

# Energy Prices: The Only Way is Up?

*Michael Pollitt*

Oxford and Cambridge Club, London  
23<sup>rd</sup> February, 2012

# Summary

---

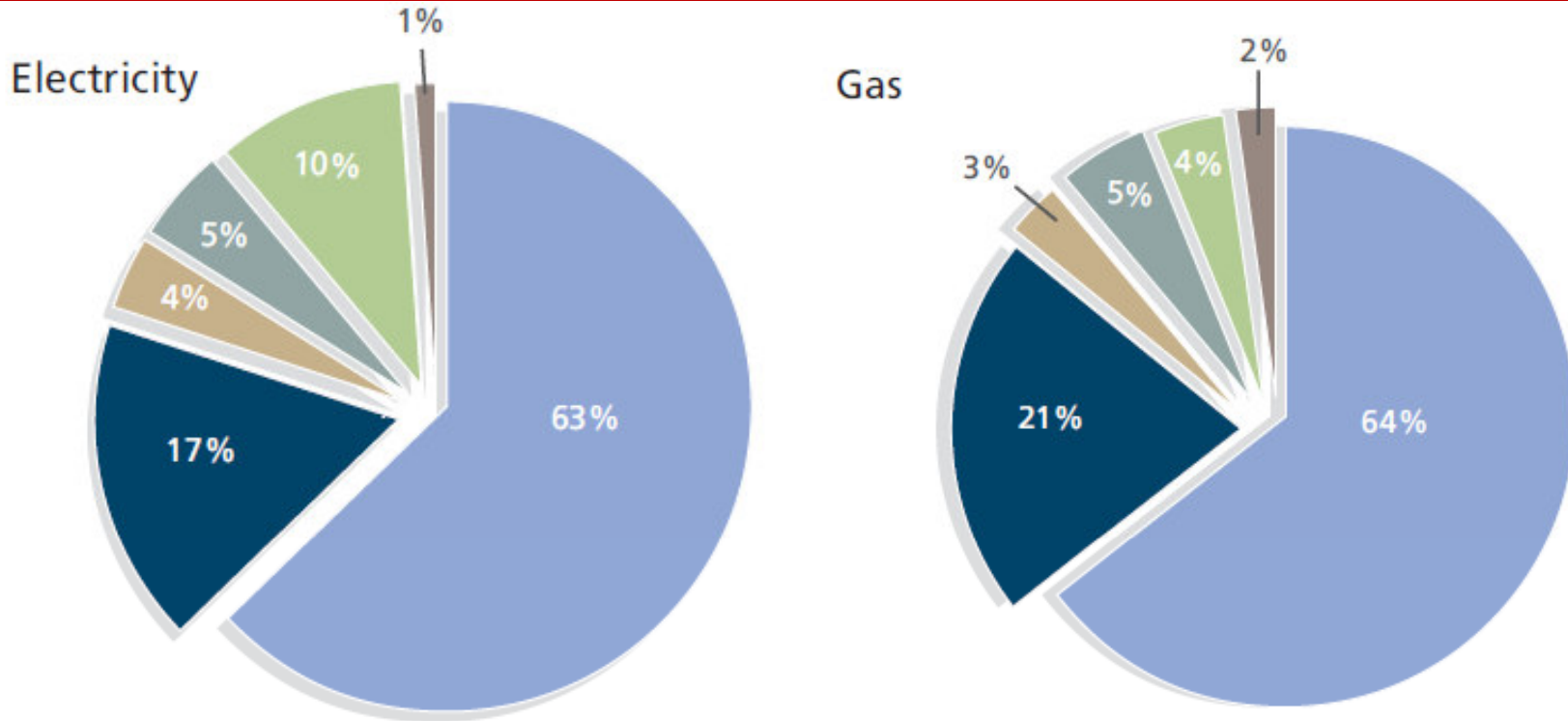
- Background and trends
- Additional policy support costs
- Competition in energy markets
- Exploitation of demand reduction
- Taxation of energy
- Future prospects

