

January 5th, 2011

EnWave Corporation

Technology and Strategic Metals

Value Dehydrated

ENW-V: \$1.76
Rating: Buy (S)
Target price: \$2.80

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EnWave Corporation

Value Dehydrated

	Page
Investment Thesis – New Solution to an Old Process	2
Company Overview	3
Key Agreements with Industry Leaders	9
Management	10
Valuation	12
Risks to Our Forecast	14
Financial Statements – Income Statement	15
Financial Statements – Balance Sheet	16
Financial Statements – Cash Flows	17
Appendix I – Industry Overview	18
Appendix II – Traditional Freeze Drier Manufacturers	19
Appendix III – EnWave’s Financings	20
Appendix IV – Important Disclosures	21

EnWave Corporation (ENW-V – \$1.76)

EnWave Corporation has the exclusive license from the University of British Columbia for its radiant energy vacuum (REV) technology. This technology offers significant savings over the traditional freeze drying process and EnWave is in the process of developing commercial REV machines. EnWave has entered into collaboration agreements with Nestlé, Danisco, Grupo Bimbo and Grimmway Farms.



Source: BigCharts.com

Market Data			
Rating	BUY(S)	Enterprise Value (M)	\$108.9
Risk	High	Net Cash (M)	\$5.2
Price	\$1.76	Total Debt (M)	\$0.0
1-Yr Target	\$2.80	Shares O/S (M)	64.8
Dividend	n/a	Market Cap (M)	\$114.1
1-Yr ROR	59%	Avg Daily Vol (K)	103.0
52 Wk High-low	\$1.85 - \$0.72	Ownership	
Valuation	DCF	Mgmt + Dir	7%
Year End	30-Sep	Institutional	3%

Revenue (000's) - September 30 Year End							
	Q1	Q2	Q3	Q4	Annual	P/S	
F2009A	\$24.0	A \$443.1	A \$15.3	A \$14.1	A \$496.6	n/a	
F2010A	\$59.7	A \$63.3	A \$3.2	A \$4.9	A \$131.0	n/a	
F2011					\$400.0	n/a	
F2012					\$2,500.0	n/a	

F.D. EPS							
	Q1	Q2	Q3	Q4	Annual	P/E	
F2009A	(\$0.01)	A (\$0.01)	A (\$0.01)	A (\$0.01)	A (\$0.02)	n/a	
F2010	(\$0.01)	A (\$0.01)	A (\$0.02)	A (\$0.02)	A (\$0.06)	n/a	
F2011					(\$0.06)	n/a	
F2012					(\$0.05)	n/a	

Source: Company Reports, LBS

Buy(S) – Target Price: \$2.80

We rate EnWave Corporation a Speculative Buy with a one-year share price target of \$2.80, implying a total return of 59%. This target is based on our DCF analysis of the company's significant customer collaborations, which we expect to start translating into revenue over the next 12-months. We have a share risk rating of High. We highlight the following:

- Commercial Ready Technology:** EnWave has developed a commercial ready version of its nutraREV technology, which is used to process dehydrated food products. The company is close to completing the development of a commercial ready version of powderREV technology, used in the processing of enzymes and probiotics.
- Technical Leap Forward for the Freeze Drying Industry:** Technological advancements have been limited in the freeze drying industry over the past 50 years. EnWave's REV technology can potentially reduce overall process costs by as much as 80% including cycle time improvements of up to 10 times.
- Significant Development Partners:** Despite being a development stage company, EnWave has managed to secure major customer collaboration agreements with several leaders in the food, probiotics and food culture industry. In food products, EnWave is working with Nestlé, Grimmway Farms, and Grupo Bimbo. In probiotics and food cultures, EnWave has been working with Danisco over the past two years. EnWave has stated that the company has signed over 30 confidentiality agreements with various companies, some of which we expect to convert to collaboration announcements over the coming year.
- Unique Business Model Licenses Technology:** Unlike the current manufacturers of freeze drying equipment, EnWave's business model is focused on licensing its unique technology to end users such that the company receives a fixed percentage of revenue of the end product. This should provide upside for the company as the global market expands.
- Pending Catalysts for EnWave's Share Price Include:** 1) the signing of its first multinational machine order and commercial license; 2) announcements of new collaboration and development agreements with major food producers; 3) the potential announcement of a major pharmaceutical development partner for freezeREV.



Investment Thesis – New Solution to an Old Process

80% Reduction in Processing Costs

EnWave has developed a revolutionary new method to create high quality, dehydrated products. The importance of this technology is that it significantly lowers energy consumption during the process and further reduces the time it takes to freeze dry the products by up to 10 times, resulting in lower labour and capital costs. While the magnitude of economic benefits are subject to individual product attributes, the combination of lower energy, labour and capital are expected to reduce overall processing costs by as much as 80%. The method also produces a dried product that is more true to the original structure, as blueberries for example appear puffier than the equivalent freeze dried version that looks closer to a raisin. EnWave is involved in several high profile collaboration agreements with industry leaders in the food industry including Nestlé, Grupo Bimbo, and Grimmway Farms as well as Danisco for probiotics and food culture dehydration. The original technology was developed at the University of British Columbia (UBC) by the company's founder and co-CEO, Tim Durance.

The commercial freeze drying industry has seen little innovation over the last 60 to 70 years since it was developed early on to freeze dry excess coffee from Brazil. What little innovation that has been done centered on computer controls and more environmentally friendly cooling methods, but essentially the process remains virtually unchanged. In total, it is estimated that the global freeze drying equipment industry is worth US\$1.8 billion annually with the majority of the producers being located in North America or Western Europe. The majority of the equipment providers are privately held companies with a regional focus.

