NERA
ECONOMIC CONSULTING

1961 ▪ 50th ANNIVERSARY ▪ 2011

The Energy Company Obligation

An efficient government intervention?

Graham Shuttleworth
Director
George Anstey
Consultant

EPRG Winter Seminar, Cambridge
5 December 2012

Insight in Economics™

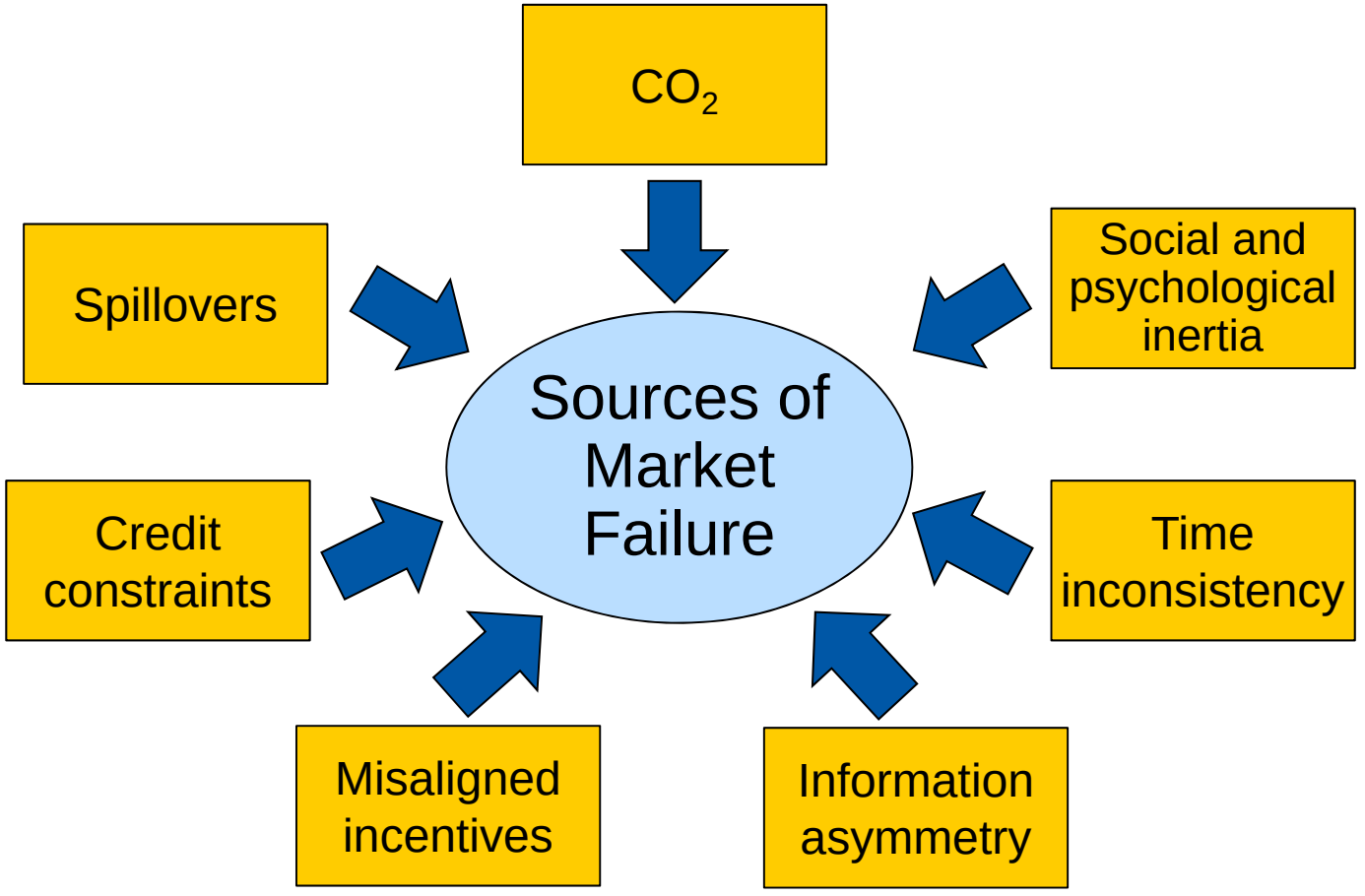
Overview

- DECC identified alleged failures in the market for insulation;
- It is introducing the Energy Company Obligation (ECO) to provide financial support for insulation;
- The ECO is a traded certificates scheme supporting:
  - Expensive insulation types; and
  - Vulnerable consumers/consumers in poorer areas.
- As a policymaker, DECC needs to show that:
  - ECO corrects identifiable market failures;
  - the cure is not worse than the disease; and
  - there is no better cure.

NERA
ECONOMIC CONSULTING

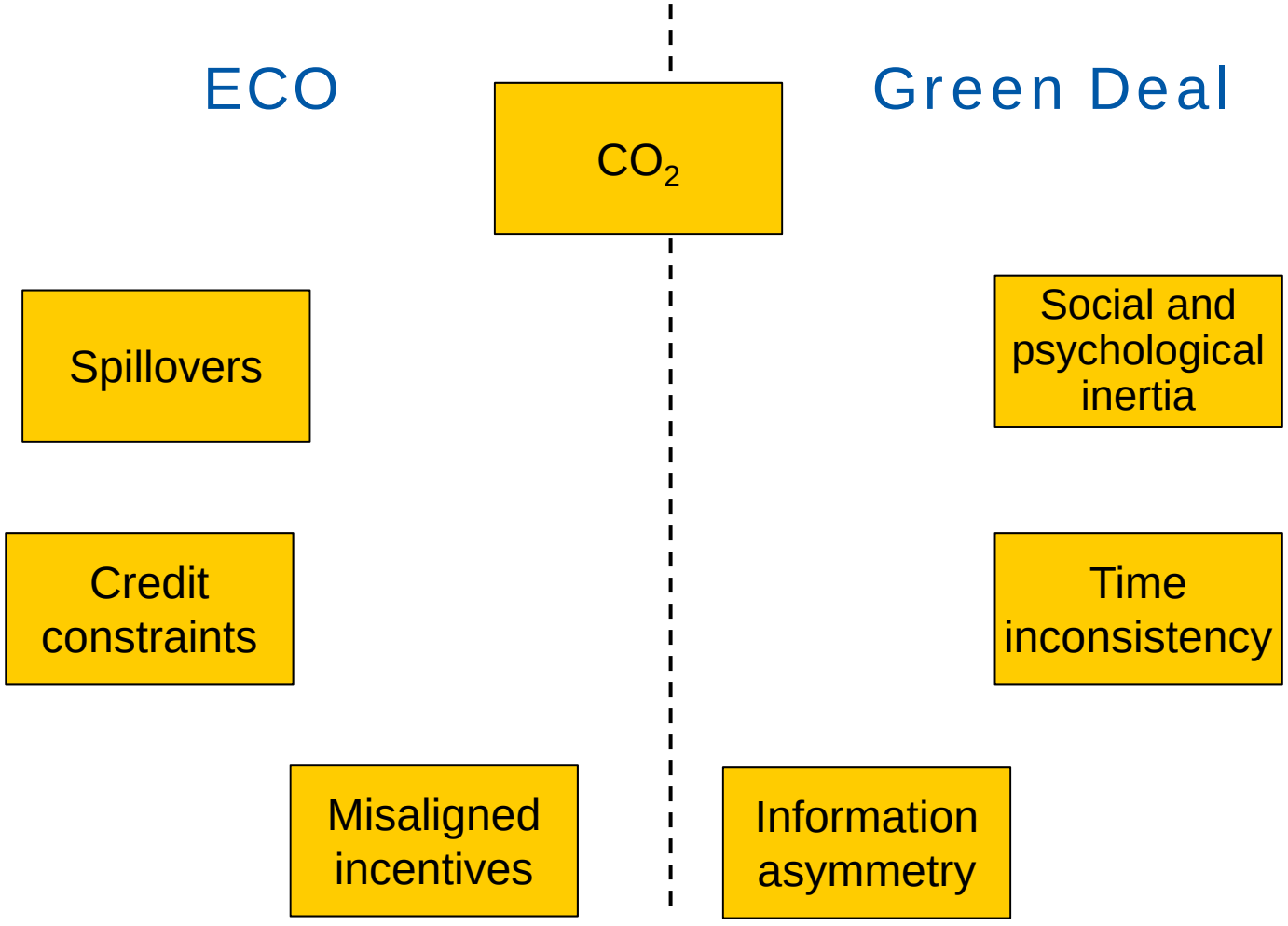
Alleged market imperfections

DECC argues that the market for insulation fails to deliver



DECC's answer is twofold: the Green Deal and ECO

The Green Deal tries to fix failures in the capital market



DECC is targeting ECO at the failures in the insulation market

