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NTU study uncovers geothermal energy potential in Yishun

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SINGAPORE: A study conducted by Nanyang Technological University (NTU) has uncovered a geothermal reservoir beneath the Yishun area, presenting a new opportunity for Singapore to harness sustainable energy. The discovery marks a significant step towards diversifying the nation's energy sources and reducing reliance on fossil fuels.

The research team identified a geothermal reservoir spanning approximately two to three kilometers in diameter. It is located about 1.5 kilometers southeast of Sembawang Hot Spring. The findings suggest that the underground heat source contributes to the formation of the hot spring by warming groundwater as heat rises from deeper layers of the Earth.

To map the underground structure, researchers deployed 80 seismometers in Yishun two years ago, monitoring ground vibrations continuously for over 50 days. The collected data was then used to

generate three-dimensional images of the subsurface. Their analysis confirmed the presence of geothermal reservoirs extending from near the surface to depths of around four kilometers.

This study is Singapore's first large-scale, non-intrusive geophysical survey for geothermal exploration. Researchers emphasized its significance for urban planning, infrastructure development, and future resource management. They highlighted that geothermal energy has the potential to contribute to Singapore's clean energy transition by providing a sustainable and renewable electricity source.

Following these promising results, the research team plans to expand their study to other parts of the island to further assess Singapore's geothermal energy potential.