EnWave's REV (Radiant Energy Vacuum) dehydration equipment expands this market significantly as the company is expected to license end users of its equipment and collect a royalty based on revenue. We expect the process savings and improved quality that the REV technology provides will more than offset the additional royalty payments that food or probiotic manufacturers have to pay to EnWave in order to use the technology. New snack food products can also be developed with the REV process that do not currently exist as the process can create in most cases food products that are superior to existing freeze dried offerings or high fat oil fried offerings.

We believe EnWave is well positioned with its key development partners to bring its unique radiant energy vacuum technology to commercialization. The key technologies are protected with a combination of patents owned by the company and the University of British Columbia (UBC) that are exclusively licensed to EnWave. The company may also purchase the patents from UBC, which we believe the company will do prior to achieving commercial revenues with Danisco.

Initiating Coverage with a Speculative BUY Rating

We are initiating coverage of EnWave with a Speculative Buy rating and \$2.80 price target. Our target price is based on a DCF analysis of our estimate of the company's future revenue streams, which we discuss in further detail in the Valuation section.



Company Overview

EnWave's vacuum microwave technology was originally developed by Dr. Tim Durance and Dr. Frank Liu at the University of British Columbia (UBC). In 1996, UBC granted an exclusive, world-wide license for the vacuum microwave technology to EnWave. The company completed a CPC transaction in 1999 and became a publicly listed development company. Over the next several years, EnWave proceeded to work towards commercializing the radiant energy vacuum technology.

In 2007, Company Strategy Shifted to REV Licensing Model

As the nutraREV product got closer to commercialization in the early 2000's, the company attempted to manufacture and distribute food products produced with the vacuum microwave technology. This strategy was not successful given the challenges in establishing an effective channel strategy. In 2007, EnWave announced the appointment of John McNicol as the company's president and Co-Chief Executive Officer. Mr. McNicol proceeded to change the company's strategic direction away from manufacturing its own food products to opportunities in manufacturing and licensing the technology to major food manufacturers. EnWave also decided to explore the market for pharmaceutical products including the drying of vaccines and other biological material.

Today, EnWave is offering one commercial ready dehydration technology and has four other development technologies. The commercial technology is a large capacity vacuum microwave machine that can be used to dry food such as vegetables, fruits, meat, herbs and seafood in varying quantities. This equipment is known as nutraREV and the company's first sale was to CAL-SAN Enterprises, a blueberry producer based in British Columbia. EnWave is also currently engaged in a research and development agreement with Nestlé S.A. for the nutraREV technology, though the specific details of the agreement are confidential. The agreement with Nestlé was first announced in July 2010 followed by a similar agreement with Grupo Bimbo SA on November 15, 2010, and finally a more recent agreement with Grimmway Farms that was announced on December 15th, 2010. Management has also indicated that a number of other companies are also examining EnWave's nutraREV (radiant energy vacuum) technology.

The next closest technology to commercialization is EnWave's powderREV technology that is used to dehydrate a continuous stream of biomaterials such as probiotics and food cultures. Probiotics are food cultures are bacteria, yeasts, enzymes or moulds that are added to dairy products in order to enhance the health properties of food. The bacteria in probiotics are live micro-organisms that are similar to the beneficial micro-organisms found in the stomach. Enzymes are proteins that assist in the production of the food product by shortening production time or eliminating certain chemical additives. Enzymes are also being used as a stain removing additive in detergents and in a growing list of other medical environmental applications.

EnWave has a research and development collaboration agreement with Danisco AS, one of the largest suppliers of probiotics and food cultures. The collaboration has thus far progressed well through several stages of testing and we believe will reach commercialization by the end of 2011. EnWave first began working with Danisco in 2008 and we believe EnWave is in the final stages of commercializing the powderREV product.

There are three additional technologies that EnWave has in development that are known as bioREV, freezeREV and quantaREV. All three technologies involve similar low-temperature dehydration techniques as used in nutraREV and powderREV though with different industry focuses. bioREV is used for dehydration of active pharmaceuticals at temperatures above freezing that allows for a long product shelf life. freezeREV is for the same pharmaceutical market as bioREV but is a microwave assisted method of freeze drying. While quantaREV is used for a continuous stream of material with the potential to dry up to several tonnes of material per hour.



REV (Radiant Energy Vacuum) Technology Overview

Commercial freeze drying or lyophilization has been around in various forms since the late 1930's. The traditional process of freeze drying requires the food product to be frozen solid then placed in a large chamber at low pressure. The product is slowly warmed within the low pressure chamber which causes the frozen water sublimate to water vapour. A traditional commercial freeze dryer is illustrated in exhibit 1.

Exhibit 1: Commercial Freeze Drying Machine



Source: GEA Nitro

Freeze drying is a lengthy process as it could take anywhere from several hours to several days over 24 hours to complete the entire process. The process is also expensive in terms of energy usage with the sublimation process taking the longest time and accounting for approximately 45% of total energy usage. Therefore, due to the long processing times it becomes increasingly efficient to do larger batch sizes, which also increases the risk of wasting the entire batch if the process has an error.

Water Boils at Room Temperature in a Vacuum

EnWave's radiant energy vacuum technology utilizes the basic principle that water boils at a much lower temperature as the pressure is lowered. In a vacuum, water boils at around room temperature and thus the water within a food product can go from liquid to gas state with a small amount of energy input. Microwave radiation causes the water molecules within a food product to vibrate and thus heat up. EnWave's commercial nutraREV machine uses a rotating plastic basket to ensure that the product is evenly heated by the microwave energy. The end result is a product that looks very similar to the original in shape and retains most of the nutrients of the original as illustrated in Exhibit 2.



