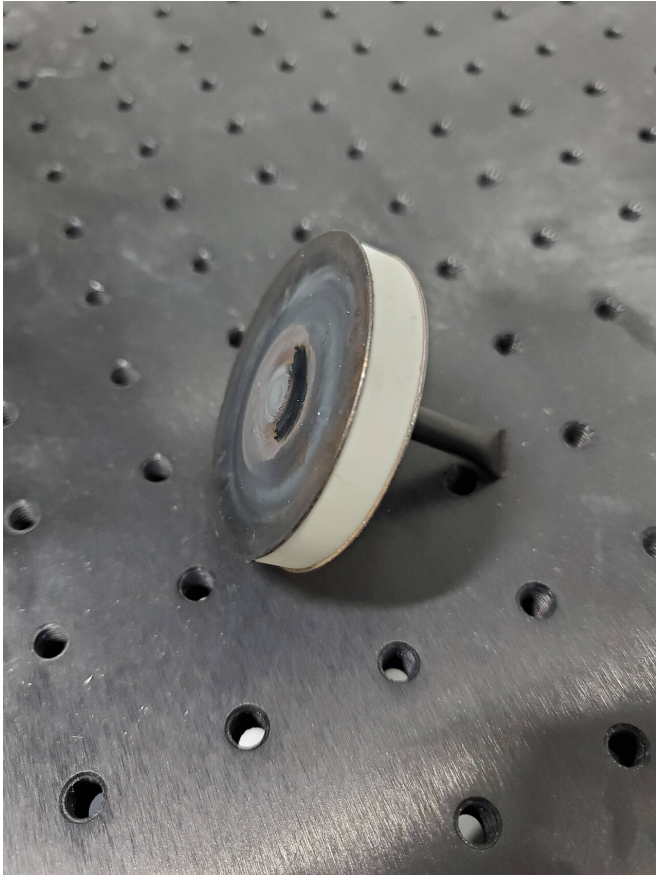


Reimagined thermionic energy technology to help reduce electricity costs

20 November 2019, by Ashley Fritz



Atlas Energy Systems, a Purdue University-affiliated startup, has built and tested standalone, combustion-fired thermionic converters. Credit: Purdue University

Energy technology can be costly and inconvenient for commercial usage due to operational expenses. Atlas Energy Systems, a Purdue University-affiliated startup, is working to create a more robust form of energy technology.

Ian Hamilton, CEO of Atlas, says he took note of the need for change within the [energy industry](#) during his time as a student in Purdue's College of Engineering. He began to reanalyze thermionic energy conversion technology that was used by

NASA in the 1950s and 1960s. From there, he used his knowledge and skills gained from the Purdue Certificate in Entrepreneurship and Innovation Program to begin developing his own business based on rethinking energy.

"Our team created a thermionic energy convertor to be more efficient and a fraction of the cost of similar past technologies," said Hamilton, who was previously selected by Forbes magazine for its annual "30 Under 30" list of outstanding researchers.

The energy convertor creates electricity from heat with no moving parts involved in the process. Hamilton said the absence of moving parts created a more solid, robust and long-lasting technology. He wants to commercialize the product as an alternative to in-home energy generators.

"The heart of it has its potential to be a platform technology used anywhere and everywhere," Hamilton said.

The Atlas team hopes to expand this concept into other forms of [energy](#) generation solutions that will grow the company into a large-scale [energy technology](#) developer.

Atlas continues to connect with alumni through the Purdue Foundry and is looking for partners.

Provided by Purdue University

APA citation: Reimagined thermionic energy technology to help reduce electricity costs (2019, November 20) retrieved 29 November 2021 from <https://techxplore.com/news/2019-11-reimagined-thermionic-energy-technology-electricity.html>

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