Helen Theoret, General Manager for Supply and Distribution for Shell Canada Limited, was recently appointed Chair of the Canadian Fuels Association's Board of Directors. Ms. Theoret, a chemical engineer from the Université de Sherbrooke, Quebec, joined Shell 25 years ago. Her successful career at Shell includes a variety of engineering, operations, planning and management roles across Canada and in Europe. She is a member of Shell Canada Limited’s Board of Directors. We recently talked with her about her experience in the fuels industry and the top issues facing the sector. The interview has been edited for length.

You started your career at Shell 25 years ago. What drew you to the fuels industry and how much has the industry changed since the beginning of your career?

I was studying chemical engineering and I really liked what we were learning. I wanted to apply that knowledge in my first workplace role. I also like working with people and in a manufacturing environment, so those were some of the criteria I was looking for in my first job. The job posting at Shell met these criteria and my career in the industry got underway.

As for what has changed, well, in many ways a lot of things remain the same. The industry is still taking crude oil and converting it into products, and those products are still key building blocks for our prosperity as a society. Change has occurred in the last 25 years: public and industry expectations have evolved regarding environment management, and efficiencies at work and competitive pressures locally and globally have increased. It hasn’t been a revolution, but a long, continuous, and actually quite significant improvement in the industry.

What are the top three issues facing the transportation fuels industry for the next 5-10 years?

It’s probably a continuum of what we’ve observed in the last number of years. One thing that I observe and expect will continue for the next number of years is the balancing act between reducing the environmental impacts of fuel production and use,
and the very important need that the fuels business meets for society in general. It’s hard to imagine a prosperous society that doesn’t have access to reliable, high-quality, affordable transportation fuels.

The regulatory agenda and the implications for industry investment and competitiveness will continue to be a challenge that requires careful analysis and conversation among the various stakeholders. The capital investment requirement of our industry is tightly linked to how much we need to change and how fast we need to change. It’s important that as policymakers continue evolving regulations that reflect our expectations as a society, it be done in a framework and at a pace that enables the industry to make the necessary investments and remain globally competitive - we don’t work in an isolated world anymore. At the end of the day, the industry provides a substantial uplift to the Canadian economy and significant career opportunities.

There is also an evolving landscape as it relates to biofuels and introducing alternate fuels into our fuels portfolio. Biofuels are still something that we are learning about. We must better understand what is the well-to-wheels environmental footprint of introducing a new component in our fuels and how much benefit that actually provides to us as a society.

What do you think will be the future of transportation fuels in 25 years? How will the fuel mix evolve to alternative forms of energy to address the challenges of climate change?

It’s clear that we will have a broader mix. The biofuel portfolio will evolve and likely grow. Liquefied natural gas will play a bigger role. We are already seeing growing LNG demand by heavy trucks for transportation. There is also good potential for LNG in marine transportation. Natural gas is part of the overall petroleum portfolio and its environmental footprint is smaller than the fuels that we use today. There will also be some growth in the use of electrical cars, and other alternate fuels. We recognize that there will be a more diversified portfolio of fuels, but it’s impossible to predict exactly what that fuel mix will be. There are just too many variables and unknowns.

From your experience at a global company like Shell, how well do you think Canada’s fuels industry is doing on environmental issues?

The industry is actually doing very well in Canada. The Association tracks members’ environmental performance on an annual basis. We collect and analyze a lot of data, review performance year over year, and compare how Canada performs relative to the rest of the world. Although we need to continue improving – and I don’t think there is any doubt in anyone’s mind about that – it’s fair to say that our footprint, as it relates to air quality, is actually at the top of the class.

We have made great progress in reducing water usage. We make much more use of ‘closed loop’ systems where we recirculate and reuse cooling water. Our water usage footprint is much smaller than it was in the past.

Visible flaring and noise at refineries has also been significantly reduced – something that is important to the communities located around refineries. It’s rare to see flaring at a refinery today, and when it does happen, it’s a short duration event. We put a lot of effort into being good neighbours to surrounding communities – from environmental performance and safety perspectives. And of course, the fuels we produce are much cleaner today than they were just a few years ago. A 2010 Environment Canada analysis confirmed the high-quality of Canadian fuels and their top level environmental performance.

When you started your career, the energy industry was largely male-dominated. What challenges did you face as a young woman and what are the opportunities for students looking to work in the fuels industry today?