Exhibit 2: nutraREV Dehydrated Products



Source: EnWave

Unlike products that are frozen, EnWave's nutraREV process does not cause significant distortion in the shape of the end product. In traditional freeze drying, when a fruit is frozen, the expansion of water as it turns into ice causes the shape of the fruit to be stretched and distorted. As the frozen water within the fruit is heated in low pressure and sublimates to water vapour, products such as blueberries can take on more of the appearance of a raisin than a blueberry. EnWave's technology, due to the fact that its method does not cause the blueberry to be overstretched and due to the vacuum environment, allows the blueberry to maintain its natural form. The REV process can also provide more flexible moisture control based on the homogeneous drying environment.

EnWave is not the first to design a microwavable freeze drying system to improve efficiency in the freeze dry process. A similar, though less successful method using microwaves as a heat source for heating up the frozen material was patented in 1980. Similar to traditional systems, this microwave freeze drying system first required the material to be frozen then placed in the vacuum chamber to remove the moisture. The difficulty with using this type of system is that ice absorbs 6,000 to 8,000 times less microwave energy than water, and thus the microwave system was designed to heat up the material surrounding the frozen fruit or vegetable. In reality, this microwave freeze drying apparatus was only marginally more efficient than existing systems though we believe it would have difficulty processing large batches.



The design of the REV equipment is fairly straightforward with a rotating basket to hold the fruit or other product to be dehydrated in a sealed chamber. A vacuum is applied to the chamber to lower the pressure while microwave energy is applied to the product. The weight of the basket of fruit is monitored throughout the process in order to determine when the food has been completely dehydrated or dehydrated to the required level of moisture. A single basket nutraREV machine is illustrated in Exhibit 3 as well as a continuous multi-basket commercial nutraREV production machine in Exhibit 4.

Exhibit 3: Single Basket nutraREV Machine



Source: EnWave



Exhibit 4: Commercial Multi-Basket nutraREV Machine



Source: EnWave

EnWave also has in development its freezeREV and bioREV machines that dehydrates vaccines and other biological material. The company currently has a bench version that can do one vial at a time though has plans in the future to develop a multi-vial machine to handle greater throughput. Similar to the nutraREV machine, it picks up a single vial of material and applies a vacuum to the vial while at the same time heating it with microwave radiation. The end result (as illustrated in Exhibit 5) is a dried vaccine or other biological material that can easily be transported and requires minimum refrigeration.

Exhibit 5: Dehydrated Vials



Source: EnWave



Long List of Patents

EnWave has exclusive licenses to the early UBC patents and has developed its own patents covering certain processes. A list of patents is illustrated in Exhibit 6.

Exhibit 6: EnWave Licensed and Owned Patents

nutraREV Patents

Topic	Ownership	Status of patent
Low fat snack foods	UBC - exclusive license to EnWave	Granted in the US
Potato pieces	UBC - exclusive license to EnWave	Granted in the US
Dehydrated krill	UBC - exclusive license to EnWave	Granted in the US
Dried fruit	UBC - exclusive license to EnWave	Granted in the US
Medicinal plants	UBC - exclusive license to EnWave	Granted in the US
Dehydrated berries	UBC - exclusive license to EnWave	Granted in the US and Canada
Protection of Company's proprietary equipment and processes for dehydration of berries and other food materials	EnWave Corporation	Patent application filed in the US, Canada, EU and eleven other jurisdictions

Other REV Related Patents

Title	Ownership	Status of patent
Production of dry sponges and foams from hydrocolloids	UBC - exclusive license to EnWave	Patent application filed, PCT reviewed and published. National filing initiated in Hong Kong, Australia, EU, India, China, and issued in Canada
Method of drying biological material including vaccines, antibiotics, enzymes and micro-organisms	UBC - exclusive license to EnWave	Patent application filed in US, India, Europe, China, Canada, Brazil, and PCT.
Protection of Company's proprietary equipment and processes for dehydration of vaccines and similar pharmaceutical materials	EnWave Corporation	Patent application filed in US and International PCT
Protection of Company's proprietary equipment and processes for freezeREV dehydration of pharmaceutical products	EnWave Corporation	Patent application filed in US and International PCT
Protection of Company's equipment and processes for powderREV dehydration	EnWave Corporation	Patent application filed in US and International PCT
Protection of Company's equipment and processes for large scale powderREV dehydration	EnWave Corporation	Patent application filed in US

Source: Company Reports



Key Agreements with Industry Leaders

nutraREV – Nestlé, Grupo Bimbo and Grimmway Farms

EnWave signed a research and development agreement with Nestec Ltd., a subsidiary of Nestlé S.A. on July 26, 2010. Very few details about the agreement are known except that the agreement involves further development of EnWave's nutraREV food dehydration technology.

Nestlé has a History of Developing and Implementing new Freeze Drying Technology

Nestlé is the world's largest food company with over 280,000 employees with 449 factories and located in 83 countries. EnWave is working with Nestlé's Science and Research division, known as Nestec, which operates from four locations including St. Louis (US), Lausanne (Switzerland), Beijing (China) and Tokyo (Japan). The company has been very active in developing and adopting new technology and in particular, new freeze drying technology as evidenced by Nestlé's move to be the first in the industry to use non-Freon refrigerants. Nestlé developed the non-Freon (CO₂ / NH₃) cascade refrigeration process in 2005, which is to be rolled out globally at the company's freeze dried coffee factories.

EnWave has been required by Nestlé to keep the terms of the agreement confidential and neither company mentions what product is being worked on. We believe potential end products for the agreement could be baby foods as these often contain freeze dried fruits as well as cereal products. Nestlé utilizes freeze drying extensively in the manufacture of instant coffee though we believe the nutraREV product is more suited to dried food such as fruits and vegetables.

Grupo Bimbo is a new relationship for the company as this agreement was announced on November 15, 2010. Grupo Bimbo is a Mexican producer of baked goods, with 98 plants located throughout Latin America, US, Central America and Asia. The press release noted that this was a collaboration agreement between the two companies to focus on the development and testing of certain food products using the nutraREV technology. Similar to EnWave's other agreements, the terms were confidential though we believe the focus will be on the use of nutraREV for certain snack products and baking ingredients.

