



WOMEN IN ENERGY TRANSFORMATION



SERIES SUMMARY PAPER
NOVEMBER 2022

PRESENTED BY



AND



WHY ARE CANADIAN WOMEN VITAL TO THE COMING ENERGY TRANSFORMATION?

Canada has committed to reducing greenhouse gas emissions 40-45% by 2030 as a critical milestone towards achieving net-zero emissions by 2050. Former Bank of Canada and Bank of England governor Mark Carney has made the case that Canada's pathways to net-zero represent a once-in-a-lifetime economic opportunity for Canadian leadership, both at home and abroad.

In discussions of climate change, we see statistics around women and children being among the most vulnerable, but when it comes to climate action, we're also seeing women and girls being among the most vocal, and those leading the charge in terms of action. While the shift to a net-zero economy and society represents a major opportunity for Canada's energy systems, infrastructure, and resources, women are currently underrepresented, both as workers and as leaders, in many of the sectors that will make the net-zero future a reality.

Supported by research and analysis by the Pembina Institute, the goal of the Women in Energy Transformation Series was to show how women can participate in and benefit from the move to an inclusive, net-zero energy economy. It identified strategies that individuals, companies, and governments can implement to ensure gender equality is an essential component of Canada's energy future. And it sought to raise the profile of women who are at the forefront of energy system innovation in Canada.

The Women in Energy Transformation Series was made up of four national dialogues, featuring 20 speakers from across the country. The dialogues featured compelling interviews and panel discussions with women from different disciplines and backgrounds who are leading the energy transition in their companies, organizations, and communities. Speakers addressed critical topics, provided testimonials, and shared stories based on their own experiences, and discussed both their concerns and opportunities for success. Each dialogue included opportunities for smaller group connection and networking with all participants.

In addition to the live events, the series developed a [unique online tool](#) that profiled 100 women and gender-diverse people, in various stages of their career, who are leading the way to a clean energy future. Individuals profiled on the platform were selected via an independent nomination process led by [Women in Renewable Energy](#), a Canadian based non-profit organization whose purpose is to advance the role and recognition of women and other under-represented groups working in the energy sector.

Throughout the series, we explored barriers to gender equity in our current systems and together considered how to make the net-zero future one where all people in Canada have a chance to participate and lead.

We thank all the participants—speakers and profiled leaders alike—for their involvement in this project. The coming decades bring many challenges, but with equity and inclusion as a guiding principle, we can make the future more sustainable and just.



ELIZABETH SHIRT
President,
GLOBE Series



CAROLYN KIM
*Senior Director, Communities
and Decarbonization,*
Pembina Institute



“ The Pembina Institute and GLOBE Series would like to thank all the incredible women leaders who stepped forward to share the stories of their lived experience on different pathways to a sustainable energy future. We would also like to thank our sponsors for their support of the Women in Energy Transformation Series. ”

— **CHRIS SEVERSON-BAKER**, Executive Director, Pembina Institute

“ As we transition towards a net-zero future, it is critical that Canada's energy transformation is both equitable and inclusive. The committed dialogue attendees and the remarkable female leaders that participated in the Women in Energy Transformation Series are a testament to the determination required to effect meaningful change. GLOBE Series and the Pembina Institute would like to thank them, along with our sponsors, for their commitment to enabling a just transition. ”

— **ELIZABETH SHIRT**, President, GLOBE Series

“ It takes words and time to create safe and inclusive practices and spaces. And as we grow and evolve, these spaces must as well. That means bringing all voices together - youth, elders, 2SLGBTQQIA+ peoples, folks with disabilities, racialized populations, migrants, immigrants - to name a few. And allowing these practices and actions to be determined by the communities they directly impact - that is inclusion. ”

— **FREDDIE HUPPÉ CAMPBELL**, Global Hub Program Manager, Indigenous Clean Energy

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“

We already know that women are crucial in building healthy and sustainable communities. I believe connecting women that are leading the energy transformation as innovators, investors, advocates, and policy makers will lead to better and more amplified outcomes for the transformation.

”

— **NISHKA GUPTA**, Senior Vice President, ARC Financial

“

I have had multiple people reach out to me to say how inspiring it was to hear from today's panel of women. I am involved in a lot of speaking events and I have never had so much unsolicited positive feedback.

”

— **RHONA DELFRARI**, Chief Sustainability Office & Senior Vice President, Cenovus Energy

Many thanks to Linda Coady, former Executive Director of the Pembina Institute for her continuing support of this project.

