

**2018** Responsible Care and Sustainability Report Summary



#### **ABOUT THIS REPORT**

Welcome to our 2018 Responsible Care® and Sustainability Report.

This is a condensed version of the full report, which is available onine at https://rc-sustainability-reports.methanex.com/2018/.

This report covers the period from January 1 to December 31, 2018. It focuses on Methanex's performance and impact in five key areas: Sustainable Energy and Methanol, Environment, Workplace, Community, and Product Stewardship.

We report on our activities and achievements as part of our commitment to Responsible Care and sustainability, our accountability to the public, and our pursuit of continual improvement.

This report includes descriptions of how we manage our material aspects. For some aspects, it also includes our quantitative measures, or key performance indicators (KPIs).

These KPIs help us drive progress and measure performance in key areas of Responsible Care and sustainability. They also reveal trends and help us identify issues that require further action.

Our reporting scope includes assets over which Methanex has direct or part ownership and full operational control. In the case of our wholly owned subsidiary Waterfront Shipping Ltd., our reporting boundary includes time- or spot-chartered vessels to the extent that Waterfront has commercial control through charter party contracts.

A printable, summary version of this report is available at https://www.methanex.com/responsible-care/responsible-care-sustainability-reports. Please visit our website for past reports and to learn more about Methanex, our product, and Responsible Care.

Please explore the report to find out about our initiatives and performance in 2018.

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This report may contain forward-looking statements. By their nature, such forward-looking statements involve risks and uncertainties that could cause actual results to differ materially from those contemplated by the forward-looking statements. For a discussion of these risks and uncertainties, please refer to the Risk Factors section of the Management's Discussion and Analysis, which can be found in our most recent Annual Report or on our website at www.methanex.com.



In 2018, Methanex saw improvements in many aspects of our Responsible Care and sustainability performance. These achievements were the result of well-established Responsible Care governance, strategies, and management systems.

Our seventh successful verification by the Chemical Industry Association of Canada (the most comprehensive review of our global Responsible Care program to date) soundly affirmed the strength of our Responsible Care ethic and management system. The verification team's praise for the level of knowledge, support, and enthusiasm for the Responsible Care Ethic and Principles for Sustainability they found throughout our regions is reflected in our performance. We still have work to do in some areas, but we're on the right track.

Last year we had very good results and solid progress in process safety, environmental performance, and social responsibility. We have achieved these results by continuously staying focused on our strategies for operational excellence, which include running safe and reliable plants. However, even with our steadfast commitment to a zero-injury workplace, we experienced a higher injury-frequency rate in 2018 than in 2017, and we realize we have more work to do to meet our occupational safety goals. We are confident that continuing to focus on Responsible Care leadership and cultivate a learning culture in our workforce will produce the results we're aiming for and have lasting effects on our team members.

We had zero significant spills in 2018. We have enhanced process-safety management systems and effective application of lessons learned to prevent spills to the environment. A focus on plant reliability, use of the latest technologies in our newer plants, and refurbishment of our older plants are measures contributing to sustained improvements in emissions intensity across our sites. We continue to incrementally improve our energy efficiency, minimize emissions, and conserve natural resources in manufacturing methanol while exploring opportunities to bring methanol into cleaner fuel and energy applications.

We also continue to identify, develop, and support emerging opportunities for methanol as cleaner energy and work closely with industry stakeholders in the areas of marine fuel, automotive fuel blending, and methanol to power. Through our wholly owned subsidiary, Waterfront Shipping, we operate a growing fleet of vessels capable of running on methanol and reducing emissions, in compliance with the International Marine Organization's (IMO) new requirements for low-sulphur fuels taking effect on January 1, 2020. Our work with partners in China to pilot the use of high-level blends of methanol as an automotive fuel is producing significant results. Two cities in China have recently converted the majority of their taxis to operate on 100% methanol fuel, and interest is growing for use of methanol as a clean-burning fuel to replace coal in the industrial boiler and kiln industries.

Methanex's global team and system of integrated capabilities enable us to deliver on our promise of unmatched, secure supply of methanol and Responsible Care leadership.

As the market for methanol continues to grow, so does the importance of our work in product stewardship. In 2018, we reached record

numbers of people with information about methanol and Responsible Care, one part of our multi-pronged approach to making sure methanol travels safely from origin to destination. Through well-established and industry-leading programs involving industry partnerships, inspection programs, Responsible Care seminars, collaboration with government, and coordination of emergency planning with community partners, we continue to evolve our Product Stewardship program to address changing needs. See our Product Stewardship chapter for many stories about our work in this area.

A network of global production sites, a fleet of dedicated ocean vessels, an integrated global supply chain, and highly responsive local customer service support allow us to carry out our business.

This network also allows us to create meaningful impacts in the world, both through the role that our product plays in everyday lives and in the many ways that we contribute to the communities where we operate and live.

Continuously developing our people is how we maintain our leadership position. In 2018, 185 team members spent approximately 7300 hours in leadership training, and even more engaged in our learning and development programs, a key pillar of our culture and one that we are continually improving. Every story in this report—from partnerships in Egypt and China to safety efforts for turnarounds, health promotion programs, collaborations with universities, and burgeoning seminars about Responsible Care—is evidence of the skill, innovation, and commitment our people bring to their work.

The consistent execution of our strategy happens at every level of our organization, from management to the teams in each of our regions—a far-reaching group united by our commitment to Responsible Care and to working together as One Team. Each year, I take pride in the ongoing dedication of our people and teams, not just at work but in the efforts they devote to giving back to the communities where they live. In 2018, we again made significant contributions in all of our locations around the globe, through corporate investments and the volunteer efforts of our people. Across these regions, nearly USD \$1.5 million and over 12,000 hours were spent supporting our communities. Giving back to our communities and being a good neighbour are expressions of our values and are fundamental to our culture.

Collaboration—within the company, and with our stakeholders—is essential to advancing our strategy. With talented, committed teams, sound practices based on the Responsible Care Ethic and Principles for Sustainability, and a firm commitment to operational excellence and Responsible Care leadership, we are creating a bright future, together.

Juffer

John Floren President and Chief Executive Officer





1426

team members

6

manufacturing sites

12

global office locations

11

methanol plants

9.4 million tonnes

production capacity in 2018

USD \$3.9 billion

in revenue



At Methanex, Responsible Care and sustainability mean that we adhere to the highest principles of health, safety, environmental stewardship, and social responsibility. We are committed to having a positive impact on the communities and environments in which we live and work, and to acting responsibly in everything we do.

#### **OUR BUSINESS**

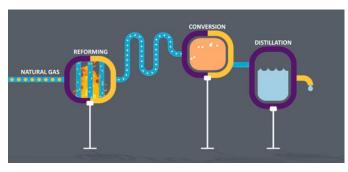
We are the world's largest producer and supplier of methanol to major international markets in North America, Asia Pacific, Europe, and South America.

Methanol (CH<sub>3</sub>OH) is a commodity chemical that is a key ingredient in a variety of chemical derivatives and serves as a building block to produce a multitude of everyday consumer and industrial items. Made of hydrogen, oxygen, and carbon, methanol can be produced from a variety of sources, including natural gas and coal, as well as renewable sources such as municipal waste, landfill gas, biomass, and captured carbon dioxide (CO<sub>2</sub>).

On an industrial scale, methanol is predominantly produced from natural gas by reforming the gas with steam and then converting and distilling the resulting synthesized gas mixture to create pure methanol. The result is a clear, liquid, organic chemical that is water soluble and readily biodegradable.

Approximately 55% of all methanol is used to produce traditional chemical derivatives, including formaldehyde, acetic acid, and a variety of other chemicals. Demand for traditional chemical applications is influenced by global economic activities. Methanol is also used in an increasing number of energy-related applications, including the methanol-to-olefin (MTO) sector.

As an innovative, clean-burning fuel, methanol is an economically viable alternative that can provide fuel diversity and reduce emissions. Methanol can be produced from renewable resources like biomass, landfill gas, and CO<sub>2</sub>.



# THE RESPONSIBLE CARE ETHIC AND PRINCIPLES FOR SUSTAINABILITY

Our Responsible Care Program is founded on the Chemistry Industry Association of Canada's Responsible Care® Ethic, Principles for Sustainability, and Codes of Practice (www.canadianchemistry.ca). These ethics and principles are recognized by the United Nations and adopted by the global chemical industry. They commit us to:

- Work for the improvement of people's lives and the environment
- Be accountable and responsive to the public
- Proactively protect health and the environment
- Innovate for products and processes that conserve resources
- Engage with business partners to ensure responsible stewardship of our products throughout their life cycles
- Understand and meet expectations for social responsibility
- Work with all stakeholders for public policy that enhances sustainability
- Promote awareness of Responsible Care, and inspire others to commit to these principles

Our Global Integrated Management System (GIMS) guides us in implementing the Responsible Care Ethic and Principles for Sustainability. It also guides implementation of our Health, Safety, Security, Environment, and Quality (HSSEQ) Policy and the Responsible Care Codes for Operations, Stewardship, and Accountability.

