

### EnWave Corporation (ENW)

June 17, 2017

EnWave Corporation offers industrial-scale dehydration technology for commercial applications in the food and pharmaceutical spaces. The Company's Radiant Energy Vacuum ("REV") platforms are becoming the new global dehydration standard, as they are faster and cheaper than freeze drying, and have better end product quality than both air drying and spray drying.

EnWave continues to make outstanding progress with its royalty partners by receiving purchase orders for additional REV machinery. No less than 14 REV machines are currently under construction for companies such as Ereğli Agrosan, Van Dyk Specialty Products, Merck and Sutro Biopharma.

EnWave is also advancing several prospective royalty partners that are conducting initial testing and product development under Technology Evaluation and License Option Agreements (TELOAs).

All of this should help the Company reach being cash flow positive in the second half of fiscal year 2017.

We reiterate our buy recommendation for EnWave Corp. with a price target of \$3.49, which is 232% above today's stock price.



- ▣ We're confident that Moon Cheese sales in the following quarters will pick up. Slant Design, the distributor of Moon Cheese, is doing an excellent job, as it has recently expanded distribution of the snack to 2,000 Rite Aid pharmacy stores, 1,600 CVS stores, and 440 Targets in the United States.
- ▣ A few days ago, EnWave signed a contract with the US Army Natick Soldier R&D Center to jointly develop food bars for US Army soldiers. A huge opportunity!
- ▣ To date, EnWave has entered into twenty royalty-bearing commercial licenses with food processing and pharmaceutical companies. It's fair to say that the Company is uniquely positioned from an investment case perspective in that it offers the opportunity for exposure to a portfolio of royalty streams.



Market Data	
Price	C\$1.05
Sector	Diversified Machinery
52-Week Price Range	C\$0.82 - C\$1.35
Shares Issued (m)	90.80
Market Cap (m)	\$95.3
Listings	ENW (TSXV) & E4U (Fra.)
Website	<a href="http://www.enwave.net">http://www.enwave.net</a>

## THE COMPANY

EnWave Corporation is a Vancouver-based industrial technology Company, that develops commercial applications for its proprietary Radiant Energy Vacuum (REV) dehydration technology.

The University of British Columbia manufactured the first prototype REV machine in 1996 for dehydrating food and nutraceuticals. Since then, EnWave has developed three commercial-scale REV platforms: nutraREV for the food industry to dry fruits, vegetables, meats and other products quickly and at low-cost, while maintaining high levels of nutrition, taste, texture and color; powderREV for the dehydration of bulk food cultures, probiotics and fine biochemicals such as enzymes; and quantaREV for continuous, high-volume low-temperature drying of sensitive food products in liquid or solid form.

In addition, the Company has one developmental-stage REV platform: freezeREV to stabilize and dehydrate biopharmaceuticals such as vaccines.

EnWave's business model is to sell REV machinery and to sign royalty-bearing commercial licenses with leading food and pharmaceutical companies for the use of its revolutionary technology. Each license agreement restricts the partner's use of the technology to specific applications and geographic areas.

EnWave generates revenues from the following three sources:

- ❑ REV machine sales and maintenance;
- ❑ Royalty streams from partners ranging between 2% and 10% on commercial products produced with a REV machine;
- ❑ NutraDried, a 51% owned joint venture, which sells healthy dried cheese snacks.

The Company reported consolidated revenues of \$4.18 million for its second quarter of fiscal year 2017, ended March 31, 2017, compared with \$4.59 million in the same period last year, a decrease of 9%.

The decline in revenue was entirely due to a blip in NutraDried sales as a result of the slow transition of the customer accounts from Spire Brands to NutraDried. In December 2016, Spire Brands, which was the master distributor of Moon Cheese, was replaced by Slant Design. Apparently Spire was somewhat reluctant to turn over all the necessary information, which delayed some of the consistency in orders.

Fortunately, that situation has now been corrected. In addition, significant additional Moon Cheese distribution has been confirmed (Also read NutraDried LLP below). Consequently, higher revenues are expected at NutraDried for the current and following quarters.



**Soon Moon Cheese will also be available at 2,000 Rite Aid pharmacy stores, 1,600 CVS stores, and 440 Targets in the United States.**

Radiant Energy Vacuum machine sales have continued to be very solid. So far in 2017, the Company received the following purchase orders:

- ❑ An order for a 100kW large-scale nutraREV machine from Ereğli Agrosan, a Turkish company that produces high value natural products for the food, cosmetic and health sectors. This order will expand Ereğli's royalty bearing production capacity as it already has one 2kW and two 10kW REV machines up and running;
- ❑ An order for a large-scale 60kW nutraREV machine from Van Dyk Specialty Products, a major Canadian producer of wild blueberry products;
- ❑ A purchase order for a 10kW small-scale machine for Natural Nutrition. This order represents the third purchase of a 10kW small-scale machine from the Chilean company, and expands its production capacity of high quality fruit products;

- A purchase order for a 10kW small-scale machine for Agricola Industrial La Lydia. This order represents the second purchase of a 10kW small-scale machine by La Lydia for processing fruit and cheese in Costa Rica;
- An order for a 10kW small scale REV machine from Ashgrove Cheese, a diversified dairy processor based in Australia; and
- A license agreement with Bare Foods, a leading American snack food company for the production of healthy snacks using REV technology. Bare must submit a purchase order for a 10kW small-scale REV machine within a defined period.

Once installed, these machines will all start generating recurring royalties for EnWave.

In addition, during the second quarter, the Company made significant progress in the construction of the first commercial powderREV machine for Sutro Biopharma, a U.S. based pharmaceutical partner. The goal is to have the machine, which will be used for the bulk dehydration of temperature sensitive biomaterials, installed before fiscal year end (September 30, 2017). Also development of the first scaled-up GMP freezeREV unit for Merck continues to progress as planned.

