

zerocarbonbritain

an alternative energy strategy

By Paul Allen, ZeroCarbonBritain, CAT, UK

Scenarios for a Fast Transition to Sustainable Energy
10th December, 2009, 10.00-12.00
Brown Room, DGI-Byen, Klimaforum'09, Copenhagen
NGO Side Event to UNFCCC COP15

http://www.inforse.org/europe/conf09_COP15.htm

<http://www.lowcarbon-societies.eu/>

<http://www.zerocarbonbritain.com/>

INFORSE

International Network for Sustainable Energy



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COP 15 Copenhagen



Centre for
Alternative
Technology

www.cat.org.uk



The rules of the past.....

- Political leaders & delegates must **navigate the path** to a rapid de-carbonisation.
- But these are **uncharted waters**, they need to know by what technology & economic path it can be done.
- Identifying **‘what we don’t yet know’**
- Creating a common, coherent **route map**



Our wellbeing depends on:

- Climate Security
- Energy Security
- Economic Security
- International Security

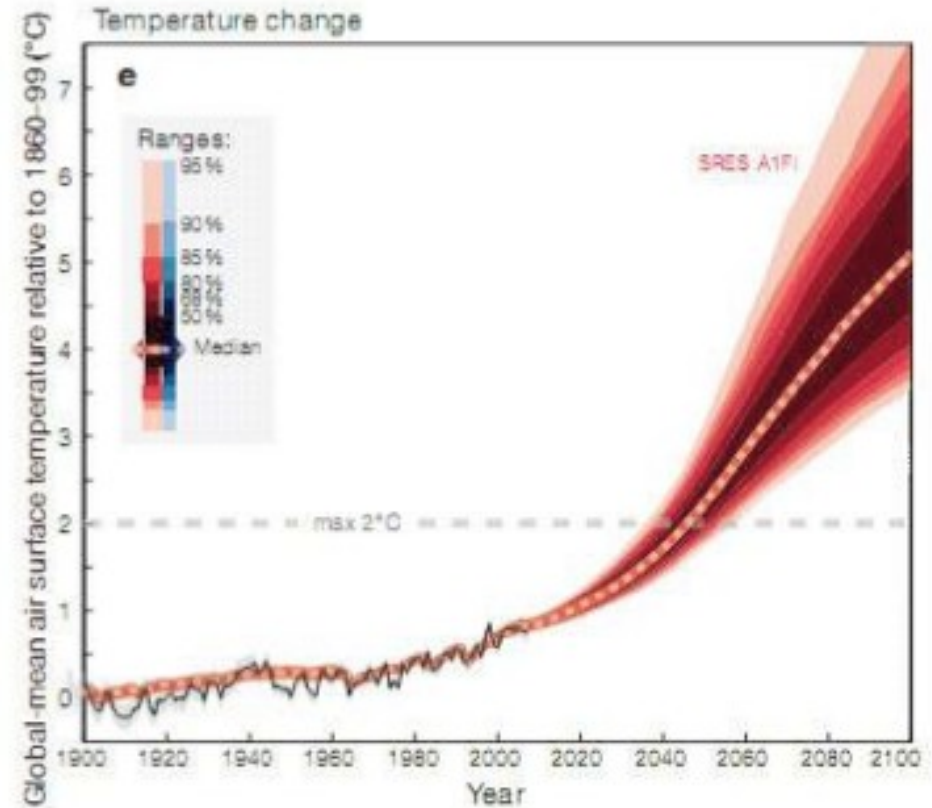


Climate Security

- Our emissions have already warmed the Earth by 0.8°C
- Current CO₂ levels lock us into at least another 0.8°C rise.

Climate Security

- A 2°C rise in average global temperature is now recognised as a very dangerous **tipping point**
- Beyond which climate systems become **non-linear & may begin runaway feedback**

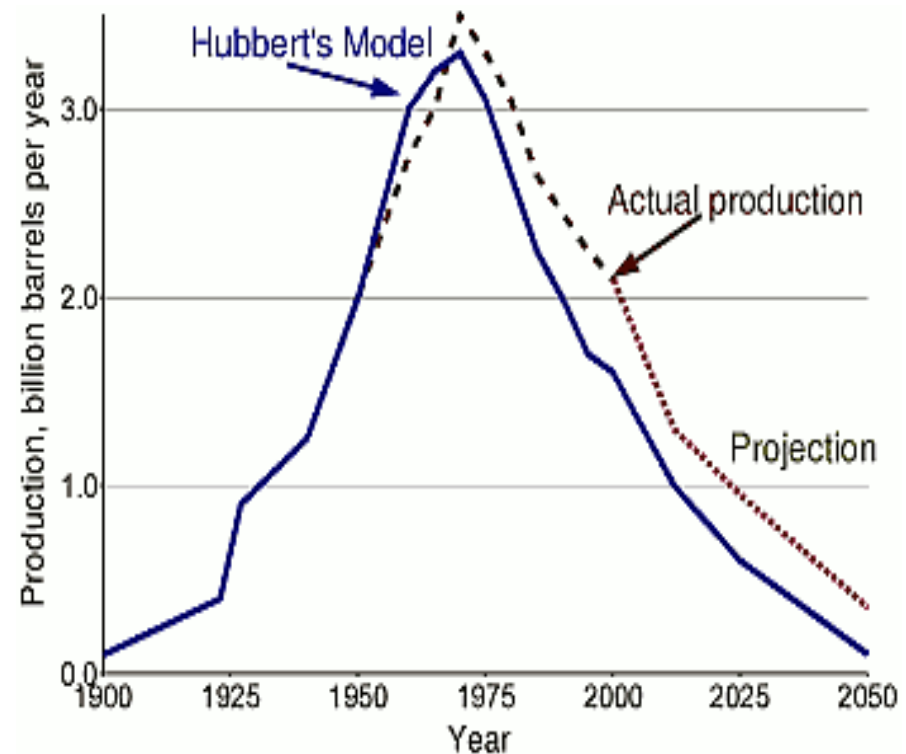


Source: Meinshausen et al. (2009)

