

RED CLAY CONSULTING PAVES THE WAY FOR A SMOOTH IMPLEMENTATION OF A NEW CIS AT KANSAS CITY POWER & LIGHT WITH SUCCESSFUL MDM & ODM IMPLEMENTATION

The intricate technology framework that must be mastered to successfully implement new utility Meter Data Management (MDM) and Operational Device Management (ODM) systems—simultaneously—is no small undertaking. Approaching this in the context of a five-year technology roadmap that involves replacing nearly every major IT system, including the customer information system (CIS)—on a condensed timeline—makes this challenge even more arduous.

In preparation for a new Oracle Utilities Customer Care and Billing (CC&B) system implementation that is scheduled for completion in 2018, Kansas City Power & Light (KCP&L) hired Red Clay Consulting to embark on this undertaking because of its stellar reputation with multiple, sometimes simultaneous implementations.

At KCP&L the MDM and ODM are being positioned to support a multi-year Advanced Metering Infrastructure (AMI) replacement project that started in 2014. This project replaces all existing KCP&L Automatic Meter Reading (AMR) (one-way) meters with new Landis + Gyr AMI (two-way) meters. Utilizing a multi-phase approach, one of KCP&L's main goals is to reduce risks associated with its Oracle Utilities CC&B implementation and subsequent bill quality.

Additional benefits of the multi-phase approach implementation include allowing the users to get familiar with the Oracle Utilities Application Framework (OUAF), the foundation for all of KCP&L's systems including: ODM, MDM and CC&B, along

with gaining comfort with the User Interface, search functionality and lite configuration. This enables KCP&L's information technology (IT) team to become comfortable with the architecture since it will be similar across all products including environment builds, troubleshooting and patching, to name a few.

THE SOLUTION

The successful completion of the MDM and ODM implementations in May 2015 introduced new functionality to KCP&L to support key business goals and positioned the utility for a smooth implementation of CC&B.

With its new MDM in place, KCP&L is now a central repository for all usage data produced by three head-end systems (HES) across three separate operating companies. This data is automatically stored, validated and cleansed.

One of the most important requirements of the MDM project is to have at least two years of bill-worthy data ready in MDM for when CC&B goes live. Interval data is now being collected for all customers, and for a select number of customers, voltage information is also collected. Before AMI rollout and MDM, interval data was only collected for commercial & industrial customers.

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With ODM now in place, KCP&L has a central repository for all meter assets (AMI and AMR), all meter attributes and all meter testing data. Before this, data was spread across several systems. Depending on the operating company an operator would choose which systems to pull information from, whereas now ODM houses a complete data set.

The project was broken into two phases (see figure 1.) In the first phase, the goal was to integrate two HES using Oracle Utilities Smart Grid Gateway (SGG) to receive real-time Outage and Restoration events from the HES and send them to Oracle Utilities

Network Management System (NMS)—both via SGG. The integrations in the second phase revolved around several systems for meter testing data loaded onto ODM, and usage export of finalized data to Oracle Utilities Load Analysis, executed from both NMS and MDM user interfaces.

Project Details

PHASE I

Oracle Utilities Meter Data Management (MDM), Oracle Utilities Smart Grid Gateway (SGG), and the productized integration of SGG for Outage Operations with Oracle Utilities Network Management System (NMS).

PROJECT SCOPE

- Integrate with two (HES); Landis + Gyr Command Center using the SGG productized adapter and CellNet USC using the SGG Adapter Development Kit (ADK) to receive real-time Outage and Restoration events from the HESs and send them downstream to NMS, both via SGG.
- SGG to receive single and bulk Status Check (Ping) Commands from NMS to the corresponding HES, via SGG, for validation of power restoration. This also included integration with one of KCP&L's Customer Information Systems (CIS).

PHASE II

Oracle Utilities Meter Data Management (MDM), Oracle Utilities Smart Grid Gateway (SGG), Oracle Utilities Operational Device Management (ODM), Oracle Utilities Analytics (OUA) for MDM.

PROJECT SCOPE

- Integrations included two Customer Information Systems (CIS), two additional HES'; Itron FCS and Itron MV-90, WECO for meter testing data loaded into ODM, and usage export of finalized usage data to Oracle Utilities Load Analysis.
- Usage load for 15 minute and five minute data, daily reads, monthly reads, and events from the HESs, as well as validation-editing-estimation (VEE), bill determinant calculation, device configuration, status and firmware validation with HES, and device commands (On- Demand Read, Connect/Disconnect, Status Check) executed from both NMS and MDM user interface.

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New Technology Reduces Costs, Risk and Restoration Time

After the successful MDM go-live in May 2015, the new system was quickly put to the test. In the early morning hours of Friday, June 26, 2015, a major storm knocked out power to more than 110,000 KCP&L customers, the largest outage since 2002. Working around the clock, KCP&L crews were able to restore customer power by Sunday. According to the spokesperson at the utility, “The combination of our new AMI meters, Outage Management System and MDM integration shaved two days off our storm recovery time. During storm situations, we’re able to ping the meters remotely to verify restoration, whereas in the past, a truck would roll to a house that already had power restored just to verify. Since we are only sending truck rolls to true outage areas, we are able to restore power quicker, because manpower is focused on the correct areas.”

Not only does the system help KCP&L’s operation run more smoothly during outage times, the utility is also better positioned to mitigate risks for its upcoming CC&B implementation. The MDM now handles all integration with KCP&L’s three HES (L+G AMI, Itron FCS, Itron MV-90) as well as capturing billing quality reads from each system. The billing manager at KCP&L stated, “By delivering MDM early, we get an extra 18 months to tune our VEE rules and verify the quality of the MDM billing determinants. This will allow us to focus on bill calculations, rates and the like during CC&B instead of worrying about getting the right meter reads delivered.”

Strong Teamwork Leads to Successful Go Live

The teams at Red Clay and KCP&L pushed past many obstacles to deliver the project successfully by the targeted go-live date. One KCP&L team member commented, “MDM is the little engine that could. This project team never quit—no matter what. It’s like one big puzzle that works.”

Director of Professional Services at Red Clay and KCP&L project lead, Leeanna Gonzalez, shared key lessons learned from the KCP&L integration:

PARTNERSHIP

The relationship between the utility and its implementation vendor should be a partnership, where they plan and execute the implementation in a phased approach. When strong partnership is present, stressful elements of a project can be more easily overcome.

FLEXIBILITY

Being flexible and open to adopting new business processes that the new software will require is key. There should be little expectation of ‘doing things the same way because that’s how they were always done.’ New systems bring new processes and room for improvement.

SUPPORT

Ensure that a team is in place that will support and own the system after go-live. Many MDM implementations are not replacements so it can be difficult for a utility to understand, when operating alone, what needs to be done to care for the system and provide guidance to the new team.

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ABOUT KANSAS CITY POWER & LIGHT COMPANY

Kansas City Power and Light Company is an investor-owned, regulated electric utility company serving more than 800,000 customers in 47 northwest Missouri and eastern Kansas counties. With a service area of about 18,000 square miles, it takes more than 3,000 miles of transmission lines, 24,000 miles of distribution lines and more than 400 substations to deliver power to its customers. It is a wholly owned subsidiary of Great Plains Energy Incorporated, of which it is the biggest component. Learn more at www.KCP&L.com.

ABOUT RED CLAY

Founded in 2001, Atlanta-based Red Clay Consulting is a leading systems integration and consulting firm in the Energy and Utilities Industry. As a certified Oracle Gold Partner with an Oracle Utilities Meter Data Management 2 and Oracle Utilities Smart Grid Gateway 2 specialization, Red Clay is a Gold level member of the Oracle Partner Network (OPN) and implements enterprise solutions based on the Oracle Utilities framework. Red Clay is ambitiously led with integrity by industry experts who are proud to manage a team of dedicated, driven and enthusiastic employees. Visit www.redclay.com to learn more about our mission of doing what is right and fair for our clients, our employees and our company.

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