The Company currently employs 35 people in Canada who operate a pilot plant and an engineering facility in Vancouver.

## Clients

EnWave's international customer list truly validates its technology and potential. The Company's market strategy targets large, Tier 1 companies in the food and pharma sector, as well as Tier 2 players in niche markets and regions.

In most cases, EnWave initially signs research collaboration agreements with potential partners, offering them certain product and geographic exclusivity. After completing a satisfactory due diligence on the technology and market opportunity, those companies have the option to sign commercial agreements and place machine orders.

Thus far, EnWave has signed twenty royalty-bearing licenses, thereby opening up eight distinct market sectors for commercialization.

In addition, EnWave has signed Technology Evaluation and License Option Agreements with a growing number of companies such as Merck Pharma, Ultima Foods, and Jack Link's, which are testing the technology.

## NutraDried LLP

NutraDried LLP develops, manufactures, markets and sells 100% all-natural cheese snacks under the Moon Cheese brand. EnWave USA Corporation, a 100% daughter of EnWave Corp, holds a 51% stake in NutraDried, while ND Creations, a private company majority owned by a former director of EnWave, controls 49%. EnWave benefits from selling REV machines to the joint venture, while it also receives a revenue-based royalty of 5%.

After the launch of Moon Cheese, its distribution expanded very rapidly. The cheese snack is now available in over 20,000 grocery stores across North America. The subsidiary's strongest accomplishment so far however, is that Moon Cheese snacks are available at the almost 9,000 corporate stores in the US and Canada.



**Moon Cheese with mozzarella flavor is now for sale at Starbucks and several other chains nationwide.**

**Very soon the snack will also be available at 2,000 Rite Aid pharmacy stores, 1,600 CVS stores, and 440 Targets in the United States.**

Moon Cheese is currently available in four flavors: Gouda, American Cheddar, Pepper Jack, and Mozzarella. Other flavors are being tested and may be launched in the future.

## TECHNOLOGY

Before EnWave launched its Radiant Energy Vacuum technology, food processing companies were limited to opt for either 'freeze drying', which provides superior product quality, but is cost prohibitive and is only used to process higher-value products; or 'spray and air-drying', which is cost effective but degrades the quality of the products (Also see table below).

Thanks to EnWave's REV dryers, companies, for the first time, can combine the effectiveness of freeze drying with the economics of spray and air drying.

EnWave's REV technology utilizes radiant energy (microwaves) in a vacuum environment to homogeneously dehydrate a wide variety of foodstuffs and biomaterials at temperatures ranging from approximately 37.5°C to below freezing.

The key to the technology is the vacuum environment in which the energy is applied, because it reduces the atmospheric pressure, therefore lowering the temperature at which the moisture can efficiently be removed. This reduction of heat and oxidization minimizes the damage inflicted on the REV-dried products, preserving richer flavors, brighter colors and higher nutritional content.

Four REV platforms have been developed to address specific market opportunities. Three platforms - nutraREV, powderREV and quantaREV - are at a commercial stage, while the fourth one - freezeREV - is under development. Each platform is described in more details below.

	EnWave's REV Technology	Freeze Drying	Air Drying
<b>Better Product</b>	Superior Color Superior Flavor High Nutritional Retention	High Nutritional Retention	Heat & Oxygen Damages Color, Flavor, Nutrients and Texture
<b>Faster Process</b>	Minutes or Hours (1,5 hours for Blueberries)	Hours or Days (24 - 36 hours for Blueberries)	Hours (6 hours for Blueberries)
<b>Cheaper Cost</b>	Up to 80% lower processing costs than freeze-drying (combination of lower capital, labor and energy costs)	High Capital Costs High Energy Costs	Low Capital Costs Competitive Energy Costs
<b>Comparison between EnWave's REV technology, and freeze &amp; air drying.</b>			

## Commercial Stage

**nutraREV** is designed for the dehydration of fruits, vegetables, herbs, dairy products, meats and seafood. It provides higher nutritional content, and improved appearance, flavor and texture over freeze drying, which is the industry standard for dehydrating many food applications. It is EnWave's most popular technology.

nutraREV machines are available at varying scales: 2kW for product development, 10kW for pilot-scale production and 100kW or higher for commercial production.

A 100kW unit is capable of producing as much as 150 kg (340 lbs) of dried product (below 5% residual moisture) per hour. A 100kW machine sells on average for \$1.5 million and generates between \$200,000 and \$400,000 in royalties per year at full utilization.

**quantaREV** is designed for high-volume, low-temperature dehydration of solids, liquids, granular or encapsulated products. It uses a continuous belt design in a controlled vacuum-microwave environment with an eventual target of dehydrating several tonnes of material per hour. This low temperature technology is designed to provide a higher-

quality end product than what is currently achieved with spray drying or air drying.



Part of a quantaREV dryer at EnWave's test facility.

**powderREV** is designed to dehydrate a wide variety of materials including enzymes, probiotics and food cultures, pharmaceuticals, non-regulated biologicals and certain dry food products.

The technology is ideally suited to replace the expensive and time consuming process of tray freeze drying, which takes place in a high heat environment and damages sensitive organisms. Laboratory tests have shown that the potential benefits of powderREV over freeze drying include less capital cost due to faster dehydration times, smaller plant footprints, and lower energy and labor costs.

## Development Stage

**freezeREV** is designed to provide high-speed dehydration for live and active organisms in vials with the potential for significantly lowering operating costs compared with freeze drying. freezeREV is intended for products that must have a minimum moisture content in order to maximize their shelf-life. It is currently available as a multi-vial prototype for partner research and development.

In December 2011, EnWave signed a Research and Development agreement with **Merck**, one of the world's leading pharmaceutical, chemical and life science companies. Under the terms of the 10-year agreement, both parties established a work plan for the production of a specifically designed non-GMP freezeREV dryer. Merck should bear all the costs associated with this process.

The idea was to evaluate EnWave's REV technology as a viable replacement for lyophilization in the pharmaceutical industry. More specifically, the developmental work and testing has focused on the potential of dehydrating several vaccinations.

Unlike lyophilization, freezeREV employs a combination of microwave energy with a low-pressure environment to achieve rapid, highly controlled dehydration of live, or active, biological materials.

Tests conducted on a lab-scale freezeREV show that processing times are far less than with lyophilization, which dramatically reduces costs. In addition, the footprint of a freezeREV machine is sizably smaller than a lyophilizer. And finally, third party tests show no key differences between freezeREV and lyophilized products.

**Test results with freezeREV have been very encouraging, prompting the manufacture of a scaled-up REV machine for continued development and product testing. Although it will take some more time to develop and commercialize freezeREV, the agreement with Merck provides revenues for EnWave as the machine and technology is further developed.**

## Expanding Patent Portfolio

EnWave holds numerous patents that protect both its REV technology and specific methods of use. Because the Company's technology continues to be developed, new innovations are made. As such, its intellectual property portfolio continually expands.

The past two years, the Company received no less than 43 new patents that protect its technology and processes.

Earlier this year, for example, it filed a patent application claim for a method to make dried puffed dehydrated food products that are starch-based. The patent application covers the production of vacuum-microwave dried formulations that combine a starch with either fruit purees, vegetable purees, meat emulsions, dairy products and/or any other food material.

When a starch component is mixed with a liquid or slurry food product, it gives the product enough structure so that when it's REV dried it becomes very porous and crunchy. EnWave already developed many different formulations in this category so that for example, yoghurt can be dried and shaped into attractive forms.

**This opens the door to unique snacking innovations that aren't available yet. As it's in the process of being patented, we wouldn't be surprised if EnWave is already in contact with potential partners to start producing these snacks in a completely new product category.**

These patents are an essential part of EnWave's licensing-royalty business, because each time a new patent is granted, the royalty stream timeline extends twenty years from the patent's filing date.

## THE MARKET

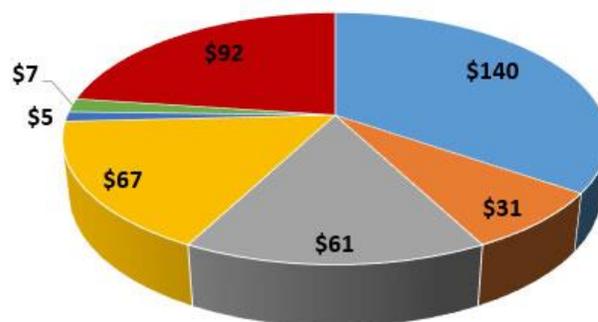
EnWave targets both the drying equipment market and dried products market, where it partners with companies that dehydrate their products.

Radiant Energy Vacuum technology allows EnWave's commercial partners to capitalize on the following important global food processing market trends:

- ❑ **Snackification** – Snacks now account for one of every five 'eating occasions', driving the demand for shelf-stable, healthy grab-and-go food choices. REV technology allows for the development of many new innovative snacking options;
- ❑ **Naturally functional** – Global consumer trends are placing increased importance on the inherent nutritional properties and the subsequent health claims of the foods they are consuming. REV allows food processing companies to retain high nutritional value;
- ❑ **Protein** – Powered by the 'naturally functional' trend, consumers are looking for protein rich snack options in new forms. REV is being used by several partners to produce protein rich products in the dairy, meat and pulse crop industries; and

- ❑ **Dairy 2.0** – Companies are looking to make the most of dairy's natural advantages and deliver new innovative products that coincide with the three other market trends listed above.

The total market size for freeze drying equipment is estimated at \$16 billion and is expected to reach \$35 billion by 2020. Especially the food processing and pharmaceutical industries are expected to continue to drive demand for freeze drying equipment. While food processing is the largest segment with about 35% of the market, biotechnology is expected to be the fastest grower the following years.



- Fruit, vegetables, herbs, ...
- Coffee
- Probiotics
- Biopharmaceuticals
- Non-Regulated biologics
- Enzymes
- Other

**The global dried products market (figures in billion USD).**

The worldwide market size for dried products is estimated at an astonishing \$400 billion. The largest segment, estimated at \$140 billion, is the food industry, which includes dried fruits, vegetables, meats, etc. The biopharmaceuticals segment comes in second with a \$67 billion market share, closely followed by probiotics, food cultures and enzymes, that generates \$61 billion annually. The dried beverage market, primarily made up of coffee and milk, is estimated at \$31 billion.

EnWave intends to develop the market for REV technology by selectively collaborating with strategic partners focused on reducing processing costs and creating new or improved product opportunities.

## GROWTH DRIVERS

While EnWave's dehydration technology has plenty of applications, it's clearly excelling in a number of sectors such as fruits, vegetables, meats and dairy products.

### Ninth Commercial License Signed in Dairy Snack Space

By far the most successful REV dried cheese snack on the market today is Moon Cheese, as it's available at every Starbucks in North America and at thousands of retail stores in Canada and the United States.

Attracted by this significant success, other food companies worldwide are sensing an opportunity and have closed commercial agreements with EnWave to produce similar snacks. Typically, EnWave receives a 5% royalty on all cheese snack sales.

The companies below have all signed a commercial agreement with EnWave to produce a REV dried dairy product. It is also stated for which country or region the companies obtained an exclusive license.

