

Energy Policies in a Global Context

British Institute of Energy Economics –
UK Energy Research Council,
Oxford, 20th September 2006

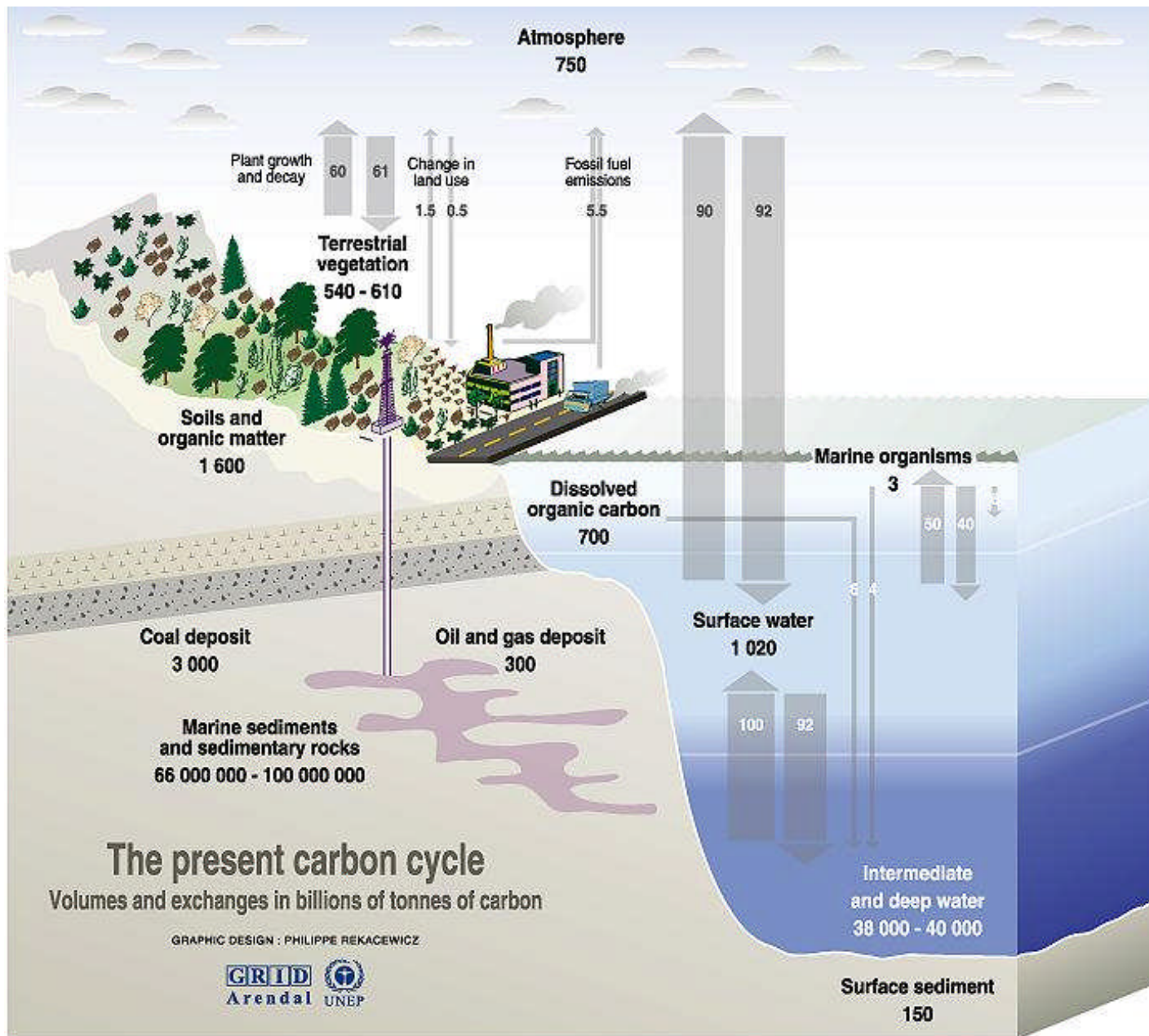
Paul Chambers

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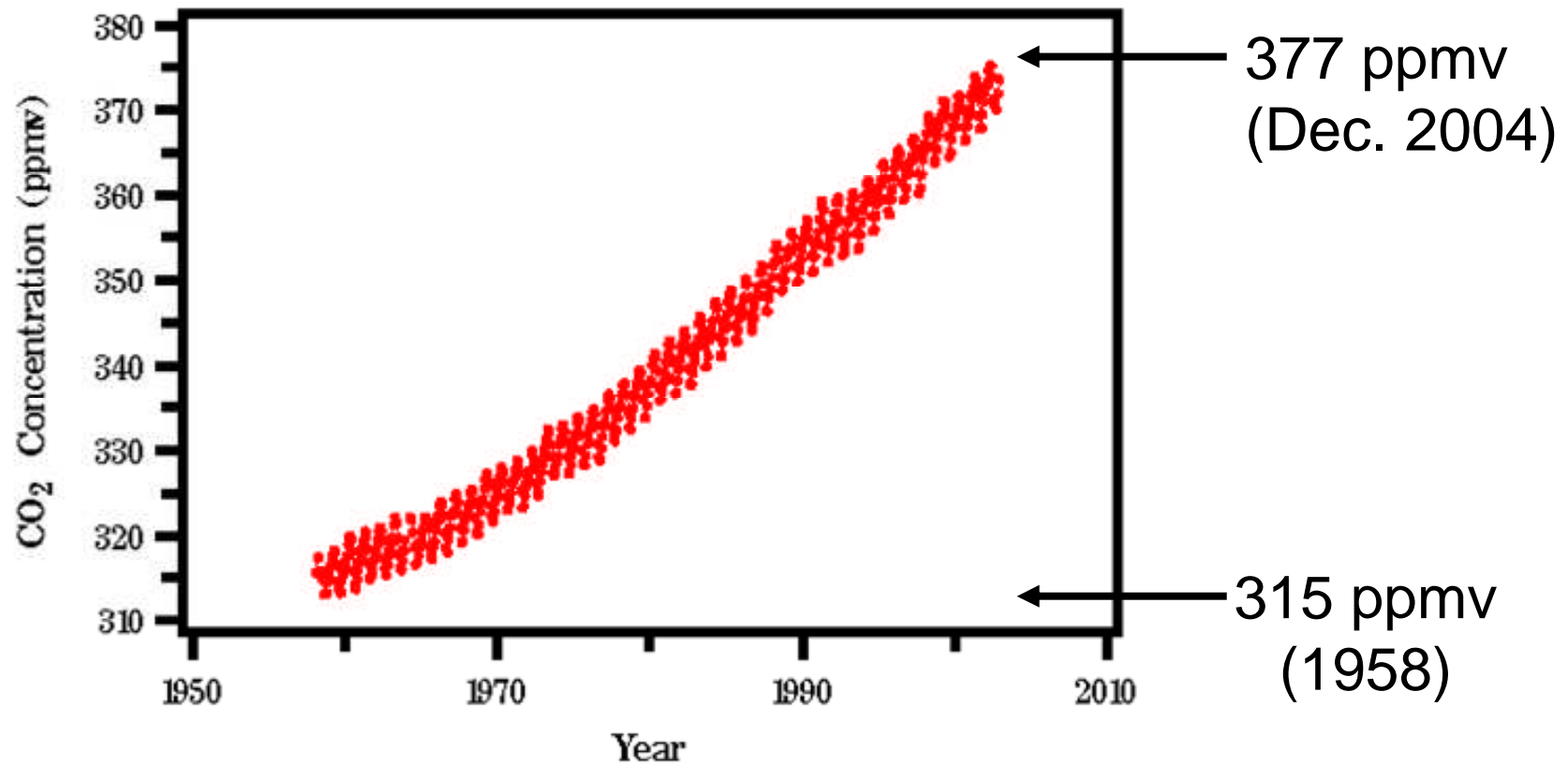
