



**Coast Waste Management Association
Conference**

Thursday October 30th 2008



PlascoEnergy
GROUP



Civilization Creates Pollution...



Air Pollution

- ❖ Most air pollution is a byproduct of energy generation
 - ❖ Vehicle emissions
 - ❖ Heating
 - ❖ Power Plants

Garbage

- ❖ Developed countries generate ~0.75 tonnes of garbage per person per year



Are there Easy Answers to Pollution Reduction?

The simple answer is “No” ...

- ❖ The outstanding pollution reduction and diversion successes to date mean that many of the easiest 3R's programs have already been implemented.
- ❖ Changing the behaviors of that segment of society who are not interested in reducing their environmental footprint creates immense challenges
- ❖ It is more technically challenging and energy intensive to extract value out of residuals that are not clean nor in large volumes
- ❖ Reducing one's environmental footprint requires a fundamentally integrated approach to pollution prevention and reduction – it's more than just about “garbage” ...

So how do we best manage garbage?

It's Obvious - Start by maximizing the 3 R's:

1. Reduce

- Consume less

2. Reuse

- Re-engineer and maximize the product lifecycle

3. Recycle

- Preserve the input energy at end of life

Some materials can easily be recycled:

For example, recycling aluminum saves 95% of the inherent energy vs. virgin aluminum



But what about what's left after the 3 R's?

Many materials are difficult to recycle...



- ❖ It takes energy to recycle
- ❖ Materials that are contaminated are inefficient to recycle
- ❖ Cross-contaminated and degenerated paper, fibre, plastics and organics can take more energy to recycle than what is in these materials to begin with

And this is recognized by the BC Ministry of Environment:

“The introduction of “recovery” in Bill 29 will allow discussions to occur to determine whether alternatives to landfilling of non-recyclables in BC should proceed and, if so, in what form. “

Barry Penner – BC Minister of Environment

What have been the options for the Residue?



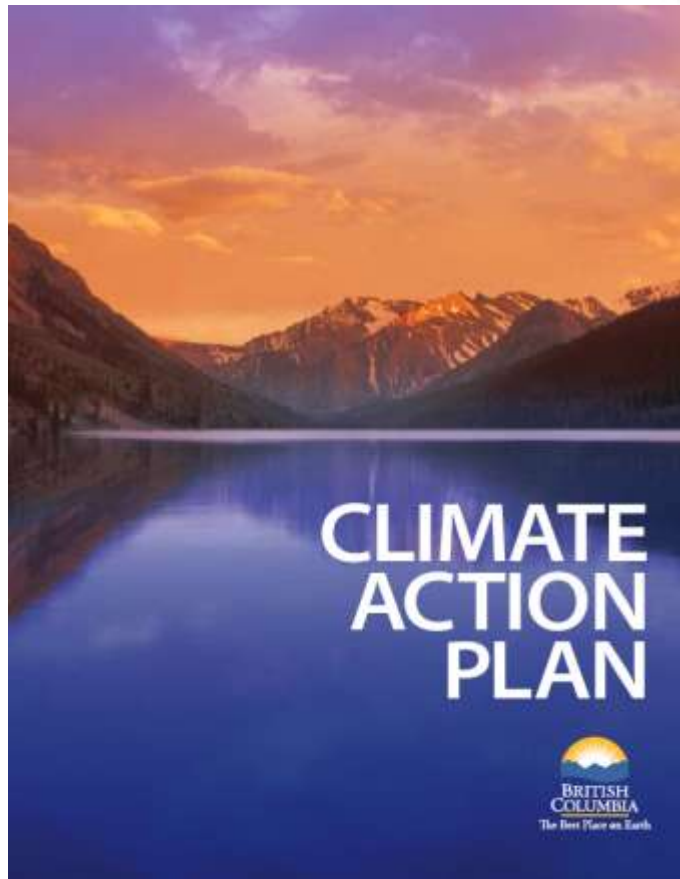
Burn it ?

Bury it ?



A Better Option?

We should find and utilize the best technologies to maximize energy recovery in our garbage while reducing emissions...



“MSW can also be converted to synthetic gas, which in turn is used to generate electricity. The electricity produced using such a process may be considered Clean or Renewable Electricity”

Government of BC

The European Union issued a directive in January 2008 that defines technologies with recovery efficiency higher than 66% as recovery and those lower than 66% as disposal. According to their formula, the Plasco conversion process achieves 78% efficiency

Plasco offers a Solution for Residues...

