

# Equity Research



**E N W  $\lambda$  V E**  
CORPORATION

## **EnWave Corporation**

**Initiation of Coverage**

**12 November 2019**

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ISIN: CA29410K1084  
WKN: A0JMA0

**Investment recommendation:**

**Buy**  
(initial)

**Target price: CAD 2.60**  
(initial)

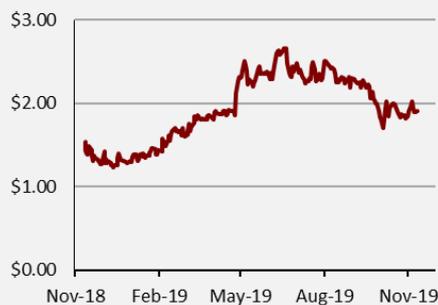
Reuters: ENW.V  
Bloomberg: ENW:CA

Market segment: TSX Venture (Toronto)  
Stock exchanges: Toronto, Frankfurt

Market capitalization: CAD 211.7 million  
Number of shares: 110.9 million

**Shareholder structure:**

Aurora Cannabis .....	4.91%
DJE Capital AG .....	3.65%
Manulife Asset Mgmt. ....	2.74%
J.P.A. Budreski .....	1.51%
Free float .....	87.19%



**Closing price (11-Nov-2019):**  
CAD 1.91

**High/Low 52 weeks (closing price):**  
CAD 2.66 / CAD 1.19

**Ø Trading volume/day (50 days):**  
CAD 160,000

**Ø Daily turnover in units (50 days):**  
100,000

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**EnWave Corporation**

**Radiant future powered by microwaves**

EnWave is a Canadian-based TSX-V-listed engineering company (ENW.V) that manufactures and markets equipment of various sizes (from 10 kW to 120 kW) for the precise dehydration of organic materials based on its proprietary REV™ technology. The REV™ technology, protected by a number of patents, is an innovative process based on microwave vacuum technology and superior to conventional processes in several respects.

The dehydration process with REV™ technology is much faster and cheaper than other established processes such as freeze drying, spray drying or air drying. The process is mainly used in the food and pharmaceutical industries, and in the latter currently mainly in the area of legal cannabis processing. Established brands such as Bonduelle, Merck, Arla Foods, FrieslandCampina and Aurora Cannabis are constantly driving demand.

The systems are not only sold by EnWave, but are also linked to royalty payments for the products manufactured on these systems. Along with the payments, licensees receive comprehensive territorial protection and EnWave generates a continuous flow of income beyond the sale of the machinery.

EnWave also operates as a food producer through its subsidiary NutraDried™. NutraDried™ produces dried dairy products using EnWave's technology. The best-known product is MoonCheese®, a popular snack made from dried cheese, which is mainly distributed in North America through the Costco and Starbucks chains.

Based on the current transaction multiples, this subsidiary alone covers EnWave's present market capitalization of approximately CAD 212 million. Taking the additional sales of REV™-machinery and the present value of future licence fees into account, the valuation of EnWave should be substantially higher in the future.

**Based on a sum-of-the-parts approach and verified by our DCF model, we formulate a price target of CAD 2.60 for the EnWave share. The investment recommendation of our initial study is "Buy".**

Key financials	2018/19e	2019/20e	2020/21e	2021/22e	2022/23e
Revenues (in CAD million)	22.825	35.835	52.968	77.005	106.824
Revenues yoy	57.9%	47.0%	45.4%	38.7%	32.7%
EBITDA-margin	6.7%	9.7%	12.8%	14.5%	16.0%
EBIT-margin	1.2%	5.9%	10.2%	12.6%	14.6%
Equity ratio	78.1%	78.2%	76.8%	76.3%	77.6%
PER	(loss)	(loss)	79.6	30.8	20.3
EPS in CAD	-0.013	-0.001	0.024	0.062	0.094
Book value per share in CAD	0.307	0.314	0.361	0.440	0.559

Financial calendar	
07-Nov-2019	European Small and Mid Cap Conference ESMiC, Luxembourg
December	Annual Report 2018/2019

