

# Waste to Energy Solutions

ARG's BOS™ gasification/oxidation technology is NOT INCINERATION. Available from 1-metric tonne a day to 500-metric tonnes a day, systems are modular & scalable. No pre-sorting or pre-treatment of the waste stream required.



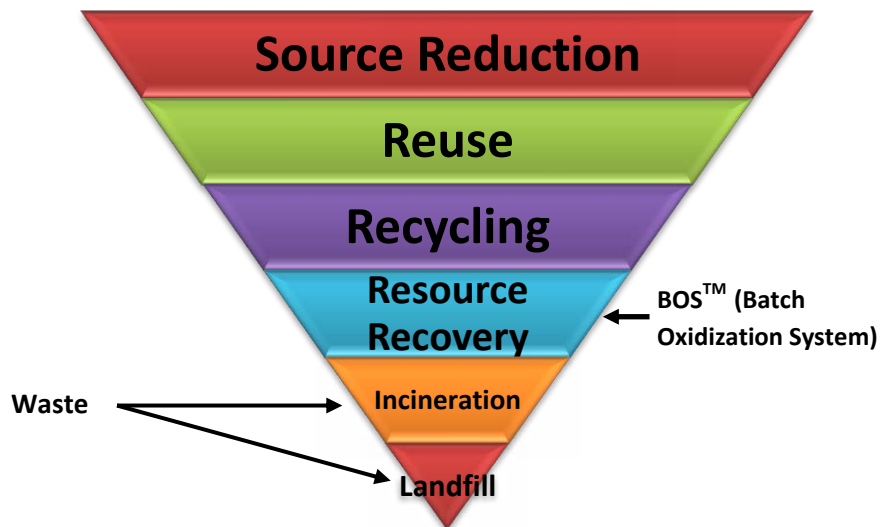
- ✓ Emissions compliant worldwide.
- ✓ Shortest ROI and lowest O&M in the industry.
- ✓ Proven and fully guaranteed.
- ✓ Successfully deployed globally.
- ✓ Accepts complete waste-stream without pre-treatment.

## Environmentally Safe, Clean & Efficient, Cost Effective, Proven & Accepted Technology

- ✓ Simple, robust design with very few moving parts.
- ✓ Successful 15-year history of development and commercial roll out.
- ✓ Clean air emissions: EU, EPA and Canadian compliant.
- ✓ Energy can be recovered for process heat, residential & commercial heating, cooling, or electricity generation
- ✓ BOS™ advanced thermal gasification technology improves the process of waste destruction.
- ✓ The BOS™ converts virtually all solid and liquid wastes to heat energy safely and efficiently with no sorting or pre-processing and no toxic ash.
- ✓ All glass and metals are recovered and recycled.

## Batch Oxidation System (BOS™) technology

- ✓ Two stage thermal gasifier converts both solid and liquid waste.
- ✓ Waste is loaded using conventional equipment into Primary Gasification Chambers.
- ✓ Reduces waste by 97% volume to inert ash & recyclable metals & glass.
- ✓ Once loaded, operation is fully automated.
- ✓ Self sustaining process only requires a small amount of propellant (5-7 minutes) to initiate combustion.
- ✓ Sizing designs from 1 to 500 mt/day.
- ✓ Extremely low O&M.
- ✓ Finest ROI available.
- ✓ Scalable & modular design allows for flexibility in processing capacity, may scale up with cash flow & need.
- ✓ BOS™ has a small footprint, allowing for versatility of site location - Ideal for remote camps to larger metro & industrial applications. Example: a 180 tonne/day BOS™ requires only 1.3 acre footprint.
- ✓ All systems can be SCADA Background monitored by ARG engineers.
- ✓ Low capital & operating costs allow for system to be decentralized.
- ✓ Due to lower temperatures of gasification process, air emissions exceed stringent EU, EPA and CDN regulations without add-on emission control devices.
- ✓ We are proud to have a long & very successful history of working with communities of all sizes, and locations, First Nations communities, camps, and remote locations.
- ✓ References from around the world are readily available.



## Corporate Social Responsibility to Solid Waste Management

The UN internationally accepted Hierarchy of Waste Management, above, classifies gasification of waste as 'Resource Recovery' which is preferred over land-filling and incineration.

Our system - BOS™ (Batch Oxidation System), utilizes thermal gasification to destroy municipal, commercial, and industrial waste while reducing greenhouse gas emissions (land-filling and Incineration produce significantly higher and more toxic levels of Greenhouse Gases compared to our BOS™ System).

Many remote communities, First Nations, industrial sites, and camp locations strive to achieve a higher level of Corporate Social Responsibility (CSR) through mandated practices which are difficult to achieve, and be consistently incorporated in Best Management Practices BMP's. In many cases CSR calls for compliance with ISO registration which calls for the continuous reduction of their Carbon Footprint.

