



I.P.S.

INTEGRATE ASSET DETAILS
INTO GIS SYSTEMS TO
IMPROVE OPERATIONS





IPS-Systems™
the proven shortcut

**Power Utilities Applications Platform
for Enterprise Asset Performance Management**

Gartner
Magic Quadrant

Case Study: McKenzie Electric Cooperative, Inc.

McKenzie Electric Cooperative, Inc.

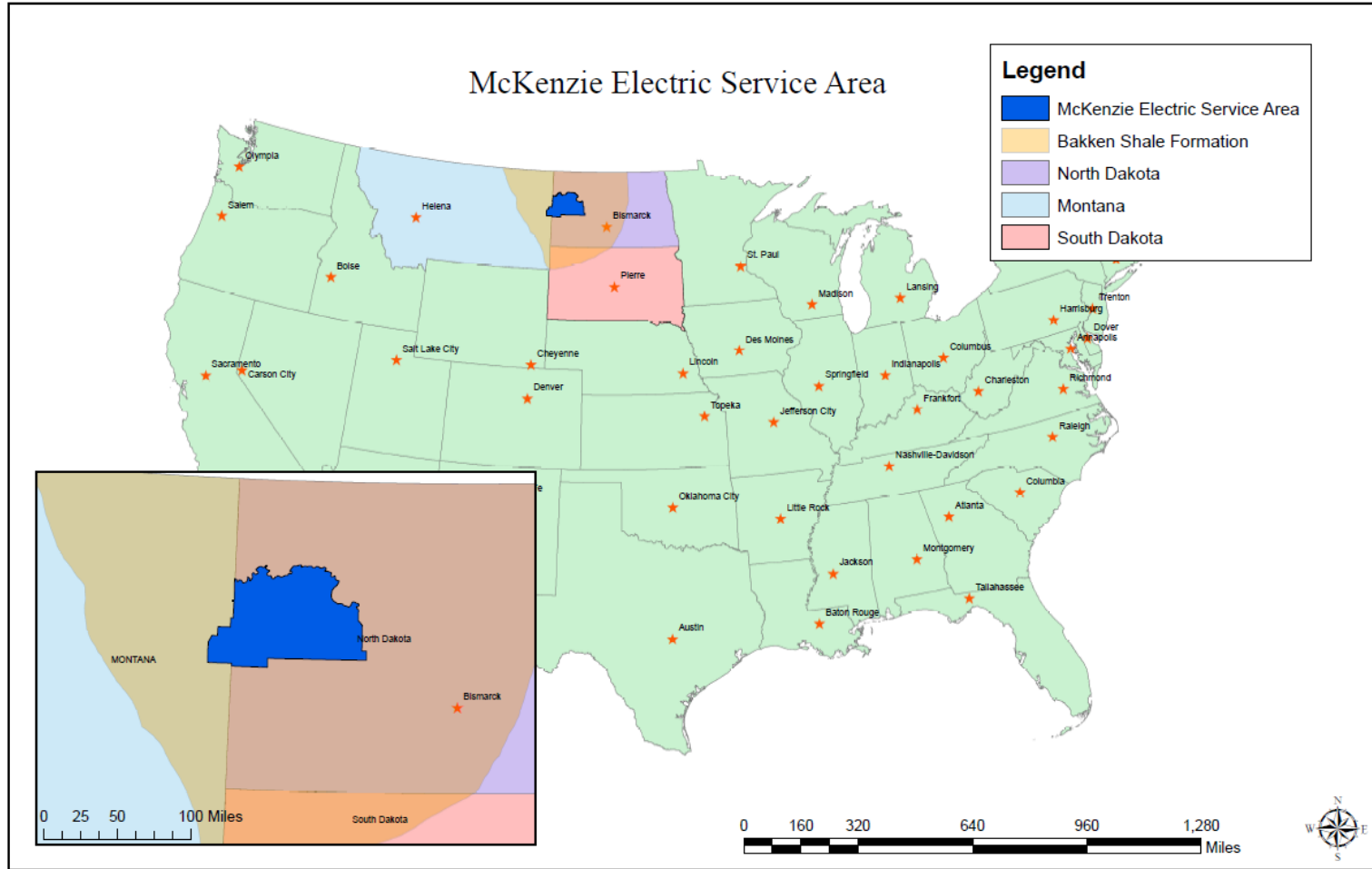
-  Rural distribution electric cooperative headquartered in Watford City, ND
-  Approximately 4,000 members
-  Approximately 14,000 meters
-  System peak includes heavy industrial loads

McKenzie Electric Situation

- ⌘ **Fast-growing utility which serves part of the Bakken oilfield region in western North Dakota and eastern Montana needed to improve data management for its T&D infrastructure**
- ⌘ **Unprecedented double digit growth: 800 percent larger than when the Bakken oil boom began**
- ⌘ **Over 400 miles of transmission lines, more than 3,300 miles of distribution lines and 68 substations**
- ⌘ **Bulk electric system assets which are NERC-qualifying require support for regulatory compliance and reporting**










McKenzie System Coverage Map



IPS-ENERGY GmbH Enterprise

The German enterprise, with headquarters in Munich, develops, implements and supports mobile Intelligent Database Solutions specialized for electrical power systems:

-  Advanced Enterprise Asset Management
-  Operative Maintenance, Result and Asset Condition Management
-  Power System Protection Data, Setting and Testing Management
-  Technical Data Analytics
-  Data based Asset Diagnostics
-  Mobile Solution for Asset Management, Data Collection and Work Execution
-  Systems designed by electric power professionals for electric power professionals

