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**Frank D'Andrea**

Vice President, Reliability Standards and Chief Regulatory Officer

BY RESS AND EMAIL

February 17, 2021

Ms. Christine E. Long  
Registrar  
Ontario Energy Board  
Suite 2700, 2300 Yonge Street  
P.O. Box 2319  
Toronto, ON M4P 1E4

Dear Ms. Long,

**EB-2018-0287/EB-2018-0288 – Utility Remuneration and Responding to Distributed Energy Resources (DERs) Consultations – Hydro One Networks Inc. Submission**

On September 24, 2020 the OEB issued a letter announcing it had commissioned two expert studies, a COVID-19 Impact Study and a DER Impact Study, to assist in confirming the scope and next steps in the Utility Remuneration and Responding to Distributed Energy Resources (DERs) initiatives. These studies were conducted by London Economics International (LEI) and ICF respectively, and were published to the OEB website on December 16, 2020 and January 18, 2021, respectively.

On January 18, 2021, the OEB also issued a letter inviting stakeholders to a meeting on February 3, 2021 to discuss the results of the two studies, the scope of the OEB initiatives and next steps. The letter also invited stakeholders to submit written comments on the two studies and implications of the studies on the appropriate focus areas and sequencing of next steps for these consultations. Please see attached written comments from Hydro One Network Inc. (HONI) with respect to these initiatives.

Hydro One appreciates the opportunity to provide feedback and the OEB's consideration of its comments.

This filing has been submitted electronically using the Board's Regulatory Electronic Submission System (RESS).

Sincerely,

A handwritten signature in cursive script that reads "Frank D'Andrea".

Frank D'Andrea

1 **Hydro One Comments**

2  
3 **Utility Remuneration (EB-2018-0287) and**  
4 **Responding to Distributed Energy Resources (EB-2018-0288)**  
5

6 On December 16, 2020 and January 18, 2021, the OEB published two studies to assist in  
7 confirming the scope and next steps in the Utility Remuneration and Responding to Distributed  
8 Energy Resources (DERs) initiatives, collectively called sector evolution initiatives. These two  
9 studies are the *COVID-19 Impact Study* by London Economics International (LEI) and *DER*  
10 *Impact Study* by ICF, respectively.

11  
12 While the analysis conducted by LEI and ICF provide recommendations on next steps for the OEB  
13 on DERs, the OEB's letter of January 18, 2021 invited stakeholders to submit written comments  
14 on the appropriate focus areas and sequencing of next steps for both sector evolution consultations,  
15 including Utility Remuneration.

16  
17 Hydro One commends OEB staff for their ongoing stakeholder engagement and work on these two  
18 initiatives, and encourages accelerating work on both policy initiatives to support the evolution of  
19 the sector. A lot of good work has been done over the last two years and Hydro One recommends  
20 that the OEB leverages the stakeholder feedback it has already received to drive meaningful  
21 progress in these important consultations. These initiatives are important to ensuring the safe and  
22 reliable operation of the electricity system, protecting consumers and facilitating innovation.

23  
24 The comments that follow are the result of further reflection and consideration of the discussions  
25 that took place during the course of the stakeholder meeting on February 3, 2021 and should be  
26 read in conjunction with previous written submissions and oral comments made by Hydro One.

27  
28 Hydro One has three key recommendations for the sector evolution consultations. Following these  
29 recommendations, Hydro One has provided feedback on the LEI and ICF studies.

30  
31 **Key Recommendations**

32  
33 **1. Work on these consultations should proceed with a greater sense of urgency and better**  
34 **reflect the current capabilities of utilities in the sector.**

35  
36 The studies by LEI and ICF seek to inform the OEB's pace in proceeding with their initiatives by  
37 evaluating the projected adoption rates of DERs through different lenses. To a certain extent, they

1 appear to signal to the OEB that significant DER adoption is a future issue and there is an  
2 opportunity to slow down in the near term. Hydro One disagrees.

