

# CANADA'S CLEAN50

PART 2 OF 3: A JUST AND SUSTAINABLE FUTURE



**DOUGLAS WEBBER**

The leader of Purpose Building has helped accelerate solutions for healthy, low-carbon buildings, including by improving the performance of assets with a cumulative total value of \$10-billion as well as developing a zero-carbon transition plan for 2,500 facilities owned by the City of Toronto.



**SABINA RUSSELL**

Passionate about hydrogen's role in decarbonizing energy systems, the principal and co-founder of Zen and the Art of Clean Energy Solutions helped NRCan develop a hydrogen strategy for Canada and enabled clients to access over \$120-million in hydrogen-project funding while managing eight hydrogen deployments.



**BRUCE TAYLOR**

The president of Enviro-Stewards is enabling Canada's food producers to reduce food loss by about 9.3 million kilogram per year, mapping out pathways to becoming carbon neutral through identifying practical, affordable measures for reducing emissions and water, energy and product losses.

## REORIENTING EDUCATION TOWARDS SUSTAINABLE DEVELOPMENT

There is a powerful tool that can help to address the interconnected global challenges of our time, including climate change, loss of biodiversity, poverty and inequality – and this tool is education.

Yet how do we hone such a tool to enhance its application and impact? How do we ensure it can be effectively used in different circumstances and communities across the globe? Such questions are at the core of the career-long efforts of Charles Hopkins, York University's UNESCO Chair, who received the 2022 Clean50 Lifetime Achievement Award for his work in reorienting education systems towards sustainable development and fostering cross-sector collaboration.

Climate challenges affect us all – and they cannot be resolved by anything less than a collaborative approach, says Mr. Hopkins. "We need to create linkages between governments, academia, business, industry, the arts and civil society. What is required is a sense of responsibility and engagement from everyone to advance a common goal: a better future for all, while 'all' is not limited to humans."

### A CONCEPT WITH UNIVERSAL APPEAL

It started with the quest to find a concept that would enable the UN to engage the global community on the topic of environmental protection, explains Mr. Hopkins. "When you work with a broad range of countries – including those in need of development – you need goals that resonate widely. One vision got buy-in from world leaders: sustainable development."

This concept, which became the UN's overarching paradigm through the Brundtland Report in



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1987 and is still valid today, describes "development that meets the needs of the present without compromising the ability of future generations to meet their own needs."

In 1992, Mr. Hopkins presented education, public awareness and training as crucial elements for sustainability. This idea became known as Education for Sustainable Development (ESD) and has been evident in all subsequent UN implementation plans, including Agenda 2030 with the Sustainable Development Goals (SDGs). "Today, the UNESCO Chair coordinates two global networks with members from over 70 countries," he says, "providing research-based evidence and policy advice to the UN, governments and other education stakeholders."

**ENABLING A SUSTAINABLE FUTURE**  
As key enabler of a sustainable future, ESD has four aspects, says Mr. Hopkins. "The first is to ensure

access to quality education and lifelong learning. The second task is reorienting education towards advancing sustainability and creating a sense of responsibility in every individual."

The third aspect concerns public awareness, he says. "When citizens understand the impact of their everyday actions, they can make conscious choices. For instance, awareness about our ecological footprint and understanding how we can create a handprint in life that helps reduce our footprint can be an important tool to achieve sustainability."

Delivering training that enables people to improve sustainability at their places of work is the fourth aspect.

### CREATING POSITIVE CHANGE AT UNIVERSITIES

"Although the percentage of the world's population attending university is quite small, these

graduates will likely become leaders and influencers who have the opportunity to shape societal outcomes," he says. "Universities are also in a unique position to answer fundamental questions about sustainability."

As a member of the President's Sustainability Council at York University, Mr. Hopkins works to embed the idea of the "university as a whole" moving towards sustainability, placing sustainable development as a theme in the curriculum, rethinking operations, facilities and management practices,

and changing the campus culture.

These endeavours have found fertile ground at York, which is known for prioritizing inclusion, equity and social justice, he says. "And this means sustainability is being embedded in teaching and research as well as societal engagement with communities, locally and globally."

The ambition of driving positive change for all community members while improving sustainability is reflected in the university's latest academic plan, aiming to elevate York's contributions to the 17 SDGs.

## AS RENEWABLES GAIN TRACTION, POWER PURCHASE AGREEMENTS OFFER A STRATEGIC ADVANTAGE

Research by Deloitte reveals that 65 per cent of consumers expect CEOs to make more progress on societal issues like reducing carbon emissions, and companies are responding to that pressure. In a more competitive renewable energy market, savvy buyers are turning to power purchase agreements (PPAs) to encourage renewable growth and obtain a cost-effective supply of green energy attributes.

Through a PPA, buyers provide price certainty to developers – which helps developers secure financing for new wind or solar projects. "PPAs are a tangible way for organizations to help bring a new renewable facility online and shrink their carbon footprint," says Suha Jehhalal, president of Bullfrog Power.

Bullfrog Power, Canada's leading green energy provider, recently partnered with RBC and Shopify to purchase energy from the upcoming Rattlesnake Ridge Wind Power Project in Alberta. The three companies signed PPAs with Berkshire Hathaway Energy Canada to off-take approximately 30,000 megawatt-hours each per year.

Companies are using PPAs to meet ambitious sustainability goals: RBC's purchase contributes to its

targets to reduce emissions by 70 per cent and to source 100 per cent of its electricity from renewable and non-emitting sources both by 2025. Shopify will use its environmental attributes to power 100 per cent of employee home offices across North America with wind energy. Bullfrog Power provided advisory services to Shopify to help the company navigate its first PPA.

The environmental attributes that Bullfrog Power procures will go towards its green electricity, a turnkey solution that matches customers' usage with high-quality renewable energy certificates.

"Bullfrog aims to make the green energy transition accessible to everyone, no matter how big or small their power needs are," says Ms. Jehhalal. "With our PPA expertise, we can advise large power users on choosing projects, mitigating financial risk and assembling buyers' groups. And by signing our own power purchase agreements, we can offer those high-quality renewable energy attributes to bullfrogpowered customers who couldn't sign a PPA on their own."

Learn about PPAs and other green energy solutions at [bullfrogpower.com](http://bullfrogpower.com)



READ PART 3 ON APRIL 22: Celebrating climate action on Earth Day



**SABER MIRESMALLI**

The founder of Ecoation developed greenhouse-monitoring technology that detects challenges early enough to be addressed without chemical pesticides. The technology, already implemented on more than 3.3 trillion sq. ft. of greenhouses, is envisioned to curb 90 per cent of pesticide application and reduce energy, water and food waste.



**TORI WAUGH**

The principal consultant at Conservation Ag Consulting tackles agricultural emissions by helping to sequester more carbon and rebuilding organic matter in soil. Partnerships are impacting 2,500 agricultural businesses across 180,000 acres, and the Talk Dirty to Me radio show helps to spread the message.



**TERESA SCHOONINGS**

As senior director, Sustainability, Bimbo Canada, Teresa Schoonings is working towards improving sustainability performance across all operations with the aim to reduce both food waste and direct GHG emissions by 50 per cent by 2030, and achieve net-zero emissions by 2050.

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## NOURISHING A BETTER, MORE SUSTAINABLE WORLD

It may seem a small thing: the little plastic clip holding together your bag of bread. Yet when you consider the number of clips used in households across the country, you can imagine their cumulative impact.

In the quest to leave no stone unturned in finding opportunities to reduce its environmental footprint, Bimbo Canada is switching to recyclable and municipally compostable bread bag clips, "the first national bakery company in North America to make this change," says Jeff Robertson, director, Environment & Sustainability, Bimbo Canada. "We're excited about this innovative change. It comes without sacrificing quality or performance and without any net price increase for consumers."

Since conventional polystyrene clips are too small for automatic recycling, they end up in landfills, where they take up to 500 years to decompose. Compare that to the new cardboard clips, which are made from 100 per cent recycled material and biodegrade in 84 days.

Teresa Schoonings, senior director, Sustainability, Bimbo Canada, suggests visualizing the impact by laying bread clips used annually in Canada side by side, with the resulting line stretching across the country – from Vancouver to St. John's – and back. "That's how much plastic we'll remove from landfills: almost 200 metric tonnes," she says, adding that the cardboard clips are produced by Quebec-based KLR Systems, which earned an innovation award.

