



# Time for a breakthrough on clean energy

---

Keith Allott  
Head of Climate Change, WWF-UK

---

8 July 2010



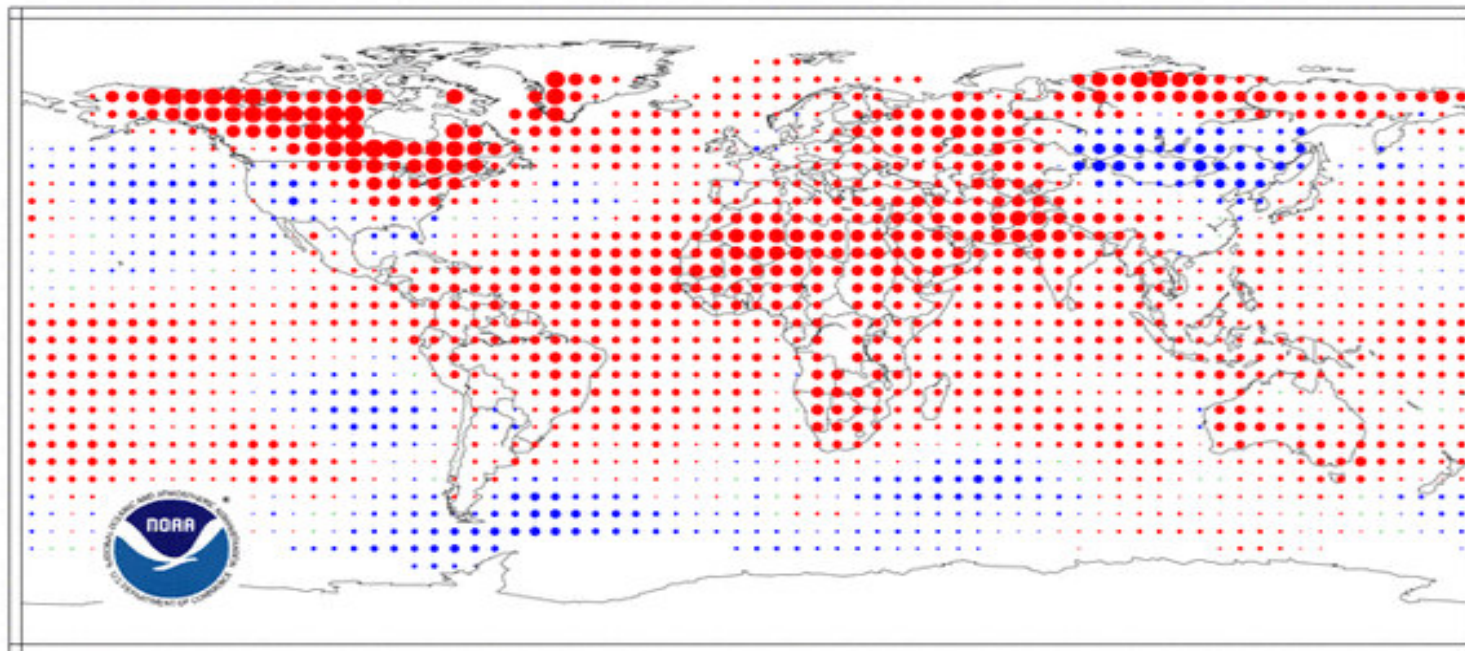


# Warmest spring on record

## Temperature Anomalies Mar-May 2010

(with respect to a 1971-2000 base period)

National Climatic Data Center/NESDIS/NOAA



Degrees Celsius

# The science remains sound

- IPCC (2007) – average warming to date of  $0.75^{\circ}\text{C}$ , with up to  $6.4^{\circ}\text{C}$  predicted this century
- At  $1.5\text{-}2.5^{\circ}\text{C}$ , 20-30% of species face increased risk of extinction
- At just  $2^{\circ}\text{C}$ , 20-40% of Amazon forest could be lost. At  $3^{\circ}\text{C}$ , this rises to 75% - Hadley Centre
- Met Office warns of  $4^{\circ}\text{C}$  warming by 2070
- IPCC too conservative on sea level – rise of at least 1 metre expected this century
- Feedbacks from rapidly melting Arctic
- 500 million people rely on coral reefs – but “widespread mortality at warming of  $1\text{-}3^{\circ}\text{C}$ ”