NERA
ECONOMIC CONSULTING

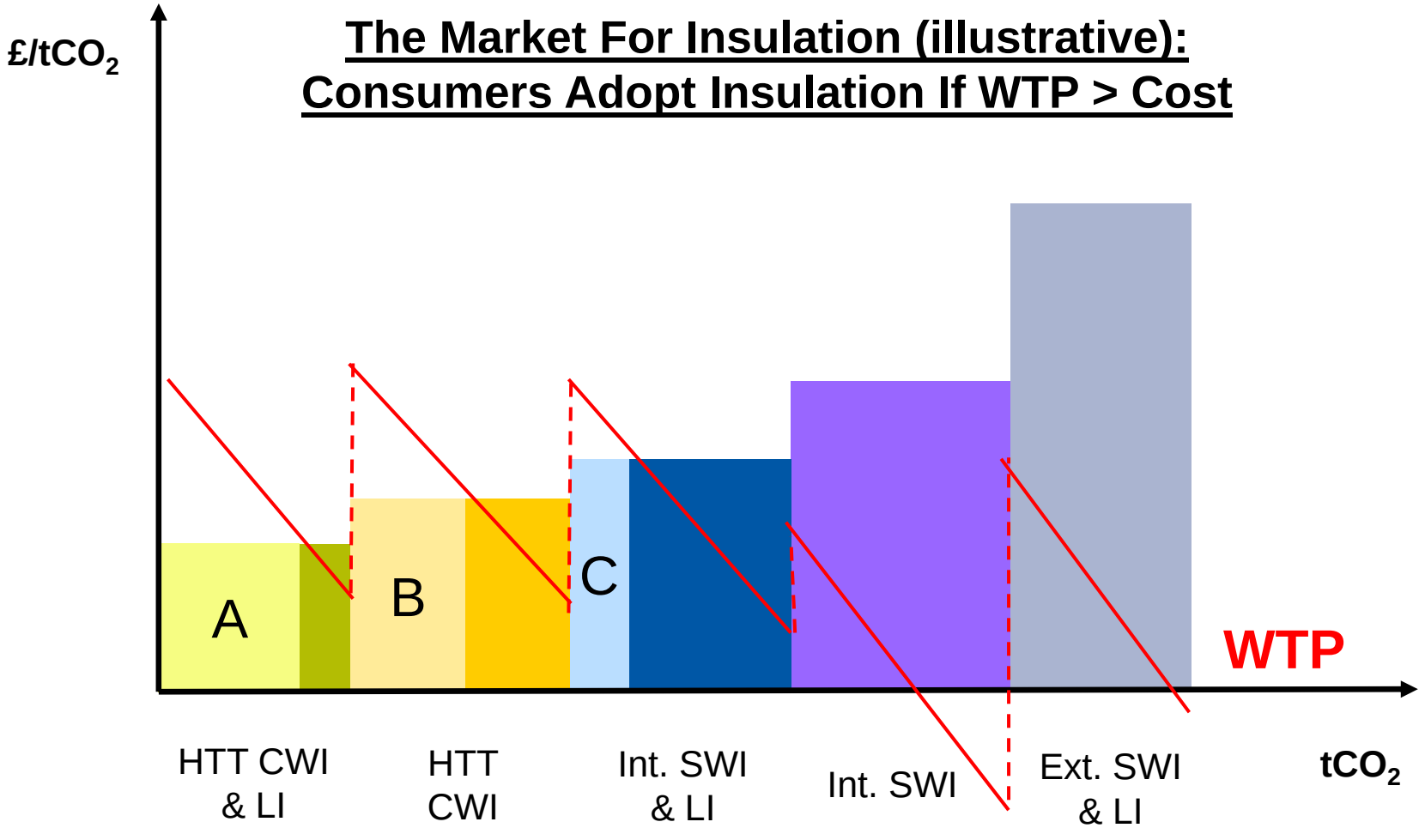
The Energy Company Obligation

ECO consists of four component parts with different targets

ECO Component	Form of Obligation	Targeting on Eligible Consumers	Permitted Insulation Types	Estimated Cost (p.a.)