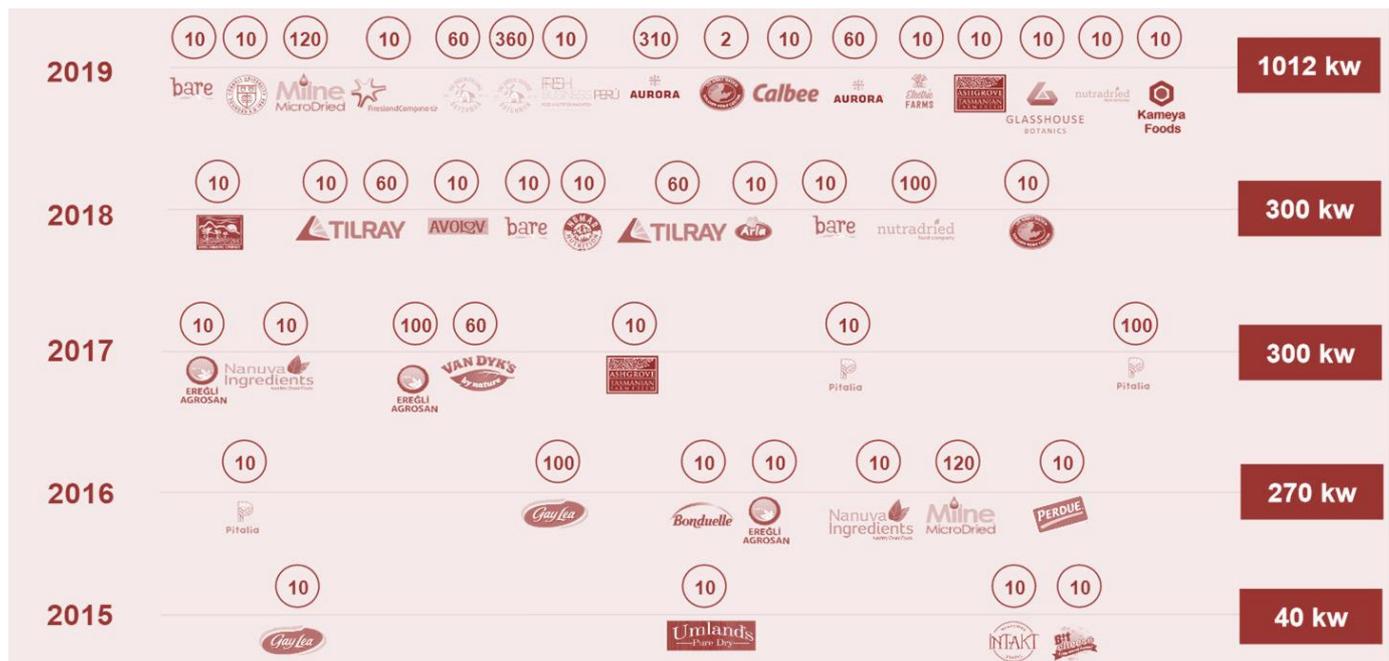
## Company profile

Vancouver-based specialty machinery manufacturer EnWave Corporation was founded in 1996 by Dr. Timothy Durance, a scientist at the University of British Columbia, and went public in 1999. It took another decade before the first machine with the patented REV™ technology (Radiant Energy Vacuum, a microwave vacuum technology) for drying organic products came onto the market. Today, the group employs around 120 people and generated sales of CAD 26.7 million in the first nine months of fiscal 2018/19, which ended on September 30. We expect growth to continue at high double-digit rates over the next few years. In 2013, the company also founded its subsidiary NutraDried with the aim of producing and marketing the Moon Cheese® product as a proof-of-concept, which was a great success. Currently, NutraDried contributes approximately ¾ to total sales.

### EnWave's business model rests on four pillars

① **Machinery** (FY 2017/18: around 21.5% of consolidated sales). Currently the product range comprises three power classes: 10 kW (list price: appx. CAD 220,000), 60 kW (CAD 1.3 million), 100 kW (CAD 1.4 million) or 120 kW (CAD 1.6 million). The machines are manufactured in the company's own factory in Delta (British Columbia) and are then assembled and commissioned on site by the company's own specialists. As a rule, six months elapse between ordering and commissioning. With the purchase of the machines, an exclusive agreement for distribution rights in certain regions for certain products is agreed. For the use of the REV™ cannabis drying machine, three regional licenses have been granted: to Tilray for Portugal (exclusive), to Glasshouse Botanics for Canada (non-exclusive) and to Aurora Cannabis for Canada (non-exclusive), the EU except Portugal, South America except Peru and Australia (all exclusive). Aurora is EnWave's key strategic customer, ordering equipment of various sizes and holding exclusivity for cannabis drying in Europe (excluding Portugal) and South America. In the food processing sector, the customer list includes world-famous brands such as Arla Foods and Bonduelle. After machinery with a total capacity of 270 kW and 300 kW were sold in the previous three years, 2018/19 saw a huge increase to 1012 kW.

## Installations and capacities since 2015



Source: EnWave Corp.