- ❑ **NutraDried LLP** for the United States;
- ❑ **Umland LLC** for high kosher products in the United States. Production and distribution of the snacks has commenced;
- ❑ **Gay Lea Foods** for Canada. It started up a 100kW nutraREV machine to expand the production of its 'Nothing But Cheese' snack product;
- ❑ **Lake Blue Spa** for Chile. Commercial production of its INTAKT cheese snacks has recently started. The dried cheese products are available in four flavors: Original Gouda, Spicy Gouda, Oregano Gouda, and Mediterranean Mix;
- ❑ **Dominant Slice** for Portugal and Spain. It recently launched a dried cheese product, coined B!t Cheese;
- ❑ **Agricola Industrial La Lydia SA** for Central America. It has received a 10kW nutraREV unit. Initial commercial sales are imminent;
- ❑ **Ereğli Agrosan** for Turkey. The license actually grants the company the exclusive right to process a variety of fruit, vegetable and cheese products. One 2kW

and two 10kW REV machines are up and running at Ereğli Agrosan's facility. In addition, the company ordered a 100kW machine, which is scheduled for installation during the coming summer. Ereğli's dried cheese product has entered the market and is being sold B2B in central Asian markets;

- ❑ **Kesito LLC** for Greece. A 10kW commercial REV machine was installed late 2016, which allowed Kesito to complete product development and enter the European market with a high-quality, shelf-stable dried cheese snack product: and
- ❑ **Ashgrove Cheese** for Tasmania. Ashgrove recently submitted a purchase order for a 10kW commercial REV machine to initiate production.

In addition, EnWave has signed a TELOA with a number of other dairy companies. Last year in August, for example, EnWave closed an agreement with the Mexican food processor **New Products R&D de C.V. (NPRD)**. The agreement gives NPRD, during eight months, the exclusive right to use EnWave's REV dehydration technology to develop dried cheese products for the Mexican market. An active dialog is ongoing with the Mexican company, which will hopefully result in a commercial agreement.

Also, in December 2016, EnWave signed a Technology Evaluation and License Option Agreement with **a major European dairy processor**. The dairy company leased a 10kW REV machine, which was installed at its facilities early 2017. Apparently significant product development has already taken place and progress continues to be made.

**We're convinced more cheese snack agreements for other territories will be signed, as the snacks are an obvious success and food companies worldwide are eager to launch new innovative products.**

### EnWave Excels In Dried Fruits Market

A growing number of fruit processors have signed either an evaluation or commercial agreement with EnWave, indicating that this

is another strong market segment for the Company's applications.

EnWave has a royalty-bearing commercial license with these fruit related companies:

▣ **Natural Nutrition Limited d.b.a. Nanuva Ingredients**, a Chilean fruit processor, that has positioned itself as a leading provider of 100% natural (with no additives) dried fruits with colours, shapes, flavours and nutrients very similar to those of fresh fruit. These healthy ingredients are used in the snack food, functional food, nutraceutical and cosmetics industry. Because of strong worldwide demand, the fruit processor ordered a third 10kW dryer from EnWave in January 2017. The initial two REV machines are running at full capacity, producing about 25 pounds of finished product per hour;

▣ **Milne Fruit Products** entered the REV-dried fruits market a couple of years ago, positioning MicroDried products - all-natural fruit pieces and powders - as pure, healthy alternatives to sugar-infused offerings. Milne's MicroDried products have been gaining traction with a growing network of customers. As a matter of fact, Milne recently placed an order for a 120kW quantaREV to expand its processing capacity. Machine construction has started and it is expected to be installed in 2017. Judging by the new machine purchase order, Milne clearly expects to ramp up its sales;

▣ Next to dried cheese (see above), **Agricola Industrial La Lydia** is also very active in the dried fruits space. In fact, we understand that the Costa Rican company will launch dried pineapple products first. La Lydia is a global leader in producing and exporting golden pineapples under the brands YAZ and SWITI. The original agreement between EnWave and La Lydia stipulates that in order for the latter to retain its geographic and product exclusivity, it has to submit a purchase order for a 100kW, or more, REV machine within one year of the start-up of the initial 10kW commercial unit. Knowing that the initial unit was installed in the summer of 2016, we could see another purchase order from La Lydia for a 100kW machine very shortly; and

▣ **Van Dyk Specialty Products Ltd.**, a major Canadian producer of wild blueberry products, that is best known for its highly successful blueberry juice, is focused on providing the market with high-quality REV dried blueberry products. Consequently, the company has purchased a large-scale 60kW nutraREV dryer from EnWave, which is scheduled for installation in the second half of 2017. As Van Dyk has a high level of experience in the food industry, with plenty of distribution relationships throughout North America, Europe and Asia, we wouldn't be surprised if the initial distribution for their dried blueberries has already been established.



**Agricola Industrial La Lydia will soon launch a dried pineapple product.**

In addition, EnWave has signed a TELOA with the following fruit companies:

▣ **Ocean Spray Cranberries Inc.** is an agricultural cooperative owned by more than 700 cranberry growers in North America. The company is very actively testing market dried cranberries. A commercial license may be signed shortly

▣ **Sun-Maid Growers of California** is a cooperative, owned by family farmers who grow raisin grapes all located within 100 miles of each other in the Great Central Valley of California. The cooperative is doing specific product development work at the moment;

▣ **California Grape Co** is a California based grape producer that has the right to evaluate EnWave's REV technology to develop dehydrated crispy grape snacks. Intensified test work is ongoing. In fact, a commercial decision could be made in the near future; and

■ A major American pulse crop processor recently entered into a TELOA after it thoroughly conducted product-focused application trials at EnWave's pilot plant facilities in 2016. The company has rented a 10kW REV dryer for further product development work at its own facilities. It has a maximum of six months to enter into a commercial agreement.

## Growing in Important Vegetable Sector

In January 2016, **Bonduelle**, the world's leading processed vegetable producer launched a new category of frozen vegetables called InFlavor. The new exclusive InFlavor dehydration and preparation process uses EnWave's vacuum-microwave drying technology.

InFlavor vegetables are initially prepared the same way as all other Bonduelle processed vegetables: they are optimally washed, cut, and blanched. Then comes the key part of the InFlavor process, partial vacuum microwave drying. The vegetables are heated and partially dried at a low temperature for several minutes by EnWave's 120kW commercial quantaREV machine. This eliminates some of the water that vegetables contain and limits water release during preparation.