Grimmway Could rapidly Launch Commercial nutraREV Products

Grimmway Farms is another new relationship for EnWave as the collaboration agreement between the two companies was announced on December 15, 2010. The agreement covers the testing of a variety of dried vegetable products using EnWave's nutraREV technology. Grimmway Farms is the world's largest producer of organic carrots and vegetables. Grimmway also produces soup bases, dehydrated carrot chip snacks, potatoes and citrus products including lemons, oranges and tangelos. Unlike prior collaboration agreements, EnWave management provided additional timeline details as both companies expect to complete the testing program by Q3-2011 with the potential for a commercial license agreement and machine order by the end of 2011.

powderREV – Danisco

EnWave has had a long standing relationship with Danisco in the development of its powderREV technology. The two companies first began working together in 2008 though the initial collaboration agreement was not announced until April 2009, following the completion of tests involving the dehydration of cultures and probiotics. The powderREV technology is newer than the nutraREV technology and requires an additional research and development effort to get it to the commercial stage.

Danisco is one of the largest producers of food ingredients in the world with a particular focus on sweeteners, enablers, cultures and probiotic ingredients. Danisco has over \$2.4 billion in annual revenue with 6,800 employees located in over 40 countries.



The company's cultures and probiotic ingredients are used in about 50% of ice cream and cheese products manufactured globally and in about 25% of all bread produced. Globally, it is estimated that the probiotic market size is approximately US\$1.5 billion annually with the largest market concentration being that of Western Europe. The fastest growing (though smaller) regions are that of North America and Eastern Europe, which are growing at approximately 25% annually.

The relationship with Danisco is EnWave's most advanced with a major producer and we believe it could become EnWave's first or second major revenue producer, depending on how quickly Grimmway Farms proceeds to review and implement the technology. As part of EnWave's agreement with Danisco, EnWave maintains control over the intellectual property developed though we believe that Danisco will likely get the exclusive rights to use the technology for the production of probiotics and cultures in its major markets.

Management

EnWave has an experienced management team that covers both the technical aspects as well as extensive business experience. The company has dual CEOs with the founder and original developer of the technology as one of the Co-CEOs with a successful entrepreneur as the other Co-CEO to help guide the company through its business strategy.

Dr. Tim Durance, *Chairman & Co-Chief Executive Officer*

Dr. Durance is a founder of EnWave and has been Co-CEO and Chairman since February 2007. Dr. Durance is responsible for R&D related to all of the REV technologies, as well as continuing intellectual property development. A co-inventor of the company's Radiant Energy Vacuum (REV) technology, Dr. Durance has 30 years experience in the processed food industry and until recently, had been a Professor in the Food, Nutrition and Health Program at University of British Columbia since 1987. Dr. Durance has authored over 60 scientific publications, filed 11 patents, and has been active presenting and lecturing about technology to the food processing industry. Dr. Durance holds a Ph.D and M.Sc. in Food Science from the University of British Columbia, as well as a B.Sc. in Microbiology from the University of Guelph and a B.A. in Anthropology from the University of Waterloo.

John McNicol, *President & Co-Chief Executive Officer*

Mr. McNicol joined EnWave as Executive Advisor in October 2006 and was later appointed President and Co-CEO in February 2007. He is responsible for the overall strategic planning and business development of the company. Prior to joining EnWave, Mr. McNicol had been President and COO of Concert Industries Ltd., a global supplier of personal hygiene products for 3 years. Mr. McNicol also served as Vice President at HSBC Securities Inc., as well as holding a number of senior positions, including CFO, President and COO of Merfin International Inc. between 1991 and 1997, until it was acquired by Buckeye Technologies Inc.. Mr. McNicol holds a Bachelor of Commerce, Marketing and Management from Mount Allison University and is a former Chartered Accountant.

Bino Anand, *Executive Vice President Sales*

Participated as a Director and sales advisor to EnWave since 2001. Mr. Anand has more than 30 years of international sales and general business experience including a number of entrepreneurial ventures in the wholesale distribution area.



Salvador Miranda, Chief Financial Officer

Mr. Miranda joined EnWave in February 2003 as a Director. He later took the position of Chief Financial Officer in November 2003. He is also the CFO of Newstrike Capital Inc. and GFM Resources Ltd. Mr. Miranda currently serves as President of InterAmerica Consulting & Development Inc., a private business consulting group since 1995. Mr. Miranda holds a Master's degree in Project Management from Massachusetts Institute of Technology.

Jennifer Thompson, Vice President of Corporate Development & Investor Relations

Mrs. Thompson joined EnWave as Vice President of Corporate Development in February 2005. Prior roles include: 3 years at Westport Innovations focusing on European business development, as well as a Project Manager role at Methanex Corporation from 1997 to 2000. Mrs. Thompson is also the founder of Thompson Planning Group Inc., a project management consulting company. Mrs. Thompson holds a Bachelor of Arts in Economics from Simon Fraser University, as well as a Masters of Arts in Economics from McMaster University.

Dr. Parastoo Yaghmaee, Senior Scientist

Dr. Yaghmaee is the company's Senior Scientist and has been working on EnWave's REV technology since 1999. Dr. Yaghmaee has been involved with REV equipment designs through conducting dehydration experiments. As a Research Associate in the Food, Nutrition and Health Department at the University of British Columbia, Dr. Yaghmaee has published numerous papers regarding the effects vacuum microwave processing on a variety of biomaterials. Dr. Yaghmaee holds a Ph.D. in Food Science.

Leon Fu, Senior Engineer

Mr. Fu has been with EnWave since 2000 as Senior Engineer. A co-author of two patents held jointly with Dr. Durance, Mr. Fu is responsible for design innovations for each REV platform. Mr. Fu holds a B.Eng. in Electronics from Petroleum University in Dong Ying, China.

