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Driving Towards 2020: Will the EU targets be achieved and what are the longer term prospects?

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Outline

- The EU targets and progress towards them.
- The view from Brussels.
- The global picture on renewables.
- The reality of the economics of climate policy.
- Future prospects for EU targets.

European Energy Policy Context

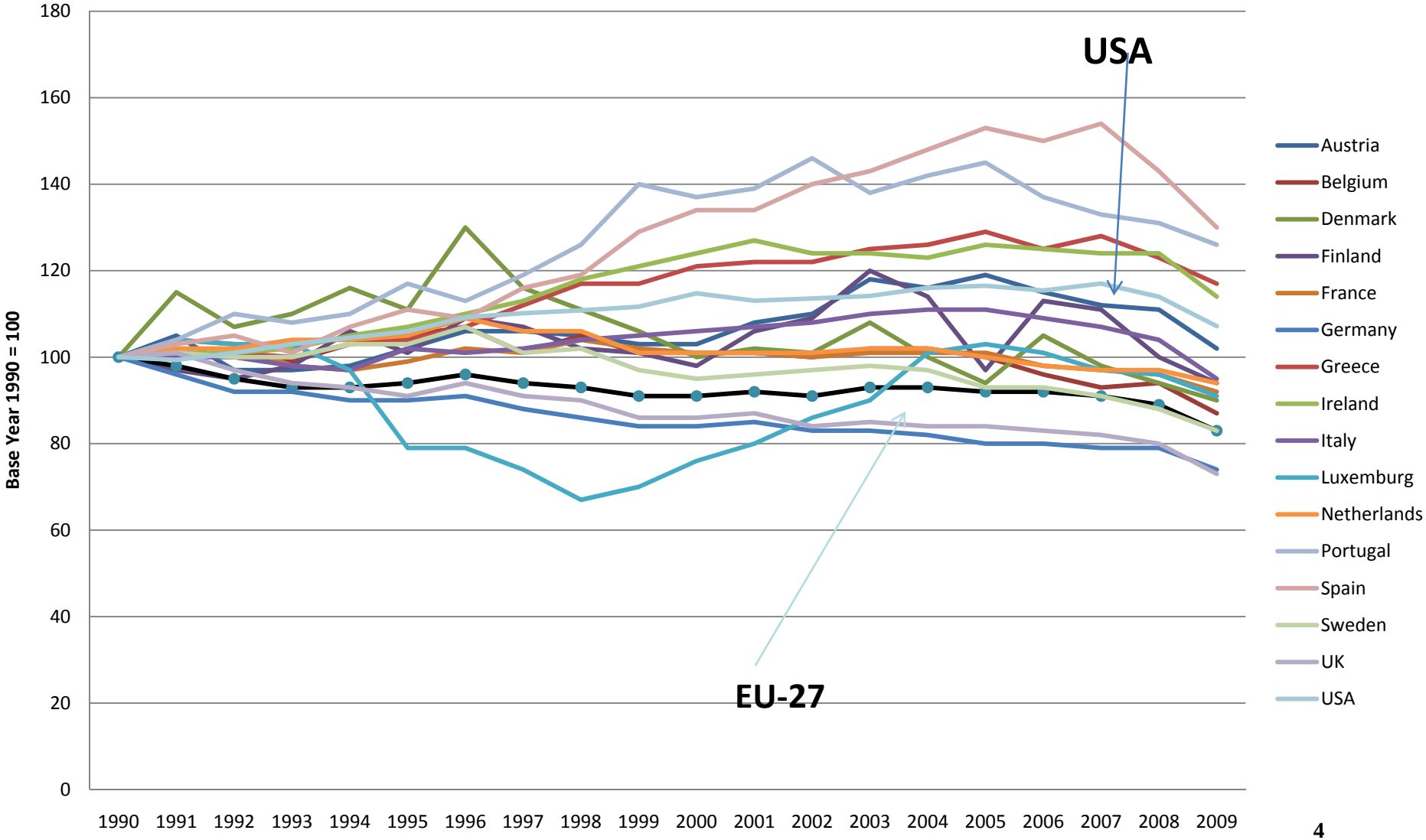
- 20-20-20 Targets for 2020:
- 20% reduction in CO2e (hard target)
- 20% renewable energy (indicative target)
- 20% reduction in energy intensity (aspirational target)

