

## THE ENGINEERING PROFESSION'S POSITION

- Diversity in engineering means engaging the best minds in the profession and incorporating a wide range of perspectives and experiences to tackle the challenges and opportunities that the engineering profession faces.
- It is crucial to support equity, diversity, and inclusion (EDI) initiatives across Canada, including measures to address workplace harassment, discrimination, and the enhancement of anti-oppressive EDI practices.
- Increased participation of equity-deserving groups, including women, Indigenous peoples, Black people, people of colour, 2SLGBTQI+ individuals, and persons with disabilities, within the engineering workforce contributes to a deeper understanding of societal needs and enables the profession to better protect and serve the public interest.
- Engineers Canada firmly believes that fostering a sense of belonging among a diversity of people is essential for the sustainability of the engineering profession and its meaningful contribution to society.
- Increased diversity provides significant advantages to Canadians by addressing skill shortages, bolstering innovation capacity, and challenging injustice against equity-deserving groups.

### The challenge(s)

The engineering profession can better understand and protect the public interest if it is representative of the demographics of the Canadian public. History offers many examples of products that were built for the people who designed them but failed to address the needs of other groups of the population, for example, car airbags. Appropriate equity, diversity, and inclusion (EDI) in the engineering profession means addressing the marginalization of a variety of demographic groups in the engineering workforce and exploring interventions to increase recruitment, retention, and equitable participation of diverse individuals. EDI in the engineering profession also means those who have been historically over-represented and hold social privilege can challenge that their experiences are “normal” or “average”.

Currently, women constitute over half of the Canadian population but remain significantly underrepresented in the engineering profession, making up only 14 percent of practicing engineers and 23.4 percent of undergraduate engineering students. Research shows that gender-based discrimination and harassment continue to be significant barriers for women's participation in engineering, creating a toxic work

environment. This exclusionary culture also upholds systemic oppression that affects Indigenous peoples, Black people, people of colour, socio-economically disadvantaged individuals, 2SLGBTQI+ individuals, and persons with disabilities.

Engineers Canada is actively collaborating with provincial and territorial regulators, post-secondary institutions, and employers to address a culture of systemic discrimination in engineering. However, additional federal support is necessary to incentivize businesses of all sizes to prioritize EDI. One example of an engineering-specific initiative is the 30 by 30 goal, with aims for 30 percent women among newly licensed engineers by 2030. It requires commitments from employers, regulators, and post-secondary institutions to drive cultural change in the profession.

Similarly, Indigenous peoples, who account for more than 4.9 percent of the Canadian population, are significantly underrepresented in engineering. A recent report commissioned by Engineers Canada estimates that Indigenous representation in the profession stands at only 0.73 percent. Engineers Canada is actively working to strengthen relationships and to contribute to improved community outcomes and collective healing.

Ensuring equal opportunities for all people to enter the Canadian engineering profession requires continuous support for equity initiatives, including equal pay and equal opportunity. These measures help remove or challenge systemic barriers that disproportionately impact individuals in the social margins. It is also essential to form diverse teams to develop solutions for society's complex problems, as diverse teams and workplaces are more creative, innovative, collaborative, and productive. The engineering profession requires problem-solvers from diverse backgrounds to effectively address these challenges in the public's interest and promote Canada's innovative capacity.

## How Engineers Canada has contributed

Engineers Canada actively promotes EDI within the engineering profession by fostering collaborative networks among regulators, higher education institutions, engineering professionals, and employers. Through these networks, we've served as a backbone organization enabling the creation of strong relationships that build alliances and solidarities to deliver relevant activities, services, and initiatives for individuals at all stages of their engineering career.

Some of Engineers Canada's initiatives and accomplishments that support EDI include:

- Building strong relationships with subject matter experts in Indigenous knowledge and reconciliation, gender equity, anti-racism, anti-oppression, accessibility, women in engineering outreach programs, and regulators.
- Recognizing outstanding Canadian engineers dedicated to supporting women in the engineering profession through the Award for the Support of Women in the Engineering Profession.
- Leading the [30 by 30](#) goal, aiming to raise the percentage of newly licensed women engineers to 30 percent by 2030. This national collaborative network involves regulators, associations, industry, individuals, and academia working together to drive a significant shift in the prevalent culture of exclusion in the profession.
- Developing the planning resource guide [Managing Transitions](#), which provides best practices for employees and employers managing maternity or parental leave in the engineering and geoscience professions.

