

Making decentralised energy work



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The EU commitments for 2020

 Emissions reductions Binding

- > 20% unilateral, or
- > 30% if multilateral

 Energy conservation Non-binding

- > 20% below current projections

 Renewables Binding

- > 20% of total energy **UK: 15%**
- > 10% of transport fuels

Energy White Paper

“The 20% renewables target is an ambitious goal ... by 2020, on the basis of existing policies, renewables would contribute around 5% of the UK’s consumption ... we will bring forward the appropriate measures, beyond those set out in this White Paper, to make our contribution to meeting these targets.”

HM Government



dti

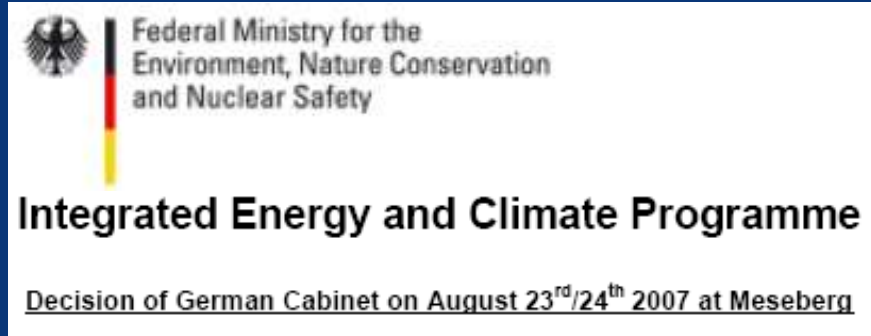
MEETING THE ENERGY CHALLENGE

A White Paper on Energy

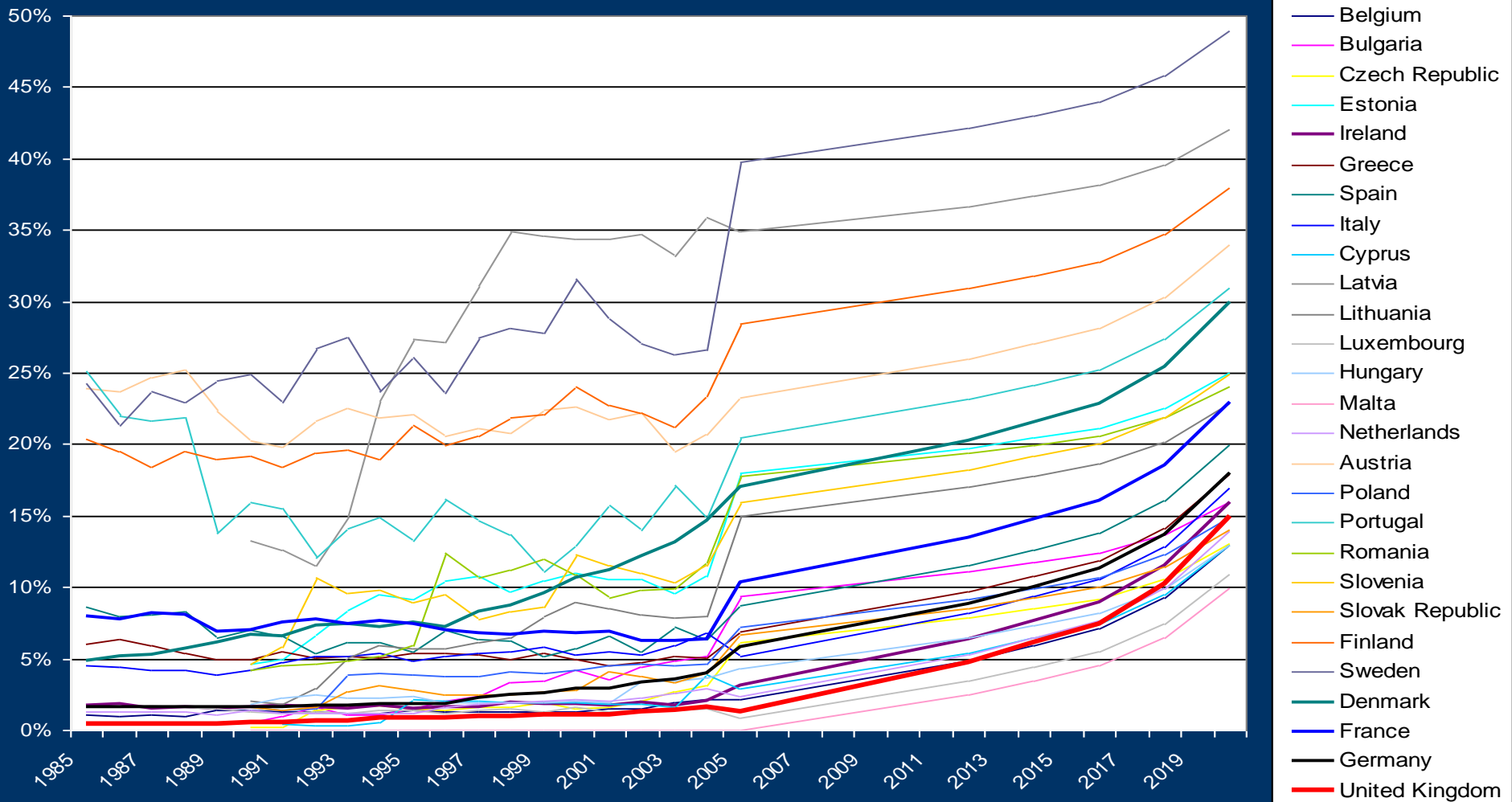
MAY 2007

German policy

- 1 Combined heat-and-power generation
- 2 Expansion of renewable energies in the power sector
- 3 CCS technologies
- 4 **Smart metering**
- 5 Clean power-station technologies
- 6 **Introduction of modern energy management systems**
- 7 Support programmes for climate protection and energy efficiency
- 8 **Energy-efficient products**
- 9 **Provisions on the feed-in of biogas to natural gas grids**
- 10 **Energy Saving Ordinance**
- 11 **Operating costs of rental accommodation**