Our Responsible Care Policy directs us to recognize and respond to stakeholder concerns about our operations and products, and to provide information concerning any potential health or environmental hazard to the appropriate authorities, employees, and stakeholders.

This report emphasizes material Responsible Care and sustainability topics that are of significant interest to our stakeholders. We identify these topics through an internal assessment of what is important to our key stakeholders and factors that influence Methanex's success in the long term.



# >**50,000** hours

logged by vessels operating on methanol to date

40%

of Waterfront Shipping's fleet to be powered by methanol in 2019

23,000 taxis

running on methanol in China by the end of 2019



We support the development of new, innovative methanol applications. Global demand for energy and focus on improving the environment are driving methanol demand for energy applications. We are the global leader in the methanol industry and are committed to supporting the development of these applications for the long term.

#### METHANOL AS A MARINE FUEL

# In 2018, Waterfront Shipping won Lloyd's List 2018 Best Fuel Solution Award in recognition of its dual-fuel technology.

Waterfront Shipping, a wholly owned subsidiary of Methanex that operates the world's largest methanol ocean tanker fleet, was honoured to receive the Lloyd's List Americas Award for Best Fuel Solution. This award recognizes the fuel efficiency and environmental performance achieved by the company's seven ships with dualfuel technology, which allows them to run on methanol. Waterfront's ships have accumulated over 50,000 operating hours on methanol to date. When used as a marine fuel instead of heavy fuel oil, methanol significantly reduces emissions of sulphur oxides, nitrogen oxides, and particulate matter.

In January 2020, new regulations by the International Marine Organization (IMO) will require all ocean-going vessels to lower sulphur oxide emissions. This change has created a growing market for methanol and other clean-burning fuels. Methanex and Waterfront Shipping are playing a leading role in establishing methanol as a viable and beneficial option for the marine sector.



Paul Hexter (right), president of Waterfront Shipping, accepts Lloyd's List 2018 Best Fuel Solution Award



By the end of 2019, 40% of Waterfront Shipping's fleet will be capable of running on methanol

In 2016, Waterfront Shipping launched the world's first two-stroke, dual-fuel vessels. In 2018, the company invested in four more ships, which will be added to its methanol fleet by the end of 2019. The vessels have received accolades and awards from the marine industry for their use of clean-burning methanol as an alternative fuel, including Ship of the Year (2017) from Japan's Society of Naval Architects and Ocean Engineers and Lloyd's List 2018 Best Fuel Solution Award.







Emission reductions when compared to heavy fuel oil Source: Stena Lines



### Methanol blends are advancing around the world

In various regions around the world, methanol blends are being commercialized for their environmental, economic, and energy security benefits

In India, the government is promoting the introduction of methanol fuels, including M15 (15% methanol, 85% gasoline). In Italy, an M15 blend has been introduced to fuel the carsharing fleet "enjoy." Israel has issued an M15 national standard in 2016 and commercial blends are available at some filing stations.

In Chile, Egypt, and New Zealand, Methanex is working with governments to complete pilots of low-level methanol fuel blends.

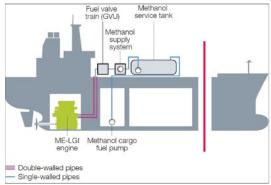


Diagram of the key components required to use methanol as fuel Source: MAN Diesel



In Xi'an city and Guizhou province, the number of methanol-fueled taxis on the road is expected to reach ~23,000 by the end of 2019

# A methanol-fueled fishing vessel pilot was successfully completed in China, demonstrating the improved performance of diesel/methanol technology.

In recent years, Methanex has been partnering in a pilot demonstration project in Jiangsu province involving the conversion of a fishing administration vessel to run on methanol.

In 2018, the project was reviewed by a panel of experts from the Marine Safety Administration (MSA) of the Ministry of Transport (MOT). The MSA concluded that, compared to diesel, the diesel/methanol compound combustion (DMCC) technology used in the pilot demonstrated better engine performance, lower emissions, and competitive fuel costs. Furthermore, the MSA panel determined that the DMCC technology is an innovative and feasible new application for use on commercial vessels in China.

The pilot began in 2017 as a partnership between MSA/MOT, Tianjin University in China, and Methanex. Methanex will continue working closely with our partners to support commercialization by helping with the development of relevant



regulations, safety guidelines, and infrastructure development.

# We've been partnering with the Methanol Institute to support the inclusion of methanol in IMO codes. In 2018, the IMO endorsed draft guidelines for using methanol as a marine fuel.

Methanex has been collaborating with the Methanol Institute and other partners to support inclusion of methanol (a low-flashpoint fuel) in the IMO Code of Safety for Ships Using Gases or Other Low-flashpoint Fuels (IGF Code).

In 2018, the IMO Marine Safety Committee endorsed draft methanol guidelines for using methanol as a marine fuel. Over the next year, further refinements will be made. We expect these guidelines to be formalized by 2020.

Currently, when methanol fuel systems are installed in ships, the design needs to be demonstrated on a case-by-case basis to meet the IGF Code's general requirements. Once approved, the guidelines will make commercializing methanol-fueled vessels more straightforward for the marine sector.

#### METHANOL AS VEHICLE FUEL

## Methanex continued to support the sustainable growth of methanol as a vehicle fuel in China.

In China, increasingly stringent air quality standards are supporting the adoption of methanol as a clean-burning vehicle fuel. Methanol fuel significantly reduces air pollutants when used in place of gasoline or diesel.

In 2018, the Ministry of Industry and Information Technology (MIIT) successfully completed its M100 (100% methanol fuel) national vehicle pilot program. In March 2019, together with seven other ministries in China, the MIIT published guidelines to promote the use of M100 vehicles. The guidelines will allow provinces throughout China to commercialize M100 and opens up the market to additional types of M100 vehicles, including sedans, buses, and trucks.

Methanex has been working with automobile manufacturer Geely and other partners in two provinces in China to support the growth of M100 in this country. We helped provide training sessions in Xi'an, Shaanxi province, where approximately 10,000 new M100 taxis are expected in 2019. Similarly, in Guizhou province (where there are already more than 5,000 M100 taxis operating), we are supporting an additional 8,000 taxis in 2019.

#### METHANOL AS POWER SOURCE

Methanex organized a Responsible Care seminar on the safe handling of methanol as a fuel for industrial boilers and engaged in other initiatives to support the use of methanol as power.

In 2018, Methanex helped organize a Responsible Care seminar on the safe handling of methanol as a boiler fuel in China. Attended by 40 people from local government and industries that use methanol boilers for heating applications, the seminar featured sessions on new national standards addressing the use of methanol as a boiler fuel.

Other presentations promoted the safe handling and operation of methanol.

Methanex has partnered with stakeholders in China to support the publication of national and group standards for methanol as a boiler fuel and also released a Methanol Safe Handling Guidebook.



Methanol burner for an industrial boiler

#### RENEWABLE METHANOL

# We supported CRI's renewable methanol plant in the development of an ISO 14001 environmental management system.

In 2018, we supported initial development of an environmental management system (EMS) for Carbon Recycling International (CRI, a privately held company with headquarters in Reykjavik, Iceland, that operates a renewable methanol plant). A formal EMS will support CRI's efforts to protect the environment and use natural resources more efficiently. This work included a gap analysis against the ISO 14001 standard and training of key personnel.

We also assisted CRI in updating and revalidating their hazard and operability study (HAZOP), which evaluates process issues that may represent risks to personnel or equipment, with the ultimate goal of preventing incidents.

Methanex is a key shareholder in CRI, with board representation. By supporting CRI's safety and environmental practices in manufacture and transport, we are helping to enable the sustainable growth of renewable methanol.



Howard Seto (Methanex), Valdimar Olsen (CRI), Kevin Kerik (Methanex), and Gunnar Thordarson (CRI) at the CRI plant in Iraland



# Methanol continues to advance in China's boiler industry

Thanks to increasing use of methanol as a boiler fuel in China, we've been taking steps to support methanol as a fuel for industrial kilns in China. As with the boiler market, the benefits of methanol in this market are its clean-burning properties, its potential to lower fuel costs, and the modest capital cost of conversion to run on methanol.



### Pilot program for 100% methanol-fueled vehicles expands in Iceland

Another Geely initiative to promote M100 (100% methanol-fueled) vehicles is the expansion of its M100 pilot program with Carbon Recycling International (CRI). Following a successful one-year pilot of six M100 cars in Iceland, Geely now plans to expand the program in the coming year. Methanex supports CRI in its development of safety management systems to enable the company's continued sustainable growth and its contribution to the renewable methanol market.