3  
4 While this may not be the case for many smaller distributors in Ontario, DERs are not something  
5 of the future for Hydro One. Hydro One already has approximately 2,500MW of installed DERs  
6 capacity connected to our distribution grid, which represents 40% of our peak demand. Hydro One  
7 continues to see customer demand to connect DERs to its system. Since the end of the  
8 government's FIT and microFIT programs, Hydro One has continued to receive an average of 11  
9 DER connection requests per month and received 154 applications in 2020 alone. For Hydro One,  
10 policy guidance is something that is required in the near-term.

11  
12 The ICF study acknowledges the regional variability in the penetration of DERs, load growth and  
13 utility capabilities and the flexibility required to manage this diversity: "the number and diversity  
14 of distributors in Ontario will require a flexible approach to managing operational impacts of DER  
15 and continual improvements in growth projections to inform future action."<sup>1</sup>

16  
17 While all utilities will benefit from clear OEB objectives for system evolution, it is important to  
18 ensure that those utilities who already have a significant penetration of DERs are provided with  
19 the timely guidance and flexibility necessary to address specific customer and system needs in the  
20 near term. Hydro One has already started to make foundational modernization investments in its  
21 infrastructure that will assist in enabling these technologies and to manage their impact on the grid.  
22 Hydro One continues to evaluate DERs as alternatives to traditional infrastructure and requires  
23 OEB guidance in the near term to help guide investment decisions.

24  
25 Hydro One believes that regulatory frameworks should not be static and should continue to evolve  
26 over time to address changing system needs. As a result, Hydro One recommends that the OEB  
27 continue moving forward in a timely manner with the sector evolution initiatives to ensure the  
28 OEB is providing guidance and advice as it is required, recognizing that the regulatory framework  
29 will continue to be refined over time.

30  
31 **2. The OEB should tackle the broad regulatory frameworks for DERs and Utility**  
32 **Remuneration.**

33  
34 As detailed further below, the approach taken in the ICF study underestimates the penetration of  
35 DERs in Ontario and the technical capabilities of utilities in Ontario. The focus of ICF  
36 recommendations is primarily on technical issues and largely looks at DERs as something that  
37 utilities will reactively respond to, rather than as tools that can be actively leveraged by utilities to

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<sup>1</sup> ICF DER Impact Study, January 18, 2021, page 34

1 optimize the grid and provide customer benefits. As a result, Hydro One believes that ICF's  
2 perspective is insufficient to result in a complete regulatory framework for the integration of DERs  
3 and provides no guidance on necessary changes to utility remuneration. The OEB needs to tackle  
4 broader regulatory issues.

5  
6 For DERs this includes considering the role and responsibilities of utilities and the IESO in a high  
7 DER penetration environment, appropriate cost allocation between ratepayers and DER  
8 proponents, and the extent to which existing regulatory mechanisms appropriately consider  
9 storage. As outlined in the third recommendation, tackling the broader issues will require  
10 consideration and coordination with work being done through other OEB and IESO initiatives,  
11 including the OEB's DER Connection Working Group and the IESO's Innovation Roadmap work.

12  
13 For Utility Remuneration, Hydro One encourages the OEB to consider improving alignment  
14 between incentives provided under the current regulatory framework and the desired customer  
15 outcomes. Hydro One encourages OEB staff to revisit the presentations and feedback collected as  
16 part of the February 2020 consultations, including Hydro One's April 30, 2020 written comments.  
17 As put forward in Hydro One's previous comments, we continue to believe that in addition to the  
18 scope laid out in the February 20, 2020 OEB staff presentation<sup>2</sup>, the Utility Remuneration  
19 consultation must include consideration of rate design, cost allocation and cost responsibility in  
20 order to meet the OEB's objectives for the consultations, including ensuring that "consumers are  
21 appropriately protected" and that "customer choice does not negatively impact other consumers".<sup>3</sup>

22  
23 Hydro One acknowledges that work on rate design is being undertaken through the OEB's  
24 Commercial & Industrial (C&I) rate design initiative and believes that this initiative can help set  
25 rates that treat all customers fairly, while also sending appropriate price signals to enable efficient  
26 outcomes of DER connections to the electricity system. However, the timing for concluding that  
27 initiative remains unclear.

