



# AESOP Energy LLC

## Executive Summary

June 20, 2016

**AESOP Energy, LLC is a start-up technology development Holding Company** located in Sebastopol, California, USA, designing revolutionary, clean, effective, and economically viable 24/7 alternatives to existing mobile and fixed power generating equipment that can replace fossil fuels fast and supersede intermittent solar and wind systems. Our technology includes Fuel-Free engines and Geomagnetic Generators. **Two subsidiaries are planned.** The first, **Fuel-Free Energy Inc.** is expected to rapidly help supersede combustion or nuclear fission for transportation and power generation. AESOP's energy breakthroughs will enable dispersed power sources to replace fuel burning engines and supplement electric power grids. Fuel-Free Energy's customers will include engine and car manufacturers and firms involved with wind and solar energy systems. The second operating subsidiary, **Ultraconductors Inc.** will develop and market the world's first practical room temperature superconductors. The Business Plan is available.

### **FUEL-FREE ENERGY:**

AESOP scientists have so far invented seven engines requiring no fuel. All of these engines will run on atmospheric heat, an untapped source of stored solar energy that far exceeds all of the potential energy of Earth's fossil fuels. Aesop Energy, LLC, is prototyping the first two of four piston engines that will utilize ambient heat of the environment as the energy source.

**Conversion of a small Briggs & Stratton gasoline engine and a Mitsubishi-Chrysler V6 engine to Fuel-Free operation is in process. Ford and Kia engines have been converted by Chris Hunter, utilizing propane as an internal refrigerant. His brilliant accomplishment proved that atmospheric heat could replace fuel. (See pages 11-15 under NO FUEL PISTON ENGINES on the website for details). Fitted with a high-power alternator, the Kia engine will be independently certified. AESOP's team has invented improved methods to convert conventional engines. Following conversion of the Fuel-Free small Briggs & Stratton gasoline engine and Mitsubishi V6 engine prototype, AESOP will build a Rauen 4 cylinder Fuel-Free piston engine that needs no propane refrigerant. Most components can eventually be 3D printed. A 4 cylinder prototype will deliver several hundred watts to prove the concept. Commercial gen-sets rated at 1 kW and 10 kW will follow. Fuel-Free engines are expected to initially power gen-sets to at least 100 kW. A converted locomotive engine can exceed 4 MW.**

The Second Law of Thermodynamics (2LT), which essentially states it is impossible to completely convert heat into work, has bounds or limits beyond which the "law" does not apply, for example, under circumstances where the conversion of atomic and molecular motion (heat) into work is not random. Heat conversion need not rely upon randomness.

Rauen experimentally verified a thermodynamic process proposed by Wayne Proell, which he named: "the Proell effect." It is the complete energy transfer analysis of the constant volume (isometric) process of classical thermodynamics as applied to displacement and regeneration, found in the Stirling Cycle. Conventional thermodynamics had no reason to study the details as Proell did. Classical thermodynamics missed this opportunity. The upshot of the Proell effect is that thermal energy is transferred across macroscopic distances (greater than the mean free path of a gas) by molecule-to-molecule collisions across temperature gradients without work input to the process. This circumvents the randomness of the 2LT. The results of this theoretical and experimental work were published in Infinite Energy magazine. A research paper, as well as related material, is posted under SECOND LAW SURPRISES on the AESOP website. A technical WHITE PAPER is available.

Rauen patented a series of thermodynamic cycles (US #6,698,200) and designed and built a prototype of an engine concept that embodies the Proell effect. The prototype did not run due to poor piston seals and excessive friction of its moving parts. Pressure instrumentation of the motored engine showed the theoretically identified cycle was occurring, but work generated did not exceed losses. Instrumentation showed the process did work. The science was right, but the engineering was wrong. A different mechanical configuration was needed for practical engines. Rauen gave lectures about his work on the Proell effect and its application in heat engines at four international science conferences and will give another this month. Physics professors attended all four. None found flaws. From a practical point of view, it has passed peer review. Several mathematical proofs exist.

Patents covering Fuel-Free engines are in process. All patents will be assigned to Aesop Institute and licensed exclusively to Aesop Energy, which plans to sublicense. They cover breakthrough innovative energy technologies. Filings will follow worldwide. Aesop is developing prototypes to validate, refine, and improve upon theoretical predictions. Initial prototype performance has proven our technical concepts not only viable, but tremendously promising. **Acquisition of two synergistic small firms to provide motors and generators will provide early cash-flow.** Another proprietary technology, covered by several domestic and international patents, is polymer Ultraconductors. Additional patents will be filed and acquired. Ultraconductors are polymer equivalents of room temperature superconductors. Aesop also plans to develop non-polymeric room temperature superconductors.

### **GEOMAGNETIC GENERATORS**

AESOP Energy LLC is prototyping a proprietary 24/7 Alternating Current generator based on unique theory and an accidental discovery. Preliminary test results suggest the possibility of an entirely new approach to solid-state production of electricity utilizing magnets. Early prototypes are under construction. A 1 kW generator may fit in a box 18" x 24" x 12". Multiple modules can be employed for greater power output. It may prove a 24/7 AC alternative to solar panels, useful in any building, including rentals and high-rise. It could provide on-board Electric Vehicle recharge. **AESOP anticipates commercial development will follow in Fuel-Free Energy Inc.**

### **ULTRACONDUCTORS:**

AESOP's team will commercialize room temperature superconductors - opening the next industrial revolution. Early products include tape, wire, motors and generators. Ultraconducting Magnetic Energy Storage will provide a unique alternative to chemical batteries. Earlier AESOP Institute affiliated firms successfully completed four Small Business Innovation Research (SBIR) Contracts. All AESOP Ultraconductors will be usable well above 200 degrees F. No refrigeration required.

**AESOP's team includes a dozen individuals** with experience in managing design, development, and test of complex systems. Subsidiaries will work in partnership with corporate allies and subcontractors to bring diverse skills to focused, coordinated projects. Mark Goldes has decades of experience exploring potential breakthroughs in energy technologies. He raised more than \$10m in Angel and DOD funding for prior AESOP Institute affiliated firms. Ken Rauen, AESOP's Chief Technical Officer, is the author of: An Introduction to Temporal Wave Mechanics (TWM); an alternative to the Standard Model of particle physics. Copies are available upon request.

**AESOP Institute seeks a total of \$50,000 in Convertible Loans at this time to rapidly complete prototypes. AESOP ENERGY LLC will have initial capitalization of \$5m USD. This Holding Company will prove inventions practical; then move them into either of the two planned subsidiaries: Fuel-Free Energy Inc. and Ultraconductors Inc.**

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