



# CASE STUDY: Open Access To Energy Market

This entity client of Xtensible in the USA manages the flow of electricity on high-voltage power lines, operates a wholesale energy market, and oversees infrastructure planning in support of member utilities with approximately 30,000,000 consumers:

- Market System

Partnering with Xtensible for consulting services:

- Strategy & Architecture
- System Integration

## THE NEED

To ensure grid reliability and efficiency, and upgrade of the entire information technology system to position for the future.

## BUSINESS VALUE

- Analytics Platform Data Architecture
- Consistent means for data access, internal and external

## RESULTS

Based on the IEC CIM and the Xtensible Model Driven Integration methodology, the design and integration of 22 systems provided by 7 vendors was completed.

## OPPORTUNITY

The electric grid is experiencing a historic transformation brought on by far-reaching environmental policies, regulatory changes, economics, consumer demands and the availability of advanced technologies. The electricity industry includes utilities, private power plant owners, and state and federal agencies, each playing a distinct role.

This particular entity is charged with ensuring the safe and reliable transportation of electricity on the power grid and is looking to transform the grid in an environmentally responsible way. As the impartial grid operator, it has no financial interest in any individual segment ensuring fair and transparent access to the transmission network and market transaction.

## INTEGRATION COMPETENCY CENTER

The entity selected Xtensible to support their multi-year program which involves several vendors, new systems, and numerous legacy systems.

Xtensible drove the development of the Integration Competency Center in support of the technology upgrades. For the integration framework the use of the CIM and the Xtensible Model Driven Integration (MD3i) methodology and toolset was used to define information exchanges.

Xtensible utilized the CIM to design and develop all the integrations related to the market operations, network model and its exchange. The entity will achieve flexibility, scalability, and cost savings through the approach.

“With this many systems and vendors involved a consistent layer of data and service across the enterprise is a must.” says Harry Garton, VP of Professional Service at Xtensible, and the project manager.

The Xtensible focus is to support the utility industry in knowing, understanding, and integrating your data across the organization. We look at all aspect of the architecture to ensure that the future state architecture is successfully implemented from a people, process, and technology perspective to ensure that business value is realized.

# WHAT IT TOOK

Xtensible worked with utility to accomplish integration systems in areas such as:

- Dispatch System
- MP Report Interface
- Load Forecast
- Transmission Capacity Calculator
- Real Time Nodal System
- Settlement and Market Clearing
- Bid Interface and Validation
- Forward Market Nodal System
- Energy Management System
- Default Energy Bids
- Real Time Metering
- Adjusted Metering
- Market Participants
- OASIS
- Interchange Scheduling System
- Congestion Revenue Rights
- Intermittent Resources
- Compliance
- RMR Validation
- Generation Outage Scheduling
- Transmission Outage Scheduling
- Market Quality System (ATF updates)

## RESULTS

Xtensible worked with the entity to design and integrate technology solutions sets from seven different vendors. The end solution Xtensible provided was a comprehensive CIM based data model and integration made up of:

- Over 130 interactions between 22 systems
- Over 75 message schemas
- Over 175 services definitions
- Over 450 publisher/consumers testable data transfers, including external model changes

## WHAT IS HAPPENING NEXT?

Currently the entity is tasked to support an enormous energy transition to modernize the way energy is produced and used to mitigate impact on public health and environment, today and for future generations.

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### THIS VISION OUTLINES THREE OVERARCHING STRATEGIES

- STRATEGY 1 Lead the transition to a low carbon grid
- STRATEGY 2 Reliably manage the grid during energy industry transformation
- STRATEGY 3 Expand collaboration to unlock regional benefits

WE MODERNIZE THE  
WAY WE PRODUCE  
AND USE ENERGY



#### BUSINESS UNITS INVOLVEMENT

- Market Participants
- Market Operations
- Information Technology



#### TECHNOLOGIES

- MD3i
- SPARX EA
- Siemens
- Areva
- ABB
- Nexant
- MCG
- Potomac
- Legacy Systems