



The Power of Intelligent Business

White Paper
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INTRODUCTION

This is the first in a series of White Papers focused on deregulation of the electricity industry and related business topics. In establishing a baseline for future discussions on other issues, this paper is in effect a case study focusing on the delivery of business information.

Utility Network & Partners Inc. (“UTILITYnet”) is an outsourced Business Services Provider (BSP), plus an Information Technology (IT) development shop, delivering solutions and services to companies buying and selling electricity and gas. UTILITYnet has a 25 year history of providing customer billing and energy management services. The company’s hallmark: providing accurate and usable information.

What sets us apart from others? Strong domain business knowledge and being able to leverage our in-house IT foundation and platform has culminated in the delivery of dashboard, analytics and Key Performance Indicator services uniquely applicable to the deregulated electricity industry. We focus on the aggregation of information that helps our clients mitigate their risk and address a wide range of key business issues, including Revenue Assurance, Margin Analysis and Energy Management Reporting.

Under the heading of Business Intelligence (BI), this white paper features the scope and depth of the data management services provided by UTILITYnet. Recent R&D investments have allowed us to move well beyond the legacy of our customer billing and invoice validation systems. Our back office data mining tools are expressly designed and deployed to help our clients better understand their consumption, trends, hedging and pricing data as needed to make more informed business decisions within the dynamics of both deregulated and regulated markets.

This case study will provide you an insight into UTILITYnet’s Corporate Performance Management (CPM) web services and the online availability of high-impact information and system applications which are accessible through the UNETgrid. Looking forward: The next white paper / case study will feature the implementation of our first AMI project: the business drivers, the integration of data, monitoring quality of delivery, customer care, retail contract and regulated billing. And, most importantly the key issues we faced as it affects the Wires, the Retailer and in particular, the Customer.

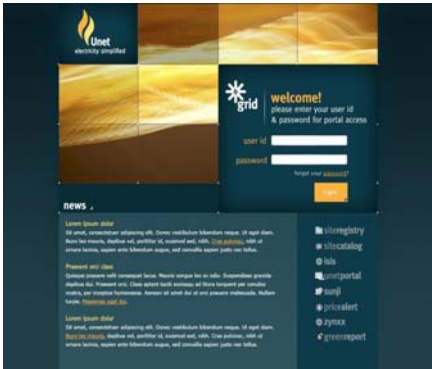
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1. INFORMATION DELIVERED “ON-DEMAND”

The UNETgrid

The UNETgrid, a single Business Intelligence (BI) platform, reshapes the future of data delivery, analysis and operations. This single access point ensures that our clients have key market information at their fingertips, essential in the stewardship of their business plus a platform for launching operating system applications, and the ability to easily drill down into the database of information to site level detail:



CPM Features

- Secure Online, 24/7 Access
- Executive Dashboard
- Energy Management Reports
- Benchmark Reporting
- Key Performance Indicators
- Interactive Trend Analysis Reports
- Real-Time Power Pool Price Alerts
- Intuitive Matrix of File Storage
- Management Exception Reports
- Business Process Applications

2. THE VALUE OF BUSINESS INFORMATION

Helping our clients understand 1) what is happening, 2) why it's happening, and 3) what needs to be done in order to succeed. The data warehouse, reporting, business processes and the operational file manager are networked and designed as a 'one-stop' total service, capable of providing users real time access to all their data and energy management processing requirements.

Any decision is only as good as the information behind it. However, the most valuable information can quickly stale-date and be costly to assemble. According to a survey in The Economist, current IT systems deliver too much data and not enough insight. Of those who responded, 67% of companies cite knowledge management/ business intelligence solutions as being important to achieving strategic goals. Despite an enormous investment in IT, producing huge volumes of data, most executives felt *unable to exploit the data in their own systems*.

Historically, data mining has been limited to only those within an organization with access to the databases and the knowledge to structure queries. The UNETgrid bridges this chasm and puts easy-to-understand information in the hands of those people that can best make use of it.

Cost and the availability of systems support has also been a major deterrent. Limited resources in equipment, time, money and personnel have left many small-to-mid sized companies out in the cold. With the advent of enterprise systems, firms are flooded with detailed data that can provide a wealth of information, if only they could access the answers. A related issue is the high cost of storage in terms of equipment, space and maintenance: how much should be stored? How secure should it be? Who will take care of it?

3. ABOUT THE ARCHITECTURE

UTILITYnet's IT engineered architecture is based on leveraging a sub-set of building blocks following the framework protocols of R.E.S.T. Web-Service and XML. This has allowed us to loosely decouple each of our current business applications, take full advantage of the principle of reusable components, and seamlessly expand on the interrelationship functionality between the applications.

The objectives of the IT architectural server framework:

- To allow for the dynamic rendering of reports where data is stored either on the file system, relational database or remote web service
- To allow for the integration of new and future applications and access to all applications through a common interface with a single security sign on

UTILITYnet's IT architecture is built on the use of Business Process Execution Language (BPEL); an XML-based tool that enables the task-and-data sharing across a distributed or grid-computing environment. By building BPEL into the core of our systems, we envision the possibility of giving corporate customers do-it-yourself capability to make their own enhancements to the reporting capability of our systems. Ultimately, this will drive down the cost of ongoing development and maintenance while at the same time providing our clients greater access and use of their data. Currently our R&D team is implementing/adopting the principles of a Service-Oriented Architecture (SOA). Following this approach allows us to tackle the complexities within our processing applications plus deliver flexibility and new services.

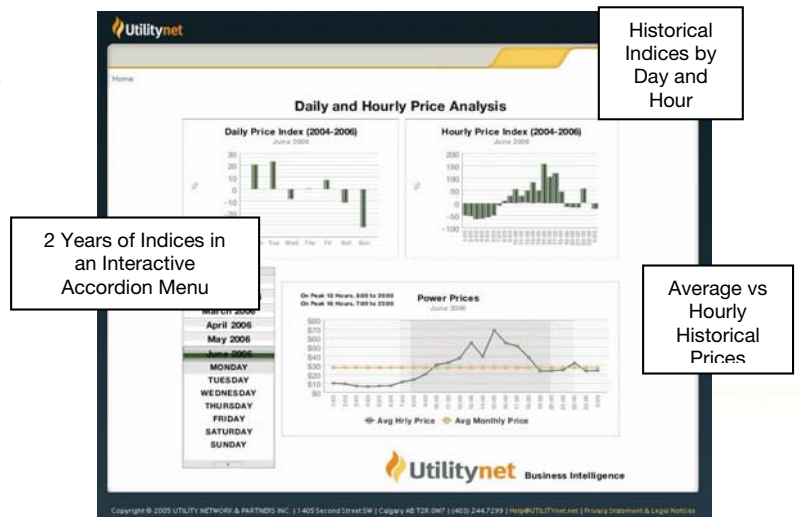
4. FOCUS ON REPORTING

In designing the reporting model to handle the growing complexities in data relationships, which in turn are driven by increased complexities that evolve during a continuously evolving retail market (as governments work with deregulation), it is first necessary to understanding the 'Business Drivers' which in part include:

- The high cost of energy and the need to identify cost management strategies
- The need for timely information to help manage hedging strategies
- The heightened importance of financial stewardship as it relates to: value at risk, margin and revenue assurance analysis
- The complex billing needs of Industrial, Commercial and REA customers

UTILITYnet's core Business Processing Services are designed to ensure the accuracy of transactional data and the reconsolidation of the Power Pool invoices to Settlement Data.

The UNETgrid is an easy to navigate interface. Clients can obtain access to vast amounts of relevant, targeted and timely data. Whether the need for information is required to support buying decisions, revenue assurance, margin analysis, financial stewardship, risk or portfolio management decisions; all the data is available through the UNETgrid.



5. BI STRUCTURED FOR THE ENERGY MARKET

Access to data without structure or clear BI goals usually becomes a frustrating, time-wasting exercise. The UNETgrid makes sense of market data by providing only the most relevant information for exception-reporting and decision-analysis.

Security First: UTILITYnet's Enterprise Security program is focused at two levels: first regulatory compliance and second guaranteed security of the network. The data center is located in a co-location site, complete with its own generators, independent AC, internet backbone connection and 24-hour monitoring services. Data protection and delivery is assured, with the dual business focused priorities of maximum up-time and a failsafe disaster recovery program.

Ease of Use: a single BI Dashboard with clear graphs and easy-to-find reports minimizes time wasted locating the right information; thus, providing an 'at-a-glance-view' of the areas that impact operational costs which reflects the actual drivers of business performance.

User-Defined Access: the UNETgrid provides a single window to all or any one of UTILITYnet's Retail Invoicing and Settlement Services and business processing applications:

- Site Catalog Searchable listing of customer gas and electricity meter sites
- Site Registry Online transaction processing, enrollment, energizing
- ISIS Business process control & transaction management/ filtering system
- SUNJI Data mining / reporting system
- Price Alert Monitoring real time spot prices
- EPSS Journal accounting interface to client's general ledger
- GreenReport GHG emissions management application
- ZYNXX™ REA Customer Information and Billing System
- AMI AMR network linked into REA MDM and Customer Billing applications

The Right IT Strategy: The systems and operational development staff, operate as an integrated and synergistic team. This has allowed us to immediately respond to enhancements requested by customers and meeting the business need for meaningful information brought about by continuing regulatory changes. The key to success is agility. The value offered to our clients is the enhanced flexibility in being able to create ad-hoc customized reports, thus maximizing the value of the information stored at our data warehouse. Clients using the UNETgrid have been given the key to the information bank and the opportunity to capture the real meaning of *Business Intelligence without Boundaries*.

6. FINANCIAL STEWARDSHIP MADE POSSIBLE WITH BI

By managing all transactions from Meter to Cash within a totally integrated system, C&I customers are assured that the posting of all financial transactions are correctly assigned. Undoubtedly, deregulated markets will continue in a state of flux for some time. As such, market participants are faced with a growing mismatch between the need for timely and accurate data and delays in the delivery of strategic information. Without the right information, there is a risk of losing business, failing audits and paying excess costs.

Through the UNETgrid users have online access to SUNJI to source both financial and consumption detailed data. From an audit perspective, this includes all energy and related wires and associated cost transactions which are online and searchable.

To streamline and automate compliance with the various internal audit controls and external regulations such as The Sarbanes-Oxley Act of 2002, firms are realizing that effective competition means rapidly deploying robust BI solutions, not building ad-hoc applications.

The audit control system offered by UTILITYnet seamlessly manages all transactions from:

- Enrollment of a customer account,
- Energizing the metered site,
- Management of metered data,
- Reconciliation of wholesale purchased of power against consumption,
- Customer billing and managing sites
- Journalizing and posting of all financial entries to the companies general ledger

7. ENERGY MANAGEMENT SERVICES

With volatile Power Pool spot prices and rising wires costs, energy management has become the topic of greatest concern. A need for a report package that clearly identifies cost savings, separates fixed from variable costs, and distills the information into an easy to read format was obvious, but typically and often only available from energy consulting firms.

Until today!

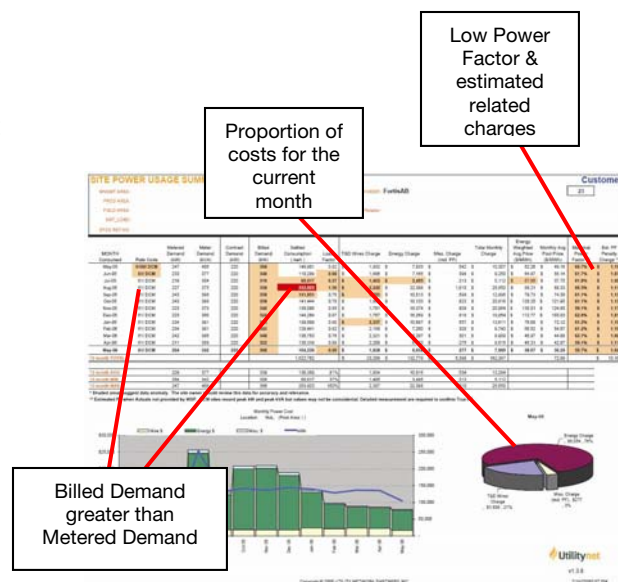
UTILITYnet Energy Management Service (EMS) reports provide answers to the question, “Where are the cost savings opportunities?”

Should corrective action be taken?

The reports clearly show anomalies such as plant shutdowns, incorrect meter reads, missing data, power factor penalty charges, contract changes and load factors

EMS reports will show the resulting cost savings as a result of the action; thus, allowing the energy manager to better monitor the benefits.

Energy managers can use the reporting services to identify and categorize wires costs and factors such as metered demand, kVa, contract demand and billed demand plus the splitting of Transmission & Distribution charges from miscellaneous factors such as rate riders.



8. ORGANIZING THE WORK TO WORK SMARTER

Organizations continuously need to adapt to meet compliance and regulatory changes and the normal evolution of business practices. As such, relevant data is critical. The UNETgrid fills the needs of various functional levels within the chain of command. Information and navigation within the UNETgrid is clearly presented and intuitive, with no complicated database language or hierarchies to understand.

Framework Agility:

- Completely scalable to meet all users needs within an organization
- Roles based security allow defined user access and views
- Business & production reports, dashboards and analysis are deployed against a centralized data warehouse, which in turn provides the confidence and trust of referential integrity
- Easy to navigate point-and-click, intuitive task-based interface increases self-reliance and reduces dependence on IT personnel

Interactive Features:

- Take advantage of the pre-formatted reports, charts and graphs, but drill down to explore the details, plus customize the data view and sort the results
- View interactive load analysis reports, as well as key performance indicators, consumption and operations reports
- Set your own Power Pool price Alert Filters and automated alarms

9. GETTING THE MOST OUT OF BI

Maximizing the benefits of BI requires some planning, organizing, controlling and training. Here are three areas to look out for:

- **Pushback:** Access to data can have a leveling effect on the members of an organization, who now have a basis upon which to ask questions, grow and plan new strategies. Although this is commonly considered to be a great asset for any company, there may be a few individuals who have become accustomed to data hoarding.
- **The old ways of doing things:** Greater access to information may not immediately reduce your costs. Once the low-hanging fruit is found, some analysis is required. However, what it will do is give you the insight to make the decisions to minimize those costs, through changes in the business process.
- **Talk the same talk:** When looking at data, it's easy to get confused. Ensure that you're speaking a common language before getting into the analysis. Elements such as time (production period versus invoice period) and estimation strategies play havoc when trying to do a comparison.

We hope you found some value in this case study.

The next case study & white paper focuses on the impact real-time two-way communications will have on the REA market. Together with Silver Spring Networks and our REA clients, we are in the process of implement an RF metering network at the farm gate. Learn why Alberta's agricultural community is bolting new meters onto the Internet. The ribbon was cut on the first gateway August 16, 2006.

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