

# Global Waste Solutions from EarthRenew



The WasteRenew™ facility in Alberta, Canada is located on a 25,000 head feedlot.



**EarthRenew®**  
Power to Renew the Earth

Raising horses, Christianne Carin knew firsthand the issues of dealing with animal waste. At one point, she found herself composting, but was frustrated by the presence of weed seeds in the final product when she applied the compost to her hay fields. She began researching the viability of cooking manure to kill those nasty weed seeds, but also bacteria and other problematic organisms. From this simple quest, EarthRenew was born.

Earth Renew is now an international corporation whose vision is to create technologies and products that renew the earth. As an inventor, Carin's initial experiments cooking manure at high temperatures, then with the help team of scientists and engineers developed patented products designed to be made on a commercial production scale. Their Organic Matter Fertilizer™ products are now produced at their WasteRenew™ facility in Alberta, Canada.

The facility, located at a 25,000 head feedlot, was commissioned in 2007 and has been operating commercially since 2008. Using large volumes of fresh cattle manure, and their patented processes, EarthRenew provides innovative agricultural solutions for increased fertilizer efficiencies, productivity and yields. Their fertilizers reduce water needs, soil erosion and add nutrients to the soil. In essence, the Organic Matter Fertilizer™ products help increase yields for today, but also sustain soils for tomorrow. For Carin, though, making quality fertilizer was merely the beginning.

As she with her team undertook the task of creating the WasteRenew™ system, they examined every aspect, including the holistic environmental, economic and social impact of creating these fertilizers. In the patented processes, energy use became a point of note. As the state-of-the-art facility was being designed, it

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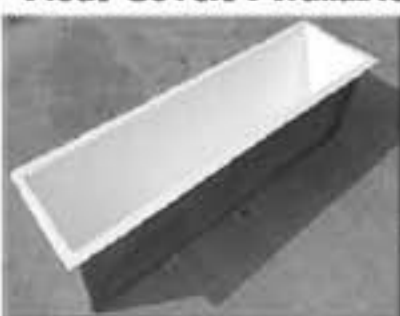


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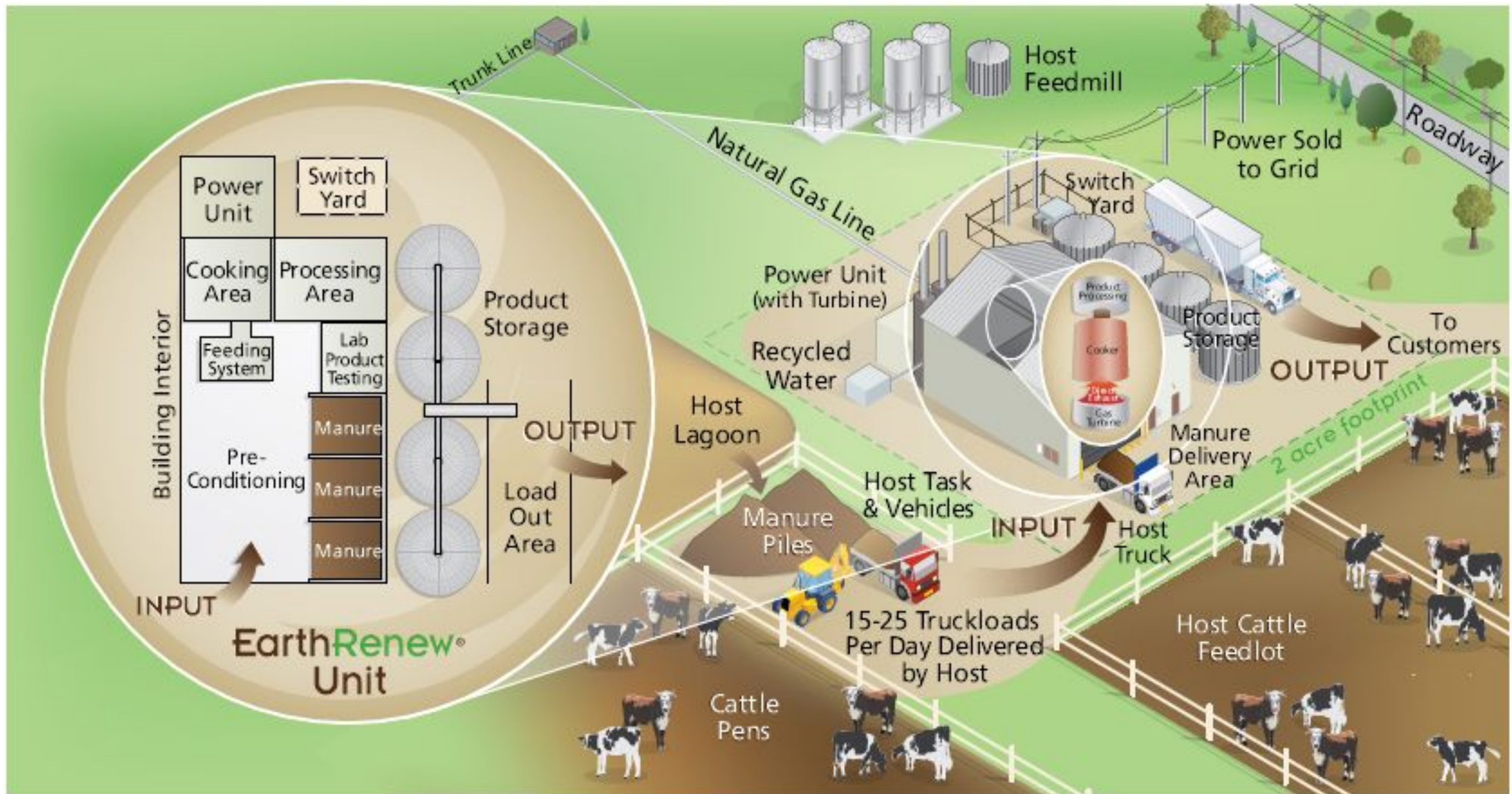
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# Typical Dairy or Cattle Feedlot EarthRenew® Unit Installation