---

*“Some scientific conclusions or theories have been so thoroughly examined and tested, and supported by so many independent observations and results, that their likelihood of subsequently being found to be wrong is vanishingly small. Such conclusions and theories are then regarded as settled facts. This is the case for the conclusions that the Earth system is warming and that much of this warming is very likely due to human activities”*

*US National Academy of Science, May 2010*



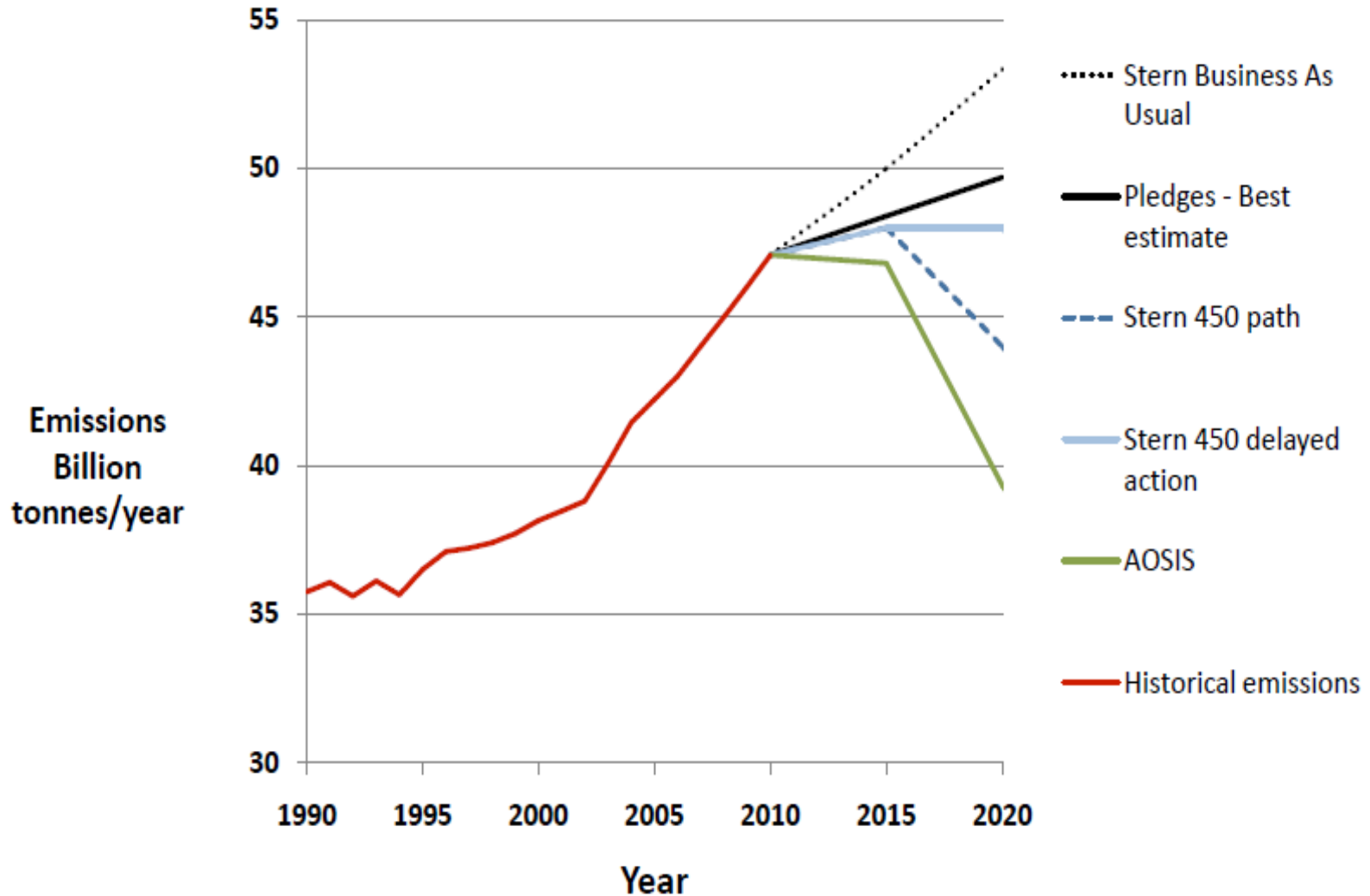
## Copenhagen – what did it achieve?

