

## EnWave Corporation (ENW)

June 15, 2019

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.

As the halfway point in the fiscal year has been completed with the publication of second quarter financial results, EnWave has demonstrated that the ambitious sales objectives for 2019 are entirely reasonable and achievable. Moon Cheese sales are booming. In addition, NutraDried began distributing its new premium salad topping called "Toppers" to Walmart in Q2 2019.

A steady stream of positive news items has led to exceptional gains for shareholders and the stock nearly doubled in price since the start of its fiscal year. This performance ranks EnWave among the best small cap stocks so far in 2019 and there appears to be room for further gains ahead.

The agreement with Aurora Cannabis is one such partnership that appears to have great promise to build significant royalty revenue. The confidence in the partnership with Aurora is also illustrated by the decision for that company to take a direct equity ownership interest in EnWave shares. In addition, the injection of working capital from that deal has greatly improved the already strong financial position of the Company.



- EnWave is on track to continue its winning streak and will once again set the bar higher with annual record revenue and cash flow numbers.

Achieving a record in both revenue and gross profits is commendable but to more than double the previous quarter for both metrics is a sign of exceptional performance.

The pipeline of new sales prospects remains primed for further contract wins, and the product lines under development and currently marketed by its license partners worldwide show great promise for additional sales growth ahead.



## 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 more than twenty 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 Bonduelle, Gay Lea Foods, Milne Fruits and Perdue Farms.

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.

A couple of weeks ago, EnWave reported financial results for its second quarter of FY 2019 ended March 31, 2019. While the numbers were encouraging across the board, a significant increase in revenue provides an indication of how successful the Company has been to continue with sales growth.

In fact, the net revenue total of \$8,773,000 during the quarter more than doubled the revenue achieved in the same period of 2018. Sales gains were led by market gains for the Moon Cheese brand, and additional sales of REV machines during the quarter also contributed to the record revenues.

Gross profit of \$3.12 million was reported for the quarter, which also represented more than double the milestone achieved during Q2 of 2018. This achievement was more notable given that operating margins improved and the Company earned a profit margin of 36% in the quarter. In tandem, rising EBITDA in 2019 was reported, demonstrating that EnWave has generated stronger cash flow from operations in the latest quarter.

The overall financial performance of the Company improved in the first six months of 2019, largely driven by growth in the NutraDried business. EnWave Canada had four large-scale REV equipment purchase contracts open in the second quarter for which revenue has yet to be recorded, and

revenue will be recorded subsequent as progress is made on the fabrication of these machines.

## 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, mozzarella, pepper jack, and sriracha 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, Target, Rite Aid, CVS, Safeway, Loblaws, and Save-On-Foods.



**Moon Cheese will be included in the Most Valuable Member ("MVM") coupon program in the summer of 2019 which will result in temporary distribution to all eight of the Costco divisions in the U.S.**

NutraDried's revenue and profitability is growing considerably thanks to the ever expanding distribution of Moon Cheese throughout Canada and the U.S.

More specifically, NutraDried began selling its Moon Cheese product in a 10oz Club Pack format to Costco in the first quarter of 2018

as a product rotation in Costco's Midwest division. During the year, NutraDried expanded the product rotation to the Southeast and Northwest divisions.



**NutraDried began distributing its new premium salad topping called Toppers to Walmart in Q2 2019 with over 2,000 locations around the U.S.**

Moreover, Moon Cheese will be included in the Most Valuable Member ("MVM") coupon program in the summer of 2019 which will result in temporary distribution to all eight of the Costco divisions in the U.S.

Currently, the 10oz Club Pack is distributed only through Costco. However, NutraDried is targeting additional Club Pack distribution opportunities. NutraDried's strategy is to further grow revenue and profitability by leveraging its network of food brokers in the United States, as well as by further investing in marketing activities to increase consumer demand and awareness for Moon Cheese.

In addition, NutraDried began distributing its new premium salad topping called "Toppers" to Walmart in Q2 2019.