DIALOGUE 1: PROFILING WOMEN LEADERS OF THE ENERGY TRANSFORMATION

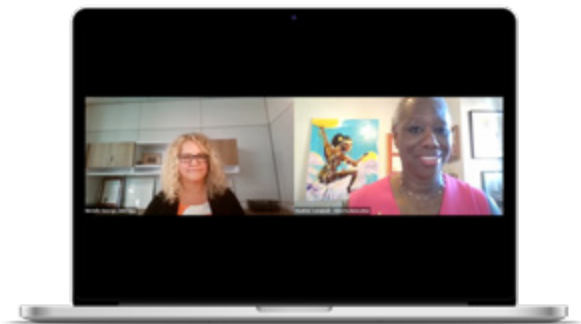
SEPTEMBER 23, 2022 — ONLINE

MODERATOR



ELIZABETH SHIRT

*President,
GLOBE Series*



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PANELISTS



KEHKASHAN BASU

*Founder & President,
Green Hope Foundation*



HEATHER CAMPBELL

*Executive Director,
Clean Technology,
Alberta Innovates*



JORDYN BURNOUF

*Sr. Associate, Medicine Rope
Strategies, and Member
Indigenous Clean Energy
Advisory Council*



ALEXANDRA TAVASOLI

*Postdoctoral Associate, MIT,
Finalist in the MaRS Discovery
District's Women in Cleantech
Challenge*

OVERVIEW AND KEY THEMES



Racism is not an opinion, it is an economic issue...when we start talking about yet another report on the perceptions of Black and Indigenous citizens in this country, the problem is not the perceptions of Black and Indigenous people in this country, the problem is the systemic racism they are experiencing that causes them to have those perceptions. Do not fix the messenger, fix the problem. We need to get to a place where we are not afraid of who we are, our history, where we are going and the data that represents it. We need to collect race-based data across the board.



— **HEATHER CAMPBELL**, *Executive Director, Clean Technology, Alberta Innovates*

Significant gender gaps and imbalances exist within the Canadian energy sector. This is particularly the case in clean technology. These gaps and imbalances are related to a number of factors, including: the gender gap in Science, Technology, Engineering, and Mathematics (STEM); a lack of progress at the corporate level on diversity and inclusion issues; gender-based harassment; the absence of male leadership in the conversations about gender equality in the workplace; and that many decisions around gender equity are often made by individuals who are not directly affected by gender imbalances.

There was widespread consensus among speakers and participants regarding the lack of Indigenous decision-making power and access to clean energy projects and initiatives in Canada. Participants expressed support and enthusiasm for the transition to a net-zero energy economy, especially for the use of clean energy in reducing inequality in both local and global contexts, however there was a caution that Indigenous women and other groups that experience systemic discrimination or disadvantage based on interdependent factors related to race, class, or gender must be at the centre of the discussion.

“My work uses clean energy as a tool for reducing inequality amongst our world's most marginalized communities... especially those in least developed countries.”

— **KEHKASHAN BASU**, Founder & President, Green Hope Foundation

IN THEIR OWN WORDS

“Our current energy systems were built by men so it shouldn't be surprising that men disproportionately benefit from them. Energy transition represents an opportunity for women to build systems that benefits them.”

“As a young woman engaging in the sustainable development process for more than a decade, I can definitely say that I've encountered gender gaps and biases in all spheres, be it at the grass root level, or in the highest... [areas] of policy making, and it's really not restricted to the energy sector.”

“A 2019 report by the International Renewable Energy Agency found that women make up 32% of the renewable energy workforce globally. Now, that exceeds women's representation in traditional energy sectors, but the same report also noted that most women in the sector hold administrative roles rather than specialized technical roles... that provide a stronger basis for career advancement.”

“On one of my first days [at a uranium company] a lady in the HR office of the company said to me ... 'Just you know, there's a lot of men in our camps, and you're going to be in situations where you're very uncomfortable and people are going to say things to you that you might not necessarily like.' ... I was being told that that the working environment was not safe for me – but I needed to prepare for that.”

“If you're in a meeting and you notice that there are no women, point it out. If you are at an event where there are very few women, point it out. If a woman has been pushed aside, stand up for her and point it out in a meeting.”

“For so long we've only addressed these specific issues with a very silos-based approach, like gender equality [and] racism... are so separate. But at the same time, they are not separate.”

“Part of thinking in systems is recognizing the diversity we all bring to the table. Discussions on energy transition often focuses on “urban” women. Yet in many instances energy development in Canada is occurring on landscapes in rural areas. We need to include a rural dimension in our thinking on gender participation and equity.”

