January 25, 2019

Ms. Kirsten Walli
Board Secretary
Ontario Energy Board
2300 Yonge St., Suite 2700
Toronto, ON, M4P 1E4

Dear Ms. Walli:

RE: Advisory Committee Report on Innovation

In January 2018, the Ontario Energy Board ("OEB" or the "Board") convened the Advisory Committee on Innovation ("ACI" or, the "Committee") to assist the OEB in sharpening its focus on enhancing: efficiency; cost effectiveness; innovation; and value for electricity customers. The Committee's focus was to identify actions that the regulator could take that will support and enable cost effective innovation, grid modernization, and consumer choice. The Committee held a series of meetings from February to September, 2018 to discuss these issues and develop recommendations. Alectra's CEO, Brian Bentz, was pleased to participate as a member of the Committee. The Committee relied on input from its members, as well as external studies and reports. Recommendations developed by the ACI were to be provided directly to the Chair of the OEB.

On November 21, 2018, the ACI provided its Report to the Chair of the OEB (the "Report") with its recommendations. The Report was also released to stakeholders and the public. The OEB then hosted a Stakeholder forum on January 16, 2019 at the Board's offices, and invited written submissions by interested parties by January 25, 2019.

Alectra Utilities ("Alectra") serves more than one million customers across over 1,800 sq. km of service territory, spanning 17 communities in Ontario, including Alliston, Aurora, Barrie, Beeton, Brampton, Bradford, Guelph, Hamilton, Markham, Mississauga, Penetanguishene, Richmond Hill, Rockwood, St. Catharines, Thornton, Tottenham and Vaughan. Alectra owns, maintains and operates approximately 7000 km of overhead primary distribution feeders and approximately 14,000 km of underground primary distribution circuits.

Alectra is a firm believer that innovation is the critical next step in the evolution of electricity markets. Alectra is taking action to drive innovation forward. Alectra's PowerHouse program, which offers solar-storage solutions to residential customers and its trial of the Advantage Power Pricing program are two such examples. Alectra is also a leader in delivering savings and efficiencies directly to its customers through its CDM programs. Alectra has among the largest efficiency targets in the province, and is expecting to over-deliver on its target.

Ontario, like many jurisdictions, has reached a tipping point where refined clarity, organization, and structures are needed to support an integrated approach to the implementation of innovation. Otherwise, execution of innovative technologies will proceed on a fragmented basis, which is both inefficient and ineffective for customers. The diffusion of technologies, the optimization of systems, and the effective utilization of data will serve to offer choice and control and reduce costs for customers.

The optimized integration of Distributed Energy Resource ("DER") assets holds the potential to deliver benefits for consumers, such as:

- Security – reliability and resilience;
- Financial – cost of power;
- Social – economic development;
- Energy – provision of energy and reduction in system losses;
- Capacity – increased generation capacity and the reduced need for transmission or distribution capacity (and corresponding deferral of capital investment);
- Grid Support – reactive supply and voltage control; consumption and generation balancing; reduced need for operating reserves; improved scheduling, forecasting, and dispatch; and
- Environmental – carbon emissions mitigation and reduced pollution.

While DERs hold the potential to deliver significant value, decision makers must explicitly account for the context in which they will operate. In the vernacular of the economist, electricity systems provide a public good. . At the same time, certain key features define electricity systems.

First, the supply and demand of power must be in balance at all times. Second, electrical energy flows from generation through network delivery systems to consumption. DERs create localized generation that can cause greater variability within localized networks, such that the physical requirement of balancing both supply and demand becomes more complex. At a certain scale, the challenge is that the behaviour of many individual agents supplying electricity, and many more consuming this electricity, needs to be coordinated. Further, it must be operated within the technical characteristics that define network operations, such as: line losses; reserve capacity; and thermal constraints.