In order to satisfy the increasing demand for its products, NutraDried commissioned a second 100kW nutraREV machine in September 2018, doubling its production capacity for Moon Cheese. This second REV unit is currently also running at full capacity.

**We understand that the conservative guidance for total NutraDried sales in fiscal year 2019 is around \$25 million.**

## 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 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

**Comparison between EnWave's REV technology, and freeze & air drying.**

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

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 at every 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.

The companies below have all signed a commercial agreement with EnWave to produce a REV dried cheese 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. After a somewhat slower start, sales are starting to pick up;
- ❑ **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;
- ❑ **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 under the Air Cheese brand name: and
- ❑ **Ashgrove Cheese** for Tasmania. Ashgrove purchased a 10kW commercial REV unit and launched a crunchy cheese

snack under the brand name 'Amaze Balls' in January 2018.

Next to the above agreements for REV dried cheese snacks, EnWave also signed a commercial royalty-bearing license with the following dairy company.

- ❑ **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 in 2018, with plans to quickly scale if its products are commercially successful.

The License grants Arla the exclusive right to use REV technology to process dairy products in Denmark, Sweden, Finland and Norway.

### 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 ordered its third 120kW machine right before the end of 2018. In fact, more than 50 consumer products on the market today already use its ingredients;
- ❑ **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. In 2018, Pitalia has started selling pineapple, apple, mango and banana snack products through its Pure Joy brand in the European and South, Central and North American markets;
- ❑ **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;
- ❑ **AvoLov LLC (formerly AvoChips LLC)**, a U.S. based processor that has developed an innovative new avocado snack product using REV technology. AvoChips submitted a purchase order to obtain a 10kW commercial-scale REV machine to initiate production. The license grants AvoChips the exclusive global rights to use the REV technology to process the snack product;
- ❑ **Howe Farming Group**, one of Australia's largest and most diverse farming enterprises. The license grants Howe Farming the exclusive right to use the Company's REV dehydration technology to produce dried banana products in Australia and the non-exclusive right to produce dried blueberry products in Australia; and
- ❑ **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. Distribution of the Bare snacks are bound to significantly increase further as the company was acquired by food and beverage giant PepsiCo in May 2018. In October last year, Bare purchased a third 10kW REV machine.
- ❑ **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.

## Growing in Important Vegetable Sector

In 2016, EnWave entered into a partnership with **Bonduelle**, the world's leading processed vegetable producer. By removing most of the moisture content prior to freezing, the companies developed an innovative way to preserve frozen vegetables using EnWave's Radiant Energy Vacuum (REV) technology. This process ensured that the flavor and texture of the vegetables remained intact.

The agreement also involved a long-term lease commitment for a commercial 120kW quantaREV machine, and granted exclusivity for the dehydrofrozen process to Bonduelle. Years of work led to the launch of Bonduelle's InFlavor premium frozen vegetable line. Presented at trade shows and test marketing events, the InFlavor brand was an immediate success and even received prestigious awards acknowledging the appeal of the product line.

After a favorable response from its test audience, several larger orders for the InFrozen products were recently secured from B2B clients, prompting Bonduelle to officially launch its InFlavor dehydrofrozen vegetable product line to its food service customers. Moreover, the multinational has confirmed plans to launch a retail version of the product line late 2019.

In February of 2019, EnWave reported that the royalty agreement with Bonduelle has been revised, such that exclusivity for the production of frozen vegetables was extended for the North American market. The global exclusivity, which Bonduelle once had in the dehydrofrozen vegetables space, however was reduced to a more focused market territory. Most likely because Bonduelle didn't purchase the number of REV machines necessary to maintain its global exclusivity. In order for Bonduelle to retain its exclusive right to produce dehydrofrozen vegetables in North America using REV technology, it must purchase a 400kW REV machine before September 30, 2019.