**36**%

reduction in CO<sub>2</sub> emissions intensity from manufacturing since inception of Methanex Corporation

18%

decrease in CO<sub>2</sub> emissions intensity from marine shipping since 2002

# **0** significant spills

significant spills to the environment in 2018



We take a multi-pronged approach to minimize our environmental impact. We make efficient use of natural resources, such as natural gas, energy, and water. We monitor and minimize the production of waste and emissions and maintain a comprehensive spill-prevention program.

#### CO<sub>2</sub> EMISSIONS AND ENERGY CONSUMPTION

#### We continue to reduce our CO<sub>2</sub> emissions intensity from manufacturing.

In 2018, Methanex generated 4,093,573 tonnes of  $CO_2$  emissions (Scope 1, on an equity basis) from methanol production. Our  $CO_2$  emissions intensity decreased by 2% (0.568 tonnes of  $CO_2$  per tonne of methanol in 2018, compared to 0.580 in 2017). This reduction of emissions intensity was achieved even while methanol production increased slightly (by 24,000 tonnes).

The improved  $CO_2$  emissions intensity is due in part to improved gas supply in Chile and Egypt, resulting in higher production with improved efficiency, reduced consumption of natural resources, and reduced emissions to the environment. Higher production contributed to a 1% increase in our total energy consumption from natural gas.

#### CO<sub>2</sub> EMISSIONS FROM METHANOL PRODUCTION



In 2018, our indirect  $CO_2$  emissions (Scope 2 emissions, on an equity basis), which are primarily from purchased electricity, increased by 1% to 206,596 tonnes. This was the result of higher electricity use to support higher production levels in Egypt. Our



Increasing production in Chile while minimizing emissions intensity

A reliable source of natural gas is critical for efficient methanol production. When plants have intermittent gas supply issues, they may either operate at reduced capacity or be shut down temporarily. Interruptions to production result in increased energy consumption and corresponding  $CO_2$  emissions.

In Chile, we signed agreements with four natural gas suppliers. Together with existing gas agreements, this will allow us to maintain a two-plant operation and annual production at rates up to 75% capacity in the near future. This means we can produce methanol more efficiently while also minimizing CO<sub>2</sub> emissions intensity.

consumption of renewable electricity (hydropower) decreased by 29% due to plant outages from two plant maintenance turnarounds at our New Zealand sites. (See the data summary table at the end of this report for more data on electricity consumption.)

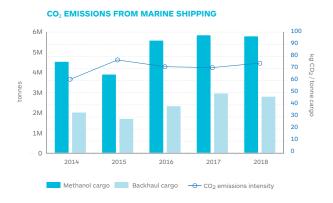
With six manufacturing sites and 11 operational plants, we continually look to improve our overall plant reliability and maximize the use of our assets to minimize energy consumption and  $CO_2$  emissions. In 2018, our overall plant reliability was 95%, an improvement from 93% in 2017 but below our target of 97%. We believe this target is achievable, and we continue to focus on reliability as a way to enhance production results and environmental performance.

Historically, the longer-term trend indicates a sustained decrease in  $CO_2$  emissions intensity: from 1994 to 2018, we've had an overall decrease of 36% in emissions intensity. Initially, the decrease was achieved by removing some of our older plants from active service. More recently, the addition of newer plants, improved catalysts, and improvements to the reliability of existing plants have further lowered the emissions intensity of our operations.

# We saw a moderate increase in CO<sub>2</sub> emissions intensity from marine shipping.

In 2018, the volume of cargo (i.e., methanol and backhaul cargos) transported by the Waterfront Shipping fleet decreased by 4%, while total  $CO_2$  emissions intensity from the fleet increased by 5% (74.7 kg  $CO_2$  per tonne of cargo, compared to 71.1 kg  $CO_2$  per tonne in 2017). This emissions intensity increase was due to a greater number of long-haul voyages with less backhaul cargo transported during the return trip (see graph), thus lowering fleet utilization. This has been occurring steadily for the last five years, as the number of trans-ocean voyages (which typically have less backhaul cargo) have been increasing.

Historically, we have seen a positive trend in our emissions intensity. Since 2002, Waterfront Shipping's  $CO_2$  emissions have decreased by 18%. This reduction is mainly due to an overall increase in backhaul cargo, which improved fleet utilization. We have also added newer, more efficient vessels to our fleet, which contributes to a lower proportional emissions intensity across the longer term.



#### WATER MANAGEMENT

# We maintained our freshwater consumption rate and decreased our effluent discharge intensity.

Four of our sites use freshwater sources to produce methanol. In 2018, we consumed 14,737,143 m³ of fresh water to produce 5,502,415 tonnes of methanol. (This figure excludes ~20% returned to the source as treated wastewater.) This equates to 2.68 m³ water/tonne of methanol. Our freshwater consumption remained steady from 2017.

Of the approximately 20% of water returned to a freshwater source as treated wastewater, the ratio of discharge per tonne of methanol decreased 7%, from 0.73 m³ in 2017 to 0.68 m³ in 2018. This was mainly due to shutdowns at two of our New Zealand plants for maintenance turnaround projects.

We continue to be guided by our water stewardship standard to identify and evaluate feasible opportunities to conserve water. This is particularly important in regions where there may be water shortages. See the highlight below on using treated effluent for irrigation in Egypt, as an example of putting our stewardship standard into action.

# We completed Phase 1 of a project in Damietta to reuse clean effluent from the plant for non-agricultural irrigation in the community.

In 2017, we reported that Methanex in Egypt signed an agreement with the Egyptian Environmental Affairs Agency (EEAA) to deliver a lasting and creative solution to the disposal of our clean effluent water by redirecting it to irrigate non-agricultural gardens in New Damietta.



A portion of the pipeline installed to direct plant effluent to community irrigation

This solution provides a sustainable source of irrigation water for the city of New Damietta, serving ultimately to benefit the community.

In 2018, we completed phase 1 of the project: installing internal pipelines within our plant gates to pump water outside the plant. This work was accomplished successfully and safely. In the next phase, our team will work with local contractors and authorities to extend the pipelines outside our gates.

We look forward to the safe and successful completion of the project and working with the community to conserve water.

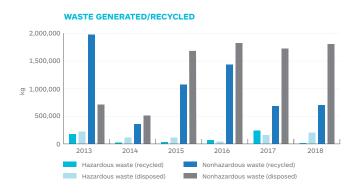
#### WASTE MANAGEMENT

# The amount of waste disposed in 2018 remained consistent with 2017.

From year to year, the amount of waste generated at Methanex is highly dependent on plant maintenance turnarounds and projects. In 2018, there were two turnarounds (similar to 2017), and we also had project work related to the restart of our Chile IV plant.

Typically, 30–40% of the waste we generate in manufacturing can be recycled. The majority of recyclable material is generated during turnaround projects and includes spent catalysts, steel from machinery, piping, and wood. In 2018, 25% of waste was recycled, lower than previous years. This is mainly due to spent catalyst generated by one of the turnarounds, which remained on site past the end of the year and will be recycled in 2019.

In 2018, approximately 87% of our total waste was nonhazardous. This waste, which was disposed to landfill, included materials such as insulation, spent filtering resins, asphalt, and sludge. These were disposed in accordance with local requirements.



In 2014, there were no plant maintenance turnaround projects, resulting in lower volumes of waste generated.

