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November 26, 2004

Mr. John Zych
Board Secretary
Ontario Energy Board
P.O. Box 2319
2300 Yonge Street, 26th Floor
Toronto, Ontario, M4P IE4

Subject: *Comments on the Draft Plan - Implementing Smart Electricity Meters in Ontario (RP-2004-0196)*

Dear Mr. Zych:

EDS is pleased to have the opportunity to provide comments on the Smart Meter Implementation Plan, dated November 9th, 2004. We found the Plan to be an excellent explanation and foundation document that detailed the Board's draft response to the Minister's Directive on the deployment of smart meters in Ontario. You are to be congratulated on its thoroughness.

EDS is a leading systems integrator with over 9,000 global clients in the manufacturing, health care, government, energy and retail industry sectors. We have also worked directly for several electrical utility clients, specifically on their smart meter solutions. Our relevant experience includes:

- ***Energy Industry Insight*** – EDS' Global Energy Practice services more than 100 utility clients and is the industry leader in providing information technology (IT) outsourced services for over 40 utility clients around the world. We have over two decades of smart meter experience to draw on.
- ***Large Scale Project Management*** – EDS is consistently ranked at the top of industry analysts' rankings for managing complex, high-availability multi-vendor IT projects..
- ***Risk Management Experience*** – EDS has over 20 years of experience in risk management and 40 years of best-in-class operational solutions that reduce risk.
- ***Back Office Delivery Proficiency*** – EDS is a provider of operational back office services such as billing, finance and accounting, human resource management, supply management and contact centre operations.
- ***Technology Independence*** – We are not a manufacturer. We offer an objective, non-proprietary, best-of-breed approach to IT solutions.

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Please find enclosed our comments related to the plan. Our observations are based on our unique experience as a designer, implementer and operator of large complex solutions in the public sector. We have focused our comments on five areas for the Board's consideration:

1. Robust Program Management
2. Service Excellence and the Back Office
3. The Advantages of an Open Architecture Approach
4. Incentives and Funding Options
5. Communications to the Consumer

Thank you for the opportunity to contribute to the process. We look forward and hope to continue participating in this dialogue. Should the Board have any questions or require any clarification, please feel free to contact me.

Yours Sincerely,

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EDS RESPONSE TO THE SMART METER DRAFT IMPLEMENTATION PLAN

EDS has examined the Ontario Energy Board's Draft Report on the Smart Meter Implementation Plan from the perspective of a large scale systems integration company, and found the Plan to be clear, thoughtful and comprehensive. Our comments below are broken down into those that apply to all large project implementations (points 1 and 4) and those that apply specifically to large-scale deployment of Smart Meter technologies (points 2, 3 and 5).

From our perspective as a large scale systems integration company, EDS has examined the Ontario Energy Board's Draft Report on the Smart Meter Implementation Plan and found it to be clear, thoughtful and comprehensive. Our comments below are broken down into those that apply to all large project implementations (points 1 and 4) and those that apply specifically to large-scale deployment of Smart Meter technologies (points 2, 3 and 5).

We have chosen to stay at a strategic level, while drawing your attention to the critical issues that may introduce an unacceptable level of risk that could threaten the overall success of the program. Based on our experience in this area, we would offer the following points for your consideration.

1. A Robust Program Management Office (PMO) is Critical

- EDS agrees with the Board's recommendation to utilize the skills and experience of the Distributors to install meters for their customers, and to manage the implementation process through an Implementation Coordinator working under the direction of the Board. This is an excellent start, but given the risk profile of this program, and the growing body of research that shows that more than half of all mega projects fail, we suggest that more needs to be done to manage the risks and ensure that the project is a success. In support of this point, we note that the Ontario Government's concerns over the failure rate of large systems has resulted in the commissioning of an independent inquiry headed by the retired Federal Auditor General, Mr. Denis Desautels under the direction of the Chair of Management Board.
- Our own global experience with large complex projects has proven that it is critically important to establish, at the outset, a tough, experienced Program Management Office or PMO. Our large customers such as General Motors and the US Navy Marine Corps insist on the establishment of a PMO prior to starting any project. Closer to home, EDS has provided PMO services to manage the Alliant Power Iowa Program including the site selection, obtaining the required permits, design, construction, and start-up of a 600MW combined-cycle gas-fired power plant and two 50MW wind farms. The PMO coordinated more than 70 contractors and suppliers ranging in their contract values from $100,000 to $30 million.

- Given the complexity and challenges associated with the Board's implementation goals, particularly the aggressive target dates and the decentralized nature of the implementation activities, we believe that the need for a top quality PMO shifts from a best practice to one that becomes critical to the success of the project. We cannot overstate the importance of a Program Management Office staffed by experienced professionals who will insure that:

  - Detailed plans are in place, including a strong Statement of Work
  - A rigorous project methodology is adopted and used by all participants
  - Regular progress reviews take place
  - All meetings and decisions are documented
  - People are informed through formal communications vehicles
  - Early identification of problems and development of risk mitigating strategies are developed
  - Change management is addressed formally
  - Technology standards are established and followed
  - Training programs are designed and provided

- The Program Management Office must be focused on results, but sophisticated enough to adjust to meet the day to day change requirements of the Board with minimal disruption to the overall program.
- There is a substantial difference between people with good intent and an experienced PMO organization with a strong mandate. Insist on experts in this area that have demonstrable large project planning experience, strong formal methodologies, a rigorous approach to monitoring progress and formal change management procedures to control scope.