**EnWave's Value is in
its Technology and
Significant
Collaboration
Agreements**

Valuation

While EnWave is a pre-revenue company, we believe the company has several strong customer relationships that we expect to translate into revenue opportunities. EnWave's most advanced customer relationship is with Danisco for its powderREV technology. We believe Danisco could become the company's first major customer and significant revenue generator. Currently EnWave has a near term revenue generating opportunity with BC based CAL-SAN, which is using EnWave's REV technology to dehydrate blueberries. EnWave's contract with CAL-SAN requires CAL-SAN to pay a royalty of up to 10% of gross revenues for food processed using the nutraREV process.

EnWave's business model going forward will be focused on generating licensing revenues based on a percentage of the final selling price of the end product. The CAL-SAN agreement specified a royalty of up to 10%, though we believe the agreements with the larger food and probiotics companies such as Nestlé, Grupo Bimbo, Grimmway and Danisco will be at a lower royalty rate as we currently estimate royalties from these companies to be in the 3% to 5% range due to their larger size.

We also believe that EnWave will be doing more leasing of the REV equipment rather than selling it to customers. We prefer the leasing option as it allows the company to maintain control of the technology to ensure that it does not get reverse engineered at some point by a competitor.

EnWave is currently a pre-revenue company that has entered into several high-profile collaboration agreements with major food and probiotics producers. Therefore, we can only value EnWave by the discounted cash flow method and we highlight several of our key assumptions below:

- ◆ Buyout of the patents currently owned by UBC in order to avoid paying the 20% royalty.
- ◆ First significant revenue customer to be Danisco, which we estimate to start achieving revenue for EnWave in mid-2012. We estimate Danisco revenue to ramp from approximately \$1 million in 2012 to \$15 million by 2014.
- ◆ Next significant customer to be Grimmway Farms, which we estimate to start achieving significant revenue by mid to late 2012. We estimate that Grimmway Farms revenue to ramp from \$1 million in 2012 to \$12 million by 2019.
- ◆ We currently model out EnWave for 15 years and use a terminal value of 3 x EBITDA
- ◆ We use a discount rate of 15%, which we believe is justified given the long time horizon to significant revenue that is offset somewhat by the substantial customer collaborations. We will adjust this rate accordingly as the company progresses towards completion of commercial contracts.
- ◆ We model out 15 years of free cash flow and use a terminal value of 3 x EBITDA. Over the 15 year period, we model a total of 10 customers using EnWave's REV technology in production.

Therefore, based on our above noted assumptions, we derive a price target of \$2.80 per share. We note that the target price is sensitive to both changes in the discount rate and terminal EBITDA multiple as indicated in the sensitivity analysis in Exhibit 7. We note that as EnWave gets closer to achieving commercial production with its potential customers we will lower the discount rate as the technological risk is further mitigated.



Exhibit 7: Sensitivity Analysis

Discount	Terminal Value - EBITDA Multiple							
	3.0	3.5	4.0	4.5	5.0	5.5	6.0	6.5
12%	\$3.36	\$3.45	\$3.54	\$3.63	\$3.72	\$3.81	\$3.90	\$3.99
13%	\$3.08	\$3.16	\$3.23	\$3.31	\$3.39	\$3.47	\$3.55	\$3.62
14%	\$2.82	\$2.89	\$2.96	\$3.03	\$3.10	\$3.17	\$3.23	\$3.30
15%	\$2.59	\$2.65	\$2.71	\$2.77	\$2.83	\$2.89	\$2.96	\$3.02
16%	\$2.39	\$2.44	\$2.49	\$2.55	\$2.60	\$2.65	\$2.71	\$2.76
17%	\$2.20	\$2.25	\$2.30	\$2.34	\$2.39	\$2.43	\$2.48	\$2.53
18%	\$2.03	\$2.08	\$2.12	\$2.16	\$2.20	\$2.24	\$2.28	\$2.32

Source: LBS Estimates



Risks to Our Forecast

- Technology Adoption** **EnWave's REV technology is new to the food dehydration market and the technology must complete extensive customer testing.** EnWave has demonstrated the savings and product quality capabilities through its bench tests and pilot plant facility. However, customers may not achieve expected economic or product benefits at a reliable commercial scale or may be slower to adopt EnWave's technology than we anticipate, ultimately putting downward pressure on future revenues.
- Currency Fluctuations** **We expect EnWave to be exposed to multiple currencies as its customers begin commercial operations.** The majority of EnWave's operations are expected to continue to be located in Canada with royalty contracts with customers in multiple geographies. We expect EnWave's revenues will be influenced by exchange rate changes in the US dollar, the Euro and potentially the Mexican Peso. If the Canadian dollar appreciates versus any of these other currencies, it could negatively impact the company's results.
- Patents** **UBC owns several key REV patents that are currently licensed exclusively to EnWave.** Under the current agreement with UBC, EnWave is required to pay UBC 20% of royalty revenues generated through use of the patents that the company licenses from the university, though the company has the option to acquire the patents from UBC. If EnWave fails to acquire the patents due to lack of financing then future royalty revenue is likely to be negatively impacted.
- Intellectual Property** **EnWave's process and related REV equipment are protected by patents registered in the US and Canada, with significant patents filed and pending in other global jurisdictions.** However, this does not prevent the risk of copying EnWave's equipment, which can then be sold by a competitor. We do believe EnWave will defend its technology through the use of legal means though this could be costly for the company.
- External Contractors** **EnWave is expected to rely upon external contractors to build its REV machines.** EnWave's potential customers are large, global enterprises with multiple production sites around the world. EnWave will be contracting out manufacturing of its equipment to external contractors in order to meet the demand needs of its customers. If one of the external contracts fails to deliver or experiences a quality issue with the machines, this could negatively impact EnWave's results.



