

# Energy

## a matter of life and death

Philip Wolfe

*(Renewable Energy Association)*

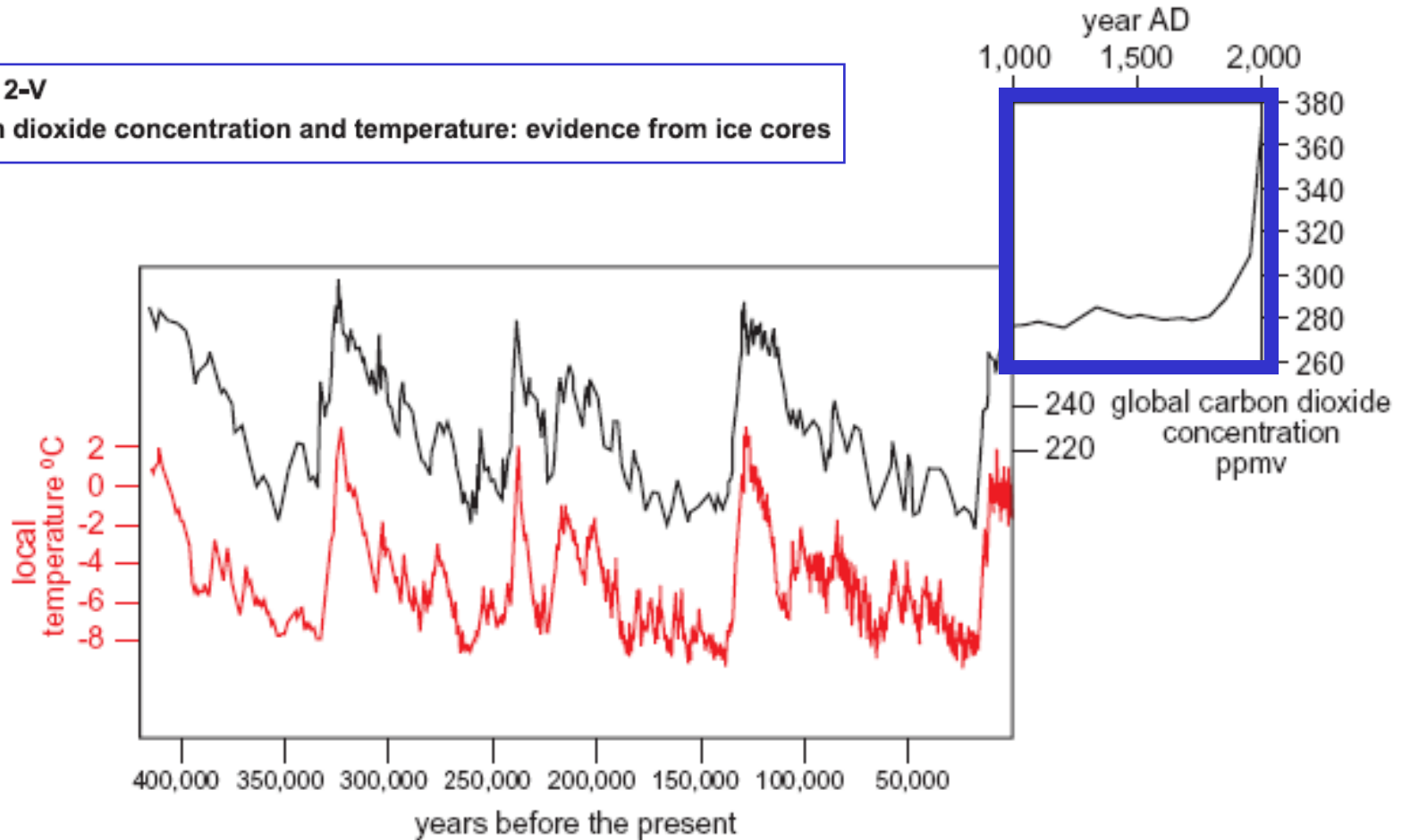
An aerial photograph of a massive open-pit mine. The mine is a large, roughly circular excavation with multiple levels of terraced rock walls. In the center of the mine, there is a large, dark blue pond. The surrounding landscape is arid and brown, with some sparse vegetation and roads visible. The text "The end" is overlaid in the upper center of the image.

