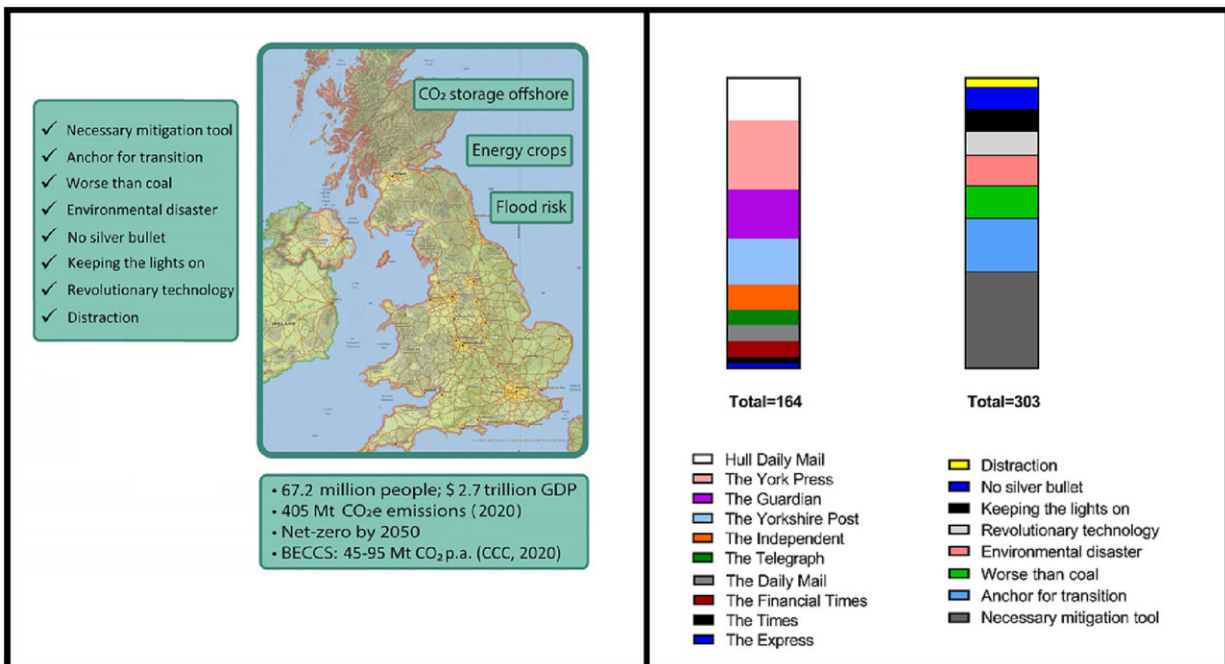


# 'Critical climate solution' or 'worse than coal'? Study explores debate around divisive energy technology

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Left-hand pane: ticked marks represent the eight storylines identified in the articles of the top circulating U.K. national newspapers and in the top three circulating newspapers of the Yorkshire and the Humber region. Data on potential ambitions for mid-century BECCS deployment taken from the Committee on Climate Change's modeling. Right-hand pane: two stacked bars represent the breakdown of the newspaper articles reviewed (n = 164), and the breakdown of storyline counts (n = 303) by storyline name. Note: most newspaper articles featured more than one identified storyline. Credit: *Energy Research & Social Science* (2023). DOI: 10.1016/j.erss.2023.103153

A new study has explored the battle lines of public debate around a controversial energy technology which is heralded as "critical to combating climate change" by its advocates and branded "worse than coal" by its critics.

Bioenergy with carbon capture and storage (BECCS) features heavily in the U.K. government's plan to achieve a net-zero economy by 2050. But there is low public awareness of the technology, which has split the opinion of scientists, politicians, and [media outlets](#).

BECCS generates energy by burning plants and trees and captures the resulting carbon dioxide (CO<sub>2</sub>) emissions, storing them underground.

Now, research by the University of Southampton published in *Energy Research & Social Science* has analyzed coverage of BECCS in 166 newspaper articles to identify the key storylines about the energy technology and understand whether it is likely to be accepted by people in the U.K. and beyond.

"With public understanding of BECCS so limited, the media has a crucial role in shaping debate and opinion on the technology," says Caspar Donnison, Research Fellow in Biological Sciences at the University of Southampton and lead author of the research.

"We've seen in the fracking debate how competing storylines are used to influence social acceptance of a new technology, and ultimately whether it becomes part of the U.K.'s energy mix or not."

The study published in *Energy Research & Social Science* identified eight key storylines. On the Pro-BECCS side were "Necessary mitigation tool"; "Keeping the lights on"; "Anchor for transition"; and

"Revolutionary technology." On the Anti-BECCS side were "Worse than coal"; "Environmental disaster"; "No silver bullet"; and "Distraction."

## **'Sustainable biomass' to 'level up the North'**

The "Necessary mitigation tool" storyline was apparent in over half of the national and regional newspaper articles analyzed. Drax Group has plans to operate the world's largest BECCS facility at its power station in Yorkshire. Drax CEO Will Gardiner used this storyline more than any other individual. But it was also referenced by Government spokespeople, the UK Committee on Climate Change (CCC) and Microsoft, as well as being featured in IPCC scenarios. The "Keeping the lights on" storyline was less prevalent but gained traction following Russia's invasion of Ukraine.

Storylines focusing on opportunity ("Anchor for transition" and "Revolutionary technology") were most prominent in Yorkshire's local media. Local MPs referred to "closing the North-South divide" and Rishi Sunak MP described the Drax project as "transformative for the region's economy," shortly before becoming Prime Minister.

"Drax's proposals in Yorkshire have had a major influence on the U.K. debate, driving more articles from three regional newspapers than all the national coverage combined," says Professor Gail Taylor, co-author of the paper and John B Orr Distinguished Professor of Environmental Plant Sciences, University of California, Davis. "The pro-BECCS coalition enjoyed greater dominance in local news media, where the necessity framing was complemented with the promise of socioeconomic benefits to the region."

## **'Ecological disaster' and 'magical thinking'**

The "Worse than coal" storyline gained prominence following a BBC Panorama documentary on Drax's supply chain and was featured in 34 articles—mostly in national newspapers. Environmental NGOs and others claim, with limited evidence, that biomass combustion results in similar CO<sub>2</sub> emissions to coal, that this carbon may not be re-absorbed by replanting trees and that supply-chain emissions add to the carbon cost. 32 articles framed BECCS as an "Environmental disaster," suggesting the land-use demand posed a risk to wildlife and food production.

Countering the "Revolutionary technology" narrative, 23 national newspaper articles (17 in the Guardian) suggested BECCS was "No silver bullet," describing it as "too good to be true" and "not feasible" at the scale and timescale envisaged. A further 10 articles in the Guardian and Independent, largely attributed to NGOs, suggested it was a "Distraction," acting as "a license to keep emitting."

"The U.K. government is relying on BECCS to help deliver their net-zero strategy but the battle for public opinion is far from won," says Donnison. "Our research shows a targeted, limited deployment of BECCS using sustainably sourced biomass could have broad national appeal. But if public concerns aren't addressed, the government will have to look to a fast-diminishing list of alternative technological and policy options."

**More information:** Caspar L. Donnison et al, A net-zero storyline for success? News media analysis of the social legitimacy of bioenergy with carbon capture and storage in the United Kingdom, *Energy Research & Social Science* (2023). [DOI: 10.1016/j.erss.2023.103153](https://doi.org/10.1016/j.erss.2023.103153)

Provided by University of Southampton

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