- Recognition of 2°C goal, science review
- Recognition of need for \$100bn per year to developing countries by 2020
- Emission pledges from all major economies
- No legally binding agreement – South Africa 2012?





# Busting the global carbon budget





## The EU needs to go for at least 30%

---

- Commission assessment in May – costs have fallen dramatically
- 20% target now effectively business as usual
- Risk of lock-in to high carbon, drastic reductions needed later
- Benefits to health and air pollution (Euros 22 billion), reduced fossil fuel imports (Euro 45.5 billion), stimulating green industry and innovation
- Restore some faith in the carbon market – and increase auctioning revenues from Euro 21 to 29 billion





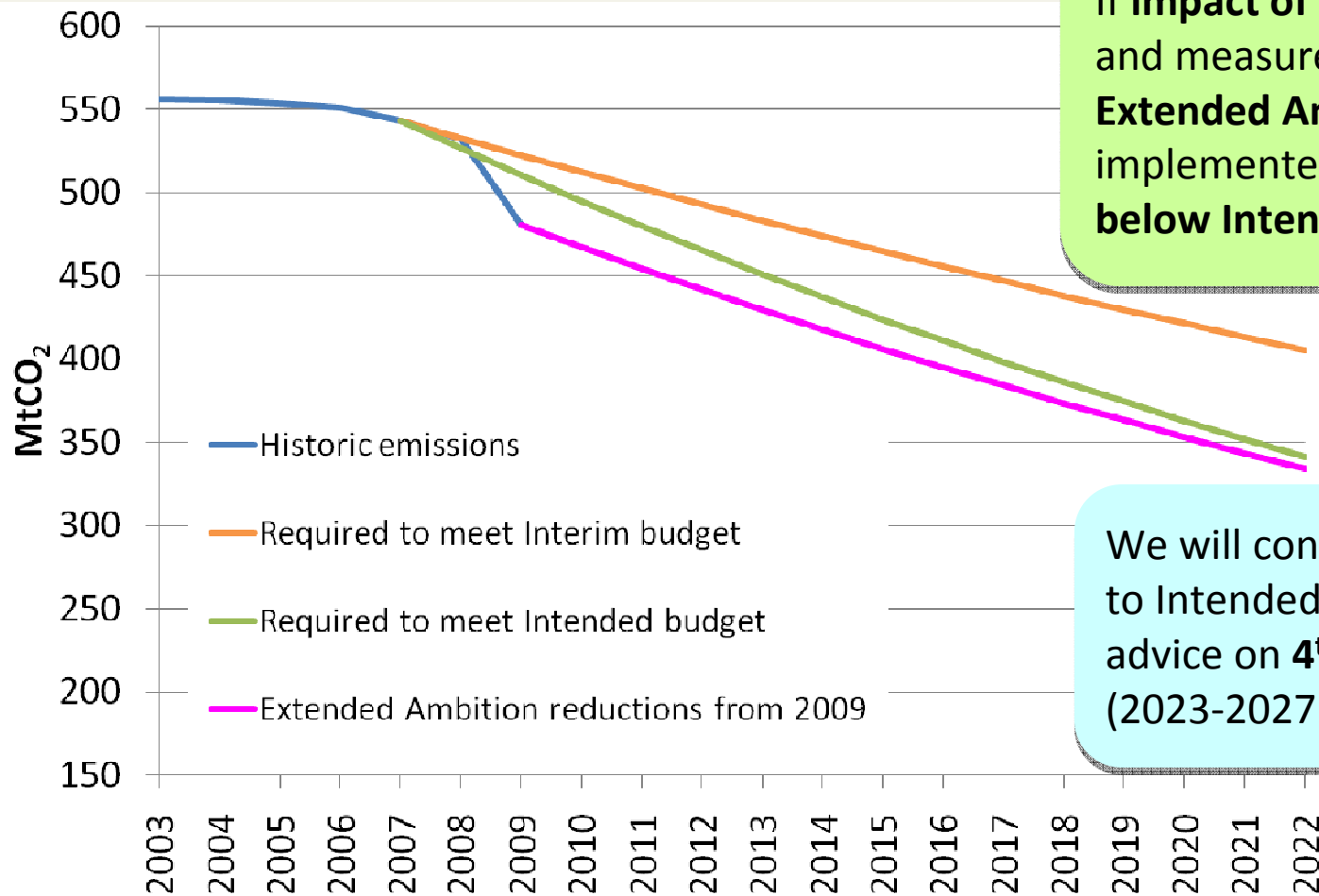
## Is the UK pulling its weight?