As the OEB and the government examine systems and structures that will support this innovation in the future, there are key items on which a sharp focus must be maintained as a result of current decisions. The following key principles should underpin decision-making and future regulatory frameworks:

1. *Safe, reliable distribution* – The number one priority should be to ensure the maintenance of reliable and safe distribution and transmission networks for all;

2. *Minimize cross-subsidization* – The path forward must not result in a framework that rewards participants at the expense of non-participants (i.e., the potential stranded asset costs must be addressed both from a distributor and customer perspective);

3. *Benefit Socialization* – the benefits of innovation should be managed and expected to benefit all ratepayers;

4. *Grid Impacts & Optimization* – Distributors, acting as Distribution System Operators ("DSOs") must be at the forefront of any systematic or framework changes in order to make real any proposed optimized benefits;

5. *Customer choice, engagement, and experience* – innovation broadly, and DER specifically, should result in greater customer choice and value.

With these guiding principles in mind, Alectra is pleased to provide its comments. Below, Alectra provides summary comments for each of the recommendation areas in response to the ACI Report. These comments provide the context for responses to questions posed by Board Staff.

The Advisory Committee Report

The ACI Report focuses on actions that the OEB can take to facilitate cost-effective innovation in energy services and in its approach to regulation which will bring value to customers. The Committee provides four main recommendations, with related steps or actions to be taken to achieve these recommendations.

1. **Provide a transparent and level playing field by clarifying expectations and requirements regarding obligations between parties and towards customers.**

Clarifying expectations and requirements regarding obligations between parties and towards customers was a central theme among many stakeholders at the recent Stakeholder Conference. Determining where and when certain technologies may be optimal, and the commercial terms that govern, will be important factors in driving motivations and behaviours in the market place. The transactions with third parties and the allowed actions or limitations placed on utility behaviour will determine how implementation occurs and how benefits will ultimately reach customers. Utilities must have a line of sight into the operations of technologies and the system impacts they create to appropriately assess these costs and benefits. The historical points of demarcation around the meter have become blurred with interactive and bi-directional energy flows. True market

transformation will take place when utilities can offer services and products downstream of the current meter demarcation point.

The guiding direction of regulation will be central to transformational change and a new framework. Regulation will establish the foundations around which the market will interact. Even non-regulated entities that interact with regulated entities are in some way influenced by the form of regulation. Most stakeholders agree that in defining the future of innovation, the single most important element will be an examination of the separation of regulated and competitive services. While third party access to the distribution system should be expected, any changes should occur through thoughtful planning and consideration. Utilities, with reliability and service obligations, and suppliers of last resort, must play a central role.

The decentralization of generation into the hands of consumers should produce meaningful benefits for all affected stakeholders. By the same token, the OEB should learn from issues and challenges faced in the past. For example, when retailers entered the water heater rental business in the province, the market that followed was characterized by customer confusion with respect to business practices. In many instances, customers were not provided full transparency with respect to the nature and terms of contracts, on the expectation that market participants were acting ethically and responsibly at all times. Service levels varied from acceptable to unlawful. New legislation and government intervention were required. Another example was the deregulation of electricity supply in Ontario. High and variable pricing led the government to intervene, eventually leading to a centrally planned system and pricing mechanisms.

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2. **Remove disincentives to innovating solutions by changing how utilities are remunerated, and introducing more systematic methods of valuation and pricing.**

Without centralized distribution and grid level planning, rapid advancement and deployment of DER assets will result in stranded generation, transmission and distribution assets throughout the province. This would not be in the public interest. Inevitably, there will be customers who need to stay connected to the grid, for reasons of reliability, certainty, or affordability. These customers would bear increasing costs spread over fewer customers, resulting in a system of electricity divided between the ‘haves’ and the ‘have-nots’. Further, some customers may be well situated or located for specific types of DER, while others are not. For example, the use of Solar PV assets can result in varying outcomes depending on a customer’s premises, the direction and location of facilities, or the customer’s own consumption characteristics. The result could be inequitable access to DER alternatives across the province; and levels of service could vary widely.

Ontarians have spent billions investing in the assets currently in place. Many of these assets will last for decades to come. If these existing assets fall out of use, this historical investment cannot be optimized and may even prove wasteful. The systems in place have value, have already been paid for, and will prove economical if their service can be maximized. Utilities are in the best position to facilitate the transition to a DER future without duplicating or unnecessarily increasing customer costs. Furthermore, distribution capital envelopes, subject to clarifying regulation, can be used to facilitate this transformation, while optimizing the value of existing infrastructure, including managing the risk of stranded asset costs.