- Completion of Electricity and Gas markets (3rd Energy Package)

- Energy Security Directive, Energy Services Directive etc…

- Reality of patchy implementation

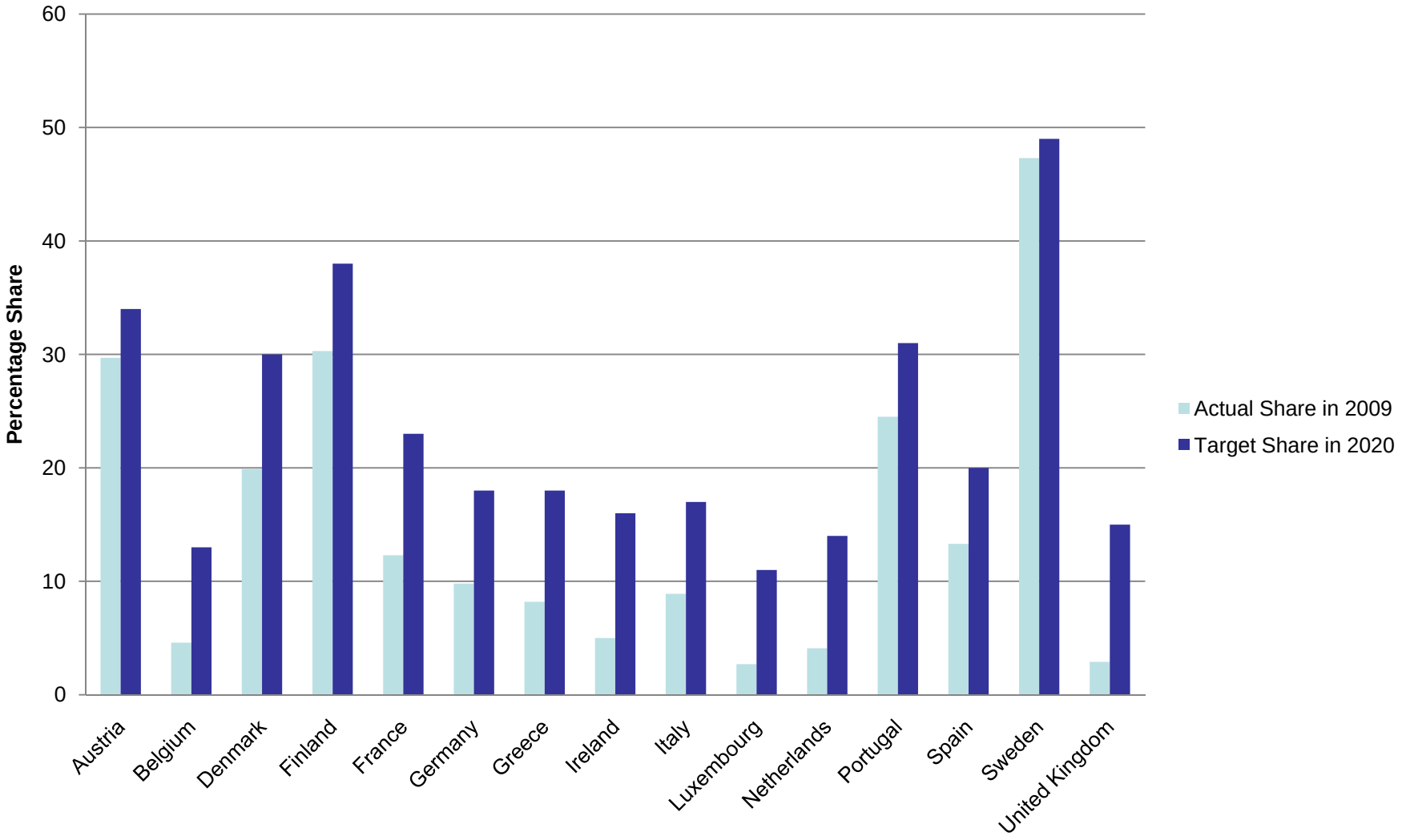
Greenhouse Gas Emission Indices For EU 15 and USA



