May 6, 2022

Carbon Emissions Report

CTIA Environment and Sustainable Development Committee Presentation

Global Innovative Tech & W2R Solutions

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Background

Why we started this work...

- Sustainability is a priority for CTIA members
- Seek out the "low carbon footprint of Canadian Textile producers"
- Investors, Customers and Employees want to understand the carbon footprint of products and the environmental stance of the companies who produce them
- Stay ahead of potential future mandates
- Seeking alignment with customer values, federal and global initiatives

“We do not inherit the earth from our ancestors, we borrow it from our children.”

Native American Proverb

Starting Assumption:

Canadian textile operations have a lower carbon footprint compared to other jurisdictions.

- Developed pilot project to calculate operational carbon emissions

We can only improve what we measure

Pilot Project

Four participating members from CTIA

Eight facilities evaluated across Canada and US

Measured carbon emissions from energy usage

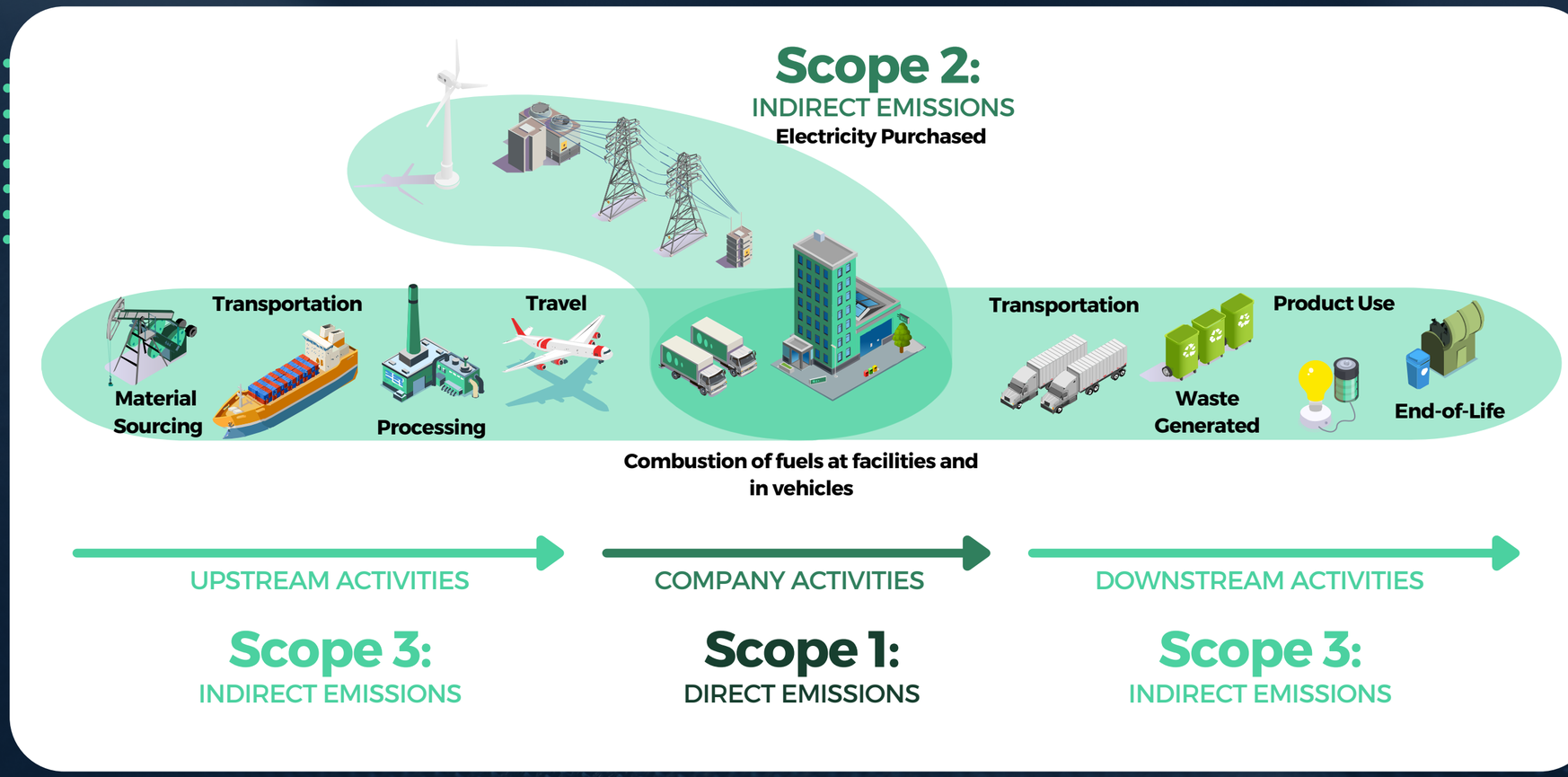
Identified energy optimization opportunities

Launched February 2, 2022 after presenting to CTIA Environmental and Sustainability committee.
Gathered and analyzed 1 year of electricity and natural gas data for all locations.

Scope of Work

- Assess one year of data
- Gas & electricity usage (Scopes 1 & 2 of carbon accounting)
- Comparison to global textile hotspots (India, China, Germany)
- Identified opportunities for energy and cost savings
- Reviewed findings during 1-on-1 calls

Carbon Accounting Overview

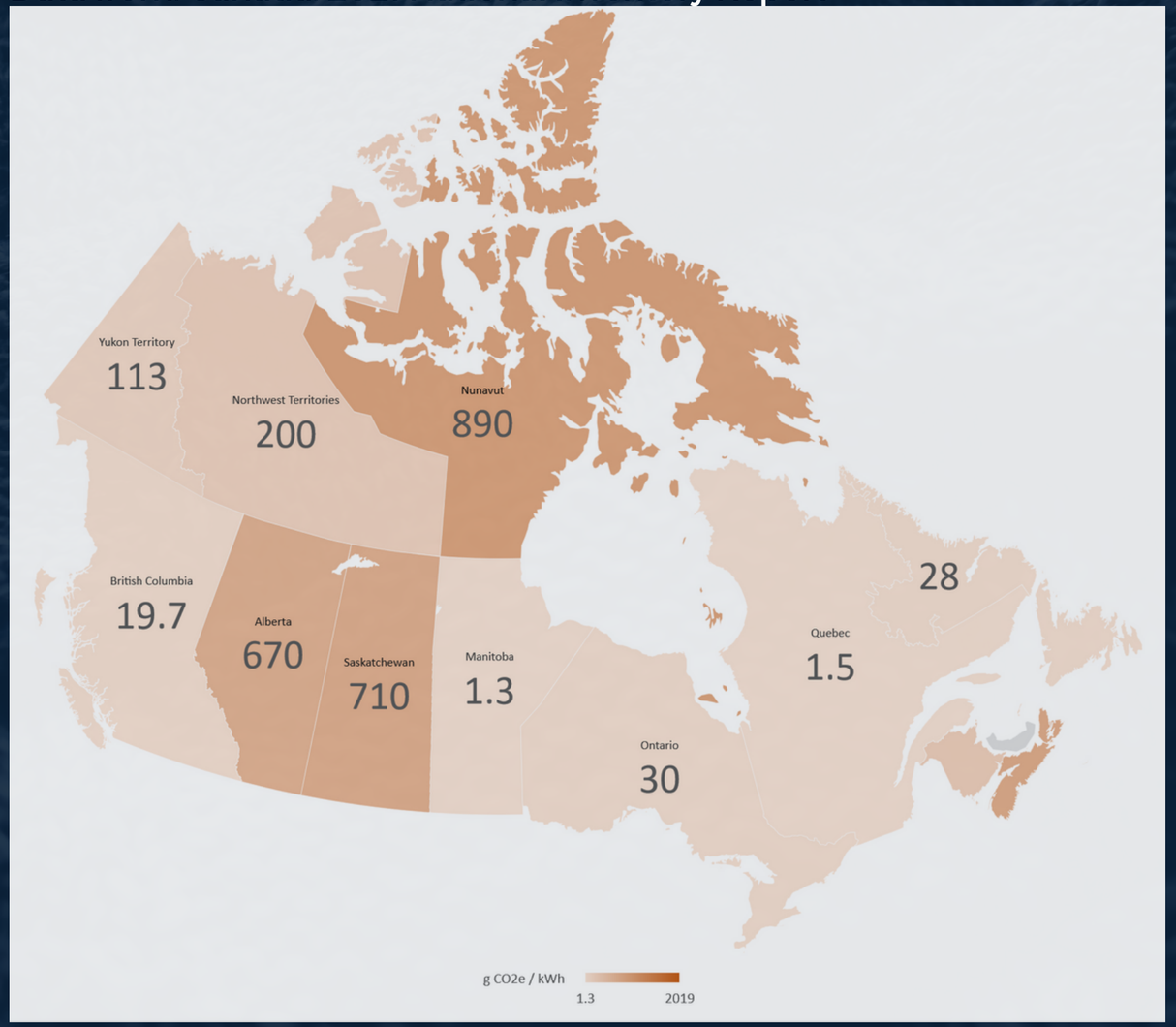


Methodology based on International standard established by GHG Protocol Initiative, World Resources Institute and the World Business Council for Sustainable Development.

Carbon Footprint by Province

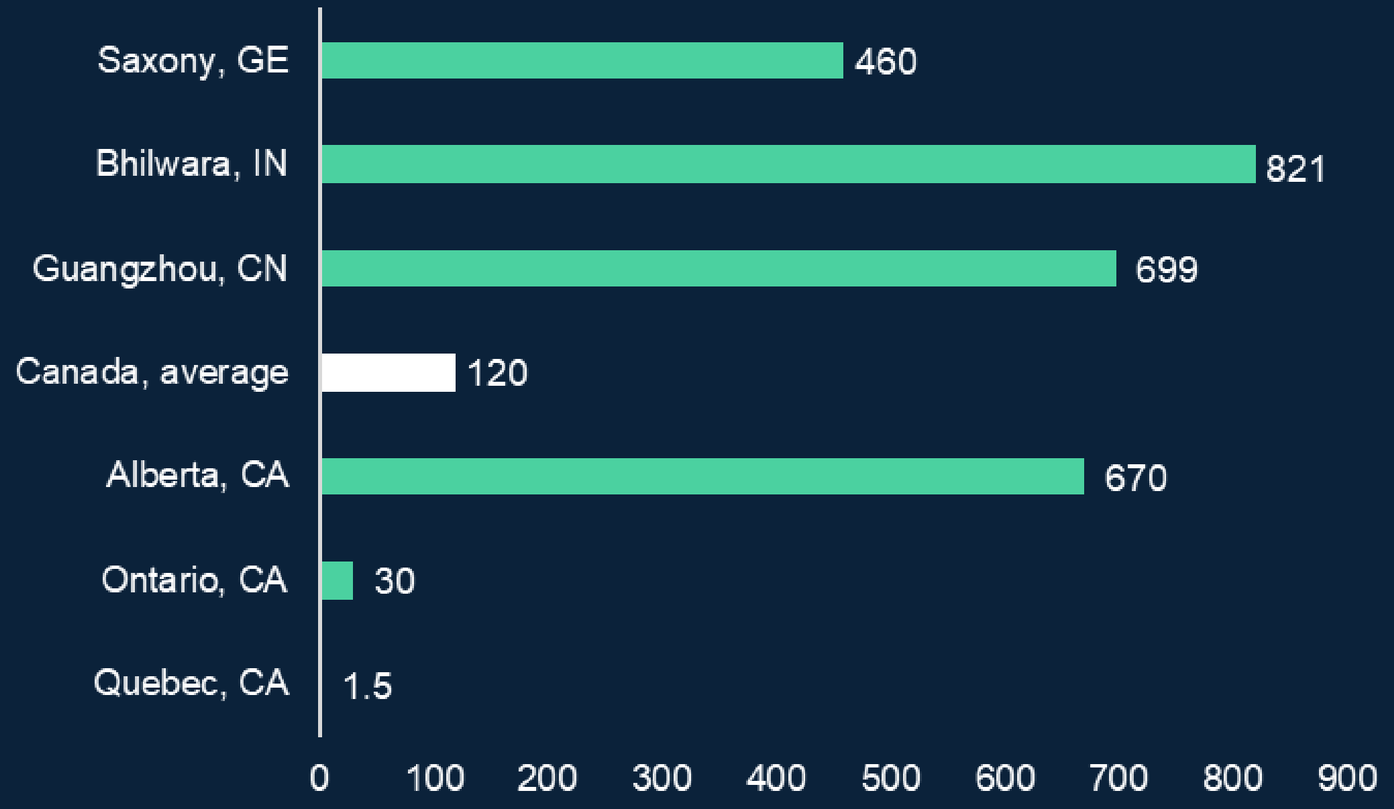
g CO2e / kWh

Data from: Canada. 2021 National Inventory Report



Comparison

Carbon Footprint of Electrical Grid (g CO2 e/kwh)



27x more emissions produced in Bilwara's Grid vs Ontario.

23x more emissions produced in Guangzhou's Grid vs Ontario.

Quebec's electricity grid is hundreds of times less carbon intensive than Bilwara, Guangzhou and assumedly many places in the world.