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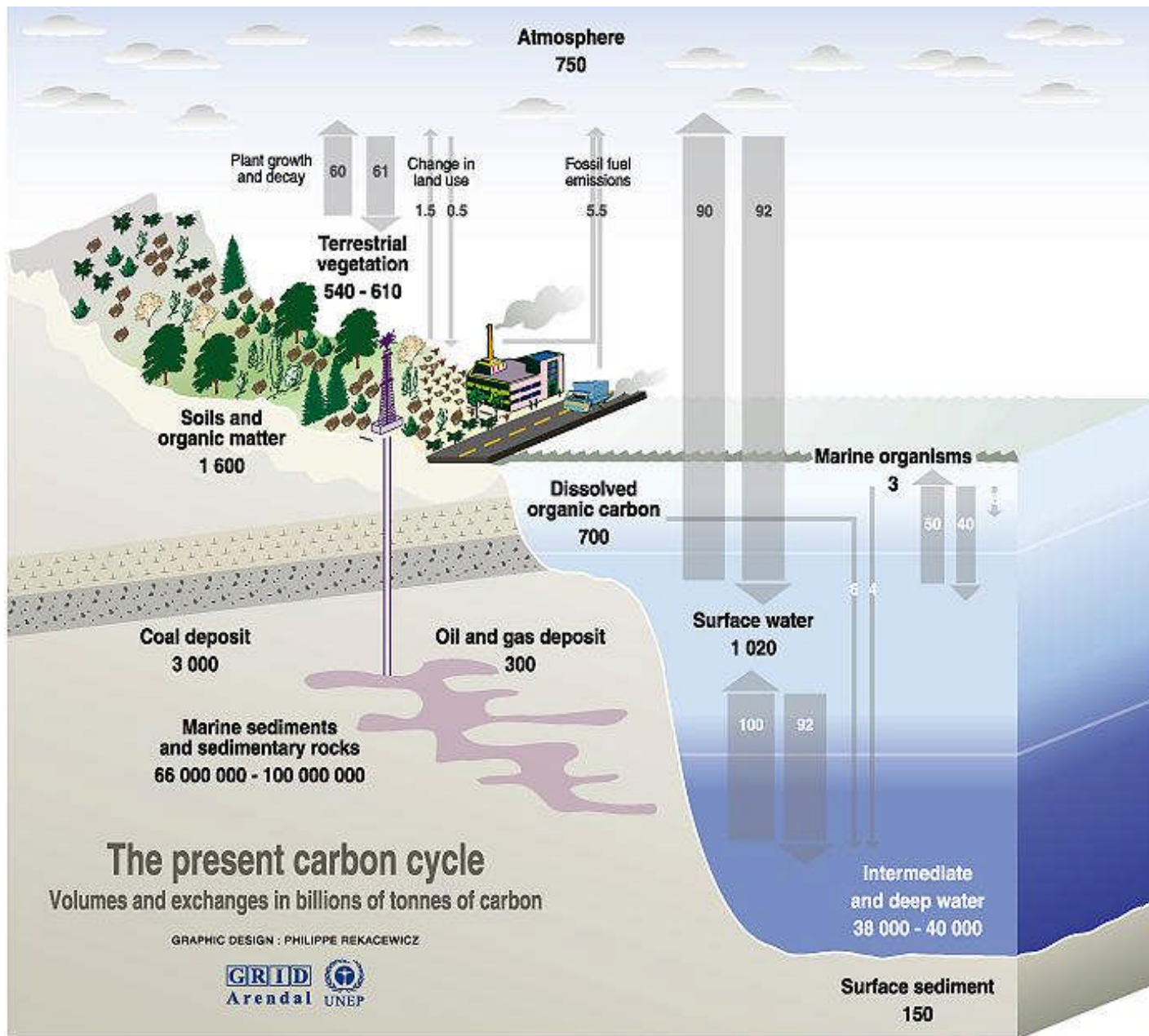
Sources: Center for climatic research, Institute for environmental studies, university of Wisconsin at Madison; Okanagan university college in Canada, Department of geography; World Watch, November-December 1996; Climate change 1995, The science of climate change, contribution of working group 1 to the second assessment report of the intergovernmental panel on climate change, UNEP and WMO, Cambridge press university, 1996.

