

Climate change & renewable energy policy

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Questions for today

Policy-making in context of the financial crisis and the low carbon imperative...

- What are the possibilities for reinvigorating Scotland's economy and reducing dependence on fossil fuels?
- Are prospects for economic renewal at odds with the need to invest in renewable energy?
- What measures can be taken to create new jobs?

Setting the scene...

Scotland's climate change targets

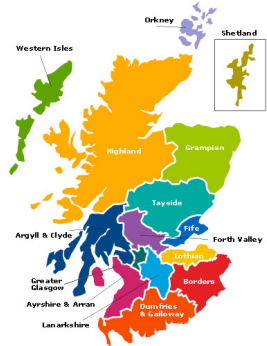
Climate Change (Scotland) Act (2009):

- Reduction of at least 80% from 1990 levels by 2050
- Interim 2020 target of at least 42%
- Reductions of at least 3% per year from 2020
- Annual targets out to 2022.
- Targets include emissions from international aviation and shipping.

UK Climate Change Act (2008)

- 80% reduction in GHGs by 2050
- At least 34% reduction by 2020, rising to 42% if EU takes 30% target
- 1st 3 carbon budgets from 2008-12; 2012-2017; 2018-2022
- Established UK Committee on Climate Change

Climate Change (Scotland) Act / UK Climate Change Act



2(1) “The Scottish Ministers must ensure that the net Scottish emissions account for the year 2020 is at least 42% lower than the baseline.”

Net Scottish emissions account = Scottish territorial emissions – carbon units credited + carbon units debited

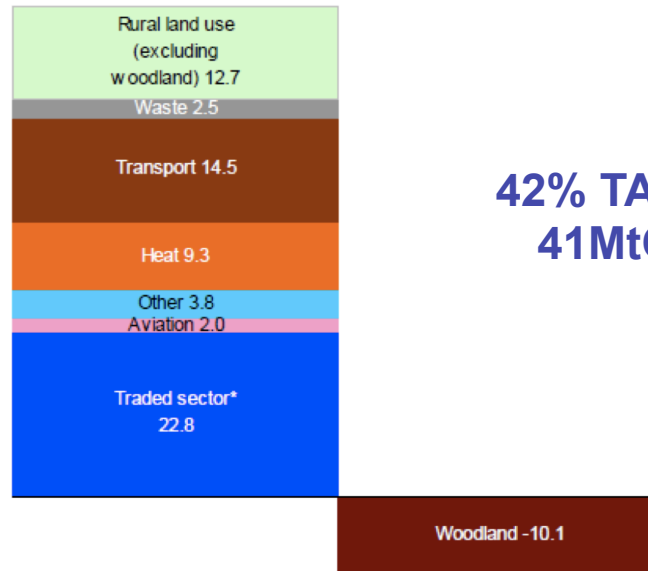
Current situation (2006 figures)

Scotland's emissions:

- 70 MtCO₂e in 1990
- 58 MtCO₂e in 2006

(Including international aviation and shipping and EU ETS)

2006 emissions (MtCO₂e)



2020 target

**42% TARGET:
41MtCO₂e**

2050 target

**80% TARGET:
14MtCO₂e**

*Electricity generation and energy intensive industry

“Traded sector” has fixed reduction of ~5MtCO₂e by 2020, implying other sectors need to deliver ~11MtCO₂e

If EU takes a 30% emission reduction target for 2020 (from 1990), the “traded sector” takes the strain:
EU ETS ~9MtCO₂e: Other sectors ~7MtCO₂e

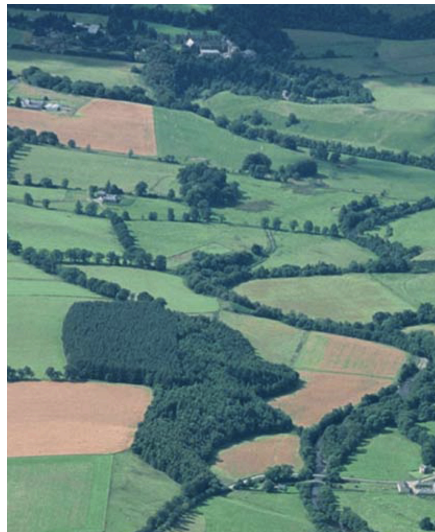


~100% by 2030



~46% by 2020

~10% by 2020



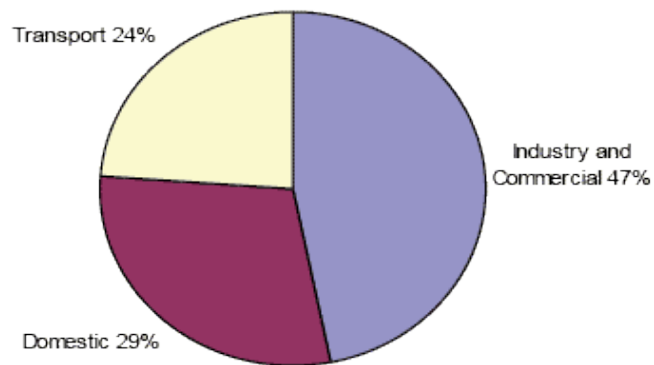
~32% by 2020

Scotland's renewable energy targets

Key drivers

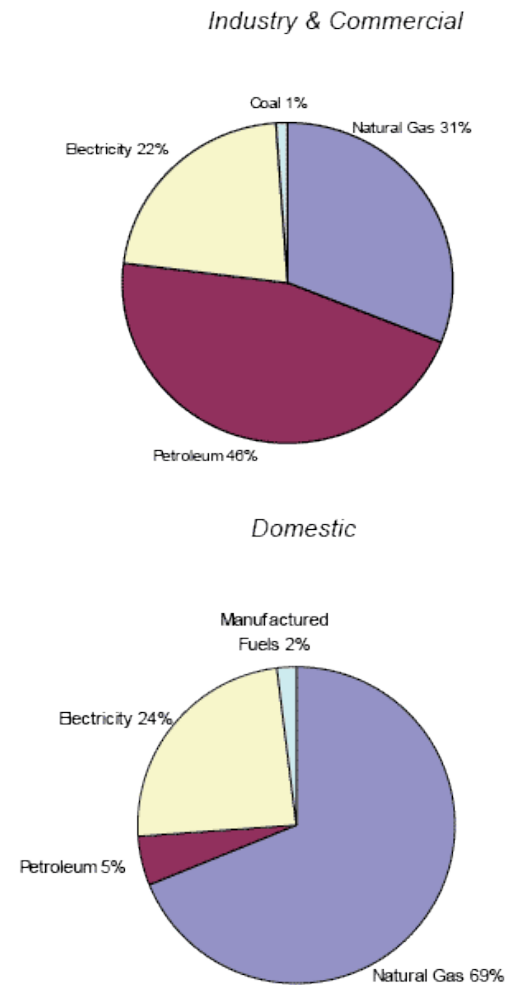
- Comparative advantage
- Export markets
- Economic growth
- Energy security
- Reducing emissions

Scottish Final Energy Consumption (%) by Demand Sector 2006



Source: DECC, Regional Consumption Data 2006, June 2009 update

Figure 2.4 Fuel Usage by Final Consuming Sector in Scotland



Source: DECC, Regional Energy Consumption (2006)

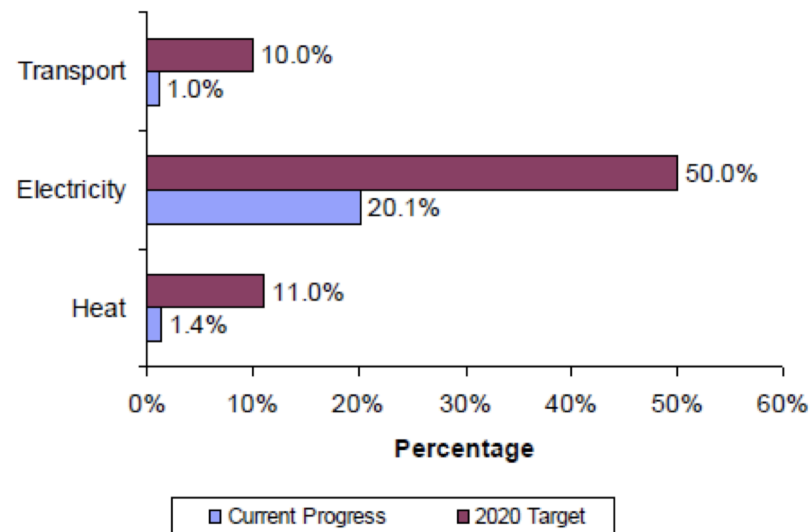
Scotland's renewable energy targets

Headline figures

- 20% of total energy use to come from renewable sources by 2020
- 50% of electricity demand from renewable sources
- 11% of heat demand from renewable sources
- 10% of transport demand for energy from renewable sources

