Sustainability: Meeting the Energy Challenge

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Sarnia-Lambton Environmental Association

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Clive Mather was appointed President & CEO of Shell Canada Limited effective August 1, 2004. Shell Canada Limited is a large integrated petroleum company in Canada with three major businesses. Exploration & Production explores for, produces and markets natural gas and natural gas liquids. Oil Sands is responsible for an integrated bitumen mining and upgrading operation in the Athabasca area of Alberta and Shell Canada’s Peace River in situ bitumen business. Oil Products manufactures, distributes and markets refined petroleum products across Canada.

Clive’s career of 36 years with Shell has spanned all of its major businesses, including assignments in Brunei, Gabon, South Africa, the Netherlands and the United Kingdom. His last position was Chairman of Shell U.K. Limited, based in London.

Clive is a prominent business leader, who writes and speaks internationally on business, leadership and corporate social responsibility (CSR). He is chairman of the U.K. Government/Industry CSR Academy and on the board of directors of the C.D. Howe Institute in Canada. Clive is a trustee of the Royal Anniversary Trust and an advisory board member of the Relationships Foundation, both in the United Kingdom. He was a director of Placer Dome Inc. until its takeover in January 2006. He has previously held many public appointments in the United Kingdom including commissioner for the Equal Opportunities Commission, deputy chairman of the Windsor Leadership Trust, chairman of the Petroleum Employer’s Council and chairman of the Lambeth Education Action Zone. He has also been chairman of the IMD Business Advisory Council in Switzerland.

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What a pleasure it is to be here today in the heart of Great Lakes country, not far from North America’s first oil discovery in 1858. Of course, the Americans are apt to claim that distinction, but what’s one year between friends? The name “hard oilers” was well earned by those Lambton-area pioneers who needed stout hearts and even stronger muscles to start Canada’s oil industry. But, I imagine that even those hardy pioneers might be surprised by the challenges our industry faces today, particularly in terms of exploiting a valuable resource without harming our environment. I believe the answer lies in sustainable development and I’d like to explain what that means for Shell Canada.

Sustainable development really began with Our Common Future, a report issued by Gro Harlem Brundtland on behalf of the World Commission on Environment. The report concluded that we must meet today’s needs without compromising the ability of future generations to meet theirs. For all of us in Shell Canada, this means integrating economic, environmental and social considerations into our daily activities and future plans.

But before I tell you about some real examples of how Shell implements sustainable development, let’s talk about one of the most compelling reasons for adopting sustainable practices - climate change. Does it even exist? Some claim that there is no proven scientific evidence to support current theories around global warming. My view, and the position taken by Shell, is that there is sufficient evidence of climate change to prompt - at the very least - a precautionary approach to our activities.

In its Statement on the Status of the Global Climate in 2005, the World Meteorological Organization reported that last year was one of the two warmest years since 1850 and that, with the exception of 1996 and 2000, the last 10 years are the warmest on record. Central Canada experienced its warmest and most humid summer on record in 2005, with twice the average number of hot days in Toronto. And the 2005 Atlantic hurricane season was the most active on record, including hurricane Katrina, which was the deadliest to hit the United States since 1928.

These climatic conditions not only affect plants and wildlife, they also threaten many communities. Canada’s Aboriginal people are finding it more difficult to maintain their traditional way of life. Climate impacts our industry, as well. Today’s drilling season lasts only 15 weeks of winter, half the time it used to be before the onset of the spring thaw. And extreme weather affects us all, as customers at the gas pump. When major hurricanes hit the US gulf coast last year, oil refineries down there took a big hit, which helped push gasoline prices to unprecedented high levels and tested supplies into the Canadian market.

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and there are some encouraging developments in this field. Shell is among the frontrunners in this respect with major investments in wind, biomass and hydrogen. For example, Royal Dutch Shell is investing in the development of fuel cell technology. There are already liquid hydrogen-fueling stations in Iceland, Japan and in Washington, D.C., with more to follow. We also support cellulose-based ethanol production. Here in Ontario, Shell has a major stake in Iogen, which is now producing ethanol from agricultural residues such as corn straw from a pilot plant in Ottawa.

So, how do we bridge the generational gap between today’s reliance on fossil fuels and a future fuelled by renewable energy? How do we satisfy the growing energy demands of developing countries and, at the same time, preserve our beautiful planet for our children and grandchildren? The answer, I believe, is sustainable development – balancing economic, environmental and social considerations. Let me start with social responsibility.