---

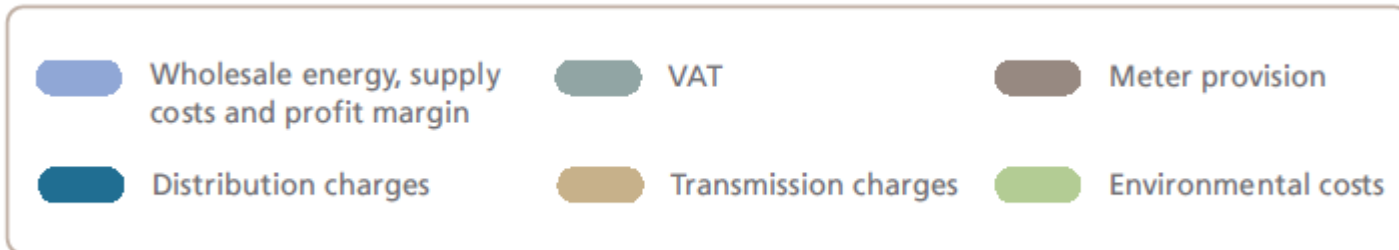
# BACKGROUND AND TRENDS

3

# Breakdown of Household Energy Bills

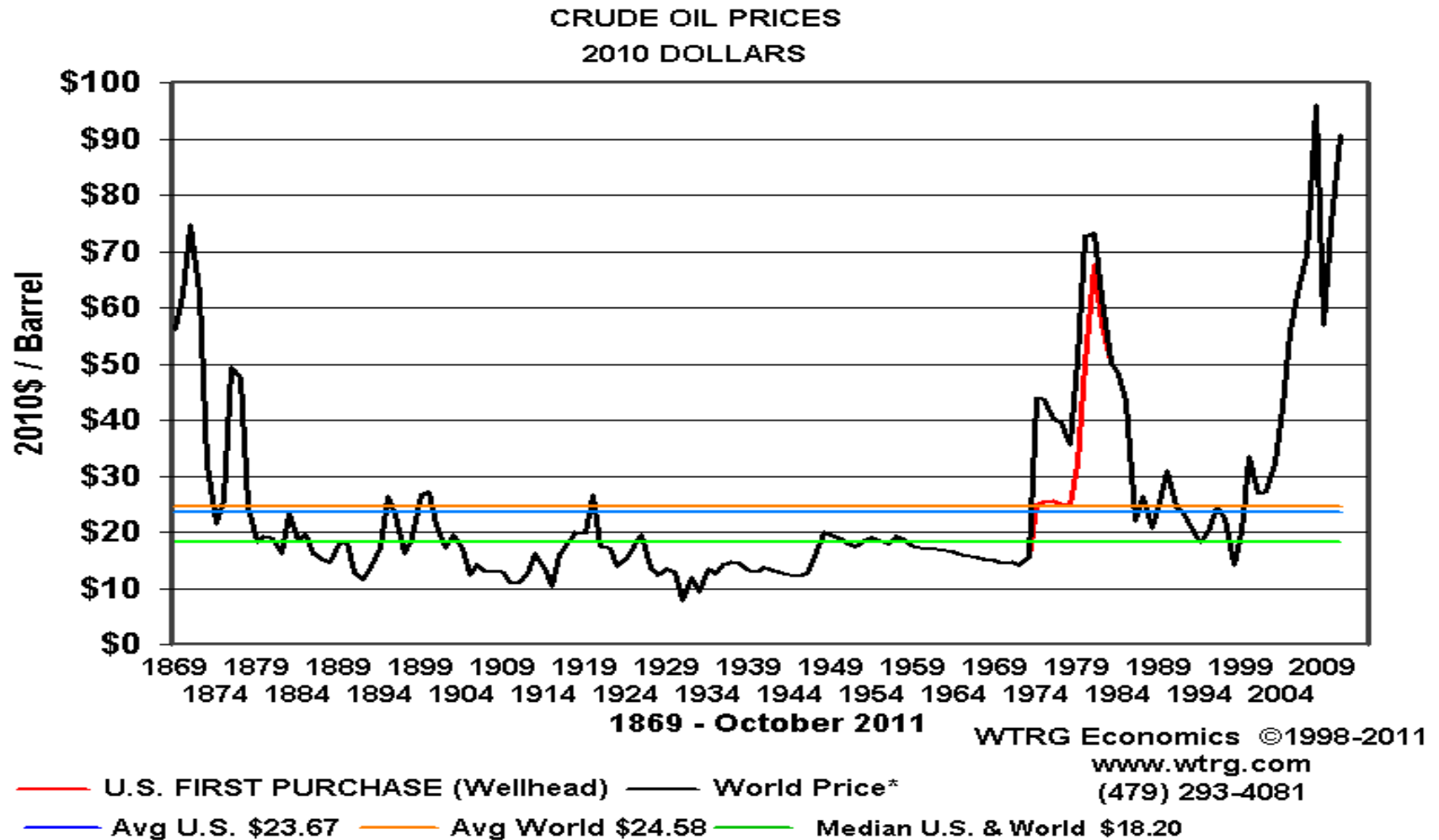


Typical Electricity bill: £424; Typical Electricity Bill: £608. Source: Ofgem, Jan 2011



4

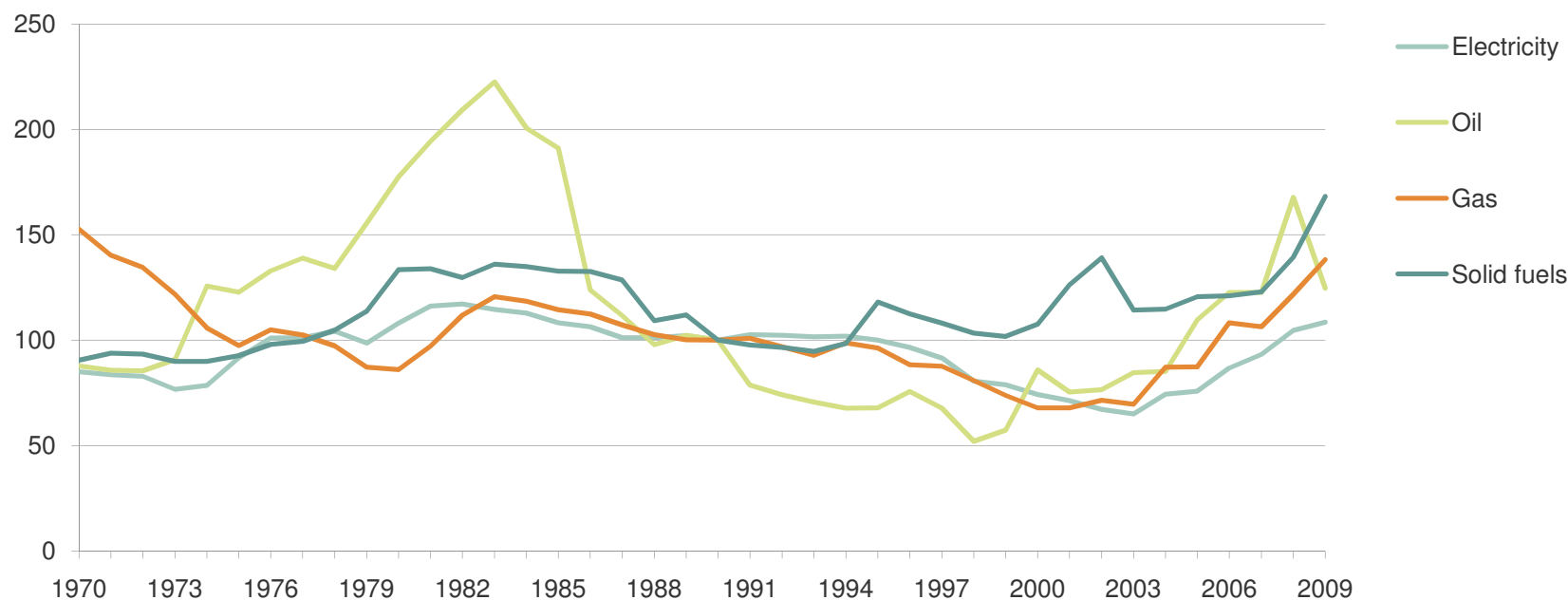
# *It is all about oil (and gas).....*



Source: <http://www.wtrg.com/prices.htm>

# Over 40 years household prices are flat in real terms..

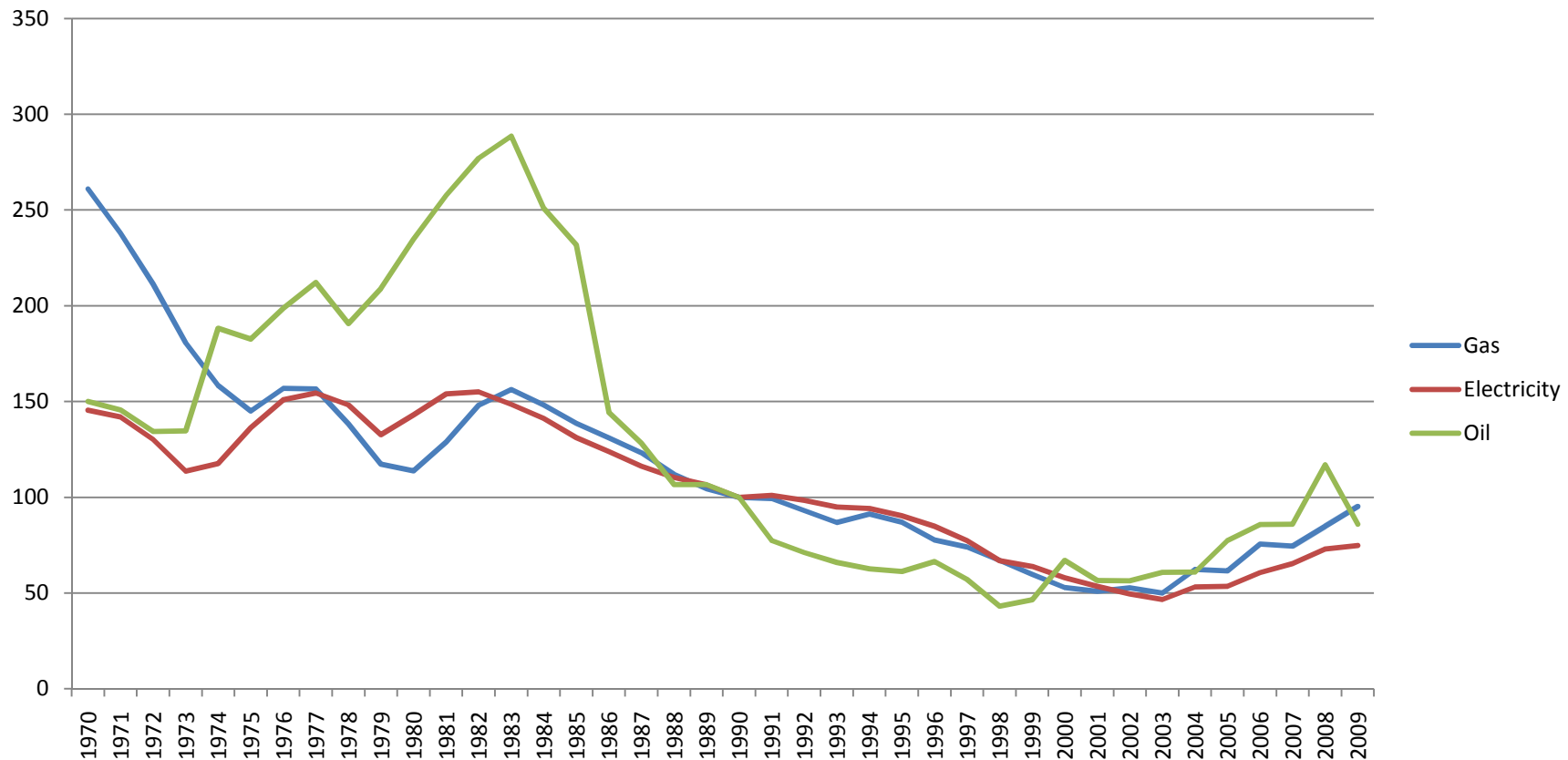
Average deflated household fuel prices (1990=100)