In a utility-ownership model, distributors would be able to procure equipment from the competitive market and pool assets to create the most efficient financing and rate structures in combination with all other system requirements or investment needs to be treated at the system level. This should not shut out the competitive market where procurement and installation of resources can be provided. The distributors' role could be to ensure customer service levels, maintenance, quality assurance, and pooling of assets for the most efficient financing and rate structures. Everyone would experience benefits of DER deployment. Customers could also be free to purchase and install directly from suppliers, so long as minimum operating conditions were met, and customers agree to whatever rate structures are most appropriate to that class of customers or asset type. New rate structures could consider access to grid services during peak times and low intensity periods, reliability and supplementary service, backup service, or a variety of other conditions.

Whether or not the assets are financed through utility rate structures or not, service levels, quality assurance, and efficient grid operations need to be the foundation of any deployment strategy. The proliferation of discrete generation technologies does not obfuscate the need and desire to enable grid operations that best serve the public interest, equitably and for all. Distributors should be given direction and certainty to deploy innovation and non-traditional investments that improve customer benefits, customer service, and system operations.

3. **Encourage market-based solutions and customer choice by making more detailed and timely information available to sector participants.**

It goes without saying that any direction to enhance information flows must be within the parameters of essential cyber security and respect for the privacy of information. The Board should carefully consider how and what information should be shared, with whom, and for what purpose.

Generating and making use of enhanced information flows will require that utilities have the infrastructure to provide such value added information. This, in turn, necessitates investment in monitoring and control capabilities, which will enable utilities to truly function as DSOs. Without this data or capability, discussion about enhanced optimization and customer value is moot.

After the capability to generate and disseminate new higher valued added information has been implemented, third party access to, and use of, this information should not impose further costs on ratepayers. For example, once it is operational, conditions should not result in excessive requests for data simply because it is available. Such information requests should have a purpose. The alternative may result in an inundation of requests from hundreds of third parties that tie up utility systems, resources, and cause inefficient costs. Further, due consideration must be given to who bears the cost for production of the information.

4. **Embrace simplified regulation by adopting simple and timely ways to allow for experimentation.**

Broadly speaking, the form and format of the regulatory construct in Ontario needs an upgrade. With the number of distributors and the adversarial style of regulatory operations in Ontario, it is no wonder or surprise to anyone that decisions take an inordinate amount of time and at great cost to the ratepayer. The system is certainly not conducive to rapid development and deployment of innovative solutions. In addition, there is an army of regulatory resources spread out across the province simply to handle the information requests and requirements of the Board used to evaluate performance in the sector.

A new framework or processes should be established that generate focus and timeliness with measurement tools to evaluate efficiency and effectiveness objectives. To this end, Alectra is supportive of concepts like the Regulatory Sandbox or innovation applications, separate and distinct from the regular rate setting process. Many stakeholders have advocated for certain amounts of budget allocated to utilities to undertake investments in innovation or 'permit by rule' authorization, where investment approvals are streamlined if certain criteria are met. These are all positive ideas that should be further explored.

OEB Staff Questions

The actions recommended by the ACI are intended to serve as a common starting point for future OEB consultations on the development of policies to support innovation. To this end, OEB Staff have posed three specific questions for discussion.

1. **What actions should be the highest priority for the OEB?**

The most important element in planning for a modernized grid that supports customer choice and optimized value will be the ability to deploy, use, and integrate assets in ways that are meaningful to

distribution system operations. Customer expectations have increased. As a result, the customer experience needs to evolve. Innovation must include the opportunity for utilities to enhance their experience. Therefore, regarding the elements addressed in the Committee's Report, the highest priority items for the Board to address centre largely around items related to DER integration and LDC remuneration.

