SUNBAY ENERGY

ONTARIO GASIFICATION FACILITY

Port Hope, Ontario
## ONTARIO GASIFICATION FACILITY

### PROJECT HIGHLIGHTS

<table>
<thead>
<tr>
<th>Project</th>
<th>Energy-from-Waste Gasification Power Plant</th>
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</thead>
<tbody>
<tr>
<td>Location</td>
<td>Port Hope, Ontario</td>
</tr>
<tr>
<td>Power Capacity</td>
<td>26 Megawatts (MW)</td>
</tr>
<tr>
<td>Net Power Output</td>
<td>194,450 Megawatt Hours (MWh) p.a.</td>
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<td>Household Equivalent</td>
<td>Powers approximately 20,000 homes in Ontario</td>
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<td>Power Sales</td>
<td>Long-term Power Purchase Agreement</td>
</tr>
<tr>
<td>Power Island</td>
<td>turbines; reciprocating engines; HRSG</td>
</tr>
<tr>
<td>Feedstock</td>
<td>Municipal Solid Waste (MSW); Tire-Derived Fuel (tdf)</td>
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<tr>
<td>Feedstock Capacity</td>
<td>400 Tons per Day (TPD), 136k Tons per Year (TPY)</td>
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<td>Effective Throughput</td>
<td>360 TPD; 122,400 TPY</td>
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<td>Gasification Island</td>
<td>Plasma Gasification System</td>
</tr>
<tr>
<td>Technology Provider</td>
<td>Europlasma SA</td>
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<tr>
<td>Engineering Contractor</td>
<td>Commonwealth Engineering and Construction</td>
</tr>
<tr>
<td>Project Finance</td>
<td>The Credit Suisse Group</td>
</tr>
<tr>
<td>Total Investment</td>
<td>$111 Million</td>
</tr>
<tr>
<td>Break Ground</td>
<td>Q3/Q4 2008</td>
</tr>
<tr>
<td>Commercial Operation</td>
<td>Q2/Q3 2010</td>
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ONTARIO GASIFICATION FACILITY

SUMMARY OF PRIMARY BENEFITS

CLEAN ALTERNATIVE ELECTRICITY
- Stable, dispatchable, baseload power;
- Cost-effective long-term pricing;
- Independent, local fuel supply;
- Higher output than any other system using same feedstock.

ENVIRONMENTAL AND PUBLIC HEALTH
- Lessens reliance on waste landfills;
- Destroys all waste materials;
- No toxic left-overs;
- Low emissions.

OPERATIONAL
- Process versatility: accepts variety of wastes and moisture contents;
- Valuable solid by-products: No secondary treatment or landfilling required;
- Modular format for easy scalability and expansion;
- Small footprint.

ECONOMIC / LOCAL BENEFITS
- Capital investment provided;
- Investment/employment during construction;
- Training/employment for on-going operations;
- Financially viable project with properly mitigated risk and “green” status.
ONTARIO GASIFICATION FACILITY

1.0 INTRODUCTION

Sunbay Energy (SUNBAY) was recently formed to develop a series of energy-from-waste projects in Canada. The first SUNBAY project will be the Ontario Gasification Facility (OGF) to be located in Port Hope, Ontario. Once in full operations, OGF will intake approximately 400 tons per day (TPD) of Municipal Solid Waste (MSW) and Tire Derived Fuel (TDF). This feedstock will be gasified into synthetic gas (syn-gas) that will fuel standard power generation equipment to produce 26 Megawatts (MW) of electricity.

A top-level development team has been assembled. An agreement is already in place with Europlasma SA, the leading plasma torch and plasma gasification system supplier based in France, to build and operate the first plant. Commonwealth Engineering and Construction (Houston, Texas) is working with Europlasma to provide the design and engineering required for permitting and project finance. The Credit Suisse Group has agreed to provide the project finance.

Site control has been completed for OGF and a specific path to permitting has been engaged. Due to the engaged involvement of the technology provider, the Development Phase may require six to nine months once preliminary designs and engineering are ready for conclusion of permits and commercial agreements.

Final design, site preparation and construction will then commence with a groundbreaking in Q3/Q4 2008. With power generation equipment requiring the longest lead time of 12 to 18 months, the Commercial Operation Date is currently targeted for early 2010.

2.0 PROJECT OVERVIEW

The Ontario Gasification Facility (OGF) is currently planned as a 26 MW energy-from-waste power plant that will use MSW and Shredded Tires as the primary feedstock.

Initial analysis regarding the capital costs, efficiencies, staffing requirements and other operating and maintenance costs are based on a plant conceptualized as three major process islands:

- **Waste Tipping Floor and Feedstock Preparation**
  Intake of MSW and other wastes; coarse shredding; separation of selected recyclables (particularly glass and metal); drying; waste stream mixing for optimization of syn-gas formation.
The following diagram depicts the general flow of activities through OGF:

- **Gasification and Gas Cleanup**
  Plasma gasification of prepared feedstock in a series of modular cupolas, causing molecular disassociation and syn-gas formation, followed by syn-gas cooling and clean-up for removal of contaminants and energy optimization.

- **Power Island**
  Production of electrical power in standard gas-fired turbines or reciprocating engines, with added power from HRSGs drawing heat from the syn-gas cooling.

3.0 FACILITY DESIGN

The facility is based on the proven commercialized system used by Europlasma in plants currently operating in Europe and Japan. Commonwealth Engineering will provide the engineering, design and construction management services. Based in Houston, Texas, their engineers have a deep experience with this type of facility.

Based on over fifteen years of industrial plasma experience and know-how transferred from the European Aeronautic Defence and Space Company (EADS), Europlasma has developed a robust and efficient plasma gasification process, CHO-Power™. This process results from the smart assembly of simple and field proven modules.
The following diagram depicts the Europlasma gasification system:

**Diagram 2:** Europlasma facility design
4.0 PROJECT SITE

OGF will be located on 23 acres in the Municipality of Port Hope, Ontario, and is an ideal site for OGF for several reasons, including:

- Industrial zone with no known environmental constraints;
- Frontage on and road access to the major industrial road, Wesleyville Road;
- Direct access to the two major rail lines: CN Rail and CP Rail;
- Very close to Highway 401 accessible by the Wesleyville exit, the only true truck exit on the 400 series highways;

Diagram 3: Three-dimensional view of Europlasma facility
Direct access to local power sources through the 44,000 kVA station abutting its northern boundary;

Close proximity to interconnection points with an area characterized by numerous high-voltage corridors, substations and power plants.

5.0 EXECUTIVE MANAGEMENT

In the development stage of the company, the management team will be supported by external technical partners, technology advisors, legal and financial advisors.

SUNBAY will engage the most highly-qualified talent at all levels of management and already includes the following key persons:

1. Jordan Oxley  
   Managing Director

2. Kris Mahabir  
   Managing Director

3. Graham Simmonds  
   Managing Director

4. David Tsubouchi  
   Director, Government Relations

5. Stein Lal  
   Director, Environmental Relations

6. Ted Manziaris (Turtle Island)  
   Strategic Partner, Feedstock and Logistics

Diagram 4: Operating facility in Cenon, France