Energy Security

M. King Hubbert worked for Shell in the 1940s.

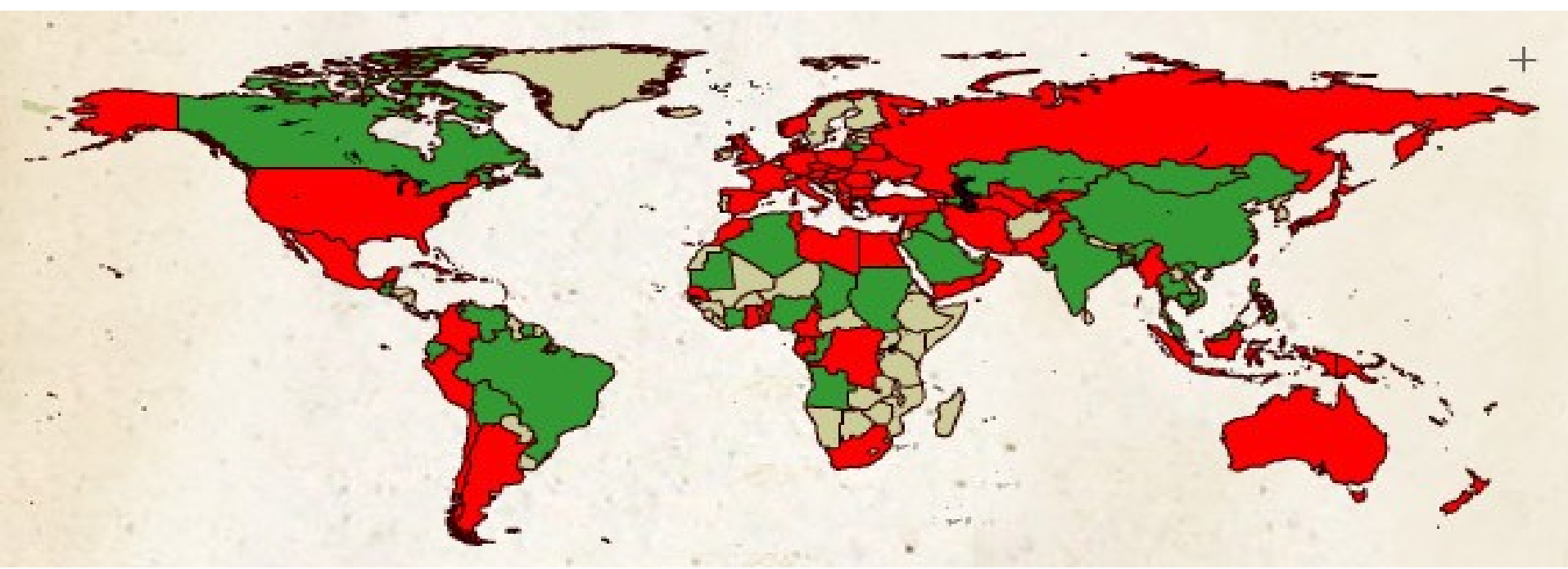
At the American Petroleum Institute conference in 1956, he predicted a **peak & then unstoppable decline** in US oil production from the early 1970s.



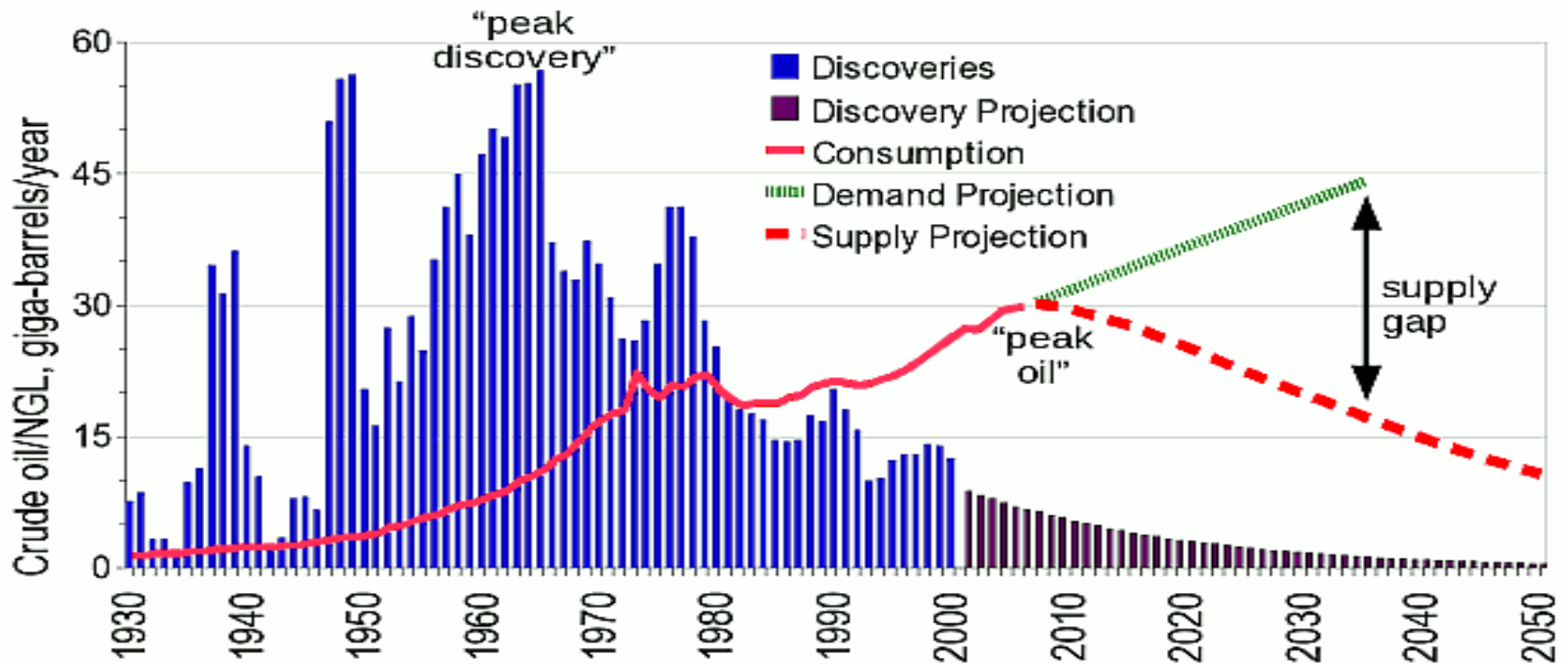
Energy Security

There are currently 98 oil producing countries in the world, of which 60 are now in terminal production decline.

