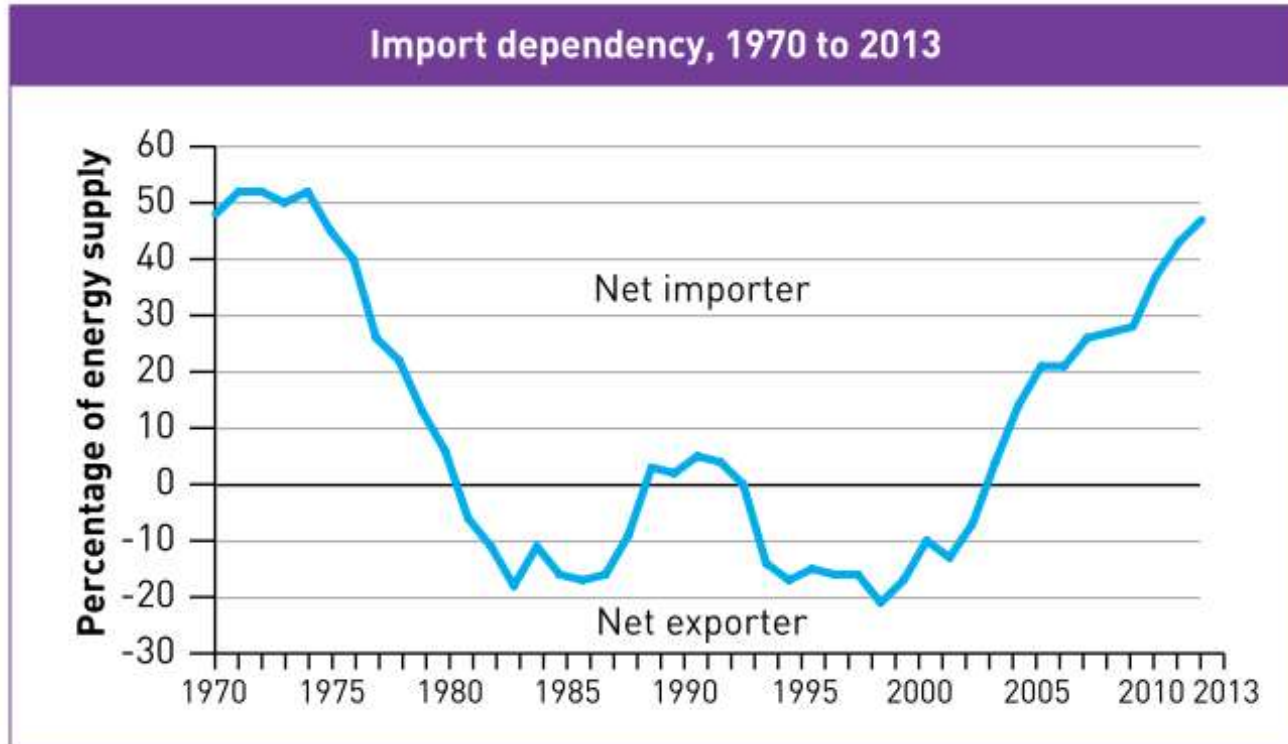


Energy Investment

Running to stand still ?

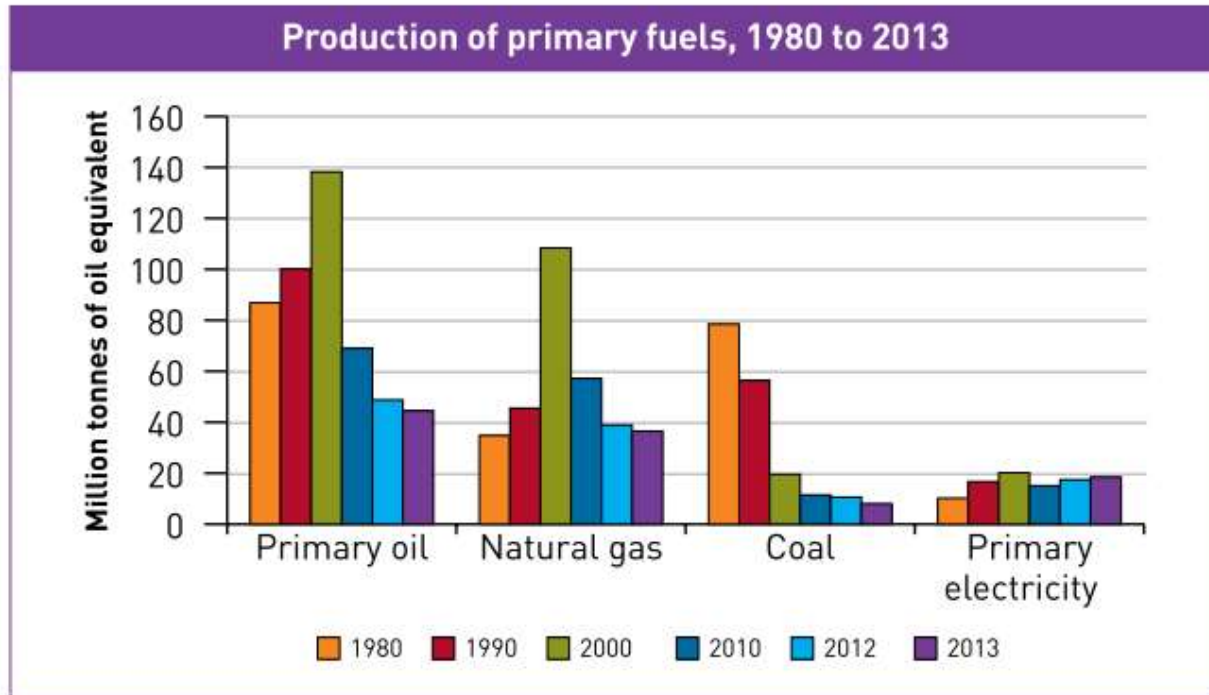
UK Energy Import Dependency



	Percentage					
	2000	2009	2010	2011	2012	2013
Coal	39%	78%	52%	63%	70%	82%
Gas	-11%	32%	38%	45%	47%	50%
Oil	-55%	8%	14%	27%	37%	40%
Total	-17%	27%	29%	37%	43%	47%

