



## **Kx Systems' kdb+ technology chosen for retrieval and querying of smart meter data processed by Ontario's Smart Metering system**

### **Time series relational database system evaluated and tested with over 15 terabytes of data**

Kx Systems has been selected to provide its kdb+ database to Ontario, Canada's Independent Electricity System Operator (IESO) to support the retrieval and querying of smart meter data processed by Ontario's Meter Data Management and Repository (MDM/R) system.

Following a competitive evaluation, Kx Systems was awarded the IESO contract based on its ability to meet or exceed demanding functional and performance requirements while doing so at the lowest total cost of ownership.

Kx Systems' relational database management software will be utilized to support MDM/R data retrieval, processing and analysis. In Ontario, the central MDM/R provides a common platform for processing, storing and managing all hourly Smart Meter data in the province. In operation since 2008, it is one of the world's largest systems of its kind and serves over 70 local distribution companies, handling reads from over four million meters, and processing over 100 million transactions per day.

"The IESO needed a time series database technology that could handle large volumes of time series smart meter data efficiently and at the lowest total cost", said Przemek Tomczak, Director – Smart Metering at the IESO. "We found after conducting extensive research, evaluations and proof of concept testing, that kdb+ and its q programming language, delivered very high levels of performance at the lowest total cost of ownership."

Kdb+ provides unified access to real-time and historical data eliminating the need for multiple different types of databases for transaction processing, data access and analytics.

"As data sets have grown from hundreds of records to millions, and tables from millions of rows to hundreds of billions, many legacy software systems cannot scale. To manage that amount of data, not just to store it, you need speed. Kdb+ has the horsepower to do sophisticated queries that simply are impossible otherwise with this amount of streaming data," said Simon Garland, Chief Strategist with Kx Systems.

The IESO is responsible for managing Ontario's bulk electricity power system and operating the wholesale market. The IESO as the Smart Metering Entity is responsible for the administration and operation of the MDM/R, including the collection, validation, estimation and the ability for distributors to edit the meter read data. For more information, please visit [www.smi-ieso.ca](http://www.smi-ieso.ca)

Widely adopted in the financial services sector, kdb+ is also used in other industries, like energy, where the management and analysis of massive amounts of time-based data at high speeds is critical.

*This article is modified from a press release issued by Kx on 22 January 2014*