A New Paradigm of Energy Efficiency
Energy Recovery and Financial Benefits
For the Water Heating Marketplace
March 2011 - Incorporated

April 2011 - Achieved AHRI Certification for water-chilling units to prove the efficiency of the compressor and heat exchanger technology.


Nov. 2014 - Sale and installation of first two 150 ton HRWH

2015 - Equipment performance will be verified in the

Currently no AHRI Certification program exists for this emerging technology
What We Do

Green Matters is committed to the conservation of energy and the preservation of our natural resources through significant reductions in energy consumption from within the HVAC marketplace.

We are bringing our patented technology to the North American marketplace - a new product line of energy efficient equipment for the world of domestic water heating.

Our products deliver dramatic defensible improvements to the profitability of major energy consumers.
Our Technology

A paradigm shift in methodology regarding energy conservation technology for the heating and cooling industry.

Ground breaking technology that is disruptive to legacy heating and cooling systems.

Integrated heating and cooling design architecture enables the heating function to be provided as a by-product of the cooling function at a fraction of the direct energy input and operating costs that legacy heating systems require.

Scalable design allows for wide uses within the commercial, industrial and residential markets employing high quality construction with fully certified parts and sub-systems.
Current Technology
ON THE MARKET CHILLERS

The Conventional Chiller System
Current Technology
ON THE MARKET BOILERS

Schematic of the Conventional Boiler
The Problem

Millions of BTUs of heat are rejected through cooling towers of water cooled chiller system, while millions of BTU’s of fossil fuels are burned in a boiler to generate heat.

A hotel running a 400-ton Chiller continuously, will generate 2.1 billion BTU’s of heat each year.

Recovering this heat and using it to heat the building or the domestic hot water turns an unused resource into a valuable one.

Boilers are limited in the level of efficiency they can achieve.

CO2 emissions are a major concern.
The Solution
HEAT RECOVERY

WHAT IS HEAT RECOVERY

DEFINITION: Heat Recovery captures waste heat energy and turns it into useful heat energy.

The heat extracted by the chillers is waste heat because it is warm but not hot enough to be used.

Heat recovery uses a small amount of electrical energy to extract heat from the warm waste water and move it to useful hot water at a higher temperature.

Heat recovery systems are ideal where the use of air-conditioning and hot water are required simultaneously.
Heat recovery taps a readily available and free energy source. As today's buildings work to reduce costs and increase energy efficiency, the use of condenser cooling water as a heating resource is rarely exploited.

A boiler burns the energy stored in the fossil fuel, at best 100% but typically 80-90% of the input energy is transferred to the hot water as some heat is always lost in the flue gases.

With heat recovery, electrical energy is used to transfer heat, at best more than 1000% but typically 550-650% of the input energy is transferred to the hot water.
GMI SYSTEM SCHEMATIC
Heat Recovery Water Heater

CITY SUPPLY

ROOF-TOP COOLING TOWER

COOLING WATER

HEAT REMOVED

HEAT RECOVERY WATER HEATER

HEATING LOAD
Space Heating Water Loop
or Domestic Hot Water

HOT WATER

HEAT RECOVERED

WATER CHILLER #1

COOLING LOAD
Air Conditioning
or Dehumidification

HEAT ABSORBED

COOLING WATER

EVAPORATOR

LEGEND

- WATER LINE
- REFRIGERANT LINE
Designed to use waste heat created from simultaneous cooling loads to satisfy heating loads in a building

Waste heat energy in the warm condenser cooling water at 95°F can be used to satisfy a building’s potable water heating or space heating loads up to 140°F

This unit is suitable for new installations and as additions to buildings with existing water-cooled water chillers

\[ \text{COP}_H \text{ (Heating Coefficient of Performance)} \text{ up to 6.5:1} \]
# Heat Recovery Water Heater

<table>
<thead>
<tr>
<th>Case</th>
<th>100%</th>
<th>75%</th>
<th>50%</th>
<th>25%</th>
<th>Units</th>
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<tbody>
<tr>
<td>Compressor Power</td>
<td>79</td>
<td>66</td>
<td>43</td>
<td>29</td>
<td>kW</td>
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<td>Min Cooling Load</td>
<td>104</td>
<td>88</td>
<td>48</td>
<td>32</td>
<td>tons</td>
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<td></td>
<td>1,240,000</td>
<td>1,060,000</td>
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<td>BTU/hr</td>
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<td>Total Heating Load</td>
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<td>208</td>
<td>138</td>
<td>kW</td>
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<tr>
<td></td>
<td>125</td>
<td>106</td>
<td>59</td>
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<td>tons</td>
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<td></td>
<td>1,490,000</td>
<td>1,270,000</td>
<td>710,000</td>
<td>471,000</td>
<td>BTU/hr</td>
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<tr>
<td>COP&lt;sub&gt;H&lt;/sub&gt;</td>
<td>5.50</td>
<td>5.60</td>
<td>4.80</td>
<td>4.70</td>
<td></td>
</tr>
<tr>
<td></td>
<td>K = 3.412 Btu/W * h</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>Evapourator Flow Rate</td>
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<td>Water Inlet Temperature</td>
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<td>140</td>
<td>140</td>
<td>140</td>
<td>°F</td>
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MARKET OPPORTUNITY

Given rising energy costs and increased environmental concerns, there has been a real transition in the market towards “green buildings”. Green buildings focus on resource efficiency, lifecycle effects and building performance. Smart technologies which are geared towards reducing lifetime maintenance costs and overall life cycle costs are key.