Source: Great Britain's Housing Energy Fact File, 2011

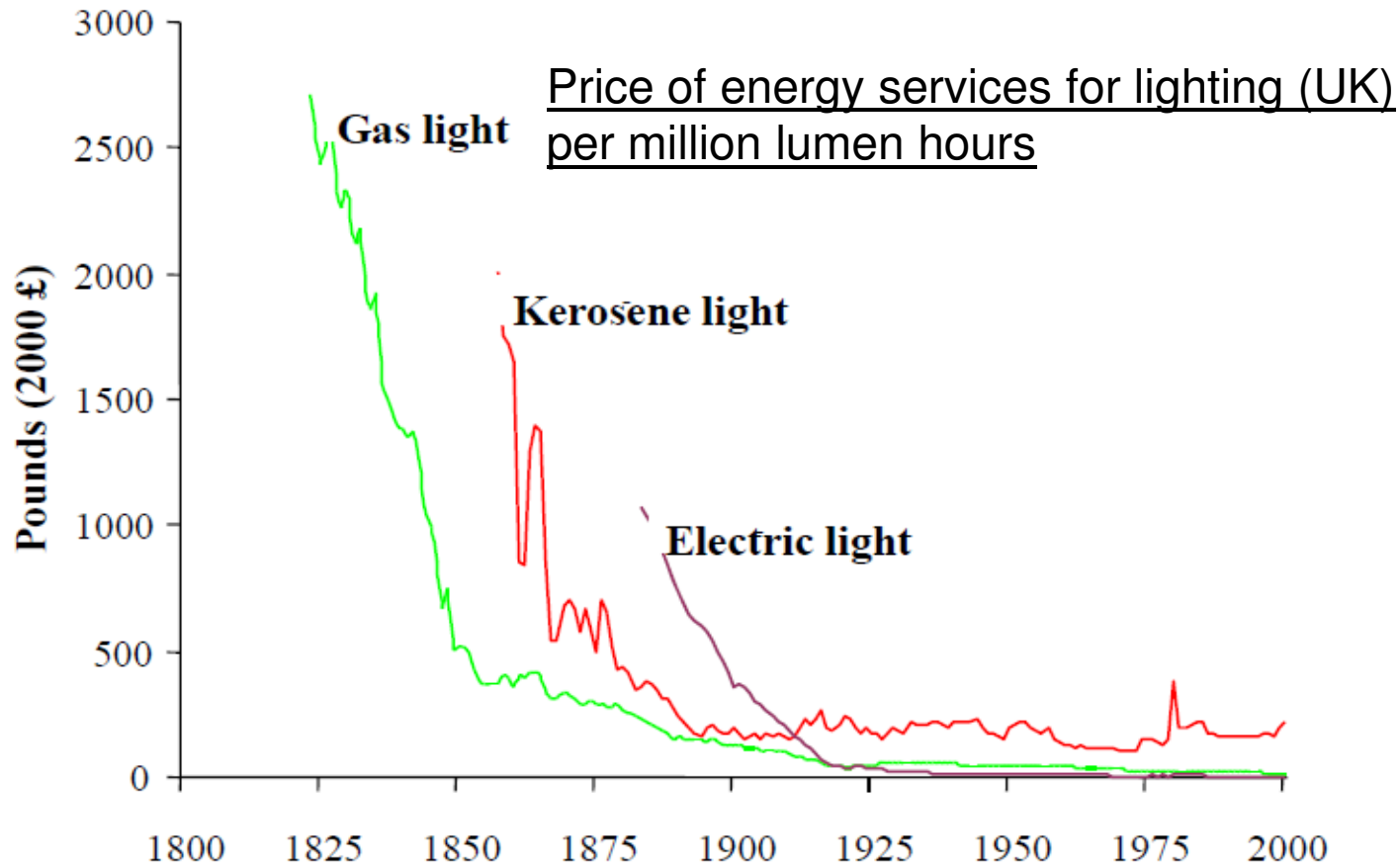
# However deflating by income...

Average Income Deflated UK Household Fuel Price Indices (1990=100)



Sources: Great Britain's Housing Energy Fact File, 2011, Table 3d and Social Trends: Income and Wealth (ST41), ONS 2010, Data for figure 1. Obtained by dividing average deflated household fuel price indices by real household disposable income per head indices.

# However it's not about energy per se...



Source: Fouquet and Pearson, 2006, p.158.