**InFlavor vegetables offer all the convenience of frozen products, but with a texture and taste that is unmatched.**

It truly separates InFlavor from all other frozen vegetables. Because the more water vegetables contain, the more ice crystals are formed during the freezing process, which damages their cellular structure. This

phenomenon affects the texture and taste of vegetables, and is also responsible for the water that is released during the preparation.

Bonduelle first launched InFlavor to its B2B customers in North America. In addition, it also has an eye on the European market, so this could potentially be a very exciting evolution. In fact, late 2016, Bonduelle contracted EnWave to double the production capacity of its existing 120kW dryer. The upgrade had to be scheduled to coincide with the sporadic availability of the machine because Bonduelle has been running it very much.

Bonduelle pays a production-based royalty between 3% and 5% on a quarterly basis and a monthly lease for the use of the EnWave machinery.

**Brent Charleton, the Senior Vice President, Business Development for EnWave, recently commented in a Smallcaps Investment Research interview, "If it proceeds as we hope, then Bonduelle could potentially become a multiple REV machine company."**

And earlier this year **Merom Farms**, an agricultural and food production company, announced that it is going to start selling wasabi-based products in Canada and the United States.

### WASABI AS A MEDICINE

Wasabi Japonica is a perennial herb which has been grown in Japan for many centuries. It is a member of the cruciferous vegetable family, such as broccoli, Brussels sprouts, kale, cauliflower, cabbage and watercress.

Cruciferous vegetables are one of the most studied food groups with over 600 studies completed to date. These studies have shown that the consumption of cruciferous vegetables protect against cancer more effectively than the total intake of fruits and vegetables.

The dried, powdered and encapsulated wasabi is specifically designed for the natural health

supplement market and will soon be available under the "Your Wasabi" brand name.

Your Wasabi holds the ONLY license issued by Health Canada to produce wasabi capsules in Canada.

EnWave will receive a 5% royalty on the wholesale price of all wasabi products sold by Merom. Knowing that wasabi is a high-value product that can cost more than \$25 per ounce, it's clear this could become another lucrative royalty stream for EnWave.

### Meat Snack Producers - Another Pillar of EnWave's Success

In addition to dairy, fruits and vegetables, meat is another pillar of EnWave's success.

The intention of most of these meat companies is to develop crispy meat snacks. Although similar snacks are already being produced with non-REV technology, the texture and taste of most meat chips is poor because they are either air dried or baked.

In the meat category, EnWave has signed a royalty-bearing agreement with the following two companies:

- ❑ **Hormel Foods Corporation**, is a \$15 billion dollar company known for its numerous meat and food products. In addition to a 100kW dryer, Hormel purchased a 2kW REV machine for product development and a 10kW REV machine for market studies. This indicates that Hormel is eager to develop and test new products with EnWave's technology.
- ❑ **Perdue Farms**, a leading food and agricultural products company, ordered a 10kW REV dryer in July 2016 to process pet food and pet treats in the United States and Canada. The initial TELOA with Perdue was signed in April 2015, after which R&D work commenced on a smaller scale REV unit. Because Perdue ordered a larger 10kW REV dryer, we're convinced that market tests went very well. In fact, we wouldn't be surprised if they already had some distribution lined up.

Moreover, EnWave has engaged in technology evaluation relationships with several other major meat and protein processors such as:

- ❑ **Jack Link's**, the number one meat snack manufacturer worldwide, extended its Technology Evaluation and License Option Agreement, as it continues to see tremendous promise in the REV technology;
- ❑ **Campofrio Food Group**, Europe's leader in the processed meats sector is conducting product development work using the REV dehydration technology. The company intends to create a number of new, healthy dried meat products for potential commercialization; and
- ❑ Another **major European meat processor** started conducting product development trials at EnWave's facilities in February 2017. After a thorough evaluation of the end products, signing a commercial license may be the next step.

EnWave is in active negotiations with many more companies in this sector in various parts of the world. So we'll undoubtedly continue to see more news with developments in the meat area.

### Pharmaceutical Technology

### Dehydration

A fifth pillar of EnWave's success is pharmaceutical applications. The commercialization of both powderREV and freezeREV technology platforms continues to progress, with EnWave advancing the design and manufacture of scaled-up versions of each platform for its two pharmaceutical partners Merck and Sutro Biopharma.

The powderREV and freezeREV machines have been designed to be constructed in accordance with Good Manufacturing Practices (GMP) standards, and GMP certification will be pursued. Installation and start-up of these machines is planned for 2017.

If the installation of the powderREV and freezeREV platforms in the pharmaceutical sector yields superior performance to incumbent dehydration technologies, it will

solidify EnWave's value proposition with potential new partners in the pharmaceutical industry.

As for **Merck**, EnWave is in the process of completing machinery design. The goal is to deliver the machine in 2018.

#### **GOOD MANUFACTURING PRACTICES (GMP)**

Good Manufacturing Practices (GMP) are the practices required in order to conform to guidelines for manufacture and sale of food, drug products, and active pharmaceutical products. These guidelines provide minimum requirements that a pharmaceutical or food products manufacturer must meet to assure that the products are of high quality and don't pose any risk to the consumer or public.

Good manufacturing practices, along with good laboratory practices and good clinical practices, are overseen by regulatory agencies in the United States, Canada, Europe, China, and other countries.

The powderREV machine for **Sutro Biopharma**, a pharmaceutical company based in San Francisco, is scheduled to be finished first.

If this REV machine is successful with the production of Sutro's products, the company will immediately go into commercial production, as their ingredient does not require FDA approval. In that scenario, Sutro Biopharma would pay EnWave a royalty based on the production of its pharmaceutical ingredient.