Carbon Savings Obligation (CSO)			Restricted	£760m
Carbon Savings Communities (CSC)			All	£165m
Rural Safeguard (RS)			All	£25m
Affordable Warmth (AW)			All + Heating	£350m

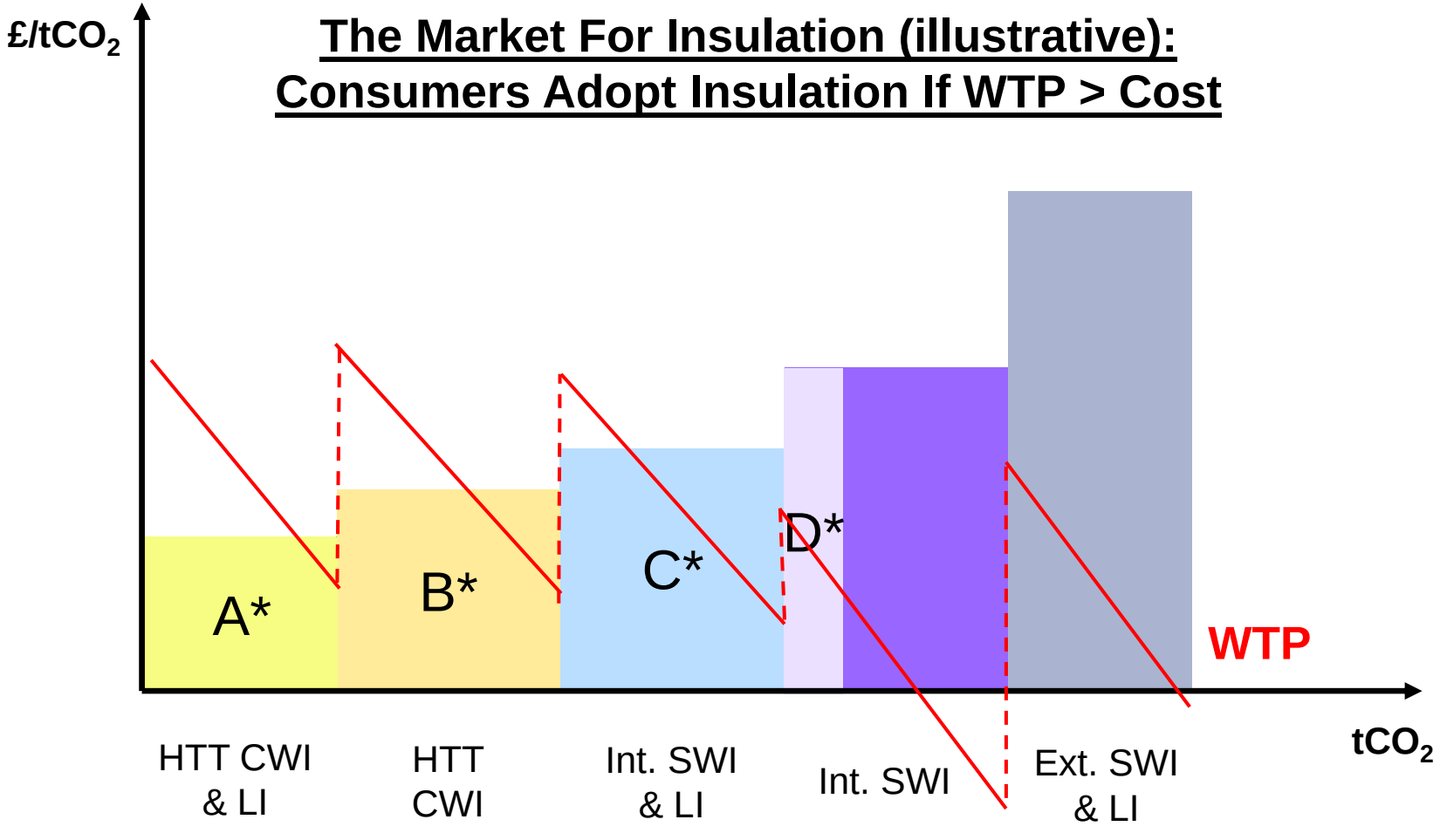
According to DECC, the total cost of ECO is around £1.3 bn, of which 60% fall under the CSO