IPS-SYSTEMS™

Mobile expert database systems for operative maintenance intelligence

IPS-ENERGY™

Technical Asset Data and
Maintenance Intelligence

Core

Executive

Enterprise

IPS-EPIS™

Enterprise Protection
Information System

Basic

Core

Executive

Enterprise

IPS-SmartGridDI™

Data Intelligence System

Core

Executive

Enterprise



IPS-CLOUD™

IPS-SYSTEMS™ Software As A Service

Online solution for IPS-SYSTEMS™ software



IPS-Cloud™

Affordable World Class Solutions for Consumer-Owned Utilities

- ☑ IPS hosts the application at world-class ISO 27001 certified secure computing center
- ☑ Customer access is via Internet to all IPS Software modules
- ☑ Modest startup charge includes Quick Start Implementation Package
- ☑ Monthly subscription charge based upon scope, database size and number of users
 - ☑ Full IPS-ENERGY™ system: Asset, Location, Advanced Work Planning & Execution
 - ☑ EPIS™: Relay Setting and Testing Management
 - ☑ SmartGridDI™: Advanced Analytics using Maintenance Decision Intelligence
- ☑ Database can be moved to Customer server upon change to Rental or Licensing



Why Integrate?

- ⌘ Utilities have a large number of critical power system assets to manage
- ⌘ Leverage powerful installed systems for engineering, GIS, CIS, monitoring
- ⌘ Improve reliability and operational efficiency
- ⌘ Implement a reliability-centered maintenance model
- ⌘ Improve time and budget allocation and reduce costs
- ⌘ Reduce duplicate data entry and errors
- ⌘ Support regulatory compliance and reporting



Integration Project Overview

- ❏ **GIS system stores all line device assets to tag to location of the asset on their lines. Substation assets and all of the other technical information for maintenance, replacement, etc., are stored in Enterprise Asset Performance Management System.**
- ❏ **Enterprise Asset Performance Management System is used for planning, scheduling and executing all maintenance activities including preventative maintenance, inspections and testing.**
- ❏ **Enterprise Asset Performance Management System is used for relays and IED advanced settings and testing management.**
- ❏ **Office and field personnel who use GIS system would like the ability to access maintenance records and settings data stored in Enterprise Asset Performance Management System from the GIS system.**



Integration Project

- ⌘ **New assets are loaded into the GIS system.**
- ⌘ **GIS system generates a daily export file and places it on the secure FTP site.**
- ⌘ **Enterprise Asset Performance Management System Integration Engine uploads the export file, searches for new assets and adds the assets and their attributes to the database into a generic location.**
- ⌘ **McKenzie Electric personnel use Location Manager to load the assets into the correct locations.**
- ⌘ **McKenzie Electric personnel use Enterprise Asset Performance Management System to manage settings and tests for relays and IEDs; plan, schedule, and execute maintenance activities**

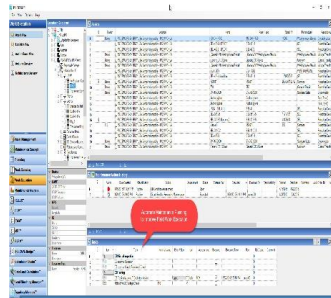


Integration Project

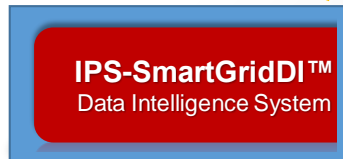
- ⌘ **Enterprise Asset Performance Management System maintains all asset details, maintenance, inspection and test history.**
- ⌘ **McKenzie Electric personnel access asset details, maintenance, inspection and test history from Enterprise Asset Performance Management System real time using a customized view that can be displayed in the GIS system screen.**
- ⌘ **In the future we hope to:**
 - ⌘ Store additional assets beyond reclosers at McKenzie Electric
 - ⌘ Expand data to be viewable in **GIS system** that is currently stored in **Enterprise Asset Performance Management System**
 - ⌘ Create additional interfaces to handle asset retirement
 - ⌘ Develop a customized screen that can access and display data that is currently stored in **Enterprise Asset Performance Management System** with one click from **GIS system**



Integration Project



MDB File Export from Milsoft










Display IPS Maintenance Activity in Milsoft screen

IPS Maintenance Activity
Database View or Web Service Request to Milsoft

New Assets added into generic location



Enterprise Asset Performance Management Integration Benefits

-  Manage fleet of power distribution equipment by getting quick reports about types of equipment, where it is located, equipment age, and modifications that may have been made to each unit
-  Transition to a proactive reliability-centered maintenance model — from an essentially ‘break-fix’ model
-  They only have to load equipment information once- eliminate duplicate data entry and possible human error
-  Speeds the data load process to IPS
-  Leverage the strengths of Enterprise Asset Performance Management on maintenance planning, execution, and analysis; and the ability to plan and track maintenance activities
-  Reduce the number of trips to remote locations
-  Plan limited resources better



I.P.S.

DEMONSTRATION

IPS-Systems™
the proven shortcut

The World Largest Power Utilities Applications Platform around Enterprise Asset Management

Gartner
Magic Quadrant

Thank you for your kind attention!

Further information

Marvel Gentry Harmon
Marvel.Gentry.Harmon@ips-energy.com
317-513-5043
ips-energy.com

