

# Energy and Environmental Legislation

Impacts on Business: An  
Opportunity or a Threat?

**Entec** *Creating the environment for business*

# Introduction

- Energy and Environmental Legislation
- What is it for?

# Economic Growth

- What drives business?
  - Demand
- How to create demand?
  - By change

# Can Legislation Drive Demand?

- Health and safety
- Vehicle design
- Electrical goods
- Pollution abatement
- Energy efficiency in homes
- Bio fuel

# No Change

- What happens when there is no change?
- Karl Marx predicted the death of capitalism

We fear change...

but we fear lack of change more

# Priority Areas: Climate Change

- Biggest sources in UK
- Electricity generation
- Housing
- Transport
- Industry
- Public and commercial building

# Opportunities

- Emission trading
- Key features of the market

# Why use trading?

- Economics - most CO<sub>2</sub> reduction for least resource (capital) input
- Concept of allocative efficiency
- Consistent with economic principle that the polluter pays
- Generate innovation
- Substitution and alternatives

# Market

Marginal Cost of Emission Reduction



Company A:  
Low Compliance Cost

Company B:  
High Compliance Cost

# Carbon Management

Minimising the risk and maximising the revenue  
from the market mechanisms of international  
climate change policy

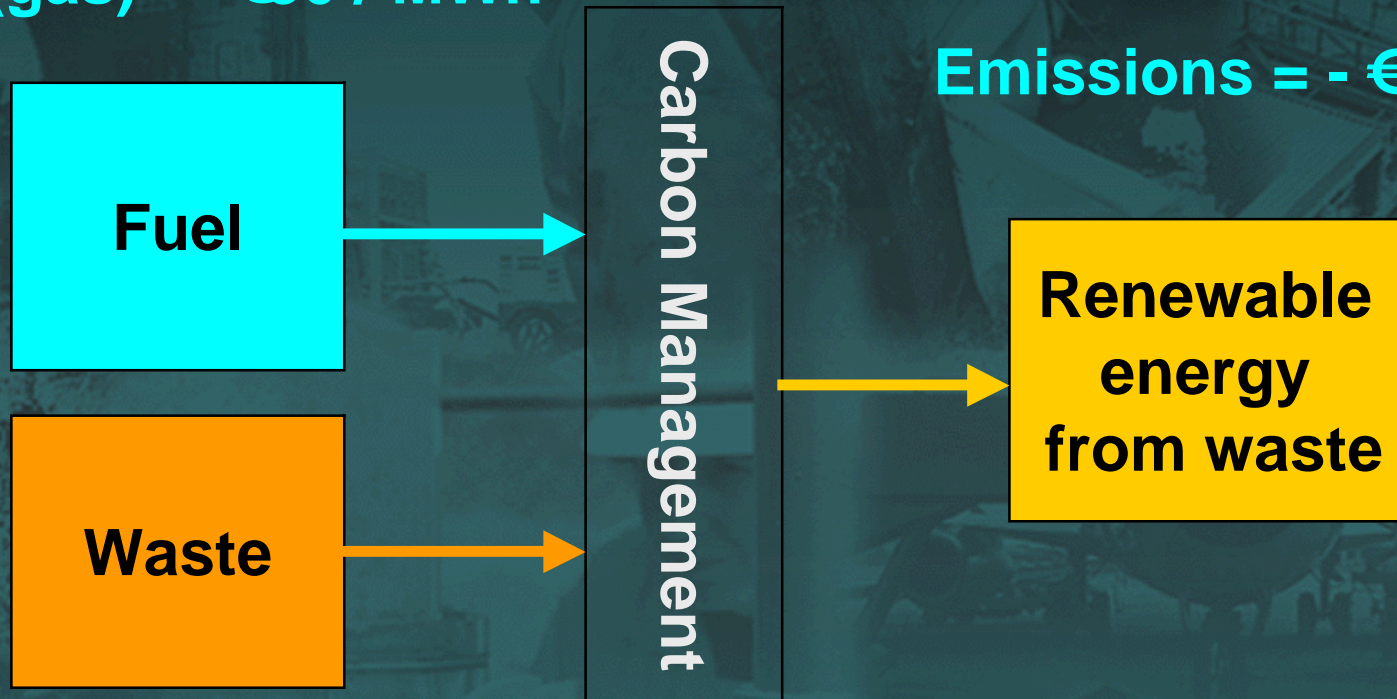
# Example

Emissions = - €20 / t CO<sub>2</sub>

Fuel (gas) = - €30 / MWh

Renewable energy  
= + €75 / MWh

Emissions = - €0 / t CO<sub>2</sub>



Landfill = -€70/ t waste  
(Rising @ €5 / t p.a)