Financial Statements – Income Statement

Exhibit 8: EnWave Income Statement								
EnWave Corporation (TSX:ENW) (FYE Sept 30)	2008	2009	Q1-10 Dec 09	Q2-10 Mar 10	Q3-10 Jun 10	Q4-10 Sep 10	2010	2011E
Product sales and other	74,040	496,559	59,686	63,300	3,150	4,912	131,048	400,000
Cost of sales	0	(502,495)	(24)	0	0	(10,601)	(10,625)	0
Expenses:								
General and administrative	588,728	643,843	224,620	244,871	231,445	201,292	902,228	878,584
	795.1%	129.7%	376.3%	386.8%	7347.5%	0.0%	0.0%	0.0%
Sales and marketing	43,987	104,989	34,614	40,079	34,283	53,785	162,761	237,408
	59.4%	21.1%	58.0%	63.3%	1088.3%	0.0%	0.0%	0.0%
Research and development	766,063	869,461	384,872	368,020	521,506	454,155	1,728,553	2,160,614
	10	2	6	6	166	0	0	0
Stock-based compensation	752,456	371,606	86,464	165,124	156,052	176,196	583,836	722,581
	1016.3%	74.8%	144.9%	260.9%	4954.0%	0.0%	0.0%	0.0%
Operating loss	(2,077,194)	(1,995,835)	(670,908)	(754,794)	(940,136)	(891,117)	(3,256,955)	(3,599,186)
Check	(2,077,194)	(1,995,835)	(670,908)	(754,794)	(940,136)	0	(3,256,955)	0
Interest and other income	29,172	23,139	4,450	5,046	7,578	11,540	28,614	11,540
Gain on disposal of equipment	(3,852)	0	0	0	468	0	468	0
Net income	(2,051,874)	(1,972,696)	(666,458)	(749,748)	(932,090)	(879,577)	(3,227,873)	(3,587,646)
Check	(2,051,874)	(1,972,696)	(666,458)	(749,748)	(932,090)	0	(3,227,873)	0
EPS (basic)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
EPS (FD)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)
Shares outstanding - basic	35,405,032	46,497,913	46,916,591	52,454,849	56,252,939	58,208,894	53,384,064	60,171,394
Shares outstanding - FD	35,405,032	46,497,913	46,916,591	52,454,849	64,755,583	64,805,583	57,233,152	66,768,083

Source: Company Reports, LBS



Financial Statements – Balance Sheet

Exhibit 9: EnWave Balance Sheet								
EnWave Corporation (TSX:ENW)	2008	2009	Q1-10	Q2-10	Q3-10	Q4-10	2010	2011E
(FYE Sept 30)			Dec 09	Mar 10	Jun 10	Sep 10		
Assets								
<u>Current</u>								
Cash and equivalents	913,683	1,785,459	1,716,102	5,273,929	6,002,307	5,206,300	5,206,300	2,341,235
Restricted cash	28,749	28,749	28,749	28,749	28,749	28,749	28,749	28,749
Receivables	84,272	53,110	61,963	139,817	93,113	187,459	187,459	187,459
Prepaid expenses and deposits	33,760	41,580	114,884	151,003	51,197	46,119	46,119	46,119
Inventories	<u>405,074</u>	<u>36,669</u>	<u>60,862</u>	<u>178,953</u>	<u>247,010</u>	<u>381,498</u>	<u>381,498</u>	<u>381,498</u>
	1,465,538	1,945,567	1,982,560	5,772,451	6,422,376	5,850,125	5,850,125	2,985,060
Deferred transaction costs			2,300	0	0	0	0	0
Equipment	<u>183,849</u>	<u>265,150</u>	<u>290,833</u>	<u>281,120</u>	<u>539,323</u>	<u>569,942</u>	<u>569,942</u>	<u>569,942</u>
								0
Total Assets	1,649,387	2,210,717	2,275,693	6,053,571	6,961,699	6,420,067	6,420,067	3,555,002
Liabilities								
<u>Current</u>								
Accounts payable	236,370	177,707	188,063	200,307	232,851	187,380	187,380	187,380
Due to related parties	21,998	49,517	65,239	72,650	104,940	160,417	160,417	160,417
Deferred revenue	<u>12,000</u>	<u>15,888</u>	<u>15,888</u>	<u>0</u>	<u>0</u>	<u>29,861</u>	<u>29,861</u>	<u>29,861</u>
	270,368	243,112	269,190	272,957	337,791	377,658	377,658	377,658
Shareholders' Equity								
Share capital	9,365,455	11,343,483	12,077,934	15,961,452	17,851,031	18,073,331	18,073,331	18,795,912
Contributed surplus	1,873,169	2,456,423	2,427,328	3,067,669	2,953,474	3,029,252	3,029,252	3,029,252
Deficit	<u>(9,859,605)</u>	<u>(11,832,301)</u>	<u>(12,498,759)</u>	<u>(13,248,507)</u>	<u>(14,180,597)</u>	<u>(15,060,174)</u>	<u>(15,060,174)</u>	<u>(18,647,820)</u>
	1,379,019	1,967,605	2,006,503	5,780,614	6,623,908	6,042,409	6,042,409	3,177,344
Total liabilities and shareholders' equity	1,649,387	2,210,717	2,275,693	6,053,571	6,961,699	6,420,067	6,420,067	3,555,002