The market does not necessarily deploy the cheapest technologies



Without a subsidy, customers are Willing To Pay for insulation up to A+B+C

The market price for ECO points will ensure the target is met



Paying a subsidy increases the roll-out of insulation to A*+B*+C*+D*

NERA
ECONOMIC CONSULTING

Is the ECO an efficient intervention in insulation markets?

DECC provides limited evidence that ECO solves market failures

NERA ECONOMIC CONSULTING

CO_2

Gas central heating. Underpriced EUAs?

Spillovers

Aren't they everywhere? Subsidise R&D rather than delivery?

Social and psychological inertia

Funded advertising? Aren't these just transactions costs?

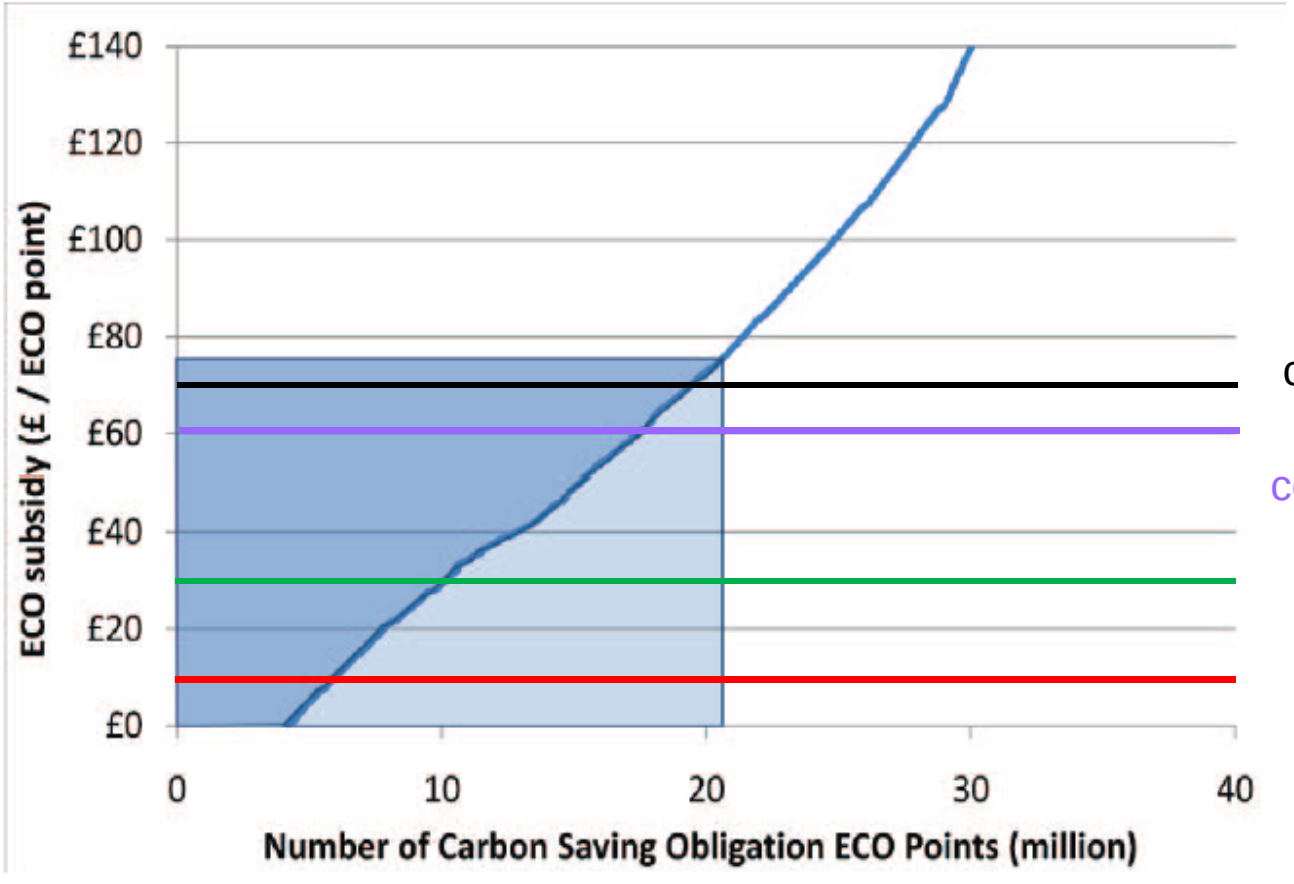
Information asymmetry

Surely still a problem after subsidy? Certification system?

The principal market failure to be solved by ECO programme is the externality of CO_2 emissions

DECC's modelling suggests ECO is an expensive way to cut CO_2 emissions

Figure 33 Central scenario ECO point supply curve and the cost of ECO (for first interim period)



DECC (2009) Target consistent measure 2030

DECC (2009) Target consistent measure 2020

DECC (2007) shadow price of carbon

EU ETS price

Source: DECC Final IA, page 84.

The price under the CSO is substantially above the current price of EUAs

DECC's estimates depend on the future being better than the past

1. Decision Making Frequency (SWI)

DECC assumption:

10% p.a.

DECC's survey evidence:

6% p.a.

2. Search Costs

DECC assumption:

10%-15% of project costs

Supplier evidence:

25% of project costs

3. Bundling

Loft Insulation

External SWI

DECC assumption:

80% preference factor

Supplier evidence:

37.5% in practice

4. Willingness to Pay

DECC assumption:

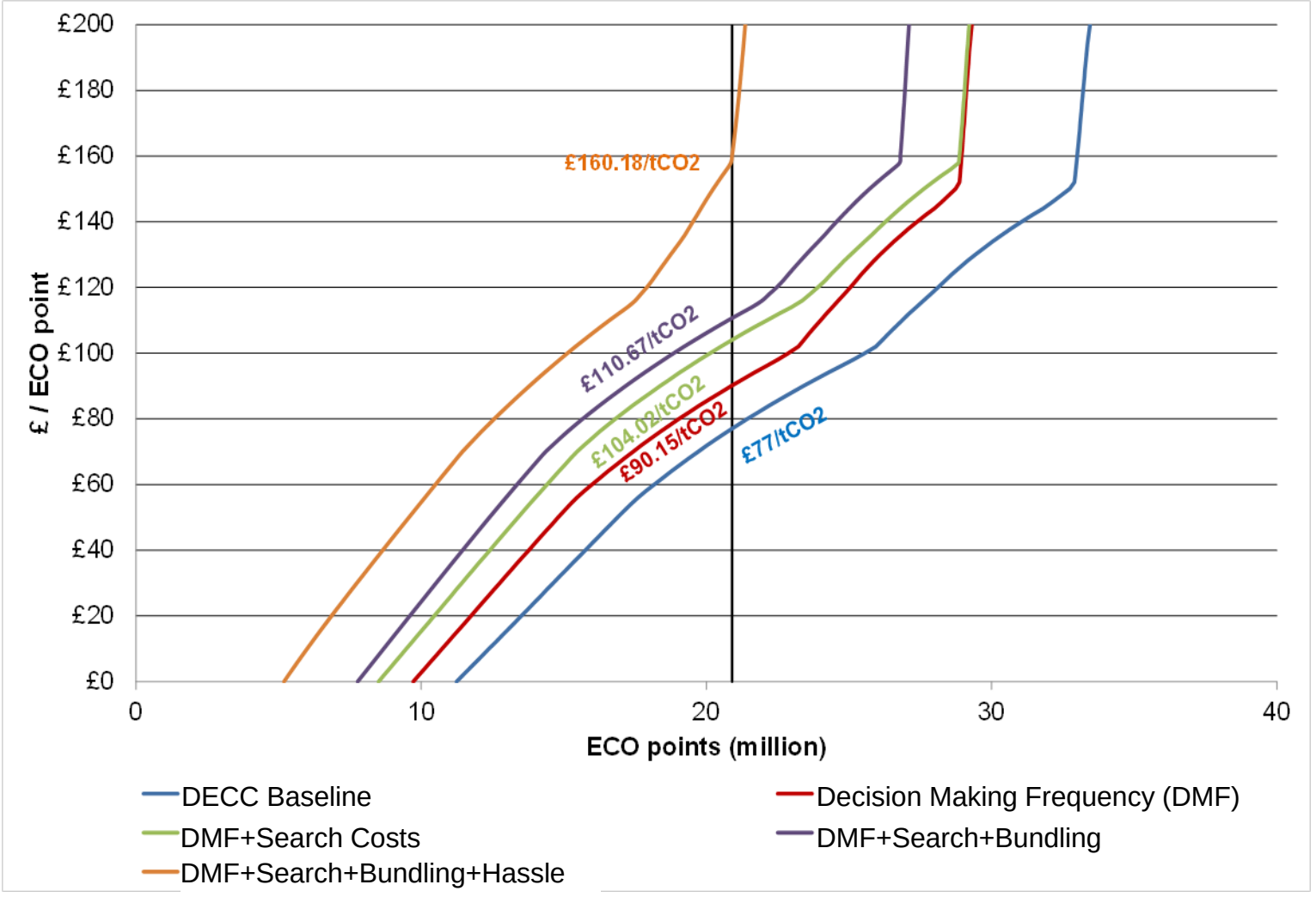
50% co-financing for SWI

Supplier evidence:

No evidence of significant contributions

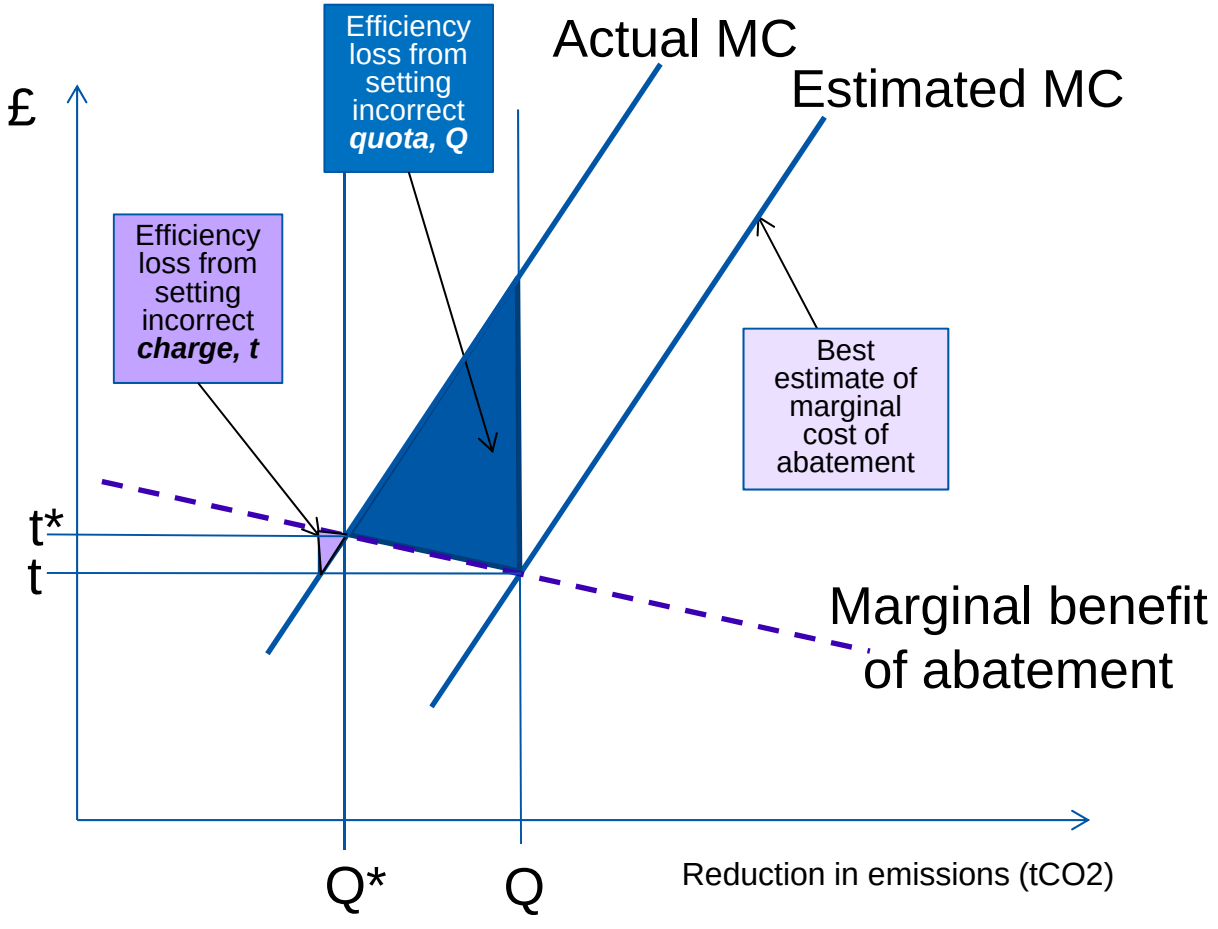
Historic evidence suggests that costs will be higher than DECC anticipates

DECC's estimate of the cost of the CSO is sensitive to its assumptions



After adjusting the assumptions behind DECC's FIA in a simplified model, the cost of CSO doubles

It's hardly new economics but...



... given the likely elasticities of benefits and costs, a quantity obligation may not be optimal

NERA
ECONOMIC CONSULTING

Conclusion

Good regulatory decisions meet a merits and procedural standard

Standard	Action	Standard Met?
Merits Standard (Efficiency)	Establish that the market is failing	~
	Propose a policy tool that is targeted at the problem	~
Procedural Standard (Transparency)	*Show* that benefits outweigh the costs	!!!
	Demonstrate there are no better alternatives	?

ECO does not clearly meet these standards

NERA
ECONOMIC CONSULTING

1961 ▪ 50th ANNIVERSARY ▪ 2011

Contact Us

Graham Shuttleworth

Director
NERA—London
+44 207 659 8654
Graham.Shuttleworth@nera.com

George Anstey

Consultant
NERA—London
+44 207 659 8630
George.anstey@nera.com