Source : DECC, 2014, "UK Energy in Brief"

UK Energy Production

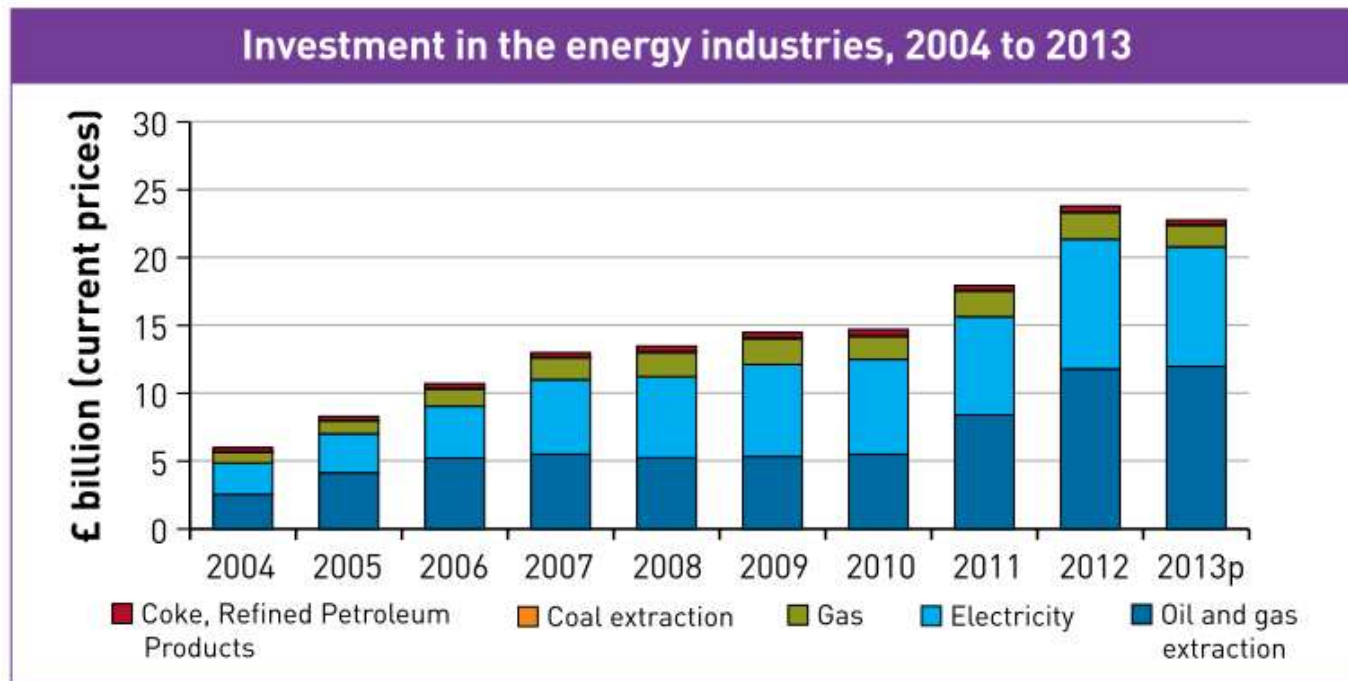


Million tonnes of oil equivalent

	1980	1990	2000	2010	2012	2013
Primary oil	86.9	100.1	138.3	69.0	48.8	44.5
Natural gas	34.8	45.5	108.4	57.2	38.9	36.5
Coal	78.5	56.4	19.6	11.5	10.6	8.0
Primary electricity	10.2	16.7	20.2	15.1	17.5	18.5
Bioenergy & waste	0.0	0.7	2.3	5.2	6.2	6.9
Total	210.5	219.4	288.7	157.9	122.0	114.4

Source : DECC, 2014, "UK Energy in Brief"

Is there an “Investment Deficit” ?



