

Submission to the Government Agency Review Panel

PHASE IIB

By: The Society of Energy Professionals

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INTRODUCTION

On behalf of the members of the Society of Energy Professionals, Local 160 of the International Federation of Professional and Technical Engineers (IFPTE), we thank you very much for the opportunity to share our thoughts with respect to Phase IIB of your mandate.

Our comments with respect to this phase of Panel's mandate are informed by our conviction that electricity is a vital service and all Ontarians have an interest in its reliable provision. Electricity is a source of some fundamental human needs, including light and warmth. The life support systems of our Province depend on electricity as do our public institutions. Electricity also powers our economy as approximately 70% of electricity used in this province powers Ontario's industrial, commercial and agricultural sectors. The provision of reliable and safe electricity at reasonable and stable prices has been, and will remain, essential to the economic fortunes of Ontario.

Our collective social and economic dependence on the reliable provision of electricity requires that the electricity industry be structured and managed in a manner that serves the interest of all Ontarians. In our view, the social and economic well-being of our province and its citizenry very much depends on effective regulation, operation and planning in the public's interest by the government agencies at the heart of the electricity industry.

Our comments are also informed by our experience in this industry. We represent over 7,000 engineers, telecommunications and information technology professionals, scientists, supervisors, and others who, for generations, have designed, built, operated and helped safeguard Ontario's vast electricity system. We are highly skilled professionals, many of whom have dozens of years of experience in this industry, who manage our electricity system and ensure that power is there when we need it. We work in all the key institutions that make up Ontario's complex electricity system including all but one (the Ontario Power Authority) of the government agencies that are subject to review by this Panel.¹

¹ Society of Energy Professionals members are working today at: Atomic Energy Canada Ltd. (AECL), Brookfield Power, Bruce Power, Electrical Safety Authority (ESA), Hydro One, Independent Electricity System Operator (IESO), Inergi, Kinectrics, New Horizon System Solutions, Nuclear Safety Solutions, Ontario Energy Board (OEB), Ontario Power Generation (OPG), Toronto Hydro and Vertex Customer Management.

EXECUTIVE SUMMARY

From our perspective as professionals in this industry we are able to observe first-hand a confluence of trends that causes us great concern. Just as this province, of necessity, embarks on the largest investment program in electricity infrastructure in its history, the industry faces a human resource deficit arising from a number of factors but mainly and simply an aging workforce. The result is an enormous, looming gap between demands for a workforce with the necessary skills to ensure the reliable provision of electricity, and the supply of such a workforce.

The obvious and consequent imperative is the adoption of labour market strategies that, first, preserve and protect existing human resources in the industry and, second, replenish the supply of labour with the necessary skills.

If this were but the full extent of the challenge we would be less anxious because there are practical, sensible solutions to closing this labour supply gap. But it isn't. The challenge is made larger, and our ability to respond to it is impeded, by the forces and interests given life by the Electricity Act, 1998. The Act remade our publicly-owned electricity assets in the image of private sector corporations by separating and corporatizing the generation and transmission functions of our electricity system and assigning to the Ontario Energy Board the mandate to ensure and even promote the economic efficiency of these new corporations.

While the Ontario government remains the sole shareholder of the government agencies subject to review by this panel – and, in that sense and that sense only, they remain public -- the corporatization and re-regulation of the transmission and generation assets forced a remodeling of the internal operations of these agencies consistent with market rationality.

The consequences relevant to this panel's mandate have been twofold: First, the existence of structural impediments to the implementation of collaborative labour market strategies capable of meeting the labour supply gap in the industry as a whole; and, second, the adoption of human resource strategies – and most particularly outsourcing – that have eroded and threaten to further erode the ability and availability of the labour force to reliably provide electricity to Ontarians.

Our response to the enormous challenge that we face in the electricity industry must involve the restructuring of our government agencies in a manner that allows for a set of operating principles that respect the primacy of the public's interest in the reliable provision of electricity. Such a restructuring would establish a foundation for the sensible and practical labour market programs and initiatives that are critical to meeting the enormous human resource challenges that we facing in the electricity industry.

THE PROBLEM

1. The Increasing Demand for Labour

The demands on Ontario's electricity industry at this point in time and into the foreseeable future are enormous because we have allowed a huge infrastructure deficit to accrue. These demands can be summarized as follows:

- **Load growth:** Electricity consumption has grown while little has been invested in new generation, transforming our Province from a net exporter to a net importer of power. Conservation and demand management programs, largely shut down a decade ago, are modest and have been unable to stem or even dampen the demands for new power.