---

- Climate Change Act sets new framework
- Interim carbon budgets sound impressive – a 34% cut in UK emissions by 2020
- But emissions were down 29% in 2009 – and DECC expects to get to 36% on current policies
- To show leadership in EU, Government should adopt the “intended” 42% target, and meet it through domestic action



# Meeting the intended carbon budget



If impact of recession persists and measures in Committee's **Extended Ambition** scenario are implemented, emissions will be **below Intended budget**

We will consider possible move to Intended budget in context of advice on **4<sup>th</sup> carbon budget (2023-2027)**



# The Energy and Green Economy Bill – a golden opportunity?

---

- Ambitious retrofit programme under Green Deal for homes
  - Pay as You Save scheme
  - minimum efficiency standards
  - reform of Energy Performance Certificates
- Incentives for investment in low-carbon generation
  - market reform
  - carbon price floor
  - emissions performance standard for ALL plant
- Establishment of a Green Investment Bank
  - support renewables and energy efficiency programme

# Focus on the power sector

A portrait of a middle-aged man with short, grey hair and glasses, smiling. He is wearing a dark suit jacket, a light blue shirt, and a yellow patterned tie. The background is a blurred indoor setting with a yellow pillar.

“Any feasible path to a 80% reduction by 2050 will require the almost total decarbonisation of electricity generation by 2030”

“There is a strong case for buttressing the carbon price lever by establishing a clear and publicly stated expectation that coal-fired power stations will not be able to generate unabated beyond the early 2020s”



