

## EnWave Corporation (ENW)

January 11, 2020

EnWave Corporation offers industrial-scale dehydration technology for commercial applications in the food, cannabis, 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.

Longer term growth objectives for the Company will be powered by royalty-bearing commercial license agreements for REV technology. EnWave reported a total of 14 new royalty agreements in 2019. Several of these agreements have already expanded in scope, including additional REV machine sales. The NutraDried subsidiary also announced another purchase for a 120kW REV machine following the end of the quarter.

In particular, the rapid expansion for REV processing in the cannabis/hemp sector was a strong driver of growth. The importance of the sector was highlighted by the announcement of a strategic investment by Aurora Cannabis Inc. The deal advanced more than \$10 million in working capital to EnWave through a financing arrangement.

The REV rollout continues, with leverage to multiple sectors. Success has been achieved through individual corporate partnerships and for the production of specific product lines. New applications are currently being developed for REV technology even as sales from established partnerships continue to build. The outlook for additional growth is therefore very strong even after the breakout achieved during this record year of sales.



- Core operations for EnWave going forward will be bolstered by additional REV machine sales and improved margins. Meanwhile the steady growth in revenues continues from the stream of royalty payments due from partnership agreements. Anticipation of further gains in the cannabis sector, along with other rapid growth channels, will contribute towards achieving sustained profitability.
- NutraDried Foods is performing extremely well with a plan in place to secure the next phase of growth.



## THE COMPANY

EnWave Corporation is a Vancouver-based applied technology Company that works in partnership with food, cannabis, and pharmaceutical companies to develop commercial applications for its proprietary Radiant Energy Vacuum (REV) dehydration technology.

The key to the technology is the vacuum environment in which the drying process takes place. Thanks to the reduced atmospheric pressure, the temperature, at which the moisture is efficiently removed, can be lowered. This reduction of heat and oxidization minimizes the damage inflicted on the REV-dried products, preserving richer flavors, brighter colors and higher nutritional content versus other drying methods.

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.

So far, EnWave has signed thirty-six royalty-bearing licenses, with licensees using the REV technology for applications in the dairy,

seafood, spice & herb, fruit, cannabis, vegetable, and meat products verticals. Some of the Company's best-known customers include Pepsico (d.b.a. Bare Foods), Arla Foods, FrieslandCampina, Calbee, Bonduelle, Gay Lea Foods and Milne Fruits.

EnWave generates revenues from the following sources:

- ▣ REV machine sales and maintenance;
- ▣ Maintenance of the machines to ensure they are running properly and to replace and repair components subject to normal wear and tear from ongoing operations;
- ▣ Royalty streams from partners, which typically vary between 3% and 5% of sales (paid out quarterly), or a fee per kilogram of net production; and
- ▣ NutraDried, a 100% owned subsidiary, which sells healthy dried cheese snacks.

Late December, EnWave filed financial results for its fiscal year 2019, ended September 30. And what a year it was. Most of the data reported could be construed with positive implications for the future. When compared with results achieved in the previous quarter or year, a trend of improving financial strength is evident.

The Company reported record revenues for 2019 of \$42.8 million compared to \$22.8 million for 2018, an increase of \$20 million, 88%. Growth in revenues was attributable to expanded sales and distribution of Moon Cheese, as well as the highest ever number of REV machine sales.

Many investors choose to briefly scan the financial numbers however, and focus on the bottom line. EnWave reported a net loss for 2019 of close to \$2 million, compared to a net loss of \$0.9 million in 2018. As a result, the stock dipped close to 5% on the day the results were announced. The positive trend however is clear from a review of the other salient information in the report.

The reasons for the higher loss are really straightforward. First, it is very common for an emerging technology company to post losses during the early phases of a product rollout. **The restructuring of the NutraDried Food Company subsidiary** has

probably been the most significant corporate development during the past fiscal year. A priority was placed on attracting strong personnel to lead marketing and product development. This included the recruitment of a Chief Marketing Officer and Senior Vice-President of Sales. Regional full-time sales positions were also filled.

In addition, improved branding and promotional events were geared towards building market share for the Moon Cheese line. Greater emphasis on product distribution enabled a wider reach to high-volume retailers and expansion across a wider territorial range. This in turn led to faster sales growth for the popular cheese snack.

Of note, much of the cost burden for this transformation has been accounted for in the recently completed fourth quarter. However, gains in sales will be realized in 2020 and beyond.



**Moon Cheese in 2019 introduced new world-class packaging design, new names for existing varieties and the debut of two new varieties.**

Next to additional costs for NutraDried, the increased overall loss was also related to **the investment to scale up production capacity** so that the Company could deliver on the rapid flow of new orders achieved by the sales team.

During the past fiscal year, the combined production capacity of sold REV units more than tripled compared with 2018. Each REV unit sold contributes high margin royalty growth in the future.

### NutraDried LLP

NutraDried LLP develops, manufactures, markets and sells 100% all-natural cheese snacks under the Moon Cheese brand.

NutraDried produces Moon Cheese in cheddar, gouda, bacon cheddar, pepper jack, and garlic parmesan flavors at its manufacturing facility in Ferndale, Washington, and distributes it in over 25,000 retail locations across Canada and the United States. Notable retail points of distribution include Starbucks, Costco, Whole Foods, Target, Rite Aid, CVS, Safeway, Loblaws, and Save-On-Foods.

Moon Cheese sales have experienced a powerful growth the past couple of years. Royalties from NutraDried to EnWave in fiscal year 2018 were \$821,000, while they reached \$1,830,000 in fiscal year 2019.

Last year, NutraDried was restructured to operate as an independent subsidiary. This involved appointing a new CEO to run the business unit. A dedicated team of sales personnel was also recruited. New flavors for the product line were launched, and an expansion of the distribution network is underway to include wider coverage in grocery stores. More focused promotional and marketing programs are planned.

NutraDried currently uses two 100kW nutraREV machines and is slated to start-up a third 120kW nutraREV machine in mid-2020.

## TECHNOLOGY

Before EnWave launched its Radiant Energy Vacuum technology, food processing companies were limited to opt for either 'freeze drying', which provides great 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 comparable 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.

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<br>Superior Flavor<br>High Nutritional Retention  | High Nutritional Retention                       | Heat & Oxygen Damages Color, Flavor, Nutrients and Texture |
| <b>Faster Process</b>   | Minutes or Hours<br>(1,5 hours for Blueberries)  | Hours or Days<br>(24 - 36 hours for Blueberries) | Hours<br>(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<br>High Energy Costs          | Low Capital Costs<br>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 USD\$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.

**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.

The idea is 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.

### 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.

**EnWave is driven to innovate and continuously commits resources to strengthen its intellectual property portfolio. Patents are truly the cornerstone for the Company's licensing-royalty business model, 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.

The total market size for freeze drying equipment is estimated 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, cannabis and biotechnology are expected to be the fastest growers the following years.

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.

## VERSATILE APPLICATIONS FOR REV

While EnWave's dehydration technology has plenty of applications, it's clearly excelling in a number of distinct sectors.

### Rapidly Expanding Dairy Space

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

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

Some of the companies with which EnWave has signed a commercial agreement to produce a REV dried cheese product are:

- ▣ **NutraDried LLP** for the United States.
- ▣ **Arla Foods**, the world's largest manufacturer of organic dairy products. Pursuant to the License, Arla submitted a purchase order to obtain a small commercial-scale Radiant Energy Vacuum machine to initiate production. The License grants Arla the exclusive right to use REV technology to process dairy products in Denmark, Sweden, Finland and Norway.
- ▣ Operating as a cooperative of more than 13,000 individual dairy farms based in Netherlands, Belgium, and Germany, **FrieslandCampina** represents the

collective interests of its membership of independent dairy farms, assisting with development, production and sale of dairy products throughout a broad-based European marketing area. In 2019, EnWave signed an agreement with FrieslandCampina that allows the latter to explore and evaluate the use of REV technology to create new dairy products.

- ❑ Early 2020, EnWave signed a commercial license with **Ballantyne Pty**, a leading Australian dairy company. The license grants Ballantyne the exclusive right to produce dairy products in Australia using the Company's REV technology (also see Recent Events).
- ❑ **Ashgrove Cheese** for Tasmania. Ashgrove purchased a 10kW commercial REV unit and launched a crunchy cheese snack under the brand name 'AmazeBalls' in January 2018. In September 2019, it purchased a second 10kW machines to fulfill increasing demand.
- ❑ **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, and is now building out commercial opportunities for the product line (also see Fruit Category below).
- ❑ **Agricola Industrial La Lydia SA (Pitalia)** for Central America. It has received two 10kW nutraREV units and has ordered a 100kW REV machine (also see Fruits Category below).
- ❑ **Ereğli Agrosan** for Turkey. The license actually grants the company the exclusive right to process a variety of fruit, vegetable and cheese products. Ereğli's dried cheese product has entered the market and is being sold B2B in central Asian markets and into Europe.

### 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, among others, these fruit related companies:

- ❑ **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 Fruit is one of EnWave's largest customers, as it has three 120kW machines in operation.
- ❑ **Calbee**, a multinational snack foods company based in Japan, signed a commercial agreement with Enwave in 2019. The emerging partnership with Calbee is of interest because it represents the first significant beachhead for EnWave within the important Japanese market place.
- ❑ **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, flavors and nutrients very similar to those of fresh fruit. These healthy ingredients are used in the snack food, functional food, nutraceutical and cosmetics industry;
- ❑ Next to dried cheese (see above), **Agricola Industrial La Lydia (Pitalia)** is also very active in the dried fruits space. In fact, La Lydia is a global leader in producing and exporting golden pineapples under the brands YAZ and SWITI. La Lydia formed a new business entity coined Pitalia specifically for the production of REV dried products. Pitalia sells pineapple, apple, mango and banana snack products through its Pure Joy brand in the European and South, Central and North American markets.
- ❑ **Dominant Slice**, a Portuguese snack company, signed a non-exclusive commercial royalty-bearing license with EnWave, granting Dominant Slice the right to use its existing REV machinery to produce pineapple, mango, banana, coconut and papaya fruit pieces in Portugal.

- ❑ **Fresh Business Consulting (FBC)**, first purchased a smaller REV unit in April of 2019 to dehydrate highly nutritious fruit and vegetable products in Peru for export to international markets. Moreover, in the last week of 2019, Fresh Business bought a 100kW nutraREV processing line to substantially increase its royalty-bearing production capacity. Installation and commissioning of the 100kW nutraREV processing line is targeted for the summer of 2020.
- ❑ **Pepsico (d.b.a. Bare Foods)** is the creator of delicious Snacks Gone Simple, including bare Apple Chips, Banana Chips, Coconut Chips, and new Beet Chips, Carrot Chips, and Sweet Potato Chips. Their snacks are sold in the United States, through grocery stores like Whole Foods Market, Sprouts, Safeway, and Publix as well as national retailers such as Target and Amazon. Bare has three 10kW REV machines in operation.



**Bare Foods has purchased three 10kW REV machines in nine months' time to keep up with demand.**

## Growing in Important Vegetable Sector

A few years ago Bonduelle, the world's leading processed vegetable producer, determined that the use of REV processing enabled a superior method to preserve vegetables such that they retained flavor and texture even after freezing. After a phase of testing and product development, Bonduelle opted to lease a 120kW QuantaREV machine and initiated commercial production of the InFlavor line of industrial food products. InFlavor was subsequently recognized with awards at food industry conferences and events.

As part of its lease agreement for a 120kW REV unit, EnWave granted exclusivity to Bonduelle for use of the technology in the North American market. Bonduelle pays the Company a royalty on all frozen vegetable sales from production using the REV machine.

More recently, Bonduelle launched its Arctic Garden brand, a similar line of frozen vegetables for retail consumers. Initial sales projections appear to be encouraging. Bonduelle has reported significant growth for both InFlavor and Arctic Garden product sales. With a much larger potential market, Bonduelle envisions expanding its REV processing capacity with a large 400kW REV machine to increase production output.

For now, the decision to move ahead with the purchase of a larger REV machine has been put on hold however. This delay has led to the conversion of the royalty license held by Bonduelle into a non-exclusive agreement. EnWave anticipates that a significant purchase order will be secured for a larger REV machine in the future nonetheless. The Bonduelle partnership remains an important corporate relationship.

The application for processing of frozen vegetables with REV technology continues to attract new enquiries from other interested companies. Discussions are currently underway with several companies that may step up to purchase REV machines and begin operating in North America.

## Cannabis / Hemp Application

Late August 2017, EnWave filed a new patent application for the simultaneous pasteurization and drying of cannabis using REV technology. These patent-pending methods expanded the application of EnWave's REV technology to the booming medical and recreational cannabis sector.

Medicinal cannabis is often used by chronically ill or immunocompromised patients, causing several countries with medicinal cannabis programs to employ strict standards regulating microbial contamination of herbal cannabis products in order to reduce the potential for opportunistic lung infections.

Ionizing radiation is currently the only method commonly employed to meet these medicinal cannabis microbial standards.



**In November 2019, EnWave signed a commercial license with a medical cannabidiol ("CBD") Company based in Switzerland. This License further validates REV technology in the hemp and cannabis space and acts as a foothold for further adoption of REV technology throughout continental Europe for the drying of medicinal-grade hemp.**

However, EnWave's patented technology pasteurizes and uniformly dries cannabis in its natural state, without any additives, in under one hour, dramatically shortening the time from harvest to marketable products and circumvents the need to transport medical cannabis to highly-specialized and expensive off-site decontamination facilities.

Another major advantage is that EnWave's continuous high-volume REV drying process also eliminates the need for large-scale in-house drying rooms and their associated potential for product loss due to mold growth during the traditional multi-day drying process.

Finally, a common method for the extraction of cannabinoids (essential oils) from the dried plants uses pressurized CO<sub>2</sub> as solvent. The challenge with this process however is that moisture levels in dried leaves often vary, which results in inconsistencies in the oils that are extracted. The goal with REV is to produce a much more homogenous raw material at a specific moisture level.

Since 2017, EnWave has targeted companies in jurisdictions where either medical or recreational use is legal.

EnWave currently has secured purchase orders for large-scale REV machines with

Aurora, Tilray and The Green Organic Dutchman, all large cannabis companies. EnWave has also signed commercial license agreements and secured purchases of 10kW REV machines with Glasshouse Botanics (Canada), Cann Group (Australia), a Swiss Medicinal Hemp Company (Switzerland), Electric Farms (Hemp - USA), and Helius Therapeutics (New Zealand). With these valued partnerships verifying the capabilities of the Company's patented technology, EnWave expects continued growth in the number of royalty-bearing commercial licenses and equipment purchase contracts in the cannabis/hemp space.

A significant portion of EnWave's machine sales in 2019 were generated from sales to the Canadian legalized cannabis sector. While the industry in Canada has grown significantly since the legalization of recreational cannabis on October 17, 2018, it is still in its early stages of maturation and is subject to many distribution and operational challenges.

### Pharmaceutical Dehydration Technology

A final pillar of EnWave's success is pharmaceutical applications.

In December 2011, EnWave signed a 10-year Research and Development agreement with **Merck**, one of the world's leading pharmaceutical, chemical and life science companies, in which Merck bears the costs associated with this process. Test results with a scaled-up freezeREV machine have been very encouraging.

The REV freeze drying technology for the pharmaceutical industry provides the capability for continuous processing such that individual dosage units of vaccines, enzymes, antibodies, proteins, probiotics and other small molecule therapeutics may be rapidly dried and packaged.

In September 2018, EnWave announced that Factory Acceptance Testing was completed after a thorough development phase at its own R&D facility in British Columbia, in collaboration with Merck. Testing work focused on achieving specific throughput and

capacity objectives established by Merck to demonstrate the processing can deliver consistent performance with regards to production metrics such as moisture content, homogeneity, processing time, etc.

Following this test phase, Merck installed the 9kW REV machine at its facility in Pennsylvania, where it recently passed site acceptance testing. Site acceptance testing ensured that the equipment performed at the Merck manufacturing complex in line with the same protocol as the original parameters already achieved at EnWave's R&D test facility.

Merck has several new products under development that will become candidates to utilize the REV machine for the potential launch of products in the future. The development regime would involve a timeline greater than 3 years to gain FDA approval, so the actual commercial payoff for this technology is some time ahead.

However, EnWave has once again demonstrated a new application for its REV technology. The potential rollout as part of the manufacturing process for established pharmaceutical companies like Merck represents another distinct industrial sector where the REV machines are contributing to efficient production of new products.

## GROWTH DRIVERS

### EnWave Potentially Solving Major Military Issue

In June 2017, EnWave entered into a contract with the US Army to jointly develop low weight, high quality, nutritious field rations.

This opportunity for EnWave is enormous, as potentially hundreds of thousands of men and women in active duty could be served REV-dried rations.

The military is focused on reducing the footprint (weight and volume) of what fighters have to carry in the field. It will not only increase chances of them packing more rations, it will also lessen their fatigue and improve agility and speed.

The Company's Radiant Energy Vacuum technology is uniquely suited for this purpose, because food items can be intermediately dried, and as such easily compressed. When products are dried with other drying techniques and then compressed, they typically pulverize into small pieces.

Internal focus groups of up to 200 people involved in sampling of these newly developed products have been very enthusiastic about the composition and flavor of the samples provided.



**For soldiers out in the field, it crucial to pack foods that are light weight, yet nutritious, durable, and healthy.**

In fact, the NSRDEC was so satisfied with the progress being made that in July 2018 it ordered a 10kW REV machine for research and development purposes.

In May 2019, EnWave reported a second machine purchase order by the United States Army Combat Capabilities Development Command Soldier Center (CCDC)\* to produce nutritious, durable rations for the military. The new 2kW REV dryer is sold for approximately \$100,000. It will be installed at another location than the 10kW machine, which was purchased last year to advance the development process.

*\* This entity was formerly known as the US Army Natick Soldier Research, Development and Engineering Center.*

The CCDC has been tasked with the development and procurement of advanced rations on behalf of the US Army. If indeed the collaboration with EnWave achieves a successful outcome, then the technology will be licensed to vendors to enable production of

the rations. This will involve the sale of larger commercial REV machines and the potential for high volume production to commence.

It should be highlighted that three-way dialogues are already ongoing between EnWave, the US Military, and approved vendors involved in supplying the military, to consider production of the new REV-dried rations once a final "go" decision has been made.

There is also the potential that other countries may be interested in licensing this technology on behalf of their military forces. EnWave has already met with representatives of the Australian department of Defence to discuss a similar development program. As was demonstrated by the breakthrough in the Cannabis sector, the leadership of a significant player to embrace a new technology process may prompt a more rapid growth curve as other participants realize the benefits.

## RECENT EVENTS

### EnWave Signs Commercial Royalty-Bearing License with leading Australian dairy company

A couple of days ago, EnWave signed a royalty-bearing commercial license with KL Ballantyne Pty Ltd, a leading Australian dairy company. The license grants Ballantyne the exclusive right to produce dairy products in Australia using the Company's REV technology, excluding direct-to-consumer cheese snack products.

Ballantyne signed an equipment purchase agreement to acquire a 10kW REV machine to initiate commercial production. Moreover, the dairy company must purchase additional REV machines in the future in order to maintain its exclusivity.

Ballantyne will pay an undisclosed royalty tied to the production of all REV-dried products.

This license is the third royalty-bearing license signed with an Australian company and the fifteenth one for dairy product processing worldwide.

### EnWave Signs Commercial License Agreement with Responsible Foods in Iceland

Last month, EnWave announced an international agreement with a food company based in Iceland. A royalty-bearing commercial license was achieved with Responsible Foods ehf, to develop and produce dried snack foods. Responsible Foods purchased a 10kW REV machine as part of this deal, to be installed at its production facility in Iceland early in 2020. Responsible Foods visited the EnWave facility several times prior to advancing with this contract agreement. Support from the EnWave team to assist in the development process also contributed to a successful outcome.



**EnWave's agreement with Responsible Foods is the first one signed in Iceland and the 36th world-wide further proving the value proposition of REV technology as a tool to create innovative, premium food applications.**

A start-up company currently involved in the development process, Responsible Foods is focused on creating novel food products that are the first of their kind. Responsible Foods has stated that most snack food products are either unhealthy or bland. Some choices are both. The corporate vision therefore is to develop and produce innovative, healthier snack choices. The strategy is based on the cultural appeal from centuries of Icelandic traditions.

Responsible Foods is advancing relationships with other experienced food sector companies to assist with the launch its product line. The business plan is to produce premium branded snack foods, plus a line of individually packaged food ingredients. Responsible Foods is committed to using authentic, nutritious raw materials sourced within Iceland. The

snack products currently in development will be nut, gluten and wheat-free.

These snack foods will also be distinguished in that only non-GMO, antibiotic and hormone-free ingredients will be considered. The product line will be available domestically in Iceland, and also for export to other markets.

The initial product launch will likely be dairy-based. A dried cheese snack is under development, similar to the successful Moon Cheese product line already in distribution by NutraDried Foods. In fact, Responsible Foods has highlighted a photo of this potential cheese snack on its website. Also a variety of unique dried snack products is under consideration, using REV processing to achieve optimum flavor and texture. These snacks will include choices based on seafood, meat, seaweed, herbs, microalgae, mushrooms and berries native to Iceland.

This is the first partnership agreement for EnWave within Iceland. The deal represents another advance in the corporate strategy to establish REV processing worldwide. EnWave has now achieved a total of 36 international license agreements with leverage to a wide variety of sectors.

### New Royalty-Bearing License for Cannabis in New Zealand

Also in December 2019, EnWave announced a commercial license agreement with Helius Therapeutics Ltd, the largest licensed medical cannabis company active in New Zealand. The latter has purchased a 10kW REV machine to enable commercial production of dehydrated cannabis. As part of this arrangement, Helius has been granted exclusivity for the processing of cannabis in New Zealand using REV technology. In addition, Helius may in turn grant a sublicense to third party cannabis companies in the country.

Under the terms of this license agreement, Helius must pay a royalty to EnWave based on the dried weight of cannabis processed using REV technology. To maintain its exclusivity option in New Zealand, Helius has also agreed to purchase another REV machine

with rated capacity of 60kW or larger by June 2021.



**Helius is New Zealand's largest licensed medical cannabis company with a strong focus on research and development. It is also the first cannabis company in the world to be certified as New Zealand Grown.**

It is notable that the agreement expands the international presence for REV technology as a premium processing option in the cannabis sector. This represents the 7th such license agreement for cannabis producers, and the first within New Zealand.

Focused on medical cannabis applications, Helius is well positioned to supply the domestic market through its state-of-the-art indoor growing facility, extraction and manufacturing operations, and the investment in research and development. The partnership with Helius thus represents an attractive opportunity for further growth.

## FINANCIALS

EnWave generates revenue from two business segments: EnWave Canada and NutraDried. EnWave Canada sells REV machinery to royalty partners, rents REV units to prospective royalty partners, and earns royalties from customers that sell REV dried products.

Note that royalties are payable to EnWave as a percentage of the value of products sold or based on the number of units produced by its royalty partners. NutraDried, on the other hand, sells Moon Cheese snacks into retail and wholesale distribution channels.

| Amounts in \$000's  | 09/30/19     | 09/30/18     |
|---|--------------|--------------|
| Total Sales   | 16,188       | 7,355        |
| Cost of Goods Sold  | 11,597       | 4,097        |
| <b>Gross Profit</b>   | <b>4,591</b> | <b>3,258</b> |
| Expenses  | 4,756        | 2,645        |
| Pre-Tax Income (Loss)   | (165)        | 613          |
| Income Tax Expense  | 260          | 538          |
| <b>Net Profit (Loss)</b>  | <b>(425)</b> | <b>75</b>    |
| Diluted Shares Outs.  | 105,438      | 100,926      |
| Diluted EPS   | (0.00)       | 0.00         |
| <b>Selected income statement data for the quarters ended September 30, 2019 and September 30, 2018. Source: Company Filings</b> |              |              |

The top line number of \$42,842,000 reported for the year easily established a new record, representing an 88% increase over that achieved in 2018. Gross profits increased by 53% as EnWave continued to post strong operating margins.

Among the financial highlights presented, royalty revenue from the NutraDried Food Company amounted to \$1,830,000, an increase of more than 122% over the \$821,000 reported in 2018. Meanwhile, total royalty income from all commercial license agreements surged by 84% overall for the year.