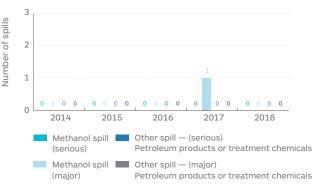
#### SPILL PREVENTION AND RESPONSE

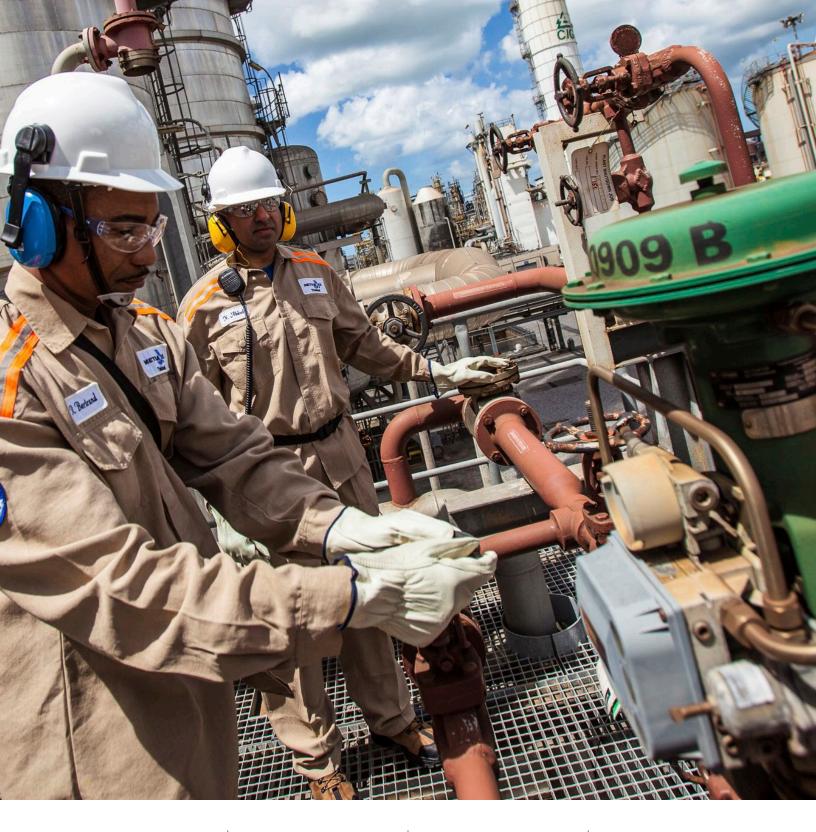
# In 2018, we continued to focus on our process-safety management and lessons-learned programs, resulting in zero significant spills to the environment.

We proactively conduct plant maintenance and inspections, train our employees on environmental management, and implement process-safety management (PSM) programs. Our primary goal is to prevent the loss of primary containment of substances that are harmful to human health, safety, and the environment.

In 2018, in line with our rigorous incident investigation process, we reviewed the controls in place against minor spill events, shared lessons learned from previous incidents with all of our manufacturing sites, and took appropriate preventive actions to address hazards that could potentially lead to more significant spills.

#### ENVIRONMENTAL SPILLS





20%

decrease in employee injury frequency

**7,368** hours

spent in leadership development

91%

participation rate in employee survey 77 team members

travelled globally for special assignments



The safety and well-being of our employees, contractors, and the communities in which we do business are our top priorities. Our talent management programs provide our staff with the knowledge and tools they need to be successful and opportunities to maximize their potential. An engaged workforce and One Team culture create our competitive advantage.

#### **HEALTH AND SAFETY**

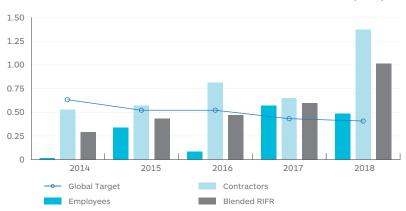
#### In spite of our goals and efforts to prevent injury, injury rates rose.

In 2018, the frequency of employee injuries decreased 20% (see 5-year Global Recordable Injury Frequency graph), but overall our personal safety performance did not meet our target. While the frequency and severity of injuries to employees declined, contractor injuries increased. A significant factor was the increase in the number of major projects we undertook.

The increase in injury severity rates (RISR) was the result of injuries requiring medical treatment or resulting in lost time or modified work (recordable injuries). None of these incidents resulted in fatalities or severe injuries, although some had the potential to be more severe. We are bringing a greater focus to working at heights and dropped objects, hazards that were associated with some of the potentially significant incidents that occurred.

Our safety education and hazard awareness programs have shown positive results for employees.

#### 5-YEAR GLOBAL RECORDABLE INJURY FREQUENCY RATE (RIFR)





Increasing safety management during our largest turnaround on record

Our Motunui plant's maintenance turnaround went on record as the largest ever at Methanex.

Before the turnaround started, we took extensive measures to share our safety culture with the contractor community. In meetings with principals and supervisors from the contractor companies, we focused on implementing a united approach to managing hazards. During induction sessions and daily check-ins, we delivered messages about the priority for safety.

The turnaround faced several challenges, including adverse weather conditions and a lengthy extension, which resulted in injury rates that did not meet targets.

The injuries remind us that our work to build and share a culture of safety must be ongoing. We will continue to seek effective ways to inspire and enable workers within our organization, and those joining us on contract, to work toward the goal of zero injuries.

## A new executive steering committee for process safety

In 2018, to further our efforts in process safety, we created a new Executive Process Safety Steering Committee. This committee will create a direct line of sight for senior leadership to key process-safety risks and mitigating measures at our plants.

Greg Sargent, process safety engineer at our Medicine Hat site, recognizes the value of the steering committee: "The EPSSC is a conduit to senior leadership for the PSM professionals at the site level. This enables us to better help leadership to understand, prioritize, and address the critical issues at our sites."

#### KEY TAKEAWAY

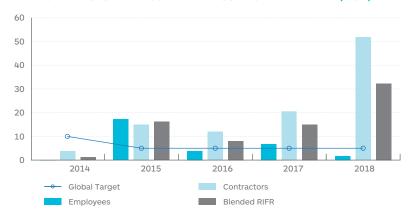
# Process Safety Depends on a Strong Team Culture

All team members need to maintain a disciplined approach to safety-critical operations and avoid complacency by adopting a perspective of chronic unease.

#### Extract from Process Safety Management: A Handbook for Methanex Senior Leaders

Other process-safety initiatives advanced in 2018 included the voluntary adoption of "safety case," a rigorous, evidence-based approach to evaluating the adequacy of risk reduction measures at our manufacturing facilities. We also developed process-safety hazard pamphlets to guide internal operations in raising awareness of what can potentially go wrong and measures to protect against these scenarios.

#### 5-YEAR GLOBAL RECORDABLE INJURY SEVERITY RATE (RISR)



To further improve performance, we are enhancing our focus on four key areas: leadership and employee engagement, contractor engagement and performance, plant maintenance turnaround performance, and our approaches to learning. We remain committed to achieving zero injuries through a One Team approach.

# We hosted a workshop, Enabling Egypt's Process Safety Journey, the first of its kind in the region.

In 2018, we hosted Egypt's first-ever workshop on process-safety management (PSM) in order to share safety standards and practices with this region. The event was attended by over 300 people, including top leaders and representatives from Egypt's oil, gas, and petrochemical industries.

Process-safety management is about managing the hazards in the physical infrastructure of our plants (i.e., the toxic, flammable, and explosive potential of the materials we use and the high pressures used to maintain our manufacturing process).

The workshop was a collaboration with the Egyptian Petrochemicals Holding Company (ECHEM), our joint venture partner in Egypt and a subsidiary of the Egyptian Ministry of Petroleum. Keynote presentations addressed the fundamentals of process safety and the role of leadership in PSM. In break-out sessions, participants developed action plans on topics ranging from university curricula to leadership engagement.

To build on the event's momentum, we have committed to supporting and organizing an annual PSM conference in the region. Methanex will also support a monthly PSM forum and advise ECHEM and the Ministry of Petroleum on ways to define their own PSM roadmap.





Mohamed Shindy (left), Managing Director, Egypt, and Jason Clement, Director of Process Safety Management, speak to participants at the workshop in Egypt

# Office-related injuries increased our awareness of ergonomic hazards in office environments.

In 2018, office injuries related to work at computers resulted in time off work and medical interventions. These injuries are a reminder of the hazards present in office settings.



Like hazards in any work setting, hazards for office workers require awareness and action to identify and prevent. Furthermore, potentially harmful circumstances in office environments can often

remain hidden from view, including repetitive tasks such as using a computer mouse.

To increase awareness and prevention of office hazards in both corporate and manufacturing settings, we have ergonomic programs to prevent musculoskeletal injuries, as well as a MoveSafe® initiative to promote frequent and safe movement. We also share with office workers hazard-assessment and mitigation practices related to their work setting.



#### Every Methanex facility around the world engaged in health promotion efforts.

Methanex undertakes global health-management initiatives to provide employees at all our locations with health programs that meet the highest standards. In 2018, our Global Health Network launched the Global Health Standard to direct Methanex's global health programs, and each region participated in a variety of health promotion efforts.



Medicine Hat published a comprehensive health promotion brochure to share about the company's health promotion practices with employees. The program includes annual influenza vaccinations for workers and their families, shingles vaccinations, health surveillance, and onsite massage therapy.



In Vancouver, a Mental Health Week Committee was formed to raise awareness that "Mental Health Is Everyone's Business." The 15-person committee conducted a local survey to highlight national statistics and their relevance to staff.



In Egypt, Dr. Medhat Elbarogy (pictured left) conducted an employee session to raise awareness about shift work fatigue and other health impacts. The session provided information about circadian rhythms—natural cycles of energy and drowsiness—as well as tips on managing shift work fatigue.



In New Zealand, in conjunction with the record number of turnarounds occurring in one year, a mobile medical portacom (portable building) was launched to support employee and contractor health. The medical portacom was relocated as needed during the turnarounds.