28  
29 During the Energy Symposium held by the OEB on February 11, 2021, the OEB's CEO, Ms.  
30 Zagar, stated that embracing innovation and new technologies can benefit customers and the  
31 industry. Hydro One is supportive of this goal and submits that fostering innovation requires space  
32 for failure. The OEB should provide utilities the opportunity to try innovative solutions, even at

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<sup>2</sup> The scope outlined in the presentation is: determination of revenue requirement (assessment of efficient expenditure levels and reasonable return); activities that attract a return for utilities; use of specific performance incentives (rewards and penalties tied to achievement of specific objectives); managing and sharing risk (e.g. earning sharing, variance accounts etc.); treatment of non-utility activities within the regulated utility (e.g. legislative restrictions/exemptions on business activities); and tools the regulator can develop/employ to support the above. OEB staff presentation at the February 20, 2020 stakeholder session.

<sup>3</sup> OEB staff presentation at February 20, 2020 stakeholder session, page 33.

1 the risk of failing. There is value in the experience gained from such exercises and this would help  
2 utilities adapt to change so consumers continue to be well-served. For example, as part of the sector  
3 evolution consultations the OEB could consider establishing dedicated funding envelopes for  
4 innovation.

5  
6 For both consultations Hydro One believes it will be important to establish a regulatory framework  
7 that affords utilities greater flexibility to adapt to changing circumstances and meet customer and  
8 system requirements at the lowest cost, using the widest range of tools possible. This flexibility is  
9 especially important as the pace of technological change in the sector continues to increase.

10  
11 **3. These consultations should consider a holistic view of the grid and be coordinated with**  
12 **other sector initiatives.**

13  
14 Increased DER penetration will impact many different entities in the sector which include  
15 distributors (both host and embedded distributors), transmitters, the IESO, generators and  
16 customers. Hydro One submits that an important step in determining the regulatory framework for  
17 DERs and Utility Remuneration is for the OEB to examine the roles and responsibilities of all  
18 parties and make a decision on the appropriate roles of regulated entities based on a holistic view  
19 of the impacts, costs and benefits across the grid. Hydro One also notes that when the OEB is  
20 determining the appropriate roles and responsibilities, it will be important to consider which parties  
21 are best positioned to achieve the objectives and desired outcomes at the lowest overall cost to  
22 ratepayers. For example, Hydro One believes that having utilities guide the siting of DERs,  
23 potentially through provision appropriate price signals, will help to unlock greater system value of  
24 these resources and mitigate unintentional cost increases or cross-subsidization.

25  
26 When considering the impacts of DERs on utilities, Hydro One recommends that the OEB not  
27 only consider the impact on utilities that directly engage with DERs, but also the upstream impacts  
28 to both host distributors and transmitters. As DER penetration continues to increase, the OEB  
29 needs to consider the technical and remuneration impacts on upstream entities. The OEB should  
30 also address the potential for customer cross-subsidization due to existing rate designs that were  
31 established when DER penetration was not a material factor.

32  
33 In addition to a holistic view of stakeholders, Hydro One submits that the OEB needs to take a  
34 holistic view of the electricity sector when developing the regulatory frameworks. The accelerating  
35 pace of technology innovation, fundamental need for grid resiliency and rise in cyber threats that  
36 will require utilities to reinforce distribution systems should all be considered. Solutions developed  
37 solely for DER's will fail unless a global approach is adopted.

1 It is only through this more holistic view that the OEB can ensure it is fully considering the impacts  
2 of DER integration and ensuring that overall costs to ratepayers are minimized, and the resulting  
3 customer rates appropriately reflect the service they receive.  
4

5 Currently, the OEB and IESO initiatives are proceeding independently with no clear integration or  
6 touch points. The IESO continues to conduct a parallel innovation initiative under their Innovation  
7 Roadmap and through their Market Renewal Program. Activities include producing White Papers  
8 on DER integration and conducting pilots (e.g., the York Region Non-Wires Alternative Auction  
9 and Energy Efficiency Auction). Material decisions made by one entity can have consequences  
10 and limit options for consideration by the other.  
11

