

Streamlining Permissions for the Electricity Sector

Discussion paper

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Introduction

The ministry is proposing regulatory changes under the *Environmental Protection Act* to expand Ontario's on-line self-registration program to cover certain stormwater management and spill control works servicing electricity power generation, transmission, distribution and battery energy storage system¹ stations.

The proposed regulatory changes would enable proponents such as utility companies to self-register their stormwater management and spill control works through the Environmental Activity and Sector Registry (EASR). This requires proponents to obtain permission to engage in stormwater management and spill control activities by self-registering these works online instead of applying for an Environmental Compliance Approval (ECA). Registrants would be required to follow rules in the proposed regulation to maintain environmental protection. This discussion paper includes the rules that are being proposed.

Under the proposed regulation, a Licensed Engineering Practitioner (LEP)² must complete a site-specific assessment³ and design the stormwater management and spill control works in a manner that protects the environment prior to the proponent registering the works online. The design of the works would need to abide by the requirements in the proposed regulation, while taking measures to protect the environment. Registered works would need to be designed, constructed and operated in accordance with the technical assessment report.

¹ A Battery Energy Storage System uses batteries to store electrical energy, enabling the release of that energy when needed. These are considered particularly crucial for integrating energy sources into the electricity grid.

² An LEP is a person who holds a license, limited licence, or temporary licence under the [Professional Engineers Act](#).

³ A site-specific assessment is site-level assessment that is performed before work starts at a site, and would inform an LEP of site conditions, which would in turn inform the technical design of the works.

Electricity systems: stormwater management and spill control systems EASR proposal

We are proposing to require proponents of stormwater management and spill control works (the works) located at electricity stations to register the works on the EASR rather than applying for, obtaining, and operating under an ECA.

It is proposed that a proponent registering the works on the EASR for this purpose would need to retain an LEP, who would produce and attest to the accuracy of a stormwater management report that covers information listed in sections below.

1. Discussion questions:

- a) Stormwater management and spill control works located at electricity facilities currently require an ECA.
 - i. Are there additional activities located at electricity stations that currently require ECAs, but could also be considered for inclusion under the EASR?
 - ii. Are there other types of stormwater management works outside of those located at electricity facilities that would be good candidates to move from ECA approval to the EASR, and why?

Proponent requirements

Pre-registration requirements

We are proposing that prior to registration on the EASR, proponents must retain an LEP to design the works in a manner that meets stormwater management objectives and ministry requirements and prepare a [Stormwater Management \(SWM\) report that is](#) stamped, dated, signed and includes the following technical assessment materials:

1. Design Details
2. Operation and Maintenance Manual
3. Erosion and Sediment Control Plan (if applicable)
4. Spill Contingency Plan

The proponent must follow the recommendations in the SWM report and affirm that construction of the works followed the recommendations outlined in the technical assessment produced by the LEP.

Operational requirements

The ministry is proposing that during the operational life of the works, the proponent must:

1. Operate in accordance with the most recent Operation and Maintenance manual, and have the manual available to operators of the works for the operational life of the works. The proponent is responsible for ensuring that the works are operating functionally and as designed, which may require inspections and periodic updates to the manual.
2. Retain records that are created (e.g., inspection and maintenance logs) for a minimum of five years from the day they were prepared, or, if they have been updated, five years from the last day they were updated. Certain records such as the technical assessments prepared by the LEP must be retained for the lifetime of the works.
3. Post a spill information notice at the site of the registered works that outlines the procedures to be followed in the case that there is a spill. It is proposed that the notice must include the following at minimum:
 - a. procedures for notification of a spill to the parties identified in [section 92](#) of the *Environmental Protection Act*,
 - b. steps to be taken to report, contain, clean up and dispose of contaminants following a spill.

Stormwater management design report

The proponent is required to retain an LEP to design the works and prepare an Operation and Maintenance manual, an Erosion and Sediment Control Plan (if applicable) and a Spill Contingency Plan as supporting documents or sections within the SWM report.

The LEP would be required to, at a minimum, include the following information in the SWM design report:

General information

1. The date of the report.
2. The name, licence number and a summary of the qualifications of the LEP that prepared the report.

3. A description of the area where the works are located and the site or area serviced by the works (“project area”), including:
 - a. catchment area of the site or any upstream areas that drain to the site and are captured and treated by the proposed works; and
 - b. any proposed industrial processes or activities and contaminants anticipated to be associated with the site or activity taking place at the site that will be serviced by the works.
4. An assessment of whether the works are a significant drinking water threat, including identifying the applicable source protection area, relevant drinking water sources, wellhead protection areas and intake protection zones, and vulnerability scores.

Minimum design requirements

1. All new registered works would be required to meet an enhanced level of protection if discharging to the natural environment and if the works are a significant drinking water threat.
2. All spill containment systems serving transformers must provide:
 - a. A spill containment volume equal to the total volume of transformer oil plus the contribution of a 24-hour duration, 25-year return storm, or
 - b. For separate but hydraulically connected containment volumes serving more than one transformer, a containment volume equal to the transformer oil of the largest transformer plus the 24-hour duration, 25-year return storm contribution over all of the linked areas.