## 2018/19 agreed machine purchases and granted licences

Licensee	Machine size	Product	Region
Tilray	60 kW	Fruit and Vegetables	Portugal
Milne Microdried Inc.	120 kW	Cannabis	USA
The Green Organic Dutchman	60 kW	Cannabis	Canada
The Green Organic Dutchman	120 kW	Cannabis	Canada
The Green Organic Dutchman	120 kW	Cannabis	Canada
The Green Organic Dutchman	120 kW	Cannabis	Canada
Aurora	120 kW	Cannabis	Canada
Aurora	120 kW	Cannabis	Canada
Aurora	60 kW	Cannabis	South America
Calbee	10 kW	Fruit and Vegetables	Japan
Electric Farms	10 kW	Industrial hemp	USA
Kameya Foods	10 kW	Fish, Vegetables, Wasabi, Tofu, Tea	Japan
Glasshouse Botanics	10 kW	Cannabis	Canada
Calbee	10 kW	Cereals	Japan
Fresh Business Consulting	10 kW/>100 kW*	Food	Peru
Ashgrove Cheese	10 kW	Cheese	Australia
Ashgrove Cheese	10 kW	Cheese	Australia
Cann Group	10 kW	Cannabis	Australia

Source: EnWave Corp.

② **License revenues** (approximately 2.5% of consolidated revenues 2017/18). To date, more than twenty licenses for the commercial use of REV™ technology have been signed, opening up nine different market segments for the marketing of new and innovative products. The license guarantees the licensee exclusive rights for the sale of certain products in selected regions. From the sale of these products, which are manufactured using EnWave technology, the Group receives royalties between 2% and 5%

of sales or royalty payments depending on the number of units sold. A minimum license fee must be paid annually in order to maintain the exclusive distribution rights.

### Overview: Worldwide license agreements



Source: EnWave Corp.

③ **Leasing and revenues from test runs (equipment rental fees, testing fees and other;** around 3.9% of Group sales). EnWave rents out small machines (usually 10 kW) for acquisition purposes. This enables potential customers to test vacuum microwave technology and develop procedures without already agreeing exclusive distribution rights or further agreements.

④ **Product manufacture** (NutraDried; approximately 72.2% of Group sales). The company produces dehydrated food in a plant in Ferndale in the US state of Washington with 80 employees. At the end of 2018 the capacity was doubled with the commissioning of the second 100 kW nutraREV® machine. The core product is a dried cheese under the brand name Moon Cheese® which is sold through retailers at more than 25,000 points of sale in the USA and Canada. The largest customers in the 2017/18 fiscal year were the North American food wholesaler Costco, which accounted for around 31% of sales, and Starbucks (11%). EnWave increased its stake in food manufacturer NutraDried from 51% to 100% as of 21 February 2019.



Source: EnWave Corp.

## Different platforms for different fields of application

EnWave currently sells two different REV™ platforms for distinct fields of application, especially for use in the food and cannabis processing industry:

**nutraREV®** (drum-based), that can dry food quickly and inexpensively. Taste, texture and colour are largely retained.

**quantaREV®** (arrangement in storage compartments), which is used for continuous, high-volume low-temperature drying of hemp.

## The REV™ procedure is protected by a large number of patents

The procedural basis of the REV™ (Radiant Energy Vacuum) was implemented in 1996 in a first prototype (REV™ machine) and patented several times. The company has since sold licensed machinery of various sizes to customers in Canada, the USA, Japan, Portugal, Peru and Australia. The company owns twelve patents which already protect the use of the machines or certain manufacturing processes in many countries, seven further patents have been applied for. In addition, EnWave has acquired license rights from the German INAP GmbH so that its patent or similar processes cannot be used or further developed by competitors. This patent is also used on the quantaREV® machines.

Table: Patents (as of 30 September 2018)

Status	Patent	Products	Processing
granted	Method and Apparatus for Drying or Heat-Treating Products		MIVAP I
granted	Process for Dehydration	Berries	
granted	Process for Drying Medicinal Plants	Medical Herbs	
granted	Method for Producing Hydrocolloid Sponges and Foams	Hydrocolloid	
granted	Method of Drying Biological Material	Vaccines	
granted	Apparatus and Method for Dehydrating Biological Materials		bioREV
granted	Apparatus and Method for Dehydrating Biological Materials with Freezing and Microwaving		freezeREV
granted	Apparatus and Method for Microwave Vacuum-Drying of Organic Materials		nutraREV
granted	Apparatus and Method for Dehydrating Biological Material		powderREV I
granted	Microwave Vacuum-Drying of Organic Materials		powderREV II
granted	Apparatus and Method for Microwave Drying of Organic Materials		powderREV III
granted	Microwave Vacuum-Drying of Organic Materials		Modular nutraREV
pending	Microwave Vacuum-Drying of Organic Materials		MIVAP II
pending	Method of Making Dried Food Products	Tofu	
pending	Method of Making a Puffed Dehydrated Food Product	Starch Based Snacks	
pending	Method of Making Dehydrated Fried Potato Products	French Fries	
pending	Method of Making Dried Porous Food Products	Food Products	Frozen In
pending	Dehydration Below the Triple Point of Water		Triple Point Drying
pending	Method and Apparatus for Pasteurizing and Dehydrating Marijuana	Cannabis	

Source: EnWave Corp.

## Management and Supervisory Board

The management level consists of John P. A. Budreski, Executive Chairman, Brent Charleton, President and CEO, Dan Henriques, CFO, and Mike Pytlinski, CEO of the subsidiary NutraDried, which with revenues of CAD 18.1 million was the main sales driver in 9M 2018/19.

Brent Charleton has been President and Chief Executive Officer of the Company since August 2018. He has succeeded Dr. Tim Durance, the founder of EnWave. Previously, Brent Charleton had played a key role in the company's marketing (commercialization and licensing) of the REV™ technology.

John P.A. Budreski has been Executive Chairman and Director Executive Chairman since June 2014.

## Shareholders

As of September 30, 2019, the number of common shares outstanding was 110.710 million. Options and warrants allow for the issuance of a further 16.497 million shares. No shareholder currently holds more than 5% of the shares. After the strategic participation of Aurora Cannabis, the German mutual fund company DJE Kapital is the largest single shareholder.

Shareholder	Share-size
Aurora Cannabis	4.91%
DJE Kapital AG (Fund: DJE - Agriculture & Nutrition)	3.65%
Manulife Asset Management	2.74%
Management	1.92%
thereof J.P.A. Budreski (Exec. Chairman): 1.51%	
Free float	87.19%

*Source: Capital IQ*

## Financial targets 2018/2019 and performance

EnWave had formulated five targets for the 2018/19 financial year:

- Revenues from licenses (excluding NutraDried) > CAD 1 million
- At least five new licence agreements
- Sale of at least eight REV™-machines > 100 kW
- Machine sales proceeds > CAD 10 million
- NutraDried revenues > CAD 20 million

In the first nine months, sales rose by 72.3% to CAD 26.654 million. Machine sales increased by 73.3% to CAD 7.622 million, product sales (NutraDried) even by 82.0% to CAD 18.092 million. A loss of CAD 1.561 million after taxes was incurred due to high upfront expenditures, especially for marketing, currency burdens and restructuring costs.

In April 2019, EnWave sold all 840,576 common shares of Aurora received through the strategic partnership to the company for CAD 12.00, further improving its cash position by approximately CAD 10 million.

The figures for the 2018/19 financial year will be published in December. After the strong growth in the first nine months, we are confident that EnWave has achieved four targets in the financial year ending 30 September. We are only assuming a lower volume of machine sales. Furthermore, the operating result is likely to have been burdened by several special factors and restructuring costs.

### Milestones in company history

<b>1996</b>	Scientists Dr. Timothy Durance (Professor of Food, Nutrition and Health and later co-founder of EnWave) and Dr. Frank Liu of the University of British Columbia (Canada) develop a prototype of the REV™ machine and patent several processes
<b>1999</b>	EnWave Corporation goes public on the Toronto Stock Exchange (TSX Venture Exchange) at a price of CAD 0.60 and raises new equity (CAD 2.1 million)
<b>2009</b>	For the first time a REV™ machine is used commercially. User is a Canadian processor of blueberries.
<b>2010</b>	EnWave acquires U.S. patents for MIVAP™ vacuum microwave dehydration technology ("MIVAP™") from German INAP GmbH for CAD 1.608 million
<b>2011</b>	EnWave acquires patents for Radiant Energy Vacuum ("REV") dehydration technology from University of British Columbia for CAD 6.186 million
<b>2013</b>	NutraDried Food Company is established as LLP (51% interest at year-end) to develop, manufacture, market and sell natural cheese snack products in the United States under the Moon Cheese® brand
<b>2015</b>	Start of the broad commercial marketing of the REV™ technology. Among other things, the U.S. Army begins testing microwave technology through the U.S. Army Natick Soldier Research, Development and Engineering Center to provide soldiers with better food products
<b>2018</b>	The subsidiary NutraDried is taken over 100% and converted into an LLC (Limited Liability Company). The US Army (NSRDEC) orders a 10 kW system
<b>2019</b>	Partnership with Aurora Cannabis. Within the framework of the cooperation, Aurora acquired 5.3 million EnWave shares at a price of CAD 1.886 and has since held approximately 4.91%.

*Source: EnWave Corp.*

## Market and market environment

### Most exciting investment story: Cannabis

The liberalisation of cannabis in many countries has given processors of this plant a surge in demand worldwide. In the USA, several states have liberalised cannabis use, but it remains prohibited at the federal level. In order to avoid possible fines due to this legal uncertainty, EnWave will not initially supply any medical cannabis processing equipment to customers in the USA. The focus is on Canadian and international companies with products for pharmaceutical applications

In early 2019, EnWave entered into a licensing agreement with Tilray of Canada. The pioneer in the research, cultivation, production and distribution of cannabis for medical applications legally exported medical cannabis to the USA for a clinical trial in September 2018, making it the first company to offer such products in the USA. Tilray supplies patients and consumers in 13 countries on five continents. In Portugal, Tilray has a certified production facility, including a 20-hectare outdoor facility that supplies other EU countries.

On 26 April EnWave agreed a licence with the Canadian company Aurora Cannabis (ISIN CA05156X1087; market capitalisation: around CAD 4.9 billion) to process cannabis products in Canada. Aurora processes around 500,000 kg of cannabis annually in 15 production facilities, making it the world's largest producer in this segment. The company sells its products in 25 countries worldwide.

It was also agreed that Aurora would be able to distribute cannabis products exclusively in all countries of the European Union with the exception of Portugal, where EnWave had already concluded an exclusive distribution agreement with Tilray. Aurora will also be granted exclusive rights for South America, where it will commission a 60 kW machine in 2020.

### Sales opportunity: industrial hemp

The USA legalized the cultivation of industrial hemp in 2018 with the Farm Bill Act. For this cannabis strain, the THC content is less than 0.3%. Thus, the use as a drug is not possible. Industrial hemp is used in paper production, as textile fibre, in food and beverages, as a food supplement, as a building material and for other industrial applications.

At the end of July, EnWave acquired the first customer to process industrial hemp: Electric Farms operates a licensed hemp flower production facility in Tennessee. The raw material is dried in a 10 kW REV™ plant.

### Further sales potential opens up in the food industry

Although the REV process competes with other established shelf life processes, it is clearly superior to them in terms of product quality. In addition, it offers many economic advantages. EnWave's list of customers in the food processing sector already includes a large number of well-known brand names (Arla, FrieslandCampina, Bonduelle), others are likely to follow soon.

### EnWave: Competitive environment and growth strategy

In the field of mechanical engineering, EnWave is generally in competition with special machine manufacturers such as GEA or other processes for processing biological products. However, in many aspects that play a significant role in the marketing of higher-value products, the REV™ procedure is qualitatively and, in most cases, economically superior to competitive procedures. In this respect, the REV™ technology currently has a unique selling point. In future EnWave could be exposed to stronger competition again later through copies and the optimization of other processes. However, given the market growth (especially in the still young cannabis industry) and market size, we see sufficient scope for the Group to continue growing at double-digit rates. For example, Grand View Research, Inc. estimates global sales of legally approved cannabis products at USD 66 bn in 2025 (CAGR 2018-2025: +23.9%). According to MarketsandMarkets™ Research, the market for vaccines is expected to grow by 6.7% p.a. to a sales volume of more than USD 50 bn by then.

For processed foods, EnWave already counts a large number of world-renowned manufacturers among its customers. To date, the share of EnWave products in the total sales of these companies is still negligibly low, as the use of the REV™ process usually only concentrates on niches such as snacks. Despite the competition, we see a good opportunity to significantly increase sales here.

OFD Foods LLC, founded in 1963, is one of NutraDried's largest competitors for food products. The non-listed company from Albany in the USA processes 20,000 tonnes of intermediate products annually in three production facilities in Oregon with 400 employees and is thus the world's largest processor of freeze-dried foods and pharmaceutical products. However, the total market size for dried and frozen fruits and vegetables of more than USD 77 billion offers EnWave/NutraDried enough room for strong growth over several years.

### The focus of expansion is currently NutraDried

Four measures were specified for the subsidiary in order to significantly increase sales:

- New distribution channels are to be opened up, in particular the segment of organic shops is to be covered more strongly.
- Stronger online marketing via Amazon platforms.
- Marketing gets feedback from 2000 consumers.
- New flavours, packaging and package sizes, supported by a new web presence, are to fulfil customer wishes even better.

Since 1 May 2019, a dedicated sales team has been promoting sales to other retailers, particularly in the USA. The commissioning of a further REV™ machine (120 kW) will increase production capacity by 60% in the current 2019/20 financial year. Sales are thus expected to grow organically continuously over the next few years with increasing market penetration.

### Machine sales driven by cannabis and food processors

For the time being, hemp processing companies will dominate the sales development in the machine sales segment. In the medium term, the food industry offers significantly greater potential for REV™ machine sales than the cannabis market. The main sales drivers are existing customers who have already successfully tested small machines and are now ordering larger machines, mostly in the 100 – 120 kW category. A contract was signed with Bonduelle for the production of dehydrofrozen vegetables in North America. In order to maintain the exclusive regional distribution rights, a machine with a capacity of 400 kW would have had to be ordered by 30 September, the largest machine ever manufactured by EnWave. The order was postponed at the end of September, but we estimate that it will be made up in the current 2019/20 fiscal year.

### Pharmaceutical industry to gain importance in the future

REV™ technology can also be used to prepare pharmaceuticals, including vaccines. The preparations treated in this way have a longer shelf life and do not require cooling until they are injected; a great advantage especially for use in many developing countries. At present, several trials are underway with pharmaceutical companies, among others the German mechanical engineering company GEA is testing the process together with Merck KGaA.

### License revenues: Cannabis products generate strong momentum

In the coming years, license revenues from the sale of cannabis products are expected to represent a strong growth moment. This is due to the higher average revenues from pharmaceutical products. Cannabis, for example, is sold by Aurora at a price of CAD 8.60 per gram, food below CAD 0.180 per

gram (estimated factor cannabis/food: > 480) and snacks at a price of CAD 12.00 per 6 ounces (estimated factor > 125). We expect license revenues to grow by 12% in 2019/20, as in subsequent years.

### Sales and earnings expected to rise significantly

For 2019/20, we expect Group sales to increase by 47% to CAD 53.0 million, driven by machine sales (+60%) and NutraDried (+45%). The EBITDA margin should rise significantly from 6.7%(e) to 9.7%. The Group should then also report - small - earnings per share; our estimate is CAD 0.024. Operating cash flow should exceed investment payments.

In the years to come, we expect a sustained high level of sales momentum with high double-digit growth rates in machine sales and NutraDried. Profitability should improve significantly. We expect earnings per share of CAD 0.062 as early as 2020/21, supported by an EBITDA margin of 12.8%.

## SWOT analysis

strengths	<ul style="list-style-type: none"> <li>■ Unique proven technology</li> <li>■ Worldwide renowned industry leaders as reference users</li> <li>■ Already represented in several industries</li> <li>■ Reliable license agreements</li> <li>■ NutraDried as a model company</li> <li>■ Multiple revenue streams</li> <li>■ patents</li> </ul>	chances	<ul style="list-style-type: none"> <li>■ The process can also be used in many other industries</li> <li>■ Target markets with sales in the billions</li> <li>■ Sale/spin-off of NutraDried</li> <li>■ Potential takeover candidate</li> </ul>
weaknesses	<ul style="list-style-type: none"> <li>■ Small team</li> <li>■ Still in the red</li> <li>■ Lack of industry diversification</li> <li>■ High concentration on cannabis processing companies</li> <li>■ Few large customers (Costco, Starbucks) for NutraDried brand</li> </ul>	risks	<ul style="list-style-type: none"> <li>■ Changes in cannabis regulation could massively reduce turnover</li> <li>■ The emergence of new procedures by competitors</li> <li>■ Enticement of key personnel</li> </ul>

Source: own representation

## Company valuation

For the valuation of the company we use several methods. We do not carry out a peer group analysis as there are no directly comparable listed competitors of EnWave. We use the meaningful Sum-of-the-Parts and DCF methods.

### Sum-of-the-parts analysis

Based on the relevant business areas, we evaluate the segments of special machinery manufacturing and food manufacturers separately on the basis of industry multiples. In addition, the present value of the expected license revenues can be determined.

1. We consider a rating of four times the turnover to be appropriate for **special machine manufacturers**. Based on the segment revenue of CAD 13.3 million expected for 2019/20, this results in a market value of CAD 53 million.
2. **Food manufacturers** are median rated at 1.9 times the revenue, specialists even at 4 times. On the basis of the expected revenue of CAD 53.5 million for 2020/21, NutraDried can calculate a fictitious market capitalization of up to CAD 214 million. Currently, NutraDried's high share of sales still distorts consolidated sales. However, the visibility of the core business (machine construction) will gradually increase. The fact is – NutraDried is a customer of the parent company EnWave. In order to resolve this conflict, EnWave has identified several options. For example, shares of NutraDried could be placed on the stock exchange. Or the company could be split off and the shares transferred directly to the EnWave shareholders.
3. **Present value of expected royalty income:** We expect royalty income to increase by 12% annually through 2021/22 and by 10% thereafter over the next 18 years. Discounted at 7%, this results in a present value of CAD 18.8 million.