When I look back, I don’t remember at any time feeling uncomfortable or unwelcome in the industry. In fact, it was the opposite. The industry has proven to provide a very positive work environment. It’s also fair to say that I was often the first woman promoted to various positions. In my experience, it wasn’t about external barriers, it was more about finding my inner confidence. In the end, it’s been very much about hard work. It’s been about speaking my mind when I had the opportunity, and sometimes creating that opportunity. It’s also been about making sure I understood where and from whom I could learn and seek input in dealing with a specific situation.

As for the younger generation and what there is to offer in the industry, I just think it’s brilliant. Depending on what type of environment motivates you most, I would say that with the variety and the complexity the industry offers, there is really no end to the opportunities and how you can grow and develop with it. I would highly encourage people who want to be in a high-tech, high capital investment, high challenge environment to choose the oil industry: it’s a fantastic place to work!
Tips for winter driving

It’s that time of the year again. As soon as the leaves are on the ground and that store shelves are empty of Halloween decorations, brace yourself for Christmas jingles and long commutes home when the first snowflakes appear. We have compiled some useful tips to help you navigate through the fast-approaching winter driving season.

Get your tires ready for winter

Switch to winter tires, which have better traction in snow, ice and sleet. Using four tires with the same tread also improves handling. Cold air reduces tire pressure, so check your tire pressure when your vehicle has been outside in the cold.

Check your battery

Winter is a tough time for a car battery. The cold hinders the chemical reactions that produce electricity and to add to that, lubricating oil thickens at sub-zero temperatures, requiring more power to start the motor. To avoid an unpleasant surprise in the morning when you are getting ready to go to work, test your battery in the fall and make sure it is fully charged.

Use a block heater

As mentioned, cold temperatures decrease the lubricating properties of engine oil, which means more power and fuel are needed to get the engine running. According to Natural Resources Canada, the most environmentally-friendly way to warm your engine is by using a block heater, which heats the coolant, which then warms the engine block and lubricants. Approximately two hours are needed for a block heater to warm the engine coolant. You can use a timer to switch the block heater on before you plan to drive. Idling for more than two or three minutes provides no benefit to the engine at all, while increasing your fuel consumption and air emissions.

Plan your trip

Check the weather forecast before taking the wheel and avoid driving during blizzards and freezing rain. If you can’t avoid hitting the road, looking at the weather forecast will help you adapt your driving style to the conditions of the day. Good to know: according to Transport Canada, snow and ice are more slippery at 0°C than at -20°C or below, and keep an eye out for black ice between 4°C and -4°C. Main roads are more likely to have been cleared of snow than secondary routes.

Adapt your driving

Winter conditions are often slippery, so it’s best to keep a greater distance with the vehicles in front of you. Adjust your speed to the driving conditions, accelerate and brake slowly to maintain traction and avoid quick movements that could make you skid. If you skid, ease off the accelerator or brake and steer gradually in the right direction. Shifting to neutral can also help if your car is skidding in a straight line.

Clear all the snow from your car

We have all seen them; Frosty the Snowmen on wheels, driving with just a tiny opening in their snow-covered windshields. Not only does that significantly reduce the driver’s visibility, but there is also a risk when snow comes flying off a vehicle and onto oncoming traffic.

Have your safety kit ready

Hope for the best, plan for the worst. The CAA and Transport Canada recommend keeping the following items at hand: emergency blanket, flashlight and batteries, maps, ice scraper and snow brush and first aid kit. In your trunk, pack a shovel, road flares, sand or gravel, matches and an emergency candle for heat and light, traction mats, a booster cable, a tow rope/chain, gas line antifreeze, a fire extinguisher, non-perishable food, a toolkit and extra winter clothing such as hats and mitts. Also, make sure you have more than enough fuel for your trip.

See more useful tips at Transport Canada, CAA and your provincial transportation ministry.
New Brunswick launches its used oil stewardship program

New Brunswick’s Minister of Environment and Local Government, Danny Soucy, announced on October 21 the launch of a provincial used oil and glycol recycling program. As of January 1, 2014, New Brunswick residents will be able drop off their used oil, oil filters and containers as well as used antifreeze and its containers in various locations throughout the province to dispose of them in an environmentally friendly way.