DER Integration

Encourage cost-effective investment by utilities in monitoring, controls and predictive capabilities

Without the ability to properly integrate DER assets into distribution system operations, decision-making regarding other investments that impact modernized grid outcomes would be stranded. Utilities require "the green light" to advance the technologies and solutions that will enable grid modernization. Such enablers include, but may not be limited to, Advanced Distribution Management Systems ("ADMS"), Distribution Energy Resource Management Systems ("DERMS"), and Advanced Metering Infrastructure ("AMI"). The criteria for undertaking technological investments and implementation should be known and widely communicated. They should also be flexible enough to allow utilities to examine the best options for integration with their particular systems and infrastructure. The functionality provided by these platforms will enable distributors to: measure; monitor; control DER functionality; and function as DSOs. Alectra believes that a DSO model is the most appropriate relative to any alternative, as it has the greatest potential to enhance operational efficiency, customer choice and assert value retention (i.e. minimizing stranded assets) and creation (i.e. integrating DERs). As reported by the Committee,

> *At some level of penetration of DERs, utilities will not be able to effectively plan and reliably operate their systems if they do not have visibility of and the ability to manage all facilities that are using or impacting their systems. This could result in legitimate denials of connection or limitations on dispatch for reliability reasons. It could also prevent new resources from being managed in a way that optimizes their functionality to the benefit of the system.*
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> *…*
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> *Monitoring and control equipment paired with intelligent analytics can maximize capabilities. This is a key learning from the telecom sector – with the advent of cellular technology enhanced the need for investment in advanced software and data-driven solutions, particularly big data analytics, as an alternative to traditional hardware.*[1]

[1] Advisory Committee on Innovation, Report to the Chair of the Ontario Energy Board, November 18, 2018, p. 16.

Re-examine regulatory restrictions on utility business activities and review the separation of regulated and competitive services

The pursuit of rapid and meaningful deployment of integrated DER services and other innovative solutions necessitates that utilities act as DSOs. To this end, utilities need to understand: what is expected of them; how to incorporate innovation into their system planning and operations; and how to deliver on those expectations. Similarly, utilities will need to understand the obligations they need to undertake in order to address identified limitations or constraints. This will require a re-examination of utility business activities and a review of the separation of regulated and competitive services.

Utilities like Alectra are open to change, and expect to be leaders of change, to the benefit of customers and the market. To realize this goal, business model flexibility must be adopted, relative to the standards that exist today. Current OEB Rules and Codes and legislation interfere with opportunities to consider Mergers & Acquisitions, potential partnerships, as well as new and innovative service offerings. Value is left stranded, due to an inability to serve customers because of rigid constraints.

A future framework should allow utilities to participate in 'grid-edge', behind the meter infrastructure. Utilities should not be regarded as the enemy of competition. Constructed properly and fairly, a new framework design should create the conditions that facilitate market transformation leading to the adoption, optimization, and participation of innovative solutions by all market participants. The Committee's observation on this point was as follows:

> *Restrictions on regulated business activities have limited a utility's ability to offer new and differentiated regulated services. Unduly limiting the activities that utilities can engage in may impede the development of the most cost effective solutions in the future.*[2]

Consider timely funding mechanisms to encourage utility innovation

In order to quickly establish the foundational infrastructure needed to support innovative, modernized outcomes, utilities should be given latitude in proposing options to implement solutions not limited to demonstration projects. This will require that utilities have access to timely funding mechanisms. Without such funding and recovery mechanisms the infrastructure required to support innovation cannot be deployed. The authors of the Report put it this way:

> *Supportive regulatory guidance could be developed to increase utilities' confidence to propose these enabling investments. Progressive improvements in monitoring and*

[2] Ibid, p. 8

management capability are an important part of realizing the full benefits of energy sector transformation.[3]

Further examine timelines for OEB decisions

Timely and efficient OEB decision-making is necessary to support utility actions in establishing market readiness. In order to have a reasonable possibility of grid modernization by 2021, investments in infrastructure will need to be designed, approved, and implemented within the 2019-2020 timeframe. Utilities require transparency, predictability, and consistency in OEB decision-making. Further, decision-making must be tied directly to policy direction. It has been Alectra's experience that there is often a wide chasm between policy direction and interpretation and implementation in the decision making process. The OEB should have a clear and express mandate or objective for supporting innovation readiness.