8



---

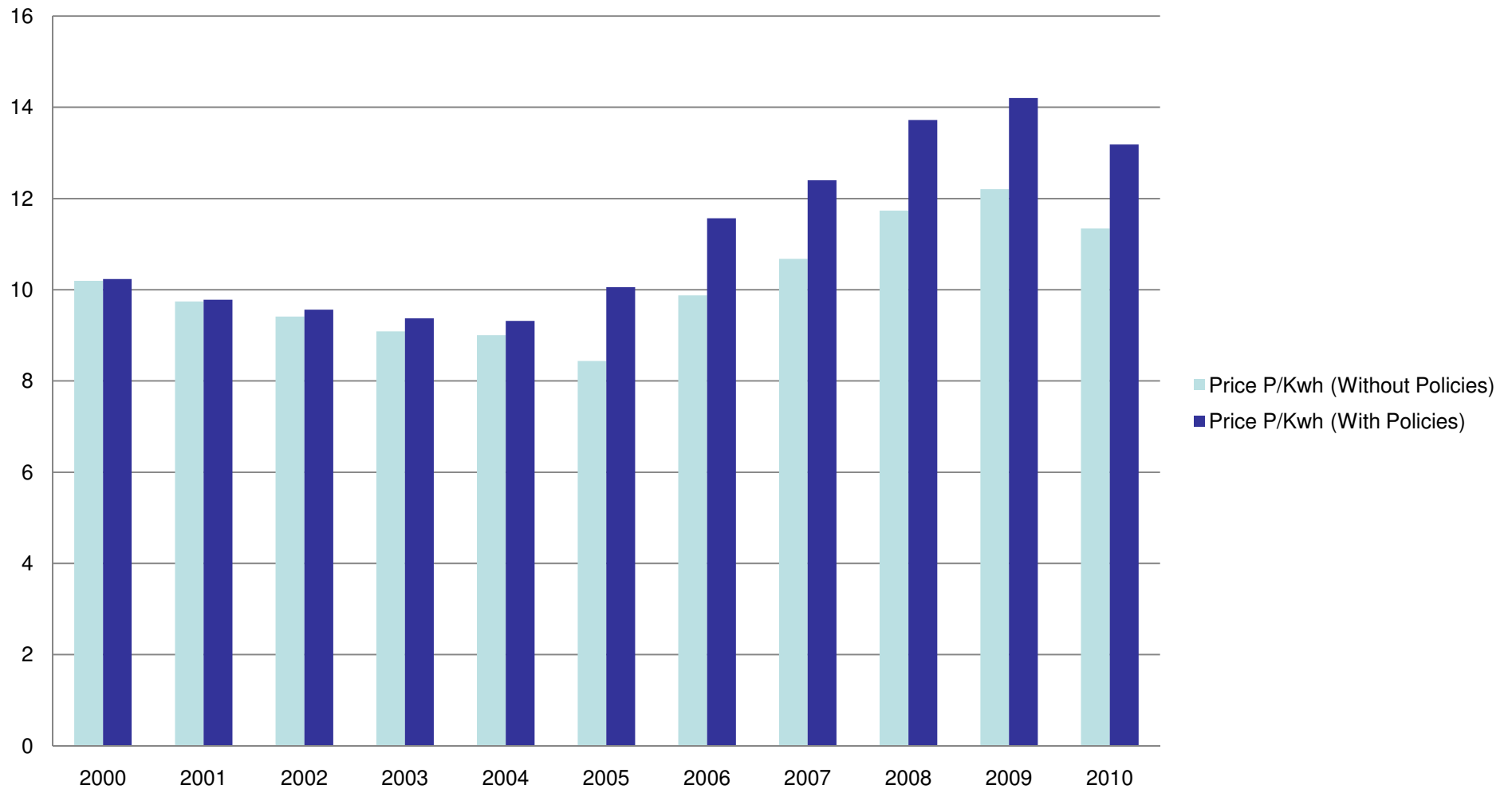
# POLICY COSTS

9

# Current policy costs: £4.88bn + £4.23bn

Scheme	Description	Cost	Paid by
<b>Environmental Policy</b>			
1. CERT/CERT Extension	This requires energy suppliers to make savings in the amount of CO2 emitted by householders. Suppliers meet this target by promoting (for example, through subsidies) the uptake of energy efficiency measures; predominantly loft insulation, cavity wall insulation and historically low energy lighting.	Total cost for the scheme over the entire period (April 08- Dec 12) is estimated to be £5.5 billion	Gas and Electricity consumers
2. CESP	CESP targets households in Great Britain, in areas of low income, to improve energy efficiency standards.	Total cost for the scheme over the entire period (Oct 09- Dec 12) is estimated to be £350 million	Gas and Electricity consumers
3. EU ETS	Renewable generators indirectly benefit from the increase in electricity prices as other companies pass the cost of emissions permits into the price of power	156.4mt emitted by power sector at 14.3 Euro per tonne EUA = £1.94 bn - in 2010.	Electricity consumers
4. FIT	Introduced in April 2010, small-scale FITs are designed to incentivise small-scale, low-carbon electricity generation by households, communities and businesses.	The value of the FIT scheme is calculated at £14.4 million for 2010/11	Electricity consumers
5. RO	Introduced in April 2002, It requires retail electricity suppliers to source an increasing proportion of their electricity from renewable sources by purchasing Renewables Obligation Certificates (ROCs) issued to generators of renewable electricity by Ofgem.	The value of the RO scheme is calculated at £1.487 billion for 2011/12	Electricity consumers
6. Warm Front Scheme (WFS)	Introduced with an aim to reduce carbon dioxide emissions, WFS helps eligible households with the take-up of heating and insulation measures, making them more energy efficient	The value of the WFS scheme is calculated at £143 million for 2011/12	WFS in totality is funded through HM Treasury
<b>Income Supplement</b>			
1. Warm Home Discounts	The powers to introduce the WHD scheme were taken in the Energy Act 2010 and the scheme was launched in April 2011 following consultation.	Total cost for the scheme over the entire period (April 11- March 12) is estimated to be £1.1 billion	Electricity and Gas customers
2. Winter Fuel Payments	The Winter Fuel Payment is a tax free payment to help older people keep warm during winter. For winter 2010-11, the WFP are worth £250 and £400 for aged 60 and 80 years, resp.	Total cost for 2010-11 is estimated to be £2.7 billion	Funded through HM Treasury
3. Cold Weather Payments	CWP provides additional monetary help to the fuel poor during periods of severe winters. A period of severe winter is defined as seven consecutive days (observed or forecasted) in which the average mean daily temperature is zero degree Celsius or lower	The value of the CWP scheme is calculated at £130.8 million for 2011/12	the Scheme was integrated into the Social Fund and was administered by the Department for Work and Pensions