- **Replacing existing assets:** Meanwhile, end-of-life estimates for the current stock of generation assets – particularly nuclear assets – are on the near horizon. In response, the Minister of Energy has directed the Ontario Power Authority (OPA) to ensure installed in-service capacity of 14,000 MW of nuclear power over the next 20 years.
- **Coal Replacement:** The government’s commitment to privatization and deregulation has given birth to the Coal Replacement Plan – a plan that the Independent Electricity System Operator has dubbed “one of the most significant undertakings in the 100-year history of Ontario’s electricity industry.”
- **Demand for Renewable Generation:** The growing public concern with global warming and commitment to the principle of sustainable development have given rise to a Minister’s directive to plan for 15,700 MW of renewable generation by 2025 and a total of 6,300 MW of total peak demand reduction by the same year.
- **Transmission Upgrades/Enhancements:** Our transmission grid is in desperate need of enhancements and upgrades. There have been no significant long distance transmission additions since the 1980s. Aging equipment and population growth have combined to create numerous local reliability concerns prompting increasing use of emergency control actions, most notably in the Greater Toronto Area.

2. The Dwindling Supply of Skilled Labour

At the same time that this effort to overcome our infrastructure deficit and remodel our electricity system is creating an increasing demand for a highly skilled workforce, the supply of such a workforce is at risk. In 2004, the Canadian Electricity Association (CEA) reported that 17% of the existing workforce across the country would be eligible for retirement by 2009 and that 37% of the workforce would be eligible for retirement within a decade.

The Society’s own retirement eligibility data reveal a far more urgent set of circumstances here in Ontario. Almost 20% of our membership in the combined workforce of the five government agencies are eligible for retirement within this calendar year. By 2013, nearly 60 percent of members in that workforce will have reached retirement eligibility.

The challenges of re-creating a labour force capable of meeting the challenges facing the industry are made more complex by the constant evolution of technology in the electricity sector and the requirement to incorporate technological developments into the operations of our system. On the transmission side of the industry, SCADA systems are becoming increasingly more sophisticated while advances in satellite communications, wireless communications and the internet are increasing our ability to monitor transmission and distribution systems to ensure reliability. Distribution Automation – technology that allows for self-diagnosing and self-healing distribution networks – is being increasingly implemented by local utilities. Concurrently, our transmission and distribution systems are wrestling with the integration of new and renewable distributed generation technologies. On the generation side of the industry, the introduction of new technologies to increase efficiency and reliability and to maximize environmental protection is accelerating.

THE IMPEDIMENT

Efforts to meet this human resources challenge are impeded by the current structure of the government agencies at the centre of Ontario’s electricity industry. This structure was given birth in 1998 by way of the *Electricity Act* (the Act), which remodeled the core functions of Ontario’s integrated public utility in the image of private sector entities. By way of this Act, the transmission assets, the generation assets and the central planning function were separated and incorporated under the *Ontario Business Corporations Act*. By virtue of this restructuring, the transmission and generation arms of the former integrated utility became separate, self-financing corporations required to obtain new investment capital in the capital

markets, without a provincial debt guarantee. The Act further amended the regulatory role of the Ontario Energy Board to protect the interests of consumers with respect to the price of electricity and to promote economic efficiency in the generation, transmission and distribution of electricity.

While there have been subsequent amendments to the Act, and the government of Ontario remains the sole shareholder, we believe these central agencies, vital to our electricity system, remain structured to mimic private sector enterprises through exposure to capital markets and, consequently, credit rating agencies. The credit assessment process is about more than financial prudence. Rating agencies also assess management practices, operations and foresight in relation to a business standard and, in so doing, effectively reach into corporations and remodel their internal operations.

The exposure of our government agencies to capital markets and a de facto regulatory regime in the form of credit ratings (which, in combination with the regulatory oversight of the OEB) has forced the adoption of a market rationality in place of the public interest at the heart of our government agencies in the electricity industry. The internalization of orthodox notions of financial discipline and business acumen by these government agencies post 1998 has resulted in the wholesale adoption of a “core business approach” to human capital decisions.

In terms of the mandate of this panel, the most significant knock-on effect of the restructuring in 1998 was the spinning out of functional components of the newly created government agencies into wholly new corporate entities: Inergi, Vertex Customer Management, New Horizon System Solutions and Kinectrics. Over the last decade billions more dollars worth of work have been outsourced from our government agencies. The consequence has been not just an immediate and significant drop in the size of the industry’s labour force, but an immediate severance of critical skills from the industry, followed by a decade-long and continuing erosion of the critical skills available.

There is no question that outsourcing has become a broadly accepted corporate strategy. And while there is much debate about how and when, and even whether, outsourcing is a useful strategy within the corporate world, these are not our issues. The relevant issue before you, for our purposes, is much narrower and is to suggest that, through the extensive use of outsourcing, the government agencies at the core of our electricity industry are putting our ability to meet the human resource challenge facing this vital public service at significant risk. To support our position, we would point to two highly problematic effects of outsourcing in this particular context: 1) skill destruction; and, 2) the importation of operational and structural risk into the industry.

