



Smart Grid Integration Services from CompuSharp

What are Smart Grids?

“Smart Grids bring benefits to consumers as they gain an understanding of how they use electricity and respond by reducing their energy use during peak demand times; to utilities in how they can increase their system reliability and reduce outage response times; to the environment in enabling the greatly expanded use of renewable energy resources and energy efficiency” (As defined by Pacific Northwest National Laboratory”).

CompuSharp has been providing services to major electric utilities like Entergy, PacifiCorp, PG&E etc, and major vendors like ABB, AREVA, GE, SIEMENS, etc. We at CompuSharp understand the technical intricacies and Management issues relating to integration of the components making up the Smart Grid.

The areas of expertise are:

- (a) Field devices at Homes/ Commercial-Industrial consumer locations/ Substations/ Generating Stations: Sensors, Controllers, Zigbee devices, Plug-in Electric Vehicles, Building Management Systems including HVAC, Lighting controls, Home displays, AMI, RTUs, PLC’s, Phasor Measurement Units.
- (b) Communication systems: Carrier, Microwave, Fiber optic, Repeaters, Internet; Interfaces: Point-to-point, Common Information Model.
- (c) Central systems: Computers, Human-Machine Interface, Inter Control Center Protocols, Data Base, IT and Cyber Security.

- (d) Application software:

Smart Grid Applications: System Islanding, Self-healing systems, AMI, Meter Data Management Systems, Demand Response.

Interfaces to existing applications: Substation Automation, SCADA, GIS, Outage Management System, Feeder Load Balancing, Volt/VAR, Customer Information System, Billing, EMS applications like State Estimation, Security Analysis, AGC, OPF, Historical Data Analysis, etc.

The various phases of the project addressed are:

- (a) Justification of Smart Grids: Business Case.
- (b) Specifications.
- (c) Implementation Support: Design and Development of Interfaces, System Testing and Acceptance.
- (d) Training.
- (e) Support: