



## 2018 - Applied Energetics Quick Summery

Applied Energetics, Inc., based in Tucson, Arizona, specializes in development and manufacture of advanced high-performance lasers, high voltage electronics, advanced optical systems and sensors, and integrated guided energy systems for defense, aerospace, industrial, and scientific customers worldwide. Applied Energetics pioneered and holds all intellectual property rights to the development and use of Laser Guided Energy (LGE) technology, including related solutions for commercial, defense and security applications.

- ❖ **Applied Energetics (AE) was founded in 2002 as Ionatron and is the creator of Laser Guided Energy (LGE), a multi-dimensional and transformational directed energy technology. Early work was primarily on 'confidential' projects for the Department of Defense (DoD) and CIA.**
  - The company booked over \$86 million in revenues during its first 8 years, starting in 2002.
  - AE went into corporate shell status in 2014 to preserve capital and IP due to government budget cuts.
- ❖ **Applied Energetics emerged from shell status as a normal operating company in April of 2017**
  - During the first quarter of 2018 a victorious proxy vote elected and installed a new 3-man Board of Directors. The board members are original *cofounder, President and CEO* Thomas C. Dearmin, Jonathon Barcklow and Brad Adamczyk. Thomas Dearmin was then appointed new CEO.
- ❖ **LGE and Laser Induced Plasma Channel (LIPC) are privately funded transformational technologies.**
  - Applied Energetics owns all LGE Directed Energy Intellectual Property including uses for DoD.
  - LGE is a unique and rare ownership circumstance of a multi-dimensional Directed Energy technology.
  - Current opportunities include DoD, emerging Manufacturing 4.0, Additive and Internet of Things (IoT).
- ❖ **AE Leverages over \$150 million (all sources) already invested in R&D.**
  - The company has approximately \$59 million federal tax loss carry and \$5.3 million AZ state tax loss carry.
- ❖ **AE was awarded 25~ patents, with 11 more labeled as 'Government Sensitive Patent Applications' (GSPA), held under secrecy order of the U.S. government.**
  - The GSPA's carry special ownership holding rights to the holder (Applied Energetics) and are held under secrecy order of the government, which by definition are reviewed every year by the government agency that classified the application. This process also allows greatly extended protection rights, additionally the classified patents have no expiration date until such time as they are no longer classified, after which they have the normal 17-year patent protection.
- ❖ **LGE Energy Transfer and Ultra-Short Pulse technologies fit perfectly into GE's pathway of 'Innovation in Manufacturing 4.0 and Technology 4.0' as transformative technologies of the future.**
  - GE says "new technologies and business models have the manufacturing industry on the verge of an innovative new period that promises greater productivity and the potential for lower costs".
  - Manufacturing 4.0 and Technology 4.0 include cheap and ubiquitous sensing, novel new Perovskites for Optoelectronic applications including solar and LED lighting, additive and 3-D processes including very large 3-D printers, and sophisticated analytics tools to process that data via a connected network of the *Industrial* Internet of Things (IIoT). These are some of the critical elements in next generation manufacturing 4.0 technologies. Applied Energetics feels it will have a strong presence in this space.
- ❖ **Internet of Things (IoT) are advancing rapidly and indicate an explosive growth period ahead.**
  - IoT integrates well with AE's related advanced technologies and offers many novel opportunities.
- ❖ **Blockchain is an early stage technology that is quickly evolving, offers tremendously diverse uses.**
  - Once integrated into AE's IP and Technology, it is expected to provide secure, traceable and highly efficient novel solutions to real issues with commercial & defense environments worldwide.
- ❖ **Applied Energetics sits in an opportunistic position.**
  - R & D activities have resumed in Tucson, AZ; business plan in place for added operations and personnel.