**The end**

**“Earth first, we’ll strip-mine the other planets later!”**

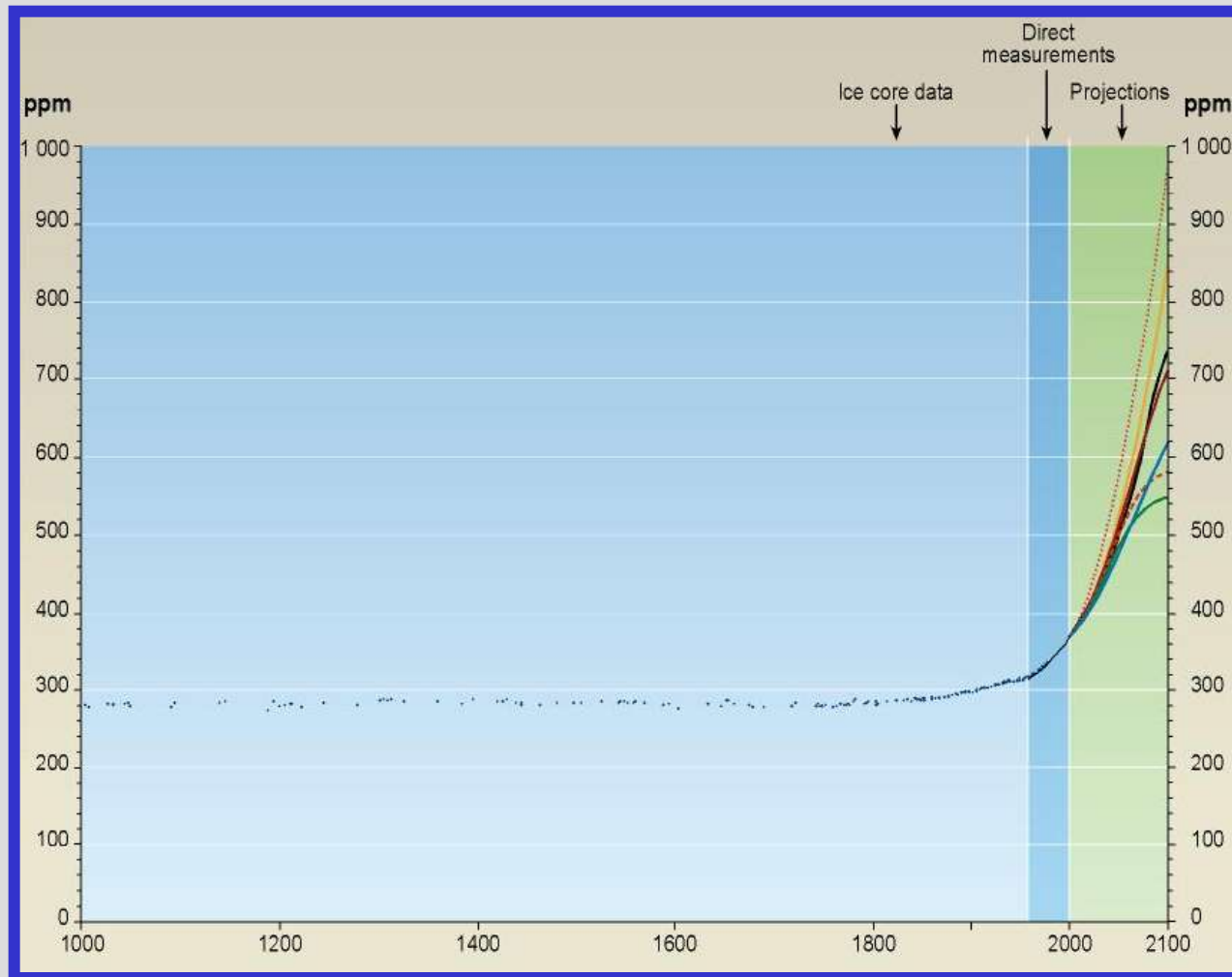
# The environmental case

**Figure 2-V**  
Carbon dioxide concentration and temperature: evidence from ice cores



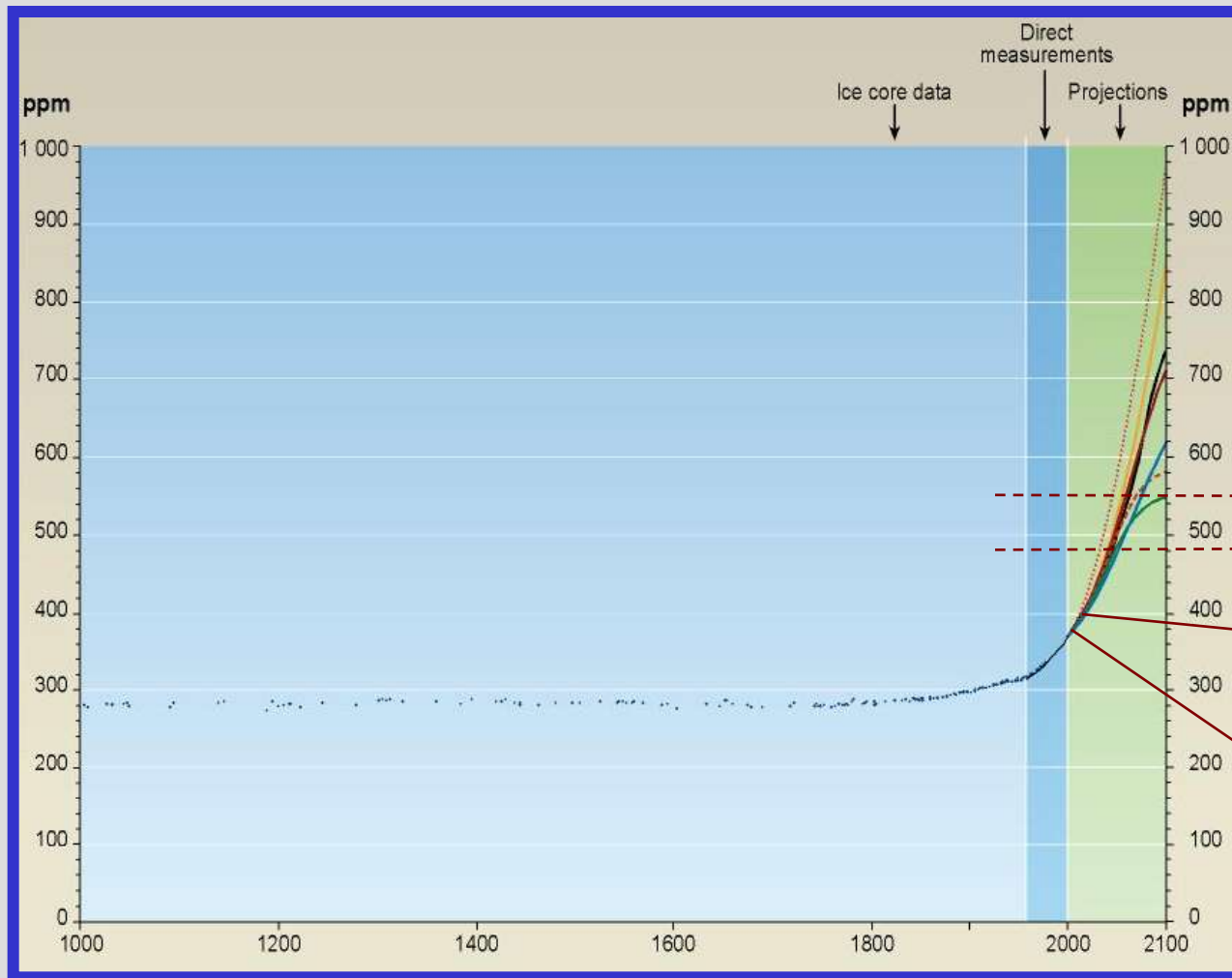
*Source: RCEP*

# The environmental case



*Source: IPCC*

# The financial case



infinite  
infinite  
£150bn<sup>1</sup>

£75bn<sup>1</sup>

Source<sup>1</sup>: Swiss Re



# Renewables – why not?

- > The problem is global
- > Renewables are “so small”
- > and “so expensive”
- > Renewable energy is intermittent
- > Policy definition is too difficult

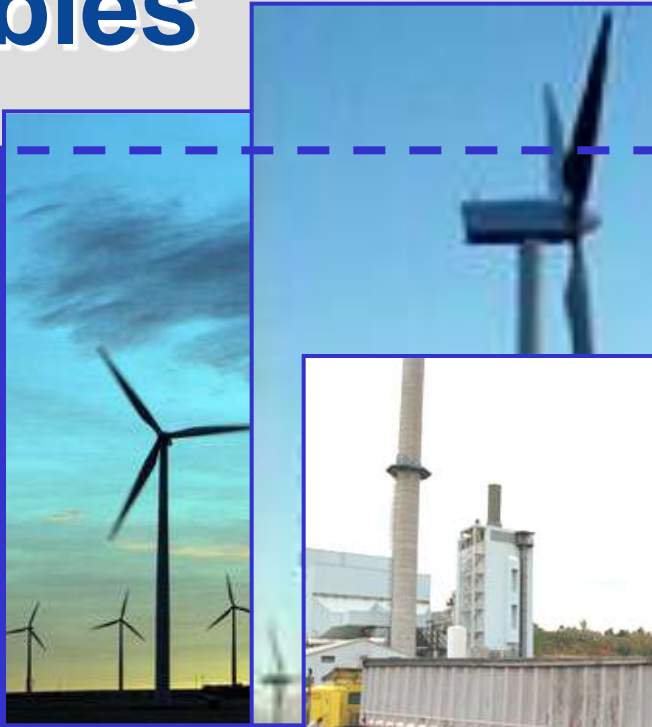


# Power availability



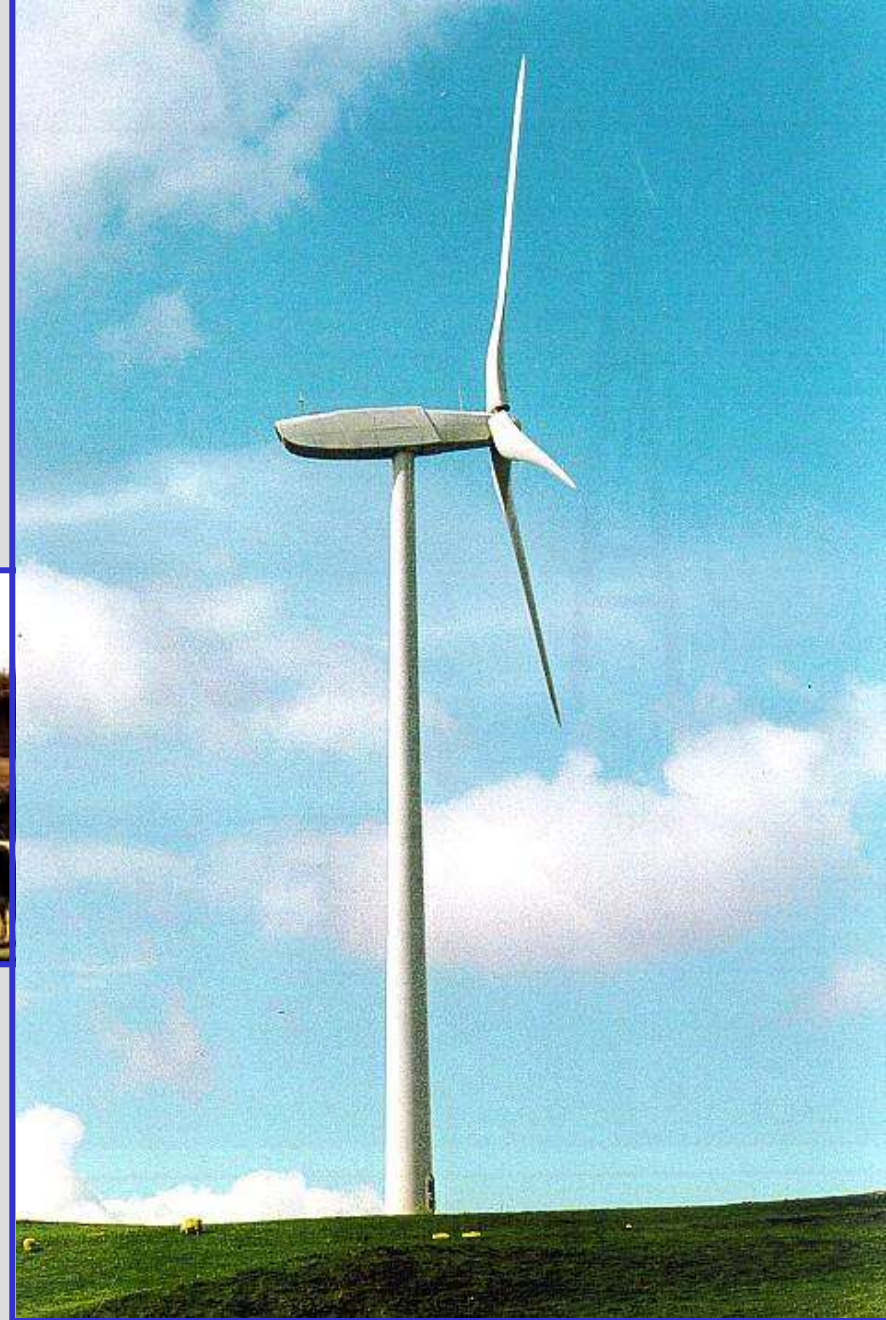
# The potential of renewables

Electricity  
consumption



# Cost of generation

# The learning curve



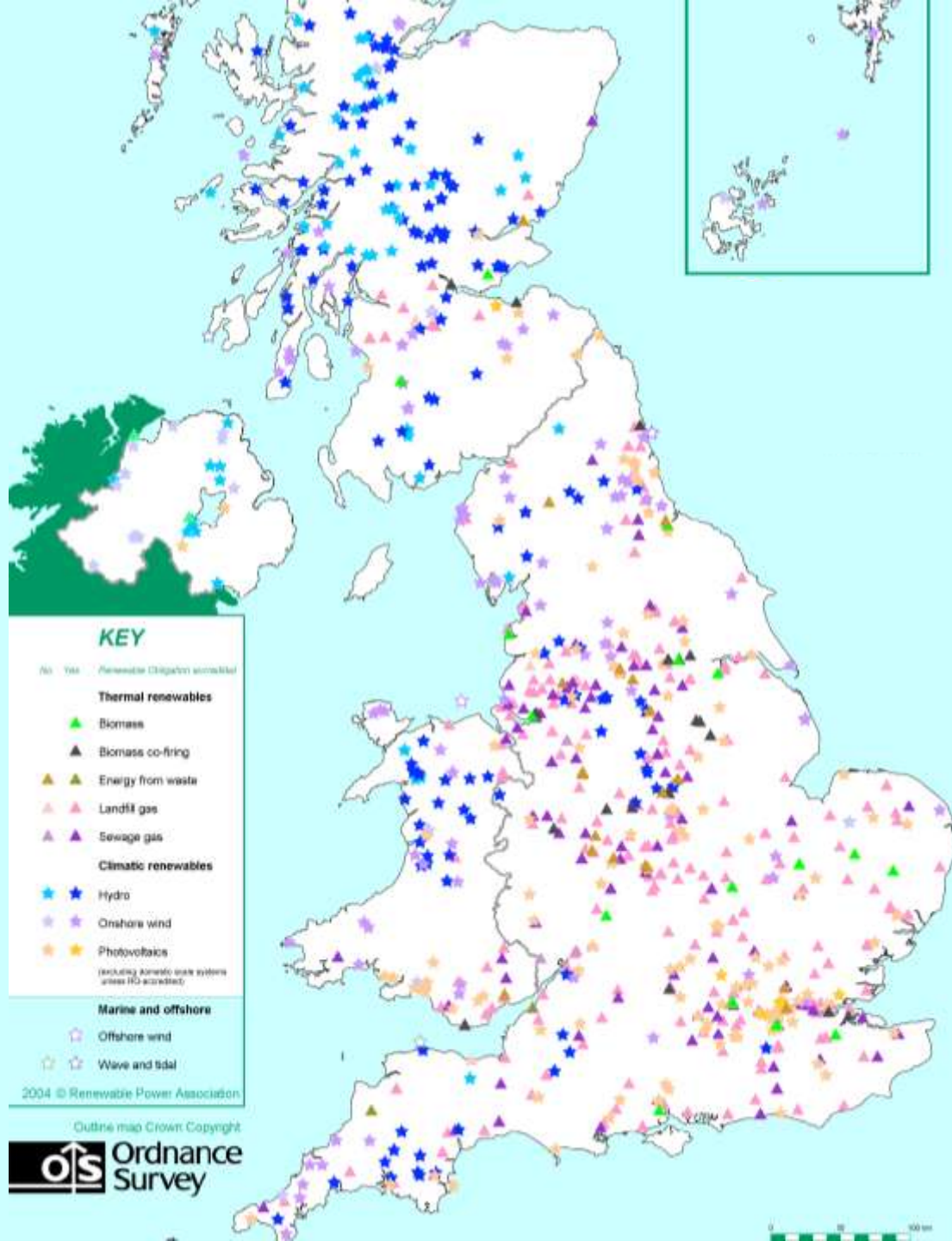


# The next learning curve



# Security of supply

# Renewable power stations



# The policy vacuum



# The Energy Review

© Philip V  
Energy Environme

# Our Energy Challenge

Securing clean,  
affordable energy for  
the long-term



dti

ENERGY REVIEW

Consultation Document

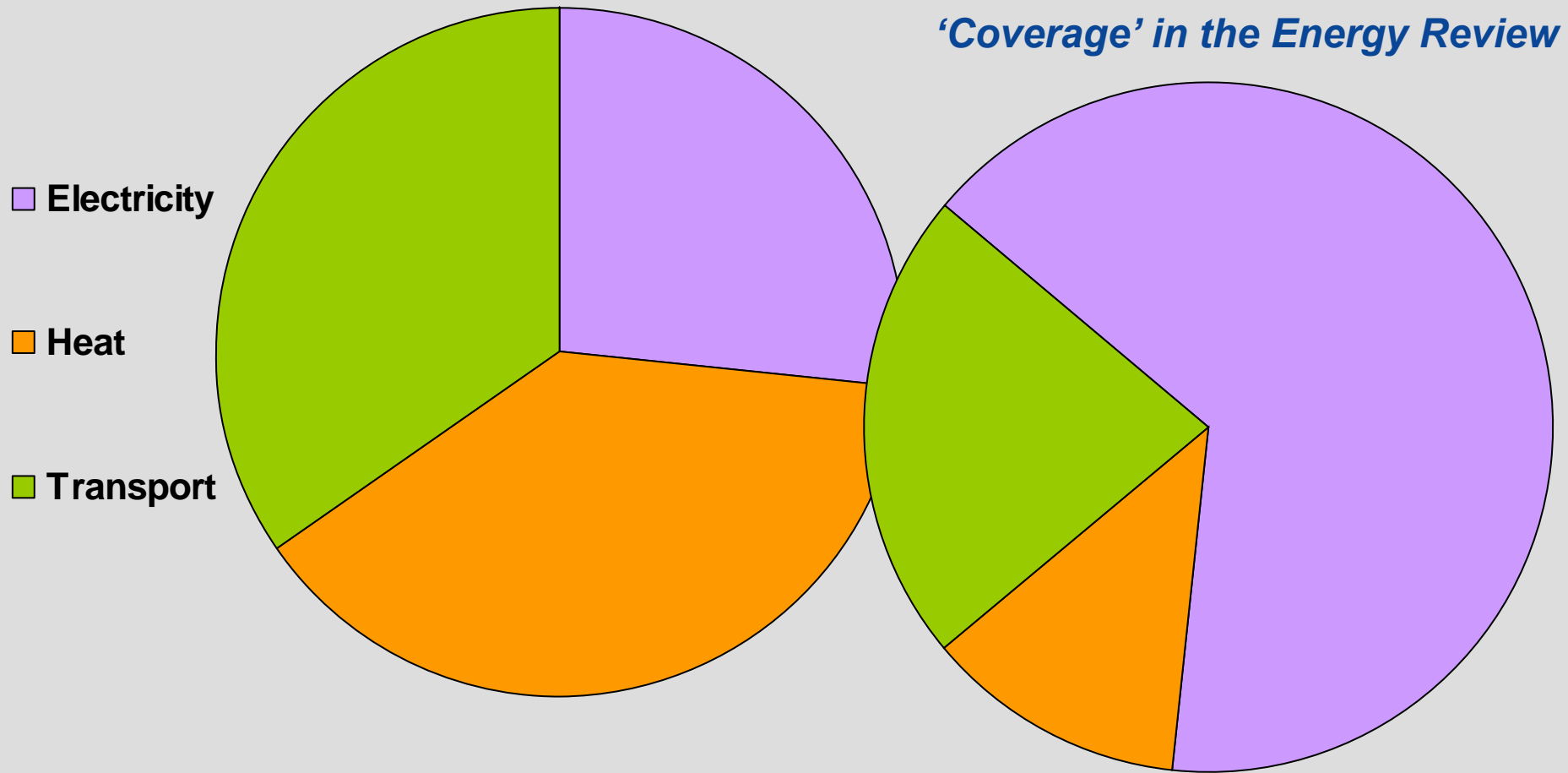
JANUARY 2006

# **No “... pulling back from the key priorities in the White Paper”**

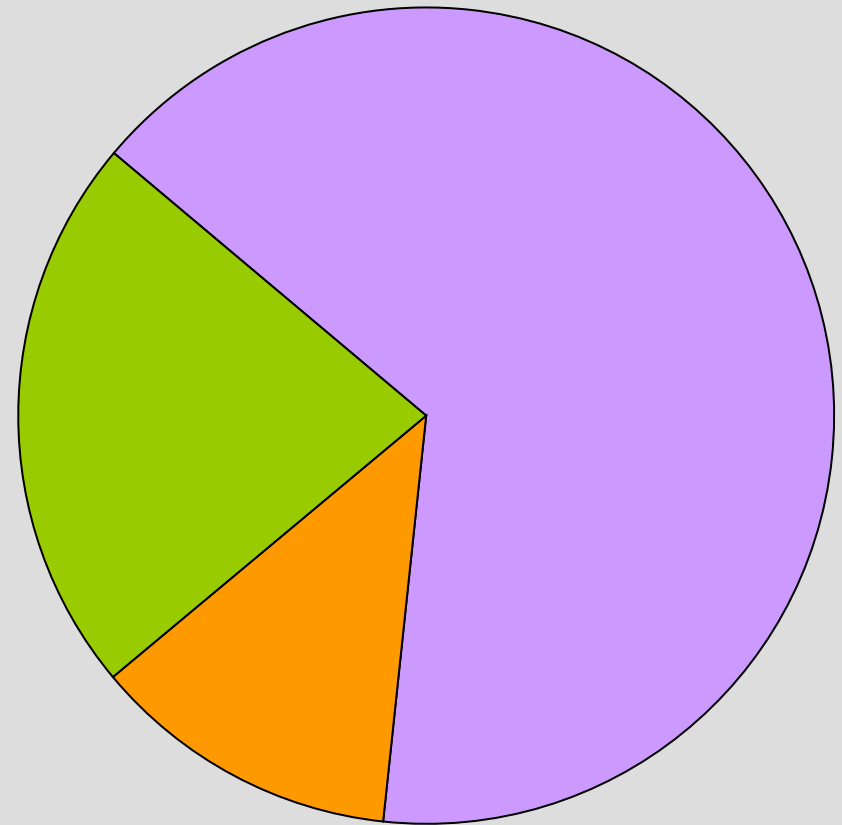
*[but we have been surprised by:]*

- > Evidence of climate change
- > UK has become net gas importer
- > Energy prices have risen