EU-27: 1990-2009: -17%

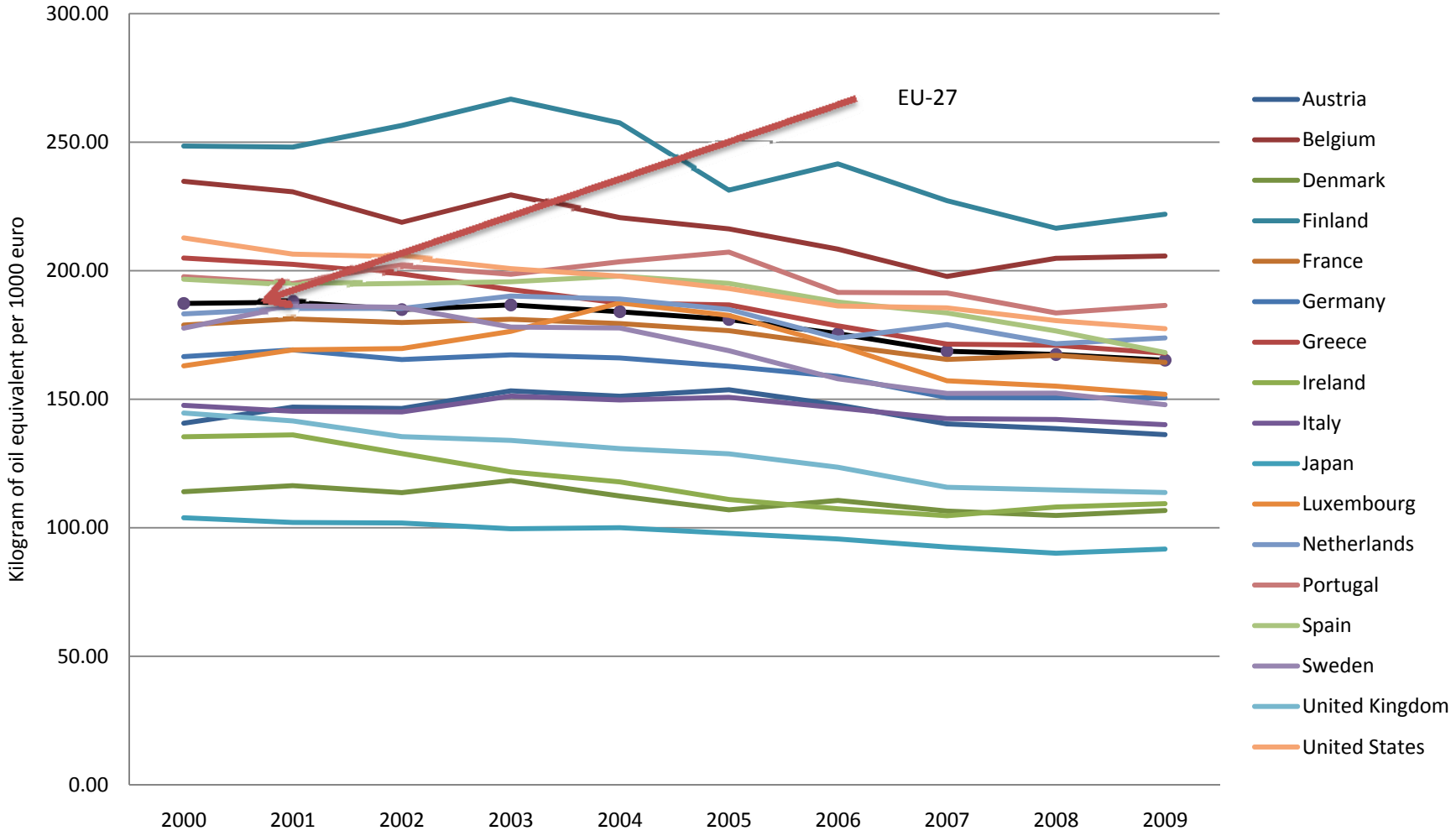
Source: http://epp.eurostat.ec.europa.eu/portal/page/portal/europe_2020_indicators/headline_indicators

