Smart Grid Library

Fremont: The Smart Address for Smart Grid Companies

The Smart Grid encompasses a wide range of technologies that modernize our existing electric, gas, and water grids, presenting a multi-billion dollar market opportunity for companies with innovative solutions. The City of Fremont offers many built-in advantages for Smart Grid companies seeking a Silicon Valley location. From its entrepreneurial spirit proven in the highest number of per capita startups in Silicon Valley, its educated workforce, its flexible workspace and its business-friendly government, Fremont offers unique opportunities to new and existing companies.

Fremont has a thriving Smart Grid ecosystem of local companies to help grow businesses that are focused on solutions in electricity generation, transmission, distribution, and/or consumption.

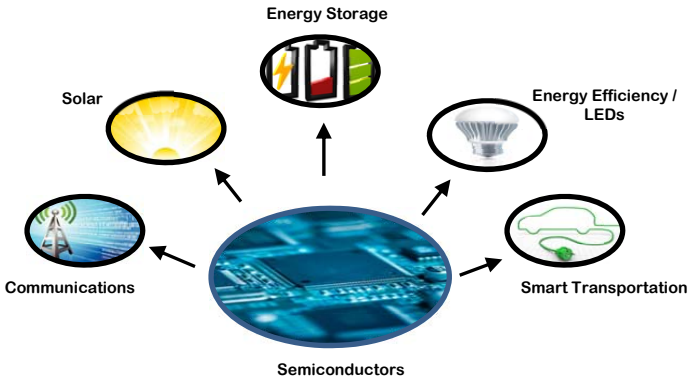

Figure 1: Fremont Smart Grid Ecosystem

Semiconductors are the DNA of the Smart Grid. A wide range of microprocessors, sensors, and integrated circuits are embedded in Smart Grid solutions. Fremont has an impressive number of semiconductor firms engaged in design, manufacture, and other business operations that can successfully partner with small startups and established multinationals to develop and deploy new Smart Grid innovations. The inverters market alone is projected at upwards of $7B in the next few years. Fremont companies specialize in:

- Advanced precision contract manufacturing
- Engineering and test services
- Product lifecycle management

Communications comprise the backbone transmitting information from embedded intelligent components and sensory networks for the Smart Grid, translating to a short term $13B market opportunity. Fremont has a complete wireless and wireline technology ecosystem within its city limits that can contribute specialized skillsets for custom design, manufacture, and marketing support to businesses. Fremont companies are focused on services and technologies in:

- New product introduction
- Advanced precision contract manufacturing
- Test equipment and services

Solar technologies are well represented in Fremont. State and local initiatives, along with innovative technologies and financing solutions will propel this market beyond the $11.5B mark achieved in 2012. The Fremont city government is experienced in working with local solar innovators to expedite rooftop permits for pilot deployments of new equipment, in addition to encouraging a healthy ecosystem that includes:

- Complete supply chain from microprocessor manufacturing to distribution
- Materials and precision component manufacturing expertise
- Product lifecycle management

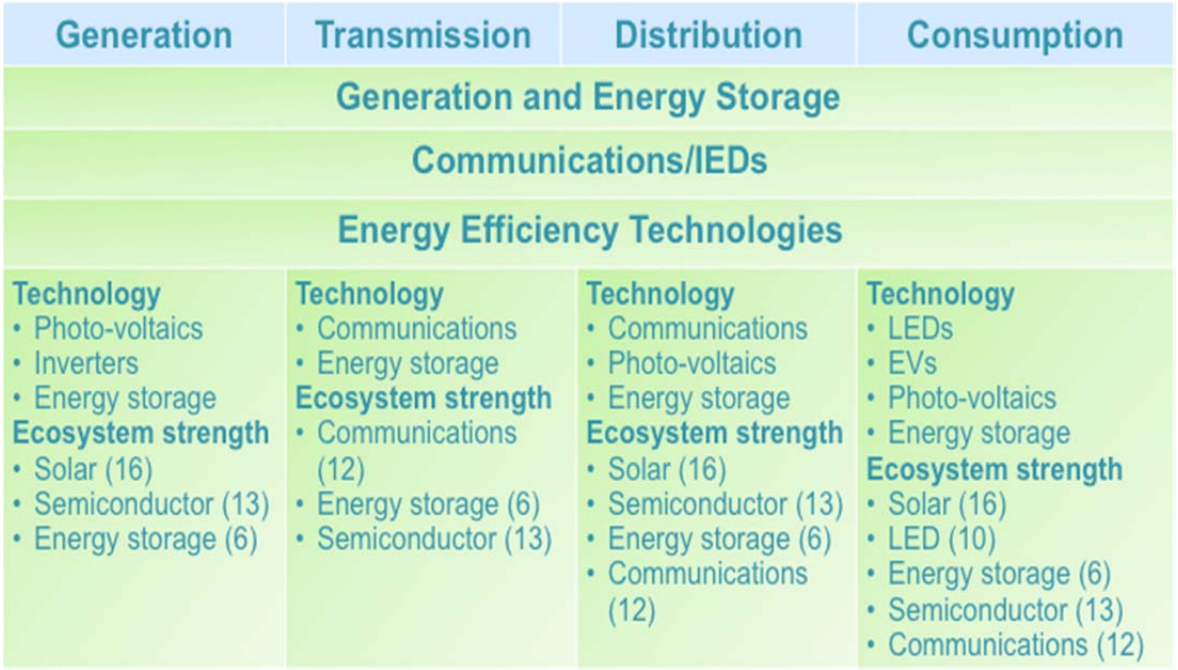

Figure 2: Ecosystem Representation in the Smart Grid Value Chain

Along with these well-established Smart Grid business categories, Fremont has exciting growth in companies focused in

- Energy storage
- Energy efficiency/energy harvesting and light emitting diodes (LEDs)
- Smart Transportation

The market opportunities in these sectors add up to over $120B by 2017.

Energy storage technologies have a natural synergy with renewable technologies like solar. Energy storage companies appreciate Fremont's close proximity to San Jose State's "Battery University" and the related CalCHARGE Initiative. The city government is also experienced in working with local businesses to accommodate a variety of chemical manufacturing processes for prototyping and manufacturing purposes.

Energy efficiency, energy harvesting, and LED technologies are extremely reliant on high quality, precision-crafted microprocessors and innovations in power consumption and heat dissipation. Fremont's focus on materials sciences and semiconductors make it a natural destination for companies seeking the best environment to grow these businesses.

Fremont-based Tesla incorporates multiple microprocessors and communications technologies combined with energy storage and energy harvesting solutions in its cars. Smart Transportation is an exciting sector that has excellent potential to become Fremont's next big business focus within the Smart Grid ecosystem.

Fremont's combination of cost-effective, flexible and advanced manufacturing facilities, a highly skilled workforce with entrepreneurial spirit, a business-friendly climate, and an exceptionally strong Smart Grid ecosystem make it a logical destination for any company focused on Smart Grid solutions.