To reduce reliance on polystyrene in its supply chain, Bimbo Canada works with a consortium of companies as part of the Canada Plastics Pact. "It's the right thing to do, and that's why we made these investments, including the switch to new packaging equipment for the new clips," says Ms. Schoonings.

These efforts of Bimbo Canada are aligned with the strategic goals of its parent company Grupo Bimbo, the world's largest baking company with operations in 33 countries, says Mr. Robertson. "Our global strategy, which was launched in 2021, ensures every single business unit is working toward nourishing a better world, with environmental stewardship at the core."

Bimbo Canada's goals include achieving a 50 per cent drop in food waste plus reducing direct GHG emissions by 50 per cent by 2030 and net-zero emissions by 2050. This requires an "all-hands-on-deck approach," he explains. "We've spent a lot of time establishing a organization-wide sustainability culture, where people understand what we're trying to achieve and what their roles are."

The company also turned to environmental consulting firm Enviro-Stewards to assess all 16 plants and four sales centres "to identify both low-hanging fruit, which can be tackled right away, and projects that

require more time and investment," Ms. Schoonings notes. For this work, Bimbo Canada and Enviro-Stewards won a Clean50 Top Project Award in 2021.

During that year, Bimbo Canada implemented 40 projects that are saving the equivalent of two million meals of food, enough water to fill 31 Olympic-sized swimming pools, enough electricity to power 209 Canadian homes and \$700,000 per year in operating costs.

"We've done a tonne, but we continue to push to reduce our environmental impact," she adds. "And we're excited about that."



Bimbo Canada is switching to recyclable and municipally compostable bread bag clips, one of many efforts to improve the environmental performance across all operations. SUPPLIED

## EMPOWERING INDIGENOUS PARTICIPATION

Linking the two narratives – of promoting a sustainable future and enhancing economic participation of Indigenous communities – can create a powerful impact with the potential to "define the future of this country," says Matt Jamieson, president and CEO at Six Nations of Grand River Development Corporation (SNGRDC). "It's going to be critically important for Canada to not overlook Indigenous communities and their rights, interests and aspirations."

Society is waking up to the importance of meeting net-zero targets, and since these goals resonate deeply with the values of Indigenous peoples, this presents a "tremendous opportunity for Indigenous communities, development companies and financial institutions to work together in new and interesting ways," says Mr. Jamieson.

SNGRDC was launched in 2015 with the mandate to pursue economic self-sufficiency without sacrificing the cultural values and integrity of the Six Nations people, the largest First Nations in Canada with over 27,000 members – made up of the Mohawk, Oneida, Onondaga, Cayuga, Seneca and Tuscarora Nations – and spread over 46,500 acres of land.

It started with the intention to "jockey for a seat at the table in a sector that is strongly aligned with



The Six Nations of Grand River Development Corporation is an equal partner in the Niagara Region Wind Farm, a 230-megawatt operation that overlaps with the Six Nations' traditional territory. SUPPLIED

encourage Indigenous participation; and inadequate experience for executing these projects," he says. "With the right effort, public policy, partnerships and financing options, we can provide communities with the tools and funding to advance their interests."

For example, SNGRDC is an equal partner in the Niagara Region Wind Farm, a 230-megawatt operation that overlaps with the Six Nations' traditional territory. A recent partnership with Vancity Community Investment Bank (VCIB) helped to secure refinancing that allows the nations to "unlock incremental value of \$400,000 per year over a 16-year period, which flows back into the community," says Mr. Jamieson, who believes such outcomes can serve as inspiration.

Over 600 Indigenous communities in Canada are currently pursuing projects related to the clean economy transition, and Mr. Jamieson regards efforts to support them as "advancing reconciliation."

Healing and reconciliation have to happen in a way where Indigenous nations gain economic might while retaining the autonomy "to control their destiny and be authentic to their values," he explains. "With economic participation, we can break the mould of dependency and go back to exploring our values and future as a people."

the nations' values of sustainability," notes Mr. Jamieson. "Over time, a paradigm shift happened, and now companies are coming to us."

Today, the corporation manages a green energy portfolio capable of producing nearly 900 megawatts of renewable energy through direct or indirect involvement in seven wind,

six solar, plus one hydroelectric projects.

Through that evolution, SNGRDC became an active developer rather than a passive investor, and learned to overcome three main barriers that commonly affect Indigenous community engagement: "lack of access to capital; public policy that doesn't

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