1. Skill Destruction

All parts of the electricity industry are technology intensive and, as discussed above, increasingly so. Our success in meeting the objective of the reliable provision of electricity to Ontarians rested and continues to rest on our ability to maintain and enhance the skills, knowledge and competencies – i.e. human capital – of our industry’s workforce. This human capital is developed through the experience of managing complex problems and technologies and is cumulative in nature. This kind of human capital cannot be adequately articulated or codified but, at its best, fits the term “deep smarts” and manifests itself as innovation.

Outsourcing, however, creates a churning among employers and workers resulting in the destruction of firm-specific and, more broadly, industry-specific human capital.² Each time a worker is separated from his firm, firm-specific human capital is lost and, if that separation takes the worker into another industry altogether, then industry-specific human capital is also lost. Moreover, this labour market churning reduces incentives for both the outsourcer and the supplier to invest in human capital and, if not lost altogether, the capacity for innovation is severely compromised.

² This is particularly true in the case of offshore outsourcing.

2. Importing Risk

Also problematic for our industry's ability to meet the challenge ahead is the fact that outsourcing inevitably imports risk into the organization. We accept that in certain contexts the assumption of risk is not inherently problematic and that in such contexts calculated risks are in some measure necessary to ensure that profits exceed the cost of capital. This market rationality suggests, in fact, that smart outsourcers understand this inevitability and the appropriate question becomes one of how much risk to tolerate and not whether to tolerate risk. But such market rationality is problematic in the context of the provision of a vital public service and therein lays the full scope of our concern with respect to risk.

a. Operational Risk

One form of risk that flows from outsourcing is operational risk. While to some extent operational risk inevitably follows with the practice of outsourcing, the extent to which it exists depends largely on two factors: a) the codifiability of the work being outsourced – that is, the extent to which the work can be documented and decision rules identified versus the degree to which experience, firm- or industry-specific knowledge and discretion are critical to the work; and b) the ability to measure the work being done – that is, recognizing that outsourcing generally surrenders real-time measurement of quality, whether or not the quality of the end product is itself measurable and, if so, how and to what extent.

Operational risks also flow from changing circumstances internal to the parties to the contract, as well as from shifting exogenous factors. Changes in ownership, capital markets, product markets, labour markets, production technologies and political regimes, to name but a few examples, can alter the outsourcing relationship and impact the ability of either party to fulfill its contract entirely or partially. The evidence suggests, in fact, that most outsourcing contracts need to be renegotiated before they expire.

Operational risk also flows from the fact that at the heart of the outsourcing relationship is a conflict of interest. This conflict gives rise to the potential for opportunistic behaviour by suppliers. It would be wrong to assume that a service provider will always act so as to maximize the interests of both parties to the outsourcing relationship.

b. Structural Risk

The outsourcing practices of our government agencies also import a second kind of risk into the industry. Following others, we term this risk "structural." It exists both independently of, and in connection to, operational risks. Structural risk flows from the dependence of the outsourcer on the supplier once the outsourcing contract comes into existence. While the outsourcer may have considerable leverage in the negotiation of the initial contract, that leverage drops precipitously once the contract has been signed. While "backsourcing" or "insourcing" have become significant trends owing to the high rates of failure of outsourcing efforts, it is an extremely difficult and costly process to undertake, due to many of the factors discussed above, including the destruction of the outsourcer's human capital.

Efforts to overcome the operational risks inherent in outsourcing lead to even greater structural dependence between outsourcer and supplier and hence even greater risk. All forms of

operational risk have at their root the problem of contractual incompleteness and it is this issue that has given rise to new theories and practices of outsourcing. Surveys indicate that about one-third of outsourcers don't consider the contract itself as providing the key framework for managing the relationship with suppliers. In the words of Accenture, "It's more than a contract, it's a business relationship." Their advice is "Hire a partner, not just a provider." According to Accenture, success in overcoming operational risks seems to depend on increasing the level of interconnectedness or partnership that defines the relationship. Thus, efforts to overcome operational risk serve to deepen the structural risks inherent in outsourcing.

c. **Failure is Persistent**

In spite of new theories and new forms of outsourcing, failure rates remain persistently high. Twenty to twenty-five percent of outsourcing efforts fail within two years and fifty percent fail within five years. Short of failure, there remain significant numbers of corporations who never realize their outsourcing objectives. According to Accenture, only 70 percent of those who sought to reduce costs through outsourcing achieved that result; only 65 percent of those who sought to improve processes achieved that result; and only 75 percent of those who sought to better focus on core business achieved that result. And, finally, Accenture found that only six out of ten corporations engaged in outsourcing found that outsourcing helped their company perform better.