Overall, this results in a market value of CAD 286 million – CAD 2.60 per share or CAD 2.25 for 127.193 million shares (fully diluted) – on a sum-of-the-parts basis.

### DCF model

In view of high upfront expenditures, especially in marketing, and still lower depression effects, EnWave has so far reported low EBITDA (9M 2018/19: CAD 2.3 million, 8.6% of sales; 2018/19e: CAD 2.4 million, 6.7% of sales). However, we expect an EBITDA margin of 14.5% from 2022/23 at the latest. With expected sales of CAD 77 million in the 2020/21 financial year, EBITDA would amount to CAD 9,8 million, and CAD 15.5 million in the 2021/22 financial year for CAD 107 million. Since high advance payments are agreed for machine sales and investments are expected to amount to around

CAD 3 million p.a., EnWave will generate a free cash flow of more than CAD 12 million p.a. from 2022/23 in our forecast model. This results in a fair value of CAD 2.64 in our DCF model (beta: 1.6; interest: 11.6%).

### **Conclusion & investment recommendation**

EnWave is a Canadian based, TSX-V listed company (ENW.V) which has developed REV™ – an innovative, method, based on microwave vacuum technology for the precise dehydration of organic materials. The dehydration process is much faster and cheaper compared to other established methods. The food and pharmaceutical industry including legal cannabis (e.g. Bonduelle, Arla Foods, FrieslandCampina, Merck und Aurora Cannabis) are driving demand.

The wholly owned subsidiary NutraDried Food Company manufactures and sells all-natural dairy snack products, including the MoonCheese™ brand in the Unites States (mainly distributed by Costco and Starbucks).

By current transaction multiples this subsidiary on its own covers the current market capitalization of about CAD 212 million. Taking the additional REV™ business and the present value of future licence fees into account the valuation of EnWave should be substantially higher in the future.

**Based on a sum-of-the-parts approach and verified by our DCF model, we formulate a price target of CAD 2.60 for the EnWave share. The investment recommendation of our initial study is "Buy".**

## Appendix

### Profit and loss statement

<i>all figures in CAD million</i>	<i>Financial year: 1 October – 30 September</i>						
	<b>2016/17</b>	<b>2017/18</b>	<b>2018/19e</b>	<b>2019/20e</b>	<b>2020/21e</b>	<b>2021/22e</b>	<b>2022/23e</b>
<b>Revenues by segments</b>							
Equipment sales and construction contracts	7.764	4.900	8.330	13.328	21.991	32.987	46.182
Product sales	6.552	16.474	26.358	38.220	53.508	72.235	93.906
Equipment rental fees, testing fees and other	1.268	.880	.704	.704	.704	.704	.704
Royalties and licensing fees	.370	.571	.640	.716	.802	.898	1.006
<b>Consolidated Turnover</b>	<b>15.954</b>	<b>22.825</b>	<b>35.835</b>	<b>52.968</b>	<b>77.005</b>	<b>106.824</b>	<b>141.798</b>
<b>Revenues by segments yoy</b>							
Equipment sales and construction contracts		-36.9%	70.0%	60.0%	65.0%	50.0%	40.0%
Product sales		151.4%	60.0%	45.0%	40.0%	35.0%	30.0%
Equipment rental fees, testing fees and other		-30.6%	-20.0%	0.0%	0.0%	0.0%	0.0%
Royalties and licensing fees		54.3%	12.0%	12.0%	12.0%	12.0%	12.0%
<b>Consolidated Revenues</b>		<b>43.1%</b>	<b>57.9%</b>	<b>47.0%</b>	<b>45.4%</b>	<b>38.7%</b>	<b>32.7%</b>
<b>Consolidated Revenues</b>	<b>15.954</b>	<b>22.825</b>	<b>35.835</b>	<b>52.968</b>	<b>77.005</b>	<b>106.824</b>	<b>141.798</b>
EBITDA	.006	1.513	2.406	5.118	9.827	15.487	22.677
EBITDA margin	0.0%	6.6%	6.7%	9.7%	12.8%	14.5%	16.0%
Depreciation of property, plant and equipm.	1.964	1.980	1.980	1.980	1.980	1.980	1.980
Amortization of goodwill							
EBIT	-1.958	-0.467	-0.426	3.138	7.847	13.507	20.697
EBIT margin	-12.3%	-2.0%	1.2%	5.9%	10.2%	12.6%	14.6%
Financial result	-0.035	.060	.143	.150	0	0	0
<b>Profit before tax</b>	<b>-2.986</b>	<b>-407</b>	<b>569</b>	<b>3.288</b>	<b>7.847</b>	<b>13.507</b>	<b>20.697</b>
Income tax rate						15.0%	15.0%
Income taxes	0	.538	.650	.650	.650	2.026	3.105
<b>Annual surplus</b>	<b>-2.986</b>	<b>-0.945</b>	<b>-0.081</b>	<b>2.638</b>	<b>7.197</b>	<b>11.481</b>	<b>17.593</b>

