

Climate change and energy policy – an economic perspective

John Fitzgerald

Economic and Social Research Institute

Keynote Address

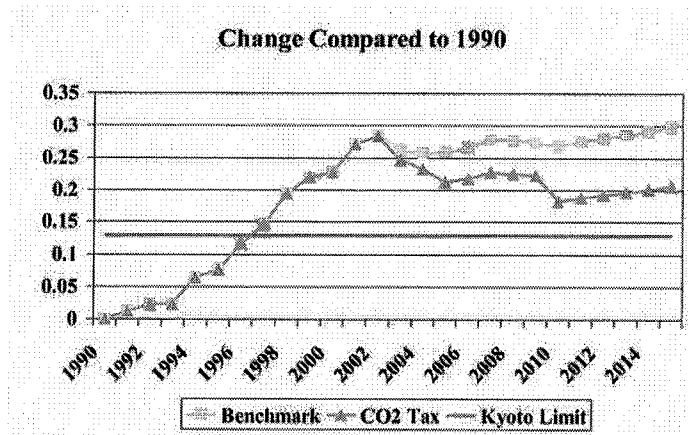
Background

- International Agreements
- Ireland's problem
- Objective - least cost solution
- Policy
 - ▶ Fossil fuel emissions - financial instruments
 - ▶ Agriculture
 - ▶ Forestry
 - ▶ Research

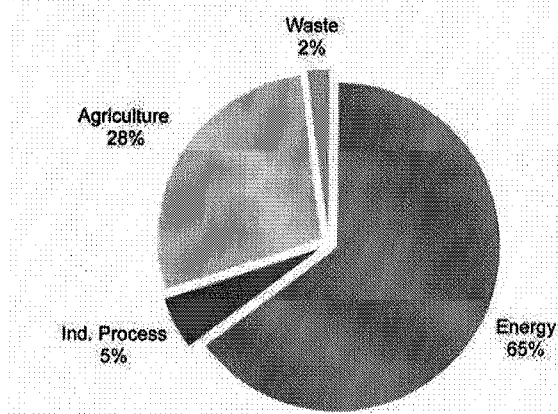
International Agreements

- Problem getting agreement
- Very long time scale for solution
- Need world-wide buy in
- Kyoto - limited coverage and objectives
- Post-Kyoto?
- 'Burden sharing' - is it feasible?
- Alternatives?

Greenhouse gas



Emissions - Gross, 2000



Ireland's Task

- A lot to do, little done
- Want a least cost fair solution
- Be good!
- Emissions trading - EU
- Carbon tax - an essential element
 - ▶ affects some sectors - special treatment
 - ▶ affects some people - special treatment
- Other instruments

Implementing Policy

- Ideally:
 - ▶ one objective - one policy instrument
- Complexity is costly
 - ▶ costly for regulators
 - ▶ costly for firms
 - ▶ cost of running a good scheme can kill it
- EU Policy Incoherent:
 - 4 multiple policies for one objective

Targets as Policy Instrument?

- Targets on:
 - ▶ emissions reduction, energy efficiency, biofuels, renewables, etc.
- Legislative targets with no instruments
- Penalties? Pay to EU or to Ireland?
- Key to implementation is instruments

Least Cost Solution

- Let the market decide
- Fiscal instruments
 - ▶ Emissions trading
 - ▶ Taxes
 - ▶ Subsidies
- Other mechanisms
 - ▶ Standards
- Research
 - ▶ Market driven or top down?

Emissions Trading in Practice

- Permits allocated for free
 - ▶ can be sold - an asset for companies
- Sectors competing on world market
 - ▶ output price can not rise - Aughinish
 - ▶ free permits may allow plant to survive
- For electricity and cement
 - ▶ limited non-EU competition
 - ▶ price rises by cost of permits?
 - ▶ permits given for free
 - ▶ potential windfall gains for shareholders

Other Effects of EU Scheme

- Uncertain price
 - ▶ costly for investment and research
- Transactions costs
 - ▶ every firm must trade
 - ▶ who runs the 'market' and for how much?
 - ▶ auditing of every firm
- Competition effects - negative
 - ▶ capital subsidy to polluters

Distributional Consequences

- Between EU member states
- Within Ireland between
 - ▶ consumers and producers
 - ▶ rich and poor households
 - ▶ different sectors
- Allocation of emission rights determines distributional outcomes
 - ▶ auctioned or grandfathered?
- Alternative - a common price

EU - Reforms Needed

- Must auction all permits
- Continued grandfathering
 - ▶ bad for competitiveness (anti-Lisbon)
 - ▶ bad for competition
 - ▶ bad for income distribution
 - ▶ use it or lose it and multiple allocations bad
- Preferably trading should apply to all sectors (or else a carbon tax)
 - ▶ exemptions for small number of sectors

Renewables Policy

- Why should there be a policy?
- Renewables encompassed by:
 - ▶ global warming policy
 - ▶ security of supply policy
- Multiple overlapping policies and instruments leads to:
 - ▶ inefficiency - high transactions costs
 - ▶ loss of competitiveness
- EU and UK policy

Policy on Transport

- Carbon Tax - small initial effect
- Congestion key environmental issue
 - ▶ urban public transport
 - ▶ congestion charging
 - ▶ emissions reduction a by-product
- EU level crucial
 - ▶ standards for fuel efficiency
 - ▶ huge market - producers can react
 - ▶ long lead in time on R&D

Housing Efficiency

- Stock to rise by 30% over decade
- Standards for new building
 - ▶ more effective than in any other country
- Enforcement?
- Energy efficiency in existing stock
 - ▶ price - incentive
 - ▶ takes time
 - ▶ R&D

Agriculture

- Agriculture
 - ▶ a role to play in a least cost solution
 - ▶ needs more consideration 30% of emissions
- Teagasc - decoupling
 - ▶ emissions reduction - higher income?
- Consistent approach to land use
- Taking account of externalities

Forestry

- Time horizon
- Importance as a sink
- Consistency with policy on agriculture
- Land use
 - ▶ shows up conflicting policies
- Problems of risk
 - ▶ risks for society
 - ▶ risks for promoters
 - ▶ risks for farmers

Biomass

- Biofuels enemy of biomass
- Biomass for heating
- Biomass for electricity?
- How high will price go?

Research

- Research is key to future emissions reduction
 - ▶ technology the solution: when and how?
- US 'Stalinist' model
 - ▶ top down
 - ▶ taxpayer pays - costly
- If environment is priced
 - ▶ price signals potential profit
 - ▶ research driven by potential profit

Conclusions

- Governments are not infallible
- Use fiscal instruments
- Long-term R&D essential
- Forestry important as a sink and as a fuel