



carmanah®



People. Planet. Profit.
Carmanah Technologies

Carmanah Technologies Corp.
**CORPORATE SOCIAL
RESPONSIBILITY REPORT**

2018

Message from the CEO

In 2015, Carmanah embarked on the journey to track carbon emissions from our Headquarters in Victoria, BC, and committed to publishing annual reports on our journey as a triple bottom line company. Now in our fourth year, I am happy to report that we are still on track and seeing much positive progress. Our carbon emissions are at an all-time low. Our commitment to our people, and the people in the communities in which we do business, has remained strong, with many initiatives highlighted within this report that we are truly proud of. We have done this all while maintaining a strong financial profitability, proof that the triple bottom line commitment—people, planet, and profit—remains a core value of our company.

Throughout our past reports we have spoken of Carmanah's circle of influence, acknowledging that much of our effect is outside of the walls of our head office. In 2017, we reflected on this by thoroughly reviewing our manufacturing and supply chain management. In 2018, we took the information we gathered and channeled it into a supplier code of conduct, which we now have in place with our tier one suppliers and manufacturing facilities. Our Supplier Code of Conduct can be found on our website within the Corporate Governance section.

In 2018, we announced the plans to divest of our Marine, Airfield Ground Lighting, and Obstruction businesses to SPX Corporation. This transaction was completed in January 2019. We are pleased to have completed this important transaction and wish SPX Corporation and our former colleagues great success as they embark on an exciting future of growth and opportunity. Equally, we look forward to focusing on the abundant prospects for growth and development in our retained businesses. One of these retained businesses is Carmanah Traffic, which grew in 2018 through the acquisition of Portland-based company Information Display Company, one of the traffic industry's most respected names in the radar speed sign business. Carmanah has since integrated the Information Display Company business with Carmanah Traffic, which now provides a more complete product offering both to Carmanah Traffic's distributors and end customers.

We are proud of the achievements outlined in the pages that follow but do acknowledge that we still have much room for growth. Carmanah will continue to focus on financial profitability and the growth of our retained businesses, while still maintaining a strong commitment to our planet and our people. We appreciate the feedback from our shareholders and our community, and we thank you for following our progress. As we continue this sustainability journey, we encourage your feedback and appreciate your support.

Mr. John Simmons
 Chief Executive Officer
 April 22, 2019




Our Triple Bottom Line Strategy

Carmanah designs, develops, and distributes renewable and energy-efficient technologies with installations in over 110 countries worldwide. The positive environmental impacts of Carmanah's products include a reduction in greenhouse gas (GHG) emissions and a decrease in reliance on the electrical grid.

In 2015, Carmanah embarked on publishing an annual Corporate Social Responsibility Report, in which we proudly set goals and report on our corporate triple bottom line activities.

Our triple bottom line commitment means doing business in a manner that supports people, planet, and profit. We are committed to minimizing the environmental impact of our operations and supporting the health, wellbeing, and education of our employees and the people in the communities we interact with and serve. We continue to believe that these activities will benefit both the environment and society while simultaneously enhancing our corporate profitability and value. We have seen progress within many of our initiatives.

The first step in our strategy was focusing on reducing the impact of our Victoria, Canada, Headquarters. Strong leadership in these initiatives must start at the core of the company as a precursor for engaging our other offices and setting up our manufacturers and suppliers to comply with our future sustainable practices.

Since 2015, we have established quarterly carbon reporting within our Victoria office, which has allowed us to monitor and manage our emissions generated through our operations. We have since been able to minimize our impacts and have improved many facets of our operations to reduce our carbon emissions. Our Victoria office also celebrates its fourth year 99% waste free, with a recycling system so streamlined that it's almost impossible to throw something away.

In 2017, we shifted our focus and took a thorough look at our manufacturing and supply chain. This led to our 2018 actions: creating and publishing a Supplier Code of Conduct on our website and engaging with our tier one manufacturing and supply chain to obtain their commitment to following its guidelines. We will check in with our partners on an annual basis to ensure commitment.

In 2018, and in future years, our goal remains to continue to reduce our environmental impact, while supporting and strengthening the communities in which we do business. We will continue to develop initiatives within our areas of influence that will reduce the environmental impact of our company and increase the social and community wellbeing of our stakeholders.

About This Report

We are pleased to share our fourth annual Corporate Social Responsibility (CSR) report, which summarizes our triple bottom line performance for our 2018 fiscal year. This report is focused solely on our Victoria, Canada, Headquarters. The "Planet" category in this report includes environmental metrics for Scope 1, 2, and 3 Greenhouse Gas (GHG) emissions from our Headquarters. In relation to Headquarters operations, we identified areas in which we have excelled and will discuss areas in which we need to focus our attention in 2019 and future years. This quarterly carbon check-in has proved helpful in focusing our efforts, as our carbon emissions in 2018 were the lowest to date.

Our performance indicators in the "People" category include current internal initiatives at our Victoria Headquarters, which we have highlighted in the following pages. A successful triple bottom line company does not neglect its financial performance, and as such we have included a high-level summary of the financials from our 2018 Year End Financial Statements.

Our financial information is audited by an independent, registered public accounting firm. Our greenhouse gas emission reporting has been compiled by Synergy Enterprises and is aligned with the reporting guidelines defined in *The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition*. Emission factors have been reviewed and approved annually by carbon management provider Offsetters. Going forward, our objective is to continue reporting on our sustainability metrics every year in accordance with the criteria outlined by the GRI G4 Reporting Guidelines. Our next CSR report, which will cover the 2019 fiscal year, can be expected in Q2 of 2020.

Discontinued Operations

On December 12, 2018, we announced our intention to divest of the Marine, Airfield Ground Lighting, and Obstruction businesses to SPX Corporation. The divestiture of these businesses was completed on February 1, 2019 ([see press release for more details](#)). When the operation is classified as a discontinued operation, the carbon calculation is re-presented as if the operation had been discontinued from the start of the comparative year. This recalculation has been completed with the following major adjustments:

- Divested businesses' employee travel emissions removed from Scope 3 calculation.
- Shipments that could be linked to divested businesses with certainty (ie, through division codes and tags) were removed from Scope 3 calculation. This may result in a small over-statement of shipping emissions in the recalculated emissions.
- Commuting data reduced by the average emissions of the number of employees in each of the divested businesses annually. Commuting data is anonymous and therefore could only be reduced based on averages.
- Changes for natural gas, electricity, water, waste, paper, and service calls were considered immaterial (under 5% of the total carbon footprint), and therefore not calculated.

| YEAR | REDUCTION |
|------|-----------|
| 2018 | 15% |
| 2017 | 10% |
| 2016 | 10% |
| 2015 | 10% |
| 2014 | 16% |

When we removed Marine, Airfield Ground Lighting, and Aviation Obstruction business statistics from our last five years of operation, we saw an overall reduction in carbon emissions, as outlined in the table to the right:

DISCLAIMER

This document may contain forward-looking statements. Often, but not always, forward-looking statements can be identified by the use of words such as "expects," "plans," "estimates," "intends," "believes," "could," "might," "will" or variations of such words and phrases. Forward-looking statements involve known and unknown risks, uncertainties and other factors that may cause the actual results, performance or achievements of Carmanah to be materially different from any future results, performance or achievements expressed or implied by the forward-looking statements. These statements are based on management's current expectations and beliefs and are subject to a number of risks and uncertainties. Examples of forward-looking information in this release include, but are not limited to, statements with respect to future revenue growth. For additional information on these risks and uncertainties, see Carmanah's most recently filed Annual Information Form (AIF) and Annual Management Discussion and Analysis (MD&A), which are available on SEDAR at www.sedar.com and on the company's website at www.carmanah.com. The risk factors identified in Carmanah's AIF and MD&A are not intended to represent a complete list of factors that could affect Carmanah. Accordingly, readers should not place undue reliance on forward-looking statements. Carmanah does not assume any obligation to update the forward-looking information contained in this document.

Carmanah at a Glance

| | | |
|----------------------------------|---|---|
| Publicly traded | TSX:CMH | |
| Year founded | 1996 | |
| Corporate headquarters | Victoria, Canada | |
| Office locations | Victoria, Canada Schwerin, Germany Edinburgh, United Kingdom Porvoo, Finland* | Norwich, United Kingdom* Tallinn, Estonia* Porirua, New Zealand* Singapore, Singapore* |
| Brands | Sol, Inc Sabik Offshore Sabik Marine* Vega* Ekta* | |
| Businesses | Signals: <ul style="list-style-type: none"> • Marine* • Airfield Ground Lighting* • Aviation Obstruction* • Traffic • Telematics Offshore: <ul style="list-style-type: none"> • Offshore Wind Illumination: <ul style="list-style-type: none"> • Illumination | |
| Employees | Approximately 90 globally after divestiture | |
| 2018 Revenue | Approximately \$31 million USD | |
| Carbon Reporting Period | January 1, 2018 - December 31, 2018 | |
| Inventory Boundary | Scope 1 (Direct emissions): Natural gas Scope 2 (Indirect emissions from purchased electricity): Electricity Scope 3 (Indirect emissions from other sources): Water, waste, paper, travel, shipping, service calls, staff commuting | |
| Sustainability Consultant | Synergy Enterprises | |
| Reporting Guidelines | Aligned with those defined in <i>The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard, Revised Edition</i> (The GHG Protocol). Emissions factors reviewed and approved by Offsetters. | |
| Contact | Corporate Social Responsibility csr@carmanah.com 250-380-0052 | |

* As these are now considered discontinued operations, the Airfield Ground Lighting, Aviation Obstruction, and Marine division's financial and tCO₂e contributions are not included in this report. See Discontinued Operations section of this report for more details.

Our Businesses

Since 1996, we have earned a global reputation for delivering durable, dependable, efficient, and cost-effective solutions for industrial applications that perform in some of the world's harshest environments. We manage our business within three reportable segments: Signals, Illumination, and Offshore. The Signals segment serves the Traffic and Telematics markets. The Illumination segment provides solar-powered LED outdoor lights for municipal and commercial customers, while the Offshore segment specializes in the provision of comprehensive safety and marking systems for offshore wind farms. For more information, please read our 2018 Q4 MD&A.