**Commenting on this upcoming event in an interview with Smallcaps Investment Research, Brent Charleton said, "I think that the Sutro Biopharma relationship could be the "dark horse" in our investment case. If successful, their throughput capacity will press the need for additional machinery. I think that this is an area that could surprise a lot of people."**

## **Opening the Seafood Category**

EnWave recently opened another category as it signed a TELOA with **Born Wild LLC**, a seafood processor located in the United States. Born Wild serves the global seafood market with processing capabilities and sourcing from Alaska, through Canada, Washington, Oregon, and northern California. It is led by several individuals with vast seafood processing experience.

Born Wild will collaborate with EnWave's product development team at the Company's pilot plant facility to develop several unique seafood snack products for human consumption. Noteworthy is that EnWave's food science group has already conducted quite a lot of product development work in the dried seafood snack space.

Born Wild has a term of seven months to exercise its option to license the use of REV dehydration technology.

## **RECENT EVENTS**

### **EnWave and US Army Jointly Develop Food Rations**

Earlier this week, EnWave entered into a contract with the US Army Natick Soldier R&D Center to jointly develop phytonutrient-rich field rations aimed to improve soldier success.

#### **PHYTONUTRIENTS**

Fruits and vegetables contain thousands of natural chemicals. These are called phytonutrients or phytochemicals. "Phyto" refers to the Greek word for plant. These chemicals help protect plants from germs, fungi, bugs, and other threats. When humans eat or drink phytonutrients, they also help prevent disease and keep the body working properly.

Work will start immediately at EnWave's pilot plant facility with a goal to develop low weight, high quality food bars for US Army soldiers. These products are intended to have quick rehydration potential and will be

designed for transportability and easy consumption.

**We understand that things could move very quickly. If EnWave is able to reach a commercial agreement with the US Army, it would be a huge opportunity to provide nutritious food rations for the hundreds of thousands of soldiers in active duty.**



**EnWave and the US Army intend to develop low weight, high quality, nutritious food rations using REV drying technology.**

The collaboration with the US Army to evaluate the use of REV technology for the development of food ration products has been ongoing for quite some time.

In July 2016, Dr. Tom Yang, a food technologist at the U.S. Army Combat Feeding Directorate, gave a presentation at the Institute of Food Technologists (IFT) show in Chicago in which he touted the use of EnWave's nutraREV technology to produce U.S. soldiers' ration.

He was quoted saying, "Our Soldiers deserve the best. They are under a lot of stress and they need to be well fed. Their physical and mental state needs to be in top shape. We are hoping to get a vacuum microwave unit so that we can use it as a tool to try out many ingredients and recipes that we know soldiers would like to have."

### **EnWave Significantly Expands Presence in Australasian Market**

After signing a couple of TELOAs in Australia last year, EnWave closed its first commercial royalty-bearing license down under in May 2017.

The Company entered into an agreement with Ashgrove Cheese, a diversified Australian dairy processor. The license grants Ashgrove the exclusive right to use EnWave's Radiant Energy Vacuum (REV) technology to process cheese products in the State of Tasmania, with a goal to produce dried cheese products similar to EnWave's Moon Cheese snacks.

In exchange for this exclusivity, Ashgrove has agreed to pay EnWave a 5% royalty on the wholesale price of all REV-dried products sold. Moreover, Ashgrove also submitted a purchase order for EnWave to deliver a 10kW commercial REV machine to initiate production.

The relationship between EnWave and Ashgrove has evolved over the past 18 months. During that time, part of the Ashgrove team visited the EnWave facility in Vancouver to conduct test work. Later, the dairy company did plenty of due diligence work in its target markets to ensure that it had a tangible business opportunity in its hands. All satisfied with those results, Ashgrove decided to proceed with a license and purchase order for a REV machine.

Another very interesting fact about the agreement is that if Ashgrove submits a purchase order for a 100kW or larger REV machine within a year, the exclusive processing territory prescribed in the license will expand to the country of Australia.



**The agreement with Ashgrove is EnWave's twentieth commercial royalty-bearing license and the first one in the Australian market.**

**Ashgrove is another high-quality partner for EnWave that's dedicated to bringing a REV dried product to the market. The dairy company has already been in business for many decades and has established excellent distribution of its products both domestically and abroad.**

### THE AUSTRALIAN DAIRY INDUSTRY

Australian dairy is a \$13 billion farming, manufacturing and export industry, making it one of the country's leading rural industries, along with meat and wheat.

Over 6,000 Australian dairy farmers produce around 9.7 billion litres of milk a year, of which nearly half is exported. This makes Australia the third largest exporter of milk behind the EU and New Zealand. The country accounts for 10% of the global export market. Australia's major export destinations by value are Japan, Singapore, China, Indonesia and Malaysia.

The Australian dairy industry directly employs nearly 40,000 Australians on farms and in factories, while more than 100,000 Australians are indirectly employed in related service industries.

Next to the agreement with Ashgrove, EnWave also signed a TELOA with another major Australasian dairy processor to explore the potential for dried dairy applications using the REV dehydration technology. The dairy company has the exclusive option to license the use of REV technology for the production of dairy products within an agreed Australasian territory for a period of six months.

And just a few days ago, EnWave signed another TELOA. This time with a leading Australian spice company. A 10kW REV machine is scheduled to be installed late summer at the company's facilities in Australia. It will rent the unit for up to nine months. REV has been shown to significantly improve the retention of natural flavors, pigments and nutrient retention in spice and herb processing, which are key advantages and product differentiation in this competitive market vertical.

Note that EnWave typically allows companies relatively short research periods. This strategy forces companies to continually move the process forward. If a decision to sign a commercial agreement isn't reached within that time frame EnWave has the option to

grant another company exclusivity in that territory.

### EnWave Signs Royalty Bearing Agreement With US Healthy Snack Food Company

Late March 2017, EnWave signed a Commercial Royalty-bearing License with Bare Foods Co., a leading US healthy snack food company.