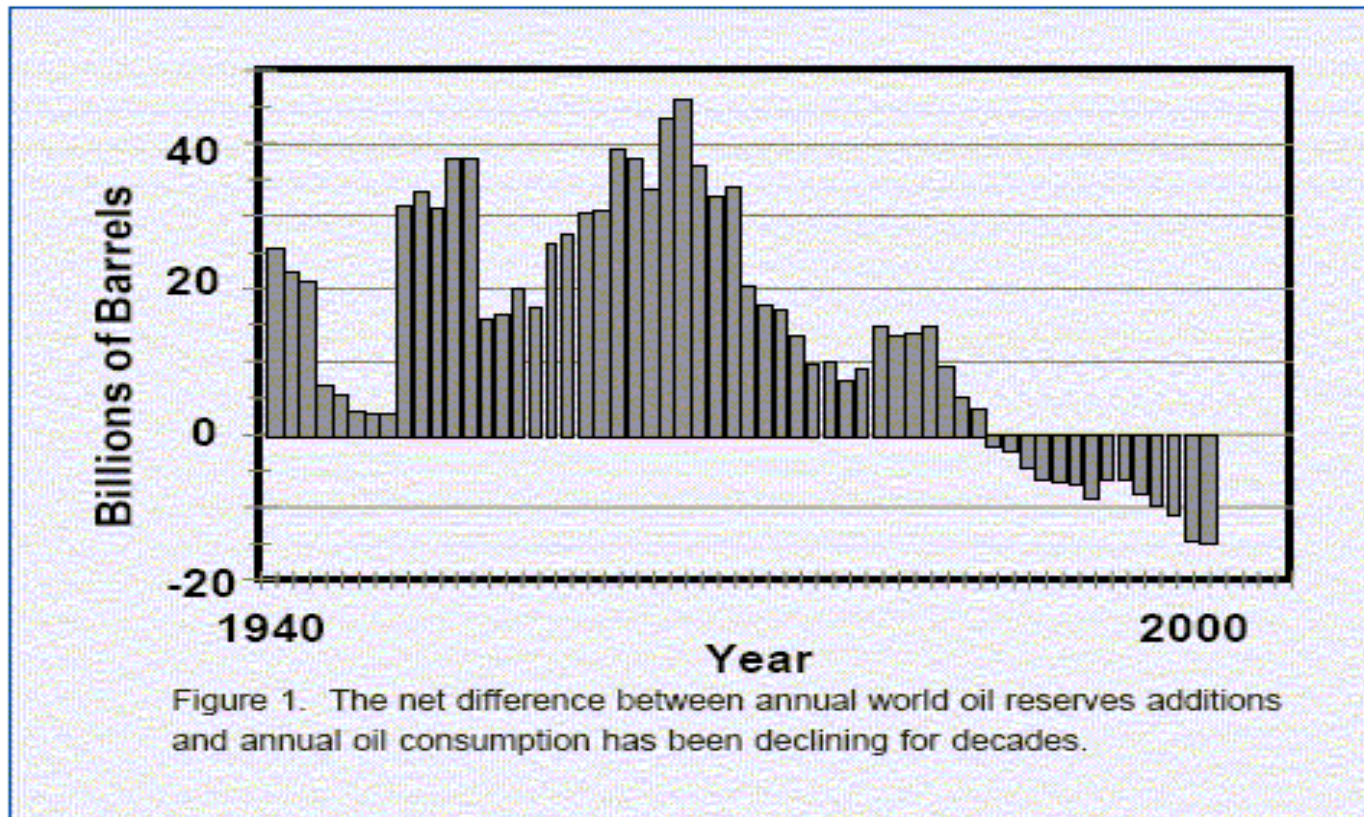
(David Strahan www.energybulletin.net)