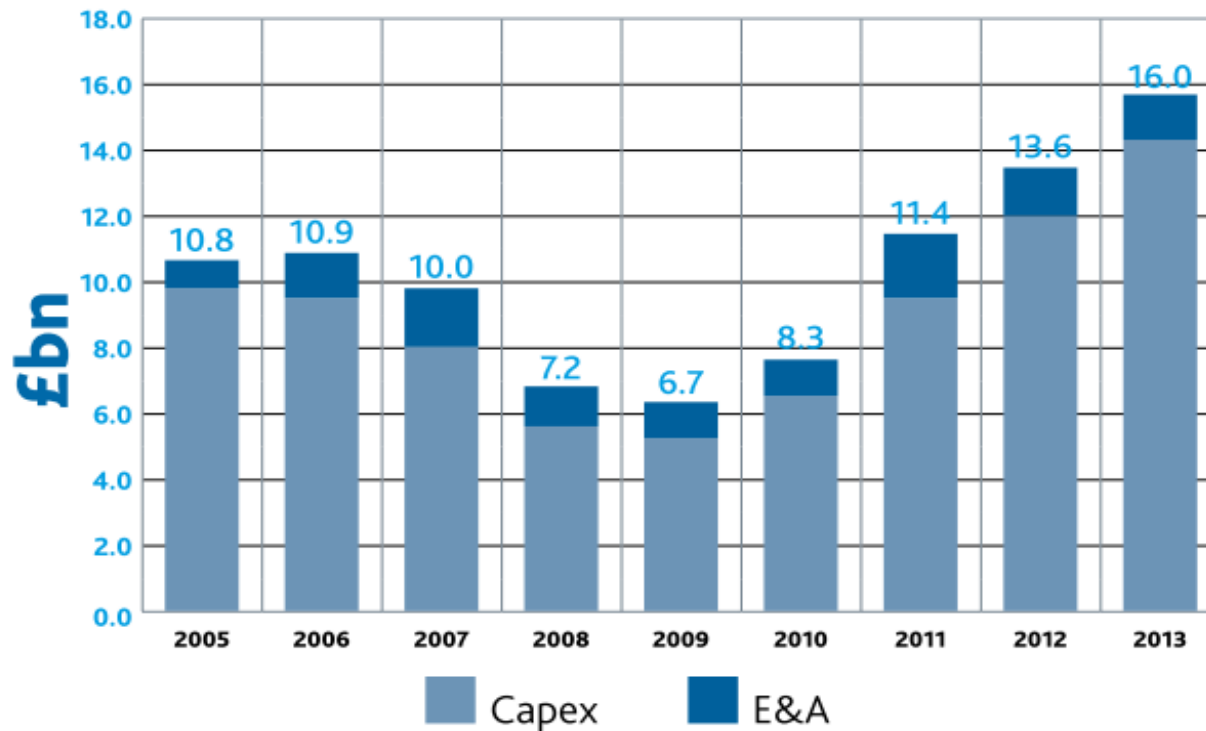
Source: Office for National Statistics

Since 2004, investment in the energy industries has continued to grow, specifically in the electricity sector. Despite the provisional slight fall in 2013, £22.8 billion (at current prices) was invested in the energy industry of which 53% was in oil and gas extraction, 39% in electricity, 7% in gas with the remaining 2% in coal extraction and coke, refined petroleum products. Investment in 2013 was 55% above the level seen in 2010.

Source : DECC, 2014, "UK Energy in Brief"

Is there an “Investment Deficit” ?

UK Continental Shelf expenditure

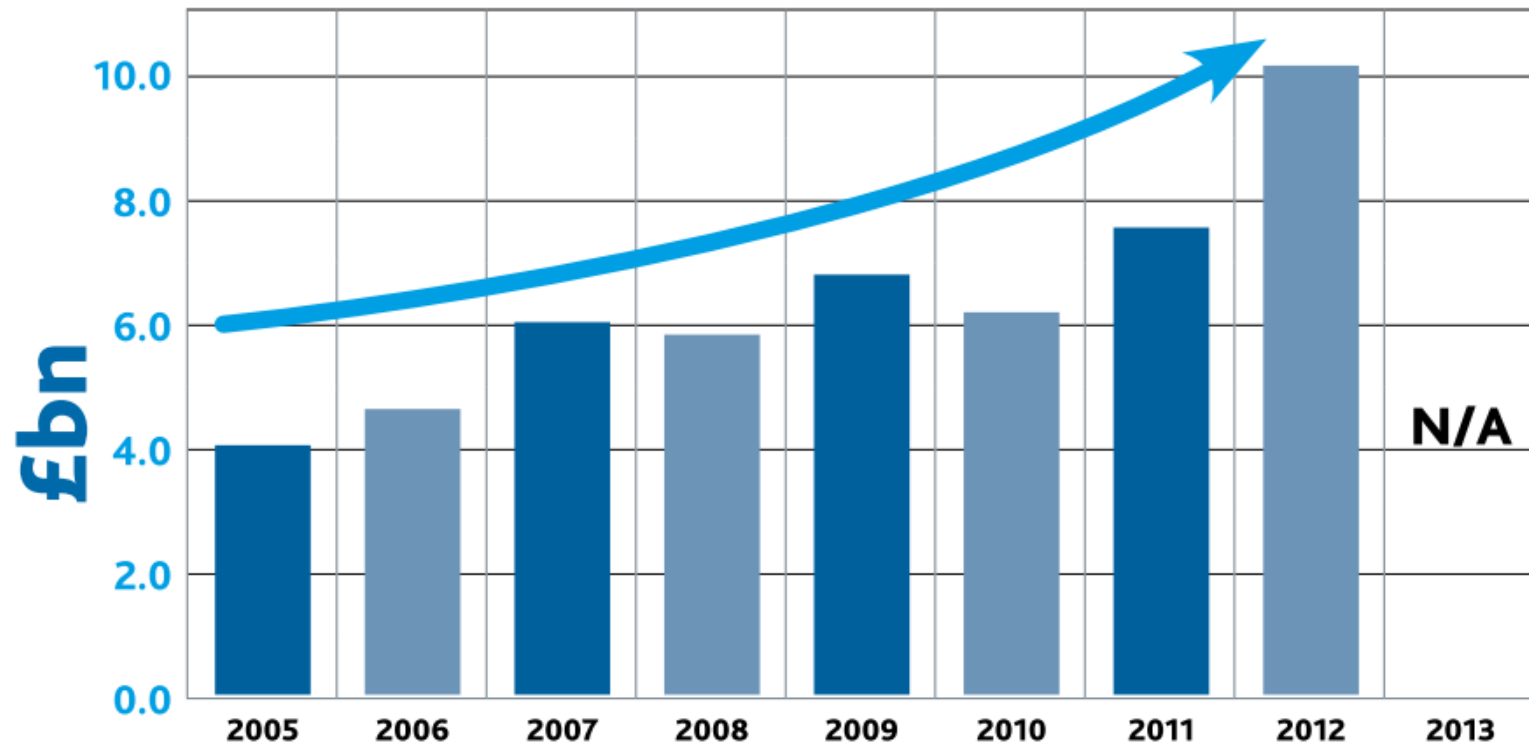


Source: DECC - 2013 prices, industry specific cost index

Source : DECC, 2014, "Energy Investment Report 2014"

Is there an “Investment Deficit” ?