DIALOGUE 2: MINDING THE GAP: BARRIERS AND THEMES IN EQUALITY AND INCLUSION

NOVEMBER 24, 2022 — ONLINE

MODERATORS



ELIZABETH SHIRT

*President,
GLOBE Series*



BINNU JEYAKUMAR

*Program Director, Electricity,
Pembina Institute*



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OPENING INTERVIEW



PATRICIA FULLER

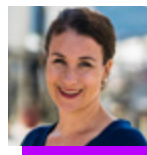
*Senior Fellow, University of Ottawa's Graduate School of Public and International Affairs,
Former Ambassador for Climate Change, Government of Canada*

PANELISTS



BIPASHA BARUAH

*Professor & Canada Research Chair
in Global Women's Issues,
University of Western Ontario*



ANNA STUKAS

*VP Business Development,
Carbon Engineering Ltd*



LUISA DA SILVA

*Executive Director,
Iron & Earth*



DEANNA BURGART

*Senior Instructor,
University of Calgary*



MARYAM MONSEF

*Canada's Former Minister for Women
and Gender Equality and Rural
Economic Development*

OVERVIEW AND KEY THEMES



In 2018, women accounted for less than 20% of the enrollments in engineering programs. But it is these very same degrees in Science, Technology, Engineering, and Mathematics (STEM) that are actually needed for women to get a foot in the door into many of the jobs in industry.



— **BINNU JEYAKUMAR**, Director, Electricity, Pembina Institute

The speakers and dialogue participants championed diversity, inclusion, and collaboration as critical to success for Canada's energy transformation. Key themes were framed on issues identified as barriers to gender equality in energy transition in a recent report by the Pembina Institute on [*Women in Alberta's Energy Transition: A review of barriers to participation and leadership*](#).

There were five barriers explored. The first was lack of access to opportunity, which explored low levels of women in STEM jobs, as well as women's exclusion from male-dominated informal networks. The second was the identification of how "good" jobs are different for women and men. Due to cultural norms and expectations, women often have domestic and social responsibilities that they balance with work, so many women prefer jobs that have flexible hours and a consistent location. However, flexibility often comes with a price—lower opportunities for advancement and job security. The third barrier is the inability to advance. Women are generally underrepresented at all levels of the energy industry, and representation also diminishes with each level of seniority. The fourth area explored was the income gap between women and men. Resource extraction industries like the oil and gas sector are among the greatest drivers of income inequality between men and women in Canada. The roles that women often occupy, in departments such as human resources, finance, and administration, are paid less than the technical and leadership roles men often occupy. Universal childcare and having more women in decision-making positions were seen as major solutions to the gender pay gap. The fifth area was industry culture, where the fossil-fuels based energy industry in Canada was built during an era of a masculine, "frontier" culture that still persists today. Women, and especially Indigenous women, are more likely to be harassed and experience violence in the industry.

Many solutions were proposed including increased training and recruitment, flexibility, changing work culture, male allyship and data collection.



In transformation, there is opportunity and there is opportunity to advance gender equality... In international discussions around gender I can't tell you how many times I heard the phrase 'women are more vulnerable to the impacts of climate change,' and it's absolutely true. But what I also heard, and the phrase that really stayed with me, was 'we are fighting, not drowning'. And that is what I have seen happening on the ground in many countries.



— **PATRICIA FULLER**, Senior Fellow, University of Ottawa's Graduate School of Public and International Affairs, Former Ambassador for Climate Change, Government of Canada

IN THEIR OWN WORDS

"Because the energy sector has almost been dominated by men for so long, much information about job opportunities, as well as information about skill transferability, appears to continue to travel through familial as well as professional networks, that are still predominantly male."

"I actually had to learn how to golf just so I could hang out with my supervisors when I was at an oil and gas company, so that I could be part of conversations on the future of a project I was working on."

"How do we increase the participation of women in science, trade, technology, engineering, arts and math in the next 3 to 5 years. If we don't [increase this number], we further exacerbate the gender-based income gap."

"I have two calls to action. First of all, to companies... make a conscious choice to support all parents to take the parental leave they need to support their families, so that we can make this a shared responsibility, rather than something that falls solely on women's shoulders. And to our government... modernize our parental leave structure to make it work for parents, and to allow the flexibility we need in order to enable women to advance in the ways that we desire."

"My first job was in fossil fuels and I worked in the Athabasca oil sands. I worked in a remote camp. There were 300 men and 20 women.... Even if 50% of the men in these types of places are decent, there's still quite a large proportion of them that aren't, and this puts women on the backfoot. This can create the kind of situation for harassment and microaggressions that can cut into your confidence. Makes you feel [like you have to] constantly prove to be where you are."

