

The natural collaborator

The new CANDU Owners Group president, **Stephanie Smith**, comes with a pedigree of senior nuclear plant operation backstopped by a chemical engineering degree. She says the real power is in the team



Above:
Stephanie Smith is the new president and CEO of the CANDU Owners Group

FOR STEPHANIE SMITH, SUCCESS HAS never been about being the smartest person in the room, despite accomplishments worth the bragging rights.

After graduating high school with 100 per cent in mathematics, Smith took what was a relatively unconventional path for a young woman in 1986, gaining a chemical engineering degree.

Through the following three decades, Smith's early success would prove to be a harbinger of what was to come. She moved through the ranks at Ontario Hydro, then its successor generation company, Ontario Power Generation (OPG), in roles that successively broke glass ceilings. In her journey from junior systems engineer to shift manager, director of operations and maintenance, and deputy senior vice president at the multi-unit Darlington nuclear station, Smith earned the title "trailblazer" for the list of firsts accomplished along the way.

On 1 September this year, Smith added another first to her list, becoming the first female president and CEO

in the 36-year history of the CANDU Owners Group (COG). The organisation's mandate is to drive innovation and continuous improvement in Candu nuclear plants through collaboration between its members and the broader nuclear industry. More recently, the organisation has also facilitated its members' ambitions beyond Candu, in new nuclear technologies and in decommissioning and waste management.

In her new role with COG, Smith will once again push her own boundaries, this time leaving the insular world of the nuclear plant to build relationships and programmes across nuclear utilities, suppliers, and organisations, worldwide.

The road to nuclear leadership

It was a class trip to Ontario Hydro's Darlington Nuclear Generating Station in the late 1980s, in the third year of her degree studies at the University of Toronto, that introduced Smith to nuclear. But it was not the engineering side of the business that caught her attention. ☺

“I went into the control room and there was the shift manager, kind of like [Star Trek’s] Captain Kirk, hands on the controls, in the chair, and I thought, ‘That is the coolest job ever,’” she recalls.

At 22, degree in hand, Smith landed a job at Darlington as a junior systems engineer. “I made it known I really wanted to be a shift supervisor and was looking for the experience to get there,” she says. A few years later, when an offer came for her to transfer over to the company’s other nuclear station, Pickering, 45 minutes down the road, she crossed over into operations and never looked back.

The Pickering plant had eight units – four commissioned in the early 1970s and four commissioned in the early 1980s. These were pioneers among the Candu stations and early on had not benefitted from the operating knowledge or maintenance programmes put in place in subsequent years. As a result, when Smith transferred in the mid-1990s the plants were showing wear and tear, though they were still relatively young by today’s standards.

“In those days, there was a lot to improve at Pickering,” Smith says of one of the most challenging periods in the plant’s history. “I wanted to go somewhere I could make a difference.”

In the years that would follow, Smith became the first woman ever licensed on the plant’s newer units (Pickering 5-8) after taking the rigorous training required to gain

authorised nuclear operator credentials. With her sights set on the shift manager role, Smith juggled home life with the gruelling demands of training and work, while trying to maintain enough emotional reserve for her two young daughters. It was not always easy. She shares credit with her husband, who left his own job to focus on raising the girls, given the demands of her schedule. “This was a family decision,” says Smith. She says, that even with the benefit of having a parent at home, the long hours and challenging work could still leave her feeling torn between two very different all-consuming worlds. She notes that the nature of control room shift work is that you report in and you do not leave until the shift is done. There is no stepping out to manage a child’s illness or to fix something that has gone wrong at school. And, after 12-hour shifts, it isn’t always a smooth transition between the control room and the household. “Sometimes, the girls would tell me to stop talking to them like a shift manager,” she laughs.

The toll of hours away from home is a challenge and a commitment faced by all families when one parent signs on to control room operations. The unique demand of the training and work is part of the reason many utilities provide spouses with their own sessions early on during the operator-in-training programme.

With her shift manager goal still in mind, Smith completed the required tests, exams and the 400 required

hours shadowing a licensed shift manager. At last, in 2006, she had earned the right to sit in the ‘captain’s chair’ of her own control room. It was a role she would play for almost nine years. And just like the fictional Kirk, she would rely on a close-knit team of skilled and highly-respected colleagues to co-pilot the journey.

“These guys — and I say guys because they were all men — they saved my bacon more than a few times,” she says. “Even if you’re the boss, it’s OK to admit when you don’t know the answer.” Together, for almost a decade, they found the answers and when Smith moved roles, the crew chipped in on a \$500 spa gift certificate.

Smith became assistant operations manager, manager and then director of maintenance. Eventually, she became director of operations and maintenance (DOM) for the entire Pickering station.

“Maintenance manager, out of all the jobs, was the one I most thoroughly enjoyed,” she says, of her time leading the team of 800 maintenance staff. “They want to do work and the best part of my job was just finding ways to remove barriers for them. They were the best bunch.”

Every other week, Smith says, she would pull the entire team together so she could hear what challenges she needed to tackle on their behalf. At 5 foot 4 inches high Smith needed a platform and bull horn to ensure she could connect visually and be heard by the full group, but the

regular meetings were effective and fit well with her hands-on leadership style.

In May 2017, when she took over the role, Smith moved to a level of busy that surpassed even her previous roles. “As plant manager, you can’t delegate. It is all consuming for an average of 70 hours a week. It isn’t a role you can sustain indefinitely,” she says.

In the years between when Smith first transferred to Pickering until she left in early 2019, the station’s performance improved steadily. The continuous improvement created an opportunity to extend the plant’s operating life. In 2019, for the first time ever, the plant was recognised for operational excellence by the World Association of Nuclear Operators (WANO). Smith says, “The greatest reward has been the opportunity to work as part of a team tasked with a single-minded purpose. You become a family. We laughed, we cried, we rallied around a common goal.

“At INPO, they really focussed on teamwork and I would say my greatest accomplishment was seeing Pickering succeed and getting that rating of excellence (in 2019). It served the plant well to adopt a more facilitative and inclusive atmosphere. Pickering is an example of good teamwork. People still want to work there, even though it is scheduled to end operation. Everyone feels part of the team.”

Select Milestones of Stephanie Smith’s career

Stephanie Smith spent 30 years at one company, Ontario Power Generation and predecessor company, Ontario Hydro, yet still travelled far before becoming the first woman president of the CANDU Owners Group in September 2020.

SEPTEMBER
2020


CANDU Owners Group, new president and CEO:
In the midst of COVID, Smith takes over as COG’s first female president and CEO. As a “trailblazer” for women in unconventional roles, Smith is committed to helping a new generation of women and men find their own path in nuclear.

TO AUGUST
2020
FROM JULY
2019


Deputy senior vice president, Darlington Nuclear:
Smith becomes the first female deputy senior vice president at Darlington nuclear power plant.

JANUARY TO JULY
2019


WANO secondment:
Leaving on a jet plane... 32 of them, in fact, for WANO benchmarking during a secondment at INPO.

2018


Smith with her two daughters, Siobhan and Ciara:
The girls were young when Smith tackled the demanding training and work schedule to become shift manager. A family commitment to the journey helped keep things sane and rewarding.

TO JANUARY
2019
FROM MAY
2017


Director of operations and maintenance, Pickering Nuclear:
As director of operations and maintenance, Smith (centre) didn’t have a lot of time to let her hair down but when she did, it was for a good cause, like raising money for a local women’s shelter with fun initiatives like Pink Hair Day.

TO SEPTEMBER
2014
FROM JANUARY
2006


Shift manager, Pickering Nuclear:
Smith gets the “keys” and a nice framed certificate as she takes on her role as shift manager.

TO MARCH
2002
FROM SEPTEMBER
1998

TO SEPTEMBER
1996
FROM MAY
1990

Section manager, chemistry, Pickering Nuclear.

Began career as a systems engineer at Darlington Nuclear.



Fred Dermarkar

Moving CANDU Owners Group beyond its history

As the nuclear sector seeks to strengthen its competitiveness and advance new technologies, the CANDU Owners Group (COG) has been innovating its collaboration model for Candu and beyond.

In the 36-year history of COG, some of the greatest leaps forward in Candu technology have been achieved through the joint effort of the organisation's members – whose plants are located in seven countries worldwide – working through COG.

COG is taking that collaboration further. It has been reaching into new areas as its members look to expand into advancing nuclear technologies, said out-going president and CEO Fred Dermarkar as he prepared for his last day at the organisation on 30 September 2020.

"In the last several years, we have spent a lot of time determining the best place to focus COG's efforts to provide the greatest gain for our members as they work to help meet the world's 21st Century energy goals," says Dermarkar.

"The COG collaboration model has allowed us to strengthen nuclear knowledge management and to tackle some of the greatest operational, scientific and engineering challenges and opportunities of our time."

