

Energy UK

Actually, we've got a bit of a problem

UK Electricity Consumption

Peak electrical demand in 2007 was 61.5 GW

Peak electrical demand in 2015 was 52.7 GW

Good news, eh?

How much is a GW?

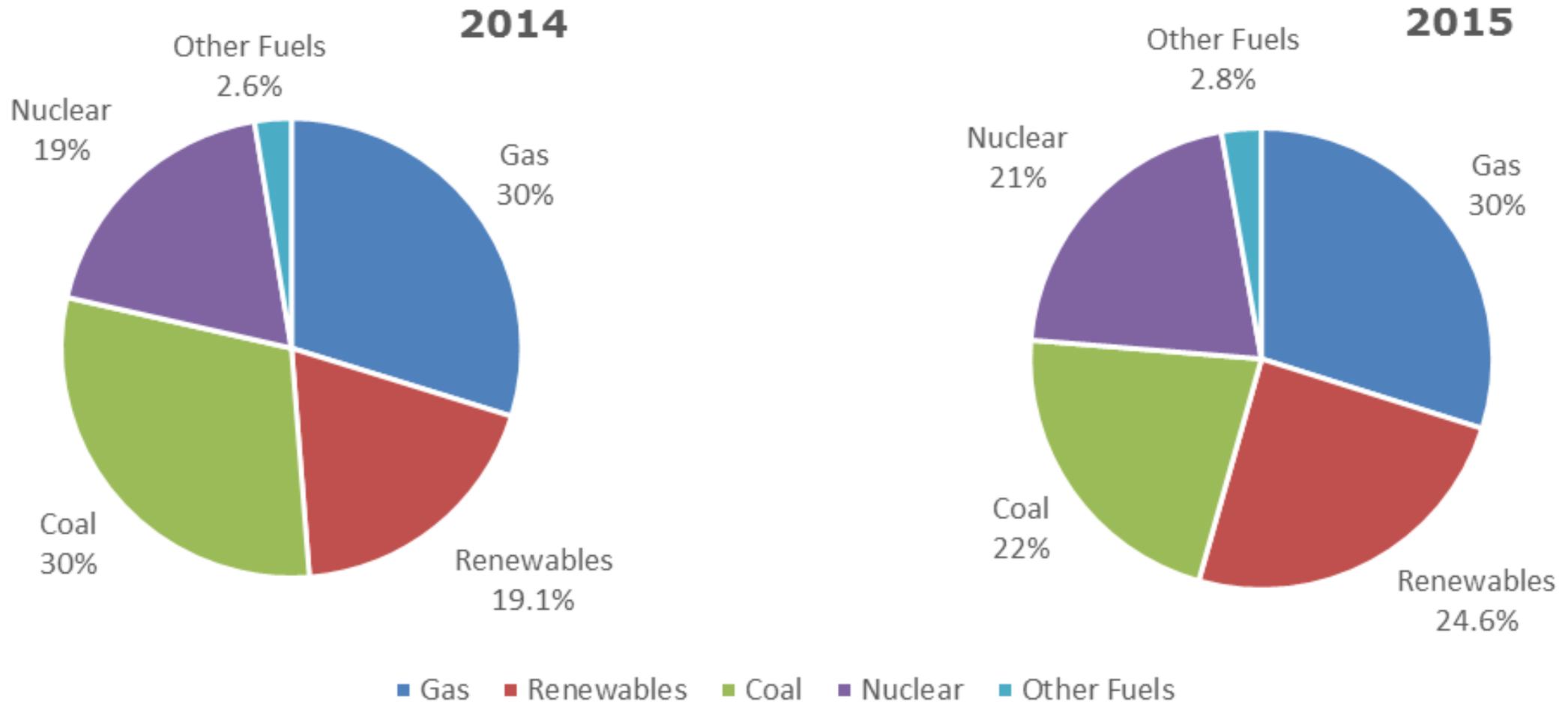
Quite a lot – it's 1,000 MW

How much is a MW?

Well, one very large fossil fuel station could generate 1,000 MW

One very large offshore wind farm could generate 250 MW

UK Energy Generation



UK Energy Generation

From the UK Energy App or <http://www.gridwatch.templar.co.uk/> this morning:

What	Proportion	How much annually?	How much today?
CCGT (gas)	51.8%	27,246 MW	21,921 MW
Coal	13.5%	7,115 MW	5,724 MW
Nuclear	19.6%	10,329 MW	8,310 MW
Wind	6.4%	3,373 MW	2,714 MW
Hydro	1.8%	949 MW	763 MW
Biofuels & 'other'	4.6%	2,424 MW	1,950 MW
Interconnectors	2.4%	1,265 MW	1,018 MW

Energy Generation

Most renewables are intermittent generators.

Most fossil fuels aren't.

Well, nuclear is reliable.

But it takes a very long time and it's very expensive. If we ever build it.

We need to decarbonise – that means more renewables.

But they are expensive and intermittent, aren't they?

So, renewables and nuclear need subsidies unlike fossil fuels, right?

Security of generation is becoming an issue because old coal and nuclear is rapidly on the way out, and because of intermittency issues

Means of Generation

The wholesale electricity prices today are around £30-£40/MWh

This price is too low to:

- incentivise fossil fuel generators to build new stations

- allow renewable generators to build without subsidies

The energy 'generation to consumption' gap is here and will get wider

What's the national policy?

The UK leads the way on this key aspect:

There isn't a coherent national strategy and there hasn't been for years.

It's confused at best and chaotic at times.

What's the answer?

It's going to be market led, despite (not because) of national policy

Smart energy – reduced consumption (but has limitations)

Decentralised and embedded generation facilities of all types

Energy storage facilities – this has huge potential

Local authorities have a significant role to play

ADEPT can influence the 'realpolitik' energy strategy in the UK

Enabling development, encouraging local industry

Planning, realisation – energy survival