Buildings with energy efficient equipment have increased sales values due to lower operating margins and higher CAP rates.

According to experts, efficiently recycling waste energy could reduce carbon dioxide emissions from domestic water heating by 10%-20% and provide savings of up to US$70 billion.
MARKET OVERVIEW

HVAC market forecast to grow at 3.2% per year to reach US$16.8 billion in 2011.

Commercial / Industrial market estimated at US$8.0 billion

HVAC accounts for 40% - 60% of energy used in U.S. commercial and residential buildings.

Mature market.

Maintenance, including energy consumption can account for 80% of the cost of a building over its lifetime (including construction costs), accordingly, smart technologies can reduce operating costs and have a discernable effect on the return on investment of a building.
MARKET TRENDS

Advances in HVAC equipment sales expected to be primarily driven by strong gains in non-residential construction.

Nearly three quarters of HVAC demand is attributable to replacements.

Replacement sector to benefit from rising interest in more energy efficient building systems.

- Driven by rising energy prices.
- Spurring the replacement of older HVAC equipment with newer models.

Changing regulations regarding minimum efficiency requirements for legacy systems will also affect sales of HVAC equipment.
Green Matters Technology
WHAT MAKES OURS DIFFERENT

New dedicated heat recovery design for this specific application and optimized for high energy efficiency.

Patented piping design and control algorithms.

Multiple compressors for redundant independent operation.

Minimized Space Footprint:
- Compacted brazed plate heat exchangers
- Compacted design and piping layout
- Can be retrofit into existing mechanical rooms with limited available space
OUR COMPETITIVE ADVANTAGE

Equipment specification and installation is customized to maximize the energy savings for each application.

Large reduction in energy costs

3 year payback is typical

Streamlined company:
  Quickly adapt to changing market conditions

Experienced management team with proven track record
CAPITAL STRUCTURE

Insider Shareholders: 40%
External Shareholders: 60%

GMI
60,000,000 Common Shares Issued and Outstanding
WHY INVEST?

Management

We believe that PEOPLE ultimately bring value to a compelling idea/plan or technology. To that end, we have assembled a team experienced in building companies in the HVAC and renewable energy industries. We have partnered with a highly sophisticated manufacturing plant.

Clear Strategy and Business Model

We have a clear and focused strategy and a business model that will optimize the long term value of our product offering. In addition, we are positioning the company so as to maintain a clear exit strategy for our investors.

Competitive Advantage

Our technology and product offering will have a sustainable advantage with our proprietary and patented technology.

Large and Growing Markets

Our target market is a well established industry where we will provide a compelling solution to the well documented need for energy efficiency, energy conservation and environmental solutions.

HVAC market forecast to grow at 3.2% per year to reach US$16.8 billion in 2011.
Commercial / Industrial market estimated at US$8.0 billion.
ABOUT US

**Michael Caetano - Director**

Mr. Caetano graduated in 1995 from Seneca College in Business, Fine Arts & Technology and studied at the University of Toronto. With a business background, Mr. Caetano demonstrates what it's truly like to be a successful entrepreneur. His 20 years of experience and success has helped him generate roles as a CEO and director for various companies. Mr. Caetano also specializes in mergers, acquisitions and capital funding for private & public companies to help achieve strategic opportunities.

**Sean Marte - Chief Technical Engineer**

Sean graduated from the University of British Columbia in 2003 with a combined Bachelor of Applied Science and Masters of Engineering in Electro-Mechanical Design Engineering. Over the past 10 years he has worked in product development as a design and test engineer for several manufacturing companies. His responsibilities involved designing, commissioning and operating test stands for new equipment designs. He is experienced with automation, instrumentation, data acquisition equipment and industrial design. In 2008 Sean completed his registration as a Professional Engineer with the Association of Professional Engineers and Geoscientists of British Columbia (APEGBC).

Since joining Green Matter Sean's experience includes design of ASME rated heat exchangers, refrigeration component specification and selection, compressor selection and validation, system design and optimization. His duties with Green Matters include machine design, system integration, design for custom installations, test loop design, performance verification and writing selection software for the various Green Matters products.
Thank you for your time.
We look forward to continuing our discussions with you.

Michael Caetano - Director
Sean Marte - Chief Technical Engineer