

# Enertopia Provides Technology Update

Kelowna, British Columbia--(Newsfile Corp. - January 12, 2023) - **Enertopia Corporation** (OTCQB: ENRT) (CSE: ENRT) ("Enertopia" or the "Company") a company focused on building shareholder value through a combination of our Nevada lithium claims, intellectual property, & patents in the green technology space, is very pleased to provide the following technology update.

## Energy Management System

Our most advanced technology, and the one that will be available for sale first, is our non-provisional patent USPTO # 17,979,696 filed on November 2, 2022. We are currently in the permitting & insurance paperwork phase and are expecting initial sales to begin by the end of February of this year. Our plan for sales & the recurring revenue of a monthly monitoring fee subscription service will be outlined in future press releases. Enertopia owns 100% of the technology and a 51% interest in the selling Joint Venture called CapNtrack.

We are also in the final prototype build out phase for non-provisional patents Solar Energy Collector System USPTO # 17/751,300 filed on May 23, 2022. Heat Recovery System USPTO # 17/751/305 filed on May 23, 2022 and Water Producing System For A Liquid Transfer Mat USPTO # 17/888,320 filed on August 15, 2022. We expect all three of these systems to be up and running by the end of February 2023.

Additionally, our patent attorneys have informed us that our two newest provisional patent applications have been submitted to the USPTO Heat Recovery and Dissipation System USPTO # 63/387/631 filed on December 15, 2022 and Expandable Thermal Energy Storage System USPTO # 63/478/038 filed on December 30, 2022. We will have until late December 2023 to file the non-provisional patent applications with the USPTO on the above two provisional patents.

## Technology Potential

This technology could allow us to create a closed system loop where only solar energy is used to both start and complete the lithium solutions processing. This will be done by taking the excess heat from solar panels, and using it to heat a lithium brine solution to the desired ambient temperature of 122F to 140F for the 3 - 4 hour processing cycle. Any excess process water will be kept in insulated storage tanks for use as new batches of lithium solution begin processing. Additionally, excess PV production will be stored by batteries and controlled by a BMS (Battery Management System).

As Enertopia moves forward towards our goal of creating a low carbon pilot plant, we realized that there were certain inefficiencies associated with PV panels which could be used to our advantage while processing the lithium claystone found on our claim. In particular, we found that the PV panels are subject to significant heat stress as temperatures rise. Manufacturers generally rate PV panels at a temperature of 77F, while field work in the desert of Nevada showed temperatures on the back of the panels regularly exceeding 140F, damaging the PV panels (resulting in a shorter life span) while also losing significant output. Our patent application directly addresses this issue.

Our patent filings are the result of our continued diligence in striving for a more economically and environmentally friendly way to extract energy from waste heat and we believe these systems will have useful applications in residential, commercial and mining applications.

## The effect of temperature on solar panel efficiency

As with most electronic equipment, excess heat can be a killer and solar panel arrays are no different. The performance of solar panels declines as they heat up, and decreased power output is the result. The industry manufacturers rate their products' susceptibility to increasing panel temperature, where it is standard practice to test solar panels for power output at 77 °F. So, if a panel is rated to have a

temperature coefficient of -0.50% per 1.8°F above 77 °F, that panel's output power will decrease by half of a percent for every 1.8F degrees the temperature rises above (77 °F). With it being common for PV panels to reach temperatures of 137F, a solar array being 60F into the heat stress zone would equal a decrease of 15% or more on the solar array output.

Other aspects of heat stress include heat fatigue causing permanent PV cell failure, string loss downtime and 100% production loss.

With over 1.2TW (Terawatts) of worldwide PV installed capacity, and another 100 Gigawatts of PV capacity coming online per year, the inefficiencies that are currently experienced due to overheating are quite extensive, and expensive. As the world transitions to a low carbon-based energy system we feel that there is a large untapped market for the Enertopia technology beyond just the processing of lithium claystone. Our technology has been designed so that it can be retrofitted onto existing PV panels, and we are confident that our upcoming trial run at the 3 megawatt solar array will validate the results we have seen in our own field experiments.

### **Expected benefits of using the Enertopia Technology:**

- A Potential increase of >10% or greater on an annual basis in electrical PV system output
- Removal of panel heat stress, which is a major contributor to below nameplate output and panel failure.
- Substantial Increase in PV System lifetime, thus improving the ROI for all users from home use to utility scale solar projects.
- Energy Management System (EMS) can Capture and Track current, voltage, temperature, pressure, or flow data from any AC or DC system VDC and VAC, temp, on or off grid.

"Our technical team continues to evaluate synergistic opportunities and we expect two more patent pending filings by the end of calendar year 2023," stated CEO Robert McAllister. "Enertopia has made great strides forward in the last year by continuing to develop and expand our Green Technology has resulted in several opportunities that we continue to investigate in improving mining and society at the same time."

### **Conclusion:**

We continue to believe that being more efficient in energy capture and storage is the smartest thing we can do as a Society. 2022 was another record year for temperatures in the world and our reliance on carbon energy by bad actors around the world is showing us the human and financial cost of not transforming our society to a more balanced carbon neutral World.

### **About Enertopia:**

A Company focused on using modern technology on extracting lithium and verifying or sourcing other intellectual property in the EV & green technologies to build shareholder value.

Enertopia shares are quoted in the United States and Canada under ticker symbol ENRT. For additional information, please visit [www.enertopia.com](http://www.enertopia.com) or call Robert McAllister, the President at 1-888-ENRT201.

This release includes forward-looking statements within the meaning of Section 27A of the Securities Act of 1933, as amended, and Section 21E of the Securities Exchange Act of 1934, as amended. Statements which are not historical facts are forward-looking statements. The Company makes forward-looking public statements concerning its expected future financial position, results of operations, cash flows, financing plans, business strategy, products and services, potential and financing of its mining or technology projects, growth opportunities, plans and objectives of management for future operations, including statements that include words such as "anticipate," "if," "believe," "plan," "estimate," "expect," "intend," "may," "could," "should," "will," and other similar expressions that are forward-looking statements. Such forward-looking statements are estimates reflecting the Company's best judgment

based upon current information and involve a number of risks and uncertainties, and there can be no assurance that other factors will not affect the accuracy of such forward-looking statements., foreign exchange and other financial markets; changes in the interest rates on borrowings; hedging activities; changes in commodity prices; changes in the investments and expenditure levels; litigation; legislation; environmental, judicial, regulatory, political and competitive developments in areas in which Enertopia Corporation operates. There can be no assurance that the testing for the brine recovery system will be effective for the recovery of Lithium and if effective will be economic or have any positive impact on Enertopia, or that current talks with respect to potential joint ventures or partnerships will result in definitive agreements. There can be no assurance that the four pending patents will become patents and have a positive impact on Enertopia. There can be no assurance that provisional patent applications will become patents pending. The User should refer to the risk disclosures set out in the periodic reports and other disclosure documents filed by Enertopia Corporation from time to time with regulatory authorities.

*The OTC and CSE has not reviewed and does not accept responsibility for the adequacy or accuracy of this release*

**Enertopia Corporation**

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