EnWave appears to be well-positioned to support this exceptional growth rate as,

- Investment continues in research and development initiatives to sustain the technology advantage;
- Facilities have been expanded to enable greater production; and
- Talented individuals have been added to the technological development, manufacturing and sales teams.

Perhaps the most attractive consideration for future growth objectives, the balance sheet remains extraordinary strong. During the fiscal year EnWave managed to increase its cash-equivalent balance to \$18,665,000. This is even more important given that the Company has no long term debt. Despite reporting a superb year that enabled EnWave to smash its own sales objectives and corporate guidance, this growth has not been funded through higher debt that could compromise future performance.

EnWave also remained cash-flow positive for the year, reporting Adjusted EBITDA of \$3,168,000, an 8% improvement over the prior year. Much of this performance was a result of the stronger cash flow generated by sales of Moon Cheese products.

### Balance Sheet As Of September 30, 2019

On September 30, 2019, the Company had working capital of \$26.11 million, compared to \$12.01 million on September 30, 2018.

Also on September 30, 2019 the Company's cash and cash equivalents balance was \$18.66 million compared to \$9.10 million on September 30, 2018, an increase of \$9.56 million. The change in cash and cash equivalents is primarily due an investment by Aurora Cannabis with net proceeds of \$9.17 million. The remaining increase is due to deposits received from customers on machine purchases as well as cash received from the exercise of stock options and warrants. The Company had net cash outflows from operating activities of \$2.41 million for the year ended September 30, 2019.

| Amounts in \$000's   | 09/30/19      | 09/30/18      |
|--|---------------|---------------|
| Cash and Cash Eq.  | 18,665        | 9,101         |
| Restricted Cash  | 250           | 250           |
| Trade Receivable   | 10,329        | 3,522         |
| Due From Customers   | 1,557         | 727           |
| Under Contract   |               |               |
| Inventories  | 5,986         | 2,873         |
| <b>Total Current Assets</b>  | <b>37,827</b> | <b>16,758</b> |
| Plant and Equipment  | 4,831         | 4,452         |
| <b>Total Assets</b>  | <b>43,250</b> | <b>22,162</b> |
| Trade and Other Payables   | 8,791         | 3,037         |
| Customer Deposits  | 2,768         | 1,201         |
| <b>Total Current Liabilities</b>   | <b>11,711</b> | <b>4,747</b>  |
| Long Term Debt   | 595           | 493           |
| <b>Total Liabilities</b>   | <b>12,306</b> | <b>5,240</b>  |
| Total Stockholder Equity   | 30,944        | 16,922        |
| <b>Selected balance sheet data on September 30, 2019 and September 30, 2018. Source: Company Filings</b> |               |               |

Inventory on September 30, 2019 includes completed machines and machine components of EnWave Canada of \$2.19

million, which is an increase of \$480,000 compared to September 30, 2018. EnWave Canada had more 10kW REV machines in inventory which were produced during 2019. NutraDried's food product and packaging supplies inventory was \$3.78 million, which is an increase of \$2.63 million compared to September 30, 2018 due to additional inventory produced to meet purchase orders.

## OUTLOOK

EnWave has had a steady flow of new contract agreements this year. These deals led to a full order book for the manufacturing of REV units, which is excellent news as equipment sales build longer term revenue growth.



**EnWave secured an additional 21,000 sq ft of industrial space. With the new facility, EnWave's total footprint is now approx. 45,000 sq ft with additional capacity for future growth.**

Some of this success was fueled by the meteoric rise for the cannabis sector on North American stock markets. The advantages of REV processing to dry cannabis flowers led to several break-through contracts in the industry.

The cannabis sector has been enormously successful for EnWave. Substantial untapped potential remains as expansion continues in many countries worldwide. However, EnWave is not a cannabis stock. As a diversified company with participation in numerous other sectors its overall performance is tied to many product categories.

Perhaps the most attractive aspect to the story for EnWave is the potential to achieve progress with numerous opportunities simultaneously. Significant inroads have been made in several sectors where REV technology was entirely unknown previously. Important business relationships have been established with reputable partner companies that involved intense scrutiny and rigorous testing prior to forging these alliances. Often, the process requires years of patient and thorough participation from the EnWave sales team to achieve a successful outcome. It is this potential with numerous irons in the fire that provides the greatest attraction going forward for shareholders.