In exchange for the extension of the exclusivity, Bonduelle had to make a milestone payment to EnWave. The amount of the payment was not disclosed but believed to be meaningful. In addition, Bonduelle agreed to buy-out the operating lease on the 120kW quantaREV machinery currently operating at Bonduelle's plant in Sainte-Martine, Quebec.

This is all good news for EnWave as Bonduelle's product line may soon generate a substantial royalty stream for the Company.

In 2017, **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.

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. (Also see Cannabis/Hemp Category below).

### Meat Snack Producers - Another Major Market for EnWave

The intention of most of these meat companies is to develop crispy meat snacks. Similar snacks are already being produced, but 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 **Perdue Farms**, a leading food and agricultural products company, ordered a 10kW REV dryer to process pet food and pet treats in the United States and Canada.

### 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.

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 CO2 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.

Still in 2017, the Company signed a royalty bearing agreement with **Tilray**, a major Canadian cannabis player with international presence. Tilray is an Authorized Licensed Producer as defined by Health Canada's Access to Cannabis for Medical Purposes Regulations (ACMPR).

The license grants the cannabis grower the exclusive right to use the Company's proprietary REV dehydration technology to dry and decontaminate cannabis in Canada.

In return for the exclusivity, Tilray has purchased a small-scale 10kW commercial REV unit to enable advanced product development along with a large-scale 60kW

commercial REV machine that will be used to initiate commercial production. In May 2018, Tilray ordered a second 60kW REV machine, which will be installed in Portugal. Both units are expected to be up and running in 2019.



**So far, Tilray has purchased a 10kW REV machine and two 60kW continuous REV machines.**

Moreover, the Licensed Producer must also pay royalties based on the amount of cannabis processed with EnWave's REV equipment. Royalties in the cannabis space could be up to three times higher than what EnWave receives from companies that are active in the food sector.

Early 2019, EnWave announced the signing of its second royalty bearing license. This time with **The Green Organic Dutchman Holdings Ltd. (TGOD)**, another well-known Canadian cannabis producer.

TGOD has purchased a commercial 60kW REV machine to begin processing cannabis. The REV machine will be installed mid-2019 and will commence operations shortly thereafter generating royalties on all cannabis processed by TGOD using EnWave's technology.

In March of this year, TGOD ordered three additional 120kW REV machines. The order also includes additional custom features including transport belts to assist with continual product feed to each unit. The machines will also be equipped with robotic arms to unload trays of dried cannabis after processing, empty them, and place them back on the belt.

The total purchase price is estimated to be in the range of \$6.5 million for the new REV machines. This one sale represents a higher total in REV unit sales than was reported by EnWave in all of 2018.



**TGOD will have four REV machines operating with total capacity of 420kW when the installations have been completed later this year.**

One month later, EnWave announced another blockbuster deal. This time with **Aurora Cannabis Inc.** As a producer of recreational and medicinal cannabis with operations in many countries worldwide, Aurora is a leading player in the sector.

So far, Aurora has agreed to purchase at least four and possibly five REV machines. Two 120kW commercial REV dehydration machines will be installed at the Aurora Sky and Aurora Sun cannabis processing facilities located in Canada. A third 120kW commercial REV unit may additionally be purchased within 60 days for installation at the Aurora Nordic facility in Denmark. A 60kW commercial REV unit will be installed and operated in South America, and Aurora has also purchased a smaller 10kW REV machine for product development, protocol development, and R&D purposes.

As with other equipment sales agreements secured by EnWave, a license has been granted to Aurora with exclusivity to operate the REV machines for the production of cannabis in Europe (excluding Portugal), throughout South America (except Peru) and an option to exclusively license the REV technology in Australia for cannabis manufacturing.

Similar to the strategic arrangement that EnWave has in partnership with Tilray, Aurora and EnWave also have the opportunity to

develop further sub-license agreements using the technology within Aurora's exclusive jurisdictions.

Aurora has now locked up processing capacity using REV machines for a large part of its worldwide production base. Considering that Aurora is one of the largest cannabis producers in the entire sector, with funded capacity to produce more than 625,000kg of cannabis per year, this royalty leverage could amount to a very significant revenue source.

