

Ministry of the Environment, Conservation and Parks

# Environmental Approval Requirements for Renewable Energy Projects

IESO Information Session

*February 9, 2024*

# Purpose

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- To provide an overview of the Ministry of the Environment, Conservation and Parks (MECP) approval requirements for renewable energy projects.

# Overview

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- Approval requirements for renewable energy projects have changed over time, and the legal instrument that regulates a facility depends in part on when the facility was established, as well as other factors such as project type and size.
  - Renewable Energy Approvals (REAs) for wind, solar and bio-energy facilities (since 2010).
    - Small ground-mounted solar projects (<500kW) may register through Environmental Activity & Sector Registry (EASR).
  - Environmental Compliance Approvals (ECAs) for wind, solar and bio-energy facilities (pre-2010).
    - Wind facilities required to complete a streamlined environmental assessment (EA) process prior to obtaining an ECA.
- Ontario Regulation 116/01—Electricity Projects and Class EA for Waterpower projects.

# New Wind Facilities

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- New wind facilities are required to obtain a **Renewable Energy Approval (REA)** from MECP if the nameplate capacity is  $\geq 3$  kilowatts (kW).
  - Projects <50 kW have fewer REA requirements; <3kW are exempt.
- REA applications submitted to MECP must meet requirements of Ontario Regulation 359/09 - Renewable Energy Approvals, under the *Environmental Protection Act*, which include (but are not limited to) the following:
  - Consultation with local municipalities, Indigenous communities and the public (through mandatory public meetings and postings on the Environmental Registry of Ontario).
  - Preparation of specific technical reports and studies (including noise assessments, natural heritage assessments, etc.).
  - Confirmation of municipal zoning and demonstration of demand.
  - Confirmation letters from other ministries re: natural heritage and cultural heritage studies.

# New Wind Facilities - Noise

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- MECP's **Technical Guide to Renewable Energy Approvals** explains the requirements of O. Reg 359/09 and how to prepare a complete REA application for submission to MECP.
  - [Technical Guide to Renewable Energy Approvals](#)
  - [Ontario Environmental Protection Act - Renewable Energy Approvals Regulation](#)
- New wind facilities are required to prepare noise assessments (noise modeling) as part of the REA application process, in accordance with MECP's **Noise Guidelines for Wind Turbines**, to show that the proposed facility will comply with applicable noise limits.
  - [Ontario Noise Guidelines for Wind Farms](#)
- Once approved and operational, the facility will be required to conduct acoustic audits (noise measurements) in accordance with MECP's **Compliance Protocol for Wind Turbine Noise**.
  - [Ontario Compliance Protocol for Wind Turbine Noise](#)

# Existing Wind Facilities

- Existing wind facilities are currently operating under terms and conditions of:
  - REA (projects approved since 2010), or
  - ECA (projects approved pre-2010).
    - Completed a streamlined EA process prior to obtaining an ECA.
- Existing wind facilities with a REA or ECA that obtain a new IESO contract, and **do not propose any changes** to their existing projects can continue to operate under the conditions of their existing approval.
  - Being awarded an IESO contract without proposing project changes does not trigger an amendment to an existing REA/ECA.
- Existing wind facilities that do propose changes to their projects will require amendments to their existing approvals (including requirements to undertake noise assessments/audits if the proposed changes impact noise emissions).

# Existing Wind – REA Amendments

- If project changes are proposed for an existing facility with a REA, then the **REA amendment** process will be followed.
  - Existing REAs generally already have conditions that require acoustic audits.
  - If the proposed project changes are expected to **impact the facility's noise emissions** (e.g. new turbine, new transformer), then as part of the amendment process, MECP would require noise assessments and **acoustic audits** to be conducted again.
  - MECP would require the noise assessments to be conducted in accordance with MECP's Noise Guidelines for Wind Farms and the acoustic audits in accordance with MECP's Compliance Protocol similar to new facilities.
  - The purpose of the noise assessments and acoustic audits is to confirm that facility will be able to operate within allowable noise limits after the proposed project changes are implemented.