Energy Security



Energy Security



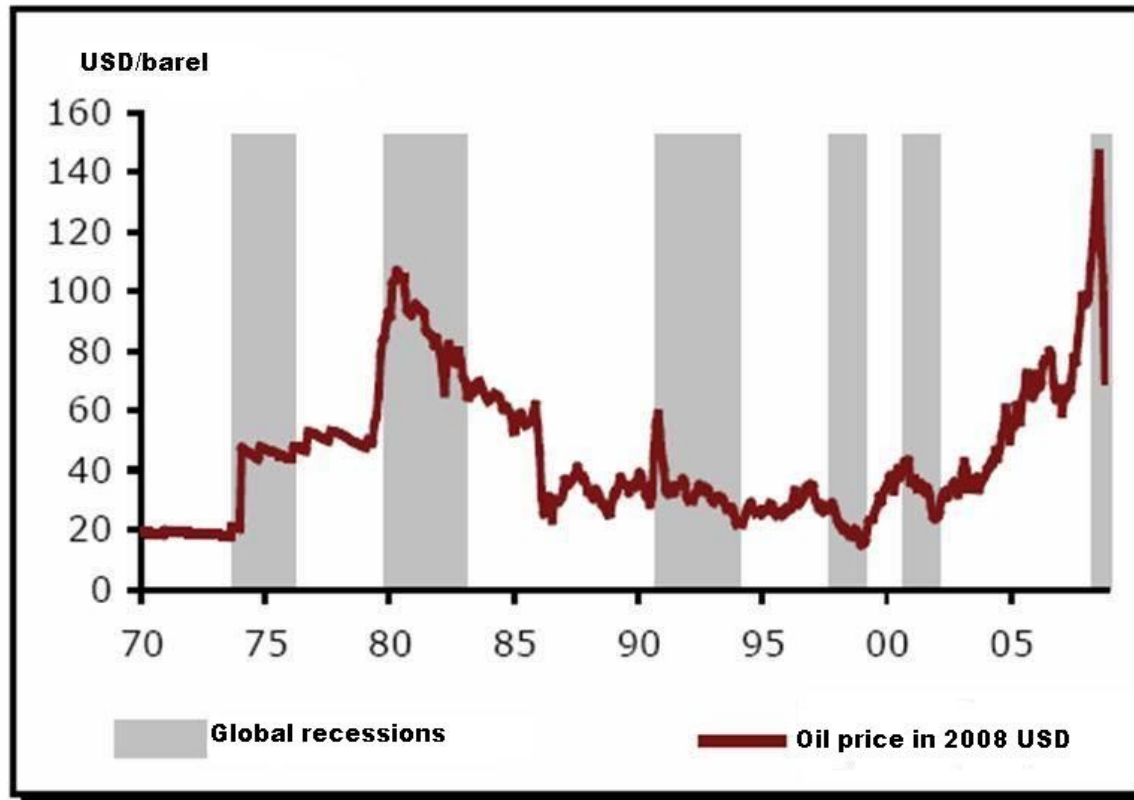
US Hirsch Report

Energy Security

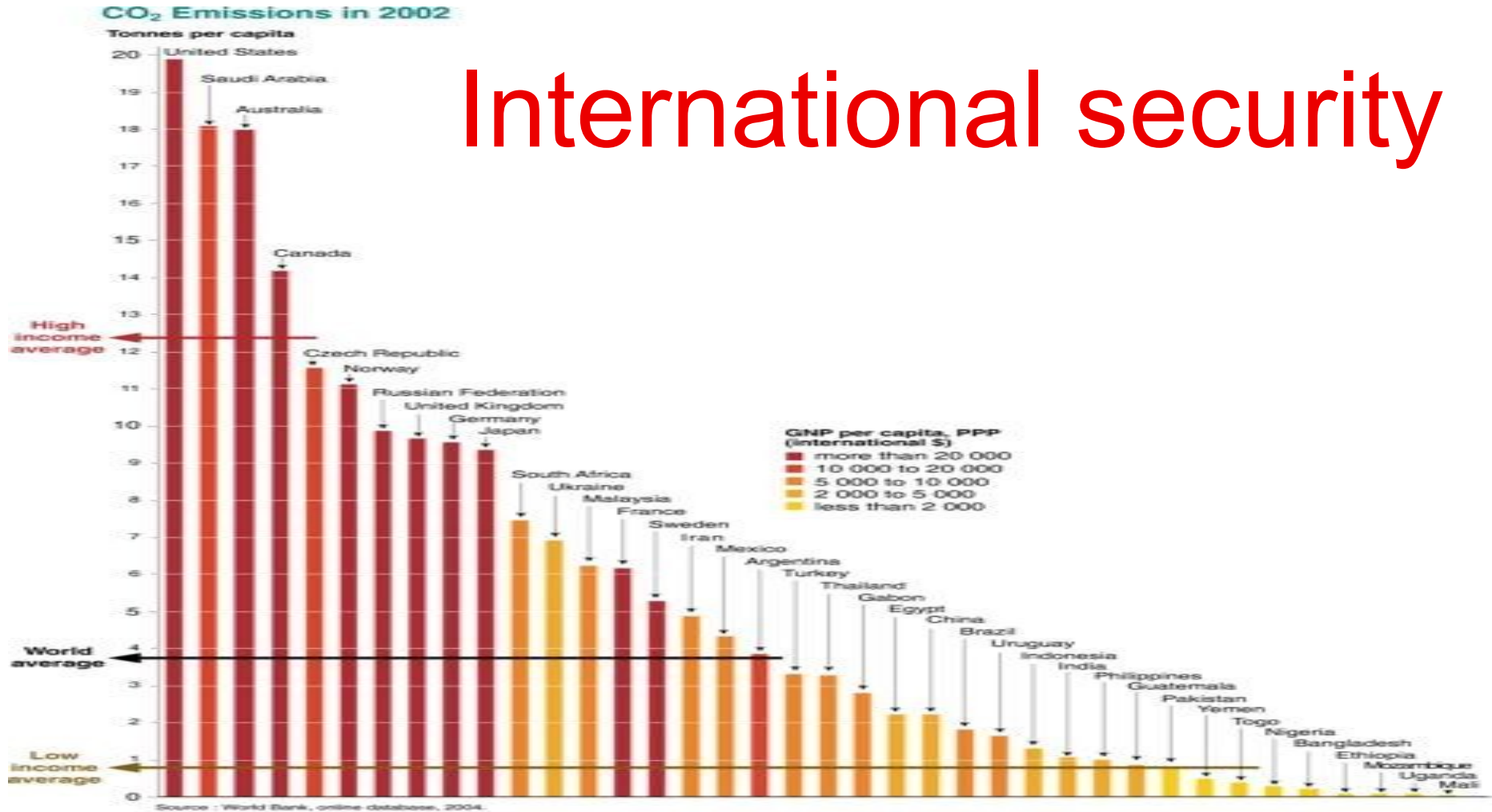
For the **first time in our history**, just as demand is exploding across the globe, humanity will no longer be able to increase energy production year on year!