Share of Renewables in Gross Final Energy Consumption for EU 15



Sources:
http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=t2020_31 and
The state of renewable energies in Europe, 11th Eurobserv'er report, 2011

Energy Intensity of the Economy for EU 15 and US, 2000-2009



EU-27: 2000-2009: -12%; 2005-2009: -9%.

Source: http://epp.eurostat.ec.europa.eu/tgm/table.do?tab=table&init=1&plugin=1&language=en&pcode=t2020_32

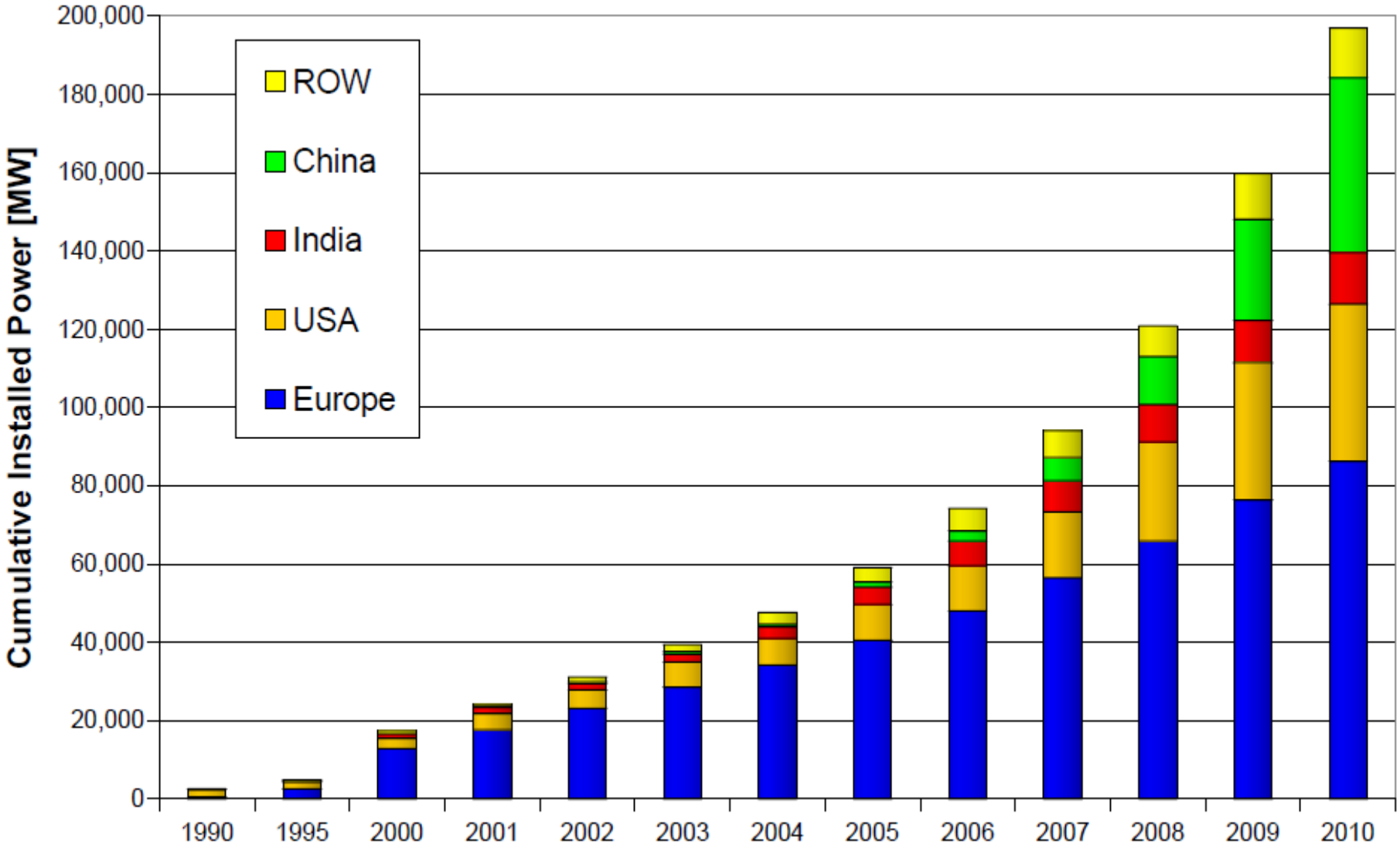
The view from Brussels

- Europe is progressing well towards 20-20-20.
- Carbon and energy efficiency targets straightforward.
- Renewables target can be achieved, but some cost/financing issues in solar and wind are interfering with subsidies.
- A few countries will not meet renewables targets.

What about the rest of world?

- China now driving global wind and nuclear markets, with an industrial policy focus.
- China also significant in solar PV as producer.
- USA benefiting from cheap gas which facilitates coal-gas substitution.
- Global gas market likely to continue to expand, helped by non-conventional gas.

Cumulative World-wide Installed Wind Power Capacity (1990-2010)



Source: http://ec.europa.eu/energy/renewables/wind_energy/doc/2011_wind_snapshot.pdf
2011 Snapshot on European Wind Energy, Figure 1 on Page 1