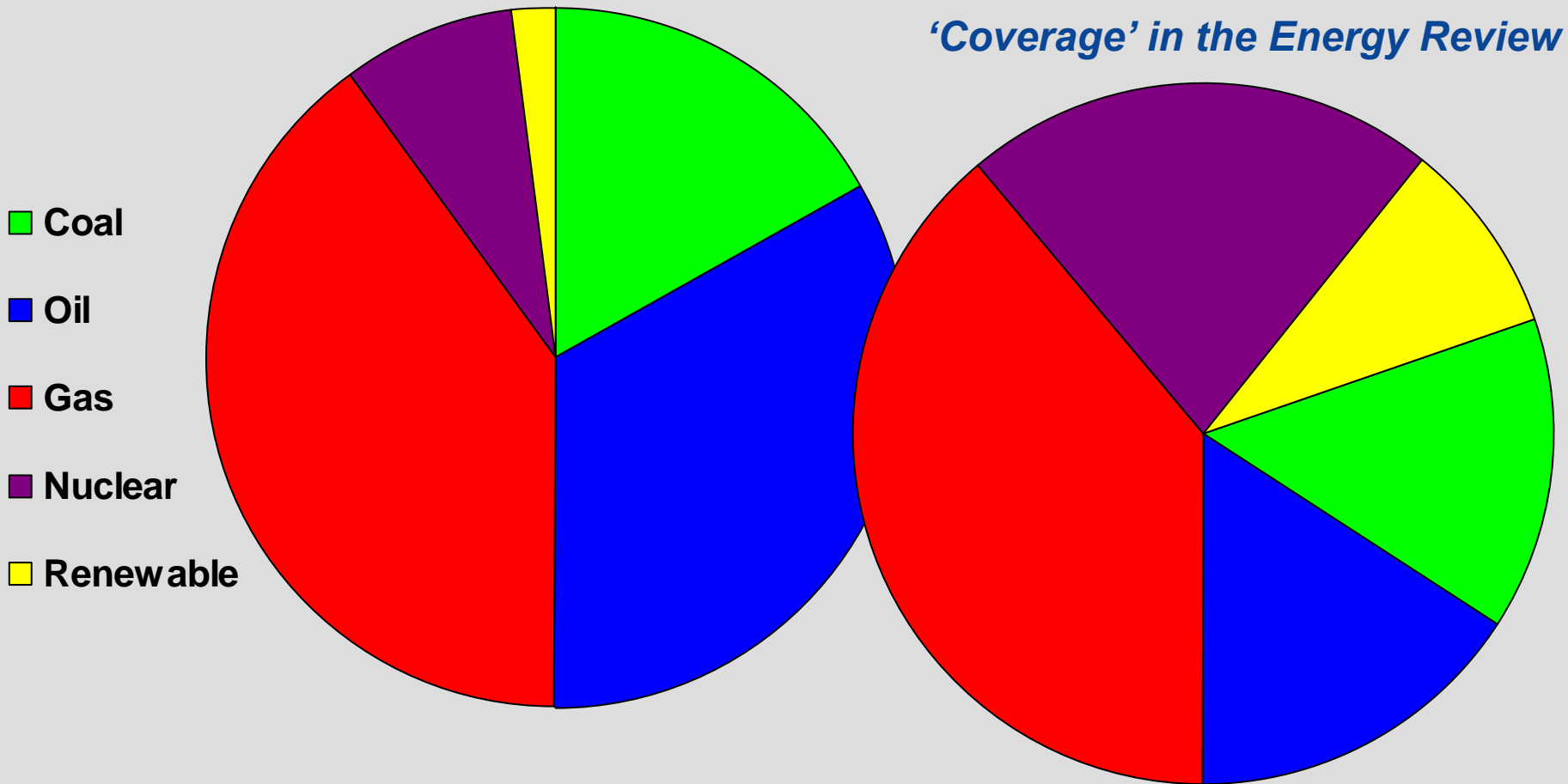
# *“consider a range of options ...*



# *... the ways we both produce and use our energy”*



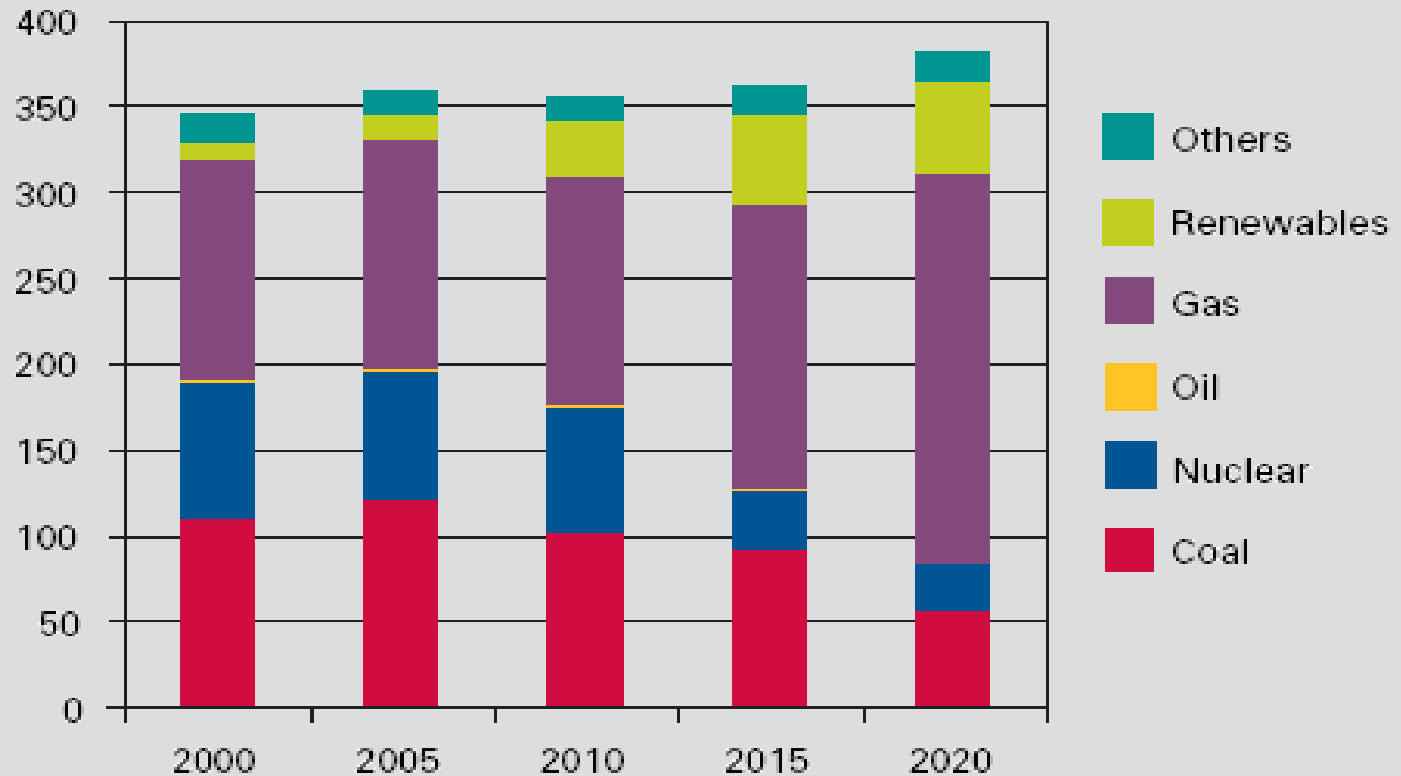
# ***“There will be no single solution”***



