

Architecture & Strategy for a Smart Grid

EXPERIENCED. STRATEGIC. PRAGMATIC.

Smart Grid's challenges are analogous to a city growing exponentially. An existing infrastructure must transform to accommodate many new goals, requirements and vastly increased number of residents. Just like a city's urban planning issues, Smart Grid requires an overarching architecture to understand how to accommodate regulatory, societal and technological changes.

Although recent industry efforts provide the foundation detailing how a Smart Grid should function, they did not address the order and priority these functions are needed. EnerNex provides this missing guidance by:

- ▶ Utilizing a systematic approach to identify what function/processes and automation assets are needed to support Smart Grid business goals.
- ▶ Identifying the activities, priorities and resources necessary to enable them.
- ▶ Detailing interactions between a business unit's procedures and the underlying automation assets.
- ▶ Providing a clear migration path forward, from legacy to an increasingly capable Smart Grid.
- ▶ Reducing risk, by looking at the entire Smart Grid ecosystem.
- ▶ Creating a living roadmap to incorporate future requirements.
- ▶ Following a governance model to successfully manage and improve.

Enterprise Architecture

EnerNex's Enterprise Architecture practice provides:

- ▶ Extensive Smart Grid roadmap, use case and standards development essential for a practical Enterprise Architecture.
- ▶ Proven Methodology by combining The Open Group Architectural Framework (TOGAF), Electric Power Research Institute (EPRI) Intelligrid methodologies and Service Oriented Architectures
- ▶ Experience in similar industries architecting and implementing "best of breed" mission critical infrastructures (ie: Finance, Telecomm and Defense)
- ▶ In-depth understanding of the industry's work done to date
- ▶ TOGAF Certified architects

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The Information Technology world is full of unfulfilled expectations because the business drivers and automation implications were not fully understood in the beginning. For this reason, systematic enterprise architectural (EA) methodologies were developed providing clarity and risk mitigation.

EA accomplishes this by identifying and translating your organization's business goals into the requisite business procedures, and underlying automation services. The multitude of systems associated with Smart Grid applications in this critical infrastructure environment calls for the most disciplined implementation of EA.

To minimize risk, EnerNex provides:

- ▶ *Leadership in National evolving standards, architecture and requirements, including EPRI Intelligrid, UCalug, OpenSG, DoE GWAC, NIST SGIP and SGAC, IEC CIM, and IEC 61850.*
- ▶ *A tailored implementation of TOGAF including embedded use-case methodology (EPRI Intelligrid), and incremental Smart Grid artifacts/deliverables. TOGAF is used by hundreds of organizations, numerous utilities, NIST's SGIP and referenced by DOE's GWAC activities.*
- ▶ *A proven suite of architecture offerings tiered to support a client's level of depth, budget and timeframes.*
- ▶ *Real experience, real knowledge.*

EnerNex Services

EnerNex is a research, engineering, and consulting firm specializing in the development and application of new electric power technologies. Our focus is to aid in the understanding and solution of electric power related issues, as well as the development of technology and expertise that will ultimately improve the operation and reliability of electric power systems. We offer services organized around these areas of emphasis:

- ▶ **Power Systems Analysis**
- ▶ **Wind Integration**
- ▶ **Information Security**
- ▶ **Systems Monitoring & Analysis**
- ▶ **Testing and Research & Development**
- ▶ **Smart Grid Development**
- ▶ **Advanced Metering Infrastructure**
- ▶ **Utility Communication Architecture & Implementation**
- ▶ **Utility Automation**
- ▶ **Demand Response & Energy Efficiency**

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