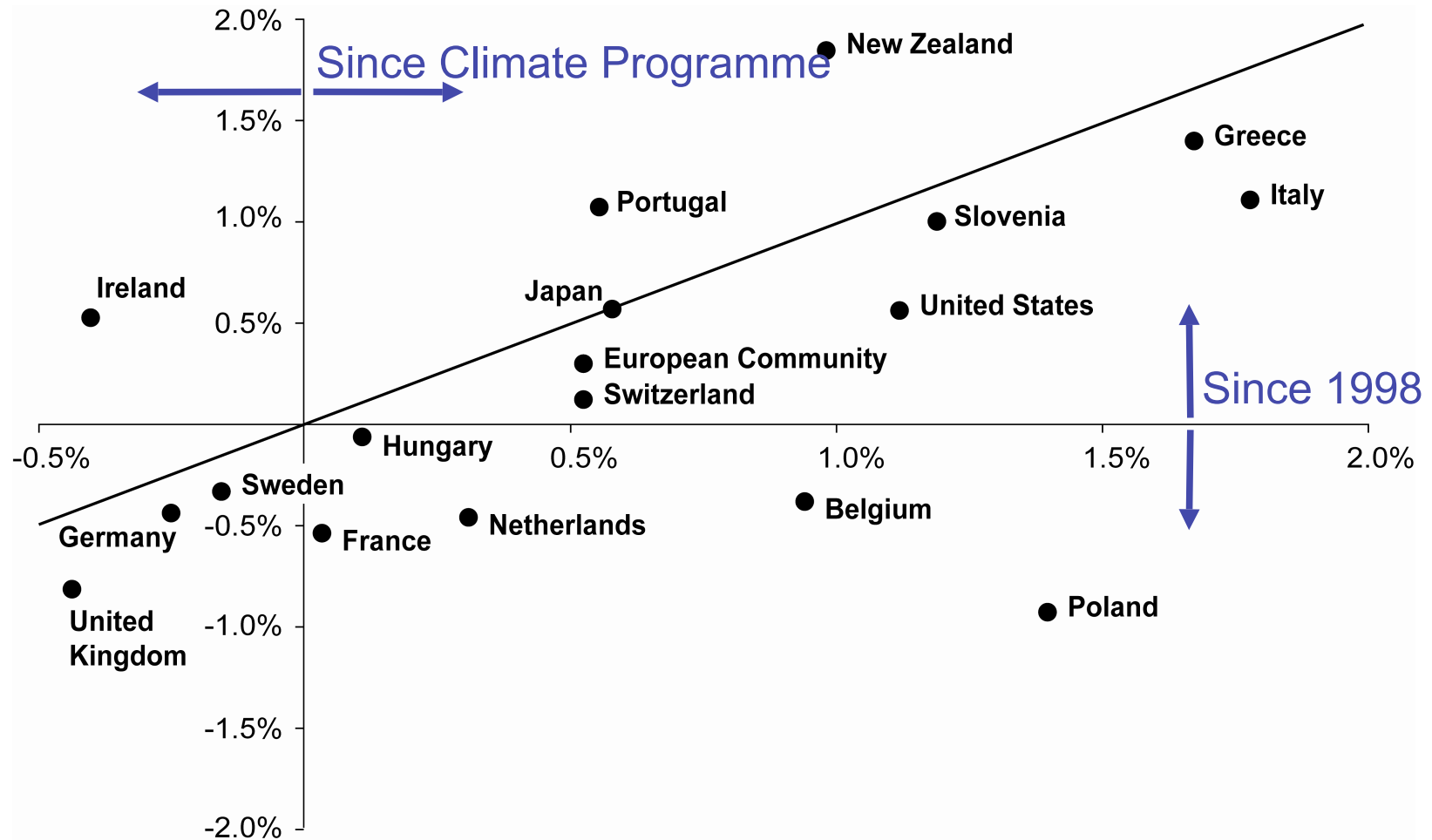
Where are we now?

