

Oil will run dry before substitutes roll out: study

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At the current pace of research and development, global oil will run out 90 years before replacement technologies are ready, says a new University of California, Davis, study based on stock market expectations.

The forecast was published online Monday (Nov. 8) in the journal *Environmental Science & Technology*. It is based on the theory that long-term investors are good predictors of whether and when new energy technologies will become commonplace.



"Our results suggest it will take a long time before renewable replacement fuels can be self-sustaining, at least from a market perspective," said study author Debbie Niemeier, a UC Davis professor of civil and environmental engineering.

Niemeier and co-author Nataliya Malyshkina, a UC Davis postdoctoral researcher, set out to create a new tool that would help policymakers set realistic targets for environmental sustainability and evaluate the progress made toward those goals.

Two key elements of the new theory are market capitalizations (based on stock share prices) and dividends of publicly owned oil companies and alternative-energy companies. Other analysts have previously used similar equations to predict events in finance, politics and sports.

"Sophisticated investors tend to put considerable effort into collecting, processing and understanding information relevant to the future cash flows paid by securities," said Malyshkina. "As a result, market forecasts of future events, representing consensus predictions of a large number of investors, tend to be relatively accurate."

Niemeier said the new study's findings are a warning that current renewable-fuel targets are not ambitious enough to prevent harm to society, economic development and natural ecosystems.

"We need stronger policy impetus to push the development of these alternative replacement technologies along," she said.

More information: Full text of study, "Future Sustainability Forecasting by Exchange Markets" -- <u>pubs.acs.org/journal/esthag</u>



Provided by University of California - Davis

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