Source: EnWave Corp (2016/17-2017/18), own calculations (2018/19 ff)

## Balance sheet (in CAD million)

Assets	2016/17	2017/18	2018/19e	2019/20e	2020/21e	2021/22e	2022/23e
Plant equipment	2.675	4.452	4.500	7.020	10.140	13.860	18.180
Intangible assets	.946	.952	.650	.450	.400	.350	.300
<b>Non-current assets</b>	<b>3.621</b>	<b>5.404</b>	<b>5.150</b>	<b>7.470</b>	<b>10.540</b>	<b>14.210</b>	<b>18.480</b>
Cash and cash equivalents	1.319	9.101	22.594	23.562	30.638	42.399	59.672
Restricted cash	.250	.250	.250				
Trade receivables	2.617	3.522	4.300				
Due customers on contract	2.378	.727	1.000				
Prepays other receivables	.186	.285	.800				
Inventory	2.973	2.873	7.200				
<b>Current assets</b>	<b>9.723</b>	<b>16.758</b>	<b>36.144</b>	<b>37.112</b>	<b>44.188</b>	<b>55.949</b>	<b>73.222</b>
<b>Liabilities and Equity</b>	<b>2016/17</b>	<b>2017/18</b>	<b>2018/19e</b>	<b>2019/20e</b>	<b>2020/21e</b>	<b>2021/22e</b>	<b>2022/23e</b>
<b>Current liabilities</b>	<b>3.222</b>	<b>4.747</b>	<b>9.555</b>	<b>9.187</b>	<b>12.137</b>	<b>16.087</b>	<b>20.037</b>
<b>Non-current liabilities</b>	<b>.090</b>	<b>.493</b>	<b>.570</b>	<b>.550</b>	<b>.550</b>	<b>.550</b>	<b>.550</b>
Share capital	54.967	63.391	79.000	79.800	79.900	80.200	80.700
Warrants	.749	1.895	1.700	.900	.800	.500	0
Contributed surplus	7.322	7.582	7.582	7.582	7.582	7.582	7.582
Foreign currency translation reserve	.430	.548	.548	.500	.500	.500	.500
Deficit	-55.199	-56.494	-56.575	-53.937	-46.741	-35.260	-17.667
<b>Total equity</b>	<b>8.269</b>	<b>16.922</b>	<b>32.255</b>	<b>34.845</b>	<b>42.041</b>	<b>53.522</b>	<b>71.115</b>
<b>Balance sheet total</b>	<b>13.344</b>	<b>22.162</b>	<b>41.294</b>	<b>44.582</b>	<b>54.728</b>	<b>70.159</b>	<b>91.702</b>

## Further key financial figures

Equity (million)	10.032	16.922	32.255	34.845	42.041	53.522	71.115
<b>Equity ratio</b>	<b>75.2%</b>	<b>76.4%</b>	<b>78.1%</b>	<b>78.2%</b>	<b>76.8%</b>	<b>76.3%</b>	<b>77.6%</b>
Net debt	0	0	0	0	0	0	0
<b>Payout ratio</b>	<b>0</b>						
Number of shares at year-end (million)	90.800	99.510	105.000	110.852	116.299	121.746	127.193

## Values per share (in CAD)

Earnings	-0.037	-0.013	-0.001	.024	.062	.094	.138
Dividend	0	0	0	0	0	0	0
Cash flow	0	.029	.017	.040	.079	.111	.154
Book value (including goodwill)	.091	.170	.307	.314	.361	.440	.559

Source: EnWave Corp (2016/17-2017/18), own calculations (2018/19 ff)

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#### Competent supervisory authority:

Federal Financial Supervisory Authority (BaFin)  
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### History of the investment ratings for EnWave Corp.

Date	Analyst	Recommendation	Target price	Last closing price
2019-11-12	Karsten Rahlf	Buy	CAD 2.60	CAD 1.91