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WEAO Forum on Provincial Ministries and  
Wastewater Issues  
Energy from Biomass and Approvals Process

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## Overview

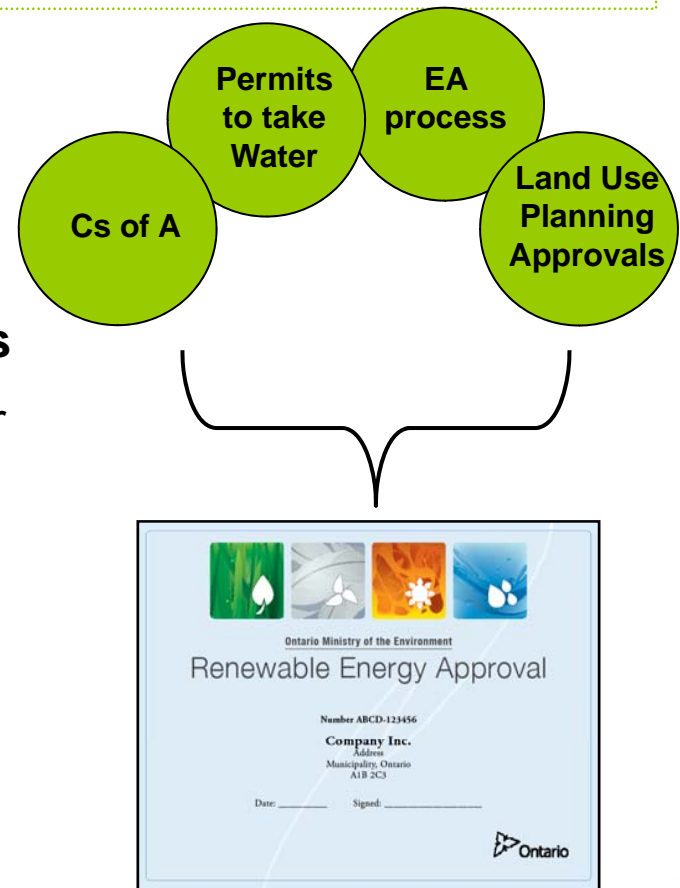
- This presentation will provide an overview of the Renewable Energy Approval (REA) process and requirements for bio-energy projects in Ontario.

# Presentation Outline

- Context
- Renewable Energy Projects and Government Investment
- Requirements - What's in, What's Out
  - Wind, Solar, Bio-energy/Biomass (anaerobic, biogas, thermal)
- Bio-energy/Biomass Requirements (studies and reports)
- REA Process – Flowchart and Principles

# Context

- The *Green Energy and Green Economy Act* received Royal Assent on May 14, 2009
- As part of the *Green Energy and Green Economy Act*, the Ministry **established a new Renewable Energy Approval (REA) process**
- Renewable Energy Approval Regulation under the *Environmental Protection Act* (O. Reg. 359/09) came into force on **September 24, 2009**
- The Renewable Energy Approval (REA) is a **single approval that integrates environmental and health and safety matters**



## Renewable Energy Projects and Government Investment

- In March and April 2010, OPA announced Feed-In Tariff contracts for:
  - **184 large (those exceeding 500 kW) with combined generating capacity of 2,421 MW; and**
  - **512 small projects (10 kW to 500 kW) with a combined generating capacity of 112 MW across the province**
    - Solar projects have been awarded the greatest number of contracts but wind will contribute the most MW of electricity when built
    - OPA has received 89 bio-energy applications and has executed 41 FIT contracts as of November 2010
- The government has also announced \$2.3 Billion in transmission system expansion and upgrades to support development of new renewable energy generation

# Renewable Energy Approval (REA)

- Streamlined environmental approval process for renewable energy projects with an approval service guarantee coordinated with MOE, MNR, MTO, MTC and Conservation Authorities
- Up front province identification of aboriginal communities that applicants must consult (coordinated with MEI, MNR, MOE, MAA)
- The process ensures extensive public, municipal and aboriginal consultation. Municipalities can provide their concerns directly to the ministry through municipal consultation forms.
- Projects applications with concerns around consultation process will not be deemed complete. The ministry ensures that all concerns raised are taken into consideration by the project developer before an application is submitted to the ministry.