"I think that balancing men and women [in industrial work environments] will definitely make the largest difference. It's a very simple concept, but just increasing the number of women will already make a huge difference."

"I want to thank those women who didn't drown, who kept swimming, who kept fighting against all odds, and brought us to this moment in time. Because of you [and] those who come before you, you've made the case that there is a link between a healthy environment and a healthy economy."

DIALOGUE 3: AN INDIGENOUS LEADERSHIP PERSPECTIVE – SOLUTIONS, CAREER PATHWAYS, AND INTERGENERATIONAL NETWORKING

MARCH 31, 2022 — GLOBE FORUM 2022, VANCOUVER, BC, IN PERSON

Thanks to our co-host [Indigenous Clean Energy](#)

MODERATOR



LINDA COADY

President & CEO, The BC Council of Forest Industries, Former Executive Director, Pembina Institute



FEATURED SPEAKERS



FREDDIE HUPPÉ CAMPBELL

Global Hub Program Manager, Indigenous Clean Energy



CHIEF SHARLEEN GALE

Chief, Fort Nelson First Nation, Chair, First Nations Major Projects Coalition (FNMPC)



TERRI LYNN MORRISON

Associate Executive Director, Indigenous Clean Energy



OVERVIEW AND KEY THEMES



I see Indigenous people leading the transition to net-zero. And we want to do more of this, because when these projects are done right, they are also a way to alleviate the poverty that is happening in our communities and to address the legacies of colonization.



— **CHIEF SHARLEEN GALE**, Chief, Fort Nelson First Nation, and Chair, First Nations Major Projects Coalition (FNMPC)

Indigenous women are among Canada's most dedicated and influential climate leaders. Many have experienced firsthand the impacts of climate change on their communities and now advocate strongly for better inclusion of Indigenous voices in climate and energy decision-making. Speakers told their stories and demonstrated the role now being played by Indigenous women leading new solutions to climate and energy challenges in Canada.

The presenters agreed that Indigenous communities must benefit from projects that take place on their land, including through decision making, financial equity, and other social and economic benefits. They noted that it can be challenging for Indigenous communities to participate in clean energy projects because there are constraints on resources and capacities. A solution is capacity-building programs that reflect individual community needs and should be guided by strong Indigenous leadership and values. They also need to be rooted in community-based energy planning that includes opportunities for energy sovereignty and self-sufficiency. Programs should be codeveloped with Indigenous leaders and be responsive to fundamental community needs and timelines. Governments and the private sector must increase accessibility to affordable private capital to fund projects in Indigenous communities. They also need to recognize that the pathway forward needs to include regulatory reform. Partnerships between Indigenous and non-Indigenous parties are successful when common objectives are identified, and all parties are treated equally and with respect.

IN THEIR OWN WORDS

"Indigenous people have been upholding their end of the deal when it comes to protecting Indigenous rights and title, while being constantly faced with challenges to show up at a table as an equal partner. You have to understand that in Indigenous communities, leadership wears many hats. Our leaders are the economic development officers, they're the energy experts, they're the director of wildlife, communication experts, social workers, caretakers. Are you starting to see the picture about how hard it is for us to be in the clean energy space?"

"I worked for my nation, and I saw what was happening and I knew that we needed to take action. We were not being heard and nothing was stopping. People would come, they would listen to us, they would present their projects, and there was nothing happening that was benefitting the communities."

"As individual communities we didn't have success trying to get into the energy business. So, we came together as a nation. And at the end of the day, we built a 150-megawatt wind farm that represents over \$220 Million. It helped the communities fund their governments that are severely underfunded. We put 160 Mi'gmaq people to work outside of the reserve for the first time in the province of Quebec. We trained community members to become electricians, heavy equipment operators, service technicians, and linesmen. We provided internships for our Indigenous engineers to be on the ground, and Indigenous environmental monitors shadowing our contractors to get their hands-on experience in the construction of our own wind farm."

"My story begins at a young age when I was bullied for not fitting in. I came home crying and my Kokum, my grandmother, consoled me. And she said there were going to be many tough times that I would face, but through teaching, she really instilled in me the importance of grounding in the collective. She always took the time to make sure that everybody was included, no matter what their background was."

"First Nations are ready to step up and help position Canada on a better path. And if we're successful in our work, I truly believe that regulatory approval processes will be more efficient, project development costs will be lower, investment risk will be reduced, environmental impacts will be lessened, and more Indigenous workers, business owners, and communities will benefit and contribute to the energy sector and Canada's transition to a net-zero economy."