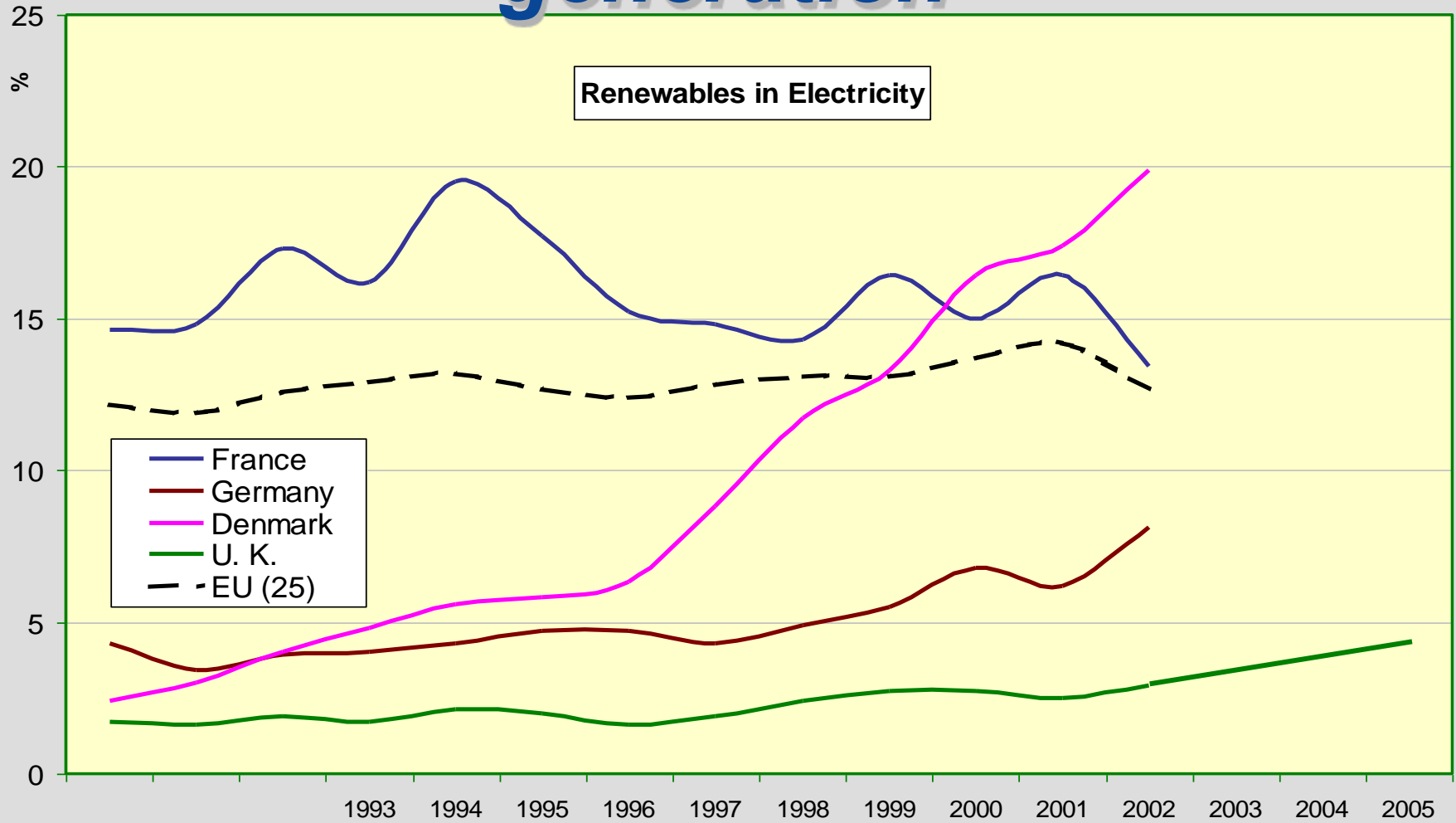
***“... avoid the UK being too reliant on too few sources ...”***

