

'Limited role' for natural gas in UK future energy mix

By Matt McGrath
Environment correspondent

🕒 5 hours ago | Science & Environment



The use of natural gas for electricity generation in the UK may have to decline significantly over the next 30 years, according to a new study.

Without carbon capture and storage (CCS) technology, gas-fired electricity would have to fall to 10% of the mix to meet emissions targets for 2050.

The new study also warns that current government policies will deter investment in gas.

The report has been published by the **UK Energy Research Centre**.

Blue bridge

Last November **the government signalled that the UK's remaining coal-fired power stations** would be phased out by 2025.

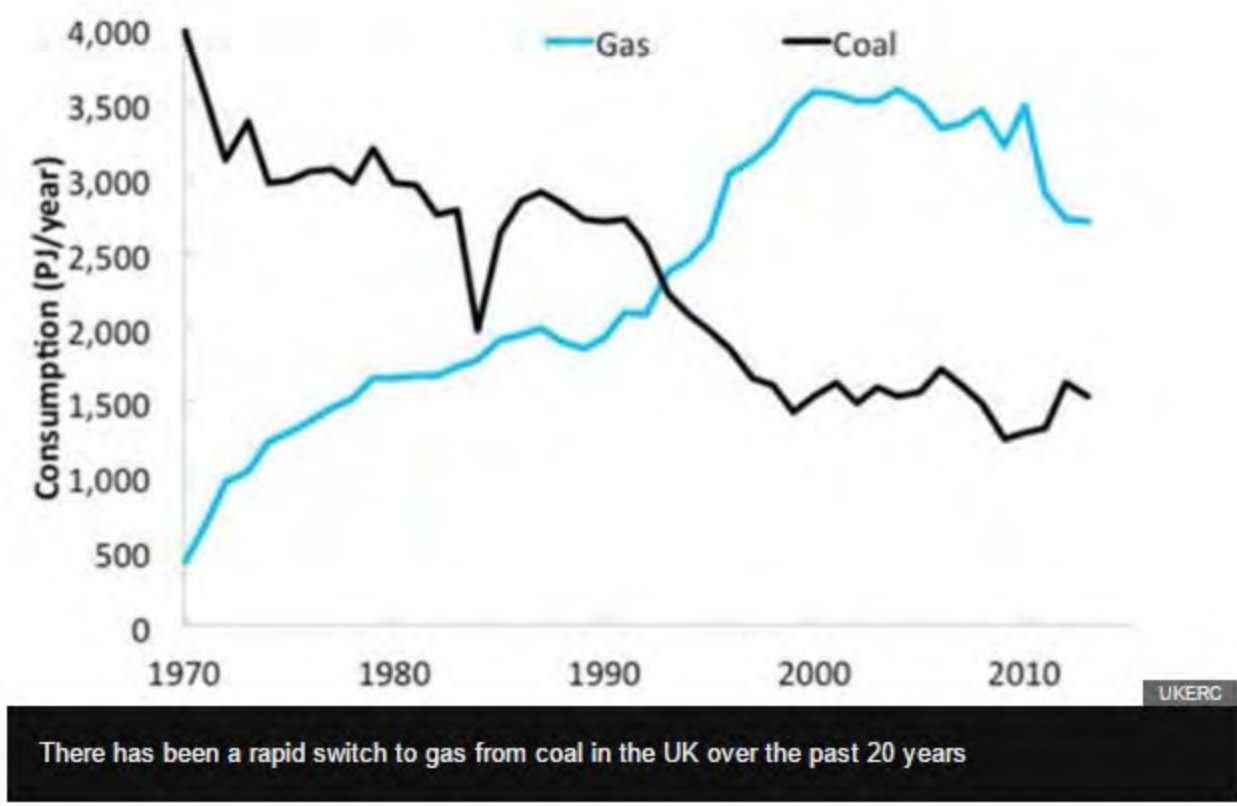
Energy Secretary Amber Rudd said those closures would only go ahead if nuclear and gas-fuelled generation could fill the gap, and act as a bridge to a decarbonised future.

This new report raises questions about the implications of a new "dash for gas".

The authors calculate that without carbon capture and storage technology, unabated gas could only make up 10% of the electricity mix in 2050, if the government wanted to meet current legal obligations to restrict carbon.

Legislation on the statute books in the UK requires an 80% cut in CO2 emissions below the 1990 level by the middle of this century.