Ever since that first oil discovery, we have lived with a legacy of how the industry used to operate. But over the last couple of decades, as people have increasingly questioned how we do things, our thinking has fundamentally changed. High on our current list of priorities is community consultation with our Aamjiwnaang neighbours right from the start. Although negotiations were complicated and difficult at times, I believe we have arrived at a successful, multi-stakeholder solution. And we commit to continue building these relationships.

Another goal is to respond to the needs of the Aboriginal communities where we operate so they can share in the opportunities offered by our presence. About a year ago, a fledgling mechanical engineering company on the Aamjiwnaang reserve wanted to establish a track record with companies like Shell. Our Sarnia Refinery hired this company – Native American Technical Services Company (NATSCO) - to give it that all-important first opportunity to prove itself. Just over a month ago, our refinery manager Marc Mageau was delighted to present NATSCO’s Doug Henry and his team with a contractor safety award in recognition of their excellent and safe work record.

Shell Canada considers itself an integral part of the larger Sarnia community. We have been proud supporters of Lambton College and the Industrial Education Cooperative for many years. This morning, I was delighted to hand over a cheque for $125,000 to the Bluewater Health Foundation for the Shell Healing Garden, a place of life, light and comfort to help heal troubled minds and spirits. This gift brings our total contribution to the Foundation to $200,000. Shell has also granted more than $140,000 through the Shell Community Service Fund to
about 80 not-for-profit organizations in Lambton County and our 2005 United Way campaign recorded its best-ever year both nationally and locally. Shell’s Sarnia-Lambton campaign raised a record-breaking $149,000, when the company matched the money raised by our employees and retirees.

Environmental responsibility plays an equal role alongside social responsibility in our concept of sustainable development. For example, the research and development of new technology play a vital role in energy improvements and emissions reduction as well as customer satisfaction. In fact, over the past 30 years, we have invested many millions of dollars in fuel technology that would help reduce tailpipe emissions by more than 90 per cent.

Internationally, Shell’s association with the Ferrari Formula One racing team has enabled us to bring Canadians cleaner gasoline. The technical knowledge acquired from test- and racetracks around the world has been applied to Shell V-Power® gasoline and tested again in actual on-road conditions in Canada. Few of us can drive a Ferrari to work, but at least we have the option to use a premium-grade fuel to help keep our engines cleaner, improve their efficiency and potentially reduce vehicle emissions.

Earlier this year, Shell sponsored an Australian couple’s attempt to set a world record for fuel-efficiency in a standard production Volkswagen Golf FSI 1.6. The Shell Fuel Economy World Record Challenge started January 17, 2006, and finished 78 days later on April 4. The drivers traveled through 25 countries, covering almost 29,000 kilometres on only 24 tanks of Shell fuel. This remarkable adventure reflects Shell’s commitment to helping its customers around the world achieve greater fuel efficiency no matter where they live or what they drive.

Improved efficiency usually means less environmental impact. Closer to home (and just as important if not quite as “sexy”), Shell Canada’s Sarnia Refinery is also working on technological advances that lighten our environmental footprint. During a major scheduled turnaround this fall, we will be replacing our carbon monoxide boiler with an expensive new model that uses new technology. The new boiler will provide better energy efficiency and improved reliability, which, in turn, will reduce greenhouse gases and other emissions.

In February, we introduced feedstock into our ultra-low-sulphur diesel projects at our Scotford and Montreal East refineries – projects that were completed on time and on budget. We also have a new hydrogen plant on our property, which will supply hydrogen to Suncor Energy Products Inc. for their ultra-low-sulphur diesel unit now under construction. Shell will transport diesel fuel by pipeline from our Sarnia
Refinery to the Suncor Refinery where the new unit will remove most of the remaining sulphur and pipe ultra-low-sulphur diesel back to Shell. Having one process unit rather than two reduces the environmental footprint. And Shell will be able to use the steam that is generated from the hydrogen production process as a cleaner energy source for our refinery operations.

You may remember that, three years ago, we gained a similar advantage from our warm water loop project. This project began during preparations to install the gasoline hydrotreating unit required to reduce the sulphur content in gasoline by 90 percent. The hydrotreater needs a lot of heat and, instead of building new infrastructure, we extracted heat from water already circulating in various parts of the refinery. The new design recovers enough energy to light almost four million 100-watt light bulbs continuously for 12 days and reduces projected greenhouse gas emissions by 10,000 tonnes.

Clearly, then, sustainable development requires a combination of imagination, innovation and new technology – which, I might add, is what industry is very good at doing. We also have to engage other people, including other industry players, usually through industry organizations such as the Sarnia-Lambton Environmental Association.