# An emissions performance standard

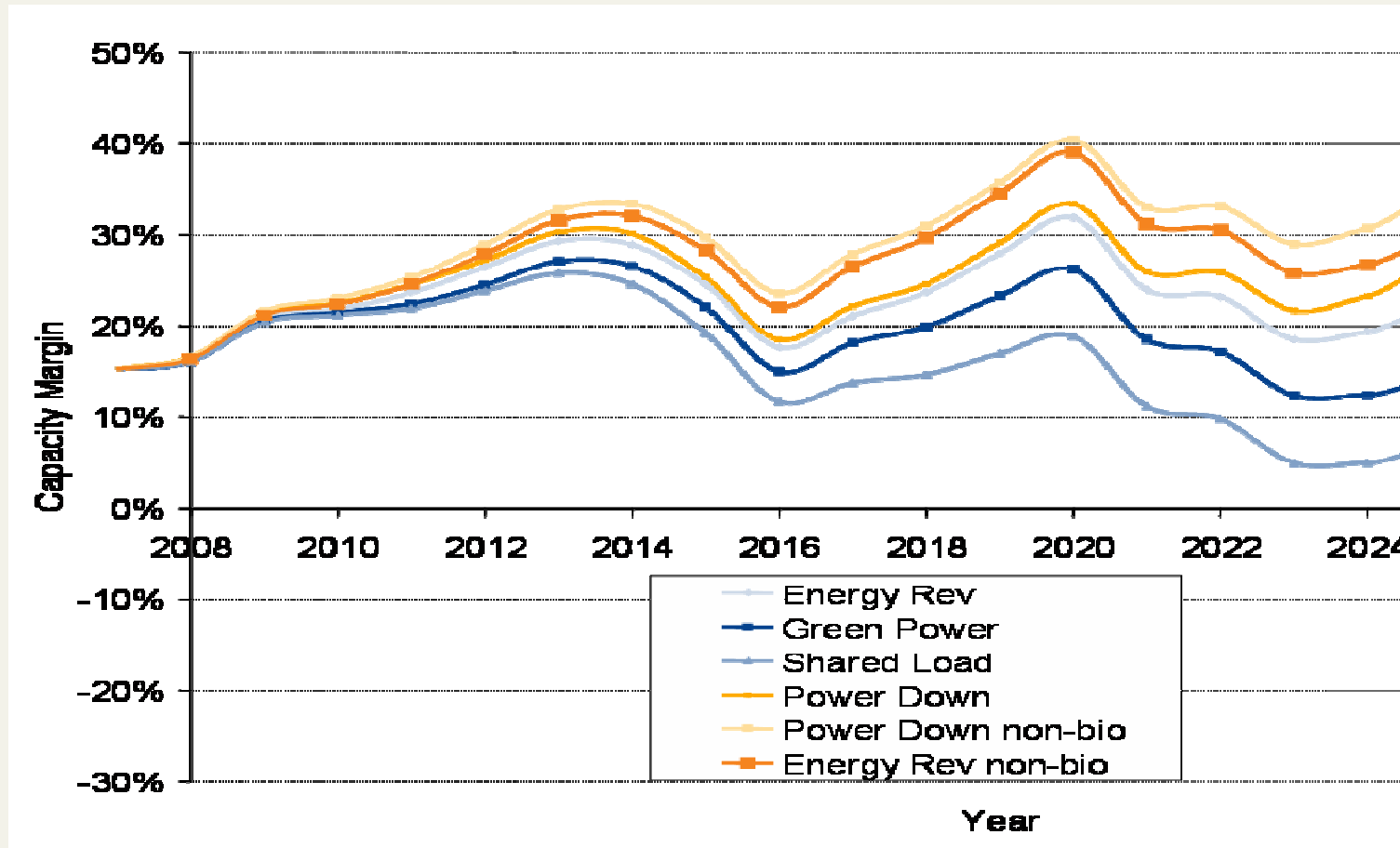
---

- Risk of partially abated coal – and new dash for gas (26GW in planning). Lock-in, disincentivises renewables
- Apply a strong EPS now for all new plant (300gCO<sub>2</sub>/kWh):
  - deliver on CCC recommendations
  - send clear signal to market
  - incentivise CCS and efficient use of gas
- Focus CCS demonstrations on value for money for both consumer and climate – retrofits, new coal gasification plant, gas power plant





# Filling the 'energy gap'



- Poyry (pre-recession) found “**little or no need for large-scale investment in conventional baseload technology in the period up to 2020**” if renewables and efficiency targets are met.