Each of our segments utilizes energy-efficient technology through solar or LEDs. Our products either focus on moving customers from grid infrastructure reliant technologies to LED and solar solutions or increases the useful life of a product through the addition of solar technology.



TRAFFIC

FOCUS: Installing solar flashing beacons, including pedestrian crosswalk beacons, LED enhanced signs, radar speed signs, school zone flashing beacons, and 24-hour roadway beacons, across North America.

SUSTAINABILITY HIGHLIGHTS: Helped ensure the rectangular rapid flashing beacon, an effective, widely used traffic safety device, remained a permissible crosswalk solution in the US following the termination in 2017 of its original interim approval.



ILLUMINATION

FOCUS: Providing street and roadway, pathway and park, parking lot, perimeter and security, and general area LED lighting.

SUSTAINABILITY HIGHLIGHTS: Illumination products promote dark-sky compliance, helping reduce light pollution through scheduled dimming, keeping lights no brighter than necessary, only placing light where it's intended, minimizing blue light emissions, and fully shielding lights to point only downwards.



OFFSHORE

FOCUS: Providing integrated marine aids-to-navigation, ID marking, and aviation obstruction lighting for the complete lifecycle of a wind farm, including temporary (construction) and permanent (operations).

SUSTAINABILITY HIGHLIGHTS: Sabik Offshore has marked over 2,200 offshore wind structures, enough to power more than 10 million homes. The Sabik Offshore office, located in Schwerin, Germany, is powered by energy generated through offshore wind.



TELEMATICS

FOCUS: Offering remote asset tracking and data capture/transmission powered by solar for new or retrofit devices.

SUSTAINABILITY HIGHLIGHTS: Telematics allows for remote monitoring for just about any application that requires it, making both the item and its monitoring more sustainable through reduced trips to check applications and streamlined maintenance schedules.

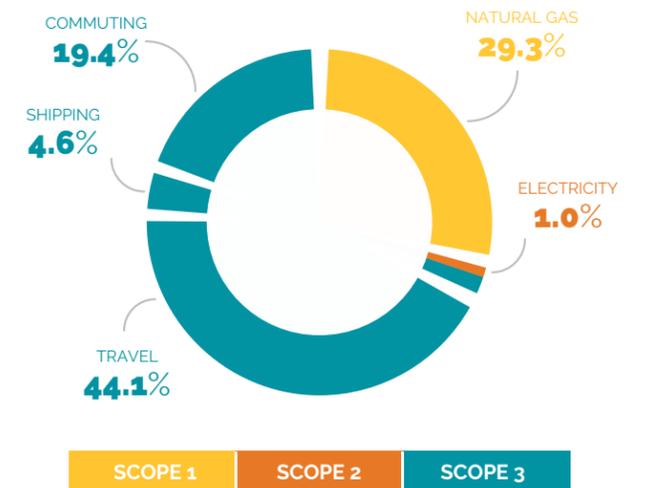


PERFORMANCE IN REVIEW

In early 2015, we embarked on a journey to track and reduce the carbon emissions generated by our Victoria Headquarters. Consistently, travel, shipping, and employee commuting are significant emission sources that could use our attention. This carbon reporting is now part of our internal quarterly KPI reporting, which provides the team with a quarterly check-in regarding how we are doing. Often these quarterly reports spur behaviour changes that are positive towards reducing our overall annual carbon impacts. Monitoring our carbon emissions is important to us, as we see this as the first step in expanding our triple bottom commitment. In 2018, we are proud to announce that our emissions were 27% lower than in 2017, and 23% lower than our 2014 baseline. This significant decrease was due to reductions in electricity use, travel, and shipping.

ANNUAL EMISSIONS (tCO₂e*) – VICTORIA HQ

Our total emissions in 2018 were **27% lower** than in 2017 (23% lower than our 2014 baseline).



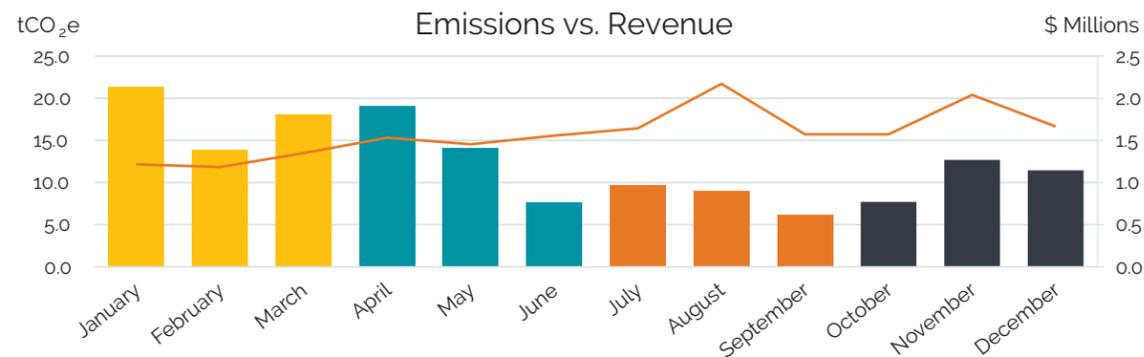
* Tonnes of Carbon Dioxide Equivalent.

