

First Tellurium's PyroDelta Thermoelectric Generator Shows Ability to Withstand Unprecedented Temperature Extremes

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The device's ability to operate at temperatures of 900 degrees Celsius opens many new applications and markets.

[First Tellurium Corp.](#) (CSE: FTEL, OTC: FSTTF) reports that recent tests of the PyroDelta thermoelectric generator show the device is capable of operating under unprecedented temperature extremes, far above the capabilities of currently available thermoelectric devices. The PyroDelta generator, designed and manufactured by First Tellurium's majority-owned subsidiary PyroDelta Energy, has produced electricity while withstanding temperatures of 900 degrees Celsius (1650 degrees Fahrenheit) with no breakdown of materials.

"The ability to operate under temperatures of 900 degrees allows this device to generate power for pretty much any industrial or technological application," said PyroDelta Head Engineer Michael Abdelmaseh. "Successful operation at even 600 degrees Celsius would cover the most extreme industrial application I can think of. As far as I know, any other commercially available thermoelectric device would disintegrate at these temperatures."

Abdelmaseh noted that currently available thermoelectric devices break down and even melt at temperatures of approximately 150 degrees Celsius.

PyroDelta has published a new video demonstrating the device's tolerance of direct heat from a propane torch, while also showing how quickly a standard thermoelectric module breaks down under much lower heat from a hot air soldering gun.

"The generator's durability opens up many potential applications and markets where waste heat at high temperatures could be deployed to produce a steady and dependable supply of clean, renewable power," said Abdelmaseh. "This allows us to explore generators for major heat-producing industries such as industrial furnaces and kilns."

Utilizing Waste Heat from Data Centers

"As a result of the December article about PyroDelta in USA Today, we are receiving inquiries from a range of energy-intensive industries," said First Tellurium President and CEO Tyrone Docherty. "Most intriguing for us has been the interest shown by companies involved with AI and cryptocurrency data centers, which consume enormous amounts of energy while generating a lot of waste heat. We believe PyroDelta's generators could harness some of this heat, save the data centers money, and provide supplemental power that reduces the strain on energy grids."

Focused on AI and Automobile Sectors

Added Docherty, "While we now have a growing list of markets to explore, our current focus is to deliver working prototypes for AI data centers and, as reported last year, the thermoelectric radiator/generator designed to replace automobile alternators.

PyroDelta's thermoelectric radiator/generator generates electricity from the heat differential of hot liquid passing through a thermoelectric pipe while air cools it from the outside.

"Our goal is to demonstrate an installed, working prototype of the automobile generator sometime in April 2025," said Docherty. "This application has become increasingly important, and urgent, with the headwinds now being faced by the EV industry. Any meaningful savings in gasoline consumption should become crucial to automakers for years to come."

Biden's Executive Order to Support AI Data Centers

Regarding applications for utilizing waste heat from AI data centers, Docherty noted that on January 14, U.S. President Joe Biden signed an executive order to provide federal support for the massive energy needs of AI data centers. In announcing the order, Biden stated: "... the volumes of computing power and electricity needed to train and operate frontier models - a term for the most advanced AI models available - are increasing rapidly and set to surge even more."

Said Docherty, "One aspect of AI that really excites us is that Canada and the northern U.S., with their colder climates, are emerging as ideal locations for building data centers. Cold climates offer higher temperature extremes, which enhance the effectiveness of the PyroDelta device."

Stock Option Grant

First Tellurium also announces it has granted 1,700,000 incentive stock options to directors of, and consultants to, the Company, exercisable at a price of \$0.15 per share for a period of 10 years.

About First Tellurium Corp.

First Tellurium's unique business model is to generate revenue and value through mineral discovery, project development, project generation and development of tellurium-based technologies.

First Tellurium is listed on the Canadian Stock Exchange under the symbol "FTEL" and on the OTC under the symbol "FSTTF". Further information about FTEL and its projects can be found at www.firsttellurium.com.

On behalf of the board of directors of

For further information please contact:

First Tellurium Corp.

Tyrone Docherty

"Tyrone Docherty"

604.789.5653

Tyrone Docherty

tyrone@firsttellurium.com

President and CEO

X/Twitter:

<https://twitter.com/TelluriumCorp>

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