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Extreme Makeover

Written by Leor Rotchild

The petroleum industry's image needs to change to attract more youth.

The recent meltdown in commodity prices is only the latest challenge the petroleum industry is facing. An even greater threat relates to the most vital and common element required in the production of oil and gas: people.

To replace a retiring generation of professionals, the petroleum sector needs an influx of youth—but many are choosing careers in industries with less tarnished reputations.

Millie Adam is an ideal candidate for the petroleum sector. Her mechanical engineering skills and experience are widely sought after.

However, "I can't see myself working in the oil industry," she says. Like many in Alberta, she worked in oil and gas while in university and even shortly after graduation. Now, Adam works for a non-profit organization called the Centre for Affordable Water and Sanitation Technology (CAWST).

Dr. Randy Gossen is President of the World Petroleum Council (WPC), an international organization representing all aspects of the petroleum sector. Gossen is well aware of the petroleum sector's negative image, fuelled by growing environmental concerns.

"Attracting and retaining young people is one of the key challenges facing the international petroleum industry," he says. So the WPC established a Youth Committee to help put in place strategies for engaging youth in the petroleum industry to design a sustainable future. The WPC defines 'youth' as anyone under the age of 35, showing the scale of the problem.

The average oil and gas employee is 50 years old. In the next two years alone, it is estimated that the industry will face a 38 per cent shortage of engineers and geoscientists. This could lead to hiring less qualified personnel to fill the gaps and therefore result in more safety and environmental incidents, project delays, supply shortages, and stagnant innovation.

For Nirmal Patel, innovation is the petroleum sector's biggest problem. Patel is a fourth-year chemical engineering student at Ryerson University and was a Canadian youth delegate to the World Petroleum Congress in 2008. Patel submitted an essay in order to receive funding for the event.

"My essay was about the petroleum industry's role in curbing energy consumption and the need to invest in more research and development [R&D]," he explains.

At the World Petroleum Congress in Spain, Patel was surprised to see how open the industry is to fresh ideas and how much emphasis there was on the need to listen to youth perspectives. Through contacts made there, Patel landed a co-op placement at Nexen, an international oil and gas company based in Calgary.

Has his perspective changed since he wrote his essay?

“No. I still feel the industry is not investing enough into R&D,” he says. “When you look at the pharmaceuticals industry for example, they make investments with 20-year horizons. Investment in this industry tends to be more short-term focused.”

For example, the pharmaceuticals industry spends more than \$45 billion a year on R&D while the petroleum sector spends approximately \$5 billion. However, since most of the petroleum-related R&D takes place in the field, not in a science lab, factoring this in may push that \$5 billion much higher. Nonetheless, a significant percentage of this R&D is directed towards increasing the efficiency of existing petroleum extraction processes rather than discontinuous or “game-changing” innovation.

With so many broad global energy challenges, there has never been a more urgent need for the petroleum industry to take on more risk, collaborate and transform into an innovative, high-tech energy sector.

Youth see wind, geothermal, and other renewable energy sources as exciting examples of innovation. A dramatic upswing of investment into clean technologies can improve the image of the petroleum industry and create a more innovative and attractive work environment. Labour and material costs are currently low and wait time for wind turbines is optimal. Developing a broad portfolio of energy sources is also the best protection from volatile commodity prices.

Dr. Gossen agrees that innovation and advances in technology are critical but reminds us, “This is particularly true with regards to non-conventional oil and gas resources.”

“The International Energy Agency is forecasting a 25 per cent increase in demand by 2030,” he says. “Even with the contribution of renewables to the energy mix, oil and gas will still constitute about 60 per cent of our total energy consumption. We must ensure that even during low commodity prices, R&D investment continues to be a priority.”

The economic downturn has slowed hiring, but the war for talent will not go away. When commodity prices finally rebound and the baby boom generation retires en masse, the need to fill vacant roles will be immense across all industries.

Attracting and retaining young talent like Adam and Patel will require an image makeover, but youth are too savvy and mistrustful to fall for an empty public relations exercise. This makeover will have to be grounded in substance, consistent with young people’s desire for a better world. Environmental responsibility and forward-thinking energy development must become touchstones of the petroleum industry. Youth should see the petroleum sector as the most innovative environment to apply their skills and wild ideas to find sustainable solutions to broad energy-related challenges.

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