| | tCO ₂ e | tCO ₂ e / \$ mil | tCO ₂ e / FTE |
|------|--------------------|-----------------------------|--------------------------|
| 2014 | 196.9 | 12.97 | 5.05 |
| 2015 | 239.4 | 15.91 | 5.09 |
| 2016 | 203.9 | 12.73 | 3.78 |
| 2017 | 206.2 | 13.90 | 4.39 |
| 2018 | 150.7 | 7.95 | 3.50 |

CARBON FOOTPRINT SUMMARY

Measuring our carbon footprint allows us to understand our greatest areas of impact and best opportunities for reduction. Scope 3 activities drive 69.7% of emissions, with travel and staff commuting the two largest contributors to the overall carbon footprint. Due to increased employee awareness of the effects of electricity use, travel, and shipping, emissions in our Headquarters have been reduced from 2017 levels. We also had a mild winter here in Victoria, which naturally lowered our electricity and natural gas consumption.

2018 MONTHLY CARBON FOOTPRINT



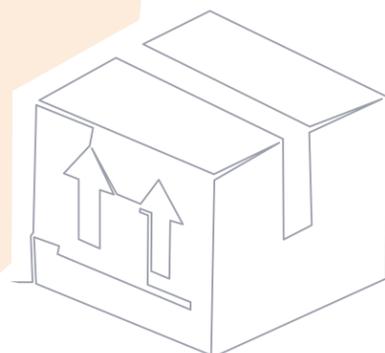
We encourage our staff to have their personal packages delivered right to the office!

Why?

Not only does this help the team manage their personal time, but it also allows us to have a shipping and packing reuse area in our office.

When our orders arrive, we save the boxes and stuffing, keeping them for whoever needs them for an outbound package.

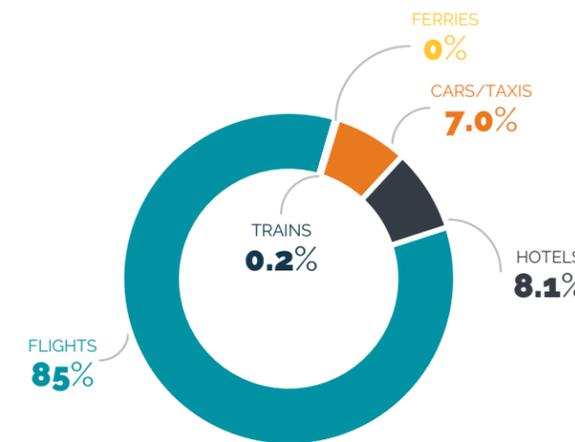
Reusing at its finest.



SHIPPING

Shipping emissions in 2018 were the lowest ever recorded, with a **48% reduction** over 2017. This reduction was achieved by an overall decrease in the number of shipments sent from our Victoria Headquarters, and an overall shortage of average travel distance for each shipment. We no longer send product specification sheets and promotional material to any of our last mile partners, which we suspect plays a role in this reduction. We also saw a 29% decrease in shipping in 2017 over 2016, so we hope to continue this positive trend in the coming years.

In 2018, shipping accounted for a total of 4.6% of our overall carbon footprint.



| | # OF TRIPS | KM TRAVELED | tCO ₂ e |
|------------|------------|-------------|--------------------|
| FLIGHTS | 310 | 533,161 | 56.2 |
| FERRIES | 10 | 530 | 0.1 |
| TRAINS | 10 | 845 | 0.1 |
| CARS/TAXIS | 273 | 19,454 | 4.7 |
| HOTELS | 238 nights | | 5.4 |

TRAVEL

Emissions from business travel remain the largest portion of Carmanah's carbon footprint, contributing 44.1% of total emissions. In 2018, we took 123 fewer flights, travelling a combined 553,161 km by plane, which led to a 38% decrease in business flight travel. In 2017, we travelled a combined 950,000 km by plane.

As our facilities for teleconferencing and virtual meetings become more advanced, we have been able to reduce the amount of travel needed to conduct our normal course of business. That said, with customers, last mile partners, and Carmanah business operations spread globally, travelling is still an imperative part of doing business. Tracking our travel data and correlated tCO₂ emissions helps us to check in and make sure that the travel we have budgeted is really needed.

The divestiture of the Marine, Airfield Ground Lighting, and Obstruction businesses also will have a future reduction as our corporate team will no longer be traveling to the Marine offices, located in Finland, Estonia, Singapore, and the UK, for meetings. Our customer concentration is also more focused in North America post-divestiture, which should also reduce our future travel emissions. Carmanah still has offices in Germany and the UK, where the Offshore Wind team is located. We will continue to examine strategic methods of reducing corporate travel, and we hope to reduce this further in 2019.

Our colleagues, partners, and customers are located around the globe, and we value communication with them!

While we know that we will never eliminate our need to travel for business, the teleconferencing facilities in our Victoria office have helped us reduce our business travel by allowing us to host more online voice or video meetings. We expect this trend to continue in future years!