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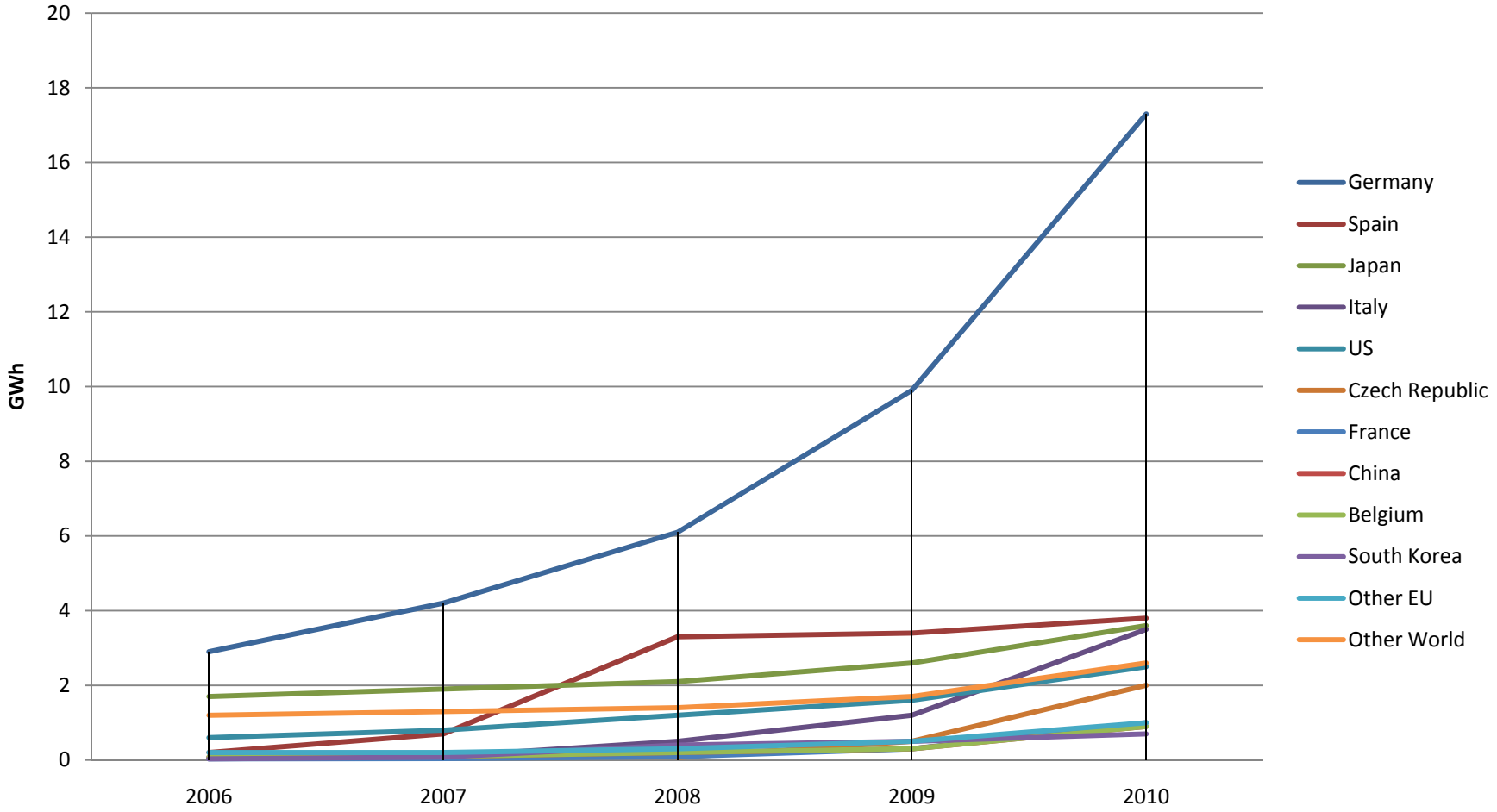