# Existing Wind – ECA Amendments

- If project changes are proposed for an existing facility with an ECA, the **ECA amendment** process will be followed.
  - ECA facilities would have originally completed a streamlined EA as part of their initial approval process, and this too may need to be amended to reflect the project change(s).
  - Existing ECA facilities generally **do not** have conditions that require acoustic audits.
  - If the proposed project changes are expected to **impact the facility's noise emissions** (e.g. new turbine, new transformer), then as part of the amendment process, MECP would require noise assessments and **acoustic audits** to be conducted.
  - MECP would require the noise assessments to be conducted in accordance with MECP's Noise Guidelines for Wind Farms, and the acoustic audits in accordance with MECP's Compliance Protocol.



# Compliance

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- The Compliance Protocol for Wind Turbine Noise outlines MECP's current process for noise Complaint Assessment.
- When a wind facility (with a REA or an ECA) receives noise complaints, MECP will apply the multi-step Complaint Assessment process to validate the complaint.
- Through the multi-step Complaint Assessment process, MECP may ultimately determine that an acoustic audit may be required at a facility (or at a specific location) that had previously not been required to conduct acoustic audits.
- MECP has and will continue to use this process to apply new acoustic audit requirements to facilities, where warranted, to ensure that wind facilities are not exceeding allowable noise limits.

# New Solar Facilities

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- New ground-mounted solar facilities are required to obtain a **REA** from MECP if the nameplate capacity is **>10 kilowatts (kW)**.
  - Small ground-mounted solar projects between 10 kW - 500kW that meet other eligibility criteria, may register through the **Small Ground-Mounted Solar EASR** process instead of obtaining a REA.
    - [Small ground-mounted solar facilities user guide for Environmental Activity and Sector Registry](#)
    - [Ontario Environmental Protection Act - Regulation for Solar Facilities](#)
- Solar REA applications submitted to MECP must meet requirements of O. Reg 359/09 similar to new wind facilities.
  - Associated transformers and inverters that emit noise require noise assessments to be conducted in accordance with MECP's guidance:
    - [Ontario Environmental Noise Guideline - Stationary and Transportation Sources - Approval and Planning \(NPC-300\)](#)
    - [Information to be submitted for approval of stationary sources of sound \(NPC- 233\)](#)

# Existing Solar Facilities

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- Existing solar facilities are currently operating either under the terms and conditions of:
  - REA (projects approved since 2010), or
  - ECA (projects approved pre-2010).
- Existing solar facilities with a REA or ECA that obtain a new IESO contract, and **do not propose any changes** to their existing projects can continue to operate under the conditions of their existing approval.
  - Being awarded an IESO contract without proposing project changes does not trigger an amendment to an existing REA/ECA.
- Existing solar facilities that **propose changes** to their projects may trigger **amendments** to their existing REA or ECA approvals.

# New Bio-Energy Facilities

- Bio-energy facilities are required to obtain a REA from MECP if they are anaerobic digestion or thermal treatment facilities using biomass, biogas or biofuel to generate electricity.
- REA application requirements for bio-energy projects are outlined in O. Reg. 359/09 and MECP's Technical Guide to Renewable Energy Approvals.
  - While some general REA requirements are consistent with wind and solar, other aspects are unique to bio-energy projects.
  - For example:
    - Bio-energy projects require odour studies
    - Similar to noise-emitting components associated with solar facilities (transformers/inverters), noise assessments are required, in accordance with MECP's NPC300 and NPC233 publications.

