

UK and EU27 compliance costs for meeting the 20% target in 2020

A presentation on the EU 2020 Renewable Energy Target
April 2008

Objectives

- Objective was to understand the relative costs and potential for renewable energy in each of the EU27 member states
 - To construct renewable energy supply curves for each member state, with separate costs for the electricity, heat and transport sectors
 - No original research intended, but to draw on existing sources where possible
- Assess the costs of achieving a given level of the EU renewable energy target in 2020 from domestic action and/or through the purchase of renewable energy certificates from other EU countries

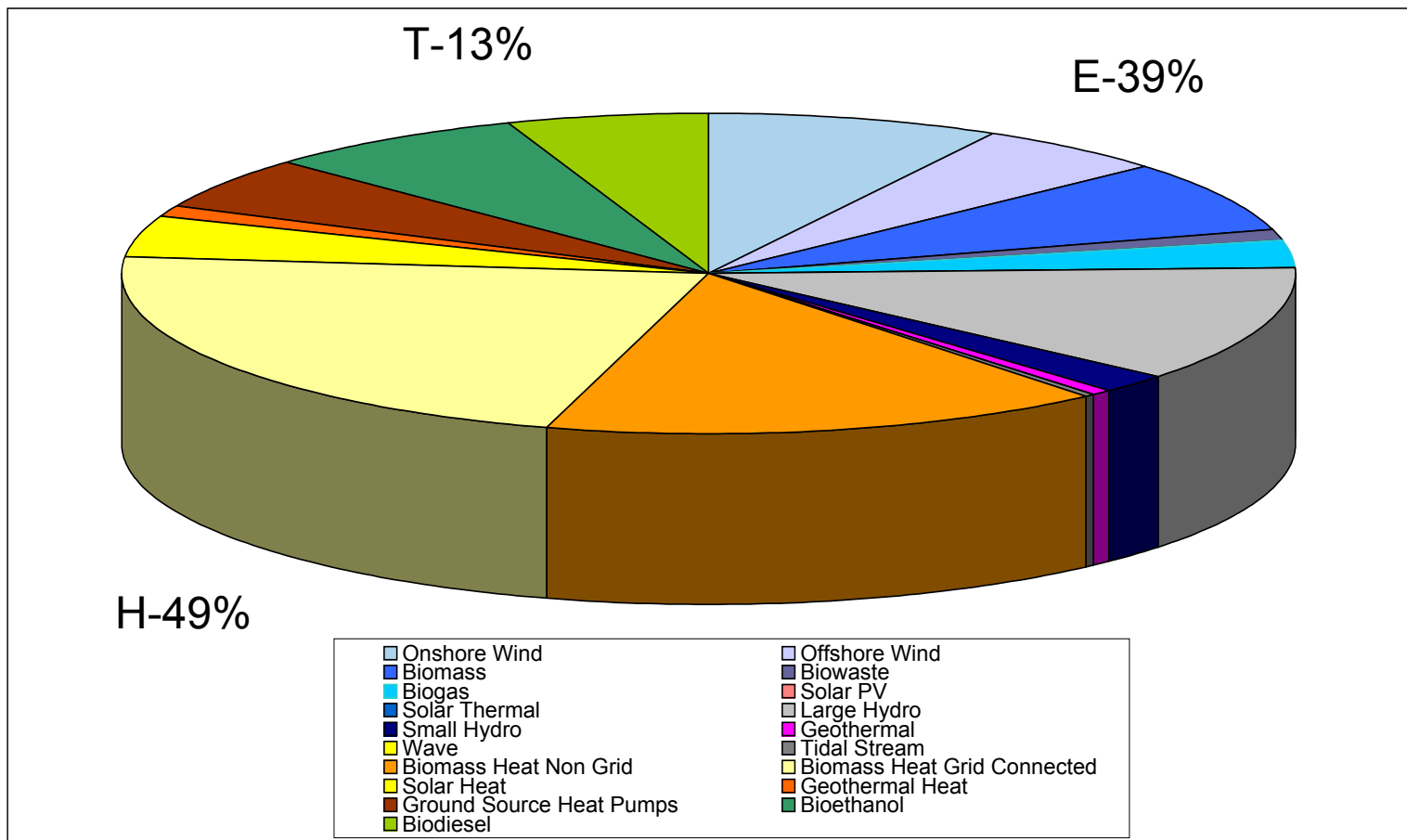
Project approach

- Costs calculated on two bases:
 - **Least Cost:** optimised allocation of renewable developments across the EU to meet 20% target
 - **Domestic compliance constraint:** each country must deliver their burden share through domestic action.
- Renewable supply curves across the EU constructed based on technology costs and level of renewable resource by different member state

Commission burden sharing approach leads to unequal distribution of cost with UK shouldering significant share

	Burden		Cost as %	
	Share % FED	2020 Cost €bn	total EU costs	Cost as % GDP
Bulgaria	16%	0.2	1%	1.0%
Finland	44%	0.2	1%	0.1%
France	23%	3.1	12%	0.2%
Germany	18%	3.4	13%	0.2%
Italy	18%	1.2	5%	0.1%
Latvia	42%	0.1	1%	1.2%
Romania	23%	2.2	8%	3.6%
Spain	20%	1.5	6%	0.2%
United Kingdom	15%	6.7	26%	0.4%
EU 27	20%	25.6	100%	0.2%

Total EU renewables mix shows diverse mix of technologies with bias towards biomass



Cost Implications – UK and EU

Scenario	Least Cost	Domestic Compliance	Difference (saving from trading)
2020 Cost €bn, 2006 Prices, discounted			
UK Total	5.0	6.7	1.7
EU 27 €bn	18.8	25.6	6.8
Lifetime cost €bn, 2006 Prices, discounted			
UK	59.0	93.1	34.1
EU	259.0	351.7	92.7

Summary

- Large distribution of level of effort and costs across EU member states
- Burden shares under Commission approach not based on cost effective deployment
- Optimal mix of EU renewables favours renewable heat and biomass technologies over wind. More wind in UK.
- Optimal mix can only be met by trading
- Trading in renewable energy certificates could reduce EU compliance costs by €6.8bn and UK costs by €1.7bn in 2020. Lifetime savings larger.
- Assumes fully functioning trading market, may not be realisable in practice.

Research Report link

‘Compliance Costs for meeting the 20% Renewable Energy Target in 2020’

March 2008, Poyry Energy Consulting

<http://www.berr.gov.uk/energy/sources/renewables/strategy/page43356.html>