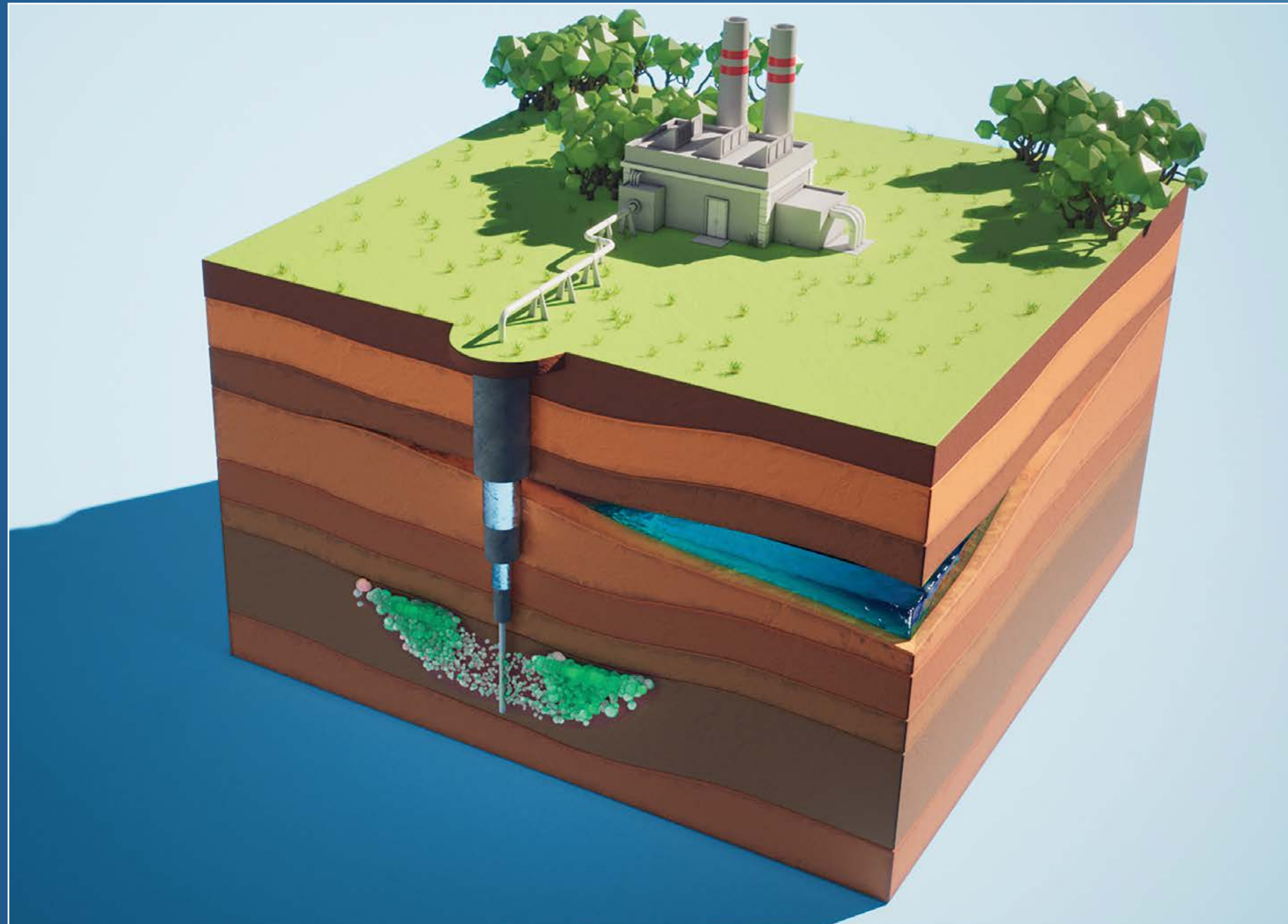


NETL-SUPPORTED PROJECT DEVELOPS DEEP LEARNING TOOL TO HELP ENSURE SAFE CARBON STORAGE

Achieves faster and more accurate real-time monitoring, identifies more seismic events and improves subsurface imaging.

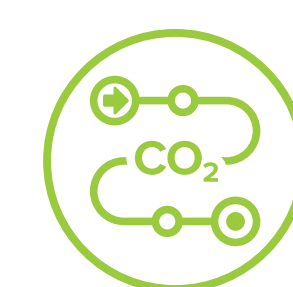


Ensuring safe carbon storage operations is key to achieving a carbon emissions-free economy by 2050.

There is a critical need to determine seismic activity — vibrations in the earth — occurring before, during or after carbon dioxide (CO₂) injection into geologic storage sites.

- Fiber-optic sensing technology called distributed acoustic sensing (DAS) shows great promise as a seismic monitoring tool, but current data processing methods do not fully realize the technology's potential.
- With NETL support, Zanskar Geothermal and Minerals Inc. developed novel deep-learning techniques using artificial neural networks to improve the detectability of DAS signals including local, regional and distant earthquakes.
- The innovative technology could help ensure safe storage of CO₂ at geologic sites.

RESEARCH PRIORITY



CARBON STORAGE AND TRANSPORT

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