

NEWS >>>

First Tellurium Subsidiary PyroDelta Energy Launches Manufacturing of Game-Changing Thermoelectric Crystals

Florida-based facility employs proprietary process to build custom-designed, custom-built bismuth telluride crystals that set new industry standards for flexibility, conductivity and durability.

Vancouver, BC, Canada, February 12, 2026 – First Tellurium Corp. (CSE: **FTEL**, OTC: **FSTTF**) announces that its majority-owned subsidiary PyroDelta Energy Corp. will produce and sell high-end bismuth telluride crystals for thermoelectric manufacturing. The Florida-based facility employs PyroDelta's [Capillary Casting](#) process (patents pending) to build crystals that are custom-designed, free of defects, highly conductive and far more robust than anything available on the market today.

"We are the only company offering bismuth telluride crystals with this level of quality and flexibility to the growing thermoelectric industry," said PyroDelta Head Engineer Michael Abdelmaseh. "It is a game-changer. Our proprietary process resolves long-standing issues and constraints, including supply vulnerabilities from China, for manufacturers of thermoelectric devices in North America and beyond. I am confident our crystals will set a new standard for the industry."

PyroDelta sources its raw materials, including high-purity refined tellurium and bismuth, from reliable North American sources. This advantage resolves supply concerns related to import restrictions and shortages.

A video interview with Abdelmaseh, available [here](#), provides more details and context on the significance of PyroDelta's process and product.

"This is an initiative we have been working on quietly, behind the scenes, for some time," said First Tellurium President and CEO Tyrone Docherty. "I encourage our shareholders and anyone in the thermoelectric industry to view the [video](#) to understand the implications of what PyroDelta has accomplished and why we're so excited about it."

Telluride bismuth crystals, the key component for most thermoelectric devices, come primarily from China. They are built using the Bridgman Process, which leaves inherent defects in crystal alignment, resulting in long-standing inefficiencies for thermoelectric devices. Additionally, manufacturers must then endure a complicated, multi-step process to incorporate the crystals into their devices.

Traditional Inefficiencies Bypassed

"This is a compromise and inefficiency we have always been told to accept in the thermoelectric industry," said Abdelmaseh. "But not anymore. We have bypassed these inefficiencies and steps. Our process allows us to grow far more robust crystals, then mold them into any shape—simple or complex—that a manufacturer requires. We are the only crystal manufacturer able to provide these advantages. There is no cutting, no soldering, and no misalignment of crystals, allowing us to deliver the highest conductivity

with the least waste. We also end up with a product that has a much lower resistivity to electric current, lower than any other crystals available on the market.”

Abdelmaseh added that these advantages will save manufacturers money and open new applications for them. “They are no longer limited in their designs of thermoelectric devices, and our product will result in a whole new standard of quality and durability,” said Abdelmaseh. “It’s also important to note that we have created the first economical, and readily available, modules that can withstand [very high temperature extremes](#).”

Thermoelectric Tubes

The Capillary Casting process is the advantage that allowed PyroDelta to create the thermoelectric industry’s first practical and economical [thermoelectric tubes](#). These devices harness waste heat from hot liquid and open many new markets, including AI and crypto mining data centers. Additionally, prototype thermoelectric tubular radiators have demonstrated the ability to harness waste heat from combustion engines and replace power-draining alternators.

“The industry has tried to create efficient and practical tubes for many years,” said Abdelmaseh. “Now, with the Capillary Casting process, we have achieved that milestone. Really, any industry that produces hot liquid and needs cooling could benefit from our tubular generators,” said Abdelmaseh. “AI and crypto mining data centers offer the biggest market at this time, and we are in discussions with data center providers to move this market forward for us.”

Another major market for PyroDelta’s conventional generators is solar power. The devices can generate power from temperature differentials, whether hot or cold, on solar panels during low-sunlight days or even at night.

“Even if a panel is covered in ice—and in fact that becomes an advantage—our devices can generate supplemental power,” said Abdelmaseh. “But they can also provide added power when solar panels get very hot and inefficient.”

Focused on High-Value Applications

“All of our research and development has been based on careful, patient science and testing for thermoelectric technology,” said Docherty. “As a result, PyroDelta has built the most effective, and cost-effective, devices on the market today. To date, we have focused on putting our test devices in high value applications to ensure the technology’s viability.”

For example, PyroDelta has conducted a pilot program for supplying supplemental power to high-payload drones. The company has entered the U.S. Defense Department [DARPA Lift Challenge](#) competition, which will take place later in 2026. Abdelmaseh has led a team designing and building a drone that will lift at least twice its weight, which is the minimum standard to enter the competition. After entering the competition, PyroDelta received numerous offers to collaborate with other companies. However, Abdelmaseh has chosen to remain independent with its entry.

“I want to emphasize that we do not plan to become drone manufacturers,” said Abdelmaseh. “We will focus on providing the thermoelectric generators to make them more efficient. Really, this is to showcase how our device can work with an innovative drone design to extend both carrying capacity and range. I’m confident our design will be very competitive, and I’m excited to show it off.”

Thermoelectric manufacturers are encouraged to contact PyroDelta at info@pyrodelta.com for more information, or visit the company's website at www.pyrodelta.com.

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 Securities 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
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