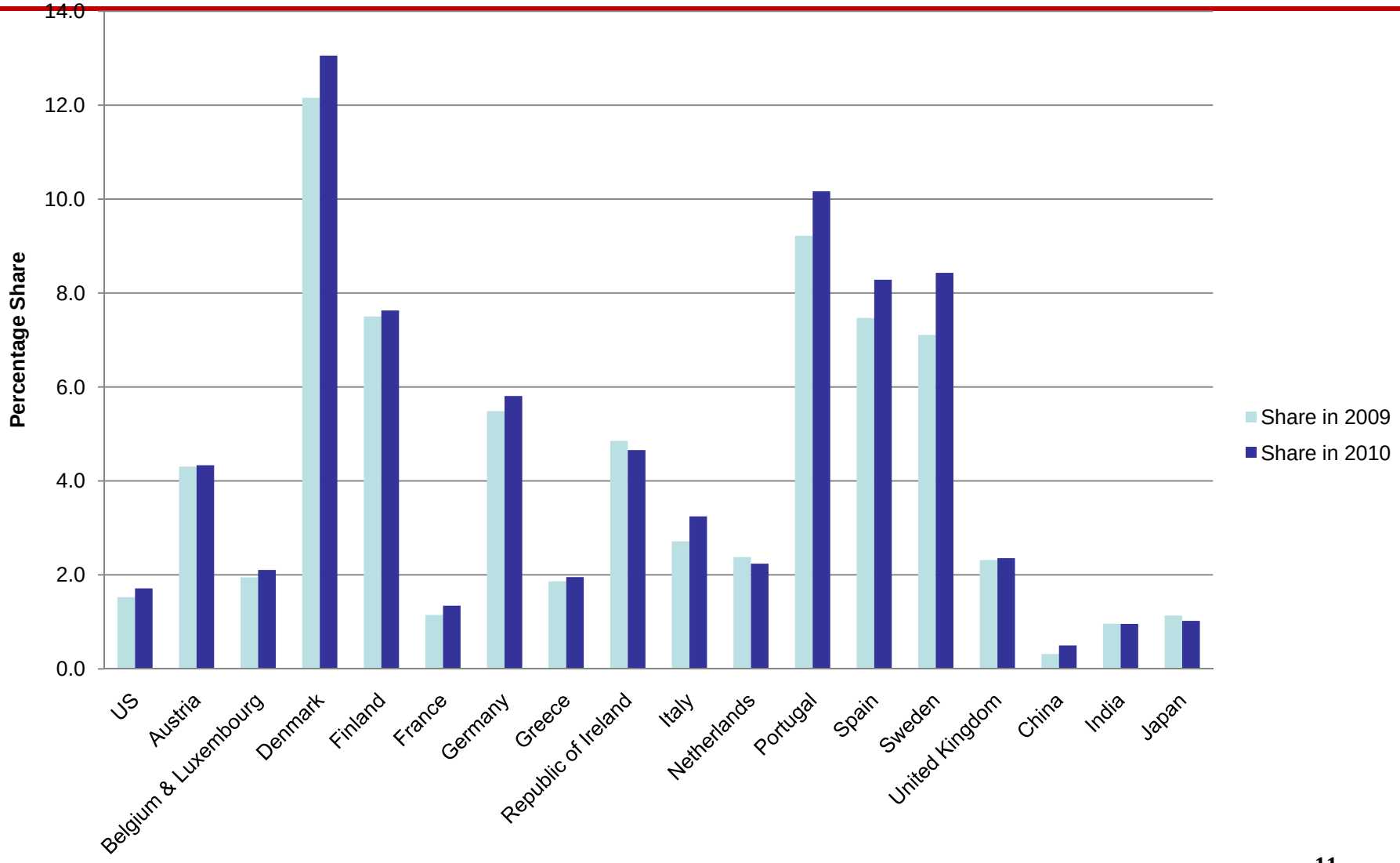
Solar PV Capacity Installed (2006-2010)