A Non-Incineration process that converts waste to clean gas that is used to generate electricity and marketable products.

- ❖ **A Small footprint and attractive design in 100 tonne per day modules**
- ❖ **Greater than 99.8% diversion from landfill**
- ❖ **Reduced trucking**
- ❖ **Generating 2.1 tonnes of Carbon Credits per tonne of residual waste**
- ❖ **Maximum clean power production (1200 kWh per tonne) from waste**
- ❖ **Best environmental performance as compared to landfill or incineration**

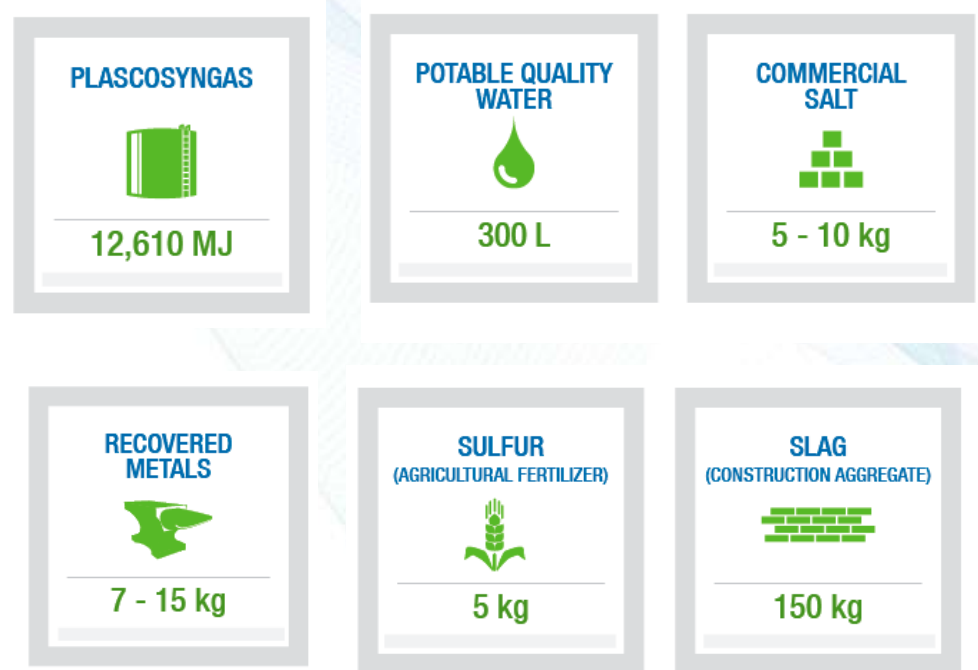


Proposed Design for the Region of Montpellier, France

This is CONVERSION



One tonne of MSW



99.8% of waste is converted to clean fuel and valuable products

Environmental Performance - The Reality

Land

- ❖ No contamination of land

Water

- ❖ No contamination of aquifer
- ❖ No leachate

Air

1. Plasco first commits to regulatory limits on air emissions that are lower than the most stringent jurisdictions in the world
2. Plasco then commits to operational emission targets that are significantly lower than these regulatory limits
3. Finally Plasco commits to shutting down if these emissions targets are not met...