Source: Company Reports, LBS



Financial Statements – Cash Flows

Exhibit 10: EnWave Statement of Cash Flows								
EnWave Corporation (TSX:ENW)	2008	2009	Q1-10	Q2-10	Q3-10	Q4-10	2010	2011E
(FYE Sept 30)			Dec 09	Mar 10	Jun 10	Sep 10		
Operating activities								
Net income	(2,051,874)	(1,972,696)	(666,458)	(749,748)	(932,090)	(879,577)	(3,227,873)	(3,587,646)
Items non involving cash:								
Amortization	30,713	52,984	15,176	15,463	37,144	21,028	88,811	140,000
Gain on disposal of equipment	3,852	0	0	0	(468)	0	(468)	0
Stock-based comp	<u>752,456</u>	<u>371,606</u>	<u>86,464</u>	<u>165,124</u>	<u>156,052</u>	<u>176,196</u>	<u>583,836</u>	<u>722,581</u>
	(1,264,853)	(1,548,106)	(564,818)	(569,161)	(739,362)	(682,353)	(2,555,694)	(2,725,065)
Changes in non-cash working capital:								
Receivables	(46,669)	31,162	(8,853)	(77,854)	46,704	(94,346)	(134,349)	0
Prepaid expenses and deposits	11,300	(7,820)	(19,282)	(90,141)	99,806	5,078	(4,539)	0
Inventories	(296,167)	378,267	(48,720)	(86,527)	(71,539)	(125,573)	(332,359)	0
Accounts payable	62,974	(25,725)	(48,095)	63,658	(41,417)	9,993	(15,861)	0
Amounts due to related parties	5,394	27,519	15,722	7,411	32,290	55,477	110,900	0
Deferred revenue	<u>12,000</u>	<u>3,888</u>	<u>0</u>	<u>(15,888)</u>	<u>0</u>	<u>29,861</u>	<u>13,973</u>	<u>0</u>
	(1,516,021)	(1,140,795)	(674,046)	(768,502)	(673,518)	(801,863)	(2,917,929)	(2,725,065)
Financing activities								
Private placement	1,065,150	2,204,000	0	3,499,999	0	0	3,499,999	0
Private placement costs	(64,140)	(131,955)	(188)	(326,871)	(651)	(41)	(327,751)	0
Exercise of warrants	0	54,152	593,580	1,122,107	1,592,482	61,625	3,369,794	0
Exercise of stock options	<u>144,000</u>	<u>16,167</u>	<u>25,500</u>	<u>63,500</u>	<u>27,500</u>	<u>60,300</u>	<u>176,800</u>	<u>0</u>
	1,145,010	2,142,364	618,892	4,358,735	1,619,331	121,884	6,718,842	0
Investing activities								
Deferred transaction cost	0	0	(2,300)	2,300	0	0	0	0
Purchase of equipment	<u>(131,461)</u>	<u>(129,793)</u>	<u>(11,903)</u>	<u>(34,706)</u>	<u>(217,435)</u>	<u>(116,028)</u>	<u>(380,072)</u>	<u>(140,000)</u>
	(131,461)	(129,793)	(14,203)	(32,406)	(217,435)	(116,028)	(380,072)	(140,000)
Net increase(decrease) in cash	(502,472)	871,776	(69,357)	3,557,827	728,378	(796,007)	3,420,841	(2,865,065)
Check	(502,472)	871,776	(69,357)	3,557,827	728,378	0	0	0
Cash at beginning of period	1,416,155	913,683	1,785,459	1,716,102	5,273,929	6,002,307	1,785,459	5,206,300
Cash at end of period	913,683	1,785,459	1,716,102	5,273,929	6,002,307	5,206,300	5,206,300	2,341,235

Source: Company Reports, LBS

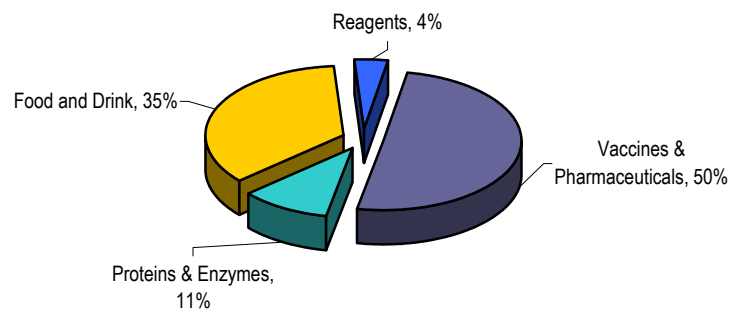
Appendix I – Industry Overview

Freeze Drying Market Expected to Shift Towards Pharmaceutical Industry

The estimated total market size for freeze drying equipment is approximately US\$1.8 billion annually. Currently, the largest market for freeze dried products is the food industry though a shift is expected to greater use of freeze drying for the pharmaceutical and biotechnology industries as technology advances. With over 50% of current drugs manufactured requiring lyophilization, the introduction of new products, and injectables will encourage demand to increase in line with the growth of biotechnology.

The freeze drying market is the primary target market for REV technology, and EnWave estimates that the global revenue opportunity to be well over \$100 billion. The REV market mimics the demands for freeze drying equipment, where roughly 50% of the market is focused on vaccines, and antibiotics, however because EnWave's business model is that of licensing producers it is expected to have a strong recurring revenue component.

Exhibit 11: REV Technology Global Market Opportunity (\$100 b)



Source: EnWave, LBS

Geographically, Europe is currently the largest market for freeze drying equipment. Within Europe, Germany, France, and Great Britain are the largest country markets for equipment with the US and Japan being the next largest markets outside of Europe. The emerging markets are currently small in terms of installed equipment though according to Global Industry Analysts Inc., these markets are expected to be the highest growth area for freeze drying equipment over the next few years.



Appendix II – Traditional Freeze Drier Manufacturers

**Few Global
Competitors, Most
Privately Held**

The market for freeze drying equipment is fragmented with many small companies that tend to be privately owned and have a very regional focus. There are a select few that are able to compete globally, such as Thermo Fisher and USIFROID.