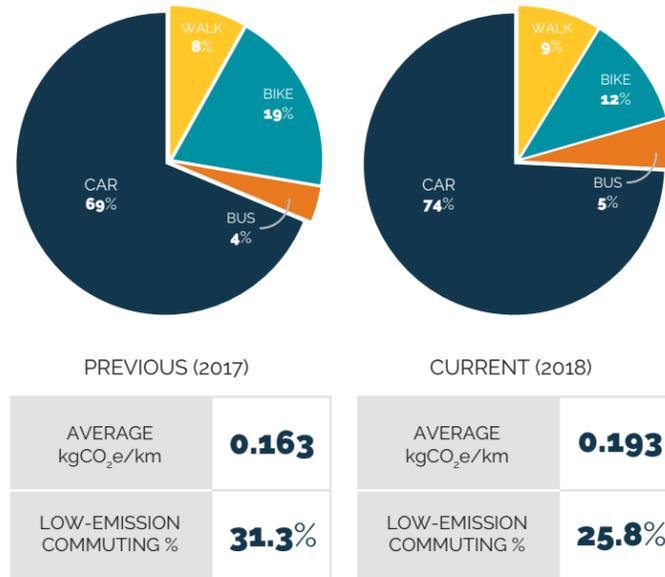


COMMUTING

In 2018, 26% of employees commuted through low emission transportation, such as biking, walking, or public transportation. Commuting via low emission transportation decreased by 3% in 2018, mainly due to fewer employees commuting via bike. The average commute for employees also increased by 0.9 km, which likely changed some employees' commuting behaviours towards using a personal vehicle instead of low emission transportation.

Carmanah still promotes low emission transportation through onsite bike facilities and by offering a discounted bus pass to employees.

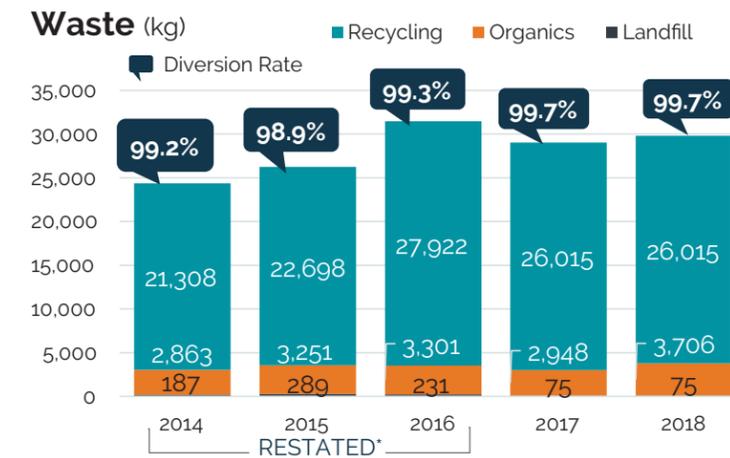
Carmanah's commuting-related emissions were 29.2 tCO₂ in 2018, which is equal to the emissions from 7.8 cars on the road for one year. We will continue to promote low-emission transportation with the hopes of further reducing commuting-related emissions in 2019. Bike to Work Week will continue to be an exciting springtime event, and we hope to have most staff participate in 2019.



WASTE

Our recycling station is something that we at Carmanah are very proud of, and we hope that the education about recycling that is provided at work will trickle into our employees' home lives. In 2018, we continued our trend of diverting 99.7% of waste from the landfill, with all organics, paper, glass, metals, plastics, cups, and drink containers recycled through our multi-stream recycling system. Our total weight of waste this year increased by 3%, but we also increased our organics waste by 26%, so we think that this increase comes from more employees using the compost at work. They must be enjoying the free fruit available in our kitchen!

For a company our size, we are extremely proud of how insignificant the emissions related to our waste are! Our employees love educating contractors and guests about how to recycle the waste they generate while visiting our office.



Did you know?

We work with local company **Pedal to Petal** who hauls away all of our compost and kitchen scraps by bike and turns it into rich, organic compost.

The nutrient-dense soil is then donated to urban farmers within the city of Victoria.



Image courtesy of the Daily.

SUPPLIER TRANSPARENCY CODE

Through the supply chain review, completed in 2017, we determined that as a forward-thinking and sustainable company, we should expand our Corporate Code of Business Conduct to include a Supplier Code of Conduct, which formalizes the key principles under which suppliers to Carmanah and its global subsidiaries are required to operate.

The principals in the Supplier Code of Conduct (the Code) state Carmanah's expectations for its suppliers on identified business practices.

In selecting suppliers, Carmanah seeks to do business with reputable business partners who are committed to ethical standards and business practices compatible with Carmanah's. Carmanah strongly encourages suppliers to exceed the requirements of this Code and promote best practices and continuous improvement throughout their operations.

Carmanah expects its suppliers to act responsibly in all respects and to ensure that no abusive, exploitative, or illegal conditions exist in their supply chains. Carmanah requires that suppliers comply with all applicable laws and regulations, as well as the principles set out in the Code. One tenet of this Supplier Code of Conduct is that Carmanah suppliers must not use any type of involuntary or forced labour; this prohibits, among other things, slave labour or business practices that in any way rely on, or encourage, human trafficking.