The past few months Bare Foods conducted extensive test work at EnWave's facility in Vancouver. Convinced of the merits of EnWave's technology, Bare entered into the License and will potentially purchase a smaller scale commercial Radiant Energy Vacuum (REV) machine. If that's the case, the dryer may potentially be delivered later this year, to initiate first commercial production late 2017.

Bare Foods Co. produces fruit snacks under the Bare Snacks brand name. The company was founded in 2001 with the goal to create simple, real-food snacks. Today, Bare Foods is based in San Francisco, California and produces baked fruit chips, including apple chips, coconut chips, and banana chips.



**Made with real, fresh-picked fruit that is sliced and baked to crunchy perfection rather than fried, bare snacks are a tasty and healthier alternative to traditional chips.**

Bare Foods is the creator of the delicious *Snacks Gone Simple* product line. The snacks are available in the U.S. market in natural and grocery stores including Whole Foods Market, Sprouts, Safeway, and Publix as well as national retailers such as Target and Amazon.

## FINANCIALS

EnWave earns revenue from two business segments: EnWave Canada and NutraDried. EnWave Canada generates revenue from the sale of REV machinery to royalty partners, rental revenue from short term rentals of REV machinery to prospective royalty partners, and royalties earned from royalty partners. NutraDried generates revenue from the sale of Moon Cheese to retail and wholesale distribution channels.

EnWave Canada had revenue of \$5.0 million for the six months ended March 31, 2017 as compared to \$4.1 million for the six months ended March 31, 2016, an increase of \$923,000. EnWave Canada had revenue of \$2.8 million for the three months ended March 31, 2017 as compared to \$2.7 million for the three months ended March 31, 2016, an increase of \$93,000. EnWave Canada's revenue growth is due to increased commercial REV equipment sale and construction activity. During the second quarter, revenue was generated from commercial equipment sale contracts with Ereğli Agrosan, Sutro Biopharma, Van Dyk Specialty Products, among others.

Amounts in \$000's	03/31/17	03/31/16
EnWave Canada Sales	2,844	2,744
NutraDried Sales	1,339	1,842
<b>Total Sales</b>	<b>4,183</b>	<b>4,586</b>
Cost of Goods Sold	3,155	2,911
<b>Gross Profit</b>	<b>1,028</b>	<b>1,675</b>
Expenses	1,807	1,580
<b>Net Profit (Loss)</b>	<b>(779)</b>	<b>9</b>
Diluted Shares Outs.	90,791	90,773
Diluted EPS	(0.01)	0.00
<b>Selected income statement data for the second quarters ended March 31, 2017 and March 31, 2016. Source: Company Filings</b>		

EnWave Canada earned royalties of \$199,000 during the six months ended March 31, 2017 as compared to \$111,000 for the six months ended March 31, 2016. EnWave Canada earned royalties of \$77,000 during the three months ended March 31, 2017 as compared to \$63,000 for the three months ended March 31, 2016.

Revenues from NutraDried were \$2.7 million for the six months ended March 31, 2017 as compared to \$3.1 million for the six months ended March 31, 2016. Revenues from NutraDried were \$1.3 million for the three months ended March 31, 2017 as compared to \$1.8 million for the three months ended March 31, 2016.

NutraDried reported net income of \$92,000 in the second quarter of 2017 as compared to net income of \$159,000 in the second quarter of 2016. The decrease in revenues partially was offset by an increase in the gross margin on Moon Cheese products sold directly to customers, whereas under the previous Master Distribution Agreement product was sold through Spire Brands.

For the second quarter of 2017, ended March 31, 2017, EnWave reported a net loss of approximately \$779,000, while a small profit of \$9,000 was recorded in the same quarter last year. Two non-cash items however were included in the consolidated net loss of the past quarter, a stock based compensation expense of \$339,000 and amortization expense related to intangible assets of \$220,000.

Noteworthy is that direct costs for the six months ended March 31, 2017 increased by almost \$1.2 million, or 25%, compared to the six months ended March 31, 2016. The increase was driven by the increase in commercial machine sales from EnWave Canada.

### Balance Sheet As Of March 31, 2017

A few items on the balance sheet stand out. First, "Due from customers on contract" at March 31, 2017 was close to \$3.0 million compared to \$578,000 on March 31, 2016. The amounts due from customers on contract

are billed and collected when project specific milestones are reached on each project.

Inventories, which include completed machines and machine components, was \$2.4 million at March 31, 2017 as compared with \$2.2 million at March 31, 2016. EnWave Canada has increased inventory to accommodate the increased sales activity related to commercial machine orders.

Amounts in \$000's	03/31/17	03/31/16
Cash and Cash Eq.	2,769	5,849
Restricted Cash	250	1,530
Trade Receivable	954	740
Due From Customers Under Contract	2,988	578
Inventories	2,396	2,167
<b>Total Current Assets</b>	<b>9,832</b>	<b>11,012</b>
Plant and Equipment	3,239	3,795
<b>Total Assets</b>	<b>14,430</b>	<b>17,159</b>
Trade and Other Payables	1,937	1,494
<b>Total Current Liabilities</b>	<b>3,073</b>	<b>3,339</b>
Long Term Debt	131	514
<b>Total Liabilities</b>	<b>3,204</b>	<b>3,853</b>
Total Stockholder Equity	11,226	13,306
<b>Selected balance sheet data on March 31, 2017 and March 31, 2016. Source: Company Filings</b>		

## OUTLOOK & VALUATION

In the past, food processing companies had to choose between minimizing their drying costs or producing premium dried products. With EnWave’s REV technology, companies no longer have to choose, as they’re able to produce high-value dried products at a much lower cost. The main goals of using REV technology are to shorten processing times, reduce operational costs and to produce higher-value products than previously achievable via alternative processing technologies with similar economics.

As EnWave’s unique dehydration technology is becoming widely known, companies recognize its potential. The food industry is extremely competitive and producers are constantly looking to make the difference. For the first time in many years a brand new dehydration technology has entered the market, which is

faster and cheaper than freeze drying, and has better end product quality than air drying or spray drying.