Biopharma Technology Ltd. (Privately Held) www.biopharma.co.uk	<ul style="list-style-type: none">◆ Established in 1997 and based in Winchester, UK◆ Limited product line offered to the biopharmaceutical industry◆ Successfully processed more than 600 substances on clients behalf
Cuddon Freeze Dry (Privately Held) www.cuddonfrezedry.com	<ul style="list-style-type: none">◆ Headquartered in Blenheim, New Zealand◆ Offers to a range of industries including dairy, pharmaceutical, food processing, and laboratory storage◆ Over 100 freeze dryers installed worldwide
Freezedry Specialities Inc. (Privately Held) www.freezedry.com	<ul style="list-style-type: none">◆ Headquartered in Princeton, Minnesota and founded in 1992◆ Target markets include Floral, Laboratory, Taxidermy and Water Damage Restoration◆ Limited product line that focuses on smaller scale items
GEA Niro (Privately Held) www.niro.com	<ul style="list-style-type: none">◆ Headquartered in Denmark and part of the GEA Group since 1993◆ Operating divisions include Chemical, Food & Dairy, Pharmaceutical and After Sales◆ Freeze drying market focus is on the coffee and food industry
Labconco Corporation (Privately Held) www.labconco.com	<ul style="list-style-type: none">◆ Founded in 1925 and headquartered in Kansas City, Missouri◆ Offers freeze dry systems primarily focusing on smaller scale laboratories.◆ Employs 250 associates across the US
Thermo Fisher (TMO:NYSE) www.thermofisher.com	<ul style="list-style-type: none">◆ Formed in November 2006, following a merger between Thermo Electron Corporation and Fisher Scientific International Inc.◆ Revenue streams include life sciences, healthcare, and industrial/environmental, and safety◆ Acquired over 40 companies since merger to round out its product line◆ F2009 revenue was \$10.1 billion, down 4% y/y
USIFROID (Privately Held) www.usifroid.com	<ul style="list-style-type: none">◆ Founded in 1948 and based in France◆ Several systems including laboratory systems, small pilot and production systems and loaders◆ Controls 80% of pharmaceutical freeze drying market in France◆ Acquired by Telstar in April 2010
VirTis (Privately Held) www.spscientific.com	<ul style="list-style-type: none">◆ Founded in 1953 and manufacturing freeze dryers since 1957◆ Offers bench-top freeze dryers primarily for biotech and pharmaceutical laboratories◆ Currently operating in Gardiner, New York



Appendix III – EnWave’s Financings

A list of EnWave’s financing since going public in 1999:

- ◆ July 14, 1999 – raised \$2,100,000 consisting of 3,500,000 units priced at \$0.60.
- ◆ May 30, 2002 – raised \$120,000 consisting of 1,200,000 units (1 share plus 1 warrant) priced at \$0.10 with the warrant exercise price at \$0.10.
- ◆ July 19, 2002 – raised \$500,000 consisting of 2,380,953 units (1 share plus 1 warrant) priced at \$0.21 with the warrant exercise price at \$0.28
- ◆ April 30, 2003 – raised \$216,518 consisting of 2,165,818 units priced at \$0.10.
- ◆ July 8, 2004 – raised \$185,000 consisting of 2,312,500 units (1 share plus 1 warrant) priced at \$0.08 with the warrant exercise price of \$0.16.
- ◆ July 18, 2005 – raised \$450,000 consisting of 2,500,000 units (1 share plus 1 warrant) priced at \$0.18 with the warrant exercise price of \$0.25.
- ◆ February 28, 2007 – raised \$200,000 consisting of 800,000 units (1 share plus 1 warrant) priced at \$0.25 with the warrant exercise price of \$0.40
- ◆ June 6, 2007 – raised \$1 million consisting of 2.2 million units (1 share plus 1 warrant) priced at \$0.45 with the warrant exercise price of \$0.45.
- ◆ May 30, 2008 – raised \$1 million consisting of 3.6 million units (1 share plus 1 warrant) priced at \$0.30 with the warrant exercise price of \$0.45
- ◆ May 28, 2009 – raised \$2.2 million consisting of 7.3 million units (1 share plus half warrant) priced at \$0.30 with the warrant exercise price of \$0.45.
- ◆ January 19, 2010 – raised \$3.5 million consisting of 3.9 million units (1 share plus half warrant) priced at \$0.90 with the warrant exercise price of \$1.15.

Appendix IV – Important Disclosures

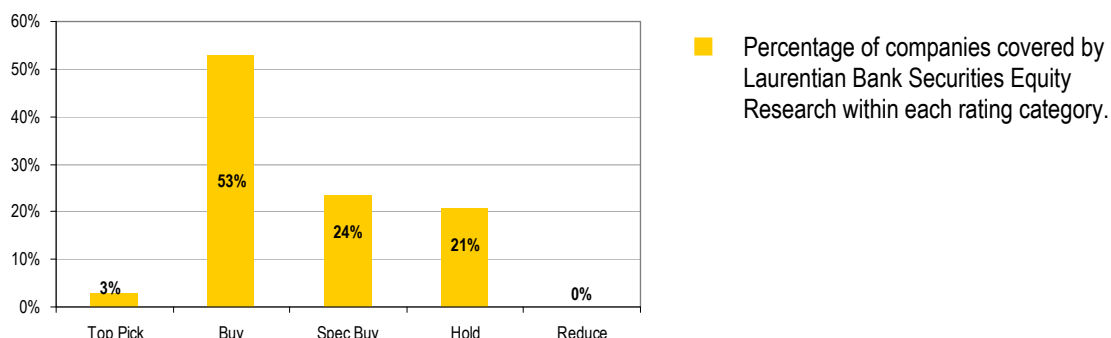
Company	Ticker	Disclosures*
EnWave Corp.	ENW-V	V

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- P** This issuer paid a portion of the travel-related expenses incurred by the Analyst to visit material operations of this issuer

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