# Electricity Price with and without policies 2000-2010 (£ 2010)

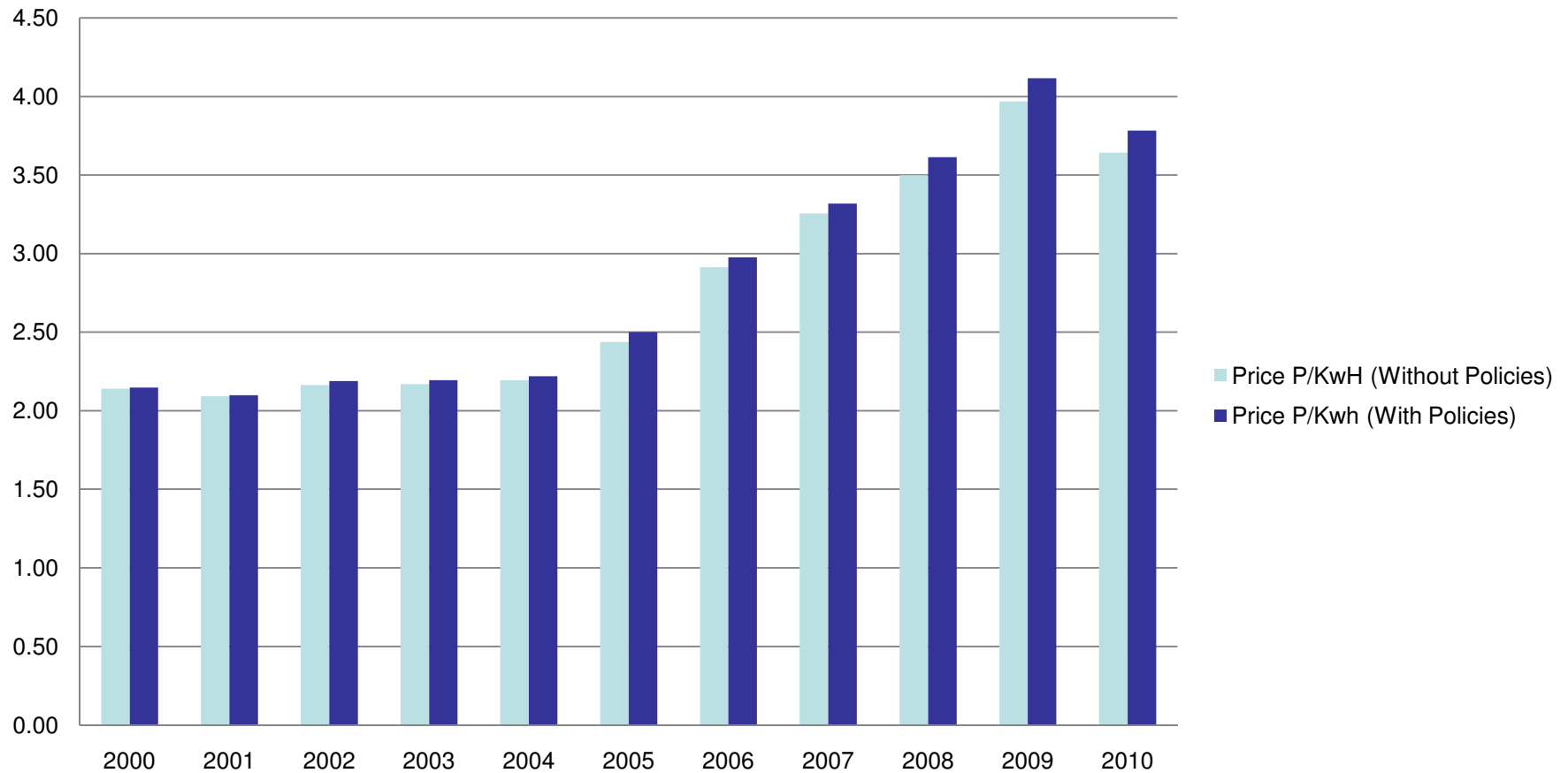


Own calculations

11

# Gas Price with and without policies 2000-2010 (£ 2010)

## Gas Price for Households, 2000-2010



Own calculations

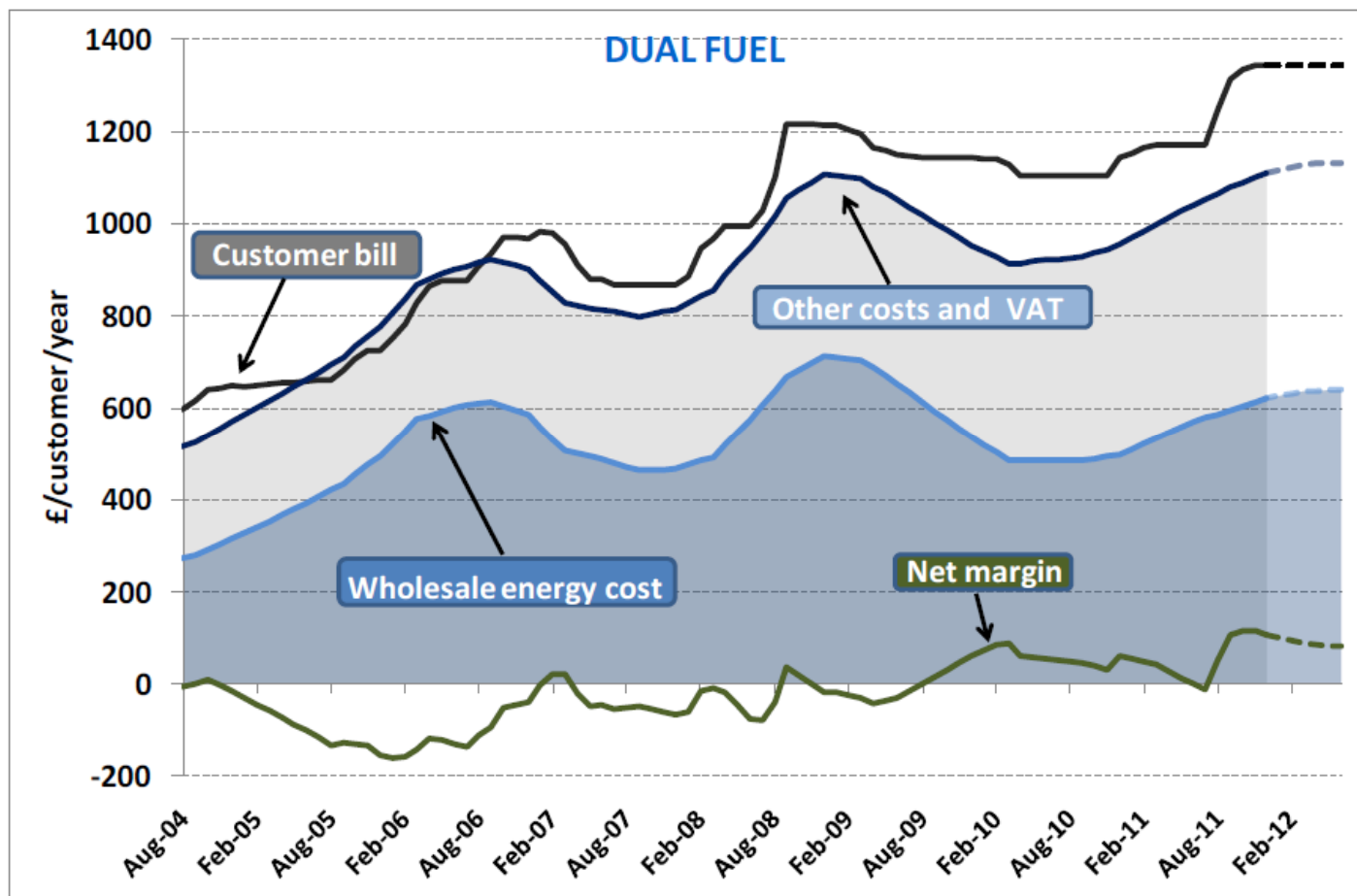
---

# COMPETITION

13

# Is competition a problem in retail energy?

Figure 1.1: Typical dual fuel customer bill, costs and net margin



Source: Ofgem 2011, Electricity and Gas Supply Market Report, December, p.4. Typical bill: £1345.