- 12 **Modernisation programme to reduce CO2 emissions from buildings**
- 13 **Energy-efficient modernisation of social infrastructure**
- 14 **Renewable Energies Heat Act**
- 15 **Programme for the energy-efficient modernisation of federal buildings**
- 16 CO2 strategy for passenger cars
- 17 Expansion of the biofuels market
- 18 Reform of vehicle tax on CO2 basis
- 19 Energy labelling of passenger cars
- 20 Reinforcing the influence of the HGV toll
- 21 Aviation
- 22 Shipping
- 23 Reduction of emissions of fluorinated greenhouse gases
- 24 **Procurement of energy-efficient products and services**
- 25 **Energy research and innovation**
- 26 Electric mobility
- 27 International projects on climate protection and energy efficiency
- 28 Reporting on energy and climate policy by German embassies and consulates
- 29 Transatlantic climate and technology initiative



Eleven years to 2020



20% Renewables – in UK

Where it is

90%

72%

51%

- Onboard
- On farm
- Nearshore
- Fossil & nuclear
- Onsite
- Onshore
- Offshore

10%

3%

23%

2%

11%

7%

16%

2%

12%

Transport

Heat

Power

Existing policies

Renewables in buildings

- ▲ Zero carbon new homes from 2016
 - > Building regulations: CSH⁴ level 6 from 2016
- ▲ CERT⁵ extended to 'micro-renewables'
- ▲ Positive planning – 'Merton Rule'⁶
- ▲ Encourage renewables in existing houses
 - > Energy certificates in home info packs

