

# IBM TO DEVELOP ONTARIO'S SMART METER DATA REPOSITORY

By Don Horne

The Independent Electricity System Operator (IESO) has entered into a contract with IBM for the development and operation of Ontario's Meter Data Management/Repository (MDM/R).

The MDM/R is a core part of the Smart Meter Initiative, providing meter data management services in order to help customers better manage their electricity costs and enhance reliability of the power system. IBM will work with the IESO and other stakeholders to finalize the design of the MDM/R and put in place a turnkey solution to support its operation. As part of the contract, IBM will operate the MDM/R for an initial period of four years.

IBM will utilize eMeter's EnergyIP software as the primary technology in the deployment of the MDM/R. IBM has also enlisted the industry leading services of Enspira Solutions and Rodan Energy & Metering Solutions for this project.

"This is an enormous challenge," said Cree Edwards, eMeter's Chairman and CEO, "requiring reliable interfaces to multiple AMI data collection systems and scores of utility CIS systems. Fortunately, our EnergyIP software was designed specifically to support multiple technologies and systems, including scaling to many millions of hourly meters. We expect consumers to realize a wide range of benefits from the Smart Meter Initiative and commend Ontario for its vision."

eMeter's EnergyIP solution has been selected for a central Meter Data Management and Repository (MDM/R) service in support of the Ontario government's Smart Metering Initiative. It will provide meter data management services to the Ontario electricity industry, supporting the province's program to install a smart electricity meter in 800,000 homes and small businesses by 2007 and throughout Ontario by 2010.

Enspira's role includes leading the integration design in collaboration with the IESO and the supported local distribution companies (LDCs), assisting the enrollment process for 94 LDCs, system testing, and system cutover.

The IESO is the Program Coordinator for Ontario's Smart Metering Initiative activities including the establishment of the MDM/R function and its successful integration into the end-to-end Smart Metering Infrastructure.

James Strapp, IBM's Advanced Metering Lead and an Associate Partner, is spearheading IBM Canada's efforts in smart metering.

"We are looking at starting initial operations this summer, with the total contract lasting four-and-a-half years," says Mr. Strapp.

"We are working with three subcontractors, eMeter, Rodan and Enspira, developing a system that will be a consolidated service across many distributors. We are very excited to be working on this project."

The importance of accurate, immediate metering data is essential to easing peak use problems.

"There are typically only a few hours of the day where peak demand is a concern," says Mr. Strapp. "By enabling the Time of Use and Critical Peak prices, consumers with smart meters can alter their energy consumption habits by shifting to off hours when the electricity rates are cheaper and demand on the grid is considerably less."

"The IESO was fortunate to receive a number of very credible responses to its request for proposals and undertook a multiple step evaluation process," said Paul Murphy, IESO President and CEO. "We believe in IBM Canada we have a partner with whom we can form a strong and successful project team for delivering a key aspect of the Smart Metering Initiative. This will work for the benefit of local distribution companies (LDCs), retailers and electricity customers," said Murphy.

When smart meters are fully deployed in Ontario, the MDM/R will be responsible for collecting hourly interval data from more than 90 LDCs across the province and for validating and processing meter reads for all residential and small business consumers in Ontario. When fully operational, it will provide the province with a unique and valuable tool for energy conservation initiatives.

"We are seeing a significant increase in the number of utilities and policy makers, nationally and internationally, who are recognizing the value of and embracing smart metering," said Ralph Gardiner, energy and utilities industry executive, IBM Canada.

"Working with IESO on this initiative helps to bring IBM's vision of Intelligent Utility Network to life, where utilities have the tools to better manage electricity demand. This is a prime example of teaming to innovate, in this case for the benefit of the whole power sector in Ontario."

The IESO has established an \$85 million program management budget which includes the value of the contract, operating costs for the first four years, program management costs, interest and financing charges and project contingencies. The awarding of the contract follows the completion of a competitive request for proposals process overseen by a Fairness Commissioner. The system is expected to be ready in the summer of 2007.

The IESO is responsible for managing Ontario's bulk electricity system and operating the wholesale electricity market.

## LONG-TERM SUPPLY

While the immediate power needs are being met, Ontario faces a long-term supply shortfall. By 2014, close to 13,000 MW of Ontario's electricity requirements will need to be met with new supply or demand-side resources.

The Ontario Power Authority (OPA) is charged with overseeing long-term planning in Ontario and identifying what new generation, transmission and demand measures are needed. Together with the provincial government, the OPA has announced a series of new projects to address the expected supply shortfall. More information about these projects can be found at the Ministry of Energy and OPA websites.

The wholesale market plays an important role in this process. While new suppliers will receive investment guarantees, they will participate in the market and be paid wholesale prices.

The OPA has been set up as a long-term transitional body – once Ontario's power system has matured and mechanisms to ensure sustainability are firmly place, it is anticipated that its role will no longer be needed.