As indicated in the Report:

> *The current length of many rate cases is not consistent with innovation. Within the time it takes for a rate case to be adjudicated, much can change in the sector outside of a regulated utility. Utilities have an important role to play in enabling and adapting to innovation to create value for consumers, either directly through delivering energy more efficiently or indirectly by enabling new innovative services offered by other service providers.*[4]

LDC Remuneration

Remunerate utilities to make them indifferent to conventional or alternative solutions

As the framework to support innovation evolves, it will be important to ensure that utility remuneration and incentives are tied to grid optimization and a role as DSO. Utilities should be encouraged to seek and entertain solutions that enhance overall value to the system, and should not be made financially worse off for doing so. The potential for changes in system characteristics will impact system planning, in which utilities should be indifferent to alternative versus conventional solutions, depending on the circumstances. Regardless of the path forward, utilities continue to make these investments, today. Existing assets cannot be stranded as a result of a new framework; instead, the value of current assets should be optimized in the interests of maximizing value to customers:

[3] Ibid., p. 17.
[4] Ibid, p. 21.

The OEB expects utilities to employ rigorous asset management processes to identify, pace and prioritize their investments. Without a change in the model for remuneration there is limited incentive to change from the past pattern despite the availability of new options that might provide the best long-term value for customers.[5]

This point is particularly critical in Alectra's view. The inherent bias enshrined in the current remuneration model incents utilities to focus on capital spending and traditional solutions. This is a clear deterrent to motivating utilities to innovate and connect non-wires alternatives ("NWAs"). Alectra proposes that this should be a central point of discussion in future consultations, including a review of alternative forms of remuneration employed in other jurisdictions. For example, it is worth exploring valuable lessons that may be learned from other jurisdictions such as New York or the United Kingdom to apply in the Ontario context. The key guiding principle should be to incent the behaviours and activities sought.

2. What interdependencies should be considered for planning and sequencing the OEB's next steps regarding further policy development and consultations?

The Board currently has a number of open and active policy files before it, including:

- Customer Service Rules (Phase 1)/ Customer Complaint Process (EB-2017-0183)
- Customer Service Rules (Phase 2)
- Corporate Governance (EB-2014-0255)
- Low Income Energy Assistance Plan Review (EB-2018-0268)
- Review of Miscellaneous Rates and Charges – Energy Retailer Service Charges (EB-2015-0304)
- Regional Planning & Cost Allocation (EB-2016-0003)
- Electricity Pricing Pilots (EB-2016-0201)
- Standardization of Variance Accounts
- Commercial & Industrial ("C&I") Rate Design (EB-2015-0043)

Each of these initiatives may in some way be impacted by developments from the Advisory Committee's recommendations. The C&I Rate Design case in particular should be deferred until such time as this consultation is complete. The reason is that this case may be at odds with, or run counter to, developments as a result of this proceeding. That is, if this case is to explore different utility remuneration models or frameworks, while the C&I case concurrently examines the impact on utility remuneration through C&I rates, then the outcomes in one case would likely interfere with the other. In Alectra's view, it makes more sense to first address utility remuneration, and then to explore rate design configurations.

In addition, all utilities in Ontario are either working on annual rate applications or preparing for multi-year incentive regulation plans (i.e., rebasing applications – whether Cost of Service or Custom

[5] Ibid, p. 10.

Incentive Regulation plans). The processes underway should not be forsaken, as a result of this consultation. Alternatively, wherever utilities might be in their rate cycle, including whether or not they are within a rebasing deferral period, the outcomes of this proceeding should apply equally to all utilities. Further, all utilities should have the opportunity of implementing such investments or outcomes as may arise from this proceeding.

Going forward, utilities will require an understanding of the Board's expectations and timelines in order to plan for and implement DER and DER-enabling investments within the context of their respective rate cycles. However, as has been discussed and addressed in the Committee's Report, the regulatory process often acts as a barrier to innovation itself:

> *The complexity of utility filings and the adversarial nature of OEB hearings may be an obstacle to innovation and experimentation by consumers, utilities, and innovators.*[6]

As a result, Alectra recommends that the Board focus on policy consultations and allow for 'innovation applications' that are outside of the realm of general rate cases or annual rate adjustment cases. While this may ultimately fit within the realm of the 'Regulatory Sandbox' approach, the point remains that it will be worthwhile to separate general rate applications from exploring opportunities for investment in innovation. As indicated above, streamlined processes and timely Board decisions are essential in all respects.