Our conversion processes **MINIMIZES** the impact on AIR

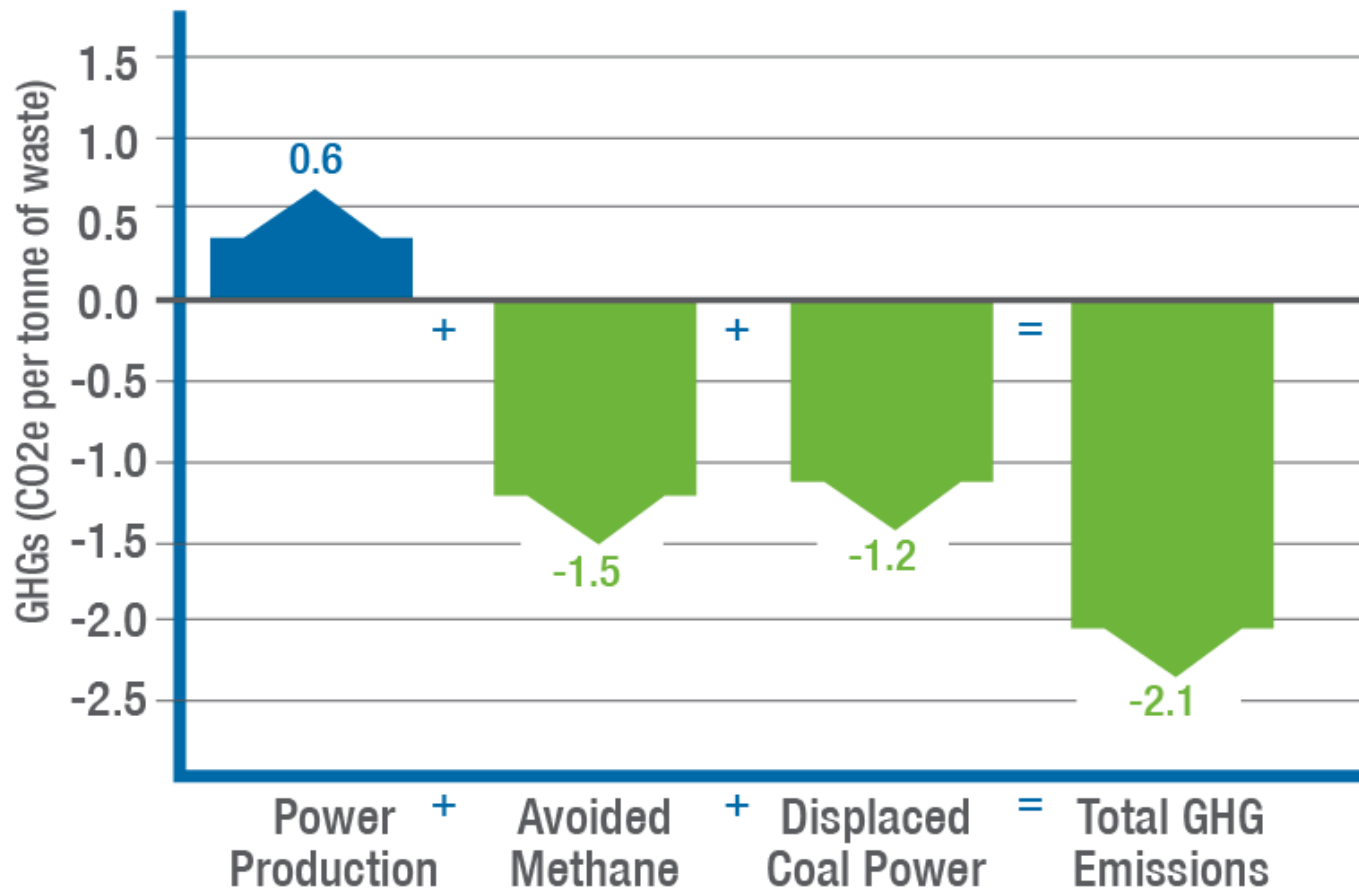
Parameter	Units	British Columbia	Plasco Regulation	Operational Target
Particulate Matter	mg/m ³	19	9	3
Organic Matter	mg/m ³	39	9	9
Hydrogen Chloride (HCl)	mg/m ³	69	9	2
Hydrogen Fluoride (HF)	mg/m ³	3	-	0.02
Sulphur dioxide (SO ₂)	mg/m ³	246	37	10
NOx expressed as NO ₂	mg/m ³	344	13	9
Carbon monoxide (CO)	mg/m ³	54	-	34
Mercury (Hg)	mg/m ³	0.19	0.005	0.0005
Cadmium (Cd)	mg/m ³	0.10	0.007	0.001
Lead	mg/m ³	0.049	0.02	0.012
Dioxins and furans	ng/m ³	0.5	0.010	ND

Notes:

1. All values are expressed at 11%O₂ and regular conditions (101.3 kPa, 25°C)

Plasco Reduces Greenhouse Gas Emissions

Greenhouse Gas Reductions per Tonne of Waste



We offer a Zero Risk Business Model

Plasco builds, owns and operates its patented conversion system

- No capital required from the Municipality
- No operational risk
- Operation within 18 months of permitting
- Environmental performance guaranteed

Municipalities provide:

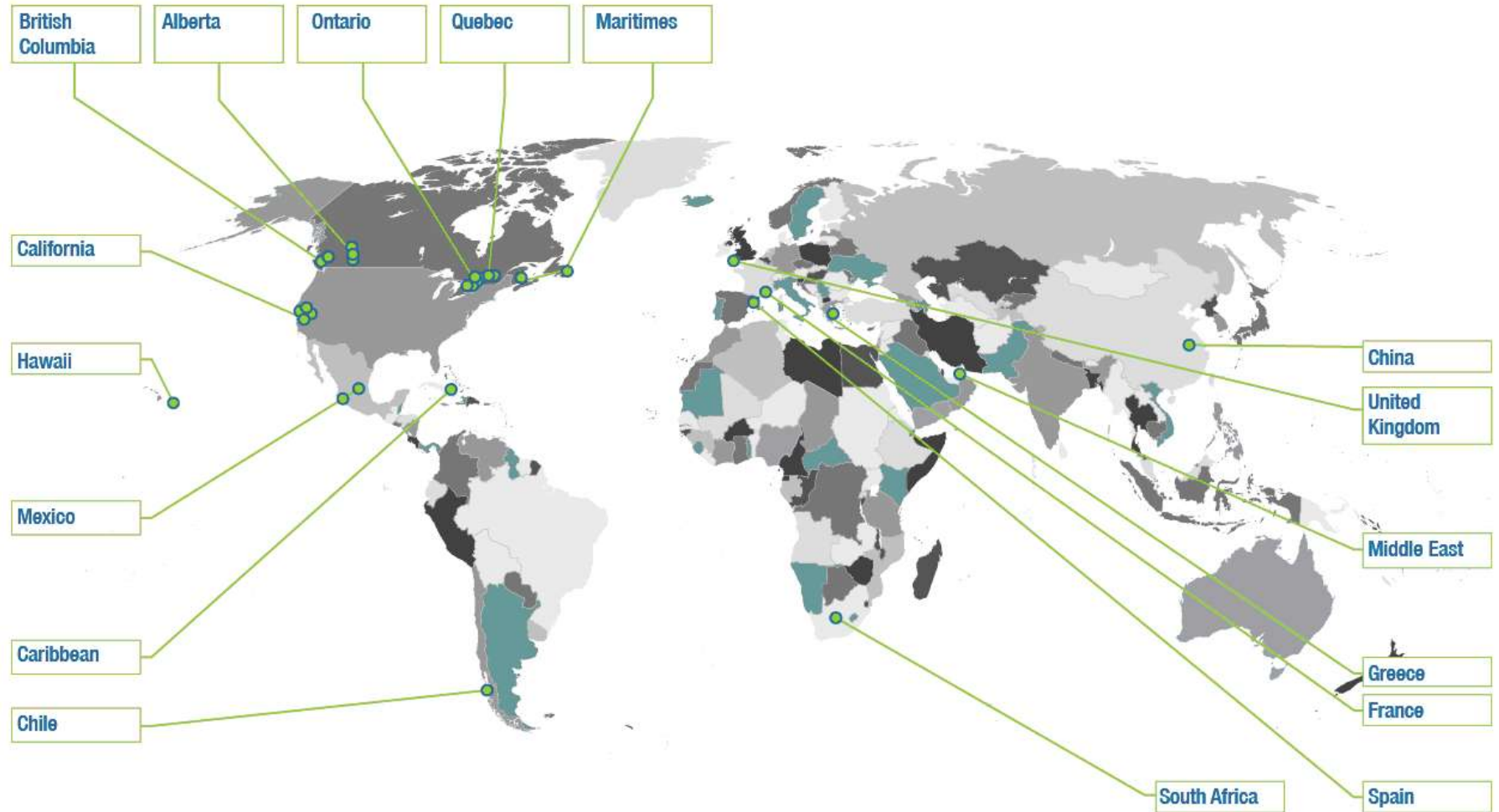
- A long-term contract for MSW delivery at an agreed upon tip fee (\$70 per tonne with \$0.11/kwh)
- Assistance with approvals, permitting, and siting



Municipality benefits from:

- Long-term budgetary certainty
- Revenue sharing above a certain threshold

And Our Technology Generates Interest...



The Plasco Objective - No Waste, No Contamination

PLASCO WAS FOUNDED

To create a commercially viable, environmentally optimal contribution to 2 of society's biggest problems.



We Minimize The Environmental Impact from Waste



1

WASTE

Current disposal methods for the vast amount of waste we create pollutes air, water and land, and also fails to recover much of the value.



2

ENERGY

Clean, distributed energy contributes to the environment and our economy.



Sustainability

Low impact facilities fit into communities where waste is created and power is needed.





Thank You...

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