12 Hydro One recommends that the OEB develop a coordinated work plan for all of the related OEB  
13 initiatives, including Utility Remuneration, Responding to DERs, C&I Rate Design, and the DER  
14 Connection Review Initiative. The work plan should identify the near-, mid- and long-term steps  
15 as well as the desired outcomes for each initiative and should tie in with the key milestones of the  
16 related IESO innovation work.  
17

18 Hydro One believes that a coordinated work plan would result in more informed, holistic decision-  
19 making that would maximize the benefit to customers by identifying interdependencies that may  
20 exist and informing the sequencing of the sector evolution next steps. For example, while the ICF  
21 study mentions that its recommendations do not cover matters that are being addressed in the  
22 OEB's DER Connection Review Initiative, the study does not clearly identify what those matters  
23 are. A transparent process would clearly articulate the desired outcomes, what decisions are  
24 anticipated to be made in each consultation and would improve the efficient use of resources by  
25 stakeholders navigating multiple consultations.  
26

### 27 **Feedback on the LEI Study recommendations**

28

29 The LEI report found that the drivers of DER adoption have slowed down as a result of COVID-  
30 19. Due to the slow down as well as the number of other OEB COVID-19-related activities (e.g.  
31 COVID-19 Deferral Account consultation), LEI recommends that the OEB slow down the sector  
32 evolution consultations and delay issuing target dates.  
33

34 Hydro One firmly believes that now is not the time to pause or slowdown the sector evolution  
35 consultations. As highlighted earlier in this submission, Hydro One, and likely other large utilities  
36 are already facing significant demand to connect DERs. Any delay in these consultations creates  
37 a heightened risk of cost avoidance by some customers to the detriment of other customers, and  
38 diminished customer and grid benefits of DER deployment.

1 **Feedback on ICF Study recommendations**

2  
3 Hydro One appreciates the effort of the ICF study in defining ‘reasonable’ growth scenarios as  
4 guide posts for the timing of their recommended OEB actions. This section outlines feedback on  
5 the DER penetration levels identified in the study and detailed comments on the recommendations.  
6 Hydro’s views on the timing and sequencing of next steps related to the OEB’s DER initiative  
7 are largely captured earlier in this submission, but references to timing of the ICF  
8 recommendations are made in this section, where relevant.

9  
10 *Underestimation of DER Penetration*

11  
12 Hydro One notes that the current DER penetration in Ontario is higher than the baseline presented  
13 in the ICF study. The ICF study relied on public OEB, IESO and Ministry of Energy, Northern  
14 Development and Mines data, but did not include utility data, and focused on end-use applications  
15 of behind the meter (BTM) rooftop solar PV and battery energy storage installations.

16  
17 Hydro One notes that DER adoption that impacts the electricity system is not necessarily limited  
18 to end-users installing facilities on their premises, as forecast by ICF. The IESO has identified  
19 potential capacity requirements starting as early as 2022<sup>4</sup> and may be looking to acquire system  
20 resources in the medium term. Hydro One notes that these types of grid-level resources would not  
21 be captured in ICF methodology but would impact local distribution systems.

22  
23 The impact of ICF’s approach and underestimation of DER penetration in Ontario is two-fold.  
24 First, Hydro One believes that the timelines outlined for the recommended OEB actions would  
25 delay development of necessary regulatory responses that the OEB should be considering in the  
26 near-term. Second, the study underestimates the extent to which all DERs installations are  
27 impactful to utilities and not just end-user installed facilities. At the February 3, 2021 stakeholder  
28 conference, ICF largely agreed with these conclusions.<sup>5</sup>

29  
30 In making their projections for solar and storage adoption rates, the ICF study also does not appear  
31 to consider the availability of hosting capacity on the system to be able connect DERs. Hydro One  
32 recommends that any future projections should consider this as many areas of the province have  
33 limited capacity to connect more DERs.

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<sup>4</sup> 2020 Annual Planning Outlook: Executive Summary, page 2.

