What’s going on with the CO₂ price in the EU ??

Challenges facing the EU-ETS

David Hone
Chief Climate Change Adviser
Royal Dutch Shell plc

Chairman, IETA
A chequered price history

Initially strong, but collapse due to over allocation

Renewed strength as Phase II allocations take hold.

Very weak as the impact of the recession is felt, but some recovery

Further weakness as allowance surplus builds.
Both the Commission and Member States have contributed to the weakening impact of the ETS EU Emissions Trading System delivers a carbon price into the EU economy Renewable Energy Targets UK Carbon Floor Price Energy Efficiency Directive 

“Green” politics and policies Nuclear Energy Policies Renewable Energy Targets UK Carbon Reduction Commitment Local carbon taxes Member State Coal Policy

Cost to society $
An ETS should provide a clear route forward, based on abatement opportunity economics.

EU-27 Abatement Chart

A carbon price drives project implementation from left to right across the abatement curve.

Cost of abatement €/tonne CO$_2$e

“Expected” EU CO$_2$ price

Abatement MTonne CO$_2$e

$T_{EU-2020}$ (EU 2020 reduction target)

$T_{EU-2030}$ (EU 2030 reduction target)
Implementation could see fuel switching first, then mature renewables, followed by some CCS in the 2020s.

A carbon price drives project implementation from left to right across the abatement curve.

EU-27 Abatement Chart

- Energy efficiency projects
- Fuel switching etc.
- Maturing renewables (e.g. hydro, onshore wind)
- Advanced renewables
- Future renewables

“Expected” EU CO₂ price

Cost of abatement € / tonne CO₂e

Abatement MTonne CO₂e

\( T_{EU-2020} \) (EU 2020 reduction target)

\( T_{EU-2030} \) (EU 2030 reduction target)
Mandated renewable energy has distorted emissions mitigation economics across the EU

EU-27 Abatement Chart

More distant renewable energy technologies brought forward by mandate

“Hidden” actual EU CO₂ price

Visible EU CO₂ price

Energy efficiency delayed

Fuel switching and CCS now comes much later

Cost of abatement

€ / tonne CO₂e

“Hidden” actual EU CO₂ price

Visible EU CO₂ price

Energy efficiency delayed

Fuel switching and CCS now comes much later

T_{EU-2020} (EU 2020 reduction target)

T_{EU-2030} (EU 2030 reduction target)
The recession has further exacerbated the situation.

EU-27 Abatement Chart

- More distant renewable energy technologies brought forward by mandate
- “Hidden” actual EU CO₂ price
- Recession driven emissions drop
- Near zero EU CO₂ price
- Only fuel switching in the 2020s
- Energy efficiency delayed

Abatement MTonne CO₂e

- Cost of abatement € / tonne CO₂e
- T_{EU-2020} (EU 2020 reduction target)
- T_{EU-2030} (EU 2030 reduction target)
1. 2001 draft ETS Directive
2. Tough negotiations
3. 2005 - ETS starts and trading begins
4. Phase I
5. 2008 Climate & Energy Package
6. 20/20/20 by 2020 deal for Europe
7. European recession, pressure from industry, EU energy costs
8. Where to from here?
David Hone
Climate Change Advisor for Shell

Hello and welcome to my blog. There’s lots said about why climate change now confronts us, and what it means, but the real issue is what to do about it. Plenty is said about that too, but there’s not enough discussion on the practical aspects of implementation. Focusing on energy, that’s what my blog sets out to achieve.

I have always worked in the energy sector and have had a long-term interest in environmental issues. My earliest foray into "journalism" was an article in our school science magazine...

More about me

31st January 2013

The real price of CO2 in the EU

The EU Emissions Trading System (ETS) is facing tough times. Last week saw the price fall to below €3 after the European Parliaments’ Industry & Energy (ITRE) Committee voted against the Commission proposal to amend the ETS Directive to allow for backloading of ETS allowances (a compromise mechanism which will shift the auction profile in Phase III to remove allowances in the short term). At such a price level the system isn’t really functioning, rather it is little more than a short term compliance accounting system for reporting on CO2 emissions.