

# PTC Awards Entry

## Plug Power GenCore 5T

Submittor:  
**Jeffrey Zemsky**

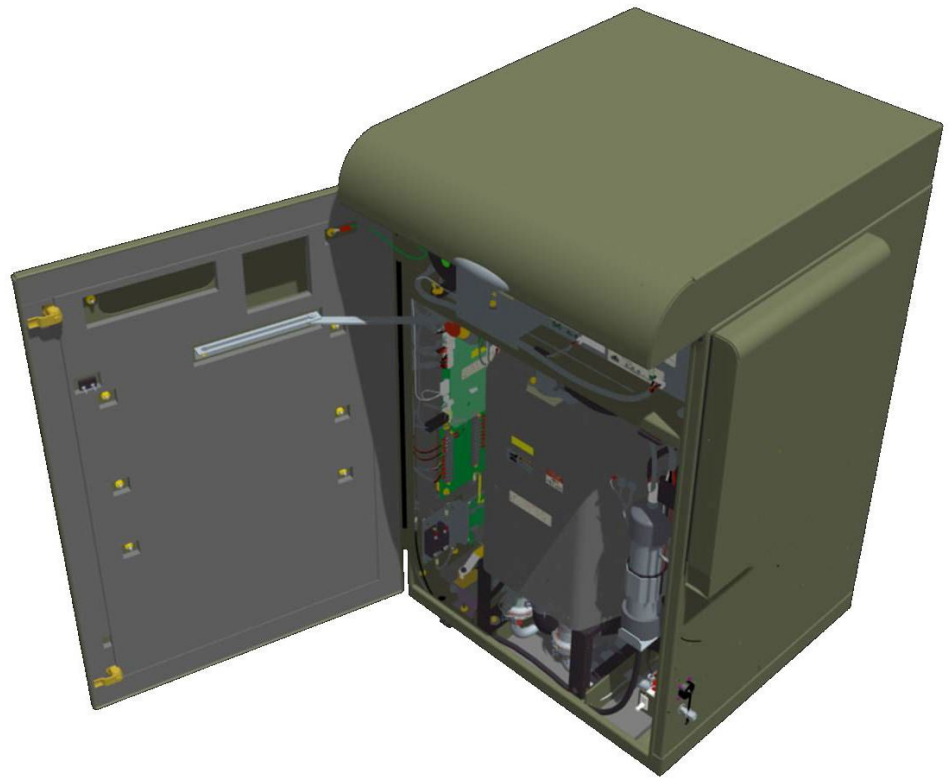
Team Members:  
**GenCore Team**

Company:  
**PLUG POWER L L C**

Country:  
**United States**

Category:  
**High-Tech Electronics**

PTC Product(s):  
**CAD**  
**Structural, Thermal, Motion**  
**Windchill**  
**Data Management**  
**Pro/ENGINEER**



High-performance fuel cell system solution, used for the critical data backup power needs of the Telecommunications market. Utilizing Pro/ENGINEER's data sharing capabilities as well as tapping into the full design spectrum (piping, cabling, sheet metal) helped Plug Power improve design cycle time. The GenCore® 5T was designed in 80% of the time taken for the previous generation product though it contains almost 100% new design content. Additional benefits have been seen in our change process with a 66% reduction in the time required to process Fast track ECNs with 54% reduction in the number of Fast track changes over 3.5 days.

The innovation is in how we supply power to our customers. Our on-site energy system is based on the proton exchange membrane (PEM) fuel cell. Unlike traditional technologies which can be maintenance-dependent and unpredictable, ultra quiet GenCore® systems provide reliable backup power over a wide range of outdoor environments with zero emissions. Presently, critical remote wireline and wireless equipment are supported through a power interruption by Valve Regulated Lead Acid (VRLA) batteries. Though offering a low first cost, VRLA systems can be unpredictable, hazardous, and expensive to maintain. Plug Power GenCore® systems are expected to offer an alternative solution, providing high reliability, lower life-cycle cost, and efficient operation. By utilizing PEM technology GenCore® is free of the need for costly and hazardous batter replacements. This also gives the GenCore® a reliable known run time that can be extended through fuel bottle replacement.