In 2020, like every sector, the nuclear industry has had to manage the immediate issue of the global pandemic. At the same time, the sector is moving at top speed to ensure nuclear is a technology of choice to meet the world's critical need for clean energy.

Using the well-established infrastructure within COG, the organisation has stepped up to advance the industry's goals on all counts.

"We have kept pace with the industry as it has rapidly expanded into new areas of focus," says Dermarkar. "We have strengthened COG internally to ensure COG is its most relevant and effective self to meet the industry's evolving goals."

In addition to traditional Candu performance areas, the members are working together through COG on small modular reactor (SMR) development, plant modernisation including digital technologies and cyber security, refurbishment, supply chain and SMR vendor training, and nuclear waste management and decommissioning.

As well, the COG management team has worked to expand the collaboration model to address financial constraints through greater resource pooling across the membership, through a global network of research facilities, partner organisations and universities.

"Collaboration is hard work and does not happen organically on a large scale," says Dermarkar. "COG has been building on its mature collaboration infrastructure to expand into new areas to better serve its current members, and to attract new ones."

One of the greatest sources of pride for Dermarkar as he passes the leadership to new president and CEO Stephanie Smith, is the strong engagement of the COG staff resulting from a strong focus on employee career development as well as increased diversity within the organisation of skills, gender, age and cultural backgrounds.

"As a management team, we have worked on updating policies that ensure we get the right talent and fit. We have looked to develop people from within. We have also looked to find where we were too homogenous and to attract people who round out our team," says Dermarkar.

The company recently signed on to Equal by 30, a commitment to gender parity in the workforce by 2030. COG has already reached that goal, a decade early, not through quotas but by seeking to ensure the right diversity of skills and perspectives.

"Stephanie has come to COG with an incredible operational pedigree for a woman or a man. What we did was set up the culture and the governance in a way that allowed COG to attract her and others whose talents and perspectives contribute to COG's vision. COG's members and the industry will be served well by this. That is a legacy I am happy to leave." ■

☞ The strong performance coupled with breakthrough research conducted through COG, demonstrating fuel channel fitness for service, has earned the plant the right to continue operation several years beyond its original design basis. Most recently, the Ontario government has expressed support for a plan to extend the newer four units (5-8) until the end of 2025, a year later than is currently approved by the federal nuclear safety regulator. OPG will make its case for the extended operation at a future hearing.

After two years as Pickering's DOM, Smith headed to WANO, working through the Institute of Nuclear Power Operations (INPO) in Atlanta, criss-crossing the US in 32 aeroplanes over seven months. Upon her return to OPG, she moved into the role of deputy site vice president at Darlington, where her career had begun.

Smith's daughters are now at the age she was when she started her career and these two strong and independent young women are unlikely to see gender as a barrier to their own aspirations.

At the helm of a new ship

In early September 2020, a few weeks after Smith started with COG and just a few days after officially taking the controls from COG's president of the past six years, Fred Dermarkar, Smith conducted her first all-staff meeting as a president and CEO.

Thanks to COVID-19, she doesn't need a bull horn or even a microphone for the COG 'town hall' meeting. Like many support organisations, COG's team is mainly working from home. It's a reality that Smith acknowledges makes sense for the times, but it is one she struggles with.

It's not that she can't manage the technology. She appears at ease and poised on camera. Her issue is the lack of in-person interaction. As she puts it, "I'm a people person. What I value is communication, working together and having a little fun as an organisation, and so it's a little bit different coming in this way."

She tells her new team to watch for invites each of them is receiving for a personal one-on-one virtual coffee chat, so she can get to know them better and learn what they need from her.

As it is not only the time of pandemic but also the time of Black Lives Matter, she asks for their help to figure out the best way for COG to respond. "The one thing you will find about me is I am always honest. And to be honest, I really don't know what I can do and what COG can do. I need to really understand the issues," she told them. "So, I would offer, when we have our one-on-ones, if you want to talk about it and share some of your experiences, I would really value that because I really want to figure out what we can do to help."

Using just seven minutes of the 15-minute time slot in her first president's address, Smith manages to extend an invitation to her team to help her do her job, offers them the help needed to do theirs and shares a short story of some exciting moments during her days as shift manager, revealing to them some key insights about her collaborative leadership style. And with that, she finishes, ensuring the meeting ends ahead of schedule on a busy Friday morning, likely endearing herself to many on her new team for that alone.

For Smith, leadership is about creating the environment for dialogue, learning what's needed, removing roadblocks, getting help from those who can offer it. ■



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