

Energy from Waste and the GEA

Paul Manning
Principal
Manning Environmental Law

*Specialist in Environmental Law
Certified by the Law Society of Upper Canada*

www.manningenvironmentallaw.com

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Road Map

- The *Green Energy and Green Economy Act (GEA)* and Regulations
- The OPA's Feed-in Tariff (FIT)
- Opportunities for Energy from Waste (EFW)
- NIMBY Challenge to Organic EFW

The *Green Energy and Green Economy Act* and Regulations

GEA: Rationale

- Encourages the development of renewable energy projects
 - Feed-in tariff program
 - Streamlined approvals, including streamlined consultation process
- Facilitates the creation of “smart grid”
 - Smart metering
 - Expanded transmission and distribution capacity and connectivity
- Promotes energy conservation

GEA: Approvals

- Introduces a streamlined approvals process for renewable energy projects
 - Single Renewable Energy Approval replaces multiple approvals under *Environmental Protection Act (EPA)*
 - Eliminates Environmental Assessment (EA) for most renewable energy projects and associated infrastructure
 - Third party right of appeal under *Environmental Bill of Rights* replaced by right of appeal under *EPA*

The OPA's Feed-in-Tariff

Feed-in Tariff (FIT)

- Ontario Power Authority FIT Program
 - For the procurement of green energy capacity
 - Long term, guaranteed prices for electricity from renewable sources
 - Standardized contracts and prices
 - Encourage investment and financing
- Initial application period closed November 30, 2009
 - If existing grid capacity is satisfied, new FIT contracts await grid expansion
 - Except small and micro-embedded generation projects

Feed-in Tariff (FIT)

- Benefits
 - No need for RFPs
 - Small project friendly
 - Guaranteed prices for a fixed term (typ. 20 years)
- Rates
 - Vary based on type of project
 - Intended to cover projects cost, plus a reasonable rate of return over 20-year contract
 - Further incentives for community-based and Aboriginal projects, based on level of economic interest in project (price adders, lower security requirements)
 - Peak performance factor
 - 35% premium during peak load hours (~11 AM – 7 PM, Monday - Friday)
 - 10% discount at off-peak times
 - Indexed to inflation (except solar)

Opportunities for EFW Projects

Overview

- EFW not eligible for REA and FIT unless it uses a renewable energy source
- Renewable energy source includes biomass, biogas and bio fuel
- “From Waste to Worth” - will not qualify EFW as waste diversion for purpose of extended producer responsibility under *Waste Diversion Act*.

GEA: What is a Renewable Energy Project?

- Projects that generate electricity from an “energy source that is renewed by natural processes”
 - Includes wind, water, solar and certain forms of biomass
 - Excludes energy generated from non-organic waste (EFW)
 - Ineligible projects (including EFW) are still subject to *Planning Act*, EPA and EA approval requirements
- Associated or ancillary equipment, systems and technologies
 - Transmission or distribution lines (<50 km), transformer stations or distribution stations, and roads used solely to provide access to the facility
- Renewable energy testing projects
 - Entitled to same exemptions as renewable energy projects
 - No Renewable Energy Approval required
- Municipalities can generate renewable energy
 - Less than 10 MW
 - Corporation under *Business Corporations Act* not required
 - Payment in lieu of tax under *Electricity Act*?

GEA: What is a Renewable Energy Project?

- Biomass
 - Organic matter, other than source separated organics, derived from a plant or animal, available on a natural renewable basis
 - Includes plants grown for the purpose of being used to generate electricity, agricultural or forestry waste products, waste from food processing, sewage biosolids, hauled sewage
- Biogas
 - Landfill gas, or gas made from anaerobic digestion of biomass, source separated organics, or organic matter derived from a plant or animal available at a farm operation
- Biofuel
 - Fuel made solely from biomass; includes ethanol, methanol and biodiesel
- SSO from municipal waste is not biomass
- Gas from anaerobic digestion of SSO from municipal waste is biogas
- REA requirement does not apply to
 - a “regulated mixed anaerobic digestion facility” as defined in Regulation 347 (General Waste Regulation)
 - certain farm-based anaerobic digestion facilities under the *Nutrient Management Act*

GEA: Prescribed Setback Distances

- Biogas from farm-based anaerobic digestion
 - 125-250 metres for capacity < 500 kW
 - 250 metres for capacity > 500 kW
- Odour containment requirements for non-farm and certain farm projects
- Thermal treatment
 - Non-wood waste 250 metres
- Setback distances for natural heritage features and water bodies must be met
 - 120 metres for water bodies (lakes, streams, seepage areas, spring)
 - Ranging from 30 – 300 metres for natural heritage sites (i.e. wetlands, wildlife habitat)

FIT RATES

Feed-In Tariff Prices for Renewable Energy Projects in Ontario			
Base Date: September 30, 2009			
Renewable Fuel	Size tranches	Contract Price ¢/kWh	Escalation Percentage ⁴
Biomass^{1,2}			
	≤ 10 MW	13.8	20%
	> 10 MW	13.0	20%
Biogas^{1,2}			
On-Farm	≤ 100 kW	19.5	20%
On-Farm	> 100 kW ≤ 250 kW	18.5	20%
Biogas	≤ 500 kW	16.0	20%
Biogas	>500 kW ≤ 10 MW	14.7	20%
Biogas	> 10 MW	10.4	20%
Landfill gas^{1,2}			
	≤ 10MW	11.1	20%
	> 10 MW	10.3	20%

NIMBY Challenge to Organic EFW

NIMBY Challenge to Organic EFW

- Single Renewable Energy Approval replaces
 - Environmental Assessment (EA) with prescribed consultation obligations
 - Municipal approvals with prescribed setbacks for wind power and other projects prescribed by regulation
 - Multiple Certificates of Approval
- Third party appeal –
 - objector must now show that project will cause “serious harm to human health or serious and irreversible harm to plant life, animal life or the natural environment”
 - A high burden of proof
 - Is it easier for NIMBYs to prove serious health issues for biomass than for wind, water, solar?
- Municipalities attempting to regain control through by-laws
 - power to protect “human health, safety and well-being of persons”

Contact Information

Paul Manning

Phone: (416) 640-6422

pmanning@manningenvironmentallaw.com

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