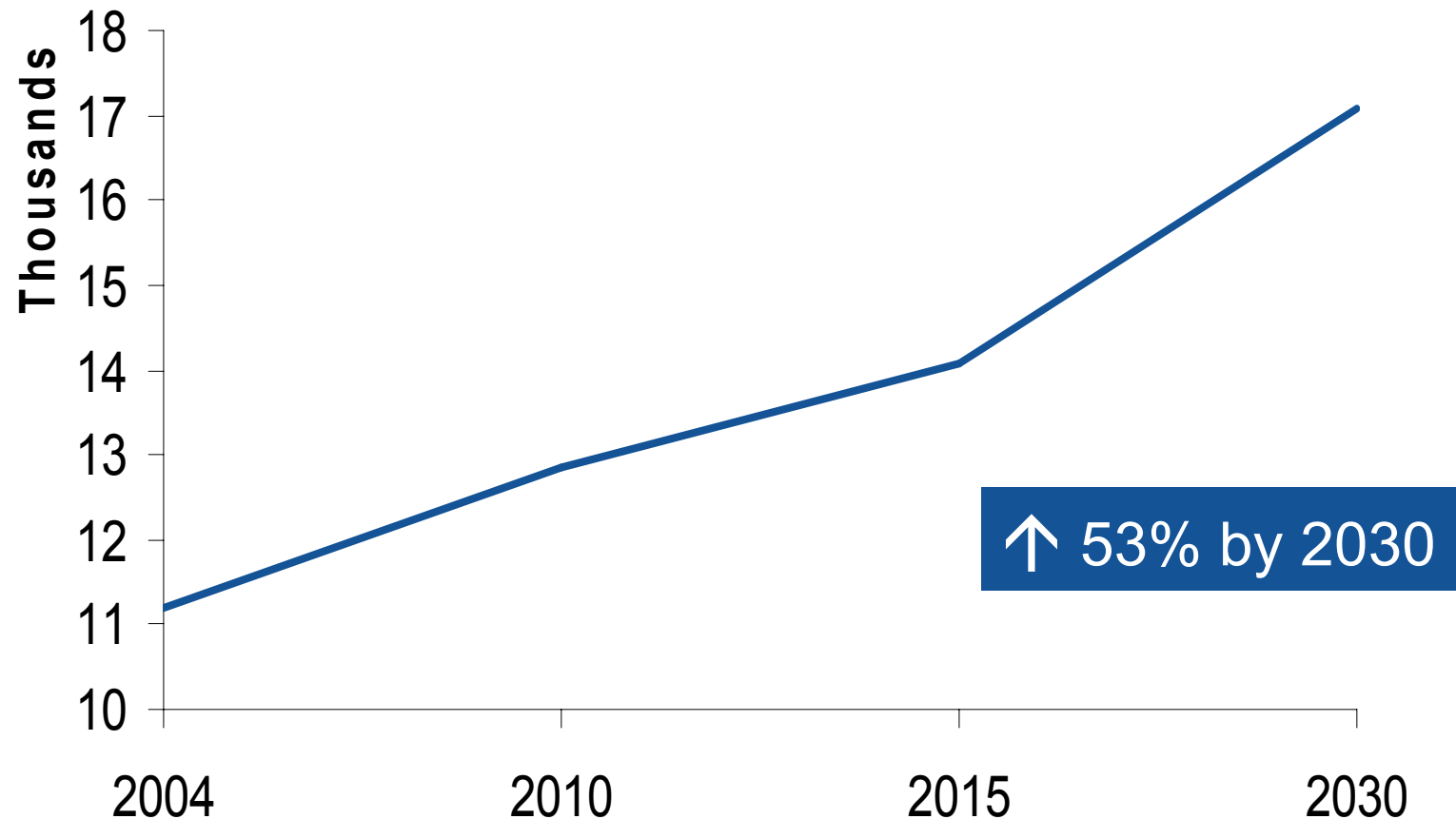
Targets

- 2°C
- 60-80% by 2050
- 20% by 2020
- national targets
(UK 2-% by 2010)