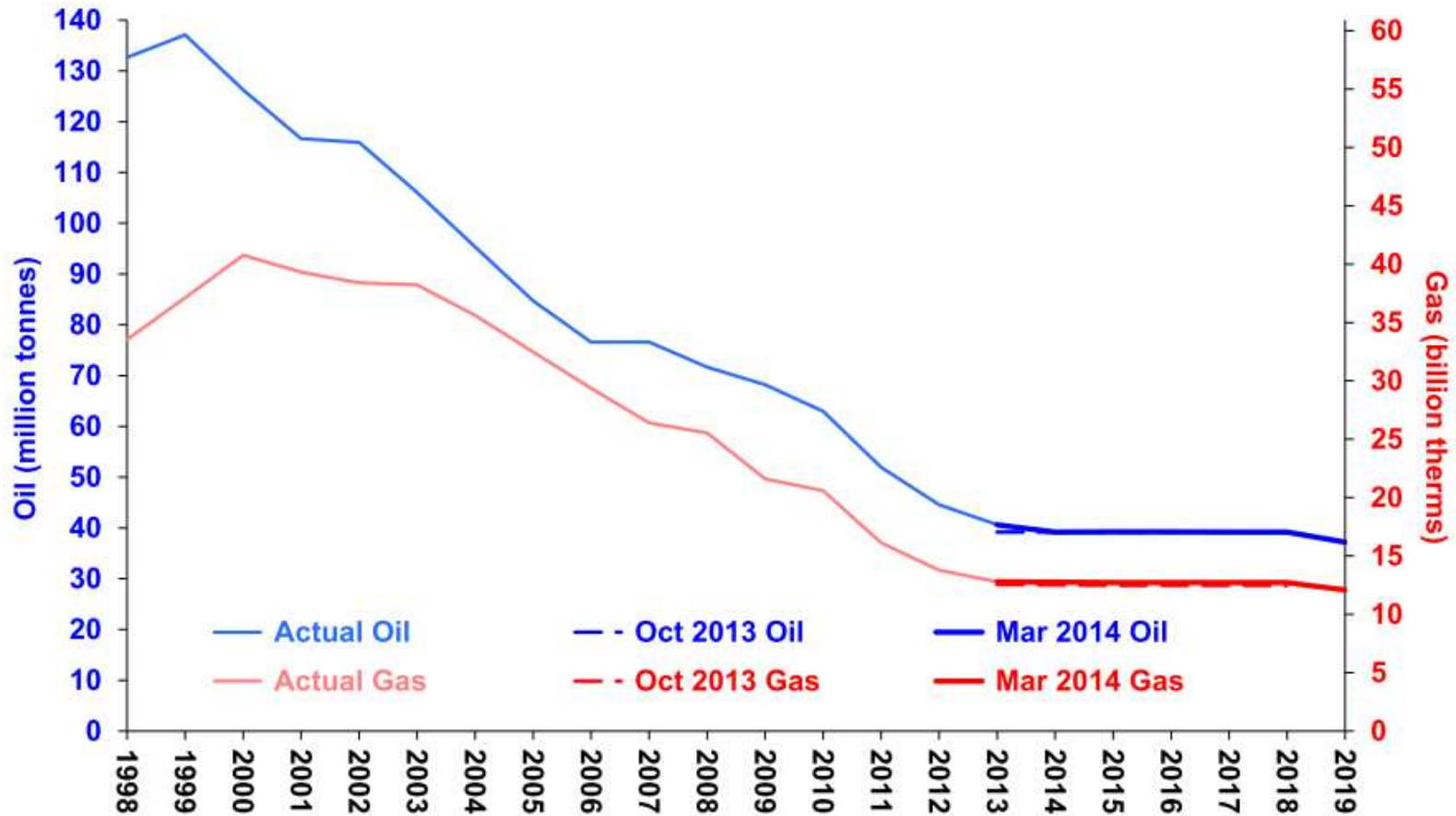
ONS Annual Business Survey – Capex on electricity, power generation & distribution



Source : DECC, 2014, "Energy Investment Report 2014"

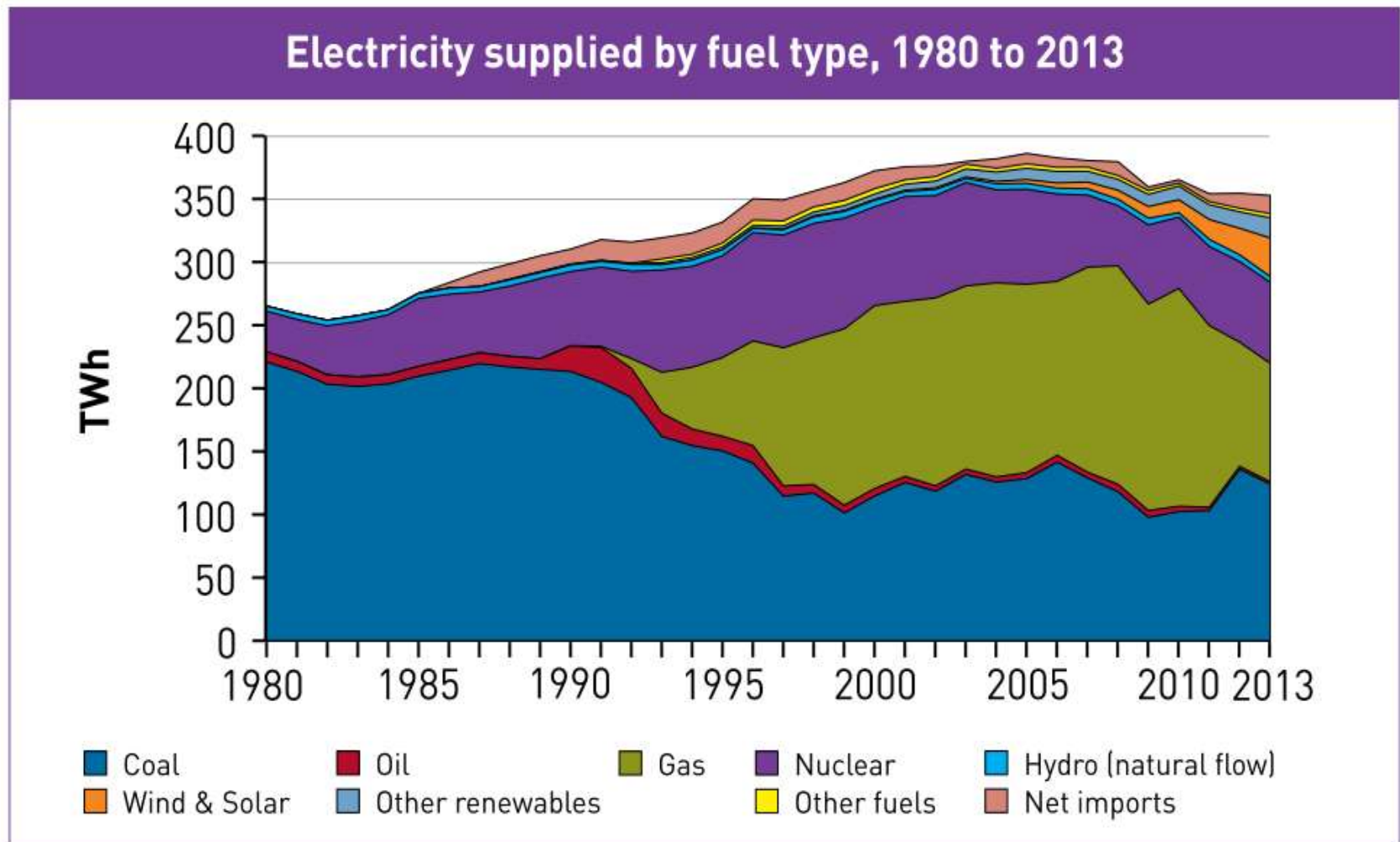
Is Oil & Gas Investment working ?

