

Without SLO BECCS, fast net-zero looks unlikely

Supplementary Materials

For the media analysis, using the software Nexis, we searched for newspaper articles only, excluding newswires. The time range used was from 01/01/2001 to 20/07/2020, with the start year of 2001 representing the first year that discussion of BECCS was published¹. The Nexis ‘moderate similarity’ grouping function was used to remove duplicates from our results.

We used the following search terms: ‘bioenergy with carbon capture and storage’, ‘BECCS’, ‘bioenergy and carbon capture and storage’, ‘bioenergy with CCS’, ‘bioenergy and CCS’. These terms were searched for in the top ten circulating national newspapers found in each geographical location.

Using the Nexis UK National Newspapers category, the ten UK newspapers used were: The Guardian, The Times, The Sunday Times, The Independent, The Daily Mail and Mail on Sunday, MailOnline, The Daily Telegraph (London), telegraph.co.uk, The Mirror (The Daily Mirror and The Sunday Mirror), The Observer (London). For California, we used the top ten circulating newspapers available through the database specific to California, as well as the top three circulating US newspapers, to supplement the fewer results that were provided by the Californian newspapers. These 13 newspapers were: Los Angeles Times, The Mercury News (California), Orange County Register (California), Contra Costa Times, The Fresno Bee, Investor's Business Daily, The San Diego Union-Tribune, La Opinion, San Gabriel Valley Tribune (San Gabriel Valley, CA), The Daily News of Los Angeles, San Bernardino Sun (California). The addition of national US newspapers did not lead to any new storylines but reinforced existing ones found in the Californian newspapers.

We found 68 US results in total: 33 from Californian newspapers, as well as seven from the New York Times, and 28 from the USA Today. For the UK, we found 96 results across the ten newspapers.

All storylines identified were represented in at least 5 articles and across annual timelines (i.e. no storyline was present in newspaper articles in just one year). Furthermore, each of the identified storylines was found to have been made by multiple stakeholders or actors. At the same time, it must be acknowledged that these storylines are not exclusive, as public discourse can manifest itself in different media forms and is not restricted to newspapers. Nevertheless, this analysis enabled us to gain a broad overview of the different storylines present in the public discourse of BECCS.

The full Nexis database created and used can be found provided at the request of the authors.

Table S1

Newspaper name	Print circulation (,000s daily)	Ownership	Political leaning/ Journalistic culture
The Guardian	134	Scott Trust Limited's Guardian Media Group	Centre-left
The Times	406	News Corporation	Centre-right
The Sunday Times	707	News Corporation	Centre-right
The Independent (online newspaper, formerly a print publication)	643	Lord Lebedev, Sultan Muhammad Abuljadayel, Justin Byam Shaw, minor shareholders	Centre
The Daily Mail & Mail on Sunday	2,190	Daily Mail and General Trust plc	Right-wing
MailOnline	830	Daily Mail and General Trust plc	Right-wing
The Daily Telegraph	335	Press Holdings (Frederick Barclay)	Centre-right
Telegraph.co.uk	983	Press Holdings (Frederick Barclay)	Centre-right
The Mirror (The Daily Mirror and The Sunday Mirror)	800	Reach plc	Right-wing

The Observer*	159	Scott Trust Limited's Guardian Media Group.	Centre-left
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* now part of The Guardian

Los Angeles Times	650	Tribune Media	Centre-left
The Mercury News	527	Digital First Media	Centre-left
Orange County Register	250	Digital First Media	Libertarian-right
Contra Costa Times aka East Bay Times	168	Digital First Media	Centre-left
The Fresno Bee	157	McClatchy	Centre-left
Investor's Business Daily	157	News Corporation	Centre-right
The San Diego Union-Tribune	121	Tribune Media	Centre-left
La Opinion	116	ImpreMedia	Centre-left
San Gabriel Valley Tribune	57	Digital First Media	Centre
The Daily News of Los Angeles	56	Digital First Media	Centre-right
San Bernardino Sun	36	Digital First Media	Centre
New York Times**	1,400	The New York Times Company	Centre
USA Today**	726	Gannett	Centre

Data sources: circulation figures of 2019 were used for the UK newspapers using the www.statista.com website, whilst circulation figures of 2020 were used for the California and two USA-wide newspapers, using www.fullintel.com and www.muckrack.com websites. The above figures provide print circulation but an increasingly important business element of newspaper companies is online content and this has had a notable impact on the reach of traditional newspaper companies. For example, The Guardian has a relatively low print circulation but the highest read digital content². ** Although these newspapers are not California based, they have a large readership across the US, and we added them to provide depth to the storylines in California (their addition did not add any new storylines to those found in the Californian newspapers).

Supplementary References

1. Obersteiner, M. *et al.* Managing Climate Risk. *Science* (80-.). **294**, 786–878 (2001).
2. Jigsaw Research. News Consumption in the UK: 2019. 1–122 (2019).