Outcomes

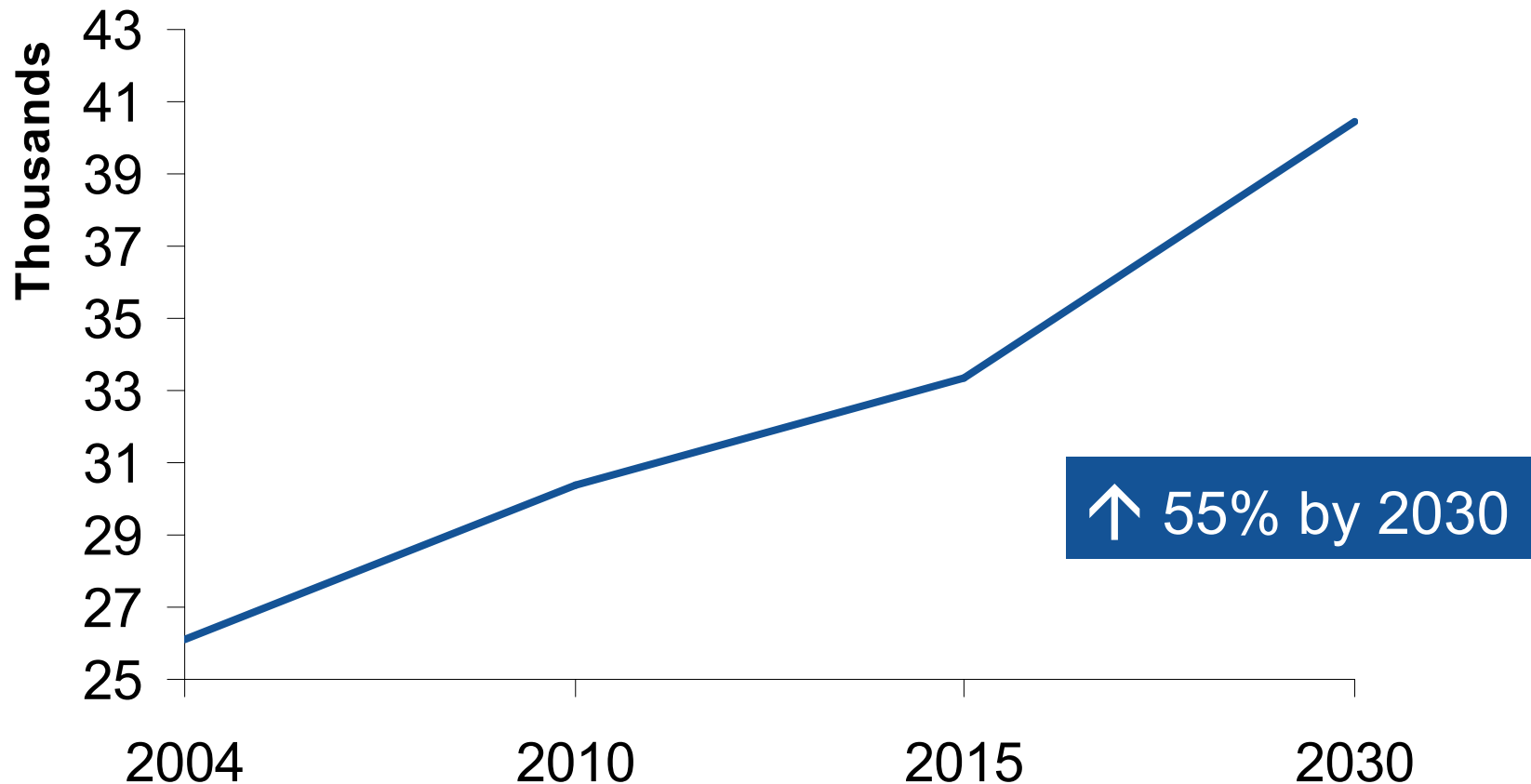
- Kyoto negligible effects
- US better than EU or UK
- UK ↑ 6% since 1997

Global energy demand projections (Mtoe)



Source: IEA World Energy Outlook 2006

Global CO2 emissions projections (million tonnes)



Source: IEA World Energy Outlook 2006

- 1000GW+ of coal-fired generation in China by 2030
- World population 6bn-9bn by 2050

Source: IEA World Energy Outlook 2006

- national energy efficiency measures
- national renewables interventions
- EU ETS
- Command-and-control pollution limits on plants
- informational campaigns
- R&D subsidies
- levies
- taxes on oil and gas
- etc, etc...

Well-known theoretical frameworks:

- broad case for economic instruments and decentralised markets over planning
- prices vs quantities literature

⇒ strong case for carbon tax

But carbon tax not main instrument because:

Some counter arguments:

- carbon taxes highly visible (command-and-control less visible)
- income effect in SR > substitution effect
- Governments not trusted with income - “just another tax”
- international agreements - oligopoly collusion - easier in quantities
- common tax rates assume differential targets
- national sovereignty over taxation in representative democracy

First best: maximise social welfare \Rightarrow revenues \Rightarrow government

but..

lack of credibility...

therefore..

hypothecation

Hicksian compensation

But...

- income inelasticity of demand
- addressing other market failures
 - R&D
 - information
 - complementarity

But: institutional credibility problem

- the time-inconsistency problem
- independence and the monetary policy example
- constitutional approaches and the importance of institutional design
- global, EU or national domains

Step one

- demonstrating total costs of alternative policy approaches
- demonstrating costs of current approaches

⇒ significant net welfare gain

Step two

- focus on hypothecation
- designing institutions at EU and institutional level
- international accounting and transparency

Step three

- either cap and collar EU ETS to hybrid or move towards single tax
- harmonise across EU
- trade out renewables quotas

Step four

- Use hypothecated funds to redistribute against CDMs

- scale of problem is huge - largest ever economic problem
- current policies failing and expensive
- economic instruments likely to significantly reduce costs
- political economy constraints bite
- economics is about substitution effects; politics is about income effects

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