Oil and gas fuel our modern way of life – literally and figuratively. Ever since that first discovery in Ontario (a fact that greatly disconcerts Albertans) we have wrestled with the production of unwanted emissions. Now is the time to make a step change. For example, we are ready to invest in the technology to capture the carbon dioxide (CO₂) from our oil sands operation and transport it to declining oil fields in other parts of Alberta. There, it can be sequestered underground and used to push more oil towards the surface for production. We are asking the Government of Canada to join us by creating the right investment environment for construction of the CO₂ pipeline infrastructure that any company in the region with unwanted CO₂ can use. The vision is one step towards an innovative showcase for Canadian technology and commitment to greenhouse gas reductions. Later, I hope it will include the addition of a market-based CO₂ emissions trading program. With the right leadership and investment, Canada can provide a compelling model to the rest of the world.

New technology and innovative ventures call for collaboration with the various levels of government to develop an appropriate legislative framework that balances environmental responsibility with the realities of the market and the contribution and limitations of industry.

In this respect, the Sarnia-Lambton area faces some specific challenges, with aging refineries and supply constraints. Shell’s Sarnia Refinery, which is over 50 years old, is one of 19 refineries in Canada. Thanks to judicious investments over the years, these refineries are highly efficient and operate as safely, reliably and

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environmentally responsibly as any in the world. Together, they produce 100 billion litres of refined products each year. But is this enough? Long-term product supply is a major challenge for the industry because growth in demand is outpacing increases in capacity. Refinery utilization rates are about as high as they can go. At the same time, the legislated changes in product specifications have necessitated major investments over a relatively short time period. And while these regulations result in positive change, they do nothing to increase refinery capacity.

Now we are facing an urgent requirement to use ethanol in gasoline we sell in Ontario. Shell supports the development of advanced biofuels, but we need the proper regulatory framework and adequate lead-time. In a race to solve one problem, we may be aggravating others, such as the reliability of supply. For example, Ontario has imposed ethanol specifications different from those in Saskatchewan, which will be different again in Manitoba. As a result, gasoline can no longer move easily and efficiently across these provincial borders, leading to potential product shortages. That is why Shell supports the federal government’s development of a National Renewable Fuels Standard. Clearly, Ontario must be in alignment with this standard if we are to implement a successful national framework that will address the differences in provincial requirements.

We also need a reliable supply of electricity. Unplanned shutdowns of a refinery or chemical plant are potentially hazardous and extremely expensive. In its desire to improve the environment, the Ontario government is planning to close all coal-fired generating stations by 2010, including the Lambton generating plant - among the cleanest of its kind in North America. At the same time, just across the Canada-United States border, the State of Michigan has announced its intention to build new coal-generated electricity plants. Since emissions recognize no borders, closure of Canadian plants will not necessarily benefit the Sarnia region environmentally and may jeopardize the security of electricity supply.

Our 2006 capital investment program includes over $300 million for refining and distribution, about 70 per cent of which is to meet legislative requirements and maintain infrastructure integrity. We believe that Ontario would benefit from a cohesive, well thought out energy policy that reflects input from all stakeholders, including local industries, which would encourage companies like Shell to continue to invest in existing infrastructure and look at longer-term growth options.

Over the years, Sarnia-Lambton has proved itself responsive to issues that are important to the community. Shell Canada tries to be equally responsive. We understand, for example, that water quality is tremendously important. Bill 133 sent a clear message that, although local industry has cut spills by 90 per cent, this reduction is not enough. And, while we might not be in complete agreement with some elements of the bill, particularly...
those concerning the inadmissibility of due diligence and reverse onus (guilty until proved innocent), we will continue to invest in measures to eliminate spills. We know that achieving zero spills is the only way to keep the public’s trust and convince people that the St. Clair River can continue to safely support a wide range of uses.

We also recognize that health is of keen interest to the community – a community that includes our own workers. I am pleased that, through the Sarnia-Lambton Environmental Association, Shell Canada is supporting a long-term, multi-stakeholder health study, spearheaded by Health Canada, which will enable a comparison between Sarnia residents and other communities.

To sum up, I believe that technology and innovation are key to sustainability. I also believe that we can provide made-in-Canada solutions to the challenges of air and water quality, spills and health concerns. Shell is proud to be part of this community and we will continue to look for ways to protect the environment and bring benefits to everyone in the Sarnia-Lambton area.

Thank you.
3 National Energy Board, 2004 Annual Report, p. 20

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