Source: Renewables 2011, Global Status Report, REN 21, from Table R3 on Page 72

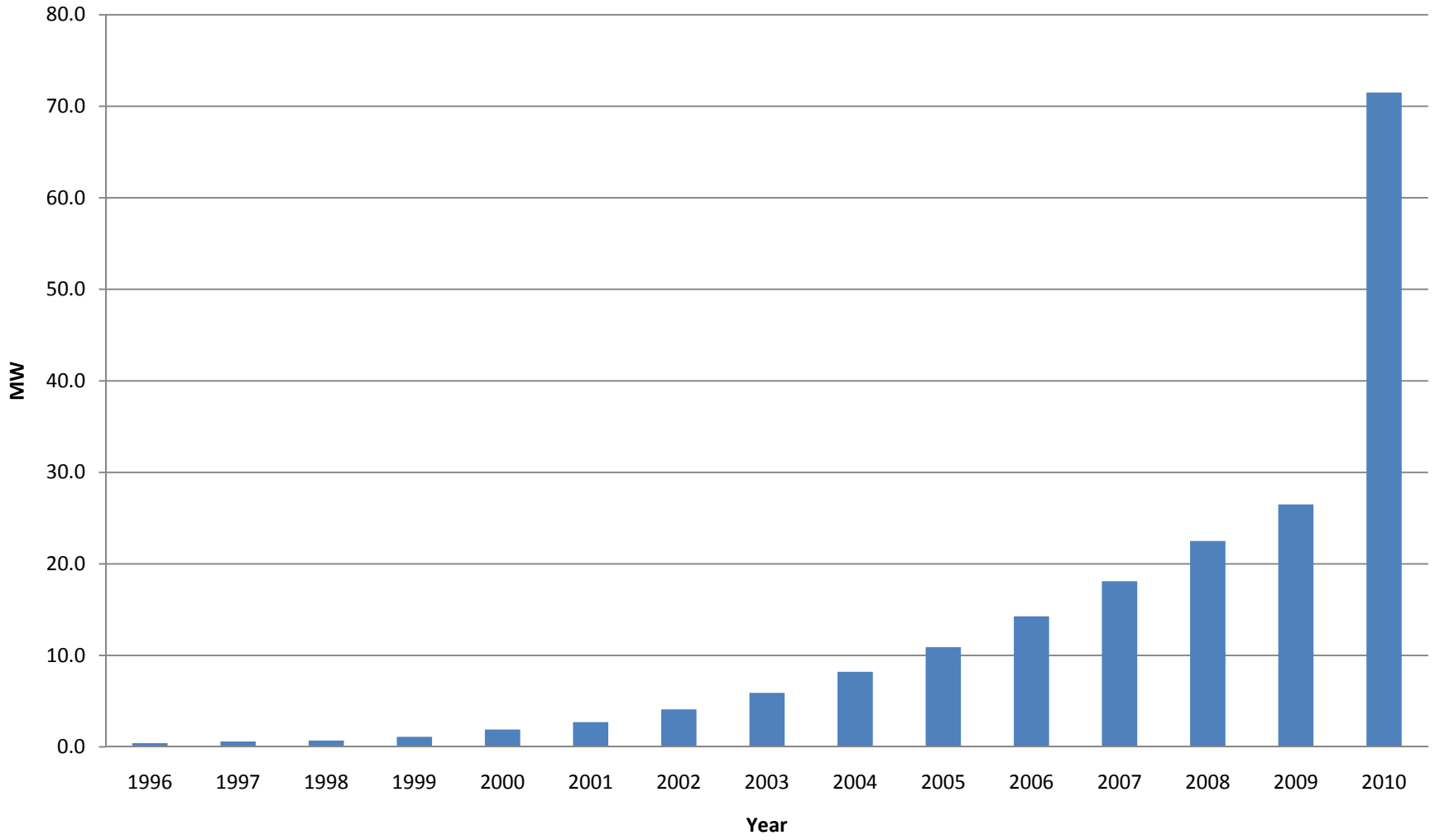
Share of Renewables in Total Primary Energy Consumption for EU 15, US, China, India and Japan (2009-2010)



Source: BP Statistical Review of World Energy June 2011

* Primary energy comprises commercially traded fuels including modern renewables used to generate electricity.

Cumulative installed photovoltaic (PV) power for UK



February 2012 figure c.1000 MW?

Source: BP Statistical Review of World Energy June 2011

Costs of different renewables in the UK

- Onshore wind: 6.6-9.3 p / kWh
- Offshore wind: 11-19.7 p / kWh
- Tidal Stream: 16.6-39.5 p / kWh
- Severn Barrage: 10.4 - 31.7p / kWh
- Wave: 22.5-50.5 p / kWh
- Domestic PV 38p / kWh

- Memo: CCGT c.5.5p / kWh (inc. CO_2 price)

Sources: Costs of Low Carbon Generation Technologies 2011, Renewable Energy Review-Technical Appendix, Solar Century, Jamasb and Pollitt, 2008

Three fundamental problems

- *The financial crisis* does reduce the attractiveness of early action on climate change and on technology subsidies. Social discount rates have risen.
- Still *no likelihood of global agreement* on carbon emissions. Optimal strategy for EU is to make further carbon reduction conditional.
- Low carbon roll out policies make no economic sense for UK or EU as *industrial policies* in terms of job creation or development of manufacturing base.

Some concluding thoughts

- EU has a ***pre-financial crisis climate/renewable policy*** which is expensive and lacks a rationale.
- It seems only a matter of time before the current policies fall apart. ***Going beyond 2020 targets looks challenging in the EU.***
- EU is likely to see its ***position in global renewables and nuclear markets eroded*** with uncertain consequences for subsidies and uptake in the EU.
- The only sensible way forward ***remains negotiation of a global agreement and increased reliance on the carbon market*** and a lower cost renewables policy subject to budget discipline.

Readings

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