

Building upon existing energy systems, renewable energy technologies, including geothermal energy will play an increasingly important role locally, not only providing energy but also economic development opportunities.

In a recently published article in Canada, Future Energy Systems Director Larry Kostiuk of the University of Alberta in Canada, describes why he believes in the localized approach to energy generation.

With the Paris Climate Agreement of 2016, Canada and the other signatories of the agreement, have pledged to reduce greenhouse gas emissions. In this context the government of Canada invested C\$75 million (around US\$58 m) to launch the Future Energy Systems research initiative at the University of Alberta, which Kostiuk, an associate VP of Research at the University of Alberta leads.

The article describes that: "Having worked on the cutting edge of energy research throughout his career, he's under no illusions about how quickly a worldwide shift can happen.

Correctly stating that many of the renewable energy technologies are not offering the reliable baseload capacity – neglecting though geothermal energy in this context – he says that "No single alternative energy technology is going to reliably meet the energy needs of every society around the world, so we have a lot of work to do." Based on that he believes that a universal system needs to be replaced with custom local solutions.

Describing the billions of dollars spent on current energy systems, he says that one should leverage as much as possible of that infrastructure to help make the transition more affordable. "In Alberta we have spent decades drilling holes for oil and gas exploration, so maybe we can use some of them for geothermal power."

"Matching new technologies to real-world needs will be time-consuming but critical, because when dominant technologies change, there are typically big consequences for communities", so the article.

He sees education and research as a crucial element in this transformation and says that no "single research program can give a definitive answer about the future of energy".

Therefore, combining education with real life application of research is crucial.

Commenting on this article, the author sees that while geothermal energy could not provide the solution for every place in the world, it can be a rather important solution locally. With combined heat and power applications, geothermal energy could provide a multiple use energy solutions to many local communities and countries.

Small scale projects therefore can be a large driver and having a great impact. With no need for transmission infrastructure, localised direct use opportunities, geothermal energy can

Why the future of global energy and geothermal energy is local

provide a lower-cost energy alternative based on a local resource, while also providing local economic development opportunities through the use of hot water.

So understanding the opportunities that geothermal provides in a local context and developing smaller projects could have a tremendous local impact and also further the cause for larger scale development.

Source: thinkgeoenergy