The Methanex Geismar site was awarded the "Geismar Wellness" Program award by a community wellness association.



To promote employee health at out Punta Arenas, Chile plant, staff participated in three talks about nutrition and exercise. Through an internal Sports and Cultural Club, "Club Deportivo," physical activities (e.g., the National Geographic run, pictured) were promoted to both employees and their families.

#### Pride in Methanex culture

We were delighted to see a 91% participation rate in our biennial Global Employee and Culture Survey, conducted to gauge our progress in addressing areas for improvement from a 2016 survey.

We were also proud that we maintained or improved our scores around our culture, which included questions about our values and Responsible Care. Responses indicated a strong belief in the company's commitment to Responsible Care and to the priority given to employee and contractor safety.

The feedback we received will lead to more improvements in the areas of learning and development, information technology, and project management.





#### **BUILDING OUR CULTURE**

# We achieved our seventh successful Responsible Care verification, further strengthening our Responsible Care culture and practices.

In 2018, after reviewing practices across our organization, the Chemistry Industry Association of Canada (CIAC) provided us with a successful Responsible Care reverification. The verifiers pointed out that Waterfront Shipping, a wholly owned subsidiary of Methanex, remains the only shipping company in the world to have adopted Responsible Care as its guiding code.

This verification indicates that the Responsible Care Ethic and Principles for Sustainability are guiding our company decisions and actions, and that an innovative and reliable management system is driving continual improvement. This is our seventh successful companywide verification since we were first verified in 1997. The report is available to the public on the CIAC website.



Rawle Ramlochan, plant manager in Medicine Hat, accepts the CIAC Responsible Care Verification certificate

# We expanded our Switch On safety culture program to reach contractors and re-engage employees and leadership.

Our Switch On to Responsible Care program focuses on building a strong safety culture. After training most of the organization in 2016 and 2017, we rolled it out to our contractors in 2018.

For those who had already been through the program, we introduced a new iteration called "Staying Switched On" to reinforce a culture of sharing, mindfulness, and individual empowerment in working safely. This new module included 10 "toolkits" of supporting materials for use in toolbox meetings and everyday conversations about safety. Our manufacturing regions have begun using the kits to support safety awareness campaigns, orientation programs, and turnaround preparations.

We also held a half-day Switch On training session for senior leaders, to better enable them to have engaging safety conversations and lead in establishing a safety culture.

# We were awarded Best New Employer by China Europe International Business School (CEIBS).

In June 2018, Methanex in Shanghai was honoured to receive recognition from the China Europe International Business School as the Best New Employer for 2017–2018. CEIBS was cofounded by the Chinese government and the European Union in 1994, and its MBA program has been ranked in the Top 25 of the Financial Times' annual global business school survey for 14 consecutive years (2005–2018) of its 23-year history.

Methanex has held recruitment and campus talks and supported events and campaigns at CEIBS. In March 2018, Sarah Boon, Methanex Director, Corporate Services (Hong Kong), spoke at the CEIBS MBA Women's Leadership Forum on initiatives that support women in organizations and approaches to fostering women in leadership in China.

Partnership with CEIBS is an important part of our recruitment strategy in Asia Pacific and demonstrates our commitment to supporting education organizations through our social responsibility programs.

#### **TALENT MANAGEMENT**

# Our commitment to building leadership capability is evident in the growth of our Global Leadership Suite of learning and development programs.

Through our Global Leadership Suite, we spent 7,368 hours building leadership capability across different levels of the organization.

- 134 emerging leaders participated in 21 two-hour sessions throughout our regions, learning practical, easy-to-apply leadership skills.
- 25 attended the Global Leadership Forum through the Centre for Creative Leadership and gained insight and perspective that helps them tap into their leadership potential and develop key leadership skills.
- 17 mid-level leaders participated in a three-week experiential-learning session, called Courageous Leadership. In this program, leaders explore the specific challenges and opportunities of leading within a global organization.
- 34 leaders participated in our High-IMPACT Coaching and Mentoring program.

These programs complement regional training plans and activities that focus on developing specific competencies and skill sets. They also provide opportunity for global network building and sharing of best practices across locations.



The cohort of emerging leaders from the 2018 Centre for Creative Leadership program in San Diego

#### We refocused our learning and development programs, a key pillar of our culture, to better respond to employee needs.

Our 2018 Employee Culture and Engagement Survey used targeted questions to gauge whether our employees feel that the learning and development measures we've taken since 2016 are making improvements. The results told us that employees and leaders value the support they receive, but we can be more consistent in how support resources are tailored to individual employee careers and their unique skills.

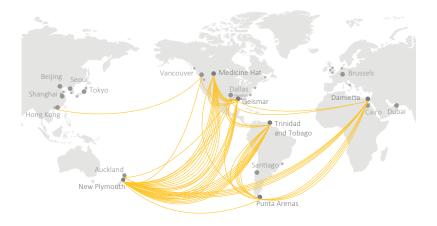
In 2018, we provided more deliberate guidance to help managers improve their effectiveness in developing employees to reach their potential while enabling the business to achieve strategic goals. This new guidance is being applied in annual career- and development-planning conversations as part of the goal-setting programs we have had in place for years.

During these conversations, employees and managers discuss strengths, development opportunities, and career aspirations. They then agree on an action plan to support continued development through a balanced mix of learning styles: 70% on-the-job experience, 20% learning from other people, and 10% formal or structured learning.

# 77 of our team members traveled to work in Methanex locations around the globe, supporting business needs, building networks, and gaining experience at the same time.

In 2018, through our Global Mobility program, 77 of our team members had the opportunity to work outside their home countries. This is more than double the number of people in last year's Global Mobility movement and included both shortand long-term assignments and support for plant projects, maintenance turnarounds, and other business initiatives.

Through this program, team members gain expertise in a new setting while simultaneously learning about operations in another region and culture. Assignments also allow our host teams to experience greater diversity and fresh ideas, enhancing knowledge and culture at the same time





23 CAPs

(community advisory panel meetings) held around the world

12,474 hours

of volunteering in the community

302 organizations

benefitting from our efforts



We believe our business must have a positive impact on people's lives. Our goal is to build and support healthy communities that are great places to live and work. Through grants, education, community development, and volunteerism, we invest in the communities where we do business, aligning our efforts with our values and culture.

#### COMMUNITY DIALOGUE AND ENGAGEMENT

In 2018, we held 23 community advisory panel (CAP) meetings around the world, engaging with community members on topics they care most about.

The topics of our CAP meetings vary, depending on community needs and concerns. Below is an example of a CAP activity or discussion from each region:

Our **Trinidad** location hosted a Disaster Preparedness Workshop with CAP members to increase community resilience following natural disasters.

In **Medicine Hat, Canada**, we held our second open house (Community Day) in June 2018. Among the 300 who attended were two classes of students from a local middle school, as well as four members of our CAP.

In **Taranaki, New Zealand,** meetings included a visit to Aica (one of our customers), a bio-diesel demonstration, a visit to Port Taranaki, and a visit to our new control panel room at Waitara Valley.

**Geismar, USA** CAP meetings included sharing of environmental performance data and sharing of a study on the economic impacts of the chemical industry in the state of Louisiana. CAP members also lent their support to a local program that exposes high-school students to jobs in the manufacturing industry.

In **Egypt**, extensive efforts were spent collaborating with the International Labour Organization (ILO) and the Ministry of Trade and Industry on implementing programs that support women and youth, employment opportunities, and small-scale entrepreneurship.

In **Punta Arenas, Chile,** CAP meetings included discussions about the restart of the Chile IV plant and improved gas availability in Chile, as well as our activities to celebrate 30 years in the region.

#### Celebrating 30 years in Chile

To celebrate 30 years of operations in the Magallanes province and thank the community for three decades of partnership, two initiatives were carried out.

Methanex was instrumental in the publication of a book of photographs titled 30 años de historia en rostros magallánicos ("30 years of history in faces of Magallanes"), featuring people from the community who have contributed important work there. We also commissioned a study of the perfil Magállanico ("Magellan profile," or "Being from Magellan"), carried out by a prominent survey company and presented it to the community to celebrate the people of Magellanes and their culture and history.

Both initiatives expressed Methanex's pride in being a member of the Magallanes community.



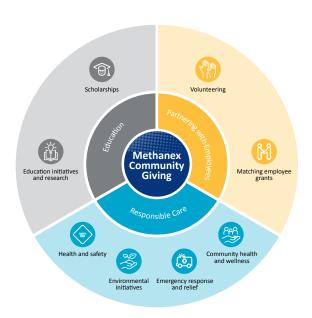
Launch of the book 30 años de historia en rostros magallánicos

#### We incorporated lessons learned from emergency-response exercises and training into our emergency-response plans.

Training, drills, and exercises are a regular part of our emergency-response programs in each region. After each drill or exercise, we evaluate what we did well and what we can do better, then incorporate these lessons learned into emergency-response plans. These plans are in place to guide us in the event of a real emergency.