# What's In, What's Out



## Wind Facilities

- Over 3kW
- All off-shore wind projects

## Solar Facilities

- Ground mounted over 12kW
- No approval required for rooftop or wall mounted of any size
- Prime agricultural land restrictions within the FIT contract



## Bio-energy Facilities

- Defined in the Green Energy Act as biomass, biogas or biofuel
- Can be anaerobic digestion or thermal treatment facilities
- No approval required for farm-based operations managed under the *Nutrient Management Act – 2002*



## Waterpower Facilities

- Does not require an REA; existing Class EA and MOE/MNR approvals still apply

# Biomass Projects Classification

## Anaerobic Digestion Facilities:

- **3 Classes:** based on location (on/off-farm and types of waste feed material (farm material, source separated organics, etc.)

## Biogas facilities include:









- Generation facilities using biogas produced offsite
- Generation facilities using biogas produced onsite through means other than anaerobic digestion, such as landfill gas capture

## Thermal Treatment:

- 3 classes based on types of feed material (woodwaste only vs. other biomass) and the location (on/off-farm)

(All Class 2 and 3 Anaerobic Digestion and Thermal Treatment Facilities are subject to Financial Assurance requirements)

# Bio-energy REA Application Submission Potential Requirements

<b>Project Description Report</b>	
<b>Construction Plan Report</b>	
<b>Consultation Report</b>	
<b>Design and Operations Report</b>	
<b>Decommissioning Plan Report</b>	
Noise Study Report	
Odour Study Report	
Emission Summary & Dispersion Modeling Report	

- All reports and their required content are outlined in the regulation. (O. Reg. 359/09 under the *Environmental Protection Act*)
- Most REA projects include five core reports
- Some projects may require additional technical reports

# Wastewater Management at Biomass Renewable Energy Projects

## Potential wastewater discharges:

- Stormwater runoff
- Run-off from biomass storage area
- Leachate runoff
- Seepage into ground

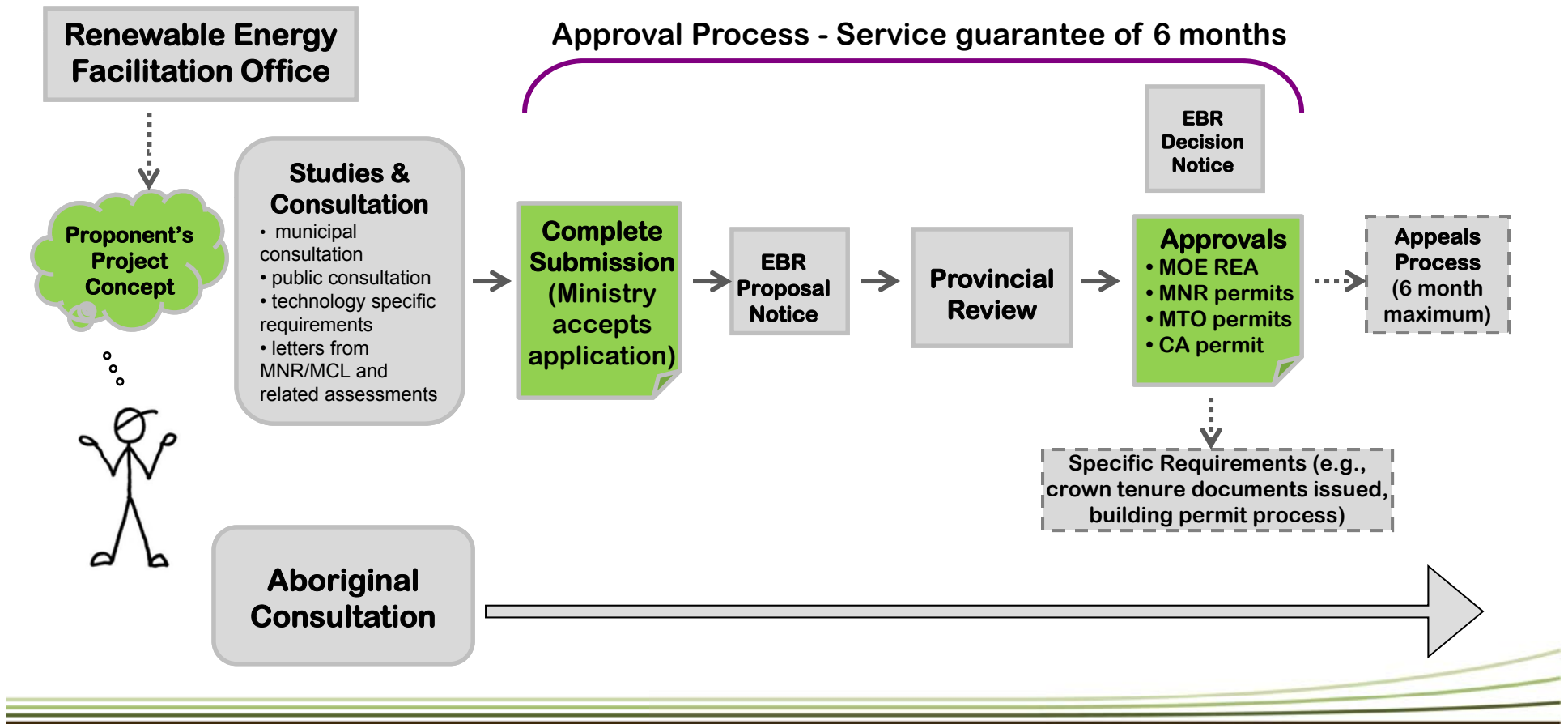
## Potential contaminants:

- Suspended solids,
- pH
- Nutrients (N and P)
- Other organics

## REA Provision for Conservation and Protection of Water

- 30 m setback to water bodies for a range of defined bio-energy equipment (biomass storage, flares, generating units, etc.)
- 120 m setback to water bodies from all project components waived if water body report completed
- Depending on the type of bio-energy technology, project size, or other features of the facility design, the following additional technical reports may be required as part the REA application:
  - Effluent Management Plan Report
  - Hydrogeological Assessment Report
  - Surface Water Assessment Report
  - Stormwater Management Report

# Renewable Energy Approval Process



**Thank you**



**Questions**

# Appendix

# Guidance For Proponents

- Plain language guide, *Provincial Approvals for Renewable Energy Projects*, available on the Ministry website:  
[http://www.ene.gov.on.ca/en/business/green-energy/docs/REP\\_Guide.pdf](http://www.ene.gov.on.ca/en/business/green-energy/docs/REP_Guide.pdf)
- Six technical bulletins have been posted for a 90-day comment period (Mar 1 – May 30) EBR Registry Number 010-9235:  
[www.ebr.gov.on.ca](http://www.ebr.gov.on.ca)
- Technical bulletins describe contents of major reports required as part of an application under O.Reg.359/09
  - Project Description Report
  - Design and Operations Report
  - Construction Plan Report
  - Decommissioning Plan Report
  - Setback requirements for wind turbines
  - Consultation Report

# More Information

- **MOE website** has general information and detailed application requirements.
  - Fact sheets describing technology specific requirements, the consultation process, and a jurisdictional comparison.
  - *Guide: Provincial Approvals for Renewable Energy Projects*
  - Technical Bulletins on the EBR for consultation (more to follow)
- **Proponents considering project application for approval** - contact the MOE, Environmental Assessment and Approvals Branch:  
[eaabgen.moe@ontario.ca](mailto:eaabgen.moe@ontario.ca)
- **MEI's Renewable Energy Facilitation Office (REFO)** has general information on all aspects of bringing a renewable energy project to life.
  - [www.ontario.ca/greenenergyprojects](http://www.ontario.ca/greenenergyprojects).
  - 1-877-440-REFO (7336)
  - [REFO@ontario.ca](mailto:REFO@ontario.ca)