



# ADVANCED WASTE CONVERSION

THE LOCKHEED MARTIN AND CONCORD BLUE<sup>®</sup> SOLUTION

**LOCKHEED MARTIN**   
*We never forget who we're working for<sup>®</sup>*

## DELIVERING GLOBAL ENERGY SOLUTIONS

With more than seven billion people on the planet, sustainable waste disposal and a need for energy that is both secure and clean are vital to quality of life. Landfills and fossil fuels no longer meet the pressing needs of our time. Lockheed Martin and Concord Blue offer an advanced waste conversion solution to address waste disposal, energy security and climate control issues, addressing the current burden on landfills and fossil fuels, as well as the desire for green baseload energy and renewable fuels.



## WHAT IS ADVANCED WASTE CONVERSION?

Advanced waste conversion is an emerging technology that uses gasification processes to convert waste products to electricity and other products, such as fuel.

## OUR UNIQUE SOLUTION

Using Concord Blue's patented Reformer<sup>®</sup> technology, and applying Lockheed Martin's engineering, program management, procurement, manufacturing and integration experience, uniquely positions the team to solve waste disposal challenges and support global needs for alternative energy solutions.

Unlike other available advanced waste conversion processes, this innovative technology utilizes heat transfer instead of direct heating or combustion to convert waste into syngas. The decomposition of the feedstock and refinement of the gas produced takes place in separate reactors, known as staged reforming, which allows for more precise control of the process steps and ultimately increases the overall efficiency of a plant. The technology benefits the environment, fulfilling all international, EPA and European regulations for renewable energy and air emissions. The reformation process works completely under the exclusion of air ensuring an environmentally-friendly process without the use of incineration.

The closed-loop, commercially-proven, environmentally-friendly process transforms waste into energy at virtually any scale. By working closely with leading businesses, governments and communities around the globe, the Lockheed Martin and Concord Blue team creates tailored solutions that safely and effectively dispose of waste.

*Cover photo: Concord Blue Reformer<sup>®</sup> in Germany*

## DISRUPTIVE, DEMONSTRATED TECHNOLOGY

- Worldwide patent and patent pending sole license
- Multi-feedstock input: utilizes any mix of organic-based material
- High-value, multiple outputs: syngas, electricity, hydrogen, heat, steam, specialty chemicals and synthetic fuels
- Syngas contains a 2:1 ratio of hydrogen to carbon monoxide, allowing for the conversion to liquid fuels
- Highly efficient: up to 100 percent of input material can be recycled economically
- Self-sustaining: no additional fuel needed to maintain the process
- Scalable: modular system with no size or volume restrictions (industrial to municipal/utility scale)
- Combined Heat and Power: Simultaneously produces heat and electricity, leading to efficiency and cost savings
- Decentralized: waste disposed of locally, directly where waste is generated



**Concord Blue USA, Inc.**  
12424 Wilshire Boulevard, Suite 660  
Los Angeles, CA 90025, USA  
(310) 979-2900  
[www.concordblueenergy.com](http://www.concordblueenergy.com)

Lockheed Martin  
Mission Systems and Training (MST)  
300 M Street, SE  
Washington, D.C. 20003  
[www.lockheedmartin.com/naturalenergy](http://www.lockheedmartin.com/naturalenergy)

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PIRA# NVG201404001