**Chart 16: Electricity generation fuel mix**

TeraWatt hour

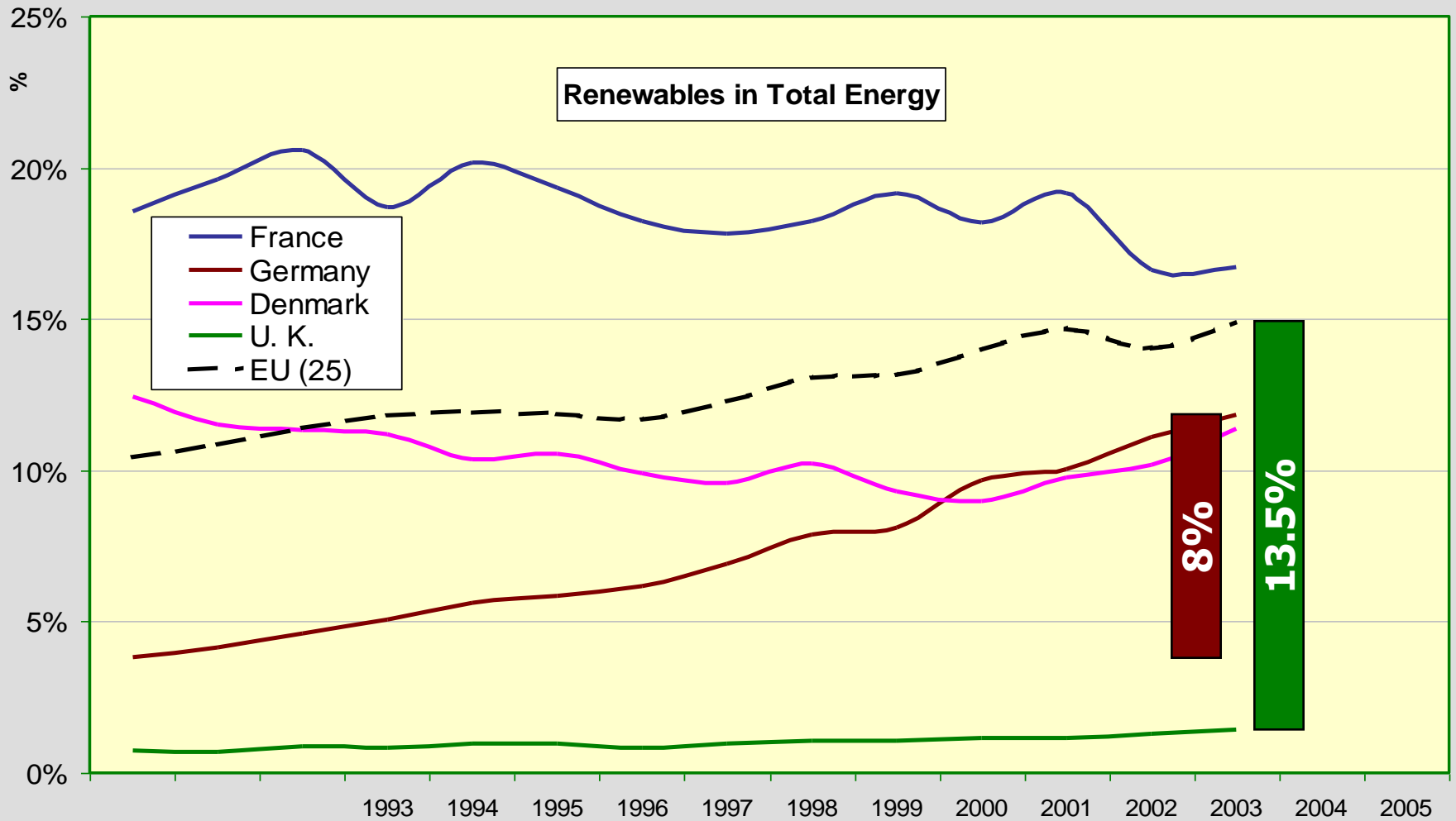


# “leap forward in renewable generation”

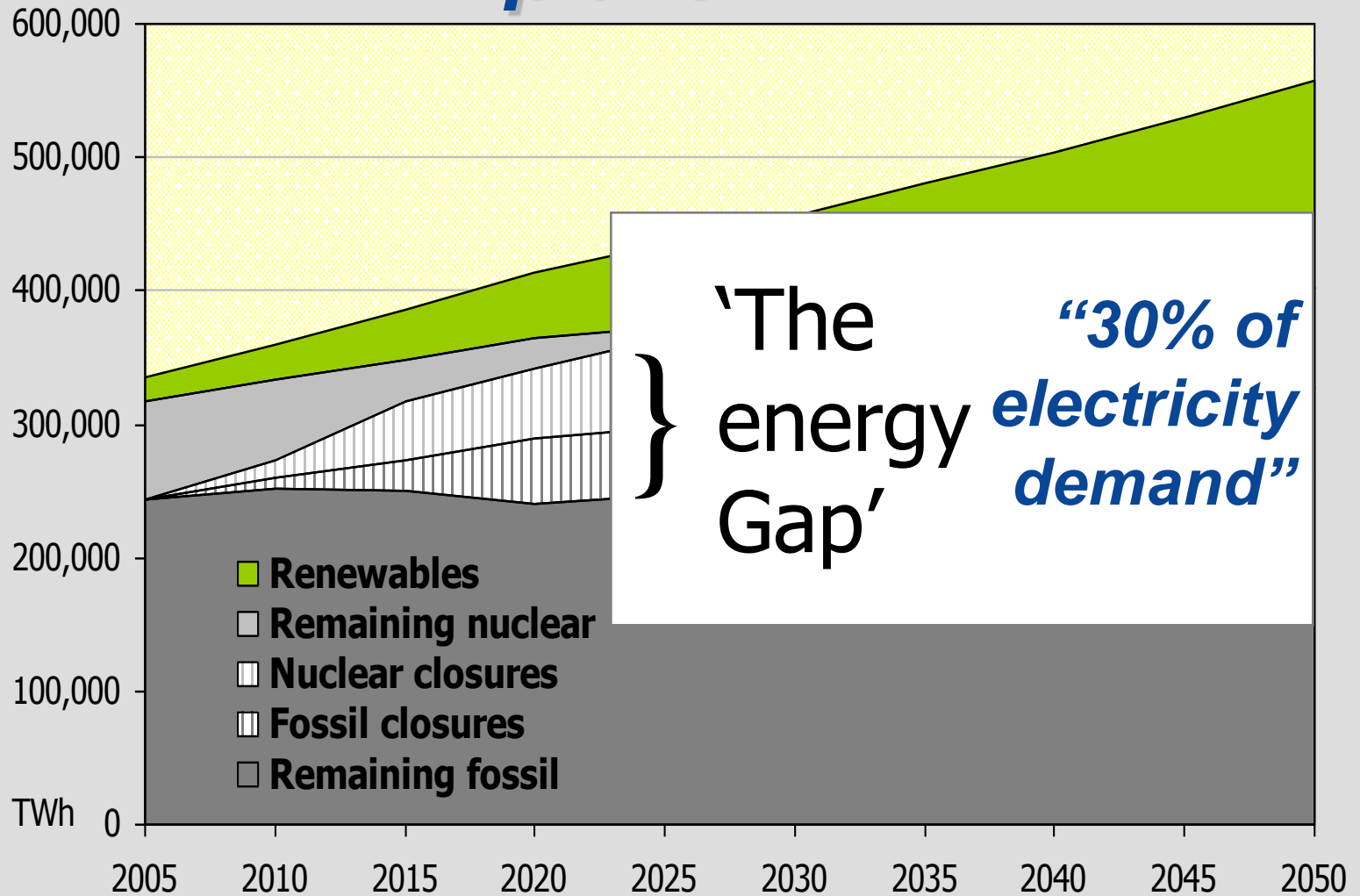




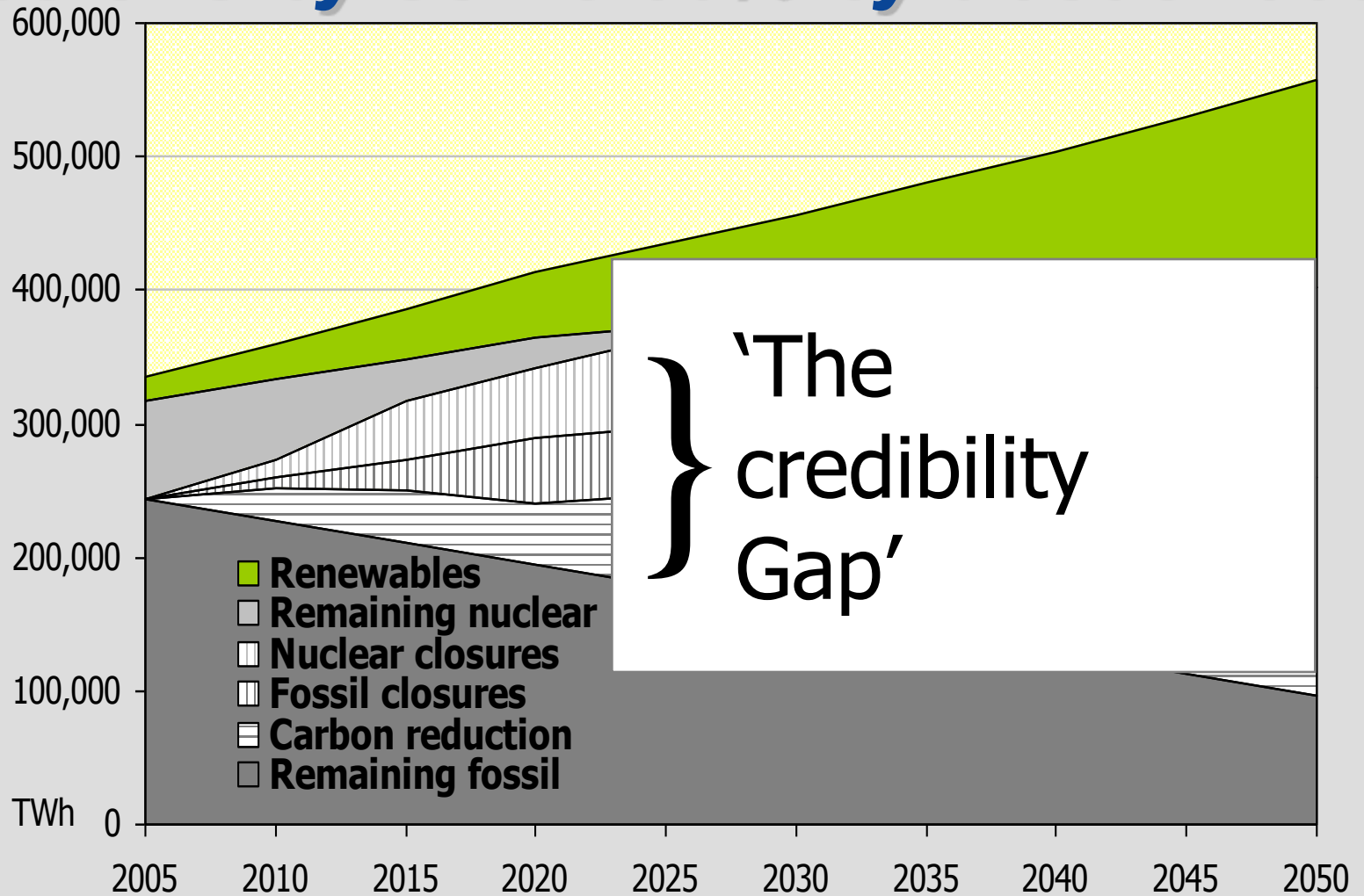
# “... encouraging renewable energy”



# “... to replace retiring coal and nuclear plant”



**“... on a path to reduce carbon dioxide emissions by some 60% by about 2050”**



# Political dogma

- > The market will deliver
- > Use the carrot – not the stick
- > Government doesn't 'pick winners'
- > Rhetoric is leadership

# Some suggested answers

# Sustainable Energy 'Manifesto'

All Party Group on Intelligent Energy  
All Party Parliamentary Climate Change Group  
Association for the Conservation of Energy  
Association of UK Energy Agencies  
British Hydropower Association  
British Wind Energy Association  
Combined Heat and Power Association  
Country Land and Business Association  
Energy Saving Trust  
Energywatch  
Environmental Industries Commission  
Friends of the Earth England, Wales and N. Ireland  
Friends of the Earth Scotland  
Green Alliance  
Greenpeace  
Institute for Public Policy Research  
Institution of Mechanical Engineers  
Institution of Engineering & Technology  
Micropower Council  
National Energy Action  
National Energy Foundation  
National Farmers Union  
New Economics Foundation  
Parliamentary Renewable and Sustainable Energy Group  
Renewable Energy Association  
Royal Society for the Protection of Birds  
Scottish Parliament Renewable Energy and Energy Efficiency Group  
Scottish Renewables Forum  
SERA Labour Environment Campaign  
Solar Trade Association  
Sustainable Energy Partnership  
Town & Country Planning Association  
UK Business Council for Sustainable Energy  
W W F Scotland  
W W F - UK

# Sustainable Energy Priorities

- > Stick with the vision
  - > 2003 Energy White Paper objectives
  - > Firm up the targets...
  - > ... and take them seriously
  - > Quantified (annual) milestones