- Hosting an annual national 30 by 30 conference which is designed to move forward 30 by 30 work related to employer engagement, a relatively new target audience for Engineers Canada's EDI work.
- Creating an EDI webinar for Engineers and Geoscientists to increase knowledge of the principles of EDI among members of the profession.

Engineers Canada also provides strategic advice and national best practices to provincial and territorial engineering regulators and engineering employers to support the overarching goal of a diverse, inclusive, and equitable engineering profession. Through the Canadian Engineering Qualifications Board and the Canadian Engineering Accreditation Board, Engineers Canada supports regulators in ensuring fair application of standards for entry into the profession and requirements for continuing competence and ethics.

## Recommendations to the federal government

Despite the progress made by engineering regulators in promoting EDI, there is still more work to be done to achieve true equity in the engineering profession. The federal government has a crucial role to play in driving this change. Here are our recommendations:

1. Invest in employer training programs: The federal government should allocate funds to support ongoing training programs for employers that focus on EDI in the engineering profession. These programs should provide guidance on learning about systems of oppression, creating inclusive workplaces, mentorship opportunities for all equity-deserving engineers, and work-integrated learning initiatives that encourage individuals from equity-seeking identities to pursue engineering education and careers.
2. Provide resources for EDI in underserved areas: It is essential to ensure that small and medium-sized enterprises and remote workplaces in industries such as mining and natural resources have access to EDI resources. The federal government should allocate funding to develop specialized EDI training and resources tailored to the engineering sector, specifically targeting these underserved areas.
3. Support outreach and access initiatives: To cultivate a diverse talent pool in engineering,

the federal government should provide financial support for outreach programs, access initiatives, bursaries, mentorship programs, and work-integrated learning opportunities. These initiatives should specifically target equity-deserving groups, including women and Indigenous peoples, encouraging them to pursue engineering education and remain engaged in engineering careers. It is crucial to allocate funding to support Indigenous people's access programs to post-secondary engineering education across Canada.

4. Embrace the benefits of EDI: The federal government should continue to recognize that diverse and inclusive workplaces are more creative, flexible, collaborative, supportive, and productive. By investing in EDI initiatives, the engineering profession can effectively address the challenges faced by society and promote Canada's innovative capacity. Maintenance of the economy and Canadian society requires recognition of the talents of individuals from all segments of society.
5. Strengthen the Pay Equity Act and the Employment Equity Act to hold more employers accountable for achieving gender equality in hiring, retention, and promotion, and to eliminate gaps in pay by implementing pay equity in their workplaces.

By implementing these recommendations, the federal government can actively support the engineering profession in attracting and retaining talented individuals from all backgrounds. This will contribute to a more equitable and inclusive society while fostering innovation and addressing the complex challenges faced by Canada.

## How Engineers Canada will contribute

Engineers Canada remains committed to supporting the engineering profession in attracting and retaining qualified individuals from equity-deserving groups, with a particular focus on women and Indigenous peoples. We will continue to collaborate with provincial and territorial engineering regulators, providing them with strategic advice and sharing best practices to guide their local initiatives.

Specifically, we will undertake the following actions:

- Promote and enhance diversity initiatives: Engineers Canada will continue to support and strengthen intersectional initiatives such as 30 by 30, working closely with the federal government and keeping them and our partners informed about the requirements and progress.
- Implement internal EDI training and strategies: We recognize the importance of fostering a culture of diversity and inclusion within Engineers Canada itself. This will ensure that our organization remains proactive in promoting these values.
- Address the Truth and Reconciliation Commission's Calls to Action: Engineers Canada will engage with engineering stakeholders to identify how the profession can address the Truth and Reconciliation Commission's 94 Calls to Action as they relate to engineering. We will consult and collaborate to support the increased participation of Indigenous peoples in the engineering profession and work with higher education institutions to provide support for Indigenous students in engineering programs.
- Listen to the lived experiences of equity-deserving people: Engineers Canada will continue to build relationships and hear stories directly from the underrepresented individuals who make up this profession. This ongoing assessment will allow us to develop targeted initiatives that ensure the engineering profession become representative of Canadian society.
- Foster a welcoming work environment: We will collaborate with regulators, higher education institutions, post-secondary institutions, and industry to provide leadership in creating an inclusive and welcoming work environment for all engineers. By promoting equity, diversity inclusion, and belonging, we aim to cultivate workplaces that value and support the contributions of individuals from all backgrounds.

Through these efforts, Engineers Canada will continue to champion EDI in the engineering profession, working collaboratively with stakeholders to drive meaningful change and create a profession that reflects the rich diversity of Canadian society.