Here are some examples of our emergency-response activities.

- Our emergency-response team in Medicine Hat, Canada held a TRANSCAER transportation safety training event to educate local first responders about products moving through the communities via rail and truck. A day later, they held a full-scale emergency-response exercise that involved local Emergency Medical Service (EMS), the Medicine Hat Police, and the Medicine Hat Fire Department.
- Methanex Chile's annual fire-fighting training camp included 19 health, safety, and environmental representatives from diverse sectors and industries across Brazil, Peru, Colombia, Uruguay, and Chile. During this four-day event, training addressed topics such as Responsible Care, risk management, and fire ground control exercises, using state-of-the-art simulators to emulate potential situations.
- In Geismar, USA, Methanex participated in Community Awareness and Emergency Response (CAER) Day, an annual event that brings emergency-response teams from chemical manufacturers in Ascension Parish together with municipal partners, elected officials, CAP members, and others.



#### COMMUNITY INVESTMENT AND VOLUNTEERING

#### In 2018, we invested USD \$1.47 million and contributed 12,474<sup>‡</sup> hours to support communities around the world, benefiting 302 organizations.

We have three areas of focus for our global community investment and volunteering efforts: partnership with employees (working together as One Team to have powerful impacts in the community), Responsible Care (supporting health and safety, environmental initiatives, emergency response and preparedness, and community health and wellness), and education (including scholarships, co-op opportunities, summer employment, and funding for research).

#### In Egypt, we helped to make significant advances to support women and youth, employment opportunities, and small-scale entrepreneurship.

In 2018, Methanex Egypt delivered three pilot projects to the Damietta community: The GET Ahead for Women in Enterprise, Job Search Clubs, and Start and Improve Your Business. Together with a new module, Know About Business, these training packages will constitute the core activities of a three-year project, running from April 2019 through March 2021, through a unique partnership with the UN's International Labour Organization to extend to Damietta the full scale of their successful project, Decent Jobs for Egypt's Young People.

By the end of the three years, we expect to reach out to 20,000 members of our community, create over 500 jobs, and develop relationships with new stakeholders such as Egypt's National Council for Brad Boyd, Senior Vice President, Corporate Women (which reports to the President's office): the Micro, Small, and Medium **Enterprise Authority** 



Resources, with the first female carpenter in Damietta. Hear her story at https://www.methanex. com/news/get-ahead-women-enterprise-trainingprogram-launched-egypt

(reporting to the Prime Minister); and the ministries of manpower, youth and sports, and education, among others.

The project will be the focal point of our social responsibility programs in Egypt and addresses one of Egypt's most pressing challenges: youth unemployment and underemployment. It also honours our Responsible Care ethic for social responsibility.

<sup>&</sup>lt;sup>‡</sup> Total hours include time spent managing the volunteer activities as well as participation, in accordance with London Benchmark Guideline (LBG).

# Each of our global teams volunteered and made investments to help meet needs and support valuable projects in their communities.



Fifteen members of our team in **Shanghai** returned to deliver gifts and supplies to a family in a rural area, whose four children receive ongoing education support from Methanex.



In **Damietta**, Methanex is supporting workshops for small-scale enterprise owners and entrepreneurs through a partnership with the International Labour Organization's Start and Improve Your Business (SIYB) program.



In **Geismar, USA**, we were the flagship sponsor for the 2018 St. Jude Run/Walk to End Childhood Cancer.



In the Damietta community in **Egypt**, with the help of Methanex employees, we delivered two medical caravans providing physician consultations and medication to villages surrounding the city.



Employees in **Trinidad** assisted their fence-line communities by repainting an orphanage, preparing a kitchen garden (shown) for another orphanage to help reduce their food costs, and cleaning up a local heach



Employees in **Chile** worked throughout the year to raise funds for the Telethon of Magallanes, as part of their ongoing efforts to support children with disabilities



Our **Hong Kong** team again supported Hong Kong Food Angel, a food bank for needy elderly at the beneficiary centre in Hong Kong. Eleven colleagues participated in this long-term partnership with Food Angel as an expression of our commitment to the society.



Once again, our **Dallas** team provided donations to Camp Summit, a camp for children and adults with disabilities.



Our team in **Medicine Hat, Canada**, did restoration work for the South East Alberta Watershed Alliance, a group dedicated to sustainable management of the South Saskatchewan River sub-basin and the Pakowki Lake watershed.



**Vancouver** staff from Waterfront Shipping supported PALS Autism Society by assisting with a painting project.

## Supporting children at La Châtaigneraie in Belgium

In 2018, we donated funds toward the construction of four unique studio apartments in a new building for La Châtaigneraie, a charity organization in Belgium that provides homes for children who come from difficult backgrounds. We've been supporting La Châtaigneraie for many years, and we are committed to helping this organization meet its worthy goals of helping a needy population of youth.

The studios will provide housing for 18-year-old students from the organization's youth program who, though of legal age, are still too young to live independently. Two of the units will be occupied by these students, and the other two by university students who will provide peer mentorship and support. This project started at the end of 2018 and will be operational by early 2020.



Methanex held a barbecue for the center's children.

#### Restoring native birds in East Taranaki

Methanex volunteers assisted in a project coordinated by the Department of Conservation and the East Taranaki Environment Trust to support the translocating of founder birds to their native habitat. Each event involved helicopter transport and a 20-minute hike to carry the birds from Huaturu (Little Barrier Island) to their new home, where they have not been seen in 30 years.

"At first I thought nothing of this other than a nice thing to be part of, but once we were there and mixing and mingling with the community of Purangi, an overwhelming sense of pride overcame me," said Methanex administrator Kelly Gates of the experience. "Not only are these birds now living amongst the beautiful bushlands in the Taranaki region; they will be a part of the future for generations to come."





100%

of all planned ship safety visits and training completed

**2739** people

attended our methanol safety seminars—a Methanex record

**747** organizations

reached through methanol safety seminars



Our comprehensive approach to product stewardship safeguards the public, the environment, and the communities in every country where we do business. We promote the proper use and safe handling of methanol while implementing environmental stewardship and social responsibility across our supply chain.

#### MARINE SAFETY

# We improved safety programs for our Waterfront Shipping fleet and raised our safety standards.

In 2018, we continued to make improvements to our Responsible Care practices in marine safety, using results of safety visits and inspections. Our work in this area helped to maintain the strong fleet safety ratings we achieved last year.

We improved the quality of incident investigations and sharing of lessons learned, and we expanded our speak-up program, which reminds people to openly express concerns about safety, ask questions, and make suggestions to vessel and shore management.

We enhanced our fleet's training and mentoring programs in the areas of competency management, training development, and onthe-job training, and added a new focus on the mental health and well-being of sea staff. (See the sidebar story to the right.)

To verify that our fleet is suitable and approved to carry customers' products, we maintain vetting inspection approvals from major international oil and gas companies. We also carry out Chemical Distribution Institute (CDI) audit inspections and safety visits on our ships on an annual basis.

The Methanol Group is a consortium of Waterfront Shipping's ship owners and ship-management companies that meet biennially to share best practices and lessons learned related to safety.

#### Making mental health top priority

At the June 2018 Responsible Care meeting of the Methanol Group, led by Waterfront Shipping, mental health for seafarers took top priority.

Data from marine industry experts shows a significant rise in mental health-related issues for ship crews over the last six years. The top stressors are distance from family, social isolation, financial issues, fatigue/long hours, and inspection demands by regulators and other stakeholders.

At the 2018 Methanol Group meeting, 58 people representing ship owners, ship managers, Waterfront Shipping, and Methanex selected mental health as the top priority among other emerging issues. Everyone committed to work toward progress in this area.

To support the change and increase awareness, the ship-owning and ship-managing companies committed to including training and awareness programs for the senior officers in our fleet, among other actions. As well, Waterfront Shipping has added a chapter on mental health and motivation to its annual safety visit program.



#### Open-door and safety event in Brazil

In October 2018, we conducted our third methanol safety workshop and open-door event at our Cattalini methanol storage terminal in Brazil. Sponsored in conjunction with Cattalini at the Camboa Hotel in Paranaguá, this biennial event has attracted an increasing number of participants every time it is held.

This year's event included participation from the main transportation companies that haul more than 20,000 truckloads from this terminal on annual basis, as well as surveyors, local authorities and agencies, and emergency responders. Speakers covered a range of topics that included vessel safety, shipping regulations, and new safety technology for trucking. The day included a group tour of the terminal's facilities.