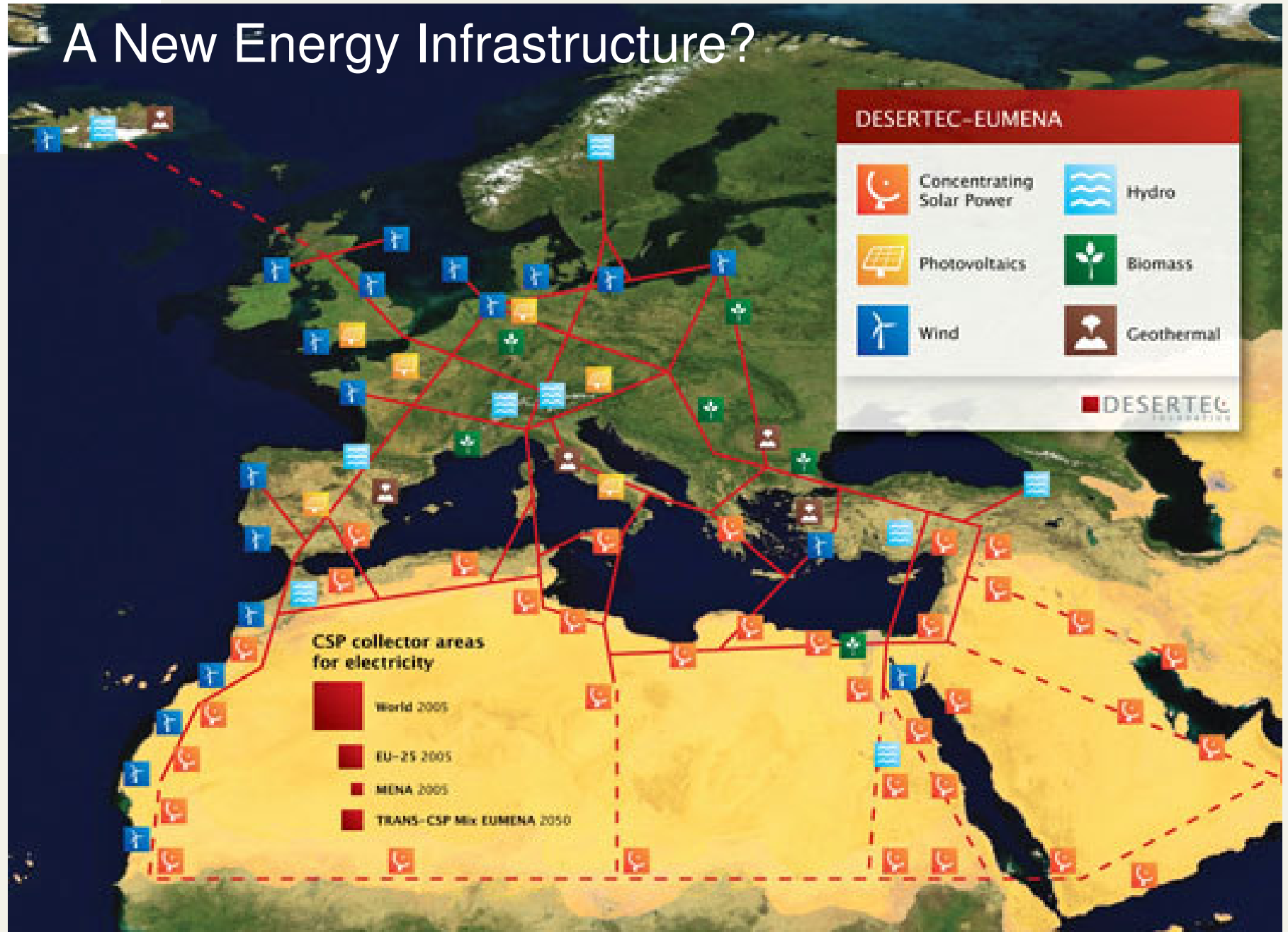


# A 100% renewable vision for Europe

---

- Recent studies by ECF/McKinsey and PWC show that a 100% renewable power supply is achievable, affordable and secure
- Demand management, electrification of transport and heat, strong grid interconnection across Europe vital in all scenarios
- ECF Roadmap 2050 included credible scenarios for 80 and 100% renewable power. All scenarios have similar costs and levels of system stability.
- Investment frameworks, grid infrastructure and market framework and regulation are key

# A New Energy Infrastructure?







# The UK – a renewable powerhouse?

---

- The Offshore Valuation study – equivalent of 1 billion barrels of oil could be generated annually, making the UK a net exporter
- Practical offshore resource 2,100TWh (current demand <400TWh)
- 145,000 new jobs could be created in offshore renewables
- Positive benefits for UK economy