"There is limited scope for gas to act as a bridge (to a decarbonised future)," said Prof Jim Watson from the UK Energy Research Centre.



"If we stick to carbon targets and have CCS, you've got a significant amount of gas being burned in the energy system, perhaps half the current levels by 2050.

"But if we stick to carbon targets and don't have CCS you are down to the 10% level compared to current gas demand by 2050."

However, UK research on CCS was dealt a severe blow following the Chancellor's Autumn Statement, when the government **confirmed it was scrapping a £1bn carbon capture and storage competition** on the grounds of cost.

According to the authors of this new report, the cancelling of the UK CCS competition will make it "risky" as to whether the technology will be available when needed.

"If you look around the world at where CCS is at, my view would be there isn't enough going on to guarantee you'll have that available," said Prof Mike Bradshaw from the Warwick Business School.

"The UK was one of the few countries that was actually serious about this - a charitable interpretation of the government's decision was that they were just hoping that someone else will bring the cost down and we'll buy it in when we need it, but that is quite a risky decision to make."

Energy dilemma

The scenario outlined by the report highlights the scale of the challenge of trying to reduce emissions while keeping the lights on.

While the government is keen on natural gas as an alternative to coal, investors have yet to be convinced that gas-fired stations are a good long-term investment.

To ease their fears the government has developed a **"capacity market"**, where generators are paid for future supplies of energy that they can provide at short notice to ensure continuity of supply as renewables provide more of the energy mix.

According to the new report, the current capacity market mechanism is simply not attractive enough for investors to build new gas-generating capabilities.

The authors argue that any new gas plants built to replace coal without CCS will only operate intermittently, meaning a poor return on investment.

"Even if you want more gas to replace coal in the power sector, the policy framework clearly isn't working," said Prof Watson.

"The capacity market isn't doing what it needs to do, and I suspect they will have to put in place much stronger economic incentives for new gas developers."

The authors say that using gas for electricity is a question that needs to be answered over the next 10 years.

Beyond that they say reducing the role of gas in domestic heating and industry will be the "critical" challenge on the way to meeting the 2050 targets.

Follow Matt **on Twitter** and on **Facebook**.

Science & Environment >



Monstrous fossils 'were armadillos'

🕒 22 February 2016 | Science & Environment



Northern Powerhouse 'a leap of faith'

🕒 22 February 2016 | Business



Britain's Atlantis 'destroyed by storms'

🕒 21 February 2016 | Suffolk

Top Stories

Water begins to return to Delhi

Water supply is partially restored to 10m people in the Indian capital, Delhi, after repairs began on a key canal which the army regained from protesters on Monday.

🕒 36 minutes ago

Fiji cyclone death toll rises to 29

🕒 6 hours ago

Leaving EU 'would threaten UK jobs'

🕒 16 minutes ago

Features & Analysis



'My fingers are heating'

An editor's stirring ode to China's leader



Going it alone

How Switzerland could show UK the route to Brexit



Unusual imams

Why does China have women-only mosques?



Arms boom

China's rise as arms seller boosts global weapons sales



French connections

How I got my daughter a visa thanks to a bit of 'piston'



Weird and wonderful

The bizarre types of buildings that China wants to ban



Oh Miaow!

The things people do in Japan to celebrate Cat Day



'Winter is Trumping'

If Donald Trump rules Westeros... then what?



'Secret society'

The people who want the UK's gun laws relaxed

Most Popular

Read	Watched
Canadian serial killer book withdrawn	1
Will Switzerland show UK the way to Brexit?	2
Water begins to return to Delhi	3
UK woman 'missing in Thailand'	4
China bans 'bizarre' architecture	5
Leaving EU 'would threaten UK jobs'	6
El Chapo: Five things his wife revealed	7
Cruz sacks top aide over doctored video	8
Egyptian boy, 4, 'convicted by mistake'	9
Syria 'ceasefire' to start at weekend	10

BBC News Services

📱 On your mobile

📺 On your connected tv

📧 Get news alerts

✉ Contact BBC News

Explore the BBC

News	Sport	Weather	Shop	Earth	Travel
Capital	Culture	Autos	Future	TV	Radio
CBBC	CBeebies	Food	iWonder	Bitesize	Music
Arts	Make It Digital	Taster	Nature	Local	