Landfill = €0

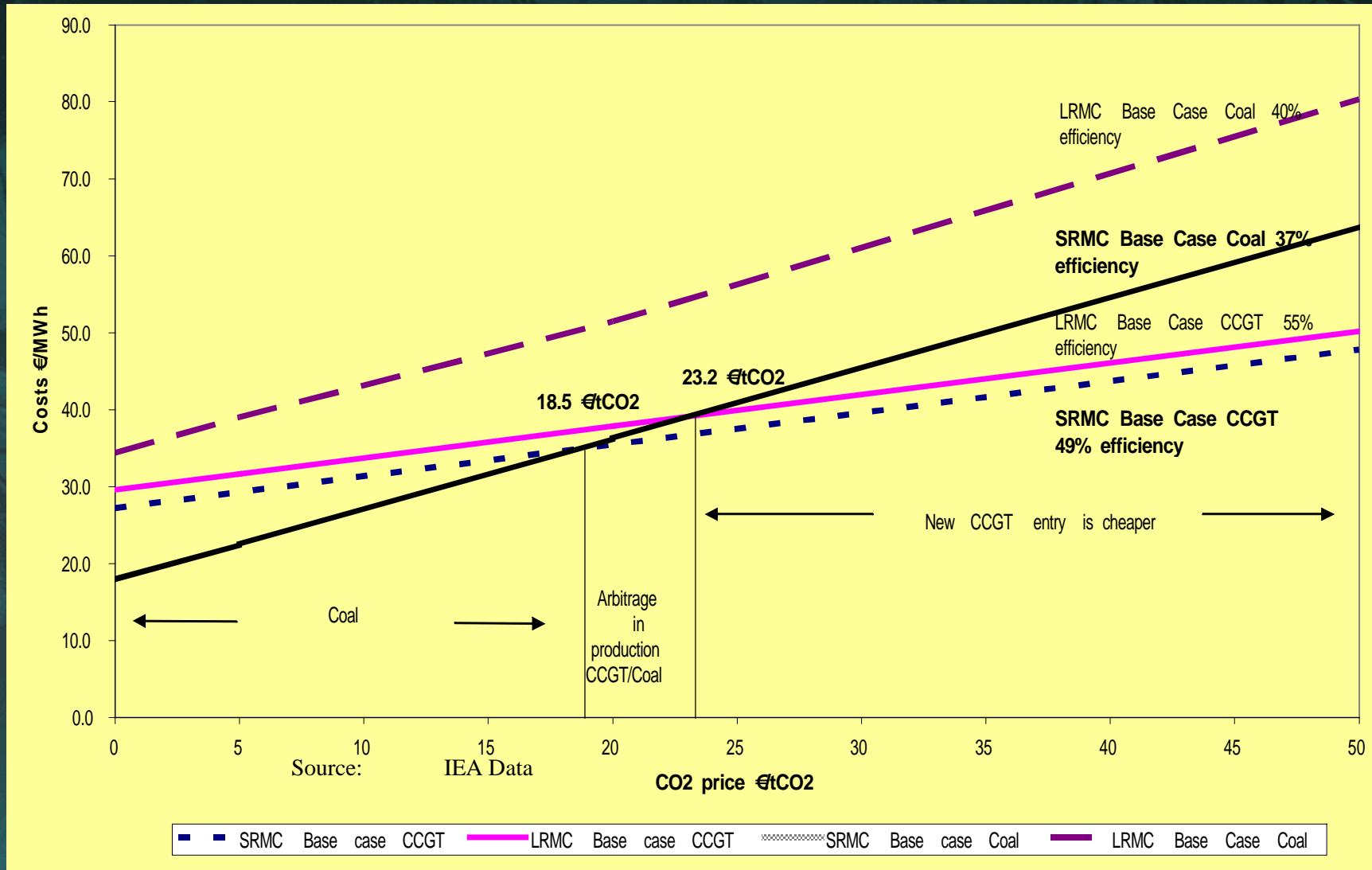
# Opportunity

- 05.12.05 Chemical company Rhodia sees shares gain on CDM decision
- Global chemicals company Rhodia has seen its share price jump almost 14 per cent since last week's announcement that its adipic acid N20 project in Onsan, South Korea received approval from the CDM Executive Board last week.

