nature

index

Energy

Nature Index 2022 Energy, a supplement to *Nature*, is produced by Nature Portfolio, the flagship science portfolio of Springer Nature. This publication is based on data from the Nature Index, a Nature Portfolio database, with a website maintained and made freely available at natureindex.com.

Nature editorial offices
The Campus, 4 Crinan Street,
London N1 9XW, UK
Tel: +44 (0)20 7833 4000
Fax: +44 (0)20 7843 4596/7

Customer services
To advertise with the Nature Index, please visit natureindex.com or email clientservicesfeedback@nature.com.

The global energy crisis sparked by Russia's invasion of Ukraine in February lends urgency to many nations' plans to decarbonize, shifting from dependency on Russian fossil fuels to sustainable options. These transitions, which require considerable planning, infrastructure and collaboration, will be not easy.

Norway is a country to watch. A major oil and gas producer and exporter, the Scandinavian nation has agreed to ramp up gas supplies to the EU in an effort to stabilize supplies. At the same time, it is committed to reducing its own greenhouse-gas emissions by 90–95% from 1990 levels by 2050, excluding carbon sinks (natural or artificial reservoirs that absorb more carbon than they release). Norway's extensive hydropower resources, which provide 92% of its electricity, will play a key role, as will strategies focused on energy technologies, such as electric vehicles, hydrogen, and carbon capture and storage, according to a recent policy review by the International Energy Agency.

Countries that favour a diversified approach to generating energy are likely to fare better over the long term. And those with strong investments in sustainable energy research will have a head-start. In this supplement, we highlight examples of high-quality research related to the United Nations' Sustainable Development Goal 7, using our signature metric, Share*, to track output in 82 natural-sciences journals.

Collaboration, not just between countries, but across sectors, is key to bringing energy technologies from the lab to the market and into homes and workplaces. It is also crucial that the needs of vulnerable and remote populations, which stand to benefit the most from cheaper and more sustainable energy technologies, are no longer overlooked in policy decision-making. As is discussed in our feature on page S2, energy policies that are developed with strong community involvement stand a greater chance of succeeding in an increasingly uncertain world.

Bec Crew
Senior editor, Nature Index

**Nature Index's signature metric Share, used in this supplement, is a fractional count for an article allocated to an institution, city or country/region, that accounts for the proportion of authors on the article whose institutional affiliation is with that institution or location. Adjusted Share accounts for the small annual variation in the total number of articles in the Nature Index journals. We point out that the Nature Index provides just one indicator of research performance, and many other factors must be taken into account when assessing the quality of research or institutions.*

On the cover: Solar panel elements at Broken Hill Solar Plant in New South Wales, Australia. Credit: zetter/Getty Images

Contents