#### **TERMINAL SAFETY**

We partnered with terminals in our supply chain as part of ongoing efforts to continually improve Responsible Care performance and share best practices.

Our Chemical Distribution Institute (CDI) terminal inspection program and Methanex Terminal Pre-screening Assessment (TPSA) program, a core part of terminal safety, relies on partnerships with terminals to put Responsible Care into practice. In 2018, we worked closely with Methanex global terminals on a variety of activities to find solutions that will close safety gaps and optimize the effectiveness of safety measures.

Throughout our regions, we made improvements to terminal safety in 2018. Through follow-ups from inspections and audits, we supported terminal staff in implementing improvements.

In Latin America, as part of our Terminal
Best Practice Exchange Program, two loading
master supervisors spent a week sharing best



A customized mobile ladder, designed for one of our North American terminals, helps prevent falls during cargo loading

practices with our Responsible Care team and local loading masters at the Cabo Negro terminal in Chile, and this work will be replicated in 2019 with loading masters from Chile going to Brazil.

# In Asia Pacific, we gave 10 awards to staff at our partner terminals for contributing ideas that improve safety and foster continuous improvement.

Our Logistics Service Providers (LSP) Recognition Award in the Asia-Pacific region is given to staff who contribute valuable safety improvement ideas at their respective terminals. In 2018, nine terminals from our Asia Pacific network participated, including six terminals from China, two from Korea, and one from Japan.



Magnetic plate on truck, an idea proposed by terminal staff to improve safety. The plate functions as a warning for drivers to make sure they don't enter the cabin or operate the truck before loading finishes and all hoses are disconnected.

#### **ROAD AND RAIL SAFETY**

# We received awards from five major North American rail lines, qualifying us for the American Railroad Association's Grand Slam award.

In 2018, our North American team was proud to receive rail awards from Canadian Pacific, BNSF, Union Pacific, Norfolk Southern, and Canadian National rail lines. These awards qualify us once again for the Grand Slam award from the American Railroad Association.

For delivery of our product in North America, we carry out a rigorous railcar preventive maintenance program, which reported 100% compliance in 2018. This program depends on careful monitoring of regulatory changes to tank car standards and operational controls for flammables.

In 2018, we also instituted a proactive plan to ensure railcars in our service adapt to new standards announced by the U.S. Department of Transportation for implementation by 2025. We are requiring all railcars (currently DOT-111) to be either retrofitted to meet the DOT-117 specifications or replaced with the DOT-117 railcar by 2023, two years ahead of the deadline.



Team members from our Dallas office, accepting the 2017 CP Chemical Shipper Safety award. (The 2018 awards ceremony will occur in 2019.)

# To enable the safe transportation of methanol, we worked closely with stakeholders across the supply chain.

In 2018, we conducted a variety of activities to enable the safe transportation of methanol and to test that our emergency-response networks are capable of safely and efficiently responding to any potential land-transportation incident involving methanol. We strategically focus on enabling coordinated technical resources and emergency support across our supply chain for any emergency or transportation event, whether or not it involves our product.

In Brazil, our Random Audit Truck Program shared audit results from over 30 participating companies with customer and logistics service providers, to share best practices. In Medicine Hat, Canada, our emergency response team attended two TRANSCAER events

### Promoting supply chain safety and emergency preparedness in the Middle East

In alignment with our mandate to promote awareness of Responsible Care and inspire others to commit to Responsible Care principles, we presented at the 2018 Gulf Petrochemicals and Chemicals Association (GPCA) conference in Dubai. The conference was attended by 174 people from 68 companies in 13 different countries.

Our presentation shared about building Responsible Care practices within the Waterfront Shipping fleet and building strong supply chain partnerships and emergency response plans.



Photo courtesy of the GPCA

with multiple agencies and partners and participated in hands-on training events with local partnering fire departments. In Geismar, USA, Methanex participated in CAER Day, an annual event hosted by the local chemical industry's Community Awareness and Emergency Response (CAER) committee.

In Europe, we assessed hazards along 15 transportation routes and are working closely with customers who have recognized our route risk assessments and want to learn about this practice from us.

"Route risk assessments" refers to an extensive process of identifying possible hazards along the path of travel of our product, from terminal to customer.

### Bringing Responsible Care to university students in China

We strongly believe the principles of Responsible Care should be shared with students who are embarking on careers in the chemical industry.

Since 2010, we have been hosting Responsible Care seminars at the Beijing University of Chemical Technology (BUCT) and the Taiyuan University of Technology (TUT). To date, approximately 800 undergraduate students at our seminars have learned about Responsible Care, methanol safety, methanol energy applications, and the environmental benefits of methanol.



Responsible Care seminar at Beijing University of Chemical Technology (BUCT)

### Hands-on Responsible Care seminar in Edmonton

In September 2018, our Marketing and Logistics team in Dallas hosted our first-ever interactive Responsible Care seminar for customers in Edmonton, Canada.

Topics and activities at the seminar included the use of personal protective equipment, a live demonstration of mock methanol fire extinguishment, and opportunities to see and handle operational equipment such as hoses, gaskets, and O-rings. Each attendee was provided with a compatibility guide for the use of methanol in typical operation environments.

The overwhelming success of this event led to announcement of an interactive seminar in 2019 to expand these education/outreach efforts and provide more customer-specific, onsite training opportunities.



#### INDUSTRY COLLABORATION AND RESPONSIBLE CARE ADVOCACY

# Our methanol safety programs reached record numbers of people and organizations around the world.

Globally, we conducted 80 methanol safety seminars with 747 organizations, directly reaching a total of 2,739 people worldwide with information about methanol and safe handling practices.

- Methanex Europe held 24 Responsible Care sharing sessions with partners, reaching 109 different organizations. We also led several customer workshops to build synergies and create learning opportunities in Responsible Care.
- A distribution forum in East China was attended by 80 participants from more than 25 downstream partners, including customers, distributors, terminals, and truck companies. The forum addressed practical approaches to truck maintenance, driver training, and transportation route risk assessments, as well as emergency response preparedness.



Value-chain partners share best practices at the East China Distribution Forum

 In Chile, we increased training at our Cabo Negro terminal in Punta Arenas, due to an increase in loading operations. Altogether, 238 people were trained in Responsible Care and safe practices for handling methanol. Once again, we presented on safe handling in a global market at Brazil's Biodiesel BR Conference, the largest congress of its kind in the region.



Fernando Reinecke speaks about methanol safety at the 2018 Biodiesel Congress in Brazil

Our North America team hosted 80
 participants at two safety webinars. Each attendee received a thumb drive
 containing an incident management checklist, a safe handling presentation, and
 a chemical compatibility guide.

# As a member of Responsible Distribution Canada (RDC), we continued to elevate safe distribution standards across North America.

In 2018, through RDC's Regional Distribution committee, we developed Transloading Guidelines for safer cargo transfer operations. (Transloading is the process of transferring a shipment from one mode of transportation to another.) We also advocated for the adoption of these guidelines across the RDC.

As a result, the Transloading Guidelines are being incorporated into Canada's RDC guidelines. In the U.S., many of our distributors have begun to incorporate similar guidelines and standards into their operations. This has resulted in significant improvements to the systems that support and facilitate safe transloading operations.

All of our Canadian distributors (and many of our U.S. distributors) are RDC certified.

### We launched a Methanol Safe Handling Guidebook for the use of methanol as an industrial boiler fuel in North China.

In partnership with industry associations and stakeholders, we launched China's first-ever Methanol Safe Handling Guidebook at a Responsible Care seminar. This guidebook helps support safety standards for the country's transition to methanol-fueled industrial boilers from coal (the traditional energy source for boilers in the region).





# We collaborated with the Methanol Institute to produce an updated video on safe handling of methanol.

A new video promoting safe practices for anyone handling methanol was filmed through a collaboration with the Methanol Institute. The video addresses workers in methanol plants, distributors, chemical and energy consumers, first responders, and the general public with an overview of critical methanol safety information that includes methanol health and fire risks and proper safe handling procedures.

This important video is being released in 2019.



View the video at https://www.methanol.org/safe-handling/



Thank you for reading our 2018 Responsible Care and Sustainability Summary Report.

We welcome you to explore the full report on our microsite at

https://rc-sustainability-reports.methanex.com/2018/.

Past reports are also available on our website at www.methanex.com/responsible-care/responsible-care-sustainability-reports.

Your questions, comments, and feedback are valuable to us, and can be sent via the contact information on the back cover.

We hope you will return next year for more updates and highlights about our activities as we work to continually improve Responsible Care and sustainability at Methanex.