Other tenets in the code include the hours of work permitted per week, the requirement for a healthy and safe work environment, the equal treatment of women in the workplace, and the compliance with local environmental laws. Where there is no local legal requirement for any of these tenets, or if a local legal requirement is not as strict as the requirement included in this Code, Carmanah suppliers are required to follow the requirement in this Code.

In 2018, Carmanah obtained signed documentation with each tier one supplier and will monitor their compliance going forward.

My team's challenge of creating a highly efficient electronics design integrated with mechanical and firmware requirements often results in interesting ideas and discussions. I thrive on coming up with innovative solutions to the problems we encounter. Throw in keeping product costs as low as possible while keeping the design manufacturable, and my days are always interesting.

– Brent Sterzenbach, Manager, Electronics Design

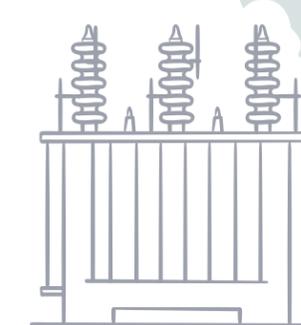
Rethinking Infrastructure

Infrastructure is a hot topic that Carmanah addresses throughout our businesses.

OUTDOOR LIGHTING

In the United States, the gap between infrastructure replacement required and work being completed is growing: electrical needs in the country will total **\$177 billion** by 2025, according to the American Society of Civil Engineers.

Sol, our Outdoor Lighting segment, helps combat the aging infrastructure problem by offering renewable, solar-powered solutions with no transformers to deal with, and no underground infrastructure to install, repair, or maintain. A solar lighting investment is a fixed cost that won't have fluctuating and unknown energy bills in the future. And it can help ease the strain on the electrical grid so upgrades can catch up to the demand. All these benefits add up to a product that we feel confident promoting as a way to rethink the current infrastructure plan for a more sustainable future.



Today, about **75%** of US transmission lines and transformers are **25-plus years old—** at or past the end of their useful life.*

* US Department of Energy.

TRAFFIC

For many decades, streets were designed almost exclusively for cars. The result of high-volume, high-speed roadways that don't take all road users into account has been increased fatalities. A 2018 *Globe & Mail* story reported the growing need for traffic calming measures. According to the latest US national data, 5,376 pedestrians were killed in the US in 2015, which ranks as the highest pedestrian death toll in nearly 20 years, and a 10% increase over 2014 numbers. Meanwhile, 283 pedestrians were killed in Canada the same year.

Today, the mindset is shifting to a multi-modal approach that addresses all road users, including pedestrians, wheelchair users, cyclists, bus riders, and more. A variety of initiatives have emerged over the years that address this shift:



- **VISION ZERO:** Achieving zero fatalities and serious injuries related to traffic incidents through roadway design, speed limits, technology, and more.
- **TRAFFIC CALMING:** Adding features like sidewalk extensions, street narrowing, and roundabouts to slow traffic and make it more comfortable and safer for walking.
- **WALKABILITY:** Improving how friendly an area is for walking by ensuring street design includes pedestrian crossings, sidewalks, quality footpaths, and reduced traffic volume and speeds.
- **SAFE ROUTES TO SCHOOL:** Ensuring children can walk or bike to school safely by implementing school zone speed limits with signs and beacons, and crosswalks with beacons and/or crossing guards.

Many of these initiatives require major infrastructure changes to existing roadways, but even smaller and less costly upgrades can make a difference. Our Traffic segment offers beacon and sign solutions that can help municipalities meet their goals for these initiatives without a substantial budget. For example, a radar speed sign can help slow traffic, while flashing crosswalk beacons can help draw attention to pedestrians. It is our philosophy that these smaller changes can be just as effective for changing the mindset of all road users.



Reclaiming the Night Sky

OUR DARK-SKY FRIENDLY LIGHTING

80% of people worldwide can't see the Milky Way—mostly the result of light pollution that keeps increasing as cities grow.

The widespread use of LEDs is part of the reason light polluted outdoor areas are growing by about 2.2% per year.

LEDs:

- The replacements for high-pressure sodium bulbs and other older types of lights
- Highly efficient
- Cheaper
- **Result: we use more of them**

Studies do not declare all hope is lost, but rather **stress the importance of lighting design and directing light where it's needed—on the ground—and not into the night sky.**

Source: Science Advances, 10 Jun 2016; Vol. 2, no. 6, e1600377. DOI: 10.1126/sciadv.1600377.

Since we have an outdoor lighting segment within our business, we must be conscientious of the light pollution that we could be helping to produce as more light systems are installed. As such, we provide products that help minimize our contributions to light pollution—and, hopefully, help reduce it as existing lights switch to become dark-sky friendly. We meet the International Dark-Sky Association's recommendations for minimizing light pollution by providing lighting solutions that are:

- **Only on when needed:** We recommend on-times that align with customer applications.
- **No brighter than necessary:** We determine the lowest recommended light levels for the application, allowing the light to dim during off-peak hours (usually overnight).
- **Only lighting the area that needs it:** Our calculations for lighting layout ensure optimal light coverage so that light is only placed where intended, helping improve visibility and overall light quality.
- **Minimizing blue light emissions:** Our recommended LED fixtures have a 3000K light output for a warm, comfortable colour temperature. Unlike in the past, these LED fixtures can reach this warmer output without using more power.
- **Fully shielded:** Our fixtures offer a built-in shield for a dark-sky friendly BUG rating (backlight, uplight, and glare measurements from a fixture).