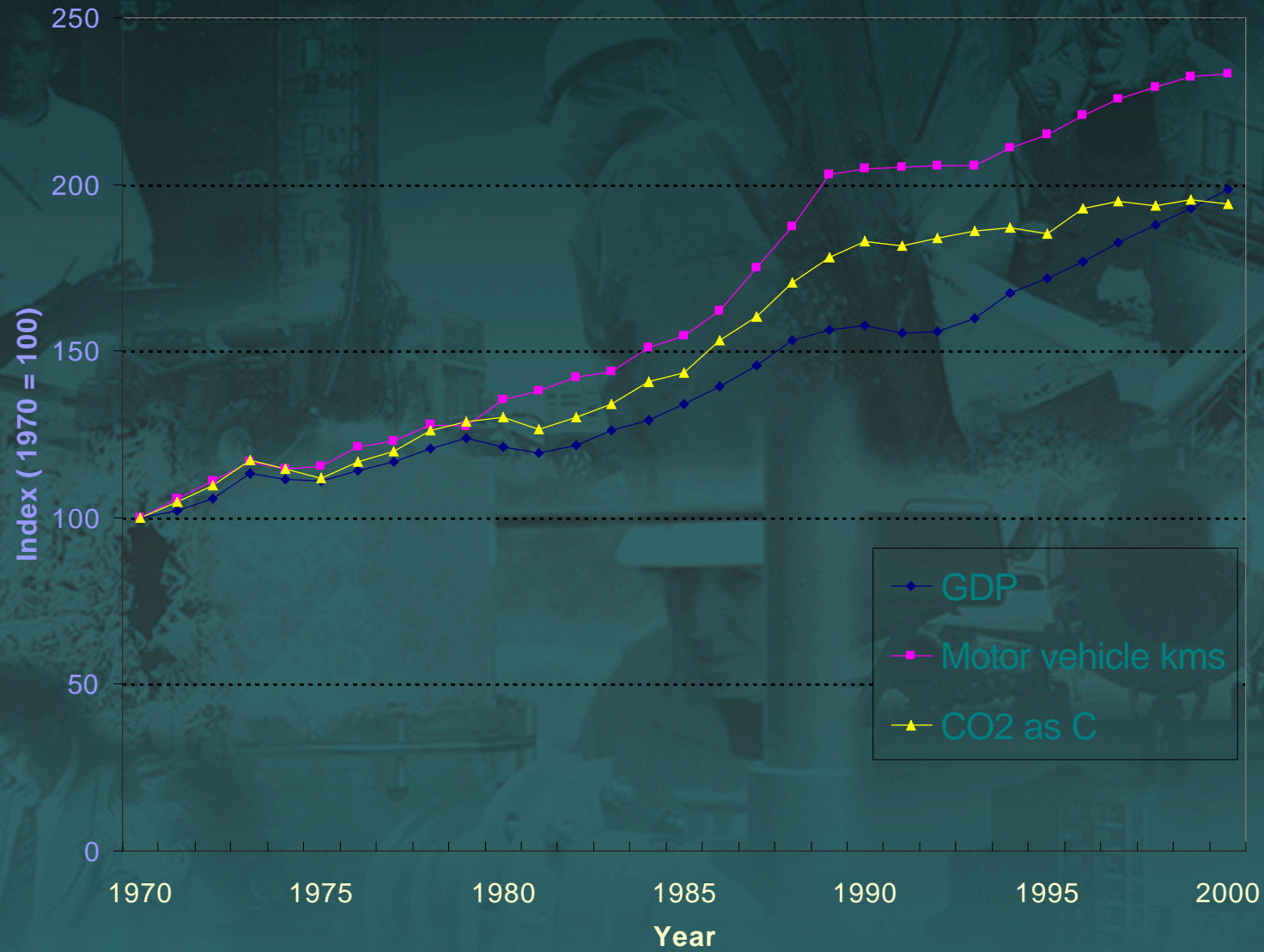
# Energy Prices

- Models of gas and electricity prices
- Debate about % of cost pass on
- Only cost of extra CO<sub>2</sub> needs to be passed on
- Opportunity cost should to be considered
- Switch - coal to gas
- Renewables

# Comparison between Coal and CCGT Plants' Competitiveness



# Road Transport



# End of the Oil Age?

- The stone age did not come to an end due to a lack of stones.
- Economies are locked in trajectories.
- Difficult to change politically and socially.
- The Kyoto agreement is a start.
- There is a long way to go yet.
- There will be irreversible effects.

# Equity in space and time

- How much CO<sub>2</sub> can we all have?
- Allocate on need or on global capacity
- Is it a human right?
- Is it a property right?



# Holiday in Cambodia

Carbon Dioxide emissions kt CO <sub>2</sub>	Cambodia	Asia (excl Middle East)	World
Total Emissions 1998	662	7,360,942	24,215,376
Emissions as % of global CO <sub>2</sub> production	0.0%	30.4%	100%
Per capita CO <sub>2</sub> emissions, 1998 t CO <sub>2</sub>	0.1	2.1	4.1
Cumulative CO <sub>2</sub> emissions, 1900 - 1999 (billion tons)	15	161,972	933,686

# Opportunity or Threat?

- Opportunity
- Opportunity
- Opportunity



**Dr Nick Wood**  
**Senior Consultant**  
**Entec UK Limited**  
**+44(0) 1606 354830**

**nicholas.wood@entecuk.co.uk**