50% UK demand	78GW	£17bn NPV
Net electricity exporter	169GW	£36bn NPV
Net energy exporter	406GW	\$55bn NPV



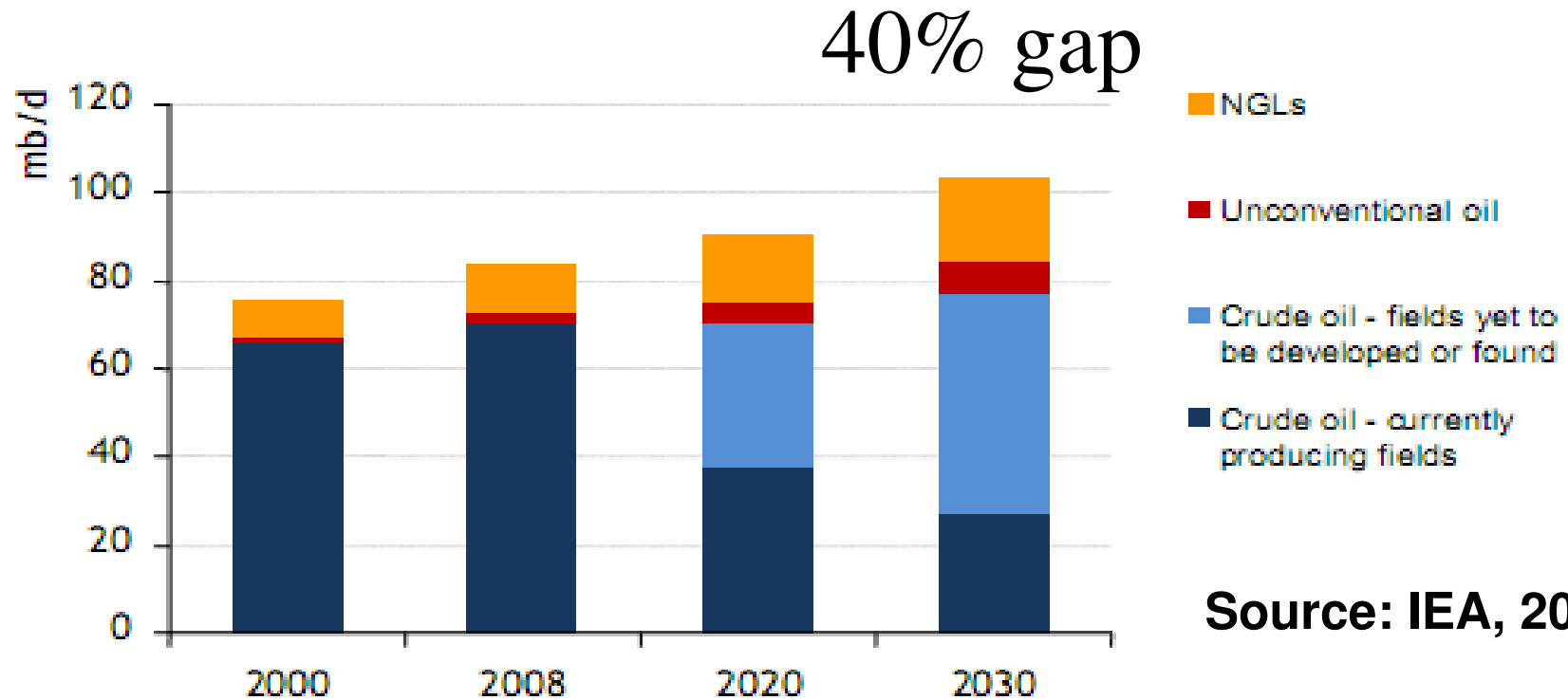
**WWF**®

Thank you

[www.wwf.org.uk](http://www.wwf.org.uk)