Actual/Projected UKCS Oil and Gas Production



Source : DECC, 2013, "Oil and gas : field data", "Production Projections"

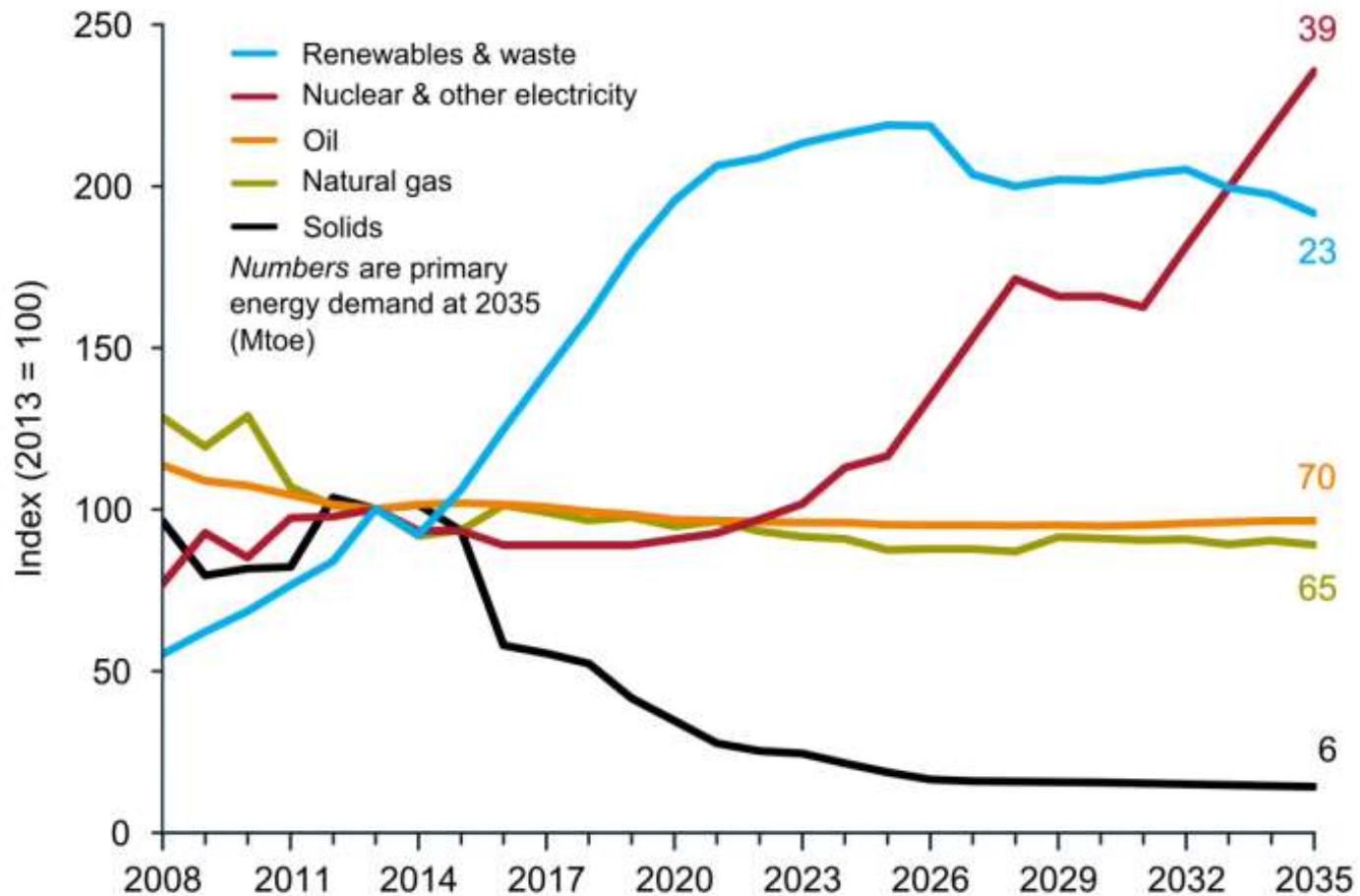
Is Electricity Investment working ?



Source : DECC, 2014, "UK Energy in Brief"

Is Electricity Investment working ?

