

Royal Academy of Engineering

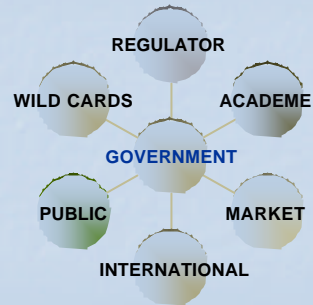
'International Contexts for UK Energy Policy'

Chris Lambert

Adam Smith Institute - Energy Policy Unit

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Stakeholder Groups & Policy Influences



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Role of the ASI Energy Policy Unit

- ⌘ Security of Supply (SOS) has to be paramount – this is a political and economic reality
- ⌘ Environmental sustainability & economic affordability are still achievable if...
- ⌘ ...Policy ensures a balanced, mixed energy policy that is risk-based in approach

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A shifting policy landscape

- ⌘ EC & EP – June 04
- ⌘ US Election – Nov 04
- ⌘ EU ETS – Jan 05
- ⌘ BETTA – Apr 05
- ⌘ UK Election – May 05?
- ⌘ Kyoto's future...?
- ⌘ UK radwaste strategy?
- ⌘ Renewables & efficiency progress...?

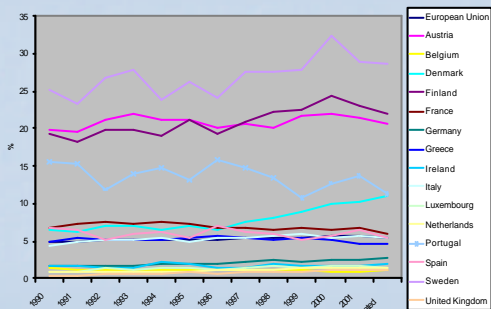
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Major Energy Trends

- ⌘ Demand for energy is growing worldwide
- ⌘ Continued ascent of environmental issues up the political agenda
- ⌘ Opening of European energy sectors to competition in an expanded EU
- ⌘ Technological research and advances

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EU Renewables contributions as % of primary energy supply (IEA '02)



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Emerging Technologies



SOLAR



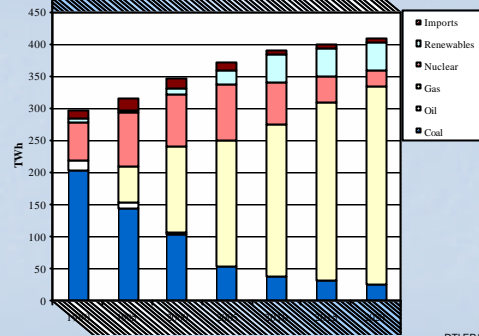
HYDROGEN



TIDAL STREAM

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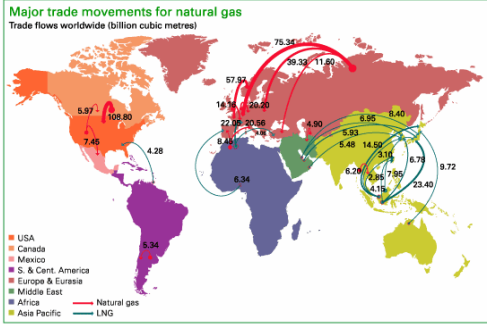
UK Electricity Consumption Forecast



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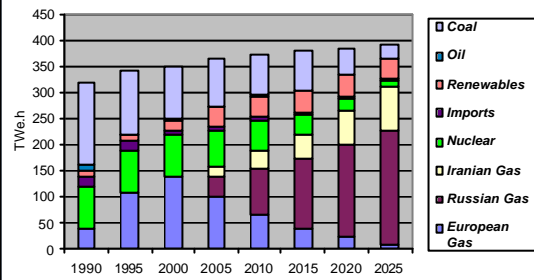
DTI EPA68 2000

Current World Gas Trade Flows



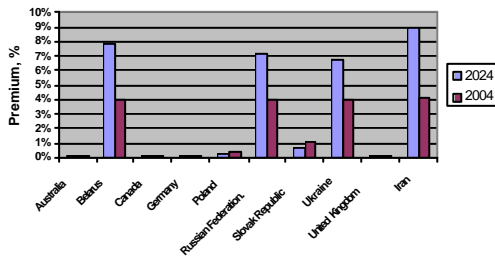
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Sources of UK Electricity.



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Political Risk Insurance Premiums, Actual and Forecast from Political Risk Indices.



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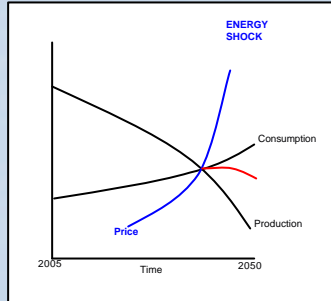
UK Gas Market Report Mar 04 - Energy Contract Consultants

UK Gas margin forecasts

	DEMAND	SUPPLY	Margin mmcf/d
2004	8500	12500	4000
2008	9000	16000	7000
2012	10000	11900	1900

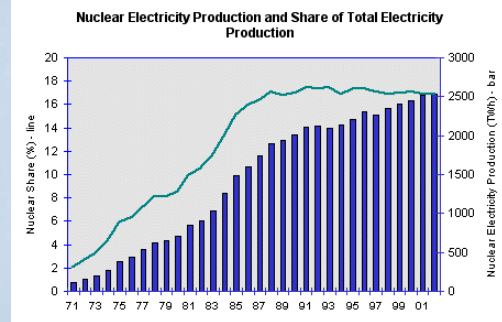
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The oil production 'crunch'



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International nuclear trends



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EU EcoSoC: Commissioner Palacio's statement:

“there is a need for a more balanced debate on nuclear energy. At present renewables cannot replace the share of EU energy currently supplied by nuclear, and given the EU's high dependence on non-EU oil and gas supplies nuclear energy is needed to ensure security of Supply whilst the development of Alternative sources for the future is also pursued”.