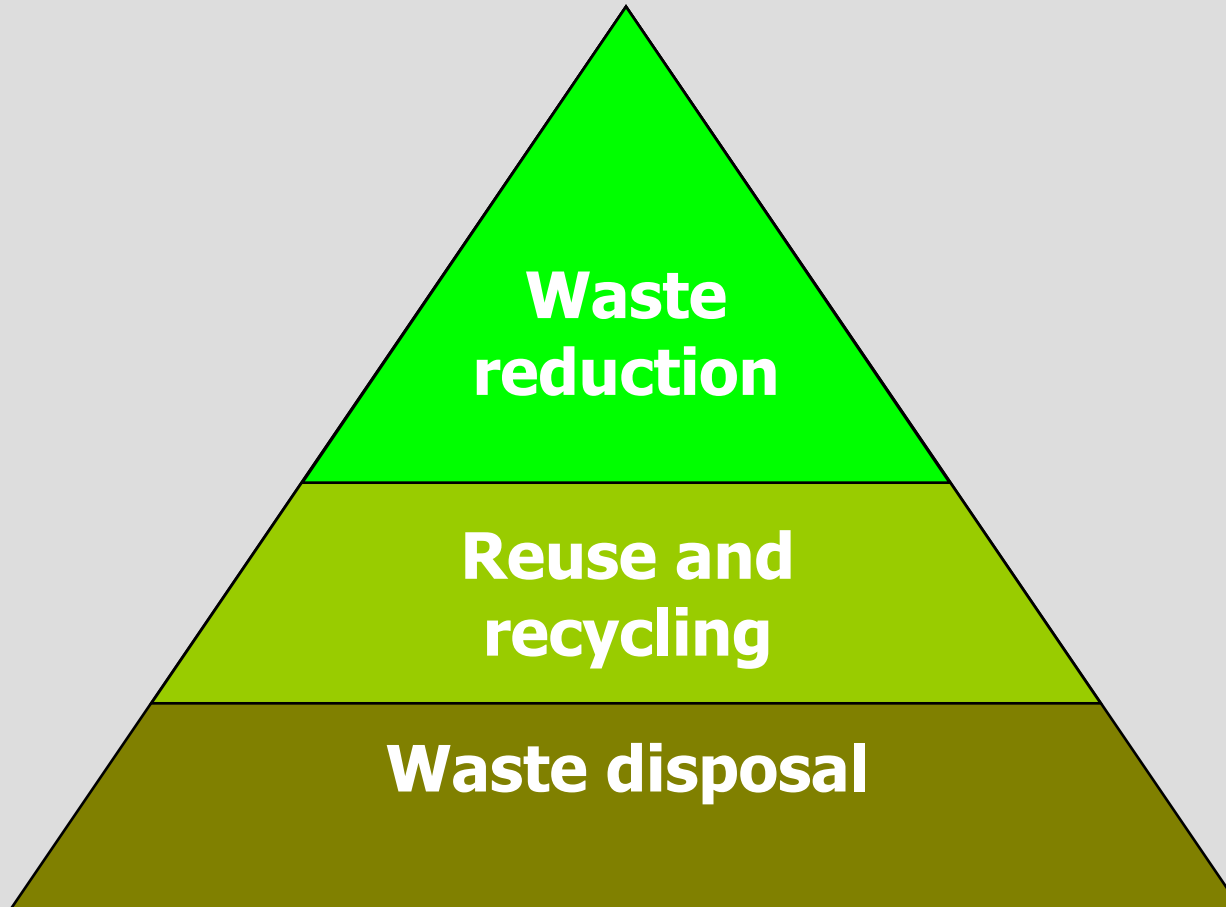
# Sustainable Energy Priorities

- > Long term policy framework
- > Business needs:
  - > Clear signals
  - > Consistency and stability
  - > Minimum 'political risk'

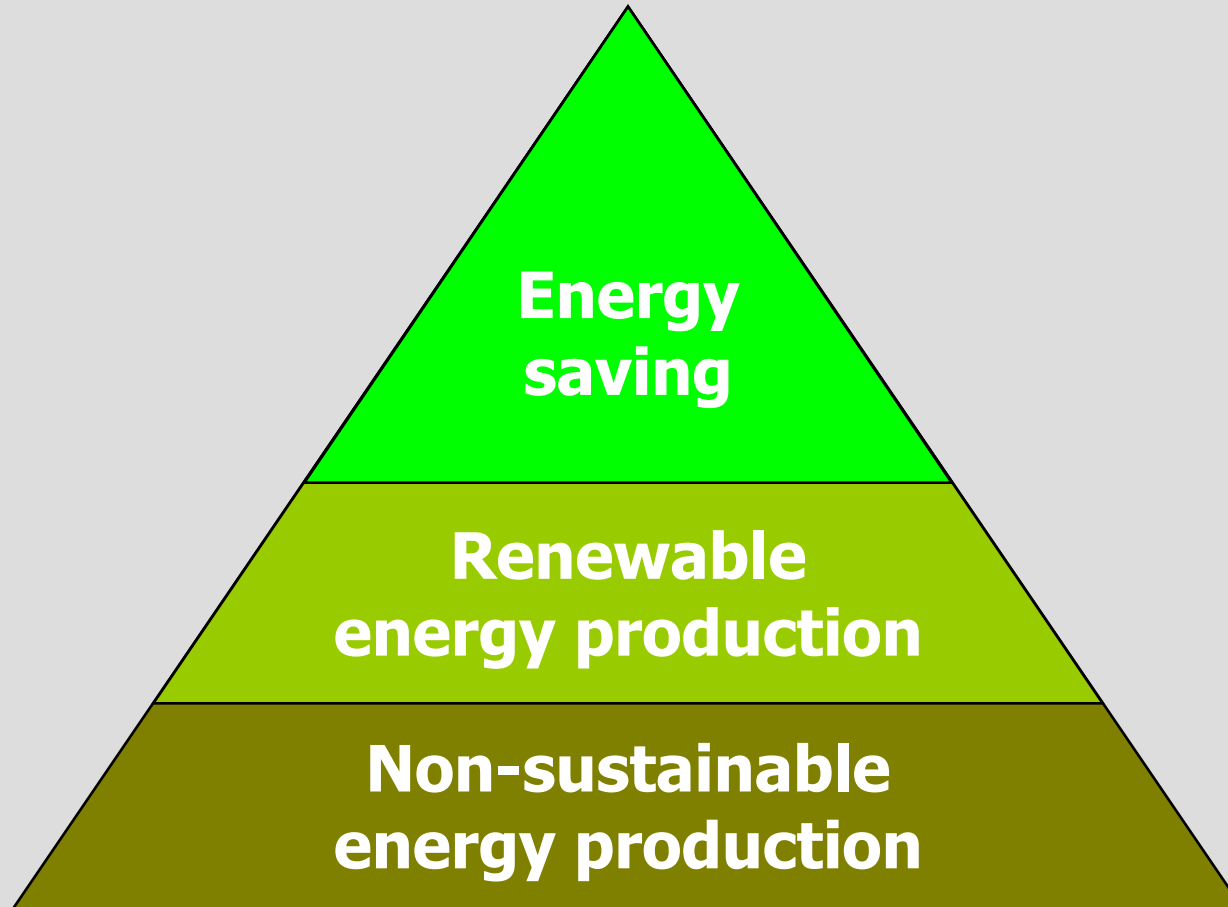
# Sustainable Energy Priorities

- > Use all suitable options (no silver bullets)
- > but prioritise them
  - > Energy conservation
  - > Sustainable energy production
  - > Fossil & nuclear
- > Minimise any 'energy gap' **before** filling it

# The Waste Hierarchy



# The Energy Hierarchy



# Sustainable Energy Priorities

- > Use all suitable options
  - > Heat
  - > Fuel
  - > Not only electricity

# Sustainable Energy Priorities

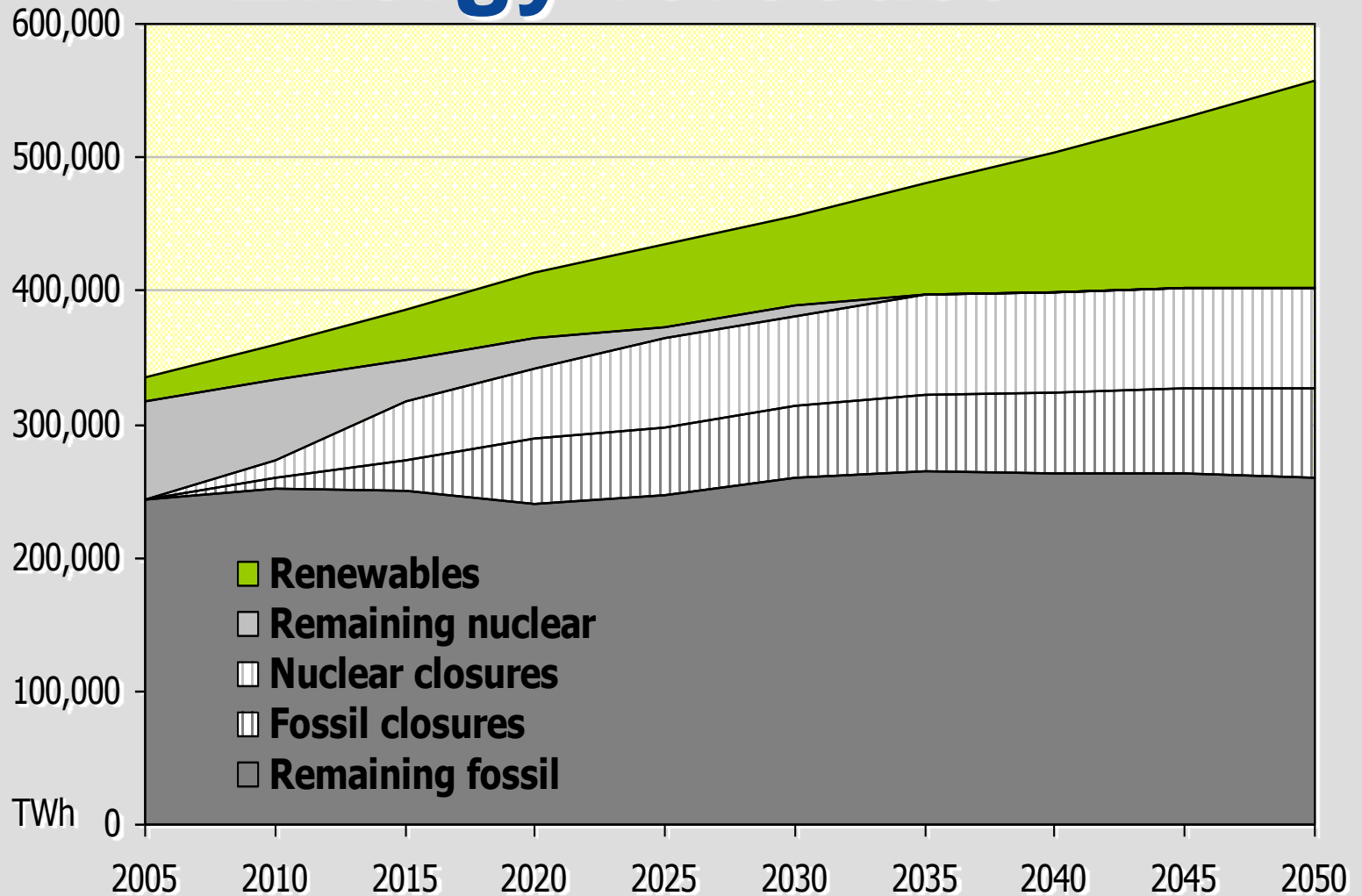
- > Structure Government and Agencies
  - > Single department or agency
  - > Duties of the regulator