DIALOGUE 4: TOWARDS AN EQUITABLE NET-ZERO FUTURE: STORIES, LESSONS LEARNED AND ACTIONS FOR ADVANCING GENDER EQUITY

OCTOBER 14, 2022 — ONLINE

MODERATORS



ELIZABETH SHIRT

*President,
GLOBE Series*



CAROLYN KIM

*Senior Director, Communities &
Decarbonization Group,
Pembina Institute*



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FEATURED SPEAKERS



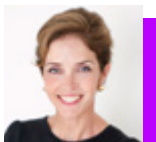
MEREDITH ADLER

*Executive Director, Student Energy,
Co-Founder, Women Leading on
Climate*



MELODY LEPINE

*Director of Government and
Industry Relations,
Mikisew Cree First Nation
Government*



JANE MCDONALD

*Senior Vice President,
Nature and Climate Solutions*



CHIEF KLUANE ADAMEK

*Yukon Regional Chief,
Assembly of First Nations*

OVERVIEW AND KEY THEMES



Analysis, empathy, strategy, creativity is what is needed for this transition to happen.



— **JANE MCDONALD**, Senior Vice President, *Climate and Natural Solutions*

In September 2022, the Pembina Institute released a new report on gender equality in energy transition. Entitled [*Equitable Net-Zero: Recommendations for advancing gender equity in Alberta's energy transition*](#), the report examines how actions by governments, businesses, communities, and individuals can accelerate gender equality.

Panelists and participants were asked to reflect on some of the themes that emerged from previous dialogues as well as research done by the Pembina Institute that supported this series. The energy transformation provides a unique opportunity to improve systems that exclude and, in some cases, are hostile to marginalized people. Diversity is a strength, but it isn't always seen that way. Some in the energy sector see the coming energy transition – combined with a push for diversity – as a threat to their livelihoods. We need new strategies and ways of thinking to overcome these kinds of fears and perceptions.

As just transition legislation is developed, it should ensure that a diverse range of people have a seat at the table. Since the net-zero future relies on historically male-dominated economic sector, systemic issues of exclusion that exist there must be addressed as we move towards a net-zero future.

Efforts for inclusion of all genders require an all-of-Canada approach, from school and on-the-job training, to a shift in workplace culture so that all people working there feel safe, both physically and psychologically. Male leaders have an important role to play in making organizational culture less toxic and more welcoming to diversity.

IN THEIR OWN WORDS

"I have worked in for-profits, non-profits, and in the political realm on sustainable development policies. We need radical cooperation and collaboration to solve some of these challenges and I believe people from across the spectrum are now up for that."

"I am joining from a region that continues to be impacted by climate change. These conversations require an approach that respects and includes Indigenous governments and relationships with governments at all levels."

"Everyone experiences the impacts of climate change in different ways. For climate action to be gender responsive we have to keep three questions in our head: who matters, who decides, and who benefits."

"Getting closer to the problem gets you closer to the solutions ... what they are and how to introduce them in ways that can be accepted. This is the only way we can build families, communities, and societies that can be resilient."

"We need to understand the history, impacts, and experience of Indigenous women living in resource extraction communities like Fort McMurray in Alberta. If we don't, there is a real risk they will be left behind in this transition."

"We need to strengthen the representation and position of women in the UN climate system. Though there has been improvement, at COP26 in Glasgow last year 30% of the lead climate negotiators were women and men did 75% of the talking."

"As the old saying goes ... what gets measured matters. A lot of decisions have been made without an understanding of impact. More women in leadership and decision-making roles can help change that fact and support more diversified strategies and approaches. I want to live in a world where women in high-ranking positions is not be a big deal."

At the Canadian Pavilion at the 2022 UN Climate Summit (COP27) in Egypt, the Pembina Institute lead an event where it tabled calls to action to overcome systemic barriers to gender equality in energy system change. The event built on the dialogues and research done for the Women in Energy Transformation Series.

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ABOUT THE PEMBINA INSTITUTE

The Pembina Institute is a national non-partisan think tank that advocates for strong, effective policies to support Canada's clean energy transition. We employ multi-faceted and highly collaborative approaches to change. Producing credible, evidence-based research and analysis, we consult directly with organizations to design and implement clean energy solutions and convene diverse sets of stakeholders to identify and move toward common solutions.

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ABOUT GLOBE SERIES

GLOBE Series convenes the innovators and changemakers who are accelerating the clean economy. For over 30 years, leaders and innovators from business, government, and civil society have come together through GLOBE Series to share knowledge, leverage opportunities, and find solutions. Our vast networks and convening power enable us to connect the companies, thought leaders, clean technology innovators, NGOs, financiers, and senior policymakers who are changing the world.

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