<sup>5</sup> February 3, 2021 Stakeholder Session transcript, page 61 and 62

1 In addition, page 6 of the ICF study, it is stated that “LDC planning outputs will enable the OEB  
2 to identify when and how to adopt the recommendations”. Hydro One notes that LDCs would have  
3 a challenge projecting DER connections because they don’t always have an understanding of the  
4 business case for the projection and how other policy changes/incentives/IESO market  
5 participation opportunities would affect that business case. Hydro One believes that the industry  
6 would benefit from a centrally procured outlook summary of how various market/economic factors  
7 would impact the business case and adoption rates that is informed by a more knowledge-based  
8 view.

9  
10 Detailed Comments on ICF Recommendations

11  
12 The table below outlines Hydro One’s detailed comments on the recommendations. Note this table  
13 is not comprehensive of all recommendations. Where there are no detailed comments provided,  
14 Hydro One is generally supportive. Hydro One recommends that the OEB refer more technical  
15 matters recommendations to a technical working group for discussion. As noted above, Hydro One  
16 does not believe that solely addressing the recommendations in the ICF will result in the  
17 comprehensive policy framework that is required.

ICF Recommendation	Hydro One Comment
<b>Near-Term Recommendations (2021-2023)</b>	
Encourage the LDCs to coalesce around common reporting requirements and best practices for data from DER	Hydro One would appreciate additional detail on this recommendation to assess if the DER Connection Working Group meets the desired outcome of this recommendation.
Work with the LDCs to determine how potential DER growth trajectories within their respective territories may impact which high value DER use cases	Hydro One recommends that customer preferences and potential changes to the regulatory structure and price signals be considered when identifying DER use cases.
<b>Medium-Term (2024-2026)</b>	
Formulate guidance for LDCs on enhanced distribution planning practices under high DER penetration	Hydro One is very interested to participate in this work to understand what changes would be contemplated.
Account for the diversity of LDC capabilities by developing guidelines and requirements that govern LDC performance in the coordination of DER participation in the IAMs	Hydro One recognizes that this will require significant work, and that the IESO is also putting forward their positions on the coordination of the transmission and distribution systems through their Innovation White Papers series.
<b>Long term (2027-2030)</b>	
Investigate the feasibility of flexible connections that allow for dynamic adjustments of DER generator settings according to distribution circuit and system conditions	Hydro One recommends pursuing this in the near-term as utilities with localized high DER penetration areas are already exploring flexible connection options.
Convene a forum to provide guidelines on the design of a distribution-level market that can effectively coordinate with the IAMs on the prioritization of services and the allocation of roles and responsibilities	Hydro One recommends the OEB ensure robust utility participation in this work to ensure impacts to the system are fully considered in the development of guidelines.
Work with the IESO to identify how potential DER growth trajectories may impact which DER use cases provide the greatest system value at the bulk power levels	Hydro One recommends that the IESO quantify the benefits of DERs at the wholesale level, and utilities to quantify benefits at the distribution level. Following this work, the OEB should work with the IESO and LDCs to determine which level of benefits has the greatest ratepayer impact if there is a conflict between the distribution and wholesale benefits identified.

1 **Conclusion**

2  
3 OEB staff indicated that the next step for these consultations is for the OEB to develop and issue  
4 a scoping paper. Hydro One recommends that the OEB deliver on its commitment to complete this  
5 work and share the scoping documents, including work plans, for these initiatives with  
6 stakeholders in the near term.

7  
8 DER installations can help support Ontario's economic recovery by providing customers with  
9 greater choice and options to help meet their loads and reduce their electricity bills. DERs can also  
10 provide utilities with additional options for addressing system needs. The work of these  
11 consultations is paramount to enable customers to achieve these benefits while ensuring utilities  
12 are able to meet their obligations of providing safe, reliable and high quality electricity services to  
13 their customers in a cost efficient manner.

14  
15 Hydro One recognizes OEB staff, LEI and ICF for their work in developing the studies. Hydro  
16 One appreciates the opportunity to provide comments to the OEB regarding these important policy  
17 consultations and looks forward to future opportunities for engagement on these issues.