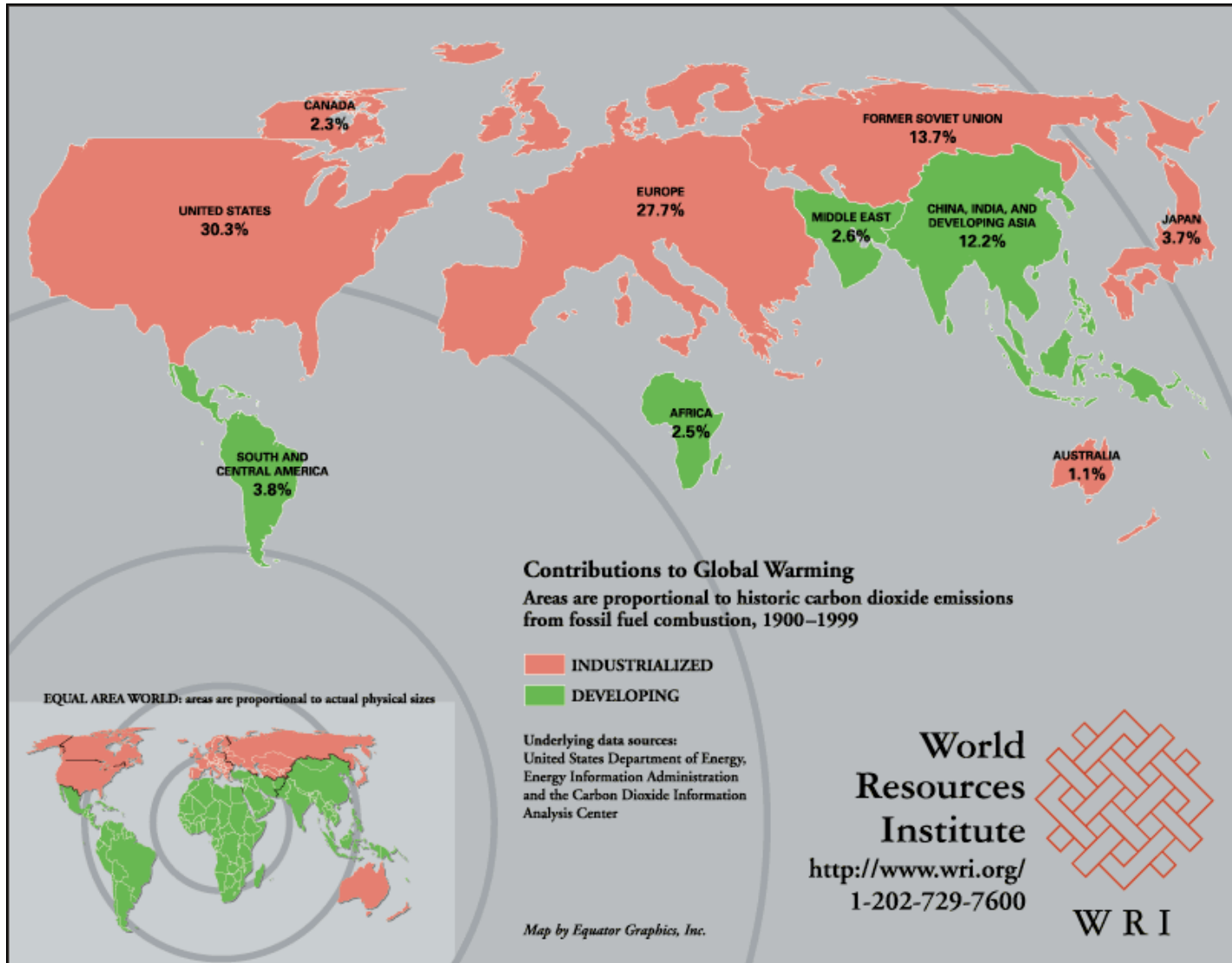
Economic Security



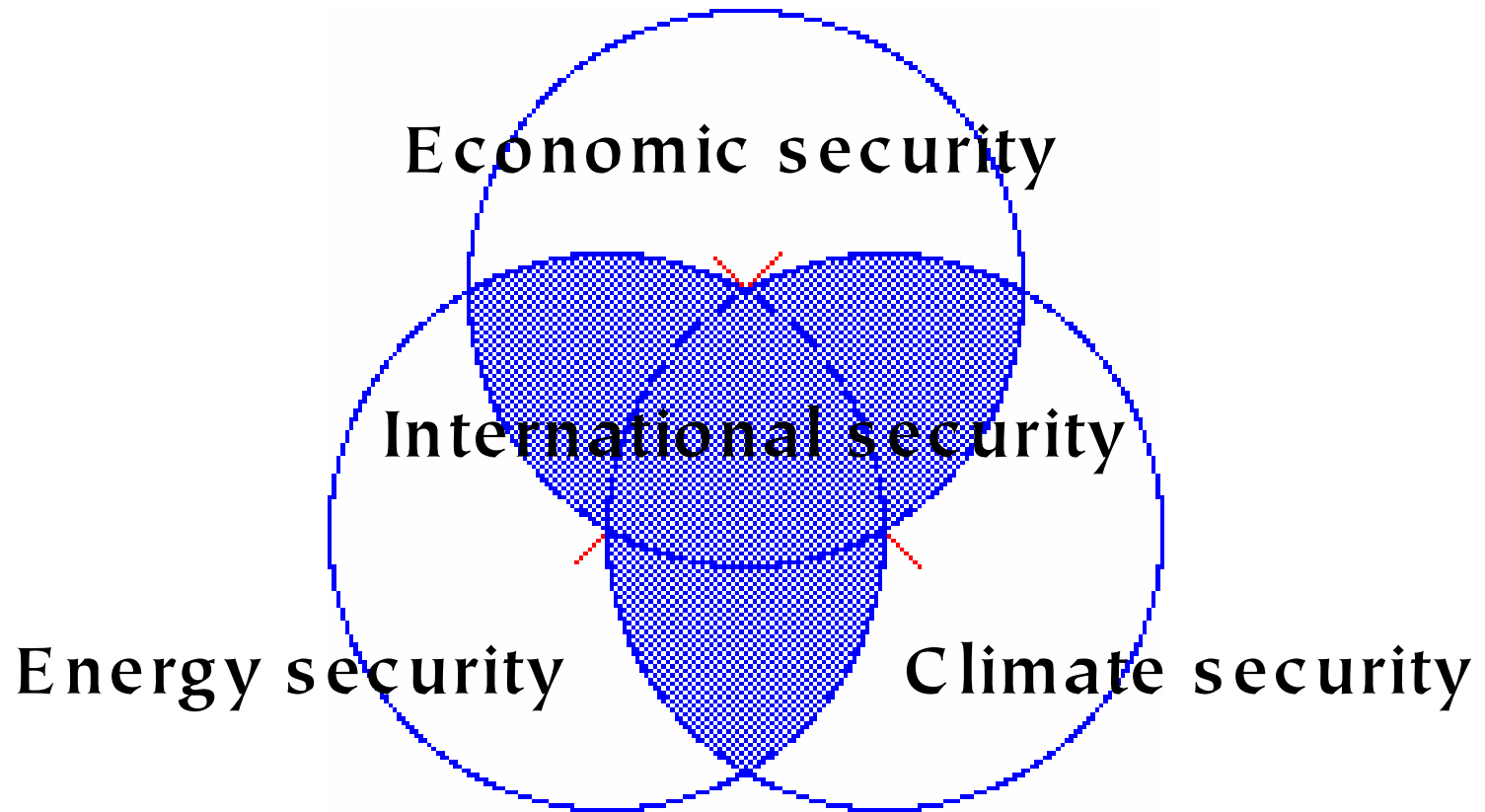
International security



(UNEP, data from World Bank 2004)