14

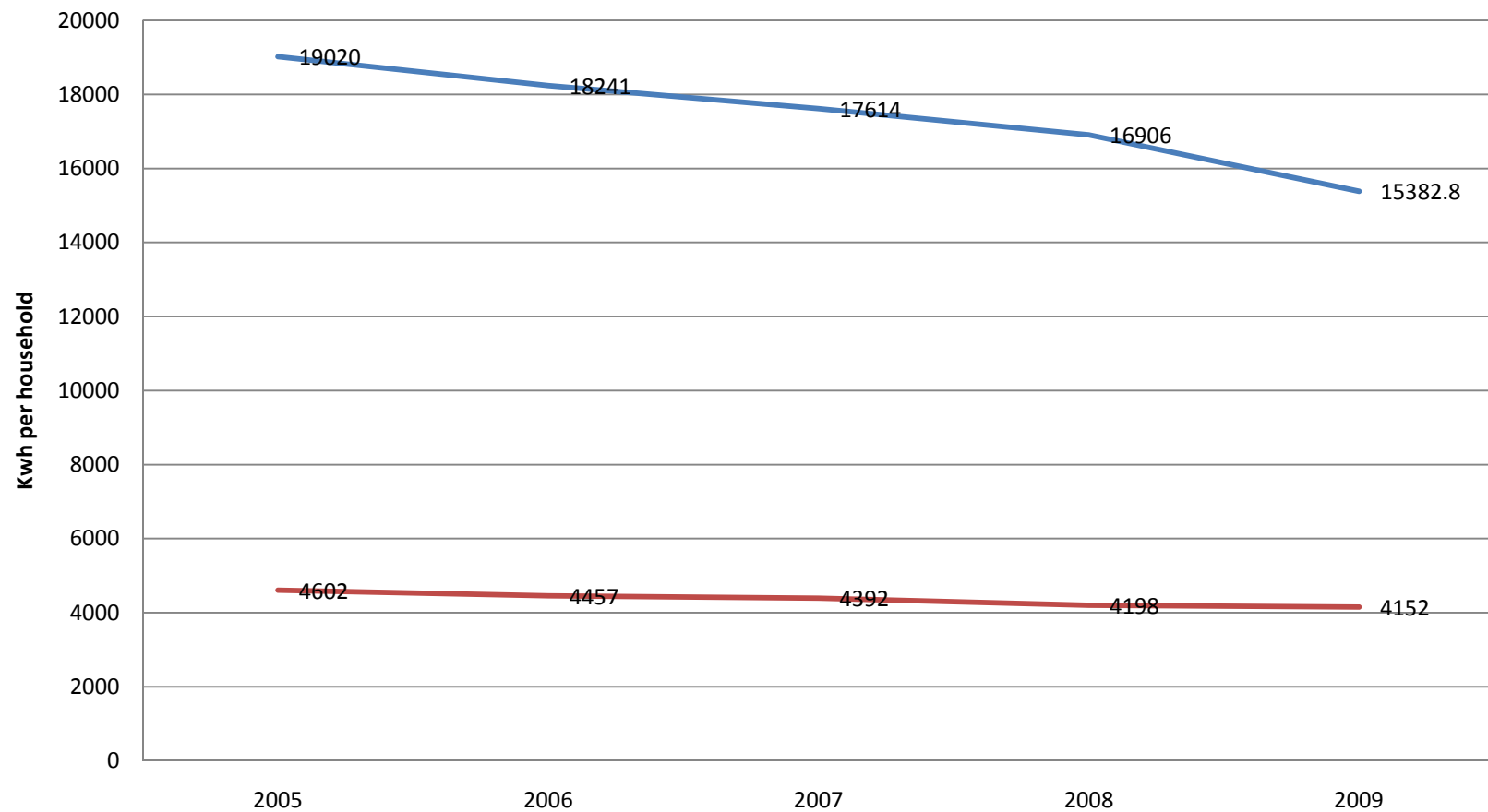
---

# DEMAND REDUCTION POTENTIAL

15

# High prices have promoted energy saving by households...

Electricity and Gas Consumption per household in KWh, 2005-2009



Sources: Sub-national gas sales and number of customers, 2011 and sub-national authority electricity consumption statistics, 2010 (DECC). 2005-09: Gas demand: -19% ; Electricity demand: -10%.