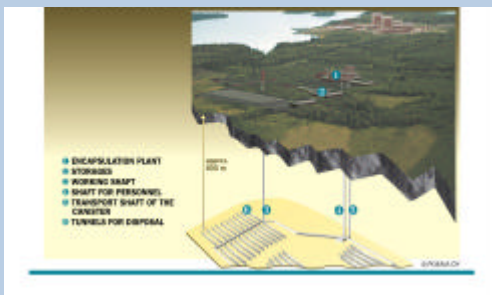
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Olkiluoto's 3rd nuclear plant



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Spent Fuel Repository at Olkiluoto



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Public perception

Public perceptions have, and will have, a major influence on energy choices

Addressing people's concerns and expectations in the right way is a major issue

The EC has a major role here but can it deliver? Could / would the media get the accurate message across the UK?

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Does nuclear power contribute greatly to global warming?

Yes 45%

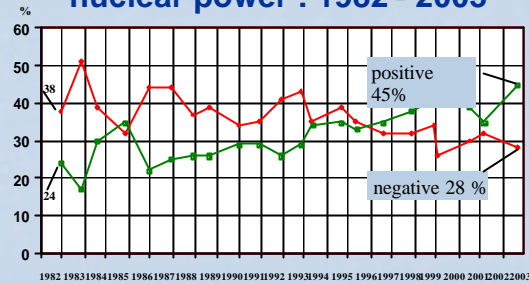
No 37%

DK 28%

(UK & EU15 respondents in EC's 2002 Eurobarometer)

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Finnish acceptance of nuclear power : 1982 - 2003

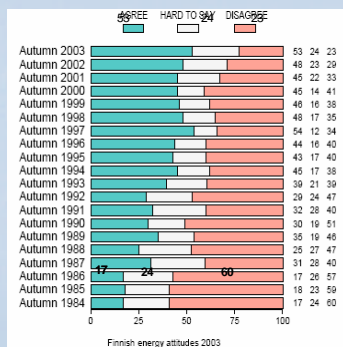


Source: Suomen Gallup Oy / TNS Gallup Oy
Finnish Energy Industries Federation

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12

It is safe to dispose of nuclear waste in the Finnish Bedrock?



Finnish energy attitudes 2003

USA / Canada Blackout - Aug 03

~1,800 MW of power lost from 250+ power stations

Blackouts in 1 Canadian Province & 8 U.S. states, across 9,266 square miles

3 deaths, 12 airports closed, & sporadic looting

1.5 million residents without water

50 million people affected in total

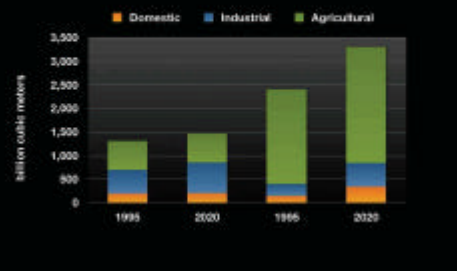
\$4.5-12 billion in economic activity lost

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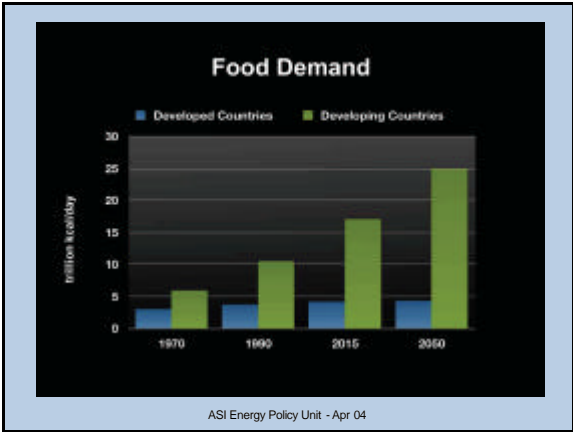


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Growing Demand for Water



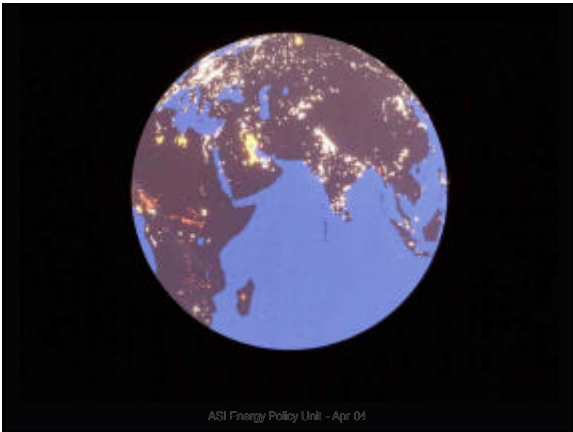
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- ### ASI energy programme 04-05
- ⌚ Financing the future of the UK energy sector
 - ⌚ Support mechanisms for emerging Renewables
 - ⌚ Carbon sequestration & EOR technology
 - ⌚ EU energy policy & clean coal / fuel cell foresight
 - ⌚ Energy access in the developing world

 - ⌚ Risk indices, energy scenarios & policy pathways

 - ⌚ Critical path analysis & economic appraisal for replacement nuclear build (UK)
- ASI Energy Policy Unit - Apr 04



Energy policy....

“...for the overall good of society.”

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