Another dimension of this arrangement that is also noteworthy is that Aurora has committed to participate in a strategic equity placement. The deal was structured similar to a share swap valued at \$10 million, whereby Aurora issued 840,576 common shares to EnWave in payment for a block of 5,302,227 EnWave shares. Following this transaction, Aurora now controls approximately 4.91% of the issued and outstanding EnWave shares.



**With sales and operations in 24 countries across five continents, Aurora is one of the world's largest and leading cannabis companies.**

Early 2019, EnWave reported another license agreement with **Your Wasabi Farms Ltd (YWF)**, to enable the partner to begin processing hemp with its REV equipment on a toll-processing basis on behalf of third-party suppliers.

It should be noted that the license currently granted to YWF is for the processing of hemp only, which is a species of the Cannabis plant. Hemp has many industrial uses derived from fibers of the plant and is also increasingly becoming important for medicinal applications. While hemp itself is legal to cultivate and process, marijuana plants are

still regulated and production of these plants in Canada requires a license.

As the legal consumption of marijuana grows in Canada, increasing demand will likely encourage more cultivation operations and larger crop yields. This in turn may lead to greater utilization of REV processing to cure and dry cannabis plants. There is the possibility that YWF may apply for regulatory approval to begin processing marijuana plants, and thereafter reach an amended deal to expand the license agreement with Tilray to include this option under a royalty structure.

### 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.

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.



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

Last month, 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's Sales Breakthrough in Japan

In May, EnWave reported another milestone in its relationship with the Japanese diversified snack food specialist, Calbee Incorporated.

Back in 2018, EnWave signed a Technology Evaluation and License Agreement (TELOA) with Calbee, providing the latter the opportunity to evaluate and develop new snack foods produced using EnWave's Radiant Energy Vacuum (REV) technology. At that time, Calbee opted to rent a smaller 10kW REV machine during the test process.

After a thorough evaluation process, Calbee moved forward with a formal Equipment Purchase Agreement and secured a Commercial License arrangement with EnWave. The machine involved in this deal is a 10kW REV unit that is ideal for further testing and product development.



**Calbee Inc. is a major Japanese snack food maker. The new agreement potentially opens many doors in the Asian market for EnWave.**

Calbee, which has a market cap of \$3.5 Billion, has established a number of popular

food products including snack confectionary items, bakery foods and cereal foods. These items are manufactured and distributed throughout Asia, Australia, Europe, and soon also North America.

Calbee now plans to advance several new REV dried products through the commercial acceptance phase in 2020 for the Japanese market.

If this product development continues successfully, Calbee plans to further advance its partnership with EnWave with the purchase of a larger REV machine to support commercial distribution. This in turn would suggest the potential for a lucrative royalty stream based on high volume sales and even perhaps a longer term growth plan in other countries where Calbee operates.

Moreover, EnWave also continues to work with Correns Corporation, based in Japan, for the purpose of assisting the Company to make inroads with new sales opportunities. According to EnWave's management, there are several such projects currently in the pipeline.

## 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.

For the second quarter, ended March 31, 2019, EnWave reported record revenue of \$8.77 million, an increase of \$4.60 million, or 110%, compared with the second quarter of fiscal year 2018.

As part of the investment to win new sales contracts, expand on infrastructure and build further growth, the Company has incurred increases to its cost of sales and General &

Administration Expense items. This included hiring talented senior staff members and the participation in promotional activities to build market awareness of REV technology and support sales. As a result, EnWave reported higher Sales & Marketing expenses of \$1,084,000 this year, compared to \$683,000 for the same period in 2018. Meanwhile G&A increased to \$1,049,000 compared to \$606,000 for the prior year.