An increasing number of food and biopharmaceutical companies are realizing that REV is the way to go if they want to maintain their competitive advantage. EnWave’s business model allows for territorial exclusivity, therefore it is simply a matter of signing an agreement first before a competitor snatches away the rights for a certain country or product.

EnWave continues to make outstanding progress with its royalty partners by receiving purchase orders for additional REV machinery. No less than 14 REV machines are currently under construction for companies such as Ereğli Agrosan, Van Dyk Specialty Products, Merck and Sutro Biopharma.

The Company is also advancing several prospective royalty partners that are conducting initial testing and product development under Technology Evaluation and License Option Agreements.

We’re confident that Moon Cheese sales in the following quarters will pick up. It’s clear that Slant is doing an excellent job, as it has expanded distribution of Moon Cheese to three major chains in just a few months. We’re hopeful that more distribution agreements are in the pipeline. Moreover, NutraDried is working to launch other snacks.

To date, EnWave has entered into twenty royalty-bearing commercial licenses with major food processing and pharmaceutical companies. It’s fair to say that the Company is uniquely positioned from an investment case perspective in that it offers the opportunity for exposure to a diverse portfolio of royalty streams.

**All of this should potentially help the Company reach being cash flow positive in the second half of fiscal year 2017.**

### Valuation

EnWave’s technology works and is validated by many commercial agreements. The

dehydration market is large and spread over many different sectors.

Given the still emerging nature of EnWave's earnings, a multiple-based valuation is challenging. Instead, we apply a Discounted Cash Flow (DCF) model.

Based on our estimate of 101 million shares outstanding, the intrinsic value of EnWave's shares derived from our model is \$3.49, about equal compared to our previous report.

**We reiterate our buy recommendation for EnWave Corp. with a price target of \$3.49, which is 232% above today's stock price.**

## SHARE DATA & OWNERSHIP

As of May 25, 2017, EnWave had approximately 90.8 million common shares outstanding. In addition, the Company had 3.125 million warrants outstanding with an exercise price of \$1.20 and 225,000 agent's warrants with an exercise price of \$0.80. Each warrant entitles the holder to purchase one common share of the Company until October 22, 2020 and October 22, 2017 respectively.

Finally, EnWave has a little over 6.9 million stock options outstanding with a weighted average exercise price of \$1.15. Each stock option entitles its holder to purchase one common share of the Company.

The principal owners of the Company's common stock are DJE Investment (5.47%), Manulife Asset Management (2.75%), Kimelman & Baird (1.48%), and Petercam S.A. (0.55%).

## MANAGEMENT

### ▣ DR. TIM DURANCE - PRESIDENT & CEO, DIRECTOR

One of the founders of EnWave, Dr. Durance has 35+ years' experience in the processed food industry and is the co-inventor of the

Company's REV technology. Dr. Durance received his Ph.D. and M.Sc. in Food Science from UBC, as well as a B.Sc. in Microbiology from the University of Guelph and a B.A. in Anthropology from the University of Waterloo. He's the author of more than 75 peer-reviewed scientific publications, 16 patents, and numerous book chapters, scientific presentations, and invited lectures on technology and food processing. As EnWave's President & Co, his responsibilities include research and development related to all of the REV technologies, as well as ongoing intellectual property development.

### ▣ MR. JOHN P.A. BUDRESKI - EXECUTIVE CHAIRMAN

Mr. Budreski has over 30 years of extensive capital markets and executive management experience. He was formerly a Vice Chairman of Cormark Securities Inc. from 2009 to 2012 and President and CEO of Orion Securities Inc. from 2005 to 2007, prior to its successful sale to Macquarie Bank. He has filled the roles of a Managing Director of Equity Capital Markets and Head of Investment Banking for Scotia Capital Inc. from March 1998 to February 2005 after starting out as a Managing Director of US Institutional Equity Group for Scotia Capital. He also held senior roles in investment banking and equity sales and trading for RBC Dominion Securities.

### ▣ MR. DANIEL HENRIQUES - CFO

Mr. Henriques is a Chartered Accountant and brings extensive experience in finance effectiveness and financial reporting to his role at EnWave. Prior to joining EnWave, Mr. Henriques was a manager in the Assurance group at PricewaterhouseCoopers LLP, and supported numerous mid-market companies, including companies listed on the Toronto Stock Exchange, TSX Venture Exchange and the New York Stock Exchange, with financial reporting and compliance. While at PwC, Mr. Henriques provided clients in the manufacturing and technology sectors professional services in the areas of financial audits, financial reporting and tax.

## ANNUAL INCOME STATEMENT FY 2014 – 6M 2017

All numbers in thousands

PERIOD ENDING	FY 2014	FY 2015*	FY 2016	6M 2017
<b>Total Revenue</b>	<b>4,554</b>	<b>5,868</b>	<b>14,933</b>	<b>7,650</b>
Cost of Revenue	3,976	4,689	10,383	5,838
	<b>578</b>	<b>1,179</b>	<b>4,550</b>	<b>1,812</b>
<b>Expenses</b>				
Administrative	2,117	2,089	1,989	1,058
Sales & Marketing	1,165	719	793	701
R&D	1,591	1,386	1,656	591
Amortization Intangible Assets	1,432	1,420	1,222	474
Stock-based Compensation	608	261	399	361
<b>Net Loss Applicable To Common Shares</b>	<b>\$6,706</b>	<b>\$4,993</b>	<b>\$1,837</b>	<b>\$1,397</b>

**Annual Income Statement FY 2014 – 6M 2017. Source: Company Filings**

\* Note that in the Fiscal Year 2015 column all revenues and expenses generated by Hans Binder Maschinenbau – a former subsidiary of EnWave - have been excluded, due to its insolvency on September 29, 2015.



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