According to Recycle NB Board Chair Bryan Howell, “used oil and coolants are one of the largest single sources of recyclable liquid waste in New Brunswick. These products are dangerous to our environment. One litre of used oil could contaminate one million litres of water.”

The stewardship program will be administered by SOGHUOMA Atlantic (Société de gestion des huiles usagées Used Oil Management Association) and funded by fees paid by industry members. In Quebec, in 2012, SOGHU’s used oil and glycol recycling program recovered approximately 94 percent of used oil, 83 percent of oil filters, 95 percent of oil containers, 32 percent of antifreeze and 59 percent of antifreeze containers.

The Canadian Fuels Association and its members have been leaders in working with provincial authorities to establish programs that collect, process and recycle waste oil products across the country. The New Brunswick program follows in the footsteps of programs already up and running in Quebec, Manitoba, Saskatchewan, Alberta and British Columbia. Canadian Fuels Eastern division vice-president and Chairman of the Board of Quebec’s SOGHU Carol Montreuil underlined that “seeing a sixth province adopting this model was a testimony to the success of current programs across the country.”

Canadian Fuels Association sponsors a series of expert dialogues

As part of our new focus, the Canadian Fuels Association committed to proactively engage in the ongoing fuels policy conversation that directly affects Canadians’ mobility and quality of life. This year, we have engaged the Public Policy Forum (PPF) and the Macdonald-Laurier Institute (MLI), two of Canada’s leading public policy think-tanks, to organize a series of roundtables inviting experts, stakeholders and representatives from various levels of government to exchange ideas on key issues affecting the transportation sector and fuels industry.

PPF roundtables, held over the spring and summer in Vancouver, Toronto and Ottawa, discussed strategies for reducing transportation greenhouse gas emissions in Canada. These roundtables highlighted the complexity of the challenge, and that the way forward to a lower carbon-intensive transportation future will be a gradual transition involving evolutionary advancements in vehicle technologies and fuels, and will require significant changes in consumer behavior and choice.

The MLI roundtables, currently underway, are examining the economics of Canada’s petroleum refining sector in the context of Canada’s surging crude oil production. The first roundtable, held in Toronto in October, highlighted the economic challenges of building new refining capacity in Ontario. Electricity costs and regulatory burden were identified as key factors impacting investment decisions.

Summary reports for the PPF sessions are now available online on the PPF website. Summaries from the MLI sessions will be available on the MLI website in due course.
U.S. EIA predicts fossil fuels will continue to play a major role worldwide

World energy demand is expected to grow to 820-quadrillion BTUs (British thermal units) by 2040, a 56 percent rise from 2010 demand, according to the U.S. Energy Information Administration’s International Energy Outlook 2013. Non-OECD countries will lead energy demand growth, with a 90 percent increase by 2040, while OECD countries will see a 17 percent increase during that same timeframe.

While nuclear power and renewable energy will experience the strongest growth, with 2.5 percent per year, fossil fuels will continue to do the heavy lifting, supplying 80 percent of world energy demand through 2040. Natural gas, increasing by 1.7 percent every year, is predicted to be the fastest growth among fossil fuels, driven by expansion of tight gas, shale gas and coalbed methane, while growth in coal consumption will outpace liquid fuels past 2030 due to Asian demand.

Petroleum and other liquid fuels are the most important component of transportation sector energy use throughout the period. Liquid fuel use for transportation will grow by 38 percent between 2010 and 2040; transportation will represent 63 percent of the total increase in liquid fuel use. World liquid fuels production is expected to increase by 28.3 million barrels per day to satisfy growing demand.

Most of the expected growth in transportation energy use occurs in the non-OECD nations, where high projected economic and population growth, combined with relatively immature transportation sectors, drives transport energy demand growth of 2.2 percent per year from 2010 to 2040. In contrast, OECD transportation sector energy use declines by an average of 0.1 percent per year over the projection period, as a result of relatively slow economic growth, improvements in energy efficiency, and stable or declining population levels.

The outlook predicts that total transportation energy use in Canada will decline by an average of 0.8 percent annually, from 2.5 quadrillion BTUs in 2010 to 2.3 quadrillion BTUs in 2020 and 2.0 quadrillion BTUs in 2040, driven mainly by more stringent greenhouse gas emissions regulations for passenger vehicles and heavy duty trucks.

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