Integrated policy



Lasting Security

To deliver climate security the UK must have a policy which:

- is based on a high probability of avoiding 2°C
- works ahead of the oil depletion curve
- takes the UK's 'fair share' of historic responsibility, to enable global agreement.
- hits zero emissions as fast as humanely possible

“Technology Scenario”

National, regional, community & domestic scale

power**down**



power**up**



powerdown

- Sector by Sector
 - Buildings
 - Transport
 - Agriculture & Services
 - Industry

- 50% overall reduction achievable





- Identify UK's '*Strategic renewable energy reserve*'
- Wind, waves, tides, biomass, solar, geothermal.....
- Include only that energy harvestable with current technology widely deployed in non-sensitive locations

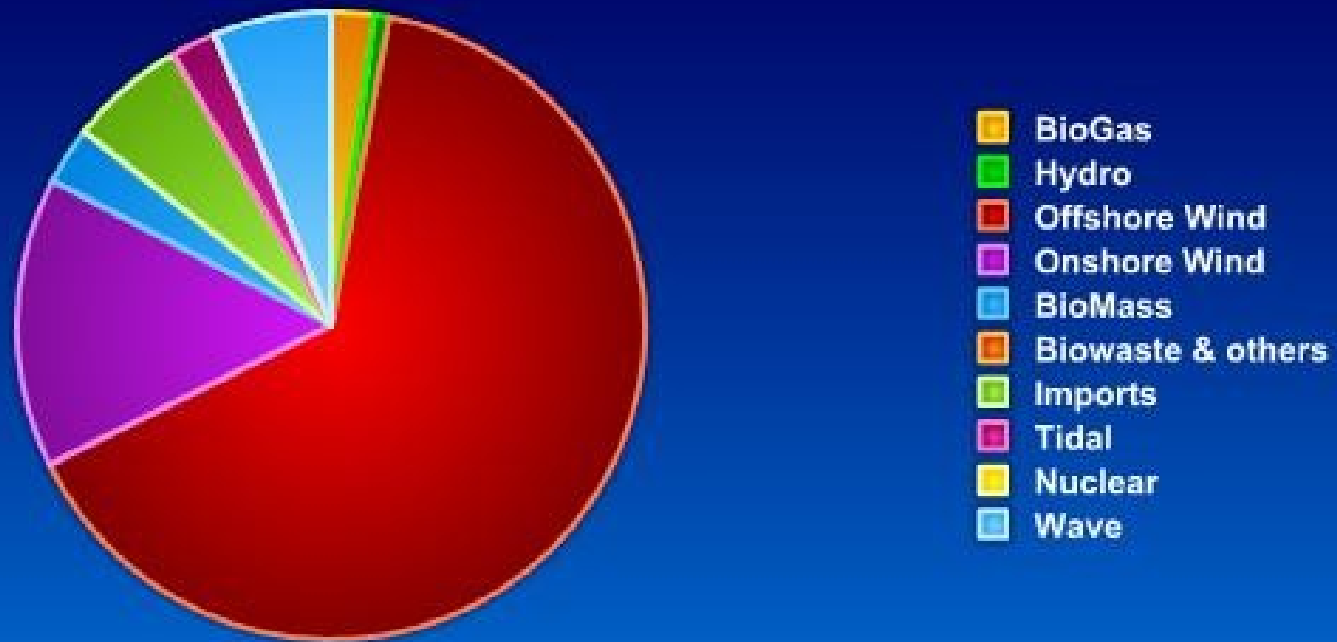


Another new index:

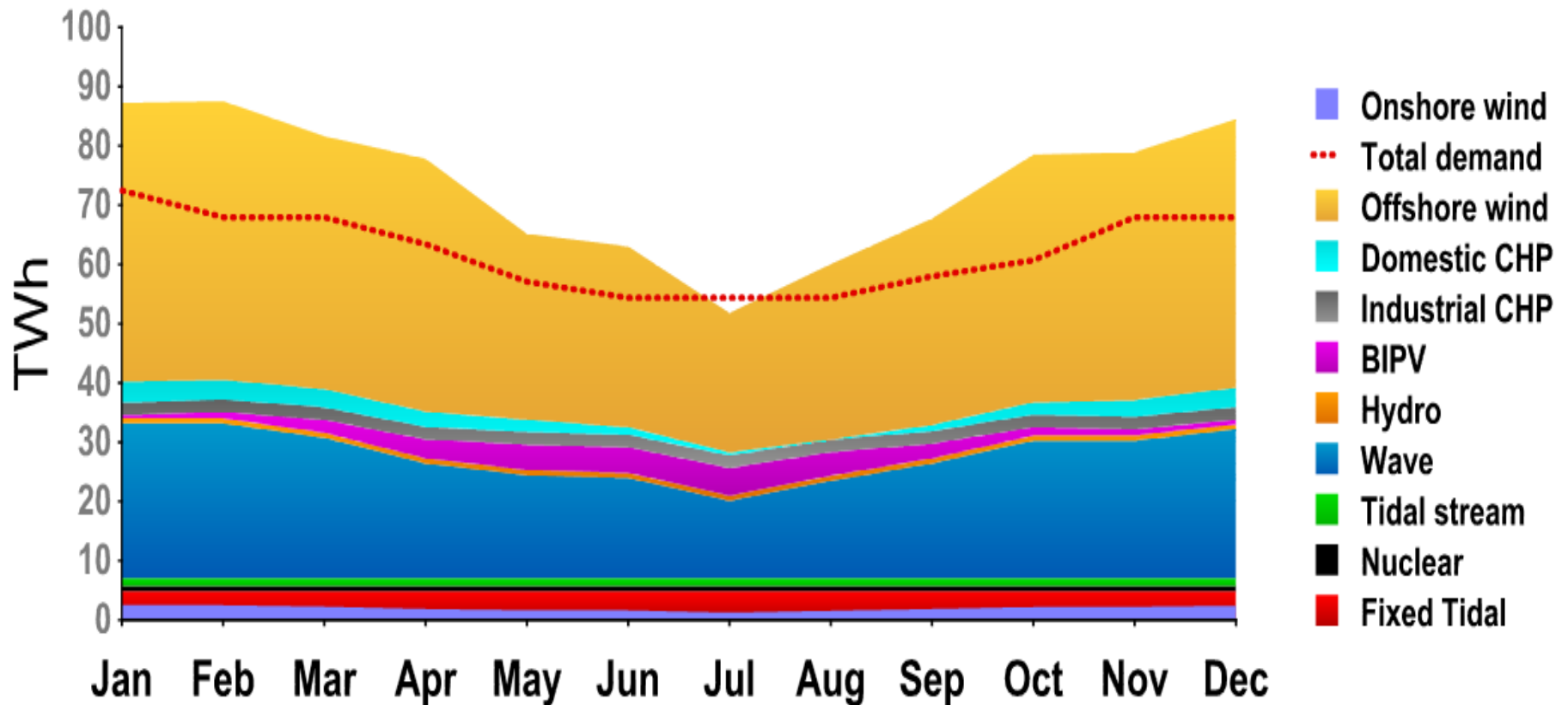
The amount of money this energy would ***inject into*** the UK economy!