Mauna Loa CO₂ observations



Source: Dave Keeling and Tim Whorf (Scripps Institution of Oceanography)

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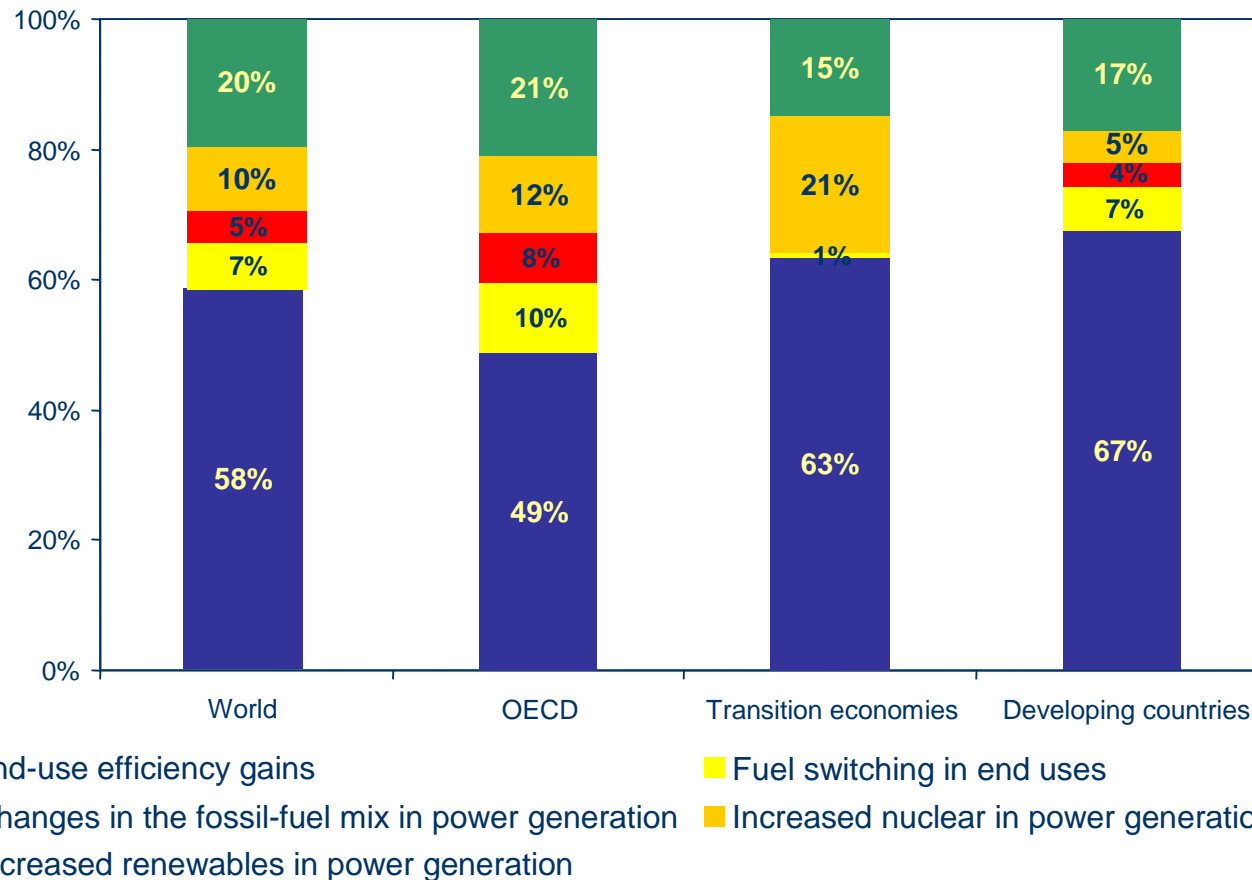


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Carbon reduction options

- **Reduce C intensity of energy supply** – renewables, CCS, nuclear, distributed generation;
- **Improve technical efficiency** – building and appliance standards;
- **Reduce energy service demand** – changing behaviour, avoiding waste.

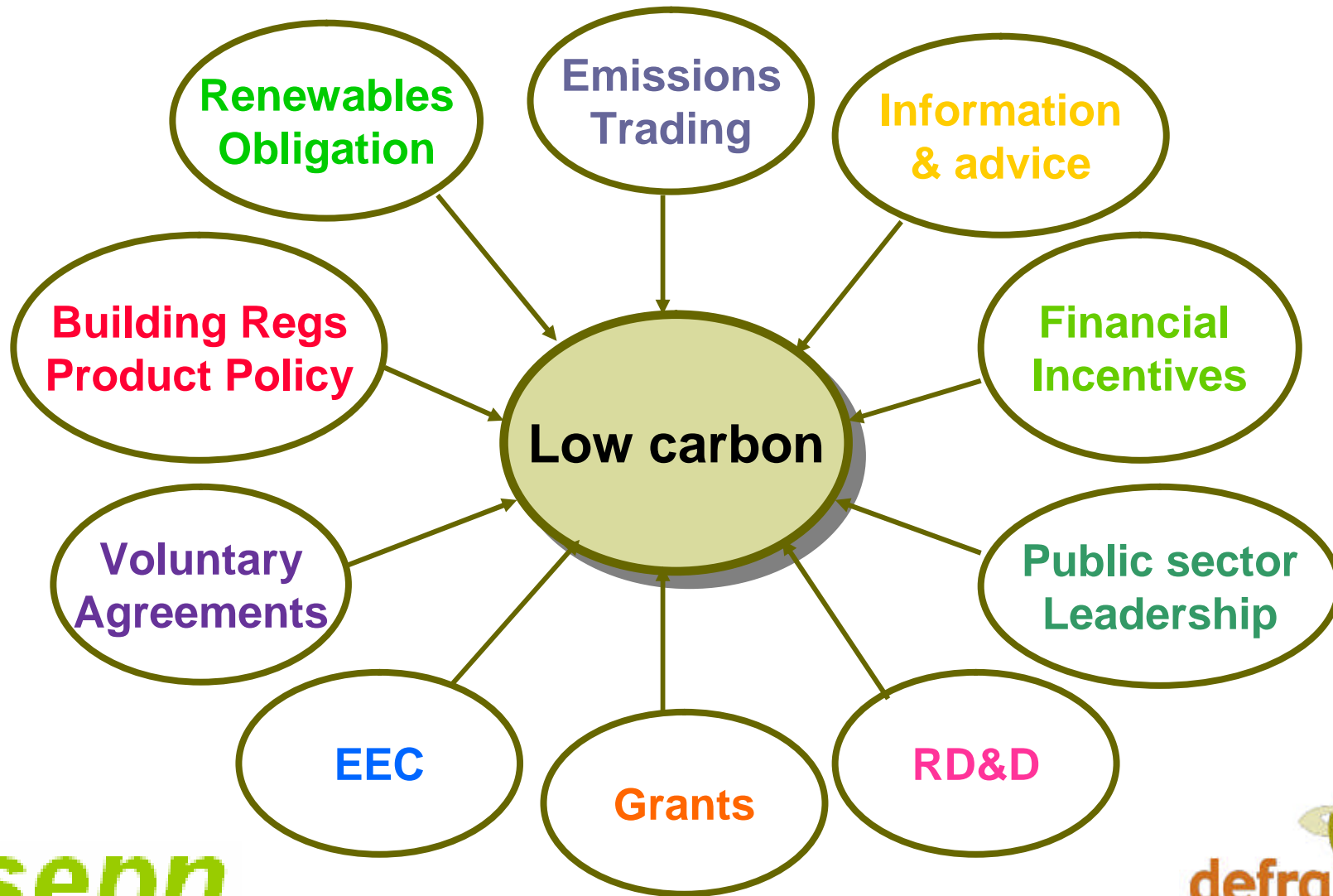
Contributory Factors in CO₂ Reduction, 2002-2030



Improvements in end-use efficiency contribute for more than half of decrease in emissions, and renewables use for 20%.

Source: IEA

Policy Levers - UK



Carbon reduction options

Sectors		Outcomes		
		Reduced C intensity of energy including transport, electricity & heat	Lower energy consumption	
			Increasing technical energy efficiency	Behaviour: reducing service demand, avoiding waste
Transport		RTFO	Voluntary agreements	Road pricing - congestion charge, incentives to lift share or shift modes
Industry	Heat	EUETS, CCA	EUETS, CCAs, ECAs	EUETS, CCAs, Carbon Trust, billing and metering
	Electricity	Support for CHP or distributed generation		
Business & Public	Heat/Cooling	Low C Buildings Programme (Energy Performance Commitment)	Product Standards Building Regulations ECAs (EPC)	Building Regulations, Carbon Trust, billing and metering
	Electricity	Support for CHP or distributed generation		
Households	Heat/cooling	Microgen supported by: LCBP, EEC, RO, B. Regs	Building Regs	Energy Saving Trust billing and metering
	Electricity		Market Transformation Programme, EEC	
ESI		Renewables obligation, support for CCS, EUETS	-	-

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New technologies - RD&D

C reduction policies – International

- **Promoting low-C generation:** REEEP, Support for CCS, EU and UK Partnerships with India and China including NZEC, International carbon trading and project mechanisms
- **Efficient Technologies**
- **Behaviour**

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C reduction options – International

- Promoting low-C generation
- **Efficient Technologies:** IEA incl 1-watt initiative, G8 – Gleneagles follow-up, EU Energy Efficiency Action Plan
- Behaviour

C reduction options – International

- Promoting low-C generation
- Efficient Technologies
- **Behaviour** – EU energy efficiency action plan; national and local programmes

Thank You

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