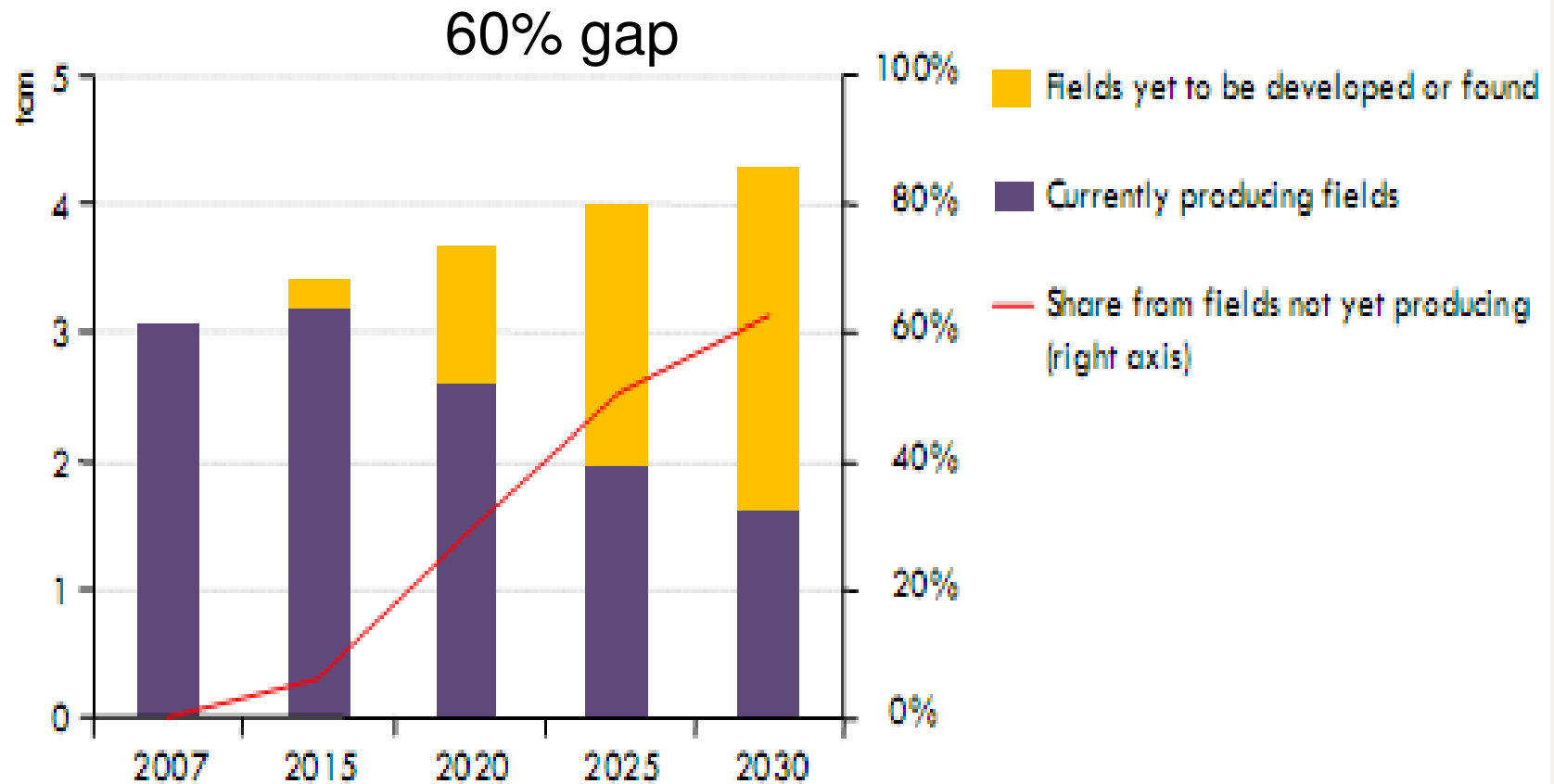
# Oil crunch ahead



Source: IEA, 2010



# Gas crunch looming?



IEA, 2010