Location Based Observations

Quebec

- The electricity grid is over 99% powered by renewables contributing to one of the cleanest grids in the world!
- Electricity is about 3.5x more expensive than natural gas.

Ontario

- Natural gas produces 6x more carbon emissions compared to the electricity grid.
- Grid purchased electricity is about 4x more expensive than natural gas.

Alberta

- The electricity grid produced about 3x more carbon emissions compared to natural gas.
- Electricity is about 5x more expensive than natural gas.

Results By Company

	Company A (QC, ON, VT)	**Company B** (AB)	**Company C** (ON)	**Company D** (QC)
Natural Gas (MWh)	648	1297	4598	11291
Natural Gas (tCO2)	117	235	833	2046
Purchased Electricity (MWh)	612	684	2547	2421
Purchased Electricity (tCO2)	49	424	44	3
t CO2/MWh	0.132	0.333	0.123	0.149

Results By Company

	Company A (QC, ON, VT)	**Company B** (AB)	**Company C** (ON)	**Company D** (QC)
Natural Gas (tCO2/MWh)	0.181	0.181	0.181	0.181
Electricity (tCO2/MWh)	0.080	0.619	0.030	0.001
Combined t CO2/MWh	0.132	0.333	0.123	0.149

Benchmarking Energy Efficiency & Related Emissions

With continuous energy and carbon measurement, facilities can identify how they perform in comparison to similar operations.

	Production Output (kg)	Energy Use (MWh)	Emissions (tCO2e)	MWh per kg	CO2e per kg
Company C	544,310	7,145	877	0.01313	0.0016
Company D	980,322	13,712	2,049	0.01399	0.0021

These measures can also identify the embedded carbon per unit of production - which can be passed down to consumers or be captured as part of your organization's environmental plan.

Future Opportunities

- Help advertise Canadian textile manufacturers on a global scale
- Stay ahead of mandates with on-going yearly monitoring of emissions
- Cost & energy savings from proactive energy management program
- Attract and retain customers by being environmental leaders within industry
- Avoid risk by aligning with Canada's Net Zero goals by 2030
- Future-proof business with internal policies (ESG, sustainability reporting, etc)

Canada's 2030 EMISSIONS REDUCTION PLAN

"...ensure that we reduce emissions across the entire economy to reach our emissions reduction target of 40 to 45 % below 2005 levels by 2030 and put us on a path to achieve net-zero emissions by 2050".

To enhance long-term certainty, the 2030 Emissions Reduction Plan commits the Government of Canada to exploring measures that help guarantee the price of pollution".

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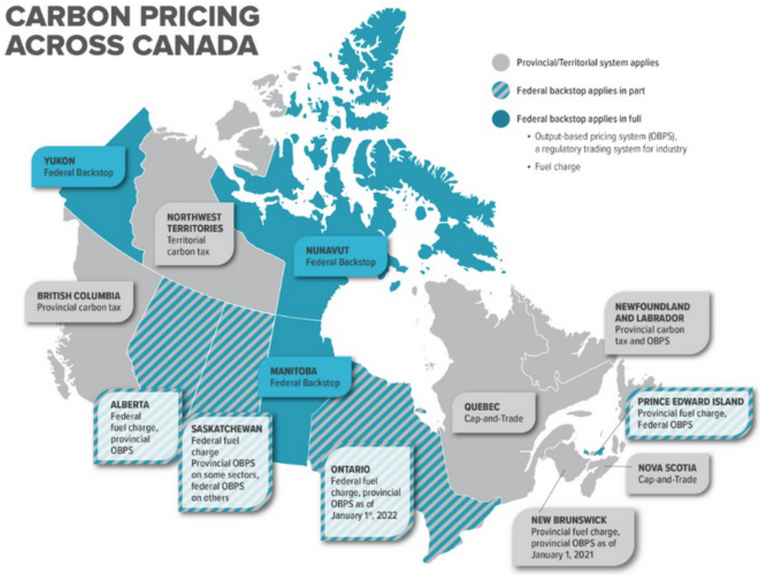
https://www.canada.ca/en/environment-climate-change/news/2022/03/2030-emissions-reduction-plan--canadas-next-steps-for-clean-air-and-a-strong-economy.html



COST OF DOING NOTHING:

- Pay more for energy, as costs increase
- Risk to company reputation
- Risk losing customers
- Risk losing new business opportunities

BENEFITS OF ACTING NOW:

- Decrease operating costs
- Attract new clients
- Stay ahead of mandates
- Be a leader in the textile industry

Thank You!

“Without data, you're just another person with an opinion”
Edward Deming