Sales proficiency to effectively present the benefits of REV technology is demonstrated by the announcement of new TELOA agreements. Thereafter, the roster of royalty partners that have subsequently purchased REV units and commenced production speaks for itself.

The financial performance achieved by EnWave during the year is the result of the many individual breakthroughs for the Company. An effective sales strategy powered astonishing growth. At the same time, an internal restructuring was completed to enable more balanced expansion and greater operating efficiency through 2020 and beyond. With a superb balance sheet, boasting more than \$18 million in cash with no outstanding debt, EnWave is fully funded to address challenges that are typically encountered following a year of rapid growth.

## SHARE DATA & OWNERSHIP

As of December 10, 2019, EnWave had approximately 111.1 million common shares outstanding. In addition, the Company had approximately 7.81 million warrants outstanding with an average exercise price of \$1.39.

Finally, EnWave had about 9.05 million stock options outstanding with a weighted average exercise price of \$1.37. Each stock option entitles its holder to purchase one common share of the Company.

The principal owners of the Company's common stock are Manulife Asset Management (3.61%), DJE Kapital AG (2.29%), Horizons Marijuana Life Sciences ETF (0.90%), and Hillsdale Canadian Small Cap fund (0.30%).

## MANAGEMENT

### ▣ **MR. BRENT CHARLETON, CFA - PRESIDENT & CEO, DIRECTOR**

Mr. Charleton has extensive experience working in competitive team-based environments in the public and private sectors. He has managed the business development, marketing and investor relations mandates for EnWave Corporation since 2010 and was recently promoted to President and Chief Executive Officer. Brent, an ex-professional athlete, is a graduate of the Marketing Management program at the British Columbia Institute of Technology and has earned a Bachelor of Arts degree in

Criminology and Communications from Simon Fraser University. Mr. Charleton has completed the Canadian Securities Course and is a holder of the right to use the Chartered Financial Analyst® designation.

### ▣ **MR. DANIEL HENRIQUES, CPA, CA - 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 2016 – FY 2019

All numbers in thousands

| PERIOD ENDING                                | FY 2016          | FY 2017          | FY 2018        | FY 2019          |
|--|------------------|------------------|----------------|------------------|
| <b>Total Revenue</b>                         | <b>14,933</b>    | <b>15,954</b>    | <b>22,825</b>  | <b>42,842</b>    |
| Cost of Revenue                              | 10,383           | 11,654           | 13,915         | 29,236           |
| <b>Gross Profit</b>                          | <b>4,550</b>     | <b>4,300</b>     | <b>8,910</b>   | <b>13,606</b>    |
| <b>Expenses</b>                              |                  |                  |                |                  |
| General & Administrative                     | 1,989            | 2,072            | 2,439          | 4,329            |
| Sales & Marketing                            | 793              | 2,160            | 3,731          | 5,787            |
| R&D  | 1,656            | 1,138            | 1,213          | 1,692            |
| Amortization Intangible Assets               | 1,222            | 888              | 573            | 391              |
| Stock-based Compensation                     | 399              | 891              | 545            | 1,821            |
| Total Operating Expenses                     | 6,387            | 7,286            | 9,317          | 14,703           |
| <b>Net Income (Loss) Before Income Taxes</b> | <b>(1,837)</b>   | <b>(2,986)</b>   | <b>(407)</b>   | <b>(1,097)</b>   |
| Income Tax Expense                           | -                | -                | 538            | 889              |
| <b>Net Income (Loss)</b>                     | <b>\$(1,923)</b> | <b>\$(2,986)</b> | <b>\$(945)</b> | <b>\$(1,986)</b> |

Annual Income Statement FY 2016 – FY 2019. Source: Company Filings



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**TSX Venture: ENW**  
**OTC: NWVCF**  
**Frankfurt: E4U**

**Company Headquarters**

#1 – 1668 Derwent Way  
Delta, BC V3M 6R9  
Canada

**Company Contact Information**

Brent Charleton, CFA - President & CEO, Director  
Phone: +1 778.378.9616  
bcharleton@enwave.net

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Contact: [editor@smallcaps.us](mailto:editor@smallcaps.us)

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