Design aspects

1. Site assessment including, at a minimum:
 - a. precipitation patterns,
 - b. site contour and hydrogeology,
 - c. existing drainage patterns at the site, and
 - d. run-off outlet location(s) and ultimate receiver(s).
2. Stormwater management criteria including, but not limited to:
 - a. any site-specific stormwater management criteria established for the site, such as water quantity, water quality and water balance, and an explanation of how these criteria were established and where they come from, and
 - b. documentation of how these site-specific criteria will be met, and how the minimum design requirements will be met.
3. Design details including, but not limited to the following:
 - a. design calculations,
 - b. storage/treatment capacity,

- c. details of the type of works and all components of the proposed treatment train,
 - d. manufacturer's specifications for any equipment that is part of the works, including manufactured treatment devices,
 - e. description and calculation of hydraulic routing of the major storms (i.e., 100-year or regional storms) through the works, including hydrographs, and
 - f. stormwater run-off analysis.
4. Design considerations for works that are identified as significant drinking water threat or are located in protected areas including but not limited to areas included in the Oak Ridges Moraine Conservation Plan, Niagara Escarpment Plan and Lake Simcoe Protection Plan.

Engineering drawings

Engineering drawings that are prepared, stamped, dated, and signed off by an LEP, and include, at a minimum as relevant:

1. The components and design details of the works, and
2. The pre-development and post-development catchment areas, including labels for the sizes of those areas and associated runoff coefficient or imperviousness.

2. Discussion question – Are there additional design requirements that should be considered by the LEP when developing the SWM report?

Operation and maintenance manual

An operation and maintenance manual would be required to be included in the report for registered works. The operation and maintenance manual must at a minimum, identify the procedures and best practices that must be followed by the operator / proponent for the routine operation and maintenance of the works.

3. Discussion question – The ministry is completing a regulatory impact assessment to determine the cost of these proposed changes. If you have hired an LEP in the past, or if you are an LEP, please provide comments on the cost of preparing an operation and maintenance manual.

Spill contingency plan

A spill contingency plan would be required to be included in the report for the registered works. The spill contingency plan would need to detail the procedures followed in the event of a spill due to operations on site where a pollutant has the potential to enter the stormwater management system or the natural environment and/or in the event the SWM works fail.

4. Discussion question – The ministry is completing a regulatory impact assessment to determine the cost of these proposed changes. If you have hired an LEP in the past, or if you are an LEP, please provide comments on the cost of preparing a Spill Contingency Plan.

Erosion and sediment control plan

An erosion and sediment control plan is required to be included in the report if construction is anticipated to occur at the site of the works (e.g., to construct the works) or at the site of the activity being serviced by the works. The purpose of the plan is to manage erosion and to prevent run-off of sediment carried in stormwater from construction activities at the site.

5. Discussion question – The ministry is completing a regulatory impact assessment to determine the cost of these proposed changes. If you have hired an LEP in the past, or if you are an LEP, please provide comments on the cost of preparing an Erosion and Sediment Control Plan.

Effluent and monitoring

1. Registered spill control works would be required to be designed and operated to meet the following effluent parameters:
 - a. Oil and Grease: 15 milligrams per litre
 - b. Phenolics (4AAP): 20 micrograms per litre
 - c. Polychlorinated biphenyls (PCBs): 0.01 micrograms per litre (if transformers have oil with PCBs).
2. If the discharge is to the natural environment or within 30 meters of the water body, the LEP must assess the potential impact of the discharge on the natural environment and must recommend best management practices.

The LEP must evaluate site specific conditions and concerns and determine whether a monitoring plan is required to monitor the potential impacts of the activity and discharge, and its potential to cause deemed impairment of water quality.

6. Discussion question – If you are an operator of electricity generation, distribution or transmission works, please provide comments on whether you continue to utilize transformers that use oil containing PCBs, and when you expect to have phased these types of transformers out of your infrastructure systems.

Records

At a minimum, the following documents or records must be created and retained:

1. Stormwater Management Design Report, including an Operation and Maintenance Manual, Spill Contingency Plan, and Erosion and Sediment Control Plan (if required).
2. Complaints Records: a record of the complaints received from the public relating to the registered works.
3. Monitoring Records (if applicable): a record of the results of a monitoring program if one is established by the LEP and any corrective actions taken.

Notice provisions

A Director may issue a notice to a proponent to retain an LEP to prepare and follow an effluent monitoring plan if the Director has reasonable grounds to believe that there has been a negative impact or there is a likelihood for negative environmental impact(s) from the works.

Transition provisions for existing ECA holders

Proponents of works that have been approved through an ECA would only need to register their works on the EASR if they are making changes to their works and would need an amendment to their ECA. Otherwise, the proponent's existing ECA would continue to apply if no changes are made as the ministry has already reviewed and approved these works in the past.