4 *Code for Sustainable Homes – Level 6 is 'zero carbon'*

5 *Carbon Emission Reduction Target (formerly EEC)*

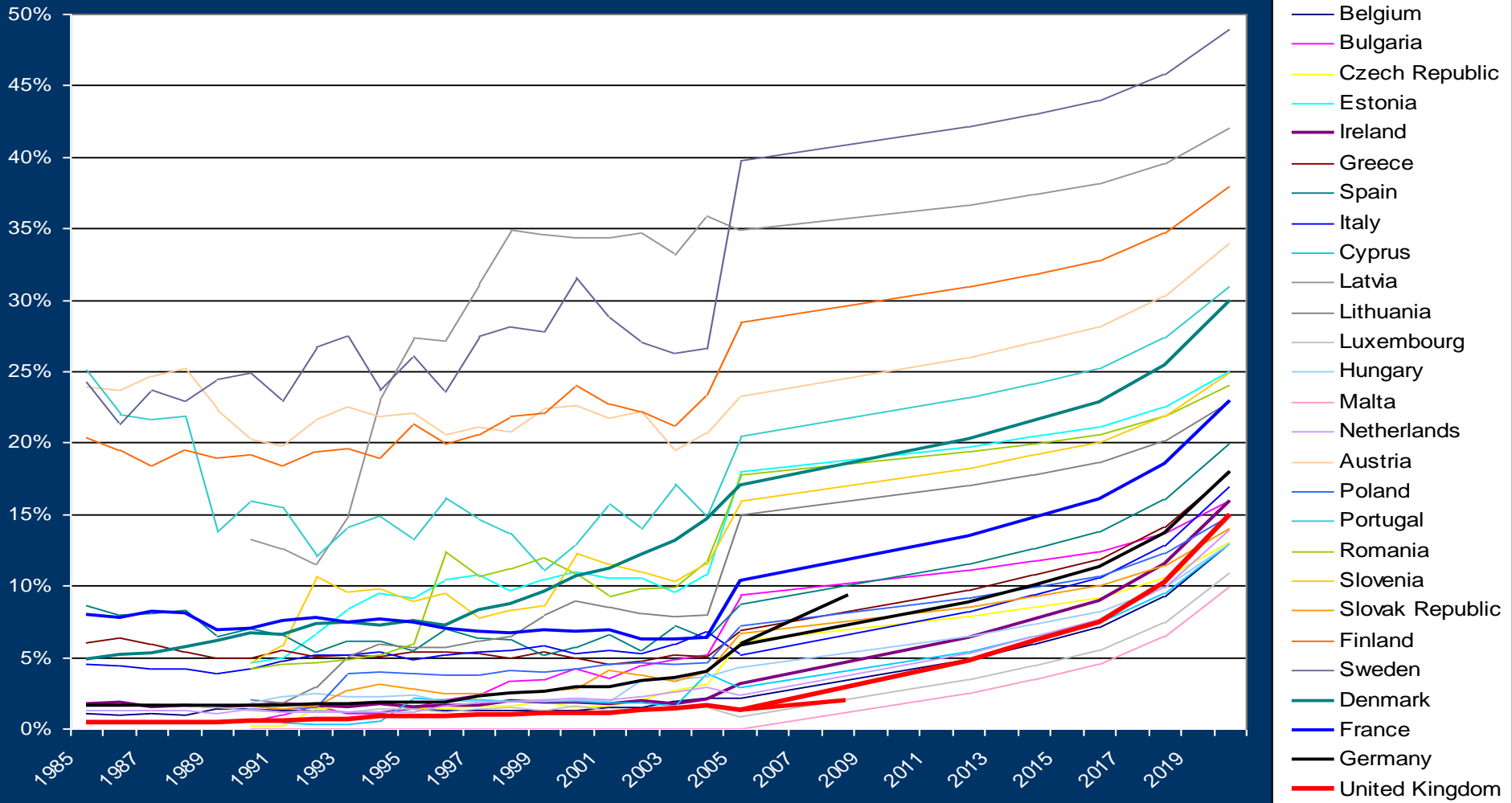
6 *Larger developments require [10%] renewable energy*

Future policies

Residential buildings

- ▲ Building regulations for new homes
 - > CSH⁴ level 3 from 2010, level 4 from 2013
- ▲ Heat & energy saving strategy
 - > Upgrade 7m homes by 2020
- ▲ Upgrading existing buildings
 - > Renewable electricity tariffs
 - > Renewable heat tariffs

Eleven years to 2020



Renewable energy tariffs

- ▲ Electricity (under 5MW); Heat + biogas
- ▲ Start in April 2010 and April 2011
- ▲ Production tariffs (reward total output)
- ▲ Fixed p/kWh depending on technology
- ▲ Paid through the energy companies
 - > but passed on to consumers

**New
event
for
energy
users**



The
SMARTENERGY
Show



CONFERENCE & EXHIBITION
Wembley Stadium
1 & 2 December 2009

Where does PV stand?

- ▲ On-site electricity options:
 - > Micro-wind – where suitable
 - > Micro-hydro – where available
 - > Bio-energy CHP – where fuel available
 - > Photovoltaics – where the sun shines
- ▲ Comparative cost
- ▲ Building-integration

Green New Deal

- ▲ Recession – recovery must be sustainable
- ▲ Stimulus packages – 20% should be ‘green’¹
 - > USA 12%; China 37%; Germany 13%²
 - > UK figure should be ~£10bn
- ▲ Energy efficiency & renewables a major part
 - > UK figure £0.29bn (but where?)
- ▲ So what’s next?

¹ *Professor Lord Stern*

² *HSBC*

Green New Energy Deal

- ▲ Decentralised Energy – bridges to tariffs
 - > Extended LCBP - £230m
 - > Bioenergy grants for biomass and AD - £80m
- ▲ Bulk energy
- ▲ Energy infrastructure, including:
 - > Smart metering, distribution networks
- ▲ Skills, research and awareness

to be announced tomorrow

Making decentralised energy work *(politically)*



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