16



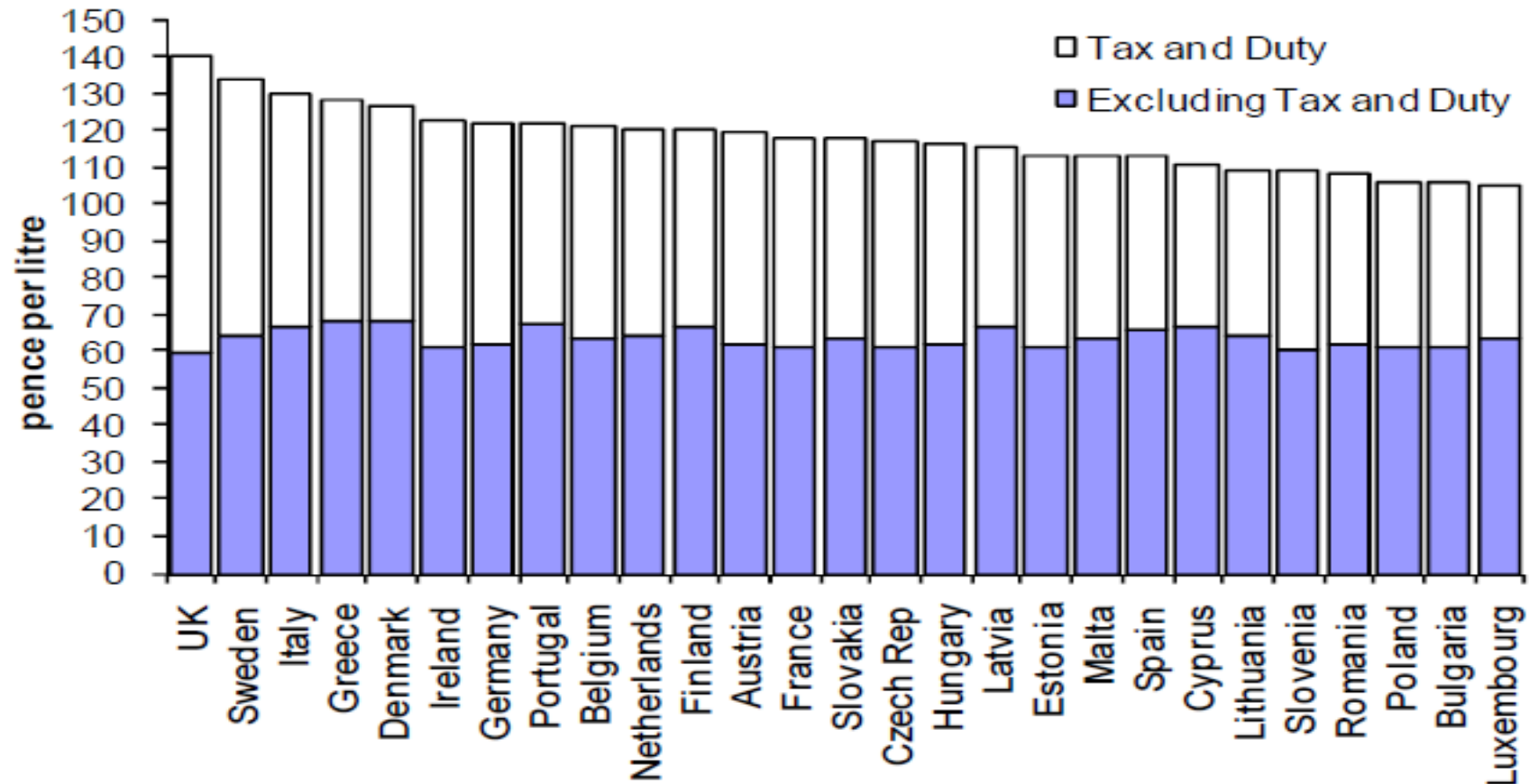
---

# TAXATION OF ENERGY

17

# ***Diesel taxes are particularly high in UK...***

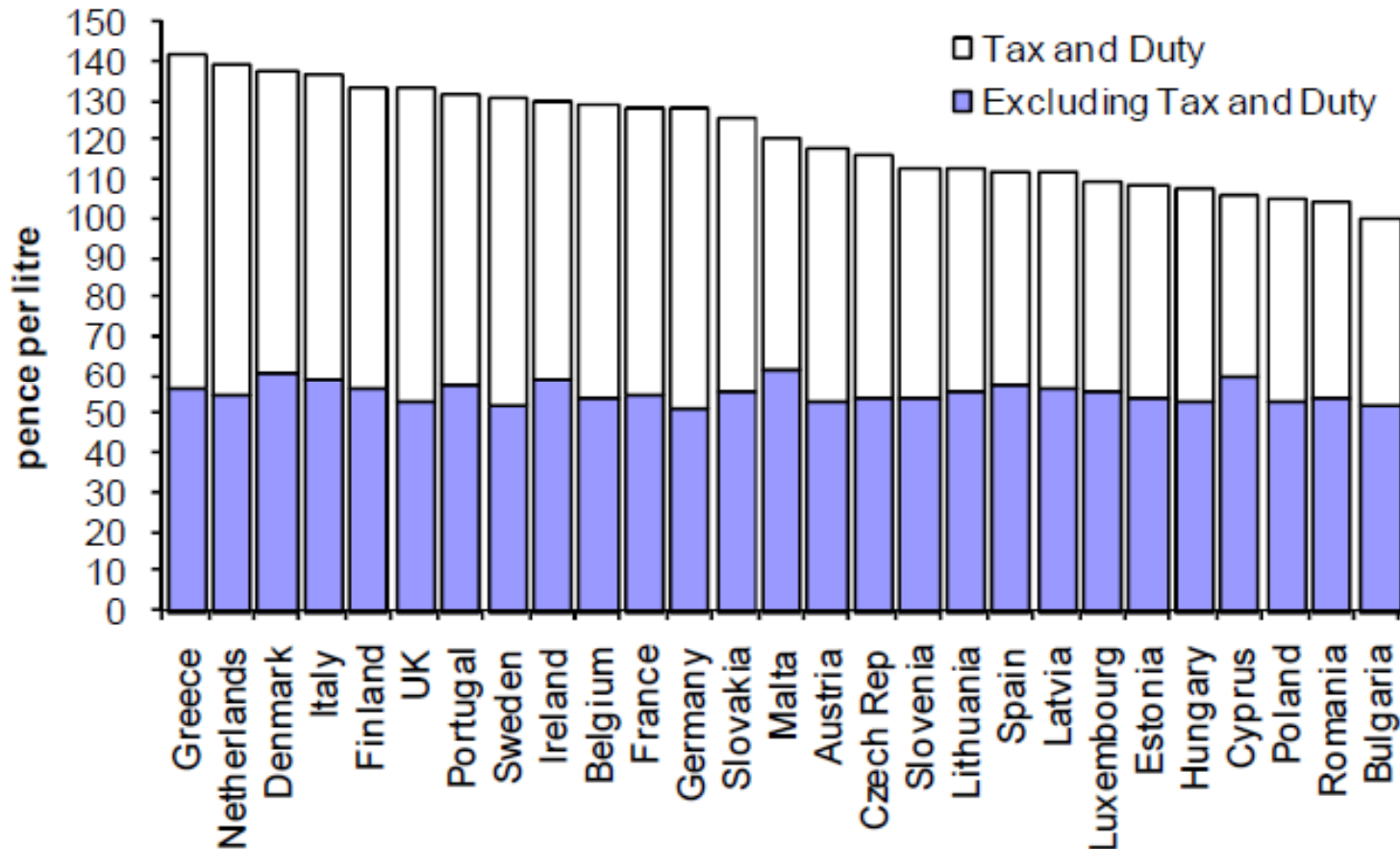
Average EU Diesel Prices in Pence per litre as at November, 2011



Source: Table 5.2.1 from QEP, Dec 2011

# ***Petrol taxes are pretty high in the UK...***

Average EU Premium Unleaded Petrol Prices in Pence per litre as at November, 2011

