WHY GEI Global Fuel Cell Electric Power Systems?

- The GEI GLOBAL X5 Fuel Cell is an Electric Power generation system that produces electricity with no moving parts with by-products of heat and water. It operates on affordable natural gas or bio gas and does not need or require pure hydrogen to produce electric power like traditional fuel cell systems. This is a significant distinction between fuel cell systems up to 100kW such as those used for automotive vehicles, busses, fork lift trucks, and consumer electronics such as computers and cell phones; all of which require pure hydrogen.

- Only fuel cell electric power system specifically developed to leverage the abundant availability of affordable natural gas within the world-wide electric power market for mid-range (5kW-100kW) commercial real estate and stationary power applications. This market is 20X in both size and potential revenue as compared to any other specific fuel cell application market. By 2020, $206 billion will be invested annually in the global electric power industry, with distributed power applications accounting for 42%.

- The GEI Global X5 is an innovative hybrid electric power generation system in that it is the only alternative energy technology that integrates fuel cells, batteries, and, solar energy and wind, to leverage the advantages of each and thereby resulting in high overall system efficiencies and a reduced power cost and footprint.

- As compared to a diesel electric generator that always operates at 100% load constantly and wastes fuel, the GEI X5 provides power on-demand and operates at 44% efficiency on natural gas as compared to 18% for a diesel electric generator. Additionally, harmful toxic emissions are reduced by 80%, noise and vibrations by 90%, and life cycle maintenance cost are reduced by 60%.

- Only fuel cell electric power generation system specifically developed to integrate a mid-temperature high heat capacity mineral oil cooling fluid at 160C for super-efficient (93%) combined heat and power (CHP) operations operating on natural gas. This is also a perfect operating temperature and medium for a cogeneration thermal electric Rankine power system.

- Only Fuel Cell Electric Power Company providing mid-range clean power solutions for commercial real estate in the range of 5kW-100kW using natural gas/bio-fuel or hydrogen as a fuel source. Commercial application examples include condominiums, schools, restaurants, hospitals, Starbucks, McDonalds, governmental waste water and bio gas facilities, oil and gas industries, hospitality industries, electric vehicle charging and other customer intensive organizations focused on operating cost reductions.

- Only fuel cell electric power system specifically developed to eliminate the flaring and burning of methane and natural gas for the oil and gas industry and thereby providing well-head power generation. The. U.S. Energy Information Agency states that North Dakota, as an example, flared 1/3 of the natural gas produced, or approximately 96 billion cubic feet in 2014. According to an Earthworks report, the flaring was equivalent to the C02 emissions of 1.1 million cars and trucks and resulted in $854 million in loss state revenue[i], 2010-2013. Considering the expansion of natural gas hydraulic fracturing, the availability of the GEI X5 modular fuel cell electric power generation technology is poised to capture a $100 billion worldwide distributed well-head power generation and grid distribution global market.

- Only fuel cell power system specifically developed to integrate seamlessly with other energy storage technologies such as batteries and ultra-capacitors, and other alternative energy generation technologies such as solar, wind, geothermal, and tidal energy, etc.

- The GEI GLOBAL X5 Fuel Cell Electric Power generator represents a distributed or scalable micro-power fuel cell technology and is a philosophy shift from a centralized monopoly of utilities, and toward open, competitive markets, which is revolutionizing a $950 billion industry world-wide. In addition to being economical when mass-produced, modular systems can be adjusted to match the scale of demand, and can be installed far more quickly than a centralized power station. Micro power can improve the grid reliability by reducing demands on transmission systems (*which are often at overcapacity and experience 30%-40% degradation and loss in developing countries*) and can avoid costly investment in new power plants. And smaller distributed systems can facilitate more local control over power use, contributing to economic development within the community and reducing reliance on distant institutions.

[i] http://midwestenergynews.com/2015/09/09/fuel-added-to-flaring-fight-in-north-dakota/