Climate change policy: a tangled web?

Dieter Helm
New College, Oxford

The Beesley Lectures on Regulation
Series XVIII 2008

October 30th 2008

Agenda

- Global trends under business-as-usual
- Prospects for an agreement at Copenhagen
- The EU January 2008 package
- The missing components: CCS, nuclear, new technologies
- What will happen?
- What ought to happen?

The global trends are (very) adverse

Some headlines:

- ↑ CO_2 by 2030 ≙ 50%?
- 1000 GW new coal by 2030 in China?
- ↑ 1 billion new cars by 2030?
- World Population 6➔9 billion by 2050

and…

- Lots of fossil fuels left (no "peak oil")
- Coal share growing (25 ➔28 ➔35%)

So far policy has had little effect

- Kyoto
  - Production based
  - Excludes aviation and shipping
  - Excludes binding caps for US, China and India
  - Only goes to 2012

- UK Carbon consumption ↑c. 19% since 1990

UK 2003 White Paper & Stern Report - a flawed prospectus

- 2003 White Paper
  - Renewables + Energy Efficiency — Nuclear
  - MARKAL modelling (very) optimistic
  - Captured by lobbyists

- Stern report
  - A (very) political context
  - The 1% cost on optimal policies
  - GDP assumptions treat environment as independent factor input
  - Discount rate and morality

Prospects for Copenhagen

☑ If the objective is “an agreement”, then good

☒ If the objective is to “address climate change”, then bleak

Just some of the issues:

- China - US & EU paying a Communist regime to improve its competitiveness…
- Russia - a carbon economy which invades Georgia, threatens Ukraine and the Baltics and moves on Arctic
- US - a world power pursuing energy independence
- Europe - renewing its coal capacity, whilst building windmills…

The EU January 2008 Package

- 20-20-20—2020 is political spin
- Overarching 20% headline is vague - CDM role unclear

And problems with…

- EUETS pre and post 2020
- Renewables directive
- Energy efficiency directive

…And much missing.

The EU ETS after 2012

- Experience to date mixed
- Not a pure quantity regime
- CDMs
- New countries after 2012 with “transitionary packages”
- Export industries and competitiveness
- Nothing post 2020 (CCS, nuclear, new technologies) and pressure from security of supply

⇉ Caps and floors

⇉ Carbon bank and quantity inputs

⇉ Other measures

The Renewables Directive

What is the question to which it is supposed to be an answer?

- It will induce a new dash-for-gas and (because of Russia) more coal
- Makes almost no difference to CO2 concentrations
- Extremely expensive

But…

- Meets the political imperative for coalitions across Europe

The Energy Efficiency Directive

- More rational

But…

- Cost estimates of +NPV very questionable
- Driven by energy price (↑ and then ↓)
- System property linked to transmission and distribution (smart metering, system demand output, etc.)

The missing components

- Base load and security of supply matters
- Current renewables (without storage) reduce security of supply

➔ Options : coal, gas, nuclear

- Coal requires CCS
- Gas requires CCS

} New North Sea utility

- Nuclear is always political and policy driven
  - Low carbon obligation
  - Long term carbon price (after 2020)

➔ Coal is the key so CCS more important policy priority than renewables

What will happen?

- Copenhagen agreement but CO2 ↑ continues
- Fiscal transfers to China *et al* gradually discredited
- CDM "fraud" will appear
- Lots more windmills

➔ Global political tensions grow after the "end of history" in the 1990s

➔ More serious climate "crisis" before effective action

What ought to happen?

Some priorities:

- Large scale, base-load technologies
- Major CCS efforts
- Redesign of transmission systems
- Technology, technology, technology…

And…

- New technologies - batteries for renewables
- (very) Smart meters and (very) large scale demand management
- Begin to think about the unthinkable - planning for a (very) hot planet

For Information

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