

Fusion startup aims to help offset greenhouse gas emissions

Posted on Monday, Sep 19, 2022

A Madison-based startup called Realta Fusion aims to develop commercially viable fusion technology that could help offset global greenhouse gas emissions.

Kieran Furlong, the company's CEO, said the UW-Madison spinoff company is working to create the "lowest capital, least complex path" to fusion energy production. He discussed its plans for commercialization during a presentation held earlier this summer by the Wisconsin Alumni Research Foundation.

While its long-term goal is "grid-scale" electrical power generation, Furlong explained the company is first targeting the industrial process heat market with a small-scale fusion power plant.

"If we can come up with an alternative source of heat that works for industry, we can decarbonize for example the chemical industry and have a material impact on global greenhouse gas emissions," he said.

He noted over 80 percent of the global energy supply currently comes from fossil fuels, and even under the most optimistic projections, that number will remain above 70 percent through the 2030s.

"While transportation tends to get the most visibility, if we want to arrest climate change we really need to focus in on industrial energy use," he said. "Industry consumes almost half of our global energy, and two-thirds of that are actually used to generate process heat. So the world absolutely needs an alternative source of high-quality heat to tackle climate change."

Furlong sees nuclear fusion as the answer to that problem. He said Realta Fusion is developing a reactor "that will be a much better fit in terms of time, capital and risk" to drive the early adoption of fusion energy in private industry. It's eyeing the refining and petrochemicals market as a starting point.

Despite the technical challenges of such an endeavor, he says the cost of energy

production with Realta Fusion's technology would be competitive with current energy prices.

The company is currently in the first part of a three-phase plan for developing a commercial reactor, and aims to raise between \$80 million and \$100 million in funding over the next three years. An initial seed funding round is planned for this year, he said.

Watch a video of the presentation: <https://www.youtube.com/watch?v=aulbz5kJNAI>

-By Alex Moe