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Sanjay Coelho
Ministry of the Environment, Conservation and Parks (MECP) - Environmental Policy Branch
40 St Clair Avenue West
Toronto, ON M4V1M2
Canada

**Re: ERO Posting 019-2785, 'Land Use Compatibility Guideline'**

Dear Mr. Coelho,

Thank you for the opportunity to provide comments on ERO posting 019-2785, 'Land Use Compatibility Guideline'.

Hydro One Networks Inc. ("Hydro One") is Ontario's largest electricity transmission provider, serving customers throughout the province. We operate more than 1500 electrical substations throughout Ontario which deliver power to homes and businesses. Many other organizations operate electrical substations in Ontario for high-load facilities (e.g. factories), generating stations, and local distribution systems.

Electrical substations typically contain one or more power transformers which produce an audible tonal hum from their cores and broadband noise from cooling fans that operate during periods of elevated loading. Different types of substations may contain other noise-producing equipment such as backup generators, capacitor banks, or Static Var Compensators (SVC). These sources are typically subject to the requirements of the Environmental Protection Act S.9 (i.e. Environmental Compliance Approval or Environmental Activity Sector Registry). As such, when noise-sensitive land uses are developed in proximity to existing electrical substations, the established facility is required to demonstrate compliance with applicable noise level limits.

The identification of electrical substations as significant noise sources and their subsequent assessment during the land use planning process has historically been inconsistent. Issues with the recognition of substations as significant noise sources or with inaccurate noise measurements/assumptions made by developers has pushed some facilities out of compliance with their established environmental approvals and created significant costs for operators who are subsequently required to implement noise abatement measures.

Hydro One supports the new proposed Land Use Compatibility Guideline and sees this as an excellent step in ensuring consistency between the Environmental Protection Act and the planning of new sensitive land uses. We welcomed the creation of NPC-300 in 2013, which harmonized noise level guidelines across both MECP review and municipal planners. Similarly, we hope that this new guideline will equip municipal planners with the tools they need to identify our facilities and assess their potential impacts more consistently.

To this end, Hydro One proposes the following modifications to the draft Land Use Compatibility Guideline:

- Addition/modification of two new rows to 'Table 1 – Area of influence (AOI) and minimum separation distance (MSD) for select major facilities.'

  Without prescriptive direction with regard to substations, these facilities should generally fall under Class 3-5 with regard to noise (varies by facility – based on Table 3, 'Characteristics for classifying major facilities'). From Table 2, 'AOI and MSD for classes of major Facilities" this class of facility would require an AOI of 1000-2000 m and a MSD of 500 m. Given the ubiquity of substations around the province and the real assessed AOIs (typically less than 500 m), this classification may not be appropriate.

| Select Major Facility | Description of Major Facility | AOI and Class | MSD |
|---|---|---|---|
| High voltage substations | Bulk electrical power substations operating at transmission voltages (>=115 kV) | 500 m<br>Class 4* | N/A*** |
| Low voltage substations | Electrical distribution substations operating at distribution voltages (<115 kV) | 250 m<br>Class 3** | N/A*** |

* High voltage substations are typically audible well outside the station property line and 500 m has historically been used as a screening criteria for this class of facility (e.g. previous Ontario Primary/Secondary Noise Screening Process). This buffer distance accords well with past acoustic assessments of Hydro One high voltage substations.

** Low voltage substations are typically audible outside the station property line. While there is no prescribed screening distance for this class of substation, a 250 m buffer distance accords well with past acoustic assessments of Hydro One low voltage substations.

***MSDs may not be appropriate for electrical substations since there are some design configurations that result in little to no off-site audible noise. For example: a few substations in urban centres are placed within buildings which attenuate noise; a few substations were built within close proximity to established sensitive land uses and are already designed with extensive noise mitigation in place. For such facilities, a default MSD is not required and would place an excessive burden on land use planning.

- Add bolded text to Section 2.6, ‘Compatibility Studies’.

  Hydro One has been a stakeholder on many previous developer-led noise studies which underestimated facility noise levels and do not capture the worst-case operating modes. Hydro One can provide highly accurate noise specifications for any significant noise-producing equipment upon request.

  > *“Section 2.7 provides a list of the documentation that is required to be included as part of compatibility studies. Some of the information required for completing compatibility studies may not be accessible to the proponent due to its proprietary nature or if a major facility or sensitive land use is not able or willing to share the information. In such cases, the compatibility study should note the deficiencies in information, and make conservative estimates for the separation distance and mitigation measures to minimize and mitigate potential adverse effects to sensitive land uses or impacts to major facilities.* ***Major facilities must be provided with a written request for contaminant source specifications. Proponent-directed air/noise/dust measurements or estimates are only acceptable when facilities refuse to share their own specifications****. The planning authority should use its discretion to ensure that the information provided is sufficient to justify the conclusions of the compatibility study and if not, require revision to address any noted deficiencies or if unsatisfactory, be rejected.”*

- Add bolded text to ‘Appendix C – Consultation and Engagement for Land Use Compatibility’

  Same reasons as previous comment.

  > *“For example, in order to ensure that noise, dust odour and other potential sources of adverse impacts to the facilities have been appropriately assessed and addressed, planning authorities should ensure that proponents of new sensitive land uses have preconsulted with major facilities within the AOI(s) of those major facilities. It is important that all major facilities are consulted as facility information may be required to determine the extent of potential impacts at the new sensitive land use and minimization and mitigation measures.* ***Proponent-led noise, dust and odour measurements taken outside the major facility should only be accepted where the facility will not provide in-situ measurements or specifications.****”*

Hydro One would be happy to meet to discuss this new guideline and our proposed modifications, or to provide any additional information you may find helpful.

We look forward to the clear direction and consistency that this new guideline can provide and thank you for your invitation to participate in stakeholder review.

Best regards,

Elise Croll