The trend of rising sales was partly offset by the increased expense items, leading to a consolidated net loss for the quarter of \$224,000. More importantly, this is a much lower loss than the \$519,000 reported last year and the improvement indicates that positive sales momentum is paying off. With losses reduced by more than half one may conclude that the next milestone objective for EnWave to report an overall net quarterly profit is drawing closer.

Amounts in \$000's	03/31/19	03/31/18
EnWave Canada Sales	2,009	1,805
NutraDried Sales	6,764	2,367
<b>Total Sales</b>	<b>8,773</b>	<b>4,172</b>
Cost of Goods Sold	5,653	2,877
<b>Gross Profit</b>	<b>3,120</b>	<b>1,295</b>
Expenses	3,062	1,814
Pre-Tax Income (Loss)	58	(519)
Income Tax Expense	282	-
<b>Net Profit (Loss)</b>	<b>(224)</b>	<b>(519)</b>
Diluted Shares Outs.	102,062	100,597
Diluted EPS	(0.00)	(0.01)
<b>Selected income statement data for the quarters ended March 31, 2019 and March 31, 2018. Source: Company Filings</b>		

For the first two quarters of fiscal 2019, the Company had consolidated revenues of \$16.57 million, compared to \$8.69 million in the same period in fiscal 2018, an increase of 91% or \$7.88 million.

EnWave Canada reported revenue of \$3.48 million for the six months ended March 31, 2019, a decrease of \$402,000 compared to the revenues of \$3.88 million for the six months ended March 31, 2018. Revenue from NutraDried on the other hand reached \$13.09 million for the six months ended March 31,

2019 compared to \$4.80 million for the six months ended March 31, 2018, an increase of \$8.29 million, or 173%.

The Company had a consolidated net loss of \$239,000 in the first two quarters of fiscal 2019, compared to a consolidated net loss of \$916,000 for fiscal 2018, a decrease of \$677,000.

### Balance Sheet As Of March 31, 2019

On March 31, 2019, the Company had working capital of \$14.435 million, compared to \$13.22 million on March 31, 2018.

On March 31, 2019 the cash and cash equivalents balance was \$12.20 million compared to \$7.48 million on March 31, 2018, an increase of \$4.72 million. The change in cash and cash equivalents is primarily due to deposits received from customers on machine purchases as well as cash proceeds from the exercise of employee stock options. The capital position was further strengthened by a direct equity investment by Aurora Cannabis immediately after the quarter, raising a total of \$10 million.

### The Company had net cash inflows from operating activities of \$1,848 for the six months ended March 31, 2019.

Amounts in \$000's	03/31/19	03/31/18
Cash and Cash Eq.	12,200	7,480
Restricted Cash	250	250
Trade Receivable	4,960	2,439
Due From Customers Under Contract	442	2,118
Inventories	4,478	3,997
<b>Total Current Assets</b>	<b>22,838</b>	<b>16,516</b>
Plant and Equipment	4,540	2,360
<b>Total Assets</b>	<b>28,114</b>	<b>20,108</b>
Trade and Other Payables	3,601	2,859
Customer Deposits	4,305	331
<b>Total Current Liabilities</b>	<b>8,403</b>	<b>3,296</b>
Long Term Debt	305	396
<b>Total Liabilities</b>	<b>8,919</b>	<b>3,692</b>
Total Stockholder Equity	19,195	16,416
<b>Selected balance sheet data on March 31, 2019 and March 31, 2018. Source: Company Filings</b>		

Inventory as at March 31, 2019 includes completed machines and machine components of EnWave Canada of \$1.95 million, which is a decrease of \$1.23 million compared to March 31, 2018. The inventory of EnWave Canada relates to 10kW machines used for rentals and those under fabrication. NutraDried's food product and packaging supplies inventory was \$2.23 million, which is an increase of \$1.43 million compared to \$806,000 at September 30, 2018 due to the increased product demand, as well as an inventory buildup for the MVM coupon program for Costco.

EnWave Canada had customer deposits and Deferred Revenue of \$4.30 million at March 31, 2019, compared to \$331,000 as at March 31, 2018, with an increase due to deposits received on several new large equipment orders. The amounts due from customers on contract are billed and collected when project specific milestones are reached on each project.