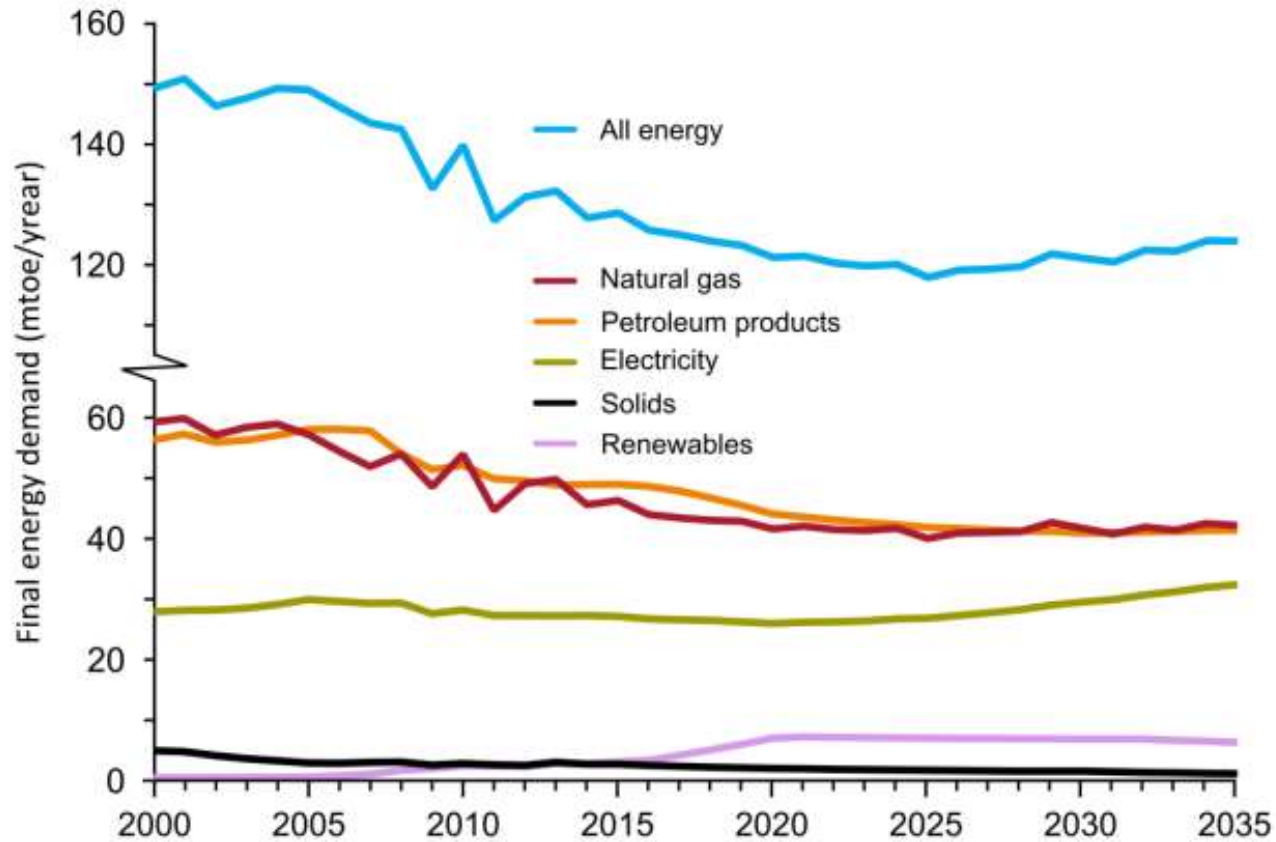
Figure 5.2: Changes over time in primary demand by fuel type ^a



Source : DECC, 2014, "Updated energy and emissions projections 2014"

Is Electricity Investment working ?

Figure 5.3: Final energy demand by type of energy ^a

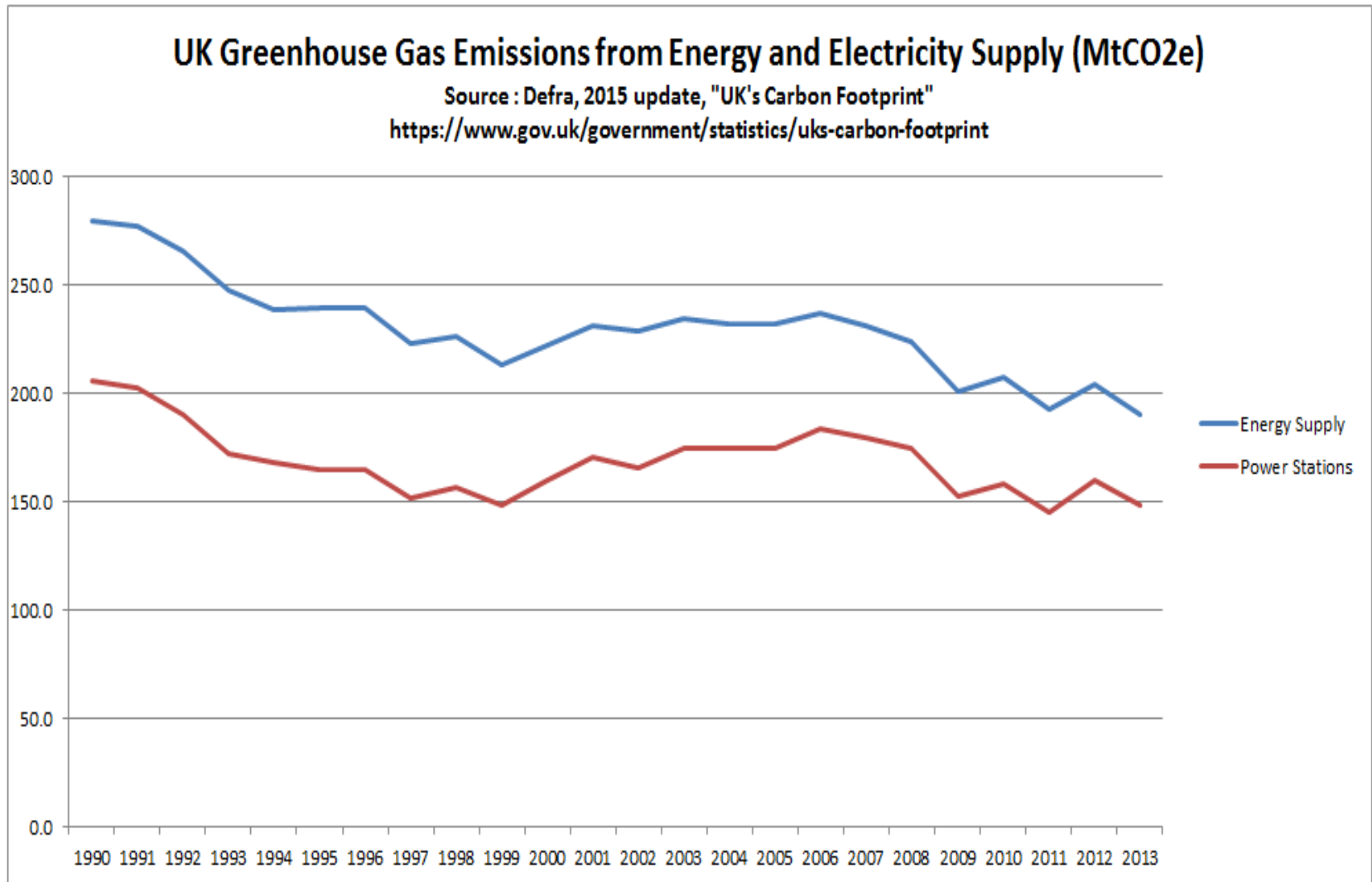


Notes:

a. Total energy does not include international aviation

Source : DECC, 2014, "Updated energy and emissions projections 2014"