It is also worth making special note of developments occurring outside of the OEB's realm. In particular, Alectra recommends that there should be coordination and alignment of policy developments and direction between the government and the OEB. For instance, Alectra understands that the government is currently investigating policies to promote efficiency, modernization, and innovative energy solutions to drive down costs for ratepayers. In particular, the government has signaled its intent to manage or reduce industrial rates. The government is also considering if Conservation and Demand Management should continue to be funded by ratepayers, once the current CDM framework has expired after 2020. Direction regarding these key policy areas is important as the related outcomes have the potential to materially impact how the Board operates or makes decisions, and ultimately what is expected of utilities and stakeholders, alike.

Other important consultations are also taking place under the purview of the Independent Electricity System Operator ("IESO"). In particular, the IESO is developing its vision and action plans for the operation of the aggregate electricity market in Ontario through the development of an Innovation Roadmap and through its Market Renewal Project. These policy areas will impact the ability or expectations for how DERs may access market pricing and have impacts on how the province conducts Regional Planning. As distribution operations are critical to the IESO's and the OEB's outcomes, it is essential that these agencies work in lock step to move the market forward. For now, the role of the OEB in these initiatives and the interaction between these initiatives and those

[6] Ibid, p. 19.

underway at the OEB are unclear. However, it is clear and obvious that an efficient market structure and the integration of DERs require that the Board and the IESO work closely together in their respective domains; moreover, outcomes should not be contradictory.

3. Are there any gaps or complementary areas of inquiry that need to be considered?

In Alectra's view, the gaps leading to grid modernization and market evolution have largely been identified in the Advisory Committee's Report. That said, an important gap is the Board's plan for future consultation process. Whatever form of process is adopted moving forward for future consultation, the Board should maintain a keen focus on the following broad areas:

- Distributor System Operator ("DSO") enablement
- Grid edge asset deployment
- Customer experience and empowerment

As this is perhaps the most important development in energy markets in Ontario in a generation, it requires vision, attention, focus, and resolve to make evolution happen. To this end, so much will rely on the process going forward.

At the recent Stakeholder Conference hosted by the OEB, Staff shared its vision for next steps. The process, as Alectra understands, includes the development of a scoping document that will identify work-streams, policy, and priority areas. This is expected to be released by spring, 2019. This would then be followed by a series of Staff Papers for each of the identified policy areas followed by submissions of parties.

Based on experience, this would then result in further refinements followed by more submissions and ultimately policy direction issued the Board. Alectra does not see that the process identified can reach any reasonable conclusion before late 2020. This matter is too urgent and too important to use a sequential process. Alectra requests that the Board move forward with a different process for consultation. Key principles for consultation should include: openness; transparency; inclusiveness; comprehensiveness; and rapidity. In Alectra's view, this can best be achieved through a generic hearing process.

A generic hearing has been used effectively in the past, both in Ontario and in other jurisdictions. The Federal Energy Regulatory Commission ("FERC") frequently conducts policy consultations in the form of technical conferences. In Ontario, other generic hearings have been used successfully in different policy contexts, such as the Natural Gas Forum and Cost of Capital policy development. The key consideration is a general forum that is open, interactive, and on the record. Importantly, it functions through direct interaction among stakeholders, and directly with Board members. It is the best way to engage all parties in healthy debate of issues and exchange of ideas. Best of all, it can be initiated and conducted in a relatively short time frame, and certainly within 2019.

Another gap that Alectra would like to identify for the Board relates to the Conservation and Demand Management file. The CDM file is currently under review by the government, and it remains to be seen how or if such business activity will continue to be included as part of regulatory operations post 2020. In Alectra's view, CDM is an excellent conduit by which to extend DER products, services, and offerings to customers to enable more efficient outcomes and customer savings directly. As the Board considers how to move the regulatory framework forward in respect of supporting innovative outcomes, Alectra submits that a specific review of how CDM can aid in this regard would be beneficial. This topic area should be framed as part of a future issues list in any upcoming policy consultations.

Alectra appreciates the opportunity to provide comments on the Advisory Committee on Innovation's Report to the OEB. If you have any questions with respect to any of the above, please contact the undersigned.

Sincerely,

Original signed by Indy J. Butany-DeSouza

Indy J. Butany-DeSouza, MBA
Vice President, Regulatory Affairs
Alectra Utilities Corporation