# Summary of Responsible Care and Sustainability Indicators

#### ENVIRONMENT

	2014	2015	2016	2017	2018
CARBON DIOXIDE (CO <sub>2</sub> ) EMISSIONS					
CO <sub>2</sub> emissions manufacturing (scope 1) <sup>1</sup>	3,169,259 t	3,245,947 t	4,118,285 t	4,171,421 t	4,093,573 t
CO <sub>2</sub> emissions manufacturing (scope 2) <sup>2</sup>	67,709 t	131,370 t	177,372 t	204,597 t	206,596 t
CO <sub>2</sub> emissions intensity manufacturing (scope 1)	. ,	- /	,-	. ,	,
tonne of CO <sub>2</sub> / tonne of methanol	0.653	0.625	0.587	0.580	0.568
CO <sub>2</sub> emissions marine transportation (scope 1)	397,923 t	428,914 t	567,579 t	619,834 t	625,314 t
CO <sub>2</sub> emissions intensity marine transportation					
kg of CO <sub>2</sub> / tonne of cargo shipped	61.7	77.6	72.6	71.1	74.7
NO <sub>x</sub> emissions (manufacturing) <sup>3</sup>	-	-	-	6,834 t	6,922 t
SO <sub>x</sub> emissions (manufacturing)⁴	-	-	-	49 t	47 t
VOC emissions (manufacturing) <sup>s</sup>	-	-	-	3,054 t	3,227 t
ENERGY					
Total energy use (excluding electricity)	226,303,331 GJ	222,201,248 GJ	292,556,200 GJ	315,532,499 GJ	318,852,561 GJ
Total electricity use	229,460 MWh	277,437 MWh	411,800 MWh	452,546 MWh	463,873 MWh
Electricity self-generated – nonrenewable	44%	20%	20%	26%	30%
Electricity self-generated – renewable	2%	0%	0%	0%	0%
Electricity purchased – nonrenewable	46%	65%	65%	61%	61%
Electricity purchased – renewable	17%	15%	14%	13%	9%
WATER					
Total freshwater consumed	11,870,091 m <sup>3</sup>	9,969,751 m <sup>3</sup>	12,624,989 m <sup>3</sup>	14,848,502 m <sup>3</sup>	14,737,143 m <sup>3</sup>
Freshwater consumption intensity					
m³ / tonne of methanol	3.35	2.92	2.38	2.68	2.68
Effluent discharged (freshwater use)	3,422,577 m <sup>3</sup>	3,105,424 m <sup>3</sup>	4,176,699 m <sup>3</sup>	4,061,522 m <sup>3</sup>	3,768,304 m <sup>3</sup>
WASTE					
Total weight of hazardous waste – disposed	101,934 kg	140,920 kg	48,646 kg	179,307 kg	362,176 kg
Total weight of hazardous waste – recycled	8,438 kg	16,088 kg	59,595 kg	330,752 kg	10,201 kg
Total weight of nonhazardous waste – disposed	497,312 kg	1,670,064 kg	1,809,966 kg	1,735,240 kg	1,802,879 kg
Total weight of nonhazardous waste – recycled	361,948 kg	1,065,124 kg	1,464,681 kg	673,980 kg	709,712kg
Waste recycled (% of total waste disposed)	38%	37%	45%	34%	25%
	3070	37.70	1370	3.70	2570
SIGNIFICANT SPILLS					
Methanol spill (serious)	0	0	0	0	0
Methanol spill (major)	0	0	0	1	0
Other spill – petroleum products or treatment chemicals (serious)	0	0	0	0	0
Other spill – petroleum products or treatment chemicals (major)	0	0	0	0	0
COMPLIANCE					
Fines (USD)	0	0	0	0	0
PRODUCTION					
Methanol (total tonnes)	5,807,628 t	5,800,325 t	7,822,306 t	8,343,996 t	8,401,087 t
Methanol (equity share, tonnes)	4,853,000 t	5,193,000 t	7,822,300 t 7,017,000 t	7,187,000 t	7,211,000 t
wiethanor (equity strate, torilles)	4,033,000 (	3,193,000 t	7,017,000 t	7,107,000 L	7,211,000 t

<sup>&</sup>lt;sup>1</sup>Scope 1 CO<sub>2</sub> emissions are direct emissions on an equity basis.

 $<sup>^{2}</sup>$ Scope 2 CO $_{2}$  emissions are indirect emissions, on an equity basis, from the generation of purchased energy.

<sup>&</sup>lt;sup>3</sup>Nitrogen oxide (NO<sub>x</sub>) emissions

<sup>&</sup>lt;sup>4</sup>Sulphur oxide (SO<sub>x</sub>) emissions

<sup>&</sup>lt;sup>5</sup>Volatile organic carbon (VOC) emissions

<sup>&</sup>lt;sup>6</sup>Recordable injuries are incidents that require medical attention or that result in restricted work or lost time.

<sup>7</sup>Recordable injury severity rate (RISR) describes the ratio of significant and near-miss incidents with high potential for loss being reported as compared to the total incidents reported.



		2014	2015	2016	2017	2018
WORKPLACE	EMPLOYEE INJURY STATISTICS					
	Recordable injury frequency rate (RIFR) <sup>6</sup> Number of recordable injuries / 200,000 hours worked	0.28	0.46	0.53	0.65	1.03
	Recordable injury severity rate (RISR) <sup>7</sup>					
	Number of significant incidents / total incidents	1.85	16.46	8.50	15.34	32.34
	GLOBAL EMPLOYEE STATISTICS					
	Total number of employees	1100	1295	1275	1357	1426
	Asia Pacific	4%	3%	4%	4%	5%
	Chile	9%	9%	10%	12%	12%
	Dallas	3%	3%	3%	3%	3%
	Egypt	13%	12%	11%	12%	11%
	Europe	3%	3%	3%	2%	3%
	Geismar	12%	13%	13%	12%	13%
	Medicine Hat	10%	10%	10%	10%	10%
	New Zealand	21%	22%	22%	22%	21%
	Trinidad	15%	15%	15%	13%	13%
	Vancouver	10%	10%	10%	9%	10%
	LENGTH OF EMPLOYEE SERVICE					
	< 1 yr	17%	11%	9%	14%	13%
	1–2 yrs	21%	25%	24%	16%	18%
	3–5 yrs	20%	21%	23%	26%	25%
	6–10 yrs	17%	25%	21%	21%	21%
	11–15 yrs	11%	5%	10%	9%	8%
	16–20 yrs	6%	5%	6%	6%	8%
	21–25 yrs	3%	2%	2%	2%	3%
	26+ years	5%	5%	5%	5%	5%
	EMPLOYEE GENERATION					
	Millennials (1981 or after)	27%	30%	34%	36%	40%
	Generation X (1966–1980)	48%	48%	48%	44%	43%
	Boomers (1946–1965)	25%	22%	19%	19%	17%
	Mature (1945 or prior)	0%	0.1%	0.2%	0.1%	0.07%
	EMPLOYEE GENDER					
	Female	26%	26%	27%	27%	28%
	Male	74%	74%	73%	73%	72%
	Females in Senior Management	2	2	2	2	1
	Females on the Board	2	4	3	3	4
COMMUNITY	Community investment	-	-	USD \$1.00 m	USD \$1.27 m	USD \$1.47 m
	Community volunteering	-	-	-	13,069 hr	12,474 hr
	Beneficiaries (organizations receiving our support)	-	-	235	369	302
	Community advisory panel (CAP) meetings	-	29	23	23	23
PRODUCT CTEWARDS	Marina vaggal safety visits	17	10	22	35	25
PRODUCT STEWARDSHIP	Marine vessel increasions (CDI Marine)	17 17	18 18	23 28	25 28	25 25
	Marine vessel inspections (CDI-Marine) Marine safety training sessions	55	70	117	100	100
	Terminal inspections (CDI-Terminal, TPSA, follow-ups)	27	70 24	30	36	28
	Responsible Care seminars held	29	50	49	75	80
	Responsible Care seminar attendees	>1,500	>1,500	1,340	1,100	2,739
	Organizations reached	>1,500 -	922	300	300	747
			322	230	230	, .,

For the complete version of our 2018 Responsible Care & Sustainability Report, please visit https://rc-sustainability-reports.methanex.com/2018. If you have any questions or comments about this report or our Responsible Care and sustainability activities, please contact us.

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A RESPONSIBLE CARE® COMPANY

Methanex is the world's largest producer and supplier of methanol to major international markets in North America, Asia Pacific, Europe, and South America. Headquartered in Vancouver, Canada, Methanex currently operates production sites in Canada, Chile, Egypt, New Zealand, the United States, and Trinidad and Tobago. The company's global operations are supported by an extensive global supply chain of terminals, storage facilities, and the world's largest dedicated fleet of methanol ocean tankers. To learn more, visit us at www.methanex.com.