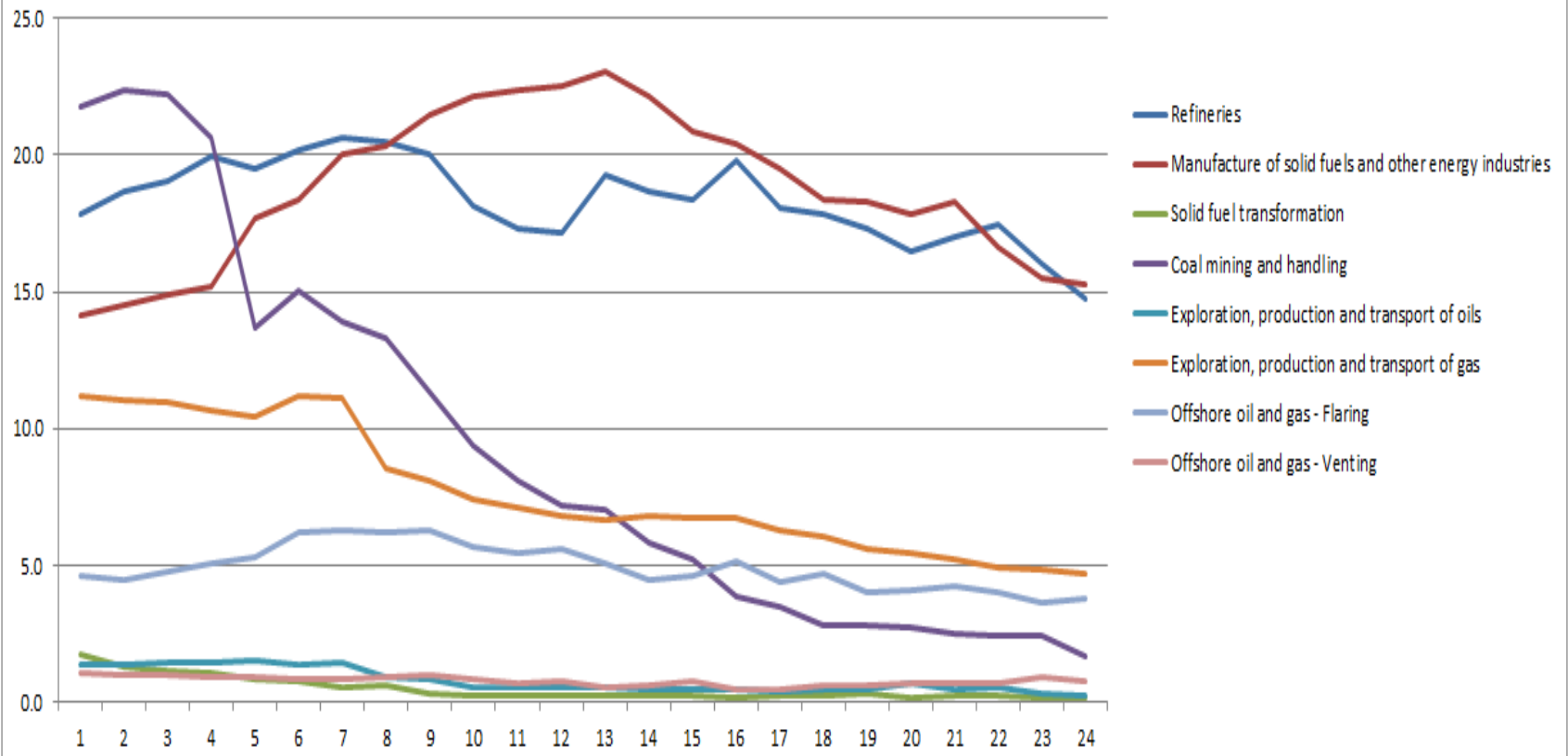
Electricity and Energy Emissions



Non-Electricity Energy Emissions

UK Greenhouse Gas Emissions from non-Electricity Energy Supply (MtCO₂e)

Source : Defra, 2015 update, "UK's Carbon Footprint"
<https://www.gov.uk/government/statistics/uks-carbon-footprint>



Is Oil & Gas Investment Working ?

The UK Continental Shelf Activity Survey 2015

Key facts – 2014 performance (unless otherwise stated)



£24.4
billion

Industry delivered
£24.4 billion of
production revenues
- the lowest since 1998

£9.6 billion



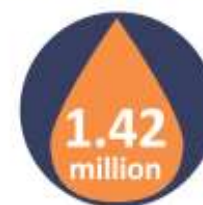
£9.6 billion was spent on
operating the UK Continental
Shelf last year, almost eight
per cent higher than in 2013



£14.8 billion
of capital invested

£1 billion

£1 billion spent on
decommissioning activity,
the highest annual spend
on record



barrels of oil equivalent

1.42 million boe
per day produced,
slowing production decline



£18.50/boe

Unit operating costs
increased last year,
up to £18.50/boe
from £17/boe in 2013

14/25



Only 14 of the expected
25 exploration wells were
actually drilled - continuing a
downward trend since 2009