was apparent that directly harnessing the exhaust heat of a gas turbine without heat exchangers for cooking manure would be advantageous. As a result, EarthRenew integrated the patented gas turbine system in the processing, which utilizes up to 85% of the energy value in the natural gas, more than double the efficiency of most industrial processes.

While this was certainly a step in the right direction, Carin was, and continues

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to be, committed to raising the bar. With the volume of power produced at the Alberta facility, and with multiple other projects slated around the United States, her goal includes municipalities. It is only logical to take this eco-efficient power and get it into the grid while also providing a solution to the biosolids and green wastes generated by municipalities.

There is a natural opportunity to meet many needs within the rural communities EarthRenew serves. Agricultural interests benefit from the quality organic matter produced, the local economy is bolstered with jobs and other fiscal benefits, and local government entities can use their patented processes as a clean, viable power source. For the company, it is a win-win-win scenario that lives up to the company's mission of caring for the earth one community at a time.

### Entering the Global Market

Carin notes that the sudden appearance of EarthRenew on the market was intentional. "We want to be able to say 'this is what we've done' not 'what we intend to do,'" she adds. The ability to articulate to livestock producers, investors and the energy community as a whole that EarthRenew has successful patented technologies under its belt was essential. Ensuring that the necessary legal ducks were in a row has also been a critical component.

EarthRenew has filed over 2,200 patent claims in 92 countries for their processes, products and technologies. To date, 15 countries including the US and Canada have issued patents and the number is growing. "We initiated the patent process in 2003," says Carin "when we filed our initial patents July 2004 it was one of the largest set of claims for our law firm in 30 years."

The determination to be at the peak of the game is quintessential of EarthRenew. Carin, as founder and CEO, has been deliberate and intentional in every step along the way. She has sought for her team the best and brightest people in waste management, environmental stewardship and systems development. For her, EarthRenew is more than a solution to her livestock waste problem. It is a philosophy transcended into quality products and services to meet the needs of our globe one step at a time.

For more information on EarthRenew, visit [www.earthrenew.com](http://www.earthrenew.com).

### EnergyRenew® Typical Process Flow