# Sustainable Energy Actions

- > Energy saving strategy that delivers
  - > Focus on achievement
  - > Slower consumption growth
- > It's the most cost-effective measure



# Energy forecast



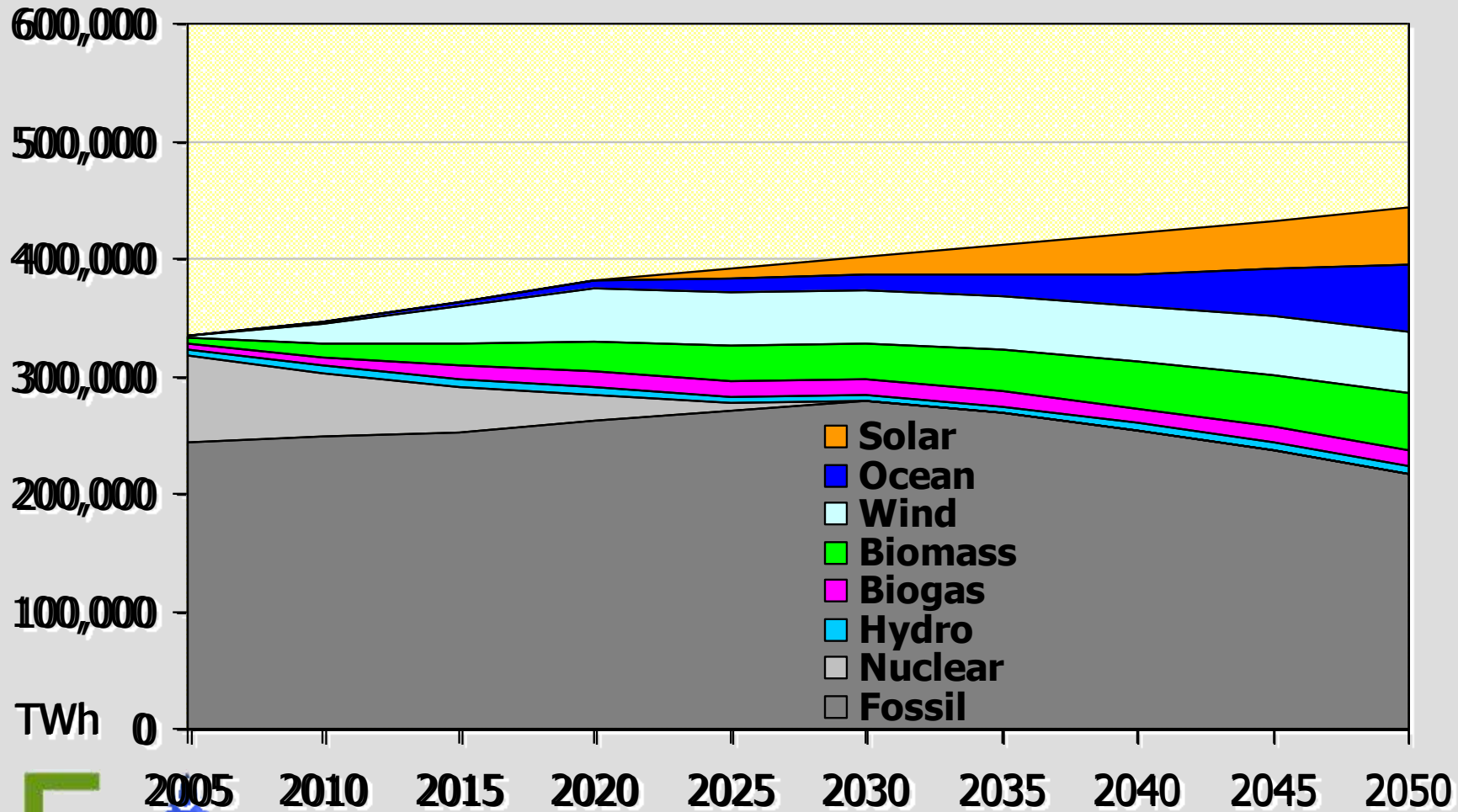
# Sustainable Energy Actions

- > Invest in decentralised energy
  - > Fair value for distributed energy
  - > Regulatory & fiscal incentives
  - > Building regs – carbon neutral by 2015
  - > Product standards
- > It's less wasteful

# Sustainable Energy Actions

- > Accelerate renewable energy
  - > UK into the top five of the EU by 2025
  - > Build scale and reduce costs
  - > Transitional support measures
- > It's good for the economy and agriculture

# Renewables Routemap



# Sustainable Energy Actions

- > Show leadership
  - > Remove barriers in UK and EU
  - > Lead by example
  - > Education and awareness raising

# Tell 'em what you told 'em

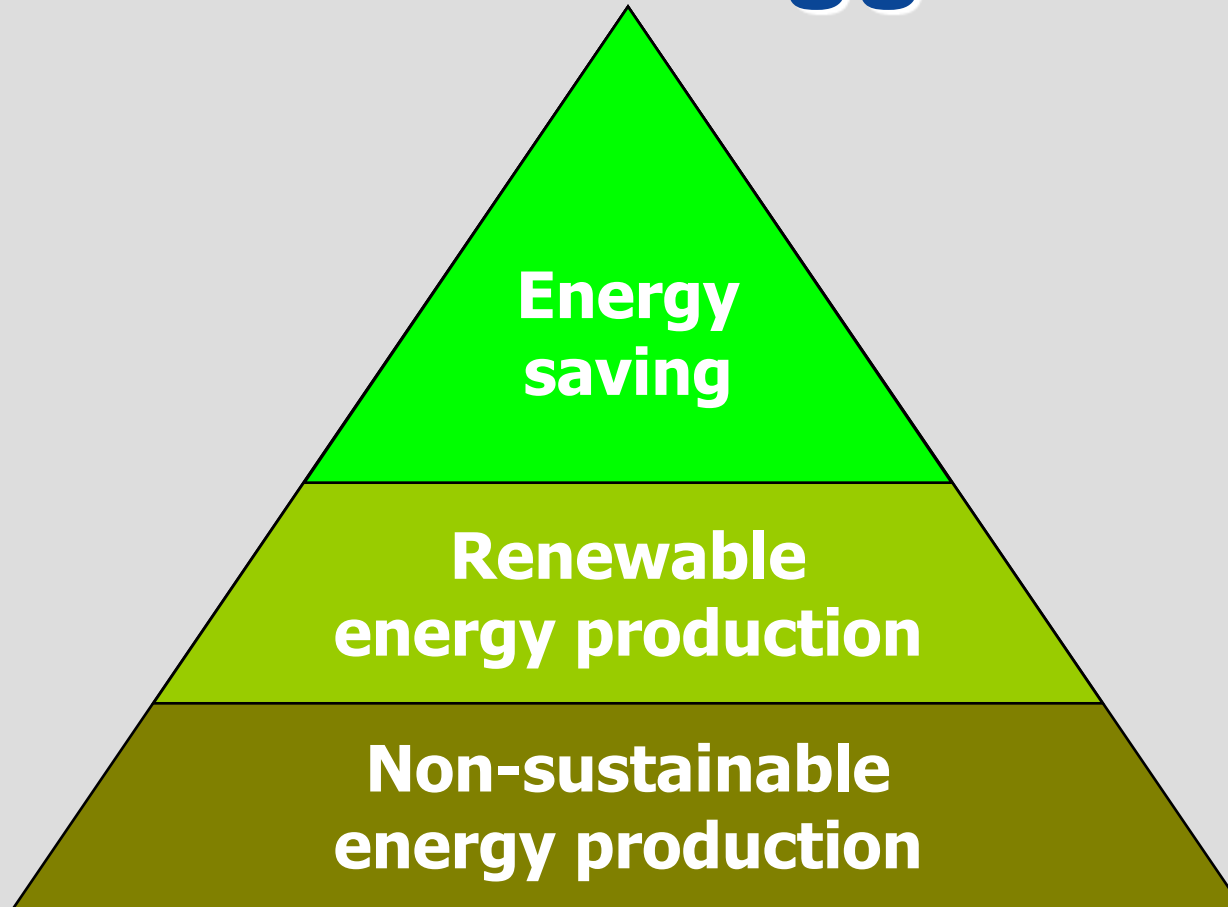
- > We have a Crisis
- > A bit of a moan
- > A few constructive suggestions

# Constructive suggestions

- > Look at the whole energy picture
  - > Heat, fuel and electricity
  - > Conservation and production
  - > Centralised and decentralised
- > Use all the sensible options
- > Prioritise them

# The Energy Hierarchy

## Constructive suggestions





# Constructive suggestions

- > Engage business
  - > Stable policies
  - > Long-term signals
- > Engage the public
  - > Carrot and stick
- > Show leadership

# Energy

## a matter of life and death

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