Just **8** new fields



Eight new fields
sanctioned alongside
28 brownfield opportunities

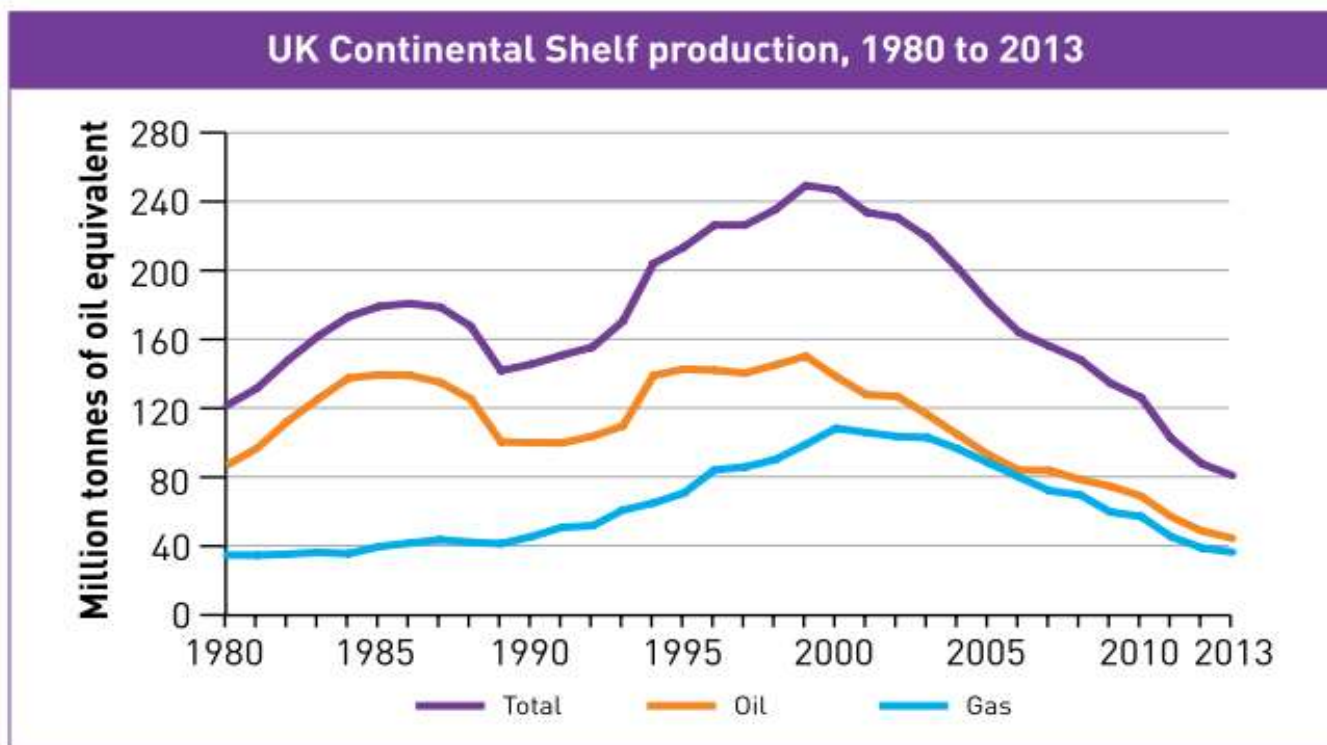
8 to 13
wells in
2015

Only eight to 13 exploration
wells are forecast to be drilled
in 2015 as the lower oil price
adds to existing barriers

£9.5 billion in 2015

Investment is forecast
to fall sharply to
£9.5–11.3 billion in 2015,
depending on current
project performance
and investment

Is Oil & Gas Investment Working ?

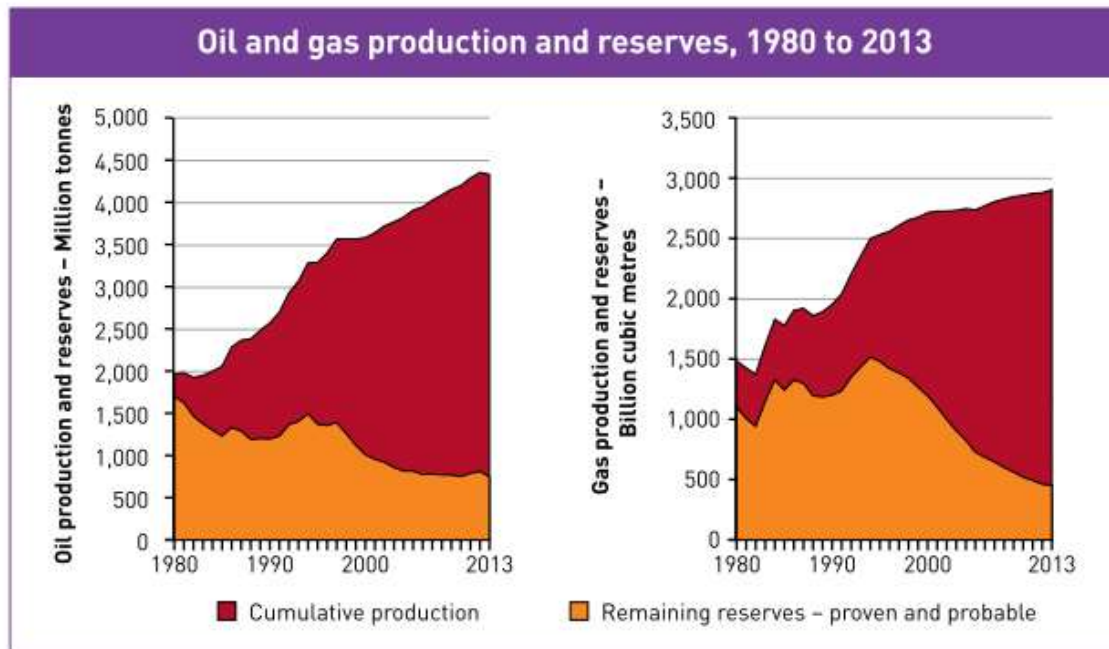


Million tonnes of oil equivalent

	1980	1990	2000	2010	2012	2013
Oil	86.9	100.1	138.3	69.0	48.8	44.5
Gas	34.8	45.5	108.4	57.2	38.9	36.5
Total	121.7	145.6	246.7	126.2	87.7	81.0

Source : DECC, 2014, "UK Energy in Brief"

Can Oil & Gas Investment Work ?



	1980	1990	2000	2010	2012	2013
Oil						
					Million tonnes	
Cumulative production	263	1,374	2,570	3,446	3,542	3,583
Proven plus probable reserves	1,700	1,195	1,010	751	811	746
Estimated Ultimate Recovery	1,963	2,569	3,580	4,197	4,353	4,329
Gas						
					Billion cubic metres	
Cumulative production	382	752	1,518	2,337	2,417	2,451
Proven plus probable reserves	1,101	1,200	1,195	520	461	452
Estimated Ultimate Recovery	1,483	1,952	2,713	2,857	2,878	2,903

Source : DECC, 2014, "UK Energy in Brief"