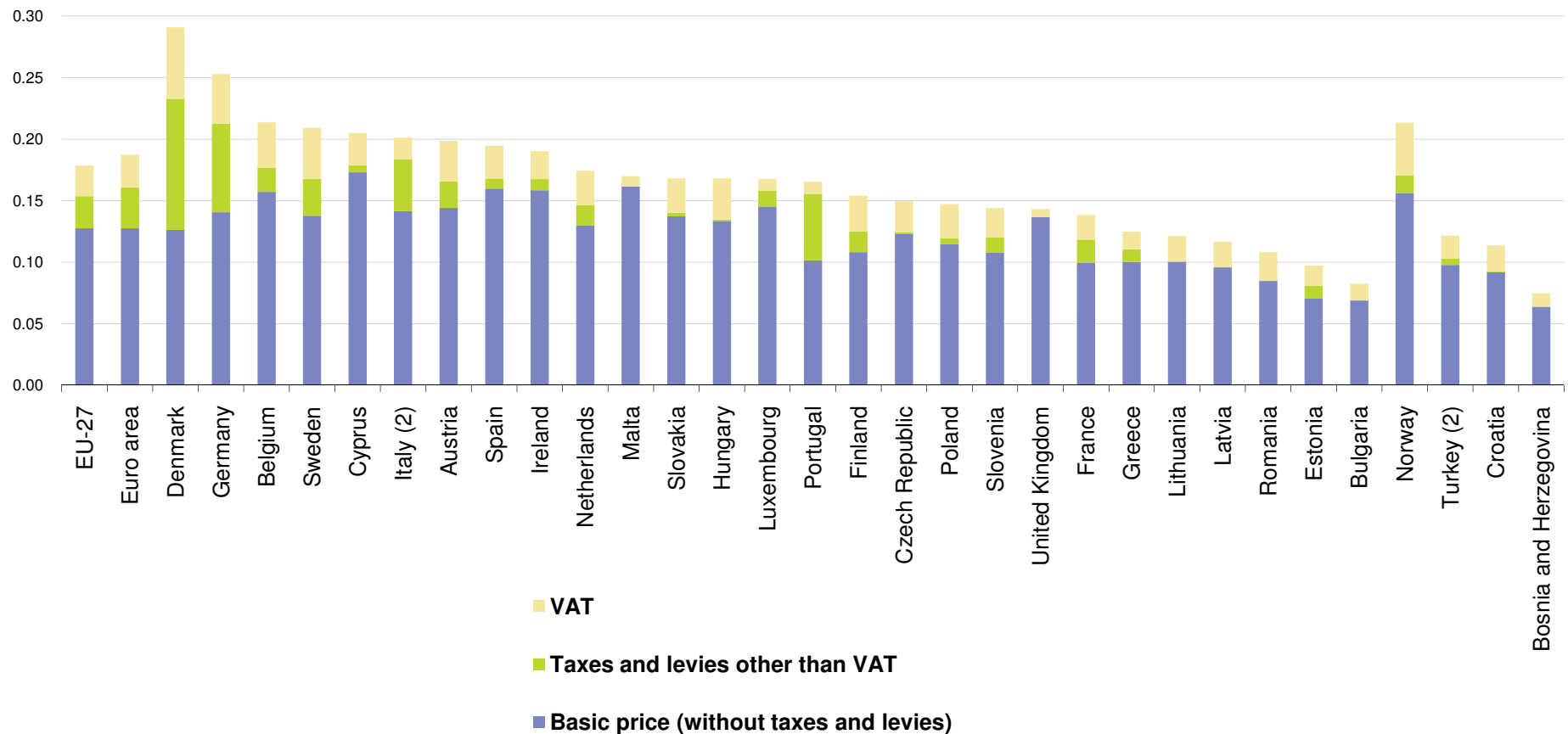


Source: Table 5.1.1 from QEP, Dec 2011

19

# Electricity taxes in UK are very low...

Electricity Prices for Household Consumers, Eur/kWh, first half 2011



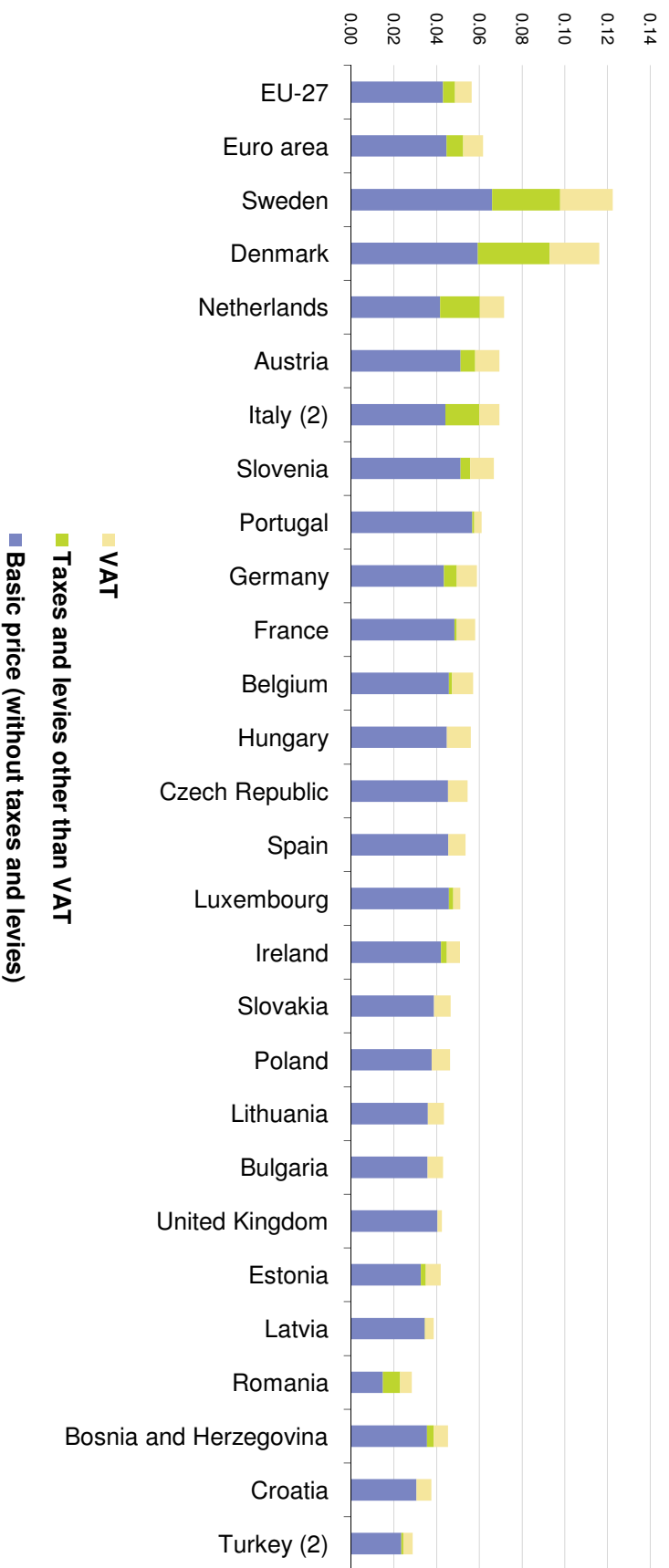
Source: Eurostat. Accessed from

[http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Electricity and natural gas prices statistics](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Electricity_and_natural_gas_prices_statistics)



# Gas taxes in UK also low...

Natural Gas Prices for Household Consumers, Eur/KWh, first half 2011



Source: Eurostat. Accessed from

[http://epp.eurostat.ec.europa.eu/statistics\\_explained/index.php/Electricity\\_and\\_natural\\_gas\\_prices](http://epp.eurostat.ec.europa.eu/statistics_explained/index.php/Electricity_and_natural_gas_prices)

---

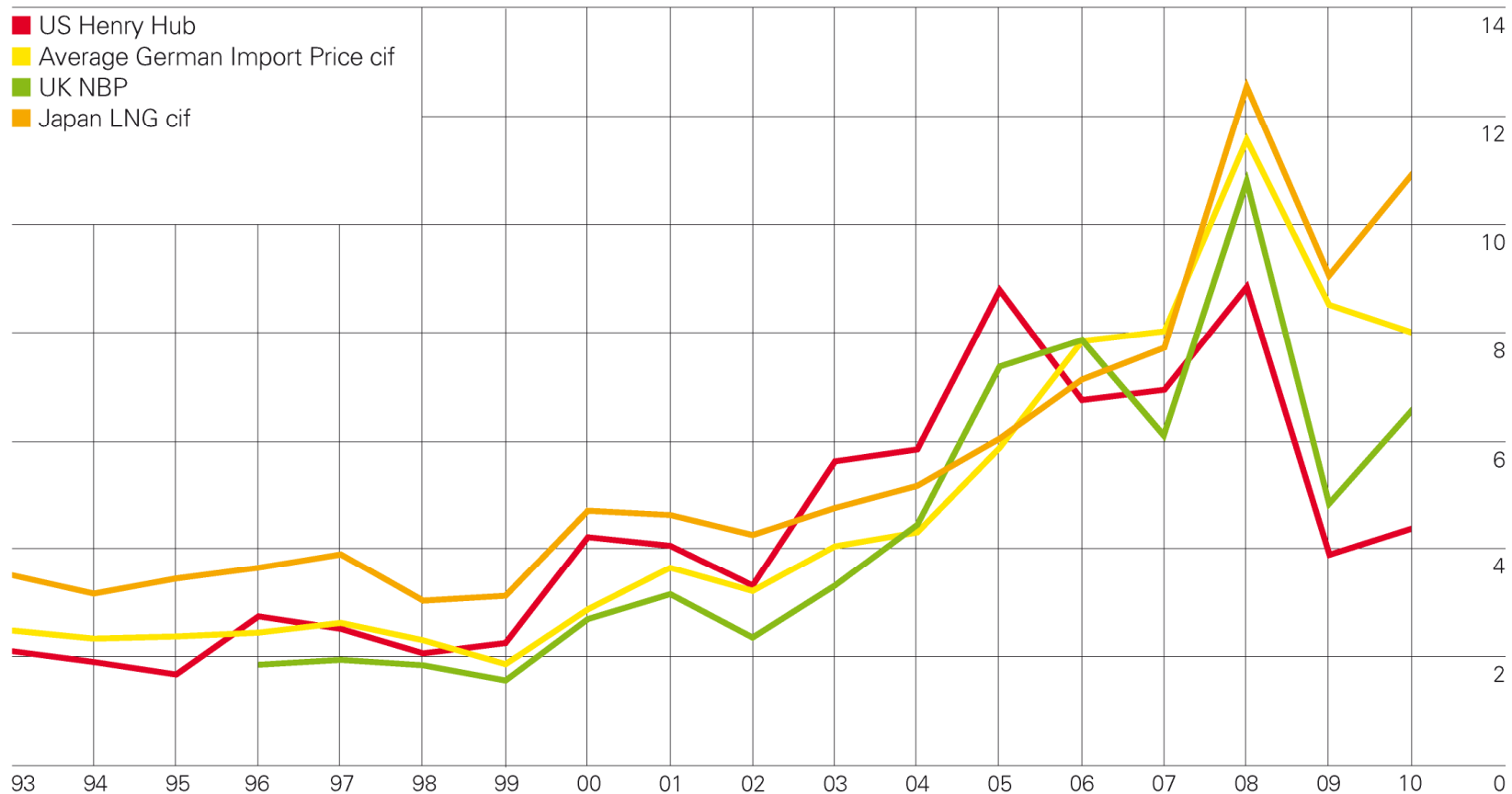
# FUTURE PROSPECTS?

22

# Impact of shale gas...

## Prices

\$/Mmbtu



23

Source: BP Statistical Review of World Energy, 2011

# ***UK Electricity Market Reform?***

---

- Aims to support up to 29% renewable electricity by 2020 (35% by 2030):
  - Carbon Price Support (target price £70 per tonne 2030)
  - Capacity Markets
  - Emissions Performance Standard
  - Low Carbon Contracts for Differences (CFDs)
- Impacts from DECC:
  - Household bills: +33% by 2030
  - Business bills: +62% by 2030
  - Wholesale prices: +80% by 2024



## ***Concluding comments***

---

- International pressures on real commodity prices.
- Tax and policy pressure upwards.
- Shale gas global impact uncertain.
- Energy services may be cheaper.
- Bills not necessarily the same as prices.