In the context of the private sector, these results are hugely problematic. In the context of an industry that provides a vital service to the public, the level of risk that attends outsourcing as a human resource strategy is simply intolerable.

THE SOLUTION

The magnitude and nature of the human resource challenge facing this industry suggests that ensuring a sufficient labour force with the necessary skills to serve the electricity industry must be a key policy objective of the government of Ontario. Further, the magnitude and nature of the supply gap suggest the necessary approach as well as the necessary preconditions to solving this problem.

In our view, the approach must be one of collaboration between labour, the government, and its agencies, including the spun-off successors to those agencies, as well as the province's educational institutions. To echo the words of the Canadian Electricity Association, "Collaboration is a priority." The shortage of labour in combination with increasing complexity of skills required to provide reliable electricity to Ontarians requires that we find a way to reconnect skill sets and expertise severed through the erection of corporate boundaries. We must reconnect our human resources in this industry and re-establish our collective "deep smarts."

We are fortunate that the government remains the sole shareholder of these government agencies – and is committed to remaining so – and that these government agencies remain at the heart of our electricity system. Further, we are fortunate, in a sense, that the predominant means of outsourcing in the industry over the last decade was by way of corporate spin-offs from the government agencies. That is to say, a significant portion of this industry's (publicly financed and trained) human capital is not forever lost – yet – but only temporarily severed. So, while significantly eroded, we are still able, if we act with the required urgency, to stop the erosion to this public service and reconstruct a workforce capable of providing reliable electricity to Ontarians long into our future.

The precondition to this brighter future, however, is the restructuring of the government agencies that are the subject of this Panel's review. To be clear, by "restructuring" we are not talking, necessarily,

about taking down the boundaries between these government agencies. But, we are talking about redefining the boundary between these government agencies and the private sector by removing government agencies from de facto regulation by capital markets and rating agencies, and re-establishing the primacy of the public's interest in the effective, reliable operation of these agencies.

1. A New Set of Operating Principles

We have seen that the corporate strategies that emerged from the current structure of our government agencies have led to approaches to human capital that, in turn, have resulted in skill destruction and the importation of intolerable levels of risk to the reliable provision of electricity in Ontario. The restructuring that we contemplate is the replacement of this market rationality with a set of principles for internal organization and operation that are informed by an understanding that the provision of electricity is a vital public service. Such a set of principles would, at a minimum:

- Re-establish an appropriate tolerance for risk;
- Re-assess the inventory of skills, knowledge, and experience required to ensure the reliable provision of electricity;
- Re-establish access to and control over those human resources that are critical to the reliable provision of electricity; and
- Re-conceive the role of government agencies as creators of the necessary skills, knowledge and experience – that is, as training institutions with a mandate for succession planning – and not just harvesters of human capital.

The alignment of government agencies in the industry with such a set of principles would enable collaborative approaches to dealing with the human resource challenges that confront this industry – including the engagement of the Province's educational institutions in this objective. Such collaborative approaches would have as their immediate objective finding ways to reconnect employees and networks of employees that have been severed by the separate, corporate interests established between the government agencies themselves, and between the government agencies and their spin-offs. Further, such collaboration would enable a reconciliation of the tension between the commitment of employers to long-term relationships and their perceived need for flexibility.

2. Specific Measures

At a minimum the Society would propose the following measures to deal with our human resource challenges:

- A requirement that the government agencies conduct periodic reviews of existing outsourcing arrangements (e.g. Inergi) for the purpose of determining their conformity to the principles above. And, where such arrangements do not conform to these principles, these government agencies be mandated to “backsource” the work;
- A requirement that all government agencies develop their own internal labour forces, including succession planning, in order to give effect to the principles above;
- The establishment of reciprocal transfer agreements between government agencies and all their corporate spin-offs;
The provision of reciprocal priority hiring status between government agencies and between government agencies and their corporate spin-offs;
- The implementation of a secondment program between government agencies, their corporate spin-offs and the Province's educational institutions;

- A government policy that would ensure that, to the extent that any outsourcing is consistent with the principles identified above, such work remain within the Province;
- The establishment of an industry-wide training program in cooperation with the Province's educational institutions;
The establishment of a collaborative recruitment program involving, at a minimum, the government, the Society of Energy Professionals and the government agencies; and,
- The re-establishment of a properly and appropriately funded research program to ensure dynamism and innovation in the electricity industry.

CONCLUSION

While our comments have discussed our past, it is not our intention to dwell there, but we look ahead with considerable trepidation, given our current circumstances. To enable us to deal with the current human resource challenges, and to establish some hope for the future, we need to escape the constraints of our current industry structure. We hope you will communicate the importance of doing that to the government and, if you are successful, we look forward to participating in a new collaborative approach to rebuilding a brighter future. Thank you for your time and attention.