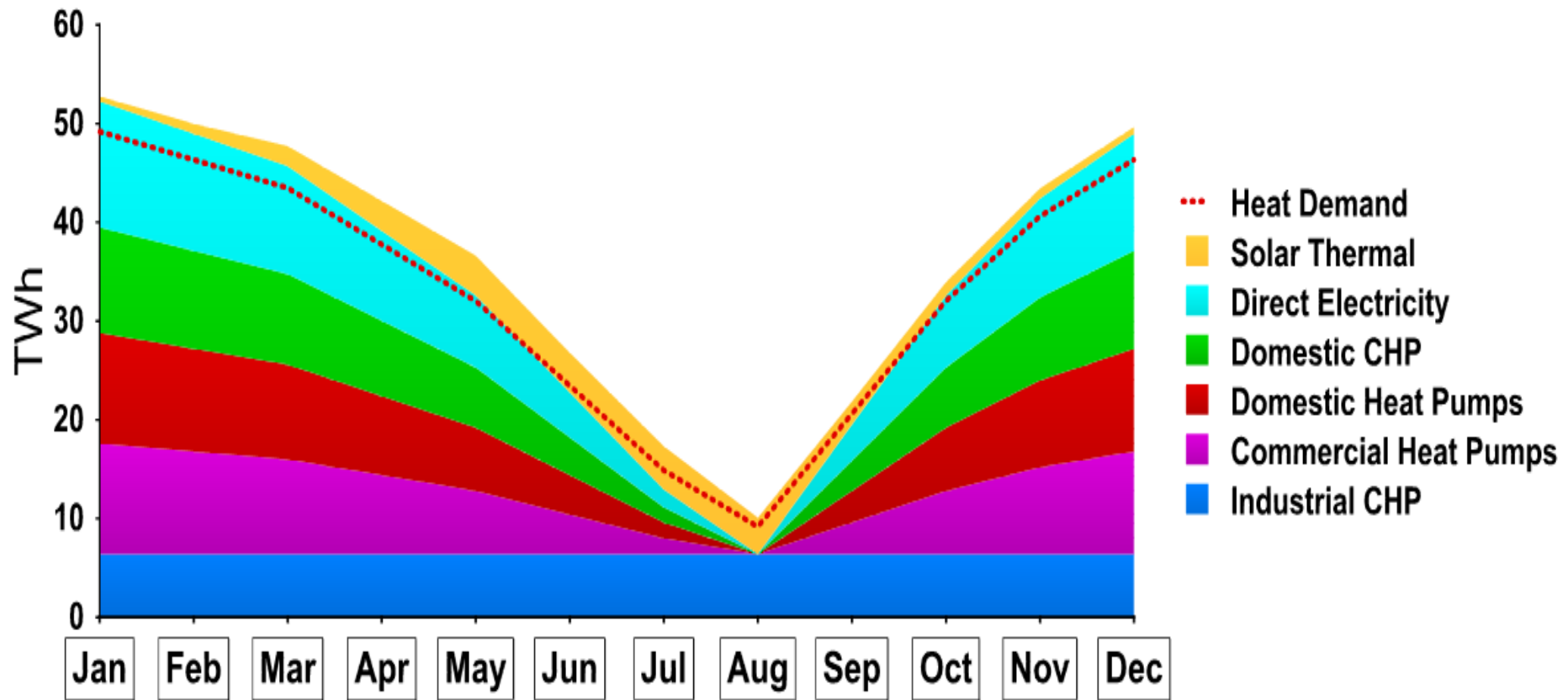
Electricity Generation by Technology



Electricity supply & demand



Heat supply & demand





- Hill-tops, roofs, gardens, islands, coasts, forests & rivers becomes an energy **and** an **income** generators
- As we get better at extracting energy through increasing economies of scale and advancements in technology, **the annual yield (and annual income) increases.**

A green new deal

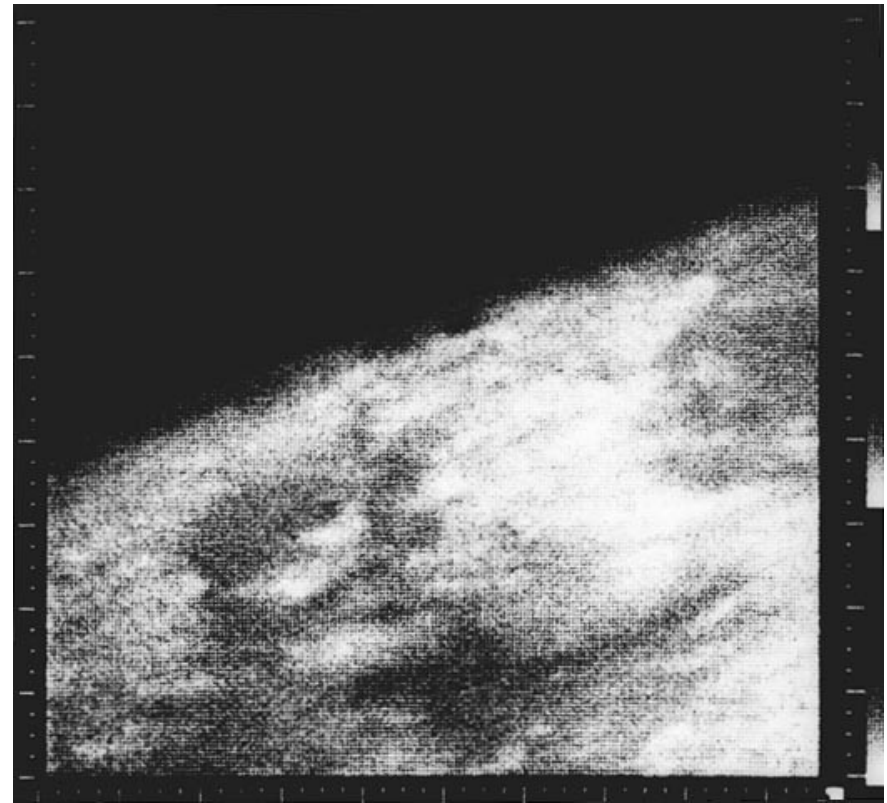
- Create secure **employment**
- Dramatically improve **balance of payments**
- **Inject revenue** into the economy every day
- **Repay the taxpayer** from the energy generated
- Future-proof against **price shocks & blockades**