## OUTLOOK

An increasing number of food, cannabis, and biopharmaceutical companies are realizing that REV is the way to go if they want to maintain their competitive advantage.

The sale of REV dryers is generating millions of dollars for EnWave. Moreover, with each additional REV unit becoming operational, the minimum quarterly royalties are increased proportional to the size of the machine. A 100kW machine will typically generate between \$200,000 and \$400,000 in royalties per year at full utilization. As more and more machines are taken into production, EnWave will benefit big time.

Although EnWave is already on the right track to achieve sustained growth and profitability, it has a vast number of solid growth opportunities in its pipeline.

The cannabis sector is evolving into one of the fastest growth channels for new Radiant Energy Vacuum (REV) machine sales. The application to use REV technology as an efficient method to dry cannabis is an important advantage ensuring rapid and

uniform processing, at much lower temperatures than possible through other methods.

REV processing also enables greater control over how much moisture is removed from the plants. Ideally, about 10% moisture content is preferred for the smokeable cannabis, while those plants that will be further processed for extractions and CBD oil are further dried down to 1% moisture content. This precise level of control is a material advantage inherent with the REV process that saves cannabis and hemp producers lots of time and money. Ever more parties involved in these industries realize that the REV technology is key to stay competitive in this evolving market place.

Recent transactions by TGOD and Aurora, demonstrate that the effectiveness of this technology advantage is an essential part of their commitment to produce the highest quality cannabis products. This is establishing REV machines as the 'gold standard' of processing options to which other cannabis producers will seek to emulate.

Once operating in the field, each of these machines will be under royalty agreements and this presents the desired outcome for stable royalty revenues to continue increasing on the back end of the sales transactions.

The cannabis sector is just one of many profitable commercial channels where EnWave has been successful to establish partnerships for its REV technology.

Since the beginning of 2016, EnWave shareholders have participated in a tremendous bull market with the share price of the Company tripling in value. This outstanding market performance has been driven by the rapid sales growth as EnWave reports equipment sales and royalty agreements with a multitude of new partners in a variety of distinct sectors.

## SHARE DATA & OWNERSHIP

As of May 28, 2019, EnWave had approximately 109.1 million common shares outstanding. In addition, the Company had approximately 8.2 million warrants

outstanding with an average exercise price of \$1.38.

Finally, EnWave had about 6.6 million stock options outstanding with a weighted average exercise price of \$1.30. 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 Kapital AG (3.23%), and Manulife Asset Management (2.34%).

## 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 – 6M 2019

All numbers in thousands

PERIOD ENDING	FY 2016	FY 2017	FY 2018	6M 2019
<b>Total Revenue</b>	<b>14,933</b>	<b>15,954</b>	<b>22,825</b>	<b>16,579</b>
Cost of Revenue	10,383	11,654	13,915	10,422
<b>Gross Profit</b>	<b>4,550</b>	<b>4,300</b>	<b>8,910</b>	<b>3,037</b>
<b>Expenses</b>				
General & Administrative	1,989	2,072	2,439	2,047
Sales & Marketing	793	2,160	3,731	2,060
R&D	1,656	1,138	1,213	710
Amortization Intangible Assets	1,222	888	573	245
Stock-based Compensation	399	891	545	809
Total Operating Expenses	6,387	7,286	9,317	5,798
<b>Net Income (Loss) Before Income Taxes</b>	<b>(1,837)</b>	<b>(2,986)</b>	<b>(407)</b>	<b>359</b>
Income Tax Expense	-	-	538	598
<b>Net Income (Loss)</b>	<b>\$(1,923)</b>	<b>\$(2,986)</b>	<b>\$(945)</b>	<b>\$(239)</b>

Annual Income Statement FY 2016 – 6M 2019. Source: Company Filings



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**OTC: NWVCF**  
**Frankfurt: E4U**

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