We are proud to provide products that help minimize light pollution while still providing effective, reliable lighting solutions for our customers.



PEOPLE

Every Bit Helps

COMMUNITY BETTERMENT PROJECTS

In 2018, we celebrated our first Carmanah in the Community day, with the goal of volunteering our time with local organizations near our Victoria Headquarters. The staff donned Carmanah in the Community shirts and hit the streets.

- **MUSTARD SEED STREET CHURCH:** Half the volunteers headed to the Mustard Seed Street Church to organize food bank donations, collected for the 5,000 individuals who use the food bank each month. Thank you to the Mustard Seed team for showing us the ropes.
- **BEACH AND PARK CLEANUP:** Half the volunteers spread out across local parks and beaches to collect and sort trash and recycling in these local public spaces. Thank you to Surfrider Vancouver Island for providing supplies.

After helping the local environment and local people over the summer, we couldn't forget about local animals when the holiday season came around:

- **CHRISTMAS BAKE SALE:** Over several days, staff brought in their best baked goods for a Christmas bake sale in support of the local BC SPCA. Staff donated cash to enjoy their coworkers' treats, raising more than \$550. With a matching donation from Carmanah, we were able to give over \$1,100 to help the Victoria branch of the SPCA to provide care and shelter for animals in need.

Volunteering at the Mustard Seed Street Church was a great experience. Being able to jump into that community for a day and help felt very meaningful. The cheerful attitudes and laughter of everyone we met were contagious.

– Dakota Hoepfner, Marketing Coordinator

Lifelong Learning

LOCAL SCHOOLS COMMITMENT

We know that our best investment is in future generations, which is why we enjoy fostering young minds in our community. This year, we sponsored the Carmanah Technologies Clean Technology Award at the Vancouver Island Regional Science Fair, awarded to a student or pair of students who demonstrate an interest in clean technologies, renewables, or battery technology. The award went to Grade 6 students Fionuala Stafford and Isla Goertz for their project "Hunting Darkness," which looked at light pollution in their home community on Pender Island.

Later in the year, we worked with Lauren Babineau, the triathlete we sponsored through 2018, to develop a presentation and video on goalsetting. Lauren spoke to Grade 6 and 7 classes about making a plan, setting a benchmark, and beating it to achieve your dreams. This project was a follow-up to the outreach she did in 2017 with Big Brothers Big Sisters Victoria and their Go Girls! group mentoring program. We helped Lauren develop these positive outreach activities in return for financially supporting her triathlon training through 2017 and 2018.



Carmanah's comprehensive recycling program has taught me that most items have no place in the landfill. The program has certainly had an impact on my home recycling habits. Since working at Carmanah, I now make special trips to recycle items not accepted at curbside pickup or bring small items to the office to spare them from the landfill.

– Dayna Kasper, Director of Finance

Four Seasons of Fun

Our staff are proud to be part of a team that takes time to have fun together on a regular basis. Our dedicated Social Committee ensures inclusive events take place throughout the year—and other enthusiastic staff members also come up with activities that bring us together in innovative ways.



SPRING

PINK SHIRT DAY: Staff wore pink clothing to work in solidarity against bullying in school and celebrated inclusiveness with a team breakfast.

EARTH DAY POTLUCK: This year, we challenged our team to go plastic free for a potluck lunch, encouraging staff to think about the waste we encounter through food packaging, storage, and consumption.

TIMES COLONIST 10K: This annual event is a favourite among staff. This year's team included 12 Carmaniacs who placed eighth in the Team Technology & Media category.

SUMMER

BIKE TO WORK WEEK: During the annual Bike to Work Week, we had 22 riders logging 903 km over five days, resulting in 196 kg greenhouse gases saved.

ICE CREAM FRIDAYS: This has become an annual tradition in August to celebrate the work our team has done through the year to date with ice cream bars, DIY sundaes, and other cool treats.



FALL

GOODLIFE MARATHON: Our very active staff gets involved with races throughout the year. This fall event is a big one, since it includes marathon, half-marathon, and 8K distances, making it a good fit for runners of all levels. This year's Carmaniacs team included 7 people.

HALLOWEEN: Our annual Halloween activities include a costume contest featuring unique categories each year, as well as a team breakfast.



WINTER

CLOTHING SWAP: We organized a women's clothing swap this year among the staff, with great success, spurring on further plans to expand the concept to be open to everyone in 2019.

CAMPING TRIP: Staff organized a camping trip to Lake Cowichan in November—we are lucky to have such mild temperatures here on Vancouver Island to make camping possible so late in the year. The team plans to continue the tradition in 2019.

GIFT EXCHANGE AND CHRISTMAS SWEATER CONTEST: This year's festivities included a white-elephant style gift exchange, plus a sweater contest honouring the best in festive and cringe-worthy designs.