Conclusions

- The science says we must
- The economics says it pays
- Technology says we can
- It's now time to say we will

Mapping a new terrain

- Evidence based
- Solutions driven
- Future focused



Politically thinkable

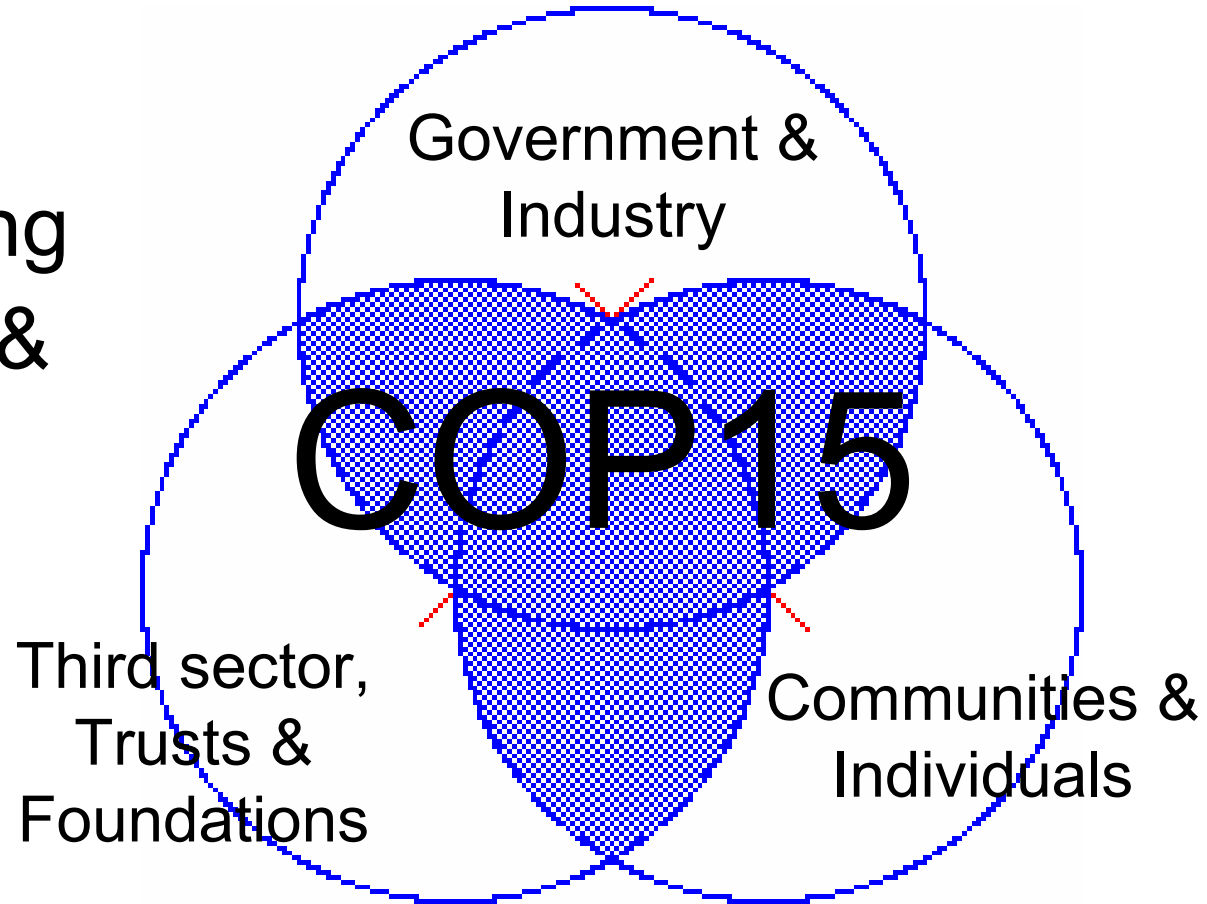
- Launched in Wales 2007
- Westminster
- Brussels, Paris, Barcelona
- UN COP14 Poznan
- New York, Washington, San Francisco
- UN CoP 15 Copenhagen

Politically thinkable

- 6 weeks after CAT presented ZCB in Westminster in 2007, the UK Liberal Democrats launched their policy called “Zero Carbon Britain – Taking a Global Lead”
- *These proposals were largely inspired by the Welsh based Centre for Alternative Technology and I would like to thank them for the ground-breaking work.*
(Lembit Opik, Shadow Secretary of State for Business and Enterprise)

A new community of practice...

... between
forward-thinking
organisations &
first movers!



It's transition time

- Change is coming, ready or not
- Our choice is between a future where we have been proactive and acted ahead of events, or a future where we have let events overtake us
- Major shift in attitudes

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“The authors of zerocarbonbritain present a time-scale for action that begins now. I commend their imagination (coupled with realism), their integrated view and their sense of urgency, as an inspiration to all who are grappling with the challenge that climate change is bringing to our world.”

Sir John Houghton, June 2007

Former Co-Chair of the Intergovernmental Panel on Climate Change (IPCC)

Former Director General of the UK Meteorological Office