# Existing Bio-Energy Facilities

- Existing bio-energy facilities are currently operating either under the terms and conditions of:
  - REA (projects approved since 2010), or
  - ECA (projects approved pre-2010)
    - Completed a streamlined EA process prior to obtaining an ECA
- Existing bio-energy facilities with a REA or ECA that obtain a new IESO contract, and **do not propose any changes** to their existing projects can continue to operate under the conditions of their existing approval.
  - Being awarded an IESO contract without proposing project changes does not trigger an amendment to an existing REA/ECA.
- Existing bio-energy facilities that **propose changes** to their projects may trigger **amendments** to their existing REA or ECA approvals.
  - In the case of older project with an ECA where a streamlined EA process was also completed, the EA may require amendments.

# New Waterpower

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- New waterpower projects may trigger requirements under the *Environmental Assessment Act*, as follows:
  - Individual EA required if  $\geq 200$  MW
  - Streamlined EA required if  $< 200$  megawatts (MW)
    - Pursuant to O. Reg. 116/01 and the Class EA for Waterpower Projects (unless exempted by the Class EA)
- Following completion of the EA process, the following permissions may apply:
  - ECA may be required for sewage.
  - EASR may be required for air and noise.
  - Other site-specific permits may also apply (e.g. permit under the *Endangered Species Act*).

# Existing Waterpower

- Waterpower facilities can continue to operate in accordance with their existing approval(s) if there are no proposed changes to the facility.
- Streamlined EA requirements under O. Reg. 116/01 and the Class EA for Waterpower Projects (if name plate capacity is  $< 200$  MW) or Individual EA requirements (if name plate capacity is  $\geq 200$  MW) may be triggered by proposed changes made to a waterpower facility.
- An ECA amendment and/or EASR registration update may also be required if there are changes proposed to the facility.
  - EA requirements would need to be addressed before any associated ECA amendments are pursued.

# Battery Energy Storage Systems (BESS)

- A stand-alone BESS requires registration through the **Air Emissions EASR** – a proponent-driven, self-registration process.
  - Appropriate North American Industry Classification System (NAICS) code is 2211221 Electric Bulk Power Transmission and Control.
- Other requirements may also be triggered depending on associated infrastructure and site-specific considerations. For example:
  - Associated transmission lines and transformers may trigger Class EA requirements.
  - Changing the project site's permeability may trigger ECA requirements for stormwater.
- BESS projects that are integrated with generation facilities may trigger different requirements depending on the type of facility they are integrated with. For example:
  - BESS integrated with a wind facility would be approved under the same ECA/REA as the wind facility.



# Summary

- The guidance provided in this presentation is general in nature and based on typical scenarios.
  - Site-specific considerations such as use of Crown land, the presence of species at risk and others, may trigger additional requirements.
- For this reason, proponents considering new or changes to existing renewable energy projects are encouraged to contact MECP to schedule a pre-submission meeting to discuss their specific project(s) and applicable requirements:
  - Email: [REAprogramdelivery@ontario.ca](mailto:REAprogramdelivery@ontario.ca)
  - c.c. [Zeljko.Romic@ontario.ca](mailto:Zeljko.Romic@ontario.ca), [Kendrick.Doll@ontario.ca](mailto:Kendrick.Doll@ontario.ca)

# Online Resources

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- The following regulations and guidance materials related to renewable energy projects are available on the MECP's website:
  - [Renewable Energy Approvals Process](#)
  - [Technical Guide to Renewable Energy Approvals](#)
  - [Ontario Environmental Protection Act - Renewable Energy Approvals](#)
  - [Ontario Noise guidelines for Wind Farms](#)
  - [Ontario Compliance Protocol for Wind Turbine Noise](#)
  - [Ontario Environmental Compliance Approval](#)
  - [Ontario Class EA for Minor Transmission Facilities](#)
  - [Small ground-mounted solar facilities user guide for Environmental Activity and Sector Registry](#)
  - [Ontario Environmental Protection Act - Regulation for Solar Facilities](#)
  - [Ontario Environmental Noise Guideline - Stationary and Transportation Sources - Approval and Planning \(NPC-300\)](#)
  - [Information to be submitted for approval of stationary sources of sound \(NPC- 233\)](#)