PROFIT

As a publicly traded company, we have a high level of commitment to all of our stakeholders, including those who hold shares in our stock (TSX:CMH). Importantly, we are proving that a commitment to our people and the community in which we live—as well as a commitment to reducing impacts on the planet—is entirely consistent and supportive of improving profitability.

Below are some highlights of our 2018 fiscal year. All figures below, unless otherwise stated, are for Carmanah's continuing operations and exclude the operating results from the Company's discontinued operations, which include the Power division (divested in 2017) and the Marine, Airfield Ground Lighting, and Aviation Obstruction divisions (divested in 2019).

2018 FISCAL REVENUES AND PROFITABILITY

For the year ended December 31, 2018, we generated revenues of \$30.7 million, up \$3.4 million or 13% over 2017 revenues of \$27.3 million.

- Signals generated revenues of \$14.8 million, up \$3.9 million or 35% over 2017, driven by increased sales in our Telematics vertical (up \$3.5 million) and our Traffic vertical (up \$0.4 million).
- Offshore generated revenues of \$11.8 million, down \$0.7 million or 6% over 2017, due to project delays that are expected to shift revenues into future periods.
- Illumination generated revenues of \$4.2 million, up \$0.3 million or 6% over 2017. We anticipated a moderate increase in 2018 revenues as 2017 was restricted by our ability to produce and ship due to component delays for our EverGen product. We resumed normal production and delivery lead times in the first quarter of 2018.

Gross margin percentage for the year was 36.9%, up from 35.3% in 2017.

Core operating expenditures for the year were \$12.2 million, up from \$11.2 million or 9% in 2017. The increase is due to an increase in amortization expenses relating to traffic control patents acquired in March 2018, combined with increased research and development expenditures.

Net loss for the year was \$0.8 million, which compares favourably to a net loss of \$1.5 million in 2017. The decrease is a direct result of increased revenues due to the growth of our Telematics vertical in 2018 and a higher gross margin.

For the year ended December 31, 2018, adjusted EBITDA was \$1.3 million or 4.4% of revenue, vs. \$1.6 million, or 5.9% of revenue in 2017. A table reconciling net income and adjusted EBITDA is included in this release.

"2018 continued to be a very active year for Carmanah, culminating with the announcement and subsequent divestiture of our Marine, Airfield Ground Lighting and Aviation Obstruction verticals to SPX Corporation on February 1, 2019," said John Simmons, CEO. "The cash proceeds of the SPX Divestiture were \$77.6 million, and our cash reserves are now approximately \$88.0 million. Management and the Board of Directors are currently evaluating our go-forward strategy and focus. Alternatives under consideration include investments and/or acquisitions that grow and support our residual business activities and returning cash to shareholders. These alternatives, as well as any additional alternatives not presently listed here, may be considered or utilized in whole or in part. We are also currently considering whether it is necessary for the Company to undertake a reorganization of its operations or restructuring of its businesses in order to achieve profitability in the years to come."

Highlights for the year are provided below:

| US\$ thousands | Twelve months ended December 31, | |
|-----------------------------|----------------------------------|---------|
| | 2018 | 2017 |
| Revenue | 30,719 | 27,313 |
| Gross margin | 11,339 | 9,647 |
| Core operating expenditures | 12,196 | 11,189 |
| Net income/(loss) | (775) | (1,532) |
| Adjusted EBITDA* | 1,333 | 1,614 |

COMPLETE SET OF FINANCIAL STATEMENTS AND MANAGEMENT DISCUSSION & ANALYSIS

2018 Financial Statements and Management's Discussion & Analysis are available on Carmanah's corporate website. To view these documents, visit: <https://carmanah.com/investors/financial-reports/>. Both documents are also filed on SEDAR (www.sedar.com). The financial information included in this release is qualified in its entirety and should be read together with the audited consolidated financial statements for the year ended December 31, 2018, including the notes thereto.

* NON-IFRS FINANCIAL MEASURES: EBITDA and Adjusted EBITDA. This news release presents information about EBITDA and adjusted EBITDA, both of which are non-IFRS financial measures, to provide supplementary information about 2018 operating performance. Carmanah defines EBITDA as net income or loss before interest, income taxes, amortization, and non-cash stock-based compensation. Adjusted EBITDA removes unusual or non-operating items from EBITDA, such as merger and acquisition costs, restructuring charges, asset write offs, and foreign exchange gains and losses. Carmanah uses these non-IFRS measures internally to make strategic decisions, forecast future results and evaluate its performance. EBITDA and adjusted EBITDA are not intended as a substitute for IFRS measures. A limitation of utilizing these non-IFRS measures is that the IFRS accounting effects of the non-recurring items do in fact reflect the underlying financial results of Carmanah's business and these effects should not be ignored in evaluating and analyzing Carmanah's financial results. Therefore, management believes that Carmanah's IFRS measures of net loss and the same respective non-IFRS measure should be considered together. Non-IFRS measures do not have any standardized meaning prescribed by IFRS and are therefore unlikely to be comparable to similar measures presented by other companies. Readers should refer to the "Non-IFRS Financial Measures" section of the Company's most recently filed MD&A for the three and twelve months ended December 31, 2018 for a more detailed discussion of these measures and their calculation.





People. Planet. Profit.
Carmanah Technologies

carmanah.com