Policymakers versus Investors:
towards an economics of Radical Transformation
(in Democracies in Peacetime)

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Policymakers versus Investors – the Disconnect

• CCS: the impasse in Industry
• Why investors want to burn the “unburnable”
• Financing Radical and Disruptive change in Power:
  ➢ towards a new Microeconomics of Climate Policy
ETS Prices and Steel Industry Investment

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<th>ETS EUR pt</th>
<th>Assumed CCS cost (EC European CCS Roadmap 2050 p 48)</th>
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<td><strong>SIGNIFICANT NEGATIVE IMPACT?</strong></td>
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**EFFECT**
• The Steel and Cement sectors emit about 12%+ of CO2 with no technological alternative

• The ULCOS Florange EUR 500 million Demonstration project; why was it withdrawn from EU NER-300 financing in 2012?

• The crisis of the Steel sector in the EU

• Financing terms for the NER-300

• Competitive Industries: Obstacles to financing CCS projects
Stranded Assets: is there a carbon bubble?

- "Unburnable Carbon: Wasted capital and stranded assets“ (June 2013):
  - "demand for (fossil fuels) will decline sharply over the next decades" Lord Stern (Intro)

- HSBC: analysis of oil price at US$50 p/b: low risk gas versus higher risk oil

- The World in 2050: Feeding and Housing the 9 billion Resources and “A Perfect Storm”?

- Shell New Lens Scenarios - Oceans, Mountains: "Oceans could eventually lead to a level of climate turbulence which severely damages the economy."

- IPCC September 2013 – 1,000 Gigatonnes of Carbon = 2°C Limit

BALANCE OF RISKS FOR INVESTORS: 9 bln people v 1,000 Gigatonnes Carbon

(Carbon Tracker/LSE-GRI)
Equity values since August 2008: SHELL, Rio Tinto and Peabody
Equity values since August 2008: RWE and E.ON
Financing Radical Transformation

• Financing: Issues of Risk and Return
  Apple, Nokia, Blackberry versus E.ON, RWE, EDF:
  The Paradox of Investors’ Preference for Low-Risk Utilities

• Economics: Incremental Change versus Radical Change:
  Managing uncertainty

• Politics: Consumers and Voters:
  Peter Atherton (Liberium) and Ed Miliband
INTELLECTUAL

* Carbon Pricing \( \Rightarrow \) versus Regulation
  (Automotive Standards, Coal Phase-Out)

* Carbon Pricing \( \Rightarrow \) versus Public Support for Innovation (R&DD)

* The Green Paradox (Sinn); higher carbon taxes affect prices, not volume

* Long term Capex: the lessons of Hinkley C

* Role of Backcasting, Roadmaps, Targets (IEA, EC, CCC)

Based on the experience of 2005-2013, can we now begin to create an effective Microeconomics of Climate Policy?
The Challenges: ... Institutional

INSTITUTIONAL

* Creating the Policy Stability needed for Investment, by building Regulatory Bodies with competence and sustained public support?

* The role of Green Investment Banks: public partners in financing mitigating policy risk making backcasting financeable

* Lessons from: China, 13\textsuperscript{th} Plan? Germany, Energiewende?

* Towards - "Nationally Appropriate Innovation Actions" (Hartwell Group)? - CCCs for all major emitters? With teeth?