While attempting to adhere to CSR, BMP's and ISO mandates managers and leadership struggle with the economics and environmental impacts of their day to day waste stream. This waste stream is represented through household waste (organics, plastics, metals, cellulose, etc), commercial (wood, metals, plastics, oils, etc) and Industrial (oils, sludge, etc), medical waste and wastewater sludge, logging and mines. This is where BOS™, as a proven solution for your organisation, comes in.

**Energy recovery and reuse** - Recovered energy can be used for industrial processes, heating and cooling, and generating electricity. Ask us for more details about the **best ROI** available.

BOS™ has a robust history and exceptional performance. None have been removed from service.

To ensure communities, organisations, corporations or camps can benefit from BOS™, ARG provides BOS™ **financing** or **lease** options. All our BOS™ systems are **guaranteed** and backed by ARG's exemplary service.

Call us to discover more about BOS™ or ARG's solutions ... 1 888 703 9626

ARG provides financing options including; Build-Own-Operate or Build-Operate-Transfer to client.

Our BOS™ technology provides a clean, safe & elegantly simple method of converting waste to energy

## BOS: The Benefits

### 1. Reduce Greenhouse Gas Emissions

At a minimum; for every one tonne of municipal waste sent to landfill, 2.1 tonnes of greenhouse gases are created including toxic leachates. BOS™ eliminates this.

### 2. Create Energy from Waste Shortest ROI available, ask us how.

### 3. Prevent Leachate

Every tonne of waste gasified by BOS™ eliminates harmful leachate from entering the environment.

### 4. Safe Disposal of waste streams

Without pre-sorting BOS treats municipal, medical, commercial and industrial waste streams including wastewater sludge, oils, tires etc.

### 5. BOS is Not Incineration

Incineration releases extreme levels of toxins & pollutants into the atmosphere. BOS prevents this & meets all EPA, EU & Canadian emission standards. BOS™ is the UN acceptable method of destructing & converting waste.

### 6. We export from Canada

ARG is 100% Canadian owned & operated using guaranteed equipment built in Canada. Ask us about Export and Development Canada eligibility.

BOS™ is a trademark of W2E

Contact us at ARG Services for  
Intelligent Sustainable Systems  
Design, Installation and  
Management



1-888-703-9626  
www.argservices.ca

## Sample of BOS™ Systems in Service

- Peccioli, Italy 5 TPD Mixed Waste, Power Recovery, 2009
- Scotgen, 120 MTPD Mixed Waste and 5 MW Power Recovery, 2009.
- Kwajalein Atoll, Marshal Islands, US Army Base, 38T, 2006.
- Husavik, Iceland, Municipal/Industrial Waste, 22T, 2005, steam to grid.
- Ft. Greely, US Army Base, Alaska, Municipal Waste, 4T, 2004.
- Amec-Pogo Gold Mine, Alaska, Industrial Waste, 1.3T, 2004.
- Lincoln County, Wyoming, Municipal Solid Waste, 20T, 2000.
- Grand Cayman Island & Cayman Brac Island, British West Indies, Infectious Hospital, 2.5 +1.0 T, 1999.
- ARCO Oil Company, North Slope, Alaska, Industrial Waste, 7T, 1999.
- Lomati Houtverwerkers, Barberton, South Africa, Industrial Waste, 180T, 1994.
- Goodwood Inc, Dagupan, Philippines, Municipal Waste, 35T, 1994.
- Procter & Gamble, Jakarta Indonesia, Industrial Waste, 6T, 1993.
- US Air Force, Wake Island, Municipal solid waste, tires, used oil, 4T, 2009
- City of Egegik, Alaska, Municipal Waste, 3.5T, 1998.
- Richway Environmental Preservation Co., Ltd. wet industrial waste, Beijing China, 10T, 1998.
- Enerwaste Taiwan, Industrial Waste, 12T, 1998.
- VIT Inc., Richland, Washington, 10T + 3T, 1998.
- MagLite, Municipal Waste, Croatia, 3T, 1997.
- Mobil Oil Indonesia, Industrial Waste, N. Sumatra Indonesia, 3T, 1997.
- Bergan Management, Philippines, Industrial Waste, 1.5T, 1996.
- Goodwood Management, Philippines, Municipal Waste, 50T, 1995.
- Vermillion County Hospital, Indiana, Medical Waste, 2T, 1994.
- Dover Air Force Base, 436<sup>th</sup> Wing, Pathological Incinerators for Operation Desert Storm, 3T, 1994.
- Asserraderos Mininco, Mulchen, Chile, Wood Waste, 240T, 1994.
- Valdez Alaska, Cleanup, materials & sludge from the Exxon Valdez oil spill, Hazardous Waste, 100T, 1989
- West Caicos Island, Municipal solid waste, 2007
- Conoco Phillips, Alaska, Industrial waste, 4T x 2

ARG Services proactively works with you from conception to commissioning, all supported 24/7 by our team of trained professionals.

We will help you find the right balance between Environmental Sustainability/Stewardship and Cost Effective Waste Management.