- Total renewable capacity in Scotland - May 2010: 3.7GW

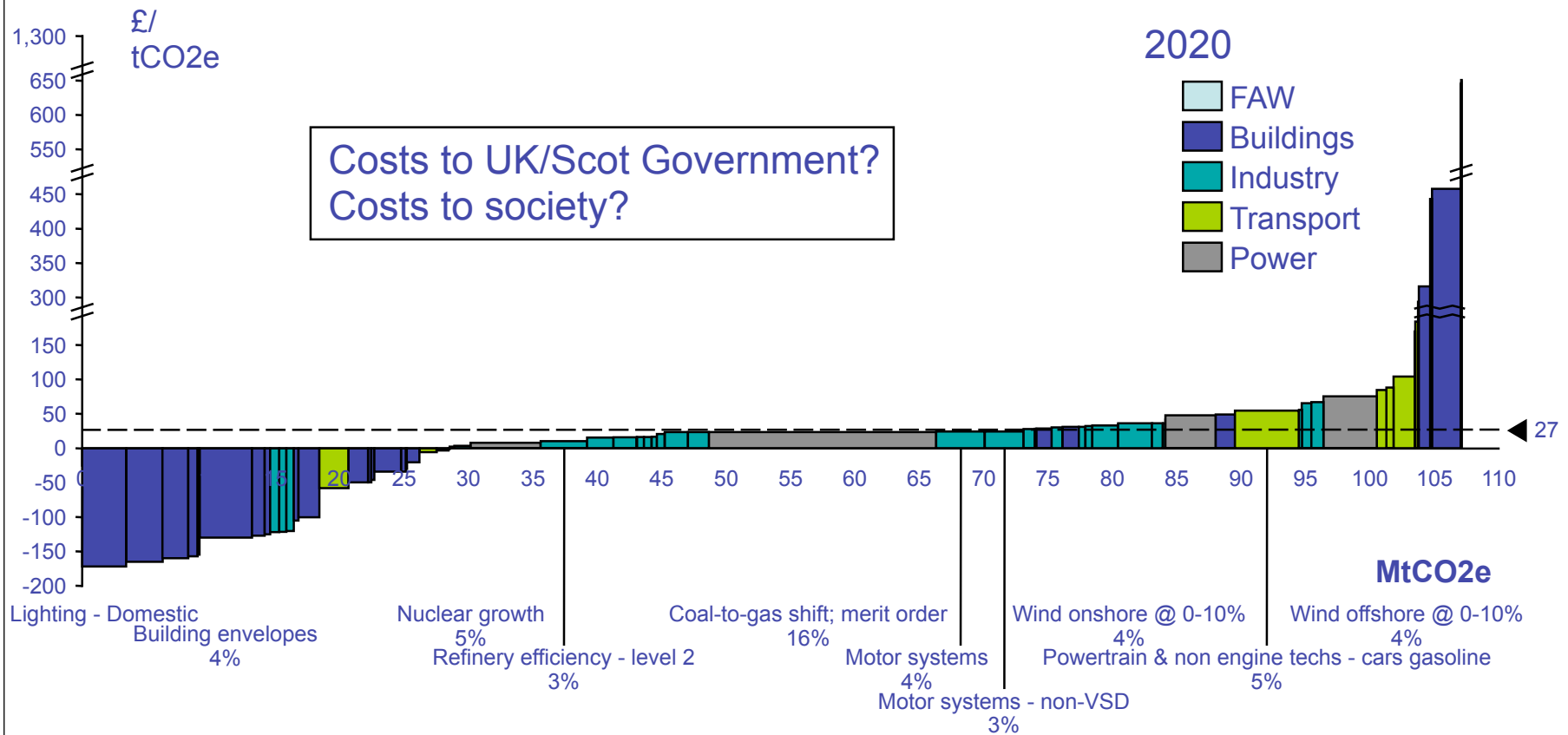


The challenge...

Initial Outcomes of National Climate Change Programmes



Turning theory into reality...



Source:

UK MAC model

The issues...

Issues for Scottish policy making...

- Financing + opportunity costs...
- Balancing higher energy costs with developing an enticing place to do business / social equity
- Planning frameworks and locking in high carbon frameworks
- “Enabling” infrastructure to deliver structural change
- Overcoming barriers to change: e.g. upfront costs
- Skills shortages
- Innovation within economy
- External drivers [export markets]
- Behavioural change / social context
- Carbon accounting & PR gap



Answers for today

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