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Resource productivity: opportunities and policies

A presentation to the Aldersgate Group seminar ‘Beyond carbon: an industrial strategy for a resource-efficient economy’

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The benefits of resource productivity

- Savings to business: £6.4 billion from measures that ‘cost little or nothing’
- Innovation: new technology, economic activity, exports
- Increased resource security (reduced vulnerability): food, water, energy, rare materials
- Environmental improvement: reduced GHG emissions, waste to landfill, extraction of virgin materials

… and an extraordinary business opportunity

NISP outputs (investment £28m over 5 years)

5-year figures = 60% attribution and 20% annual persistence decay

	Actual	**5 years**	**Public investment/ unit output**
Landfill diverted (mt)	7.0	12.6	0.31 (£/t)
CO_2 reduction (mt)	6.0	18.1	0.36 (£/t)
Virgin materials saved (mt)	9.7	29.1	0.23 (£/t)
Hazardous materials reduced (mt)	0.36	1.1	6.04 (£/t)
Water saved (mt)	9.6	28.7	0.23 (£/t)
Extra sales (£m)	176	317	0.012 (£/£)
Costs saved (£m)	156	281	0.014 (£/£)
PLUS			
Extra Government revenue (£m)		89	0.31 (£/£) Fiscal multiplier: 3.2 (£/£)
Private investment (£m)	131		
Jobs created	3683		
Jobs saved	5087		

Policies for resource productivity

- Importance of prices to drive productivity improvement
  - Landfill tax in 2013 will drive out landfill
  - Carbon price to drive energy from waste, CHP, biogas, recycling
  - Green fiscal reform (Green Fiscal Commission) can meet 2020 carbon reduction targets
- Prices not enough: need for regulation, information
  - Pricing too difficult: land use, planning, biodiversity, Water Framework Directive, product design/performance (e.g. buildings, vehicles, appliances)
  - Prices don't work: information failure (main NISP innovation)
    - Culture, habits, institutional structure (attention/job description)
    - Businesses won't pay even though very profitable – rationale for public intervention (Landfill Tax – businesses pay for disposal; NISP – businesses improve resource and economic efficiency; businesses and government better off)

Final thoughts

- Take physical basis of the economy as seriously as monetary basis: physical (resource flow) accounts to match National (money flow) Accounts
- Use prices to increase resource productivity, reduce waste/loss of potentially valuable materials
- Use information to increase effectiveness of price signals
- Use regulation to secure environmental services/ecosystem functions, set framework within which markets/prices operate, achieve defined environmental outcomes when more effective than price signals
- Low-Carbon Industrial Strategy, Carbon Trust, Technology Strategy Board, WRAP, NISP – UK has made a start, well behind some other EU countries (e.g. Germany, Sweden), long way to go but prize is very great


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