2. Service excellence is dependent on the quality of the Back Office

- EDS' experience with large utilities (such as Enel, Pacific Gas and Electric, San Diego Gas and Electric, Exelon) implementing Smart Metering technology has consistently demonstrated that:

  - The utility's back office is generally unprepared for the volume, complexity and granularity of the data associated with this type of program.
  - The integration into existing computer systems that is required is usually underestimated.
  - The cost to prepare the utilities back office information systems is significant and often understated. The amount varies according to the specifics of each case. For planning purposes you should be looking at costs in the range of 10-15% of the entire program, or more.

- The entire Smart Meter Initiative's credibility and adoption is dependent on each utility's back office to properly and consistently collect, aggregate and present billing information to the public.
- Unlike the local installation of the metering technology, it would be advantageous to design, build and pay for the basic back office systems and processes once. This can be achieved by deploying one systems integrator to do the work and implement the solution across multiple utilities.
- By adopting such a strategy, the Board could more easily manage future changes to the overall program and avoid the need to audit each utility's solution. Changes to system informational requirements could be made centrally and information would be processed and presented in a consistent manner to the public, while reducing the overall cost to the consumer.
- Another consideration is for the Board to support a third party shared services function for administering billing and customer service functions, especially for smaller utilities. This would save participating utilities the expense of upgrading their current systems and adding new functions to their back office. This could be cost neutral to the Board, as the third party provider(s) would develop and operate the service while recovering its investment from payment for each meter read or each bill issued.

3. The advantage of an open architecture approach

- EDS agrees with the strategy of creating buying groups for meters, data concentrators and communications technology. However, we strongly recommend that the software components required to manage and operate the smart meters be selected centrally and procured first. These software products (e.g. the Meter Management System, the Operational Data Store, the Web presentation software, etc) are independent of any specific metering technology because they are based on an open architecture platform
- Relying on the proprietary software supplied with individual meters to enable the solution can create costly modifications in the future and significantly reduce the number of metering options. It will also make future upgrades to the meters potentially more difficult and expensive. These costs would have to ultimately be passed on to the consumer.
- Using the open architecture approach, the meters, data concentrators, and communication technologies become a commodity – allowing almost any meter from virtually any vendor to be considered for deployment. In addition, we have had very positive experiences with the major software vendors who have shown a willingness to develop interfaces for additional meters as required.
- The adoption of an open architecture will also assist with the Board's concern that technological obsolescence may drive a shorter depreciation period. As demonstrated in the computer field, open architecture has a strong positive effect on lowering costs by generating more competition.

4. Incentives and Funding Options

- EDS's experience with large systems implementations suggests that the way these systems are paid for can have a significant impact on the overall success of the project. In the case of the Smart Meter Project, we would recommend that Distributors be encouraged to rapidly deploy the new meters and supporting systems by being required to retain the portion of the new rate attributable to the Smart Meter Implementation only after the new meter is installed. This would avoid the potential situation where distributors would be in a position of receiving money up front with little incentive to purchase and implement the necessary smart meters and associated systems in a timely way.
- There are several financing options available for this type of project/deal through third party structured financing that could eliminate the need for upfront out of pocket investment by the government, the Board or the Distributors. EDS would welcome the opportunity to present those options to the Board, if it would be of interest.

5. Communications to the consumer is critical

EDS' experience with other utilities confirms that there is a direct correlation between the first-time success of the installers and the amount of communication to the consumer. The Enel experience in Italy demonstrates that that multiple communications with the customers through various media was required to minimize problems and ensure a successful implementation. We would recommend that ongoing communications should continue well beyond the implementation period to encourage feedback on the successes and challenges of the project in order to develop a customer base of voluntary compliance.

EDS would recommend that the Board consider placing minimum communication standards (frequency, types, etc) into the Implementation Plan and consider using the services of a best in class communications firm. This would better assure timely success in implementing the project and greatly reduce the size and cost of back office call centres that would be required to answer calls from a confused public. We are all familiar with the phenomenon of the VCR that still blinks 12:00, and the programmable thermostat that the family has long since given up on. This project is too important to suffer that fate.

Summary

We trust that you find our comments thought provoking. We are impressed with the work which you have accomplished and the amount of consultation that has gone on to date. We have a well earned and healthy respect, born from real world experience, for the complexity and challenge of the task you are undertaking. We may have included suggestions and recommendations that you already have well in hand, so we ask for your indulgence if this is the case. If we have alerted you to one or two critical success factors that will assist you in